

FOLDER 7

Bureau of Mineral Resources, Geology and Geophysics

OPEN CUT COAL INVESTIGATIONS IN NEW SOUTH WALES

CESSNOCK MUSWELLBROOK REGION

HOWICK AREA REPORT

Records 1953/47

Folder 7.

Bore logs of Scout and/or Test
Boreholes in the Farrell's Creek,
Pond's Creek and Jerry's Plains
Subareas.

Bore log of BMR S1 State Mine
Reserve Ravensworth.

LIST OF ABBREVIATIONS USED IN BORE LOGS.

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

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.

FARRELL'S CREEK SUBAREA

List of Approximate Locations from Point
of Origin No. 2 (SW Cnr. Portion 157, NW.
Cnr. Portion 160, Parish of Ravensworth)

1&6S	103°40'	4900'	4&5S	116°10'	1790'
2&3S	190°00'	3020'	7S	171°40'	3900'

Cessnock

BMR 1 & 6S FARRELL'S CREEK

DISTRICT	Muswellbrook	COUNTY	Durham	PARISH	Ravensworth	PORTION	138	LOCATION	
	J. Svoronos		Tel. Alidade			445.0'	ASL		BMR Map N14/110
Surveyed by	M. Reynolds/W. McKinnon	Survey Method	---	Elevation	Standard			Ref. Map	BMR Records 1953/47
Logged by	BMR	Cased	Failing 1500/SN293	Datum	677' 2"			Ref. Report	28/8/52-3/11/52
Sunk by		Type of Drill		Depth				Date Begun/Finished	

[illegible]

[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
91		4	1	Claystone, silty and siltstone with occasional fine grained Greywacke band, grey to brown, sideritic for 6" at 3" above base	4	1										
92	10	1	10	Shale, grey	1	4										
93	8		10	Siltstone to fine-grained Greywacke mainly black, carbonaceous.		10										
95	6	1	10	Claystone to siltstone, grey to brown-grey ? sideritic	1	10										
99	1	3	7	Claystone, grey with disseminated carbonaceous material	3	7										
99	8		7	Shale, dark grey to black, carbonaceous with band claystone and with bands and lamination bright COAL		7										
100	2		6	Claystone, black, carbonaceous with small lenses light brown claystone to dark brown and shaly near bottom		6										
100	7½		5½	? Carbonaceous Splint to Splint COAL with thin lense light brown siltstone, shaly at bottom		5½										
100	11½		4	COAL mainly dull		4										
101	2		2½	Shale, black, carbonaceous		2½										
101	8½		6½	COAL mainly dull		6½	1/BMR					3.4	29.7	44.7	22.2	10,530
102			3½	COAL dull and bright, laminated, medium tough		3½										
102	9		9	COAL dull and bright banded, cleated		9										
102	10		1	Claystone, light brown		1										
105	2½	2	4½	? Carbonaceous Splint, black mainly	2	4½										
105	4½		2	Claystone, dark brown, silty		2										
111	1½	5	9	COAL, mainly dull, broken in part with occasional laminations and bands, and with rare dark brown siltstone band (not greater than ½")	5	9	2/BMR 3/BMR					3.1 3.5	28.3 27.9	51.6 55.7	17.0 12.9	11,380 11,980
111	3		1½	Clayshale, black, carbonaceous		1½										
111	4		1	COAL, dull		1	4/BMR					3.3	28.2	46.4	22.1	10,630
112	4	1		COAL, bright and dull banded, shattered		8										
115	4	3		Greywacke, black, carbonaceous, medium-grained, friable in places	2	2										
123	5	8	1	Greywacke, grey, coarse to very coarse-grained conglomerate in parts	4											
127	5	4		As above 4'6" probably - not recovered												

---FARRELL'S CREEK SEAM---

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
128 11	3 9	Greywacke, gy.f.grd. w. c. grd. bd.												
131 11		Siltstone grey		8										
133 11	2	Greywacke soft, grey, clayey, very fine grained		4										
		Greywacke grey to dark grey carbonaceous fine grained (coarse grained in part)												
136 11	3	soft friable at bottom	2	8										
137 5½	6½	Siltstone, dark grey with 2" coarse grained greywacke band		6½										
140	2 6½	Greywacke light grey, fine grained to grey very coarse grained, friable		5										
148	8	Greywacke grey-dark grey, fine-medium grained but coarse grained in part in middle	5	10½										
155 10	7 10	Greywacke grey, medium and coarse grained	7	10										
155 11	1	Clayshale grey to black carbonaceous		1										
156	1	COAL dull with thin band brown silty claystone		1										
157 5 (?)	1 5	COAL dull and powdery bright with band shale at bottom		10										
157 11	6	Grey band rich in calcite veins		6										
159	1 1	Siltstone grey soft with thin band shale at bottom		3										
164	5	Siltstone, grey, soft		6										
169	5	Siltstone grey, soft to claystone over bottom 4"		9½										
169 6	6	COAL dull with numerous white calcite veins over bottom 1½"		4½										
170 2	5 2	Greywacke, grey, fine grained tough with occasional siltstone band	3	1										
176 8	1 6	Siltstone grey		9½										
181 2	4 6	Claystone grey with thin greywacke band and occasional shale band	4	3										
181 3½	1½	Shale black carbonaceous		1½										
181 6½	3	Shale grey		3										
182 9	1 2½	COAL dull and bright banded to powdery intermixed with light brown silty shale		3½										
183 10½	1 1½	Interbanded light brown to off-white and grey clayshale	1	1½										

SEAM Q

SEAM P

[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
251	0	3	9	Shale, dk. grey, silty in bands	3	9										
255		4		Shale, dark grey to greyish-black	4											
255	8		8	Siltstone, grey		8										
258		2	4	Shale, grey, soft		6										
263	6	5	6	Shale, dark grey	4	7										
266		2	6	Greywacke, grey, medium-grained	1	7										
272	5	6	5	Greywacke, grey, coarse-grained	6	5										
274	6	2	1	Greywacke, grey, fine-grained, with dark grey shale bands	2											
275	$\frac{1}{2}$		$6\frac{1}{2}$	Claystone, dark grey, siderite		$6\frac{1}{2}$										
279	$6\frac{1}{2}$	4	6	Greywacke, grey, fine-grained with shaly bands and carbonaceous concretions	4	6										
281		1	$5\frac{1}{2}$	Shale, dark grey, dense ?siderite	1	$5\frac{1}{2}$										
283		2		Greywacke, grey, fine-grained	1	3										
292	6	9	6	Greywacke, grey, fine-grained with grey shale bands	9											
294	6	2		Siltstone, grey, medium hard	1	$11\frac{1}{2}$										
295	7	1	1	Shale, black, hard	1	1										
299	4	3	9	COAL, mostly bright, dull & shaly in two small bands	2	8	16/BMR 17/BMR	$\frac{1}{2}$	Seam J	3.2 3.0	29.7 31.8	43.6 44.1	23.5 21.1	10,730 11,140		
299	10		6	Shale, dark grey		6										
307	11	8	1	Greywacke, grey, fine to medium grained	8	1										
314	6	6	7	Shale, dark grey	6	3										
316	9	2	3	COAL, bright	1	$\frac{1}{2}$	8/BMR	$\frac{1}{2}$		3.0	25.8	35.5	35.7	--		
317	2		5	COAL, dull, soft ? weathered		2										
317	$9\frac{1}{2}$		$7\frac{1}{2}$	Shale, grey		$7\frac{1}{2}$										
317	10		$2\frac{1}{2}$	Shale, brown, soft		$\frac{1}{2}$										
317	11		1	Shale, grey, silty		1										
318			1	COAL, bright		1										
318	3		3	COAL, dull, soft, ? weathered		3	9/BMR			3.1	25.1	36.0	35.8	--		
319	4	1	1	COAL, bright	1	1										
319	5		1	COAL, bright and dull, soft, ? weathered		1										
319	6		1	Shale, grey, soft		1										
321	$1\frac{1}{2}$	1	$7\frac{1}{2}$	COAL, dull, soft, ? weathered		$6\frac{1}{2}$										
321	2		$2\frac{1}{2}$	Shale, brownish-grey		$\frac{1}{2}$										
321	11		9	Shale, dark grey, to grey												

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
322	4 1/2	0	1 1/2	COAL, bright		1 1/2										
322	7		2 1/2	Shale, grey		2 1/2										
323	1		6	COAL, bright		6				Seam G						
323	6		5	COAL, dull, soft, ? weathered		2										
325	2	1	8	Shale, grey	1	6										
330	9 1/2	5	7 1/2	Shale, grey, soft	5	7 1/2										
331	0		2 1/2	Shale, brown		2 1/2										
335	1 1/2	4	1 1/2	COAL, mostly dull, fragmentary		2 1/2	10/BMR			Seam E		2.6	32.9	52.5	12.0	12,680
335	6		4 1/2	Greywacke, grey, medium-grained		4 1/2	11/BMR					2.6	30.8	45.4	21.2	11,260
340	10	5	4	Greywacke, light grey, very coarse grained with some small pebbles near bottom	5	4										
341	8		10	Greywacke, grey, fine to medium-grained		10										
344	6	2	10	Greywacke, conglomerate, light grey, fine to pebble.	2	9										
353		8	6	Greywacke, light grey, coarse grained	8	4										
361	2	8	2	Greywacke, conglomerate, grey, fine, with pebble bands	8	2										
362	6	1	4	Greywacke grey, coarse to medium grained	1	4										
364	2	1	8	Siltstone grey	1	8										
366	2	2		Greywacke, grey, fine to medium-grained	2											
367	1	11		Shale, grey, medium soft		11										
367	5		4	COAL, mostly bright		4	12/BMR			Seam C		2.7	33.8	55.5	8.0	13,220
367	6		1	COAL, dull, soft, weathered		1										
370	8	3	2	COAL, mostly bright, increasingly broken with depth finally shattered	2	1	13/BMR					2.8	35.5	52.6	9.1	13,120
372	5	1	3	Shale, dark grey, soft, carbonaceous	1	8 1/2										
374	7	2	2	Siltstone, dark grey	2	2										
375	10	1	3	Shale, grey, carbonaceous	1	3										
379	10	4		Greywacke, grey, fine-grained	4											
385	8	5	10	Shale, grey, silty & sandy in bands	5											
384		8	4	Greywacke, grey, very fine to coarse grained	7	3										
413	11	19	11	Greywacke, grey, medium-grained	19	2										
422	5	8	6	Siltstone, grey	3	2										
427	7	5	2	Greywacke, grey, medium-grained with darker bands	5	2										
427	8		1	Shale, grey		1										
428	1 1/2		4 1/2	COAL, bright		4 1/2										
428	4 1/2		4	Shale, black with two brown bands		4				U. Artie's Seam.						

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
420	7½		3	COAL, mostly dull		3										
420	9		1½	Shale, dark grey.		1½										
430	2	1	5	COAL, bright	1	3	14/BMR					2.7	26.0	37.8	33.5	--
430	3½		1½	Shale, black		1½										
430	5		1½	Shale, dark brown		1½										
430	9		4	COAL, generally dull, pyritiferous		3½										
432	8	1	11	COAL, dull, soft, ? weathered		2										
432	10		2	Shale, dark grey		2										
434	10	2		COAL, bright	1	1	15/BMR					2.4	31.2	44.5	21.9	10,940
436	2	1	4	Shale, grey, soft in bands (drillers report)		Nil										
436	10		8	Siltstone, dark grey, dense, ? siderite		8										
439	7	2	9	Shale, grey	2	6										
439	11		4	Claystone, dark grey		4										
440	2		3	Shale, dark grey, very soft		3										
443	9	3	7	COAL, generally bright	3	7	16/BMR					2.4	33.3	56.6	7.7	13,310
443	11		2	COAL, dull, soft		2	17/BMR					2.5	35.6	57.1	4.8	13,880
444	2		3	Shale, dark grey to black		3										
450	6	6	4	Shale, grey, soft in bands	3	4										
451	2		8	Claystone, siderite, brownish-grey, dense		8										
460	6	9	4	Greywacke, grey, fine-grained, silty in bands	8	1										
470	7	10	1	Greywacke, grey, fine to medium grained	10	1										
471			5	Shale, grey		2										
487	6	16	6	Greywacke, grey, fine-grained, shaly in parts and with carbonaceous laminae	15											
487	9		3	Claystone, dark grey, siderite		3										
496		8	3	Shale, grey, silty in bands with siderite bands	7	7										
497	3	1	3	COAL, dull with bright bands		10½	18/BMR					2.8	30.6	46.4	20.2	11,090
497	3½		1	Shale, grey		1½										
498	9½	1	6	COAL, dull, with many bright bands	1	1½	19/BMR					1.8	30.9	47.3	20.0	11,340
499	3½		6	Shale, grey, sideritic in part		4½										
500	3½	1		COAL, dull, with bright bands		4										
500	9		5½	Shale, dark grey		5½										
501	6		9	COAL, bright		2										
501	11		5	Shale, black, medium hard		5										
501	11½		1½	Shale, brown, micaceous		1½										
502	1		1½	COAL, dull, very shaly		1										

Upper
Artie's
SeamMiddle
Artie's
Seam

Artie's Seam

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.	H.M.	V.	F.C.
503		11		COAL, bright		3 1/2		Lower Artie's Seam.						
504		1	0	COAL, (probably)		Nil.								
505		1		Shale, dark grey	1									
507	6	2	6	Siltstone and very fine grained grey wacke	2	6								
565		57	6	Greywacke, grey, medium to coarse-grained	44	9								
565	6		6	Greywacke, grey, medium to very fine grain sideritic		6								
572	8 1/2	7	2 1/2	Greywacke, grey, medium-grained	7									
573	2		5 1/2	Shale, light grey		5 1/2								
573	6		4	COAL, bright, rather soft, ? weathered		3 1/2	20/BMR			2.3	37.6	53.4	6.7	13,730
574	2		8	COAL, bright		8 1/2								
576	2	2		COAL, bright		4 1/2								
577	9	1	7	COAL, bright	1	7 1/2	21/BMR			2.8	34.3	54.8	8.1	13,190
578	6	1	9	COAL, generally bright, crumbly, soft, & weathered		7 1/2								
580		1	6	COAL, generally, bright	1	4 1/2	22/BMR			2.5	34.0	47.7	15.8	12,140
580	3		3	Shale, greyish, black										
580	7 1/2		4 1/2	COAL, bright		3								
580	11		3 1/2	Shale, greyish-black		3 1/2								
581	1		2	COAL, mostly bright		2								
581	2		1	Shale, greyish-black		1								
581	3 1/2		1 1/2	COAL, bright		1 1/2								
581	6		2 1/2	Shale, black		2 1/2								
583		1	6	COAL, bright	1	6 1/2	23/BMR.			2.6	34.1	49.2	14.1	12,340
583	9		9	Shale, dark grey, soft		9								
595	3	11	6	Greywacke, light grey, medium-grained	10	9								
597	11	2	8	Siltstone, light grey	2	8								
603	5	5	6	Greywacke, light grey, fine-grained shaly	5	6								
603	9		4	Shale, dark grey		4								
605	2	1	5	Shale, grey	1	5								
606	1	11		COAL, dull, rather shaly with a calcite lense.		11								
606	2 1/2		1 1/2	Shale, brownish grey		1 1/2								
606	10		7 1/2	COAL, mostly bright		7 1/2				2.3	34.0	45.9	17.8	11,810
607	1 1/2		2 1/2	Shale, brownish grey, soft		2 1/2								
607	4 1/2		4	COAL, mostly dull and shaly		4								
607	6		1 1/2	Shale, brownish, grey, soft		1 1/2				2.5	31.2	49.5	16.8	11,940
609	1	1	7	COAL, mostly bright	1	7								
609	6		5	Shale, greyish, -black,										

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
609	9	3		COAL, mostly dull	5	3										
609	11	2		Shale, brownish & dark grey.		2										
610	4 $\frac{1}{2}$	5 $\frac{1}{2}$		Greywacke, grey, fine-grained		5 $\frac{1}{2}$										
611		7 $\frac{1}{2}$		Greywacke, brownish-grey, fine-grained, sideritic.		5 $\frac{1}{2}$										
617		6		Greywacke, light grey, fine-grained with shale and darker bands.	5	11										
617	1 $\frac{1}{2}$	1 $\frac{1}{2}$		Claystone, grey, dense, sideritic		1 $\frac{1}{2}$										
624	9	1 $\frac{1}{2}$		Shale, grey	1	10										
643	10	19	1	Greywacke, grey, fine to medium grained	16	10										
645	10	4	8	Greywacke, dark grey, very fine grained with light grey, medium grained bands	4	8										
646	11	1	1	Shale, dark grey	1	1										
647	8		9	Claystone, brownish-grey, dense, sideritic		9										
651		3	4	COAL, bright, fragmentary	3	4	26/BMR					2.5	34.6	46.7	16.2	12,020
653	9	2	9	COAL, dull with bright bands	2	9	27/BMR					2.8	29.1	36.8	31.3	9,300
654	5		8	COAL, mostly bright		8										
654	6		1	Shale, dark brown		1	28/BMR					2.7	34.0	45.9	17.4	11,810
654	7		1	COAL, dull		1										
654	9 $\frac{1}{2}$		2 $\frac{1}{2}$	Shale, greyish-brown		2 $\frac{1}{2}$										
656	11 $\frac{1}{2}$	2	2	COAL, mostly bright	2	2	29/BMR					2.4	34.3	49.1	14.2	12,450
657	8 $\frac{1}{2}$		9	Siltstone, grey		9										
658	7		10 $\frac{1}{2}$	Shale, dark grey		10 $\frac{1}{2}$										
708	10	50	3	Greywacke, light gray, medium to very fine-grained with soft dark grey shale bands	49	11										
709	2		4	Shale, black and dark grey		4										
711	2		2	COAL, generally dull with many thin bright bands	2		30/BMR					2.2	36.6	48.9	12.3	12,730
711	3		1	Siltstone, dark grey		1										
712	1		10	COAL, generally dull with a grey siltstone lense		10	31/BMR					2.5	28.9	45.7	22.9	11,050
713	1	1		COAL bright	1		32/BMR					2.4	33.7	48.1	15.8	12,190
713	2 $\frac{1}{2}$		1 $\frac{1}{2}$	Shale, brownish-grey		1 $\frac{1}{2}$										
713	3 $\frac{3}{4}$		1 $\frac{1}{4}$	COAL, dull and bright		1 $\frac{1}{4}$										
713	5 $\frac{1}{2}$		1 $\frac{3}{4}$	Siltstone, brownish-grey		1 $\frac{3}{4}$										
715	5 $\frac{1}{2}$	1	7	COAL, dull, with rare bright bands	1	7										
715	5		4 $\frac{1}{2}$	COAL, bright		4 $\frac{1}{2}$	33/BMR					2.6	31.1	50.0	16.3	12,680
715	8		3	COAL, dull, soft, friable, ? weathered		3										

Lower
Liddell
Seam

Barrett's Seam

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
717	2	1	6	Shale, dk. gy. w. some carb. bands	1	6										
736	7	15	5	Greywacke, gray, fine-grained, shaly and with grey shale bands.	17	11										
740	10	4	3	Greywacke, light grey, medium grained with contorted bright coal streaks.	4	3										
747	6	6	8	Siltstone, dark grey to black	6	8										
769	11	27	5	Greywacke, grey, fine grained with shale bands	17	6										
788	10	18	11	Greywacke light grey, medium grained	18	11										
834		45	2	Greywacke, light grey, fine to very fine grained with dark grey shale bands	26											
846		12		Claystone, grey	40.	3										
864	11	18	11	Shale, grey, with rare sandy bands	12											
					13											

Hole completed.

Typed: 10.6.1953.

BUREAU OF MINERAL RESOURCES

Name and No. of Bore

BMR 2/3 FARRELL'S CREEK

Gessbrook

DISTRICT Muswellbrook COUNTY Durham PARISH Ravensthorpe PORTION 161 LOCATION _____

Surveyed by J. Svoronos Survey Method Tel. Alidade Elevation 539.0' Ref. Map BMR Map N14/110

Logged by M. C. Reynolds Cased --- Datum Standard Ref. Report BMR Records 1953/47

Sunk by B. M. R. Type of Drill Failing 750/S/N263 Depth BMR2-370', BMR3-552'10 Date Begun/Finished 29/8/52-10/9/52

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
11	2	11	2	Clay												
15	6	4	4	Greywacke weathered												
16	8	1	2	Siltstone to very fine grained Greywacke shaly in part, weathered	1	2										
				Greywacke grey to light grey, fine to very fine grained weathered brown mainly shaly in part with thin band carbonaceous material	3	10										
20	6	3	10	Greywacke, light brown weathered medium grained with occasional band very coarse grained	5	2										
26		5	6	Greywacke very coarse grained with clayey bands smut medium grained in part near bottom	3	8										
30		4		Greywacke fine grained, friable, powdered		8										
32		2		Greywacke, medium grained but very coarse grained in part	1	7										
35	8	3	8	Siltstone, grey		11										
36	7		11	Greywacke, fine grained		6										
37	1		6	Greywacke, medium grained-coarse grained with bands grey siltstone and occasional thin band COAL	1	11										
39		1	11	COAL dull (? split at top) with fine laminae and thin bands bright more common over bottom 2'7" and with occasional leaf of shale granular in part -slightly pyritic	3	11	1/BMR					3.3	26.4	56.9	13.4	12,170
45	8	6	8	COAL and black carbonaceous shale coarsely granular white coloured grains		2	2/BMR					3.1	30.3	49.2	17.4	11,620
45	10		2	Greywacke, light grey, fine to medium grained with numerous bands carbonaceous material	2	2										
48		2	2	Greywacke, c. to v.c.w.bds. of carb. mat. & coal bds.	1	8										
49	8	1	8													

FARRELL'S SEAM.

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
53	2	3	6	Interbedded, fine grained Conglomerate and coarse-grained Greywacke.	3	6										
54	1 1/2	11 1/2		Conglomerate, fine-medium grained		11 1/2										
55	8	1	6 1/2	Greywacke, coarse-grained to fine-grained conglomerate	1	3										
56			4	Conglomerate, mainly fine-grained		4										
74	6	18	6	Greywacke, brown-grey, fine-grained with occasional bands friable, medium-coarse grained, and with occasional siltstone bands near bottom	13	9										
76		1	6	Conglomerate medium-grained, with pebbles up to 1 1/2"		7										
75	5		5	Claystone, grey to dark brown, grey, laminated at bottom		5										
76	7		2	Shale, black, carbonaceous with small lenses light brown claystone and fine laminated bright COAL		2										
78	1	1	6	COAL, dull and bright banded, broken at top with numerous thin bands, dark brown carbonaceous shale and ? marcasite, and occasional light brown claystone bands		11 1/2										
78	7		6	Claystone to siltstone, brown-grey ? sideritic		6										
79	4		9	Greywacke, light grey, fine-grained with thin banded carbonaceous material and band siltstone		9										
83	9	4	5	Claystone, silty, brown-grey, ? sideritic as above 6", medium tough with finely disseminated pyrites shaly in part and with occasional bands of dark brown to black carbonaceous clayshale with fine COAL laminae	2	4 1/2										
84	5 1/2		8 1/2	Clay-ironstone, brown, irregularly interbedded with COAL over bottom 2 1/2"		8 1/2										
85	1/2		7	COAL, mainly dull with bright laminae medium tough, broken with band brown shale, and with lenses ? marcasite		7										

Seam R.

Seam R.

[illegible]

[illegible]

[illegible]

[illegible]

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
318	1 1/2	1	6	1	6										
			Greywacke light grey medium grained												
319	11	1	9 1/2	1	9 1/2										
364		44	1	37	4										
			bedded with siltstone over bottom 10 1/2"												
			Greywacke, light grey, medium grained, soft friable												
365	3	1	3		9 1/2	16/BMR					2.4	35.8	48.0	13.8	12,390
366		1	3	1											
368	9	2	3	1	2 1/2	18/BMR					2.2	35.3	50.6	11.9	12,700
368	11		2		2 1/2										
369	3		4		3 1/2										
369	5		2		2										
369	11		6		6										
372	7	2	8	2	8	19/BMR					2.4	38.3	53.4	5.9	13,660
			COAL, mostly bright, broken, shattered in parts												
372	8		1		1										
372	11		3		3										
373	2		3		3										
373	6		4		4										
373	8 1/2		2 1/2		2 1/2										
373	10 1/2		2		2	20/BMR					2.5	31.9	48.2	17.4	11,850
383	11		1 1/2		1 1/2										
			Shale, brownish grey, ? sideritic, lenticular												
375	6	1	7	1	3										
375	10 1/2		4 1/2		4 1/2										
377		1	1 1/2		3 1/2										
377	7		7		6 1/2										
377	10 1/2		3 1/2		3 1/2										
383		5	1 1/2		4										
389	6	6	6	6	6										
448	8	59	2	52	2										
			COAL, mostly bright, dull and shaly in two bands												
449	11	1	3	1											
451	3	1	4	1	4	21/BMR									
452	6	1	3		11						2.1	39.0	53.2	5.7	13,830
452	6 1/2		1 1/2		1 1/2	22/BMR									
453			3		2 1/2						2.3	34.8	53.2	9.7	13,030
			COAL, mostly bright, friable, ? weathered												

Article's Seam

Upper LIDDELL SEAM.

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
457 3 1/2	4	3	COAL, bright	4	1	23/BMR			-L. LIDDELL S.		2.1	39.7	53.3	4.9	13,930
457 4 1/2		1	Shale, greyish-black, soft		1	24/BMR					2.2	38.9	53.6	5.3	13,840
457 6 1/2		2	COAL, bright		2										
457 8 1/2		2	Shale, black, soft		2										
459 2	1	5 1/2	COAL, bright	1	5 1/2	25/BMR					2.2	37.9	51.1	8.8	13,260
459 4		2	Claystone, brownish-grey, dense, sideritic		2										
460 8	1	4	COAL, bright	1	4	26/BMR					2.2	38.2	53.5	6.1	13,660
463 2	2	6	Shale, grey	1	6										
466 8	3	6	Greywacke, grey, fine-grained	3	1										
467 1		5	Claystone, dark grey, dense, sideritic		5										
467 9		8	Siltstone, grey		6										
			Claystone, dark brownish-grey, dense, sideritic		6										
468 3		6			6										
470 2	1	11	Shale, grey	1	11										
472 2	2		COAL, bright	1	6	27/BMR					2.3	33.8	45.0	18.9	11,650
472 7		5	Shale, light grey		5										
474 1	1	6	COAL, generally bright		9	28/BMR					2.2	31.6	48.4	17.8	11,840
475 9	1	8	Shale, grey	1	6										
505 7	29	10	Siltstone, grey, to very finegrained greywacke and shaly with depth	25	8										
						29/BMR					2.2	33.5	44.8	19.5	11,580
511 1	5	6	COAL mostly bright, broken	4	8 1/2	30/BMR					2.2	35.0	49.2	13.6	12,460
512 5	1	4	Shale, dark grey to black	1	4										
552 10	40	5	Greywacke, grey, medium-grained	37	5										

Hole Completed.

Typed: 11/6/1953

BUREAU OF MINERAL RESOURCES

Name and No. of Bore BMR. 4S.. FARRELL'S CREEK.

DISTRICT Cessnock
Muswellbrook COUNTY Durham PARISH Ravensworth PORTION 150 LOCATION
Surveyed by J. Svoronos. Survey Method Tel. Alidade Elevation 510.2' Ref. Map BMR Map N14/110
Logged by N. Hoyling Cased Not Datum Standard Ref. Report BMR Records 1953/47
Sunk by B.M.R. Type of Drill Failing 750 S/N290 Depth 68'4" Date Begun/Finished 16.9.52/29/9/52.

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
18	8	18	8	Greywacke, brown, medium-grained												
20	4	1	8	Greywacke, light grey, fine-grained, soft	1	3										
20	9		5	Claystone, dull red, sideritic		5										
22	0	1	3	Greywacke, light grey, fine-grained soft.		11										
23	0	1	0	Shale, light grey silty in the middle	1	0										
26	2	3	2	Greywacke, light grey, fine-grained, with shaly bands	1	8										
32	4	6	2	Greywacke, light brownish grey, fine-grained with shaly bands	4	4										
38	4	6	0	Shale & Siltstone, light grey sandy in parts	5	6										
48	3	9	11	Greywacke, very fine to medium grain light grey shaly in bands	8	7										
53	11	5	8	Greywacke, grey, fine-grained, medium soft.	5	8										
57	4	3	5	Greywacke, grey & ferruginous, very coarse-grained to medium-grained at bottom.	3	5										
60	1	2	9	Siltstone, grey, medium soft	2	7										
63	4	3	3	Greywacke, fine-grained, grey soft with a brownish red,? sideritic band near bottom	3	3										
65	1	1	9	Shale, grey ferruginous, carbonaceous medium soft	1	9										
67	1	2	0	Shale, silty, blackish-brown, ferruginous, soft, weathered	1	5										
67	8		7	Shale, pinkish-br. s.		1				Heavy	circulation loss.					
68	4		8	COAL, dull, soft, weathered		1					Hole abandoned.			Typed:4.11.52.		

BUREAU OF MINERAL RESOURCES

BMR 5(S) FARRELL'S CREEK.

Name and No. of Bore

DISTRICT Cessnock COUNTY Durham PARISH Revensworth PORTION 150 LOCATION BMR 5(S) FARRELL'S CREEK
 Surveyed by J. Svoronos. Survey Method Not. Elevation Standard. Ref. Map BMR 5(S) FARRELL'S CREEK
 Logged by N. Hoyling Cased Failing 750/S/W290 Datum 503' 5 Ref. Report BMR Records 1953/47
 Sunk by B.M.R. Type of Drill Failing 750/S/W290 Depth 503' 5 Date Begun/Finished 29/9/52-23/10/52

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
30	11	30	11	Ferruginous Greywacke and shale												
34	5	4	6	Shale, brown, sandy in parts, soft	4	6										
44	11	10	6	Greywacke, ferruginous, fine-grained, rather friable, soft in parts	10	6										
46	3	1	4	Shale, dark brown, soft	1	4										
80	6	34	3	Greywacke, brown, medium grained, soft, with some 2" shale bands and a fine conglomerate band	34	3										
84	11	4	5	Siltstone, grey, carbonaceous, dark grey in the last 3"	4	5										
85	7	8		COAL, bright		8										
85	8 $\frac{1}{2}$	1 $\frac{1}{2}$		Shale, black		1 $\frac{1}{2}$										
85	9 $\frac{1}{2}$	1		COAL, bright		1										
85	10 $\frac{1}{2}$	1		Shale, black		1										
86	2	3 $\frac{1}{2}$		COAL, bright		3 $\frac{1}{2}$										
86	11	9		COAL, mostly dull, weathered		5										
87	8	9		Shale, grey, greyish-black in the lower half		9										
94	3	6	7	Greywacke, grey, fine-grained	3	10										
97		2	9	Shale, dark grey, silty	2	2										
99	5	2	5	COAL, mostly bright in bands		8										
101	5	2		Shale, dark grey, with a lighter siltstone band	1	7										
103	10	2	5	Shale, grey	2	5										
104		2 $\frac{1}{2}$		Greywacke, dark grey, medium-grained		2 $\frac{1}{2}$										
104	5 $\frac{1}{2}$	5		COAL, dull, shaly		5										
104	8	2 $\frac{1}{2}$		Shale, light grey with many carbonaceous laminae		2 $\frac{1}{2}$										
105	10	1	2	COAL, dull with thin shale lenses	1	2										
105	11 $\frac{1}{2}$	1 $\frac{1}{2}$		Shale, greyish-black		1 $\frac{1}{2}$										
106	4 $\frac{1}{2}$	5		Claystone, light grey		5										
106	7	2 $\frac{1}{2}$		Shale, black		2 $\frac{1}{2}$										

---Seam J.---

---Seam G.---

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.	H.M.	V.	F.C.
107	2		7	COAL, bright		7								
107	3		1	Shale, brown		1								
107	9		6	COAL, bright		6								
111	9		4	Shale, light grey, silty		4								
113	0	1	3	COAL, mostly bright	1	2								
113	1		1	Shale, dark grey, hard		1								
113	7		6	Shale, light grey		6								
114	6		11	COAL, mostly dull, pyritiferous		8								
115	0		6	Greywacke, grey, fine-grained		5 $\frac{1}{2}$								
116	9	1	9	Shale, dark grey, medium hard	1	7								
118	11	2	2	Shale, grey, medium soft		5								
121	0	2	1	Shale, dark grey, medium hard	1	9								
157	11	36	11	Greywacke, grey, generally coarse grained	27	8								
161	5	3	6	Shale, grey	3	6								
162	0		7	COAL, bright		7								
165	1	2	1	COAL, generally bright 7 soft, ? weathered	2	8								
165	5		4	COAL, bright, fragmentary		4								
165	7		2	COAL, dull, soft, ? weathered		2								
165	9 $\frac{1}{2}$		2 $\frac{1}{2}$	COAL, mostly dull		2 $\frac{1}{2}$								
166	2		4 $\frac{1}{2}$	COAL, dull, soft, ? weathered		4 $\frac{1}{2}$								
166	6 $\frac{1}{2}$		4 $\frac{1}{2}$	COAL, bright, fragmentary		4 $\frac{1}{2}$								
166	9 $\frac{1}{2}$		3	Shale, dark grey, soft		3								
169	1	2	3 $\frac{1}{2}$	Shale, grey	1	7								
176	7	7	6	Greywacke, light grey, medium-grained	7	3								
178	11	2	4	Shale, siltstone and fine-grained Greywacke	2	1								
182	3	3	4	Shale, carbonaceous grey, some siltstone	3									
182	10		7	Claystone, fractured grey, carbonaceous detritus		6 $\frac{1}{2}$								
183	10	1	0	Shale as above		10 $\frac{1}{2}$								
184	6		8	Claystone as above		8								
184	10		4	Sideritic claystone, broken, brown		3 $\frac{1}{2}$								
185	10		1	Claystone, grey, carbonaceous, detritus	1									
				Siltstone, grey, shaly		3 $\frac{1}{2}$								
198	2	12	4	Siltstone, grey, shaley in part, carbonaceous detritus	10	2								
				Greywacke, grey, medium-grained to fine grained, with shaly bands	28	9								
229	4	31	2											
231	0	1	8	Shale, dark grey to black	1	5								
232	11	1	11</											

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
233 3			Shale, grey												
239 0	5	9	Greywacke, gray, fine-grained	5	6										
243 6	4	6	Shale, grey, slickensided at top	4	3										
244 8	1	2	COAL, bright		2										
245 1½			Siltstone, black, micaceous		5½										
245 7		5½	Siltstone, grey		5½										
247 7	2	0	COAL, bright, shaly in first and last 3"	1	9										
247 9		2	Shale, black		2										
249 9	2	0	COAL, bright	1	8										
251 2	1	5	Shale, dark grey	1	4½										
251 9		7	COAL, bright		7										
255 9	4	0	Shale, grey, dark grey in the last 1'	3	8										
260 8	4	11	COAL, bright shattered in the lower half	3	9										
280 11	20	3	Greywacke, grey, fine-grained	17	3										
282 0	1	1	Shale, grey, silty	1	1½										
283 9	1	9	COAL, generally bright	1	6½										
284 9	1	0	COAL, bright, finely divided ? weathered		10										
284 11		2	Shale, grey		2										
285 4		5	COAL, bright		4½										
286 7	1	3	Shale, dark grey to grey	1	3										
298 5	11	10	Greywacke, grey, fine-grained, with shale bands	10	4										
301 3	2	10	Greywacke, light grey, medium-grained	2	10										
306 9	5	6	Siltstone, grey	5	3										
339 8	32	11	Greywacke, grey, fine-grained with shaly bands	30	3										
343 5	4	9	Shale, grey, silty	4	9										
345 2	1	9	Greywacke, grey, very fine-grained, shaly	1	9										
345 5		3	Shale, dark grey		3										
345 9		4	COAL, generally dull		4										
345 10½		1½	Greywacke, brownish-grey, medium-grained		1½										
347 9½	1	11	COAL, generally bright	1	11										
347 11½		2	Shale, black		2										
348 5½		6	Shale, dark grey, carbonaceous		6										
348 7½		2	COAL, bright		2										
348 10		2½	Shale, black		2½										
353 11	5	1	COAL, bright	5	1										
362 11	9	0	Siltstone, grey with carbonaceous bands	8	11										
393 5	30	6	Gw. gy. v. f. gr. sh. in parts & carb. bds.	27	1										

Upper Artie's Seam.
Artie's Seam.

U. Liddell Seam.

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
398	1	4	8	Shale, light grey, silty	4	8										
398	5		4	COAL, bright		3 $\frac{1}{2}$										
398	6 $\frac{1}{2}$		1 $\frac{1}{2}$	Siltstone, grey		1 $\frac{1}{2}$										
398	8 $\frac{1}{2}$		2	Shale, black		2										
398	10		1 $\frac{1}{2}$	Shale, grey		1 $\frac{1}{2}$										
399	8	10		COAL, generally dull		9 $\frac{1}{2}$										
400	1		5	Shale, light grey		5										
401	1		1	COAL, bright		1										
402	5	1	4	COAL, generally bright, soft, ? weathered		8										
402	7		2	COAL, bright		2										
403	9	1	2	COAL, generally bright, soft, ? weathered		6 $\frac{1}{2}$										
403	11		2	Shale, black		2										
405	0	1	1	COAL, generally bright, soft ? weathered		6 $\frac{1}{2}$										
405	0 $\frac{1}{2}$		0 $\frac{1}{2}$	COAL, bright		1 $\frac{1}{2}$										
405	1		0 $\frac{1}{2}$	Shale, brown		1 $\frac{1}{2}$										
406	9	1	0	COAL, bright		10										
			1 $\frac{1}{2}$	Shale, grey		1 $\frac{1}{2}$										
409	1	3	0	COAL, generally dull, powdery, ? weathered		7										
424	1	15	0	Siltstone, grey	14	3										
482	6	58	5	Greywacke, light grey, medium-grained	42	8										
488	0	5	6	COAL, bright, fragmentary to broken	5	6	1/BMR					3.1	34.6	53.4	8.9	13,030
488	1 $\frac{1}{2}$		1 $\frac{1}{2}$	Shale, greyish-black		1 $\frac{1}{2}$	2/BMR					3.0	36.5	53.6	6.9	13,330
488	5		3 $\frac{1}{2}$	COAL, bright	Nil?											
488	6		1	Siltstone, light grey	1											
488	9 $\frac{1}{2}$		3 $\frac{1}{2}$	COAL, bright, fragmentary		3 $\frac{1}{2}$										
489	0 $\frac{1}{2}$		3	COAL, dull, shaly		2	3/BMR					2.9	36.7	54.4	6.0	13,520
489	3		2 $\frac{1}{2}$	Greywacke, light grey		2 $\frac{1}{2}$										
490	5	1	2	COAL, bright	1	1 $\frac{1}{2}$										
490	10 $\frac{1}{2}$		5 $\frac{1}{2}$	Shale, black		5 $\frac{1}{2}$										
491	0		1 $\frac{1}{2}$	Siltstone, light grey		1 $\frac{1}{2}$										
495	3	4	3	Greywacke, light grey, fine to medium grained	4	3										
495	5		2	COAL, bright		2										
503	6	8	1	Shale grey	6	2										
Hole completed.												Typed:	11/6/1953.			

BUREAU OF MINERAL RESOURCES

Name and No. of Bore **B.M.R. 7 (S) FARRELL'S CREEK.**

DISTRICT **Muswellbrook,** COUNTY **Darham** PARISH **Ravensworth** PORTION **161** LOCATION **Cessnock**
 Surveyed by **J. Svoronos.** Survey Method **Nil** Elevation **530.6'** Ref. Map **MR 114/110**
 Logged by **N. Hoyling** Cased **Nil** Datum **Standard** Ref. Report **MR Records 1953/47**
 Sunk by **B.M.R.** Type of Drill **Failing 750 S/N262** Depth **506'4"** Date Begun/Finished **15/10/52-12/11/52**
Failing 1500S/N316

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		17		Greywacke, brown, fine to medium-grained with some dark grey shale bands	4	1										
27	6	10	6	Shale, dark grey to grey, with sandy and ferruginous bands	6	6										
34	8	7	2	Greywacke, grey, medium-grained	7											
43	11	9	3	Greywacke, grey, fine-grained, with dark grey shale bands	8	9										
46	7	2	8	Shale, bluish-grey with many thin light grey bands	2	8										
54	3	7	8	Greywacke, light grey, medium-grained	7	6										
55	9	1	6	COAL, generally bright	1	4										
58	1	2	4	Shale, dark grey	2	2										
64	4	6	3	Greywacke, light grey, fine to medium grained	6	3										
66	2	1	10	Siltstone, dark grey, shaly	1	10										
72	11	6	9	Shale, grey, with fine-grained Greywacke bands	6	9										
77	8	4	9	Greywacke, grey, very fine-grained	4	4										
84	1	7	5	Shale, grey	6											
86	7	2	6	Siltstone, light grey	2	6										
87	5		10	Shale, grey		9										
93	2	5	9	Greywacke, light grey, medium-grained	5	9										
104		10	10	Greywacke, light grey, very fine-grained shaly	8	4										
105	6	1	6	Siltstone, black, sandy	1	6										
107		1	6	Greywacke, grey, very coarse-grained, carbonaceous	1	6										
113	7	6	7	COAL, generally dull and fragmentary with shaly bands	3	11	1/BMR 2/BMR									
118	1	4	6	Greywacke, dark grey, medium to very coarse grained	4	4										
118	9		8	Greywacke, conglomerate, grey, fine		8										
								FARRELL'S CK. SEAM.				3.5	28.0	49.1	19.4	10,900
												3.1	29.3	48.7	18.9	11,120

Estimated Depth	Estimated Thickness	GEOLOGICAL DESCRIPTION OF STRATA	Core Measured	Coal Sample No.	Min. Bands Included	Min. Bands Excluded	PROXIMATE ANALYSIS				
							H.M.	V.	F.C.	ASH	B. TH. U/LB
124 6	5	Greywacke, grey, medium to c. grained.	5								
127	2	Siltstone, light grey	2								
143 1	16	Greywacke, light grey, medium-grained	14								
143 2	1	COAL, bright	1								
143 4	2	Shale, brownish-grey	2								
143 6	2	COAL, bright	2								
144	6	Shale, dark grey	6								
151 6	7	Siltstone, light grey, sandy bands in top half, shaly in the bottom	7								
152 7	1	Shale, dark grey	1								
153	5	COAL, bright	5								
153 8	8	Shale, dark grey	8								
171 8	18	Greywacke, grey, fine-grained, with three grey shale bands in the last 6'	15								
174 4	2	Shale, grey	2								
174 8	4	COAL, generally dull	4								
174 10	2	Shale, grey	2								
176 1	1	COAL, dull and bright	1 1/2	3/BMR			3.5	31.1	40.9	24.5	10,340
176 1 1/2	1 1/2	Shale, greyish-brown	1 1/2								
177 3	1	COAL, generally bright, with a brown shale lense	1	4/BMR			2	3.8	28.6	45.1	22.5 10.660
177 4	1	Shale, grey	1								
177 5	1	COAL, dull	1								
177 8	3	Shale, dark grey	3								
179 5	1	COAL, bright	1	5/BMR			3.3	30.0	47.9	18.8	11.380
179 8	3	Shale, black	3								
179 11	3	Shale, greyish white, soft	3								
180 3	4	COAL, generally dull	3 1/2								
180 3 1/2	1 1/2	Siltstone, brown	1 1/2								
185 7	5	Shale, grey	3								
191 11	6	Greywacke, light grey, medium-grained	6								
193 5	1	Shale, grey	1								
199 8	6	Greywacke, grey, medium to fine-grained shaly in parts	6								
203 8	4	Shale, dark grey, with a sideritic and Greywacke bands	4								
207 8	4	Greywacke, light grey, fine-grained	2								
212 6	4	Shale, dark grey	4								
216 3	3	Greywacke, grey, fine-grained, carbonaceous	3								

SEAM Q

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.
463	4	2	5½	COAL, bright with dull bands.	1	9	16/BMR					3.6	33.0	52.2	11.2	12,780
472	10	9	6	Shale, dark grey, soft	3	5										
484	10	12		Siltstone, grey	12											
506	4	21	6	Greywacke, light grey, medium-grained	21	6										
Hole Completed.																
Typed: <u>11.6.1953.</u>																

POND'S CREEK SUBAREA

List of Approximate Locations of Scout Boreholes
from Point of Origin No. 4 (Howick Trig. Station)
by True Bearings and Distances in Feet.

1S 114°30' 3550'	4S 226°20' 2000'
1SR106°30' 3940'	5S 36°50' 5850'
2S 318°20' 10060'	6S 354°15' 6120'
2SR318°10' 9980'	7S 0°20' 4020'
3S 53°10' 1670'	8S 309°20' 6240'
3SR 53°10' 1670'	8SR309°20' 6240'

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.				H.M.	V.	F.C.	ASH	B. TH. U/LB
40	0 1/2	2 1/2		Shale, as above.	2 1/2									
40	8	7 1/2		Greywacke, l. br. to off-wh. v. f. grd. m. tough with thin slst. band.	7 1/2									
43	7	2 11		Greywacke, orange to off-wh. f. grd. to gy. v. f. grd v. s. & shaly in part.	2	5								
44	8	1	1	Siltstone, br. gy. soft.	1	1								
44	11		3	Claystone, br. gy. to shale at bottom.		3								
46	11	2	0	Interbdd. gy. slst. & s. br. gy. f. grd. gw.	2	0								
52	11	6	0	Greywacke, l. gy. to br. limonitic m. grd.	6	0								
53	11	1	0	Sand in consolidated, fine grained.		9								
55	3	1	4	Greywacke, red br. stained m. c. grained.	1	4								
58	9	3	6	Greywacke, l. br. gy. v. coarse grained.	3	6								
60	6	1	9	Conglomerate, fine grained with 1" sand bd.	1	9								
64	5	3 11		Greywacke, v. c. to m. grained, in part.	3	11								
65	2		9	Greywacke, fine grd. finely lamd. w. carb. material friable.		3								
67	3	2	1	Interbdd. gy. f. grd. gw. to dk. gy. slst. & l. gy. m. grd. gw. stained br. in part.	1	9								
71	4	4	1	As above for 2" then l. gy. m. grd. gw. with some t. bdd. carb. mat. & t. irregular band of coal at bot. (Loss at top)	3	4								
73	7	2	3	Greywacke, c. grd. w. irreg. coal lenses friable.	1	3								
74	7	1	0	Greywacke, as above 1'3" w. pebble bds.	1	0								
75	0		5	Greywacke, as above 1'3" w. pebble bds. at bottom.		4								
77	7	2	7	Siltstone, gy. (br. in part) & tough br. gy. ? sideritic for 4" at 1'3" above bot.	2	7								
80	3	2	8	Siltstone, to silty claystone gy. almost vertically fractured.	2	8								
80	9		6	Siltstone, to very fine grd. gw. gy. fractd.		6								
82	0 1/2	1	3 1/2	Siltstone, grey.	1	3 1/2								
82	4		3 1/2	Shale, grey.		1 1/2								
83	10 1/2	1	6 1/2	? Shale, claystone to siltstone, grey.		6								
86	5	2	6 1/2	Greywacke, l. gy. m. & f. grd. w. bds. rich in carb. mat. & slst. bd near bottom.	2	6 1/2								
87	0 1/2		7 1/2	Greywacke, l. gy. c. grd. w. irregular bds. carbonaceous material.		7 1/2								
89	1	2	0 1/2	Greywacke, fine & medium grd.	2	0 1/2								

Page

Name and No. of Bore

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
175 3	3	Claystone, gy. w. pyr. carb. mat. & t. bd. shale at bottom.		5										
176 3	1 0	Carb. splint bk. intermixed w. 1" dull coal.		5										
176 10	7	Siltstone, grey.		7										
178 6	1 8	Claystone, to shale gy. to dk. gy. carb. pyrite.		10 3/4										
181 2 1/2	2 8 1/2	COAL, dull & bright bdd. to laminated.		7	1/BMR.					2.2	27.6	37.3	32.9	9,380
181 6 1/2	4	Splint bk. sdy. carb. 3" dull coal] mixed broken.		4										
182 3 1/2	9 1/4	COAL, dull & bright banded.		9 1/4	2/BMR.					2.4	30.7	41.2	25.7	10,410
182 4	1 1/2	Splint black carbonaceous pyrite.		1 1/2										
182 6 1/2	2 3/8	Intermixed bdd. coal & carb. splint (1")		2 3/8										
182 9	2 1/8	Shale, dk. gy. to bk. ypr. irreg. lamd.		2 1/8										
183 5 1/2	8 1/8	Interbdd. gy. & dk. gy. carb. shaly clst.		4										
184 3	9 1/2	Siltstone, grey.		9 1/2										
184 6	3	Siltstone, grey.		3										
185 5 1/4	11 1/4	Greywacke, l. gy. f. grd. w. t. gy. slst. bds.	11 1/4	11 1/4										
186 4 1/2	11 1/4	Claystone, dark grey.		11 1/4										
189 2	2 9 1/2	Interbdd. gy. slst. & gy.-l. gy. v. f. grd. greywacke with occasional thin clst. bd.	2	9 1/2										
190 9	1 7	Greywacke, gy.-l. gy. v. f. grd. w. t. bdd. carbonaceous material.	1	1										
192 0	1 3	Greywacke, as above 1'1" w. t. slst. bds.	1	3										
199 9	7 9	Greywacke, l. gy. f. grd. w. t. bdd. carb. material.	6	1										
205 9	6 0	Greywacke, l. gy. medium-fine grd.	5	8 1/2										
207 8	1 11	Siltstone, grey pyrite to claystone.	1	8 1/2										
207 9 1/2	1 1/2	Claystone, light brown gy. pyrite sandy.		1 1/2										
208 2 3/4	5	Siltstone, tough ? sideritic broken.		5										
208 10 1/4	7 3/4	COAL, dull & bright bdd. with foetid odour.		3 1/4										
208 10 5/8	1 1/4	Shale, black carbonaceous.		1 1/4										
209 0 1/2	2	COAL, dull & bright banded.		2										
209 10	9 1/2	Splint bk. carb. silty pyr. w. 1/2" coal bd. near bottom.		9 1/2										
210 0	2	COAL, dull.		2										
210 3	3	? COAL, &/or shale as below.		-										
210 5	2	Clayshale white & brown mottled.		2										
211 4	11	COAL, mainly dull with some bright bands.	11	3/BMR.		Seam				2.0	27.4	43.1	27.5	10,300
211 4 1/2	0 1/2	Shale, brown sandy.		1 1/2		J								

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						
212	3½		11	COAL, dull & bright finely broken.		8	4/BMR.	Seam J		1½	2.4	29.6	40.0	28.0	10,130							
212	5		1½	Shale brown to bk. carb. v. sdy. at top.		1½																
213	2		9	COAL, dull & bright broken.		5																
213	3½		1½	COAL, dull & bright banded.		1½																
214	0		8½	Shale, br. gy. to clst. pyr. slickensided.		8½	5/BMR.											2.3	35.0	45.9	16.8	11,960
214	3		3	Claystone, dk. gy. carb. to gy. shaly.		3																
215	4	1	1	COAL, dull & bright bdd. broken at bottom.		9																
215	8		4	Shale, dk. grey carbonaceous pyrite.		4																
215	9½		1½	Shale dark grey carbonaceous pyrite.		1½																
216	0		2½	Claystone, dark grey.		2½																
216	7		7	Siltstone, gy. pyr. fractd. & w. calcite veins.		7																
217	1		6	?Sideritic slst. brown grey pyr. w. calcite veins.		6																
217	7		6	Siltstone, grey.		6																
217	11		4	Claystone, gy-dk. gy. carbonaceous pyr.		4		Seam G														
220	2	2	3	Siltstone, to fine grained greywacke.	2	0½																
221	6	1	4	Claystone to slst. gy. w. gw. lenses.	1	4																
223	0	1	6	Greywacke, gy. v. f.-l. gy. f. grained.	1	6																
223	7		7	Claystone, gy. w. f. grd.gw. bds. near bot.		7																
223	9		2	Shale, dark grey carbonaceous.		2																
224	11	1	2	Interbdd. slst. & fine grd. greywacke.	1	2																
230	1	5	2	Greywacke, f. grd. w. t. slst. bands.	4	2																
230	5		4	Siltstone, grey pyrite.		4																
230	7¼		2¼	Shale, black carb. richly pyrite.		2¼																
230	7¾		1¾	COAL, dull & bright laminated.		1¾	Seam G															
230	9½		1¾	Claystone, br. carb. sdy. w. t. bds. carb. shale.		1¾																
231	0½		3	Splint black carbonaceous.		3																
231	1		1	COAL, as above ½"		1																
231	3½		2½	Claystone, br. gy. to dk. gy. carb. sandy.		2½																
231	5		1½	COAL, dull to bright broken.		1½																
231	6		1	Splint carbonaceous, dark brown.		1																
231	9½		3½	COAL, dull & bright banded, broken.		3½																
231	10¼		3¼	Shale, grey-dark grey.		3¼																
232	1¼		3	COAL, dull & bright banded.		3																
232	4¾		3½	Splint carb. w. occasional t. coal bands.		3½	6/BMR.															
233	10	1	6	COAL, dull & bright bdd. impregnated with pyrite at 1½" from top.	1	6																
233	11½		1	Shale black carbonaceous with pyrite.		1				1												

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
320 0	5	3 1/2	Greywacke, fine-medium grained	5	3 1/2									
326 0	1	7	Greywacke, medium-coarse grained.	1	4 1/2									
327 7	11	4	Greywacke, fine grained.	11	0									
338 11	4	9	Greywacke, medium grained.	4	9									
343 8	14	2	Greywacke, f. grd. with thin bdd. carbonaceous mat. & thin bds. medium grained.	14	0 1/2									
357 10		3 1/2	Greywacke, medium-fine grd. in part.		11 1/2									
358 1 1/2		7 3/4	?Coal (2") & br. sdy. clst. w. irreg. coal bands (1 1/2").		7 3/4									
358 9 1/2		2 1/4	COAL, dull & bright banded.		2 1/4									
358 11 1/2	1	6 1/4	Shale, bk. carb. sandy with thin bds. coal.	1	4 1/2									
360 6	1	5 1/2	COAL, bdd. as above cleated & powdery w. t. sandy shale lens 1 1/2" above bottom.	1	5 1/2									
361 11 1/2	4	10	Claystone, dk. gy. slickensided shaly to siltstone.	4	10									
366 9 1/2	5	1 1/2	Interbdd. slst. & f. grd. greywacke.	5	6									
371 11	1	2 1/2	Greywacke, l. gy. f. grd. w.t. gy. slst. bands.	1	2 1/2									
373 1 1/2	8		Interbdd. gy. v.f. grd. gw. & gy-dk.gy.slst.	8										
373 9 1/2	7		Shale gy. to bk. carbonaceous in part.	7										
374 4 1/2	6 1/2		Siltstone, gy. w. wedge dk. gy. sdy. slst.	6 1/2										
374 11	7 3/4		Greywacke, l. gy. w. irreg. gy. slst. band.	7 3/4										
375 6 3/4	7 3/4		COAL, dull & bright banded.	7 3/4										
375 7 1/2	2 1/2		Shale, dark brown.	2 1/2										
375 10	3 1/2		COAL, as above w. occas. v. t. sdy. sh. bds.	3 1/2										
376 1 1/2	3 1/2		COAL, as above mostly broken w. wh. min. or cleat planes.	3 1/2										
376 5	3 1/2		? dull coal to bk. carb. sh. w. some bright laminate.	3 1/2										
378 3	1	10	COAL, bdd. as above broken with 1/2" dk. br. sandy carb. shale band near bottom.	1	0 1/2									
378 10 1/2	7 1/4		COAL, dull & bright banded.	7 1/4										
378 11 1/2	1 1/2		Shale dk. gy. with thin coal bands.	1 1/2										
379 3 1/2	4		COAL, dull & bright bdd. w. 1/2" shale band.	4										
381 0 1/2	1	9	Shale to clst. dk. gy. & carb. in part.	1	9									
384 0	2	11 1/2	Greywacke, l. gy. f. grd. interbdd. w. gy. siltstone bands.	2	9 1/2									
386 5	2	5	Siltstone, to clst. gy. fractd. grading down into.	2	5									

Upper
---Artie's---
Seam.

3/4

1/2

---Middle Artie's Seam---

3/4

2.5 29.3 42.1 26.1 10,420

2.5 32.2 48.5 16.8 11,810

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
387	0	7		Clay-irnst.dk.br.gy.w.wh.calcite veins	7											
387	11½	11½		COAL, dull & bright banded.	5					Artie's Seam						
388	5½	6		Shale dk. gy. carb. interdigitating in part with grey siltstone.	6											
389	11½	1	6	Greywacke, light grey, fine grained.	1	6										
391	1	1	1½	Siltstone, gy. lamd. br. ?sideritic over middle 5".	1	1½										
392	4	1	3	Greywacke, as above 1'6".	1	3										
392	9½		5½	Greywacke, grey very fine grained.		5½										
393	0½		3	Clay-ironstone dark grey.		3										
399	5	6	4½	Greywacke, grey & fine grd. to gy. slst. w. some irreg. calcite bds. near top & occasional very t. carb. shale band.	6	4½										
399	10		5	Greywacke, grey very fine grained.		5										
401	9	1	11	Greywacke, light grey fine-medium grained.	1	11										
403	3	1	6	Greywacke, light grey coarse-v. coarse grd.	1	6										
406	11	3	8	Greywacke, light grey medium-coarse grained.	2	8										
408	6	1	7	Siltstone, grey.	1	7										
409	7	1	1	Claystone, dk. gy. rich in carb. material,	1	1										
410	6		11	Clay-ironstone dark brown grey.		11										
412	9½	2	3½	Claystone, as above tough ?sideritic at top.	2	3½										
412	10½		1	Shale dark grey carbonaceous.		1										
414	9	1	10½	COAL, dull & bright w. R. v. t. br. clst. lens near bot. broken in part.	1	10½										
414	10		1	Claystone, dark brown to black sandy.		1										
416	0	1	2	COAL, dull with bright lam.		4½										
417	9	1	9	COAL, dull & bright lamd. w. R intermixed v. t. carb. sh. bds. finely broken.		6½										
418	1		4	Shale black-dark grey, carbonaceous.		4										
421	5	3	4	Claystone, dk. gy. rich in carb. material.	3	4										
421	9¼		4½	Shale dk. gy. to bk. w. bright coal bds.		4½										
422	8½		3½	COAL, dull & bright bdd, cleated.		3½										
422	6		5½	Shale dark grey carbonaceous.		5½										
423	3¾		9½	COAL, dull w. bright lam. to bdd. w. sdy. shale laminate.		9¾										
423	7		3½	Claystone, br. sdy. to bk. carb. w. t. bds. coal.		3½										
423	11½		4½	COAL, dull w. t. bright bds. to bdd. in part.		4½										
425	6	1	6½	Claystone, dk. gy. rich in carb. material.	11											

-----Upper Liddell Seam-----

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
429	5	3	11	Interbdd. f. grd. gw. & gy. siltstone	3	11										
430	11	1	6	Greywacke, f. grd. with thin slst. bds.	1	6										
431	3		4	Siltstone, grey.		4										
431	9		6	Clay-ironstone dark brown grey.		6										
435	8	3	11	Greywacke, light grey, fine-very fine grd.	3	7										
436	4 $\frac{1}{2}$		8 $\frac{1}{2}$	Siltstone, grey.		8 $\frac{1}{2}$										
442	1 $\frac{1}{2}$	5	9	Greywacke, light grey, fine grained.	5	9										
444	3	2	1 $\frac{1}{2}$	Interbdd. fine grained gw. & siltstone.	1	6										
446	3	2	0	Siltstone, grey.	1	0										
447	7	1	4	Claystone, dk. gy. silty at bottom.	1	4										
449	8	2	1	Siltstone to v. f. grd. greywacke.	2	1										
450	0		4	Siltstone, grey.		4										
450	7 $\frac{1}{2}$		7 $\frac{1}{2}$	Shale gy-dk. gy carb. w. t. bds coal.		7 $\frac{1}{2}$										
451	3		7 $\frac{1}{2}$	Claystone, grey.		7 $\frac{1}{2}$										
451	5 $\frac{3}{4}$		2 $\frac{3}{4}$	Shale as above 7 $\frac{1}{2}$ "		2 $\frac{3}{4}$										
452	3 $\frac{1}{2}$		9 $\frac{3}{4}$	COAL, dull bright bdd. w. R. v. t. lens dark brown, sandy shale.		9 $\frac{3}{4}$										
452	5 $\frac{1}{2}$		2	Shale dk. gy carb. w. $\frac{1}{4}$ " lens ?marcasite at top.		2										
453	0		6 $\frac{1}{2}$	COAL, mostly bright finely broken.		3										
453	1 $\frac{1}{2}$		1 $\frac{1}{2}$	Shale dark grey carbonaceous.		1 $\frac{1}{2}$										
453	6 $\frac{1}{2}$		5	COAL, dull & bright banded, broken.		5										
453	7		$\frac{1}{2}$	Shale black sandy carbonaceous.		$\frac{1}{2}$										
453	9		2	Siltstone, brown grey.		2										
453	9 $\frac{1}{2}$		$\frac{1}{2}$	Shale black carbonaceous very sandy.		$\frac{1}{2}$										
454	10	1	0 $\frac{1}{2}$	COAL, dull & bright lam		2										

Lower Liddell Seam

typed 11.6.53

BUREAU OF MINERAL RESOURCES

BMR. 1 (S)R POND'S CREEK.

Cessnock
 DISTRICT Muswellbrook. COUNTY Durham PARISH Howick
 N. Gorbunow Theodolite Traverse PORTION 121 LOCATION Howick Trig. /3960' 97'30"
 Surveyed by Paul G. Duff Survey Method 10' Elevation Standard Ref. Map BMR. N14-110
 Logged by J. MC D. Royle Cased Sullivan 22 Datum 418'0" Ref. Report 4. 9. 52/12.12.52
 Sunk by Type of Drill Depth Date Begun/Finished

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
15	7	15	7	Soil, clayey & sdy. brown, pebbly in part.	13	0										
39	2	23	7	Claystone, soft, friable, sdy. yellow, brown and grey.	21	3										
44	1	4	11	Greywacke, light brown-red, very fine grd.	4	11										
47	3	3	2	Shale, grey, iron-stained, clayey in part.	1	8										
51	6	4	3	Claystone, hard, silty at bottom grey, some limonite pebbles.	1	7										
54	5	2	11	Greywacke, light red-brown, very fine grd.	2	9										
56	0	1	7	Claystone, brown-grey hard, iron-stained.	1	7										
58	9	2	9	Greywacke, as before.	2	9										
60	11	2	2	Siltstone, l. brown-grey, iron-stained, broken.	2	2										
62	11	2	0	Siltstone, brown & light brown.	2	0										
63	7		8	Limonite red brown, irregular.		8										
65	1	1	6	Claystone, light brown & grey, friable.	1	6										
65	7		6	Smut mixed with some claystone.		6										
70	9	5	2	Greywacke, l. brown, clayey in thin bands, vertical fractures.	4	10										
73	9	3	0	Greywacke, light brown, medium grained.	3	0										
75	9	2	0	Greywacke, as above.	1	6										
77	6	1	9	Limonite, sandy.		9										
80	0	2	6	Greywacke, as above.	2	0										
83	11	3	11	Siltstone, cream, some iron-stained, broken.	2	0										
84	8		9	Shale grey & light brown.		9										
86	3	1	7	Limonite, red-brown.		8										
86	5		2	Shale, as before.		2										
88	7	2	2	Siltstone, light brown fractured, fractures iron-stained.	2	2										
92	0	3	5	Shale, grey, common carb. detritus.	2	11										
93	11	1	11	Shale, as before.		9										
99	0	5	1	Greywacke, light grey, very fine grained.	5	1										
106	2	7	2	Shale dark grey silty in part,	7	0										

Seam C

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
106 8			Shale dark grey, much pyrites.												
107 5		11	COAL, very broken.		8	Seam									
108 3		10	COAL, dull, cleated.		4	A									
108 7		4	Shale, grey, hard.		2										
108 11		4	Shale, grey, carb. detritus pyrites.		4										
109 10		11	Shale, dark grey, carbonaceous.		4										
110 6		8	COAL, broken dull & bright, friable, smutty finely divided.		8										
110 10		4	Greywacke, light grey f. grd. pyrites.		4										
112 1	1	3	Shale, light grey.		11										
116 1	4	0	Greywacke, light grey, fine grained.	4	0										
118 7	2	6	Greywacke, light grey, m. grd. unconsolidated.		2 6										
124 11	6	4	Greywacke, light grey, m. grd. & coarse.	4	10										
125 11	1	0	Greywacke, light grey, coarse grained.	1	0										
126 10		11	Shale, grey.		11										
128 10	2	0	Shale, grey.	1	7										
130 0	1	2	Siltstone, light grey.	1	2										
137 8	7	8	Greywacke, l. grey, very coarse grained, some fine grained bands.	6	8										
145 9	8	1	Greywacke, light grey, very coarse grd. grading into conglomerate.	7	3										
146 6		9	Greywacke, light grey, coarse grained.		9										
147 10	1	4	Siltstone, light grey, t. carb. laminations.	1	4										
150 7	2	9	Greywacke, light grey, coarse grained.	2	9										
153 8	3	1	Greywacke, light grey, coarse grained.	2	7										
155 9	2	1	Siltstone, light grey.	2	1										
158 9	3	0	Greywacke, light grey, very fine grained.	3	0										
162 3	3	6	Greywacke, light grey, f. grd. some carb.	3	6										
164 0	1	9	COAL, mostly dull, smutty broken, soft fri.	1	6 1/2										
164 7		7	COAL, mostly dull.		6 3/4	1/BMR.					3.5	33.1	50.1	13.3	12,360
164 8 1/2		1 1/2	COAL, dull & cleated.		1 1/2										
165 0 1/2		4	Claystone, grey, very soft, silty.		4										
165 5 1/2		5	COAL, very broken.		3										
166 0		6 1/2	COAL, dull, cleated.		6 1/2										
167 0	1	0	COAL, dull & bright, broken.	11	2/BMR.						3.3	31.4	43.8	21.5	11,120
168 0	1	0	COAL, dull & bright, friable, cleated.		8 1/2										
168 3		3	COAL, dull, shaly.		2										
170 4	2	1	Siltstone, grey.	2	1										

Upper Artie's Seam

[illegible]

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
254 7	2 7	Greywacke, light grey, f. grd. t. carb. onaceous laminae.	2	7										
256 1	1 6	Siltstone, grey.	1	6										
264 1	8 0	Greywacke, light grey, medium grd. rare thin carbonaceous laminae.	8	0										
265 8	1 7	Greywacke, light grey, medium grd. some coal lenses.	1	1										
266 9	1 1	Siltstone, light grey one t. coal band.	1	1										
268 6	1 9	Shale, dark grey.	1	9										
270 0	1 6	Greywacke, light grey, medium & fine grd. shale at bottom.	1	6										
270 7	7	Shale, grey, broken.		7										
270 8 1/2	1 1/2	Shale, grey, carbonaceous in part.		1 1/2										
271 10	1 1 1/2	COAL, dull & bright broken one t. shale bd.		7 1/2										
272 4	6	Shale, black, carbonaceous.		3										
273 0	8	COAL, mostly dull, fragmentary.		5	6/BMR.					3.0	30.9	41.9	24.2	10,610
273 1 1/2	1 1/2	Shale, brown silty, thin, carbonaceous, lam.		1 1/2										
273 8 3/4	7	COAL, dull, fragmentary.		4 3/4										
273 9 3/4	1	Shale, brown grey.		1										
274 1	3 1/2	COAL, dull & bright cleated.		3 1/2				2 1/2						
275 0	11	COAL, dull & bright, fragmentary.		7 3/4										
275 7	7	COAL, dull & bright banded.		3	7/BMR.					3.6	28.7	38.6	29.1	9,610
275 9	2	Shale, black, carbonaceous, broken.		2				2						
276 5	8	COAL, very shaley, bright bands, broken.		5										
277 10	1 5	Shale, grey & dark grey carb. in part.	1	5										
279 4	1 6	Shale, grey carbonaceous material.	1	6										
280 2	10	Siltstone, light grey.		10										
282 0	1 10	Siltstone, shaley, light grey.	1	10										
286 0	4 0	Siltstone, shaley in part, some fractured.	4	0										
289 9	3 9	Greywacke, light grey, fine grained.	3	9										
290 6	9	Siltstone, grey sideritic, hard dense.		9										
292 6	2 0	Greywacke, light grey, medium grained.	2	0										
302 6	10 0	Greywacke, light grey, thin carb. lam.	9	9										
305 9	3 3	Greywacke, light grey, medium grained.	3	3										
309 3	3 6	Siltstone, grey partly sideritic.	3	6										
310 3	1 0	COAL, dull & bright cleated.		10 1/2	8/BMR.					3.3	34.9	48.6	13.5	12,280
311 4	1 1	COAL, fragmentary & shattered.		11 1/2										
311 6	2	Siltstone, light grey.		1 1/2										
311 10	4	Shale, black, carbonaceous.		4										

Lower Liddell Seam.

Barrett's
Seam.

BUREAU OF MINERAL RESOURCES

Name and No. of Bore BMR. 2S POND'S CREEK.
Approx
DISTRICT Cessnock COUNTY Durham PARISH Howick PORTION 121 LOCATION Howick Trig./10040y310°
Surveyed by N. Gorbunow Survey Method Theodolite Traverse Elevation 489.5' ASL. Ref. Map BMR. N14-110
Logged by M.A. Reynolds Cased No Datum Standard Ref. Report BMR. Records 1953/47
Sunk by BMR. Type of Drill Failing 750/290 Depth 78'3" Date Begun/Finished 23.10.53/28.10.52

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
5	0	5	0	Clay, brown.	-	-										
46	8	41	8	Greywacke, light grey stained brown, fine - very fine grained, with occasional thin slst. band, weathered.	27	8										
47	6		10	Siltstone, brown, weathered.		10										
52	5	4	11	Greywacke, as above soft, shaly.	4	9										
60	0	7	7	Shaly claystone grey to shale rich in carbonaceous material with 2 thin bands weathered coal.	3	8										
67	3	7	3	Greywacke, dk. gy. carb. to grey with thin band carbonaceous siltstone weathered.	2	9										
67	9		6	Dark gy. bd. distorted porous with white min. weathered.		3										
78	3	10	6	?Dolerite light brown weathered to dark grey in part with a suggestion of brecciation over bottom 8" Cavernous for 2' below this.	7	6										
													typed	12.6.	53	

BUREAU OF MINERAL RESOURCES

Name and No. of Bore BMR. 2(S)R POND'S CREEK.

Cessnock

DISTRICT Muswellbrook COUNTY Durham PARISH Howick PORTION 121 LOCATION Howick Tris./9960/309⁰

Surveyed by N. Gorbunov Survey Method Theodolite Traverse Elevation 489.5' ASL Ref. Map BMR. N14-110

Logged by M.A. Reynolds. Cased No Datum Standard. Ref. Report BMR. Records 1953/47

Sunk by BMR. Type of Drill Failing 1500/316 Depth 1077'3" Date Begun/Finished 13.11.52/13.2.53

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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
191 8		Shale bk. carb. w. t. bds. bright coal.	3								
192 0	4	Siltstone, grey.	4								
192 6	6	COAL, bright mainly w. rare t. sh. band.	6								
193 4	10	Siltstone, grey, soft, shaly at top.	10								
198 7 1/2	5 3 1/2	Greywacke, medium-coarse grained.	5 3 1/2								
205 11	7 3 1/2	Siltstone, gy. w. occas. sdy. bd. tuffaceous in part.	7 3 1/2								
214 11	9 0	Shale carb. mostly s.w.bds. coal w. thin calcite veins.	2 8		Seam X						
236 5	21 6	Greywacke, fine grained, with slst. bands.	21 6								
252 7	16 2	Greywacke, m-c. grd. to f. grd. cgl. with some thin slst. bands.	15 2								
267 6	14 11	Siltstone, grey, soft in part.	9 2								
282 2	14 8	Greywacke, coarse grained.	14 8								
283 0	10	Shale dk. gy. carb. w. t. bds. bright coal.	10								
294 2	11 2	Siltstone, gy-dk. gy. to v. f. grd. gw. impact w. 8" sideritic at 2'6" from ht.	11 2								
321 6 1/2	27 4 1/2	Greywacke, f. grd. w. numerous gy. slst. bds. & rare ? sideritic band.	27 4 1/2								
322 3	8 1/2	Siltstone, gy. to dk. gy carb. shaly.	8 1/2								
322 6	3	COAL, dull & bright banded.	3		Seam W						
327 6	5 0	COAL, bright powdery with rare dull bds.	2 3	5/BMR.			3.5	27.4	46.9	22.2	10,730
328 11	1 5	Greywacke, l. gy, f. grd. w. t. slst. bds. faulted.	1 5								
334 6	5 7	Siltstone, grey.	4 2								
335 1	7	Clay-ironstone.	7								
338 0	2 11	Shale gy. silty with thin gw. band.	2 11								
345 2	7 2	Greywacke, very fine-fine grained.	7 2								
362 0	16 10	Greywacke, medium-v.c. grd. w. pebbly bds.	16 10								
367 8	5 8	Conglomerate fine-medium grained.	5 8								
372 3	4 7	Siltstone, gy. ?sideritic near top w. numerous thin fine-medium grd. cgl. bds.	3 7								
373 2	11	Greywacke, fine grd. with siltstone bands.	11								
376 1	2 11	Greywacke, light grey, medium grained.	2 11								
377 11	1 10	Greywacke, coarse-very coarse grained.	1 10								
384 1	6 2	Conglomerate, fine-medium grained.	6 1								
384 5	4	Greywacke, fine grained.	4								
386 0	1 7	Greywacke, very coarse grained.	1 7								

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
387	3	1	3	Greywacke, light grey, fine grained.	1	3										
389	1	1	10	Greywacke, light grey, fine grained.	1	10										
389	8		7	Siltstone, grey.		7										
390	0 1/2		4 1/2	Shale, grey-dark grey, carbonaceous.		4 1/2										
390	8		7 1/2	COAL, dull & bright banded.		7 1/2										
391	2		6	Shale, black-dark grey carb. with thin greywacke band.		3										
395	10	4	8	Siltstone, to very fine grained greywacke.	3	9										
396	11	1	1	COAL, dull & bright banded, broken with rare thin carbonaceous shale band.	1	1										
397	0		1	Shale, black carbonaceous with laminated bright coal.		1										
398	8	1	8	COAL, as above.		9 1/2	6/BMR.					3.3	27.2	48.6	20.9	10,920
399	4		8	COAL, dull & bright banded, broken.		8										
400	3	11		Intermixed silt, sandy carbonaceous shale & some coal.		9 1/2										
400	8		5	COAL, dull cindered & bright laminated distorted.		5	7/BMR.					2.6	11.5	67.7	18.2	11,310
401	8	1	0	COAL, as above 5"		11 1/2										
402	0		4	COAL, dull & bright with metallic lustre.		4										
404	6	2	6	?Andesite, light grey amygdaloidal.	2	6										
405	6	1	0	COAL, as above 4"		3 1/2										
406	2		8	Siltstone, grey sandy to light gy, fine grained greywacke,		8										
410	7	4	5	Siltstone, gy. shaly w. t. sdy. bds. at bot.	4	5										
412	6	1	11	Greywacke, light grey, medium grained.	1	11										
415	6	3	0	Siltstone, gy irregularly banded & shaly in part.	3	0										
416	1		7	Hard, grey band with calcite veins to clay-ironstone.		7										
419	4	3	3	Interbdd. fine grd. greywacke, & grey siltstone.	3	3										
423	0	3	8	Shale gy. rich in carbonaceous material.	2	11										
428	8	5	8	Greywacke, l. gy. f. grd. interbdd. w. gy. siltstone.	5	8										
429	2		6	Siltstone, tough grey sideritic.		6										
433	4	4	2	Shale gy.-dk. gy. carb. s.w.t. clst. bds.	2	9										
434	2		10	Greywacke, very fine to fine grained.		10										

Farrell's Creek Seam--

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
435 5	1 5	Greywacke, fine grained.	1	5										
435 11		Siltstone, grey.		6										
438 5	2 6	Shale, grey-dark grey.	1	8										
444 0	5 7	Greywacke, fine grd. with rare slst. bd.	3	7										
448 2	4 2	Siltstone, grey.	3	4										
450 9	2 7	Carbonaceous shale & ? coal.	-	-										
453 1 1/2	2 4 1/2	Greywacke, fine grained.	2	4 1/2										
453 10		Siltstone, grey.		8 1/2										
454 3	5	Shale dark grey with thin bds. coal.		5										
454 5	2	COAL, mostly bright broken.		2										
455 0	7	Siltstone, grey.		7										
464 8	9 8	Greywacke, fine grd.-m. grd. w. t. slst. bands.	9	8										
465 7	11	Shale grey-dark grey.		11										
466 1	6	COAL, dull & bright bdd. w. R. t. sh. bd.		6										
468 4	2 3	Shale gy-dk. gy. carb. w. R. lam. bright coal.	2	3										
469 3	11	Shale gy-dk. gy. carb. w. t. bd. dull coal.		11										
469 4 1/2	1 1/2	Shale br. soft ? tuffaceous.		1 1/2										
470 4	11 1/2	COAL, dull & bright bdd. to dull at bottom.		10 1/2										
470 8 1/2	4 1/2	COAL, dull & bright banded.		3 1/2										
471 4	7 1/2	Shale dk. gy.-bk. carb. w. wh. veins at top 1/2" band dull coal.		7 1/2										
471 6	2	Shale, light grey finely banded.		2										
472 2	8	Shale to siltstone dark grey.		8										
472 9	7	Siltstone, sideritic.		7										
476 6	3 9	Siltstone, grey, tough sideritic in part.	3	9										
477 0	6	COAL, dull & bright bdd. w. R. t. sh. bd.		6										
477 9 1/2	9 1/2	Shale br. gy. w. about 1" broken bright coal.		9 1/2										
477 10	1 1/2	COAL, dull & bright banded.		1 1/2										
478 2	4	COAL, dull & bright bdd. w. t. sh. bd. at bottom.		4										
483 9	5 7	Interbdd. slst. & gw. faulted & w. wh. calcite veins.	5	7										
484 2	5	Shale, dark grey.		5										
485 3	1 1	Siltstone, black carbonaceous, broken with 2" coal (approximately)	1	1										
486 10	1 7	Siltstone, brown grey.	1	7										
488 3	1 5	Greywacke, light grey, fine grained.	1	5										

Seam Q

Seam P

Seam O-

[illegible]

[illegible]

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
724 9	5 6	Siltstone, gy. rich in carb. material tough near bottom.	4 11								
766 0	41 3	Greywacke, f. to v. f. grd. interbedded w. gy-dk. gy. slst. w. 1' bd. rich in calcite, siderite at 2'6" from top.	41 1								
769 6	3 6	Clay-ironstone, to sideritic slst. br. gy. tough.	3 6								
772 21	2 7	Greywacke, fine grained.	2 7								
773 1	1 0	Siltstone, grey.	1 0								
773 9	8	Shale, gy.-dk. gy to black carbonaceous sdy. w. t. bd. of coal.	8								
780 10	7 1	COAL, dull & bright banded.	4 11	9/BMR. 10/BMR. 11/BMR.			2.6 2.7 2.8	35.4 29.1 33.9	48.3 57.7 57.0	13.7 10.5 16.3	12,460 12,730 13,460
781 1½	3½	Shale br. & l. br. tuff. sandy pyrite.	3½								
787 1½	6 0	COAL, dull & bright bdd. becoming powdered near bottom.	3 2	12/BMR. 13/BMR.			2.8 3.0	35.5 29.9	53.6 44.1	8.1 23.0	13,180 10,800
787 4½	3	Siltstone, grey.	3								
787 6	1½	COAL, dull & bright banded.	1½								
787 7½	1½	Claystone, dark brown sandy.	1½								
788 2	6½	COAL, banded as above.	6½								
788 6	4	Shale, black carbonaceous.	4	14/BMR.			2.6	21.3	49.9	26.2	10,250
789 6	1 0	COAL, banded as above.	9								
790 1	7	COAL, bdd. as above w. t. fusinitic band.	1½								
791 7	1 6	Siltstone, dk. gy. - black, carbonaceous.	1 5								
796 8	5 1	?Intrusion rock, l. blue & white mottled.	5 1								
803 0	6 4	Siltstone, as above sideritic in part to f. grd. dark brown & grey greywacke.	6 4								
940 6½	37 6½	Greywacke, m-c. grd. w. occas. slst. band.	35 9								
849 6½	9 0	Greywacke, fine grained.	9 0								
855 3	5 8½	Siltstone, gy. w. 2½" dk. gy. shy. bd. at bottom.	5 8½								
857 4	2 1	COAL, mostly bright broken to powdered with rare thin shale band.	2 1	15/BMR.			3.1	25.4	39.2	32.3	9,310
861 0	3 8	COAL, dull for 8" then dull & bright bdd.	3 8								
861 3	3	Siltstone, dark brown pyrite.	3								
862 0	9	COAL, bright powdered (daut) w. t. shale bands.	9								
864 0	2 0	Greywacke, light grey, coarse grained.	4								

-----Artie's Seam-----

Upper
Liddell
Seam.

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
864	2		2	Shale, dark grey, carbonaceous.		1½										
869	11	4	11	Siltstone, dark grey, carbonaceous.	3	6										
876	6	7	5	Siltstone, grey & v. f. grained greywacke.	7	5										
881	10	5	4	Siltstone, & v. f. grd. gw. some shale.	5	4										
882	9		11	Siltstone, sideritic br. gy. broken.		6										
886	0	3	3	Shale, grey some l. gy. v. f. grd. gw.	3	3										
893	10	7	10	Greywacke, light grey, fine-medium grd.	7	10										
895	6	1	8	Siltstone, grey.	1	8										
897	0	1	6	Siltstone, grey shal. near bottom.	1	6										
898	6	1	6	Siltstone, black carb. to silty, shale.	1	6										
898	11½		5½	COAL, dull & bright bdd. highly pyrite at bottom.		5½										
899	1½		2	Shale, dark brown, carbonaceous, soft.		2										
899	11½		10	COAL, bdd. as above & highly pyr. intermixed w. s. br. sh. as above & with thin band of grey siltstone.		10										
900	1		1½	Siltstone, black, carbonaceous.		1½										
900	4		3	Shale off white to light brown ? tuff.		3										
900	11		7	COAL, dull mainly with bright laminae and thin band shale at bottom.		7										
901	2½		3½	Siltstone, grey.		3½										
903	4½	2	2	Intermixed s. gy. shale & powdery bright coal.		2½										
903	8½		4	COAL, dull & bright bdd. fragmentary w. ¾" band carbonaceous siltstone.		4										
904	10½	1	2	COAL, tough indurated & intruded.	1	2										
905	6		7½	Shale, carb. w. t. bds. coal indurated.		7½										
905	8		2	COAL, as above 1'2".		2										
906	0		4	Siltstone, black, carbonaceous.		4										
907	0	1	0	COAL, w. t. shale bands indurated.		7										
913	6	6	6	Intrusive rock ?Andesitic to ?Doleritic with some xenoliths, pyrite.		6										
916	8	3	2	Shale, bk. carb. indurated & w. t. bds. coal.	1	4										
920	2	3	6	Greywacke, fine grained.	11	11										
928	2	8	0	Siltstone, grey.	6	2										
939	9	11	7	Greywacke, f-v. f. grd. w. x bedding & t. bd. ? sideritic.	10	0										
945	2	5	5	Siltstone, grey.	5	5										
945	3		1	Shale, gy. w. t. carb. lam. & wh. calcite veins		1										

-----Lower Liddell Seam-----

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
947	9	2	6	COAL, dull & bright bdd. w. $\frac{1}{2}$ " bd. br. gy.sdy. shale near bot. fragmentary at bottom.	2	0 $\frac{1}{2}$	16/BMR. Barrett's Seam					2.9	32.9	47.7	16.5	11,930
948	6		9	Siltstone, br. gy. sandy pyr. & ? shale.		2 $\frac{1}{2}$										
949	6	1	0	COAL, dull & bright banded & ? shale.		2										
949	8		2	Shale, dark grey, carbonaceous.		2										
950	9	1	1	Siltstone, grey-dark grey, sandy.	1	1										
951	3		6	COAL, dull & bright lamd. w. t. band carbonaceous shale.		2 $\frac{1}{2}$										
966	3	15	0	Siltstone, mainly gy. & br. gy. w. t. gw. bds. & w. t. bd. shale.	11	7										
969	9	3	6	Greywacke, f. - v. f. grd. showing faulting to a small degree.	3	6										
976	6	6	9	Greywacke, l. gy. f. grd. w. large br. tough clst. nodules over bottom 1'.	6	9										
1003	6	27	0	Greywacke, gy- l. gy.-v.f. & fine grd.	27	0										
1016	9	13	3	Greywacke, gy. & l. gy. grading into slst. numerous thin carbonaceous laminae, vertically fractured in part.	11	2										
1036	3	19	6	Greywacke, gy. v. f. grd. silty towards bot. tough indurated in part.	19	6										
1062	6	26	3	Siltstone, dk. gy. mic. w. t. bds. & lenses of f. grd. gw. & w. t. bd. lst. 4'4" above bottom.	22	7										
1064	8	2	2	Siltstone, dark grey.	2	2										
1065	2		6	Clay-ironstone w. marcasite lens to ?lst. (cone in cone structure.)		6										
1077	3	12	1	Siltstone, dk. grey with marcasite nodules.	10	0							typed	12.6.53		

BUREAU OF MINERAL RESOURCES

Cessnock

Name and No. of Bore

BMR. 3S POND'S CREEK.

DISTRICT Muswellbrook COUNTY Durham PARISH Howick PORTION 121 LOCATION 121
 Surveyed by N. Gorbunow Survey Method Theodolite Traverse Elevation 545.1' ASL Ref. Map BMR. N14-110
 Logged by Paul G. Duff Cased No Datum Standard Ref. Report BMR. Records 1953/47
 Sunk by BMR. Type of Drill Failing 1500/293 Depth 395' 11" Date Begun/Finished 3.11.52/13.11.52

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
4	0	4	0	Siltstone, light grey.		6										
9	0	5	0	Claystone, light grey & white, broken.		8										
13	8	4	8	Greywacke, red-brown, fine grained.		8										
18	6	4	10	Greywacke, light grey, broken, fine grd.		10										
19	1		7	Shale, grey, silty in part, carb. detritus.		7										
20	1	1	0	Siltstone, light grey, fractured.		11										
23	5	3	4	Greywacke, light grey, wd. f. grd. & very fine grained.	3	4										
24	6	1	1	Greywacke, light brown, med. grd. wd.	1	1										
26	2	1	8	Claystone, light grey, very broken.	1	8										
27	7	1	5	Shale, grey & black, mostly carbonaceous, weathered thin bright coal bands.	1	5										
28	6		11	Greywacke, v. f. grd. & slst. interbedded much carbonaceous detritus.		11										
30	2	1	8	Greywacke, v. f. grd., light grey, broken.	1	8										
31	0		10	Claystone, grey, hard.		9										
32	2	1	2	Claystone, as before with wd. calcite veining.		8										
34	3	2	1	Siltstone, light grey, many thin carb. lam.	2	1										
36	3	2	0	Shale, mainly grey partly carb. fine grd. greywacke & siltstone beds, rare.	2	0										
40	3	4	0	Siltstone, grey, numerous carb. laminations.	3	3										
42	4	2	1	Greywacke, fine grained, light grey.	2	1										
43	7	1	3	Siltstone, brown-grey, sideritic		11										
48	9	5	2	Greywacke, as above.	5	2										
49	4		7	Claystone, sideritic on bot. one t. bright coal band with pyrites & calcite.		4										
50	5	1	1	Claystone, grey.	1	1										
55	3	4	10	Siltstone & v. f. grd. gw. interbdd. l. grey	4	10										
55	11		8	Shale, dk grey & black, carb. pyrites.		8										
60	1	4	2	COAL, mostly broken finely;	4	2										

? Farrell's
Ck. Scan.

[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
125	8	10		COAL, finely divided weathered (dent)		6										
126	3	7		Shale, grey-light.		7										
126	8	5		Shale, dark grey, broken.		5										
131	6	4	10	Siltstone, light grey.	4	10										
135	0	3	6	Greywacke, light grey, medium & fine grd. some thin bright coal bands.	3	6										
141	8	6	8	Greywacke, medium to coarse grd. thin carb. laminations.	6	8										
142	2	6		COAL, very broken.		1										
142	9	7		Shale, dark grey, carbonaceous.		7										
145	0	2	3	Greywacke, light grey, medium grained.	2	3										
155	0	10	0	Greywacke, as before.	7	6										
162	0	7	0	Greywacke, as before.	6	6										
163	6	1	6	Greywacke, dk. grey, carbonaceous, broken.	1	0										
165	0	1	6	Greywacke, l. grey, fine grained.		6										
170	10	5	10	Greywacke, light grey, very fine grained.	5	10										
175	0	4	2	Greywacke, light grey, medium grained.	2	11										
183	1	8	11	Siltstone, l. grey, vertically fractd. in part, fractures calcite filled.	6	1										
185	0	1	11	Shale, black, carbonaceous.	1	2										
185	5	5		COAL, very finely comminuted, weathered.		3										
186	2	9		Shale, light grey.		9										
186	11	9		COAL, mostly bright finely divided.		7										
187	3	4		Claystone, grey, shaly.		4										
187	9	6		COAL, as above.		4										
188	0	3		Shale, light grey.		3										
191	10	3	10	Siltstone, light grey, friable.	2	10										
194	6	2	8	Greywacke, f. grd. & v. f. grd. vert. fractd.	2	8										
204	4	9	10	Greywacke, medium grd. light grey, friable.	8	10										
212	0	7	8	Greywacke, f. grd. & m. grd. l. grey, wd.fri.	7	8										
216	6	4	6	Greywacke, as before.	4	6										
219	0	2	6	Shale, grey & dark grey.	2	6										
222	0	3	0	Greywacke, as above.	3	0										
223	0	1	0	Shale, grey, carbonaceous.	1	0										
223	7	7		Shale, black, carbonaceous.		7										
224	7	1	0	Shale, as before, very broken.		10										
228	6	3	11	COAL, dull & bright banded, fri. v. broken.	2	11	1/BMR.					3.4	30.4	40.3	25.9	10,100
229	9	1	3	COAL, cleated mostly bright.		10	2/BMR.					3.6	35.5	51.4	9.5	12,710
229	10	1		Shale, black, carbonaceous.		1										

Seam P--

Seam N.

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
230	11	1	1	COAL, dull & bright banded.	8½		3/BMR.			Seam N.		3.7	27.6	39.0	29.7	9,430
232	6	1	7	Shale, dark grey, carbonaceous, soft.	1	7										
242	6	10	0	Greywacke; l. grey, m. grd. fri. broken.	7	8										
246	8	4	2	Siltstone, grey.	4	2										
246	10		2	COAL, bright crumbly.		2										
252	0	5	2	Greywacke, light grey, fine grained.	1	2										
254	8	2	8	Greywacke, light grey, medium grained.	2	8										
257	5	2	9	Siltstone, grey, some carb. detritus.	2	9										
259	9	2	4	Shale, dk. grey & black carbonaceous.	2	4										
260	6		9	COAL, dull finely divided.	6		4/BMR.				3.5	26.4	40.1	30.0	9,440	
264	2	3	8	COAL, dull & bright v. broken small shale pieces intermixed.	3	0	5/BMR.			Seam J	3.2	25.0	33.3	38.5	- -	
265	0	1	10	Siltstone, light grey.	1	10										
268	2	2	2	Shale, grey, carb. laminations.	1	2										
272	0	3	10	Siltstone, sideritic calcite veins.	1	2										
279	6	7	6	Siltstone, with thin carb. laminations.	6	6										
280	5		11	Shale, carbonaceous, black & dk. grey pyr.		11										
285	0	4	7	COAL, dull & bright banded, bottom 6" broken badly.	3	6	6/BMR.			Seam G	3.3	29.9	44.5	22.3	10,710	
286	8	1	8	Shale, grey with one 1" br. coal band.	1	3	7/BMR.				3.4	33.5	49.7	13.4	12,150	
288	8	2	0	Siltstone, light grey.	1	7										
295	0	6	4	Greywacke, l. grey, f. grd. with some shale bands & rare coal lenses.	6	4										
295	4½		4½	Claystone, grey hard calcite veins.		4½										
295	8		3½	COAL, cleated, dull.		2½										
296	0		4	Siltstone, light grey, small coal lenses.		5										
297	0	1	0	COAL, mostly dull cleated some broken one small black carbonaceous shale band.		11				Seam E--						
297	9		9	COAL, dull & bright very broken weathered.?		7										
298	6		9	Siltstone, light grey.		10										
301	0	2	6	Siltstone, shaly in part numerous thin carb. laminations.	1	1										
303	6	7	6	Siltstone, light grey, some fine grd. gw rare thin bright coal bands pyrites.	6	6										
318	10	10	4	Siltstone, light grey friable carb. detritus.	5	10										
320	2½	1	4½	Shale, dark grey, silty, very broken, rare. black carbonaceous shale bands.	1	4										
324	6½	4	4	COAL, very broken, weathered ?	2	4	8/BMR.			Seam C	3.2	30.2	43.7	22.9	10,620	

Page

Name and No. of Bore

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
325	8 $\frac{1}{2}$	1	2	Claystone, grey, soft.		2										
325	10 $\frac{1}{2}$		2	Shale, carbonaceous, black, soft.		2										
326	0 $\frac{1}{2}$		2	Siltstone, light grey, broken, hard.		2										
327	3 $\frac{1}{2}$	1	3	Greywacke, light grey, fine grd. broken.	1	3										
329	2 $\frac{1}{2}$	1	11	Shale, grey, carbonaceous in part.	1	11										
330	2 $\frac{1}{2}$	1	0	Claystone, sideritic, hard, dense.	1	0										
330	5		2 $\frac{1}{2}$	Shale, carbonaceous, grey, twisted calcite.		2 $\frac{1}{2}$										
330	10 $\frac{1}{2}$		5 $\frac{1}{2}$	Claystone, grey.		5 $\frac{1}{2}$										
332	3 $\frac{1}{2}$	1	5	Siltstone, light grey.	1	5										
333	1 $\frac{1}{2}$		10	Siltstone, sideritic, hard dense, grey.		10										
333	8 $\frac{1}{2}$		7	Siltstone, light grey & grey.		7										
333	9 $\frac{1}{2}$		1	COAL, finely broken, weathered ?		1										
334	2		4 $\frac{1}{2}$	Siltstone, sideritic grey-brown, calcite.		4 $\frac{1}{2}$										
334	5		3	Claystone, with large calcite filled vugs..		3										
335	11	1	6	Shale, dark grey with carb. detritus.	1	3										
337	2	1	3	Siltstone, sideritic in top 1" carb. lam.	1	2										
341	3	4	1	Siltstone, as before but not sideritic.	4	1										
347	11	6	8	Siltstone, grey & clst. grey interbedded broken in bottom 6".	6	7										
363	11	16	0	Greywacke, light grey mostly medium grd. some fine grd. one t. silty carb. shale bd.	15	11										
367	10	3	11	Siltstone, grey & l. grey, shaly in part.	3	10										
372	1	4	3	Siltstone, as before much calcite veining.	3	3										
376	5	4	4	Siltstone, light grey numerous carbonaceous lam. some fractured vertically.	4	3										
377	6	1	1	Shale, dark grey, broken.		2										
382	10	5	4	Siltstone, as before grading into v. f. grd. greywacke, vert. frags. calcite filled.	4	11										
390	0	7	2	Greywacke, light grey, very fine grd. & fine grd. to siltstone over bottom 2'0".	5	1										
391	0	1	0	COAL, mostly dull some dull & bright banded shaly in part, cleated.	1	0	9/BMR.					3.0	34.5	49.3	13.2	12,230
392	0	1	0	Shale, black carbonaceous, silty.	1	0										
395	11	3	11	COAL, dull & bright, very broken.	1	11	10/BMR.					3.3	33.1	48.2	15.4	11,860

Artie's
Seam.

typed 16.6.53.

BUREAU OF MINERAL RESOURCES

Name and No. of Bore BMR. 3(S)R-2 FOND'S CREEK.

Cessnock

DISTRICT Muswellbrook COUNTY Durham PARISH Howick PORTION 121 LOCATION On the site of a building

Surveyed by N. Gorbunow Survey Method Theodolite Traverse Elevation 545.1' ASL Ref. Map BMR. N14-110

Logged by Paul G. Duff Cased No Datum Standard Ref. Report BMR. Records 1953/47

Sunk by BMR. Type of Drill Failing 1500 # 293 Depth 641'2" Date Begun/Finished 25.11.52/11.12.52

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
384	8	3	11	Greywacke, fine grd. l. grey, shale grey & slst. interbdd. in t. beds, numerous thin carbonaceous laminations.	3	11										
385	8	1	0	Shale, grey.	1	0										
388	7	2	11	Greywacke, fine grd. light grey.	2	11										
391	0	2	5	Shale, grey.	2	5										
392	9	1	9	COAL, mostly bright & shattered.		9										
393	6		9	Siltstone, grey.		4										
394	6	1	0	COAL, generally bright.		6 1/2										
394	9		3	Claystone, light grey.		1 1/2										
395	6		9	Claystone, grey.		3										
398	6	3	0	COAL, mostly bright.		8										
400	5	1	11	Greywacke, light grey, medium grained.	1	11										
400	8		3	Claystone, grey, with a coal band.		3										
400	10 1/2		2 1/2	Shale, black.		2 1/2										
402	0 1/2	1	2	Siltstone, light grey & grey.	1	2										
402	8		7 1/2	COAL, dull.		3										
403	0 1/2		4 1/2	Siltstone, light grey.		4 1/2										
403	2		1 1/2	Shale, grey.		1 1/2										
403	9		7	COAL, shale, weathered.		7										
405	9	2	0	Claystone, dark grey.	2	0										
411	9	6	0	Siltstone, l. grey with darker shale bds.	5	2										
426	0	14	3	Shale, dark grey with a 2" coal lens.	10	0										
434	6	8	6	Siltstone, grey.	7	9										
438	6	4	0	COAL, mostly dull, very shaly in bands.	4	0	1/BMR.	Upper Liddell	3.5	35.6	54.2	6.7	13,270			
439	6	1	0	COAL, bright.		1/2	2/BMR.	Seam	3.8	31.7	50.4	14.1	12,150			
440	6	1	0	Shale, grey, thin coal lenses.	1	0										
441	10	1	4	Shale, grey.	1	4										
443	3	1	5	Claystone, grey brown sideritic.		5										
443	7		4	Shale, black, carbonaceous.		4										
446	3	2	8	Siltstone, light grey.	2	8										

Estimated Depth Ft. Ins	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.	H.M.	V.	F.C.	ASH	B. TH. U/LB	
446 9			Shale, grey													
447 3		6	Shale, black, carbonaceous		6											
447 7 1/2		4 1/2	Shale, brown grey.		4 1/2											
448 10	1	2 1/2	COAL, very finely divided smutty.		3 1/2					Middle Liddell Seam						
449 0		2	Shale, grey & dark grey, carbonaceous.		2											
449 3		3	Siltstone, grey.		3											
460 8	11	5	Greywacke, light grey, very fine grd. very soft as bottom, broken.		9 7											
465 0	4	4	Siltstone, shaly grey.		3 10											
470 3	5	3	Greywacke, light grey, medium grained, some bright coal lenses.		5 3											
491 3	21	0	Greywacke, l. grey, medium grd. partly fri.	13	2											
493 3	2	0	COAL, bright shattered in part, part shaly pyrites.		6	3/BMR.				1 1/2	3.2	31.4	46.3	19.1	11,490	
494 3	1	0	COAL, dull & bright cleated, broken.		11		Lower Liddell Seam.									
494 6		3	Siltstone, light grey.		3											
495 3		9	COAL, shattered many shale pieces.		9											
496 11	1	8	COAL, broken & shattered.		1 5											
498 2	1	3	Shale, black with thin coal bands.		1 3											
500 3	2	1	Shale, grey & light grey.		2 1											
503 9	3	6	Siltstone, light grey.		3 6											
505 5	1	8	Siltstone, grey brown, sideritic.		11											
514 0	8	7	Siltstone, light grey, hard.		8 6											
519 4	5	4	Greywacke, light grey, coarse grained.		5 4											
522 7	3	3	Greywacke, medium grained.		3 3											
524 8	2	1	Greywacke, v. f.-f. grd. w. t. bdd. carb. material.		2 1											
531 9	7	1	Greywacke, f.-v. f. grd. mainly w. t. slst. bands.		7 1											
533 9	2	0	Siltstone, brown sandy.		1 8											
534 0 1/2		3 1/2	Siltstone, grey.		3 1/2											
535 9 1/2	1	9	COAL, dull & bright bdd. broken at bot..		1 9											
536 1		3 1/2	Siltstone, br. sdy ? tuff. cly. at top.		3 1/2											
537 0	11		COAL, dull shaly to banded.		5 1/2											
537 1		1	Siltstone, br. sdy. as above w.t. bds. coal		1					1"						
537 9 1/2		8 1/2	COAL, mostly bright, broken.		2 1/2	4/BMR.				3.2	34.4	51.1	11.3	12,650		
538 0		2 1/2	Siltstone, light brown, grey, sandy.		2 1/2					2 1/2"						
539 3	1	3	COAL, dull & bright banded.		11 1/2		Barrett's Seam.									
546 11	7	8	Siltstone, v. f. grd. gw. shaly near bot.		7 1											

BUREAU OF MINERAL RESOURCES

Name and No. of Bore BMR. 4S POND'S CREEK.

Cessnock
DISTRICT Muswellbrook COUNTY Durham PARISH Howick PORTION 12 LOCATION
Surveyed by N. Gorbunow Survey Method Theodolite Traverse Elevation 476.5' ASL Ref. Map BMR. N14-110
Logged by M.A. Reynolds-P.G. Duff No Datum Standard Ref. Report BMR. Records 1953/47
Sunk by BMR. Type of Drill Failing 1500/293 Depth 598' 7" Date Begun/Finished 12.12.52/6.2.53

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
11	6	11	6	Alluvium - sand and clay.	-	-										
14	4	2	10	Conglomerate consisting of clst. pellets in clayey matrix.	2	10										
21	7	7	3	Greywacke, fine grained, weathered.	7	0										
22	3		8	Claystone, gy. wd. w. bds. smut near bot.		8										
23	0		9	Smut, black.		9										
24	8	1	8	Shale, dark grey carb. to grey, weathered.	1	8										
25	5		9	Shale, dark grey carb. w. t. smut bands.		5										
25	7		2	Claystone, grey, weathered.		2										
27	10	2	3	Interbedded, fine grd. gw. & claystone.	2	3										
28	2		4	Ironstone, red-brown.		4										
32	0	3	10	Greywacke, very fine grained.	3	10										
43	6	11	6	Siltstone, mostly s. powdery in part with some sandy bands.	9	6										
54	7 1/2	11	1 1/2	Greywacke, medium-coarse grained, wd.	10	0										
56	2	1	6 1/2	Greywacke, gy. medium grd. very tough.	1	6 1/2										
65	3	9	1	Shale, grey, silty to sd. in part.	9	1										
71	5	6	2	Greywacke, fine grained.	4	6										
75	3	3	10	Siltstone, grey.	3	10										
117	10	42	7	Greywacke, f.-v.f. grd. interbdd. w. gy. siltstone.	42	6										
118	7		9	Shale, gy. & dk. gy. carb. w.t. bds. coal.		9										
119	2		7	Shale, bk. carb. & coal interbedded.		7										
119	9		7	COAL, mostly dull fragmentary w. some bright.		7										
120	11 1/2	1	2 1/2	COAL, dull & bright banded, cindery.	1	2 1/2										
121	0 1/2		1	Shale, black carbonaceous, silty.		1										
123	2 1/2	2	2	COAL, as above 1' 2 1/2" becoming less powdery in part.	2	2										
123	4 1/2		2	Siltstone, dark brown, carbonaceous.		2										

Seam W

Fatrell's -
Ck. Seam.

1/BMR.

2/BMR.

4.8 30.8 52.4 12.0 11,970

4.8 32.1 57.4 5.7 12,990

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
228	4 1/2	0	0	Dant.	5 1/2	0										
228	6	1	1 1/2	Shale, grey	1 1/2	0										
229	10	1	4	Shale, grey with thin siltstone bands	1	4										
231	4	1	6	Siltstone, gy. shaly in part w.t. band clay-ironstone.	1	6										
237	8	6	4	Greywacke, v. f.-f. grd. w. t. bd. uncon- solidated.	4	8 1/2										
238	4		8	Shale, grey.		8										
239	0		8	Siltstone, grey.		8										
242	1	3	1	Greywacke, f. grd. with thin slst. bands.	3	1										
243	2 1/2	1	1 1/2	Siltstone, grey with thin shale bands.	1	1 1/2										
245	6	2	3 1/2	Shale, gy.-dk. gy. becoming increasingly andy over bottom 1' pyrite.	2	3 1/2										
245	7		1	COAL, dull & bright banded to lamd.		1										
245	9		2	Shale, dk. br.-br. cly with slight dip.		2										
248	4	2	7	COAL, as above mostly shaly cleavage, finely broken.	2	7	6/BMR.					3.7	26.1	57.2	13.0	12,040
248	8 1/2		4 1/2	COAL, dull & bright banded pyrite.		4 1/2										
249	7		10 1/2	Shale, bk. carb. with coal bands.		10 1/2										
252	0	2	5	COAL, mostly cindered, pyr. & baked with bright coal developing metallic lustre.	2	5	7/BMR.					3.8	3.3	64.2	28.7	9,790
254	2	2	2	Clay, y. wh. sdy. ? gentonitic.	1	10										
254	10		8	COAL, with metallic lustre as above.		8	8/BMR.					3.6	3.3	64.8	23.3	10,050
255	2		4	COAL, dull & bright bdd. mostly bright.		4										
255	7 1/2		5 1/2	Shale, dk. br. pyr. to bk. carbonaceous.		5 1/2										
257	5	1	9 1/2	COAL, dull & bright bdd. mostly bright.	1	2 1/2	9/BMR.					3.7	32.7	57.8	5.8	13,080
257	11		6	Shale, dark grey-grey.		6										
259	5	1	6	Siltstone, grey.	1	3										
287	5	28	0	Interbdd. v.f.-f. grd. gw. & s. shaly slst.	28	0										
293	11	6	6	Greywacke, light grey, medium-coarse grd.	6	6										
296	11	3	0	Greywacke, grey, medium grained, tough.	2	11 1/2										
307	3 1/2	10	4 1/2	Greywacke, l. gy. f.-v.f. grd. interbedded with grey siltstone.	10	1										
307	6 1/2		3	Shale, bk. carb. w.t. bds. coal & wh. irregular calcite veins (parallel to bdding)		3										
307	8 1/2		2	COAL, dull & bright bdd. w. some white calcite veins.		2										
308	6		9 1/2	Shale, vr. to l. br. tuffaceous sandy.		9 1/2										

Seam J G

Seam E.

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
309	6 $\frac{1}{2}$	1	0 $\frac{1}{2}$	COAL, dull & bright bdd. w. $\frac{3}{4}$ " bd. of br. sh.	1	0 $\frac{1}{2}$										
310	1 $\frac{1}{2}$		7	Clay-ironst. dk. br. sid. w. wh. calcite veins		7										
310	8		6 $\frac{1}{2}$	COAL, dull & bright bdd. mostly bright.		6 $\frac{1}{2}$										
310	8 $\frac{1}{2}$		$\frac{1}{2}$	Shale, dk. br. carb. w. t. bds. coal.		$\frac{1}{2}$										
311	2 $\frac{1}{2}$		6	Greywacke, fine grd. br. ? tuffaceous.		6										
314	3 $\frac{1}{2}$	3	1	Greywacke, l. gy. fine-medium grained.	3	1										
319	0	4	8 $\frac{1}{2}$	Greywacke, fine grd. to siltstone.	2	0										
332	6	13	6	Siltstone, grey with thin shale bands.	12	6										
334	0	1	6	Shale, brown-light brown, tuffaceous.		4 $\frac{1}{2}$										
342	8	8	8	Tuff. shale & slst. gr. off-wh ? Interbdd.	6	3 $\frac{1}{2}$										
343	5		9	Shale, black carb. with thin bds. coal.		4 $\frac{1}{2}$										
343	7 $\frac{1}{2}$		2 $\frac{1}{2}$	? Intrusive with grey amygdaloids.		2 $\frac{1}{2}$										
344	6		10 $\frac{1}{2}$	Shale, black carb. indurated.		10 $\frac{1}{2}$										
348	3 $\frac{1}{2}$	3	9 $\frac{1}{2}$	Greywacke, dk. br. gy. f. grd. indurated.	3	9 $\frac{1}{2}$										
348	5 $\frac{1}{2}$		2	Shale, black carbonaceous.		2										
348	10		4 $\frac{1}{2}$	COAL, dull & bright banded.		2 $\frac{1}{2}$										
351	6	2	8	Light gr. intrusive w. xbd green mineral.	2	8										
352	11 $\frac{1}{2}$	1	5 $\frac{1}{2}$	COAL, tough indurated.	1	5 $\frac{1}{2}$										
353	3		3 $\frac{1}{2}$	Shale, black carbonaceous, indurated.		3 $\frac{1}{2}$										
354	4	1	1	COAL, as above, indurated.	1	1										
354	7 $\frac{1}{2}$		3 $\frac{1}{2}$	Shale, black carbonaceous, indurated.		3 $\frac{1}{2}$										
355	0		4 $\frac{1}{2}$	COAL, as above, indurated.		4 $\frac{1}{2}$										
355	2 $\frac{1}{2}$		2 $\frac{1}{2}$	Shale, black carbonaceous, indurated.		2 $\frac{1}{2}$										
355	5		2 $\frac{1}{2}$	COAL, as above, indurated w.t. sh. bd at bot.		2 $\frac{1}{2}$										
355	8 $\frac{1}{2}$		3 $\frac{1}{2}$	Shale, bk. carb. indurated w.t. bds. coal.		3 $\frac{1}{2}$										
356	10 $\frac{1}{2}$	1	2	COAL, as above w. sh. bds. towards bottom.	1	2										
365	0	8	1 $\frac{1}{2}$	Mainly igneous rock w. some ingested mat. ? doleritic & dk. gy. becoming off. wh. at contacts.	8	1 $\frac{1}{2}$										
365	7		7	COAL, as above w. t. sh. bds. near top.		7										
365	8		1	Shale, as above.		1										
366	1 $\frac{1}{2}$		5 $\frac{1}{2}$	COAL, as above.		5 $\frac{1}{2}$										
366	4		2 $\frac{1}{2}$	Shale, as above.		2 $\frac{1}{2}$										
366	7 $\frac{1}{2}$		3 $\frac{1}{2}$	COAL, as above.		3 $\frac{1}{2}$										
413	10 $\frac{1}{2}$	47	3	Interbdd. gy. slst. & l. gy. f. grd. gw. w. occasional t. bd. clay-ironstone.	46	2										
416	1	2	2 $\frac{1}{2}$	Greywacke, medium grd. tough, fractured.	2	2 $\frac{1}{2}$										
418	11	2	10	Greywacke, br. gy. w. irregular lenses & pellets of carb. slst. sideritic.	2	10										

Seam

Seam B

Seam A

3 $\frac{1}{2}$

5.6

8.5

57.6

28.3

8,980

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
422	1	3	2	Greywacke, fine-medium grained	3	2										
428	2	6	1	Interbdd, f. grd. gw. & gy. siltstone	6	1										
431	10	3	8	Greywacke, grey, fine-medium grained.	3	8										
432	3		5	Siltstone, gy. tough with calcite veins.		5										
434	0	1	9	? Andesitic intrusion.	1	9										
439	2	5	2	Siltstone, baked.	5	2										
440	0		10	Dolerite green-grey, fine grained.		10										
442	1	2	1	Shale, dk. gy. hard dense t. bds. l. gy. gw. some chlorite.	2	0										
450	5	8	4	Siltstone, grey, hard dense small band, sideritic.	8	4										
456	1	5	8	Shale, dk. gy. & gw. f. grd. l. gy. interbedded.	5	8										
457	1	1	0	Shale, black carb. almost coal in part.	1	0										
460	11	3	10	Shale, bk. l. gy. dk. gy. interbdd. v. fri.	2	8										
462	9	1	10	Shale, bk. carb. indurated w. t. bds. coal.	1	10										
463	4		7	COAL, mostly, indurated.		7										
464	4	1	0	Shale, as above 1'10".	1	0										
465	2		10	COAL, indurated tough w. some shale.		10										
465	9		7	?Siltstone, bk. carb. highly indurated.		7										
474	10	9	1	?Andesite to ? dolerite w. some chlorite developed & some xenoliths.	9	1										
478	1	3	3	COAL, mostly w. some sh. bds, indurated.	3	3	11/BMR.					3.0	7.8	66.1	23.1	10,220
478	9		8	COAL, mostly bright powdery.		7	12/BMR.					4.4	6.3	68.3	20.7	10,490
478	11		2	Shale, grey.		2										
479	10		11	Shale, grey.		6										
481	9	1	11	Siltstone, grey with thin sand band.	1	11										
485	3	3	6	Greywacke, medium grd. friable.	3	6										
487	5	2	2	Greywacke, f. grd. to gy. slst. sideritic & w. irregular calcite veins over bot. 8".	2	2										
490	9	3	4	Greywacke, f. grd. s. shy. & slst. grey.	2	4										
491	11	1	2	Siltstone, brown, grey.	1	2										
493	2½	1	3½	COAL, bright powdery & dull fragmentary.	1	3½										
493	5		2½	Shale, soft, black carbonaceous.		2½	13/BMR.					2.8	24.3	62.7	10.2	12,990
494	8	1	3	COAL, as above 1'3½" fragmentary.	1	0										
494	11		3	Shale, soft, dark brown.		1½										
495	3		4	Shale, grey.		4										
495	10		7	Siltstone, grey.		7										
498	11	3	1	Greywacke, light grey, fine grained.	3	1										

Upper Artie's Seam

Middle Artie's Seam.

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
503	6	4	7	Interbedd. gy. shy. slst. & f.grd. gw.	4	7										
503	9		3	Shale, grey.		3										
504	0		3	COAL, dull & bright banded.		3										
506	7	2	7	Interbedded slst. & fine grained gw.	2	7										
508	1	1	6	Siltstone, br. ?sideritic w. t. bd. w. irregular calcite veins.	1	6										
510	3	2	2	Greywacke, v. f. grd. to slst. gy-dk gy shaly at bottom.	2	2										
510	7		4	Shale, gy-dk. gy. w.t. bd. pyr. coal at top.		4										
513	4	2	9	COAL, dull & bright becoming bright powdery with thin sh. bds. near bottom.	2	9	} 14/BMR. } 15/BMR.	Artie's Seam		2.6	19.8	64.3	13.3	12,530		
514	7	1	3	COAL, dull & brown banded.		6				2.5	23.7	63.8	10.0	13,040		
538	11	24	2	Greywacke, f.-m. grd. w. occas. slst. band.	23	8										
541	7	2	8	Greywacke, f. grd. to gy. slst w. 5" bd of clay-ironstone.	1	3										
554	7	13	0	Greywacke, f. grd. w. numerous t.gy. slst. bands.	12	10										
557	9	3	2	Greywacke, coarse grained, friable.	2	2										
560	9	3	0	Greywacke, fine. grd. as above 12'10"	1	7										
574	9	14	0	Greywacke, medium grd. w. some c. grd. bds.	13	0										
576	5 1/2	1	8 1/2	Greywacke, f.-v. fine grained.	1	8 1/2										
580	0 1/2	3	7	Siltstone, dk. gy & bk. to bk. shale w. a thin coal bd. indurated & intruded.	2	6		Upper Liddell Seam								
581	11 1/2	1	11	Intrusive rock ?Andesitic with calcite veins.	1	11										
583	2	1	2 1/2	Siltstone, gy & black indurated with thin bd. bk. carb. sh. at bot. intruded.	1	2 1/2										
589	7	6	5	Black X line igneous ? or indurated.	6	5										
590	7	1	0	As above.		8										
593	7	3	0	As above but friable very broken.	3	0										
598	7	5	0	As above, top consolidated bottom, friable top portion with calcite & green mineral vein. 1".	4	5						typed	16.6.53			

BUREAU OF MINERAL RESOURCES

Name and No. of Bore BMR. 5S POND'S CREEK.

Cessnock
DISTRICT Muswellbrook COUNTY Durham PARISH Howick PORTION 121 LOCATION
Surveyed by N. Gorbunow Survey Method Theodolite Traverse Elevation 421.2' ASL Ref. Map BMR. N14-110
Logged by Paul G. Duff Cased No Datum Ref. Report BMR. Records 1953/47
Sunk by Houben & Kent Type of Drill Mindrill A 2,000 Depth 304' 4" Date Begun/Finished 18.11.52/29.11.52

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
11	2	11	2	Claystone; wh.y. orange, wd. silty & sdy. in part.	8	7										
12	7	1	5	Greywacke; l. br. wd. fri. fractd. m. grd.	1	5										
21	2	8	7	Greywacke, as before but very coarse grd. and very friable.	6	4										
40	2	19	0	Greywacke, as before loosely banded mostly broken bot. 8" becoming hard compact.	13	11										
51	10	11	8	Siltstone, l. br. & l. gy. broken in part shaly in part.	11	8										
52	9	11		Shale, red-brown & grey.	11											
54	2	1	5	Smut, finely divided.	1											
54	3 1/2	1 1/2		Claystone, creamy brown.	1 1/2											
62	9	8	5 1/2	Smut, finely divided.	4	0										
64	2	1	5	Claystone, br. gy. y. weathered, silty.	1	5										
73	8	9	6	Siltstone, l. gy. iron-stained some t. carb. lam. grading into clst. at bot.	9	6										
75	10	2	2	COAL, dull, broken.	2											
78	0	3	10	Claystone, carb. very soft & mixed with smut material.	2	10										
80	8	2	8	Siltstone, l. gy. shaly in part carb. detritus.	2	5										
81	8	1	0	Greywacke, light grey, medium grained.	1	0										
86	10	5	2	Siltstone, as before.	5	2										
88	2	1	4	Siltstone, br. gy. sideritic calcite.	1	4										
99	4	11	2	Greywacke, l. gy. m. grd. rare t. carb. lamination & t. bright coal bands.	9	10										
108	1	8	9	Greywacke, as before, fractd. at bottom.	8	9										
118	11	10	10	Greywacke, l. gy. medium & coarse grd. rare thin coal lenses.	10	10										
120	6	1	7	Shale, grey.	1	7										
122	11	2	5	Shale, gy. & dk. gy. thin coal lenses.	2	5										

Upper Liddell
Seam

Middle Liddell Seam

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
124	5	1	6	COAL, dull & bright banded, broken.	1	6		Lower Liddell Seam								
124	6		1	Shale, black, carbonaceous.		1										
124	10 $\frac{1}{2}$		4 $\frac{1}{2}$	COAL, mostly dull.		4 $\frac{1}{2}$										
125	0		1 $\frac{1}{2}$	Siltstone, light grey.		1 $\frac{1}{2}$										
125	2		2	COAL, dull.		2										
125	4		2	Siltstone, light grey.		2										
128	2	2	10	COAL, dull & bright, cleated some bds. fri.	2	10										
129	11	1	9	Shale, light grey some t. coal, bands	1	9										
131	7	1	8	Siltstone, light grey, shaly at bottom.	1	8										
141	5	9	10	Siltstone, light grey, some broken.	5	7										
149	7	8	2	Greywacke, light grey, medium & c. grained, some vertically fractured.	6	6										
152	10	3	3	Greywacke, as above.	1	7										
159	7	6	9	Siltstone, l. grey, t. carb. laminae.	6	9										
164	9	5	2	Siltstone, as before with some thin v. f. grained greywacke bands.	5	2										
166	7	1	10	Siltstone, br. grey, sideritic pyrites.		8										
171	1	4	6	Greywacke, light grey, medium grd. vert. fractures with pyrites.	4	6										
172	0		11	Siltstone, sideritic brown grey, very broken.		8										
172	10		10	Greywacke, light grey, medium grained.		10										
174	1	1	3	Siltstone, sideritic brown grey, broken.		3										
176	7	2	6	Siltstone, light grey, thin carb. laminae.	2	6										
178	9 $\frac{1}{2}$	2	2 $\frac{1}{2}$	COAL, dull & bright cleated.		4 $\frac{1}{2}$										
179	2		4 $\frac{1}{2}$	Siltstone, as above.		4 $\frac{1}{2}$										
179	6		4	Siltstone, br.-gy. sideritic, broken pyrites.		4										
179	10		4	COAL, mostly dull some dull & bright.		3 $\frac{1}{2}$										
180	0		2	COAL, finely divided in clayey matrix.		1 $\frac{1}{2}$										
180	3		3	COAL, very broken.		2 $\frac{1}{2}$										
180	4 $\frac{1}{2}$		1 $\frac{1}{2}$	Siltstone, light grey.		1 $\frac{1}{2}$										
180	6 $\frac{1}{2}$		2	COAL, dull, cleated.		2										
180	7		1 $\frac{1}{2}$	Siltstone, carbonaceous.		1 $\frac{1}{2}$										
181	0		5	COAL, very broken.		4 $\frac{1}{2}$										
181	3		3	Siltstone, light grey.		3										
181	11		8	COAL, dull & bright banded, cleated.		8										
182	0 $\frac{1}{2}$		1 $\frac{1}{2}$	Siltstone, carbonaceous.		1										
182	3		2 $\frac{1}{2}$	COAL, very broken.		2										
182	4		1	Siltstone, brown grey.		1 $\frac{1}{2}$										
183	0		8	COAL, dull & bright, some cleated, broken.		7 $\frac{1}{2}$										
								Barrett's Seam								

BUREAU OF MINERAL RESOURCES

Name and No. of Bore BMR. 6S POND'S CREEK.

DISTRICT	Muswellbrook	COUNTY	Durham	PARISH	Howick	PORTION	121	LOCATION	
Surveyed by	N. Gorbunow	Survey Method	Theodolite Traverse	Elevation	336.4'	ASL		Ref. Map	BMR. N14-110
Logged by	M.A. Reynolds	Cased	No	Datum	Standard			Ref. Report	BMR. Records 1953/47
Sunk by	BMR.	Type of Drill	Failing 750/290	Depth	217'8"			Date Begun/Finished	28.11.52/3.12.52

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
11	2	11	2	Clay, silty. Siltstone, br. gy. wd. for 37', sdy. in part, to dark grey mic. with ? marcasite nodules & rare thin limestone band generally shaly cleavage, fossilif.	-	-										
217	8	206	6		201	10										

BUREAU OF MINERAL RESOURCES

Name and No. of Bore BMR. 75 POND'S CREEK.

Cessnock							
DISTRICT	Muswellbrook	COUNTY	Durham	PARISH	Howick	PORTION	12 LOCATION
Surveyed by	N. Gorbunow	Survey Method	Theodolite Traverse	Elevation	447.0' ASL	Ref. Map	BMR. N14-110
Logged by	M.A. Reynolds-P.G. Duff	Cased	No	Datum	Standard	Ref. Report	BMR. Records 1953/47
Sunk by	BMR.	Type of Drill	Failing 750/262	Depth	369' 7"	Date Begun/Finished	4.12.52/19.11.52

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
155	11		10 $\frac{1}{2}$	COAL, as above broken w. irreg. pyr. nodule		5										
156	0		1	Shale, as above lens.		1										
156	2 $\frac{1}{2}$		2 $\frac{1}{2}$	COAL, as above 1'5"		2 $\frac{1}{2}$										
156	3		$\frac{1}{2}$	Shale, dark brown, sandy pyrite		$\frac{1}{2}$										
156	7		4	COAL, as above		4										
156	7 $\frac{1}{2}$		$\frac{1}{2}$	Shale, as above $\frac{1}{2}$ "		$\frac{1}{2}$										
157	2		6 $\frac{1}{2}$	COAL, dull & bright banded		6 $\frac{1}{2}$										
157	8		6	Shale, dk. gy. carb. w. t. coal bds. pyr.		6										
158	6		10	Siltstone, gy. w. pyr. carb. material		10										
160	7 $\frac{1}{2}$	2	1 $\frac{1}{2}$	Siltstone, gy. w. pyr. carb. material	2	1 $\frac{1}{2}$										
161	10	1	2 $\frac{1}{2}$	Sideritic siltstone fract. with pyrite	1	2 $\frac{1}{2}$										
162	2 $\frac{1}{2}$		4 $\frac{1}{2}$	Siltstone, grey soft, shaly		4 $\frac{1}{2}$										
194	4	32	1 $\frac{1}{2}$	Greywacke, l. gy. fri. & shy. in part. m. grd.	30	3										
198	5	4	1	Greywacke, very fine-fine grained.	4	1										
198	8		3	Greywacke, very coarse grained.		3										
202	8	4	0	Siltstone, gy. w. t. sh. bd. broken at bot. w. odd coal & shale fragments.	3	4										
202	9 $\frac{1}{2}$		1 $\frac{1}{2}$	Shale, dark grey, carbonaceous.		1 $\frac{1}{2}$										
205	0	2	2 $\frac{1}{2}$	COAL, dull w. foetid odour to dull & bright bdd. w. ? adventitious slst. fragments.	1	3	4/BMR					3.3	31.5	50.5	14.7	12,000
206	10 $\frac{1}{2}$	1	10 $\frac{1}{2}$	COAL, dull & bright bdd. w. foetid odour & w. t. sh. bd. near bot. where broken.	1	8										
207	0		1 $\frac{1}{2}$	Siltstone, grey.		1 $\frac{1}{2}$										
211	4	4	4	Greywacke, f. grd. w. gy. slst. bands.	4	4										
212	6	1	2	Shale, grey.		7 $\frac{1}{2}$										
213	0		6	Silts. soft, grey-dark grey.		3										
214	4 $\frac{1}{2}$	1	4 $\frac{1}{2}$	COAL, dull & bright bdd. cleated w. white calcite veins.		11										
214	6		1 $\frac{1}{2}$	Shale, grey silty w. t. coal bands.		1 $\frac{1}{2}$										
216	3	1	9	Shale, grey.		3										
217	9	1	6	Greywacke, fine grained.	1	6										
218	11	1	2	Greywacke, soft, shaly fine grained.	1	2										
225	9	6	10	Shale, gy. v. sdy. (f. grd.) & silty.	6	10										
226	4		7	Siltstone, grey		7										
235	0	8	8	Greywacke, fine-medium grained.	7	1 $\frac{1}{2}$										
243	3	8	3	Greywacke, light grey, coarse grained.	7	5										
				numerous thin coal lenses.												
252	9	9	6	Greywacke, l. gy. m. grd. some siltstone.	8	5										

---Artie's
Seam.Upper
Liddell
Seam.Middle
Liddell
Seam.

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
261	9	9	0	Greywacke, medium grd. light grey	7	5										
265	2	3	5	Greywacke, l.gy. medium grained.	2	5										
268	10	3	8	Siltstone, grey rare coal laminae.	2	7										
270	0	1	2	Shale, dark grey, coal laminae.	1	2										
270	11	11		COAL, dull & bright broken.		11										
271	1		2	Shale, black carbonaceous.		2										
271	6		5	COAL, dull & bright shattered.		3 1/2										
271	8		2	Siltstone, light grey.		2										
271	11		3	COAL, dull & bright.		1 1/2										
272	0		1	Siltstone, as above.		1										
272	5 1/2		5 1/2	COAL, dull & bright.		5 1/2	5/BMR.					3.7	27.2	40.3	28.8	9,780
272	6		1 1/2	Siltstone, as before.		1 1/2										
273	7	1	1	COAL, fragmentary, friable.	1	1										
273	9		2	Shale, black carbonaceous.		2										
276	0	2	3	Shale, dk. gy. & bk. some coal bands.	1	10										
277	8	1	8	Siltstone, grey.	1	8										
280	1	2	5	Siltstone, light grey, broken.	2	5										
281	5	1	4	Siltstone, sideritic, brown-grey.		9										
282	9	1	4	Greywacke, light grey, medium grained, some friable.	1	4										
292	9	10	0	Greywacke, light grey, medium grained.	9	3										
302	9	10	0	Siltstone, & shale, grey numerous, thin friable coal bands.	9	0										
302	10 1/2		1 1/2	Shale, grey.		1 1/2										
303	9		10 1/2	COAL, shattered.		5 1/2										
304	11	1	2	COAL, dull & bright.		8	6/BMR.					3.7	29.7	49.6	17.0	11,590
306	11	2	0	COAL, fragmentary.	1	6										
307	1		2	Siltstone, grey.		2										
308	1	1	0	COAL, dull & bright.		6										
308	6		5	Shale, black.		5										
308	8 1/2		2 1/2	COAL, broken, cleated.		2 1/2										
308	11		2 1/2	Shale, dark grey.		2 1/2										
309	4		5	COAL, dull & bright.		5										
309	5 1/2		1 1/2	Shale, black.		1 1/2										
310	4 1/2		11	COAL, broken.		5										
310	9		4 1/2	Shale, dark grey, silty.		4 1/2										
321	7	10	10	Siltstone, grey part sideritic numerous thin carbonaceous laminations.	6	10										

Lower
Liddell
Seam.

Barrett's Seam

BUREAU OF MINERAL RESOURCES

Name and No. of Bore

BMR. 85 POND'S CREEK.

~~Cosmo~~
~~Cosmo~~

DISTRICT	Muswellbrook	COUNTY	Durham	PARISH	Howick	PORTION	121	LOCATION	
Surveyed by	N. Gorbunow	Survey Method	Theodolite Traverse	Elevation	260.0'	ASL		Ref. Map	BMR. N14-110
Logged by	M.A. Reynolds-P.G. Duff	Cased	No	Datum	Standard			Ref. Report	BMR. Records 1953/47
Sunk by	BMR.	Type of Drill	Failing 750/263	Depth	411'6"			Date Begun/Finished	19.1.53/20.2.53

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
87	4	10		COAL, mostly dull w. some bright bds. frag.	10											
87	7 $\frac{1}{2}$	3 $\frac{1}{2}$		Shale, gy. & dk. gy. bdd w.t. bds. coal.	3 $\frac{1}{2}$											
88	0 $\frac{1}{2}$	5		Shale, bk. carb. to dull coal w. t. bright bands.	5											
88	4 $\frac{1}{2}$	4		COAL, dull & bright banded.	2 $\frac{1}{2}$											
89	6	1	1 $\frac{1}{2}$	COAL, mostly bright for 5" to dant w. occas. thin black carb. shale laminations.	1	1 $\frac{1}{2}$										
90	6	1	0	COAL, dull & bright bdd. w. $\frac{1}{2}$ " carb. shale band near top.	6											
91	0 $\frac{1}{2}$	6 $\frac{1}{2}$		Claystone, to clay brown sdy. w.t. bds. coal.	5											
91	6	5 $\frac{1}{2}$		Siltstone, to v.f. grd. greywacke.	5 $\frac{1}{2}$											
95	2 $\frac{1}{2}$	3	8 $\frac{1}{2}$	Siltstone, gy-l.gy with thin sdy. bands.	2	4 $\frac{1}{2}$										
99	1 $\frac{1}{2}$	3	11	Greywacke, l. gy. m.-c. grd. friable.	1	11										
103	6 $\frac{1}{2}$	4	5	Siltstone, to v.f. grd. gw. w. t. bd. clay-shale & clay-ironstone.	3	11										
104	4	9 $\frac{1}{2}$		Shale, grey.	6 $\frac{1}{2}$											
104	7 $\frac{1}{2}$	3 $\frac{1}{2}$		Clay-ironstone.	3 $\frac{1}{2}$											
117	11	13	3 $\frac{1}{2}$	Shale, gy. interbdd. w. fri. fine-medium grained greywacke over bottom 6'.	9	3										
118	6	7		Clay-ironstone shattered with thin band shale at bottom.	7											
118	11	5		Shale, grey.	3											
119	2 $\frac{1}{2}$	3 $\frac{1}{2}$		COAL, mostly dull.	3 $\frac{1}{2}$											
119	4 $\frac{1}{2}$	2		Clay, dark brown, soft.	2											
120	1 $\frac{1}{2}$	9		COAL, mostly dull w. t. bds. carb. shale.	9											
120	5	3 $\frac{1}{2}$		Shale, dk. br. carb. w. l. br. sdy. bd. at bottom.	3 $\frac{1}{2}$											
120	10	5		COAL, dull & bright banded.	2 $\frac{1}{2}$											
122	0	1	2	Shale, br. grey with thin bands coal.	1	2										
122	4 $\frac{1}{2}$	4 $\frac{1}{2}$		Shale, dark grey carbonaceous.	4 $\frac{1}{2}$											
126	9 $\frac{1}{2}$	4	5	Greywacke, light grey, fine grd. soft, fri.	4	0										
129	5	2	7 $\frac{1}{2}$	Shale, gy. with thin/slst band.	2	7 $\frac{1}{2}$										
131	3	1	10	Interbdd. bright coal & dk. gy. shale.	1	10										
132	3	1	0	Siltstone br. gy sdy. finely banded.	1	0										
136	0	3	9	Greywacke, coarse-very coarse grd. friable.	3	5										
138	11	2	11	Conglomerate, fine grained, friable.	2	11										
142	9	3	10	Greywacke, coarse grained.	2	3										
151	0	8	3	Greywacke, fine-medium grained.	8	3										
161	1	10	1	Greywacke, v,c.grd. to f.grd.cgl. in part.	10	1										

---Seam E---

---Seam B---

Seam A

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
163 0	1 11	Greywacke, medium-coarse grained.	1 11										
165 2	2 2	Greywacke, light grey, coarse grained.	2 2										
170 4	5 2	Shale & siltstone, grey, very soft.	5 2										
181 10	11 6	Claystone & slst, grey w. some t. smut & black sh. bds. all very soft.	11 6										
187 9	5 11	Shale, bk. v. s. some t. bds. smutty coal.	5 11										
188 1	4	Siltstone, light grey.	4										
196 10	8 9	Interbdd. dk. gy. slst. & sh. (partly carb) with occasional thin gw. band.	8 2										
219 4 1/2	23 1 1/2	Siltstone to v. f. grd. gw. in part w.t.bd. carbonaceous sh. & t. bd. sideritic.	23 0										
220 8 1/2	9	Clay-ironstone, tough.	9										
222 4 1/2	1 8	Siltstone, grey.	1 8										
223 0 1/2	8	Shale, grey-dark grey, carbonaceous.	8										
223 6 1/2	6	Siltstone, brown grey.	6										
224 5	10 1/2	COAL, dull shaly w. t. bright bands.	10 1/2	1/BMR.					3.5	27.5	56.0	13.0	12,170
224 11	6	Shale, bk. carb. with thin bands coal.	6										
230 5	5 6	COAL, dull & bright banded.	5 6	2/BMR.					3.8	35.1	54.5	6.6	13,210
230 5 1/2	1 1/2	COAL, dull & bright banded.	1 1/2	3/BMR.					3.8	34.0	55.9	6.3	13,270
230 8 3/4	3	Claystone, brown.	3										
232 0	1 3 1/2	COAL, dull shaly with bright lam. to mostly bright & powdery.	1 3 1/2	4/BMR.					4.0	33.7	54.6	7.7	13,010
232 7	7	Shale, bk. carb. with bands of daut.	7										
232 10	3	Shale, grey.	3										
233 2	4	Shale, black carbonaceous as above.	4										
233 3 1/2	1 1/2	COAL, dull & bright banded.	1 1/2										
233 4 1/2	1	Shale, dark grey.	1										
233 6 1/2	2	COAL, dull & bright band.	2										
233 11	4 1/2	Shale, dark brown, grey.	4 1/2										
234 2	3	Siltstone, grey.	3										
237 0	2 10	Claystone, grey carb. plant impression.	2 10										
238 0	1 0	COAL, dull & bright white clay veins.	1 0										
238 3 1/2	3 1/2	Claystone, grey with coal lens.	3 1/2										
239 2	10 1/2	Greywacke, grey v. f. grd. thin coal lam.	10 1/2										
240 5	1 3	COAL, with many shy. bands & clay veins.	1 3										
241 0	7	Shale, dk. gy. carb. thin coal laminae.	7										
242 7	1 7	Shale, gy. & dk. gy, carbonaceous.	1 7										
244 1	1 6	COAL, dull & bright shy. in part, friable gas escaping.	1 5										

Middle Artie's Seam
--Upper Artie's Seam--
Seam

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.				H.M.	V.	F.C.	ASH	B. TH. U/LB
344	2	8	11	Greywacke, l. gy. f. grd. fri & shaly near bottom.	8	11								
344	6		4	Shale, grey.		1								
354	10	10	4	Interbedded slst. & shale, carb. over bot. 7' with R coal lam. & 6" sideritic at 7' above bottom.	10	1								
359	2	4	4	Interbedded slst. & v.f. grd. gw. dk. grey & carbonaceous.	4	4								
362	0	2	10	Greywacke, very coarse grained.	2	10								
363	4 $\frac{1}{2}$	1	4 $\frac{1}{2}$	Shale, grey silty in part.	1	4 $\frac{1}{2}$								
365	11 $\frac{1}{2}$	2	7	Greywacke, c. grd. to f. grd. cgl.	2	7								
366	6		6 $\frac{1}{2}$	Shale, dark grey-black, carbonaceous.		6 $\frac{1}{2}$								
366	11 $\frac{1}{2}$		5 $\frac{1}{2}$	COAL, dull & bright.		5 $\frac{1}{2}$								
367	1 $\frac{1}{2}$		2	Shale, black carbonaceous.		1 $\frac{1}{2}$								
367	4 $\frac{1}{2}$		3	COAL, as above.		1 $\frac{1}{4}$								
368	2		9 $\frac{1}{2}$	Shale, dark grey, carbonaceous.		8								
369	9	1	7	Siltstone, grey.	1	7								
369	11		2	Shale, black carbonaceous.		2								
371	0	1	1	COAL, dull shaly.		3 $\frac{1}{2}$								
371	11 $\frac{1}{2}$		11 $\frac{1}{2}$	COAL, dull shaly w. some bright bands.		6								
372	2 $\frac{1}{2}$		3	Shale, black, carbonaceous.		3								
373	10	1	7 $\frac{1}{2}$	Siltstone, dk. gy-gy. to f. grd. gw.	1	7 $\frac{1}{2}$								
376	5 $\frac{1}{2}$	2	7 $\frac{1}{2}$	Greywacke, f. grd to slst. gy. & dk. gy. with thin bds. carbonaceous shale.	2	7 $\frac{1}{2}$								
377	10	1	4 $\frac{1}{2}$	Shale, dk. gy.-bk. w.t.bd. slst. & thin bands coal at bottom.	1	4 $\frac{1}{2}$								
378	0 $\frac{1}{2}$		2 $\frac{1}{2}$	COAL, dull & bright banded, shaly.		2 $\frac{1}{2}$								
379	10	1	9 $\frac{1}{2}$	COAL, dull shaly with bright laminations.	1	6								
380	8		10	COAL, dull shaly with some bright bds. intermixed near bot. w. dk. br. tough. ? shale.		9 $\frac{1}{2}$								
382	8	2	0	Siltstone, dark brown gy. carb. w.t. bds. bright coal.	2	0								
385	1	2	5	Greywacke, gy-l. gy fine-medium grd.	2	5								
386	5	1	4	Greywacke, l. gy., fine grained.	1	4								
411	6	25	1	Greywacke, l. gy. m.-c. grd. w. occasional band, fine grained, conglomerate.	25	1								

Lower Liddell Seam-

typed 17.6.53

BUREAU OF MINERAL RESOURCES

Name and No. of Bore

BMR. 8(S)R POND'S CREEK.

DISTRICT		COUNTY		PARISH		PORTION		LOCATION	
Muswellbrook		Durham		Howick		121		BMR. N14-110	
Surveyed by		Survey Method		Elevation		260.0' ASL		Ref. Map	
N. Gorbunow.		Theodolite Traverse		36'0"		Standard		BMR. Records 1953/47	
Logged by		Cased		Datum		100'5"		Ref. Report	
M.A. Reynolds.		Failing 750/263		Depth		23.2.53/27.2.53		Date Begun/Finished	
Sunk by		Type of Drill							
BMR.									

POND'S CREEK SUBAREA

List of Approximate Locations of Test Boreholes
from Point of Origin No.4 (Howick Trig. Station)
by True Bearings and Distances in Feet.

1T	37°00'	7700	'	8TR	55°40'	4240	'
2T	33°40'	7900	'	9T	355°00'	5140	'
3T	23°10'	5600	'	10T	349°45'	6060	'
4T	11°40'	5550	'	11T	339°40'	6970	'
5T	5°40'	4480	'	12T	336°45'	8200	'
6T	18°30'	4490	'	13T	334°30'	9500	'
7T	354°45'	4610	'	14T	330°15'	11800	'
8T	55°40'	4240	'	15T	327°10'	6930	'
		16T	326°40'	11120			'

BUREAU OF MINERAL RESOURCES

Name and No. of Bore BMR. 1T POND'S CREEK.

DISTRICT Cessnock COUNTY Durham PARISH Howick PORTION 12 LOCATION 121

Surveyed by N. Gorbunow Survey Method Theodolite Traverse Elevation 523.1' ASL Ref. Map BMR. N14-110

Logged by N. Hoyling Cased 16' Datum Standard Ref. Report BMR. Records 1953/47

Sunk by Drilling Corp. of Aust. Type of Drill Mindrill El000~~7~~5 Depth 98'0" Date Begun/Finished 25.11.52/27.11.52

[illegible]

Hole completed.

Typed: 1.6.53.

BUREAU OF MINERAL RESOURCES

Cessnock

Name and No. of Bore BMR. 2T POND'S CREEK.

DISTRICT Muswellbrook COUNTY Durham PARISH Howick PORTION 121 LOCATION
 Surveyed by N. Gorbunow Survey Method Theodolite Traverse Elevation 475.2' ASL Ref. Map BMR. N14-110
 Logged by N. Hoyling & Duff Cased 20' Datum Standard Ref. Report BMR. Records 1953/47
 Sunk by Price & Anderson Type of Drill Goldfields 20 Depth 116'0" Date Begun/Finished 26.11.52/1.12.52

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		1	0	Surface clay.		8										
12	0	11	0	Greywacke, light greyish to brownish buff, medium grained.	6	5										
16	9½	4	9½	Claystone, white with purplish grey bands & ferruginous mottling.	2	8										
36	9½	20	0	Greywacke, brown to brownish buff, fine to medium grained.	20	0										
38	1½	1	4	Shale, brownish to blackish grey.	1	4										
38	2		½	COAL, dull.		½										
38	5		3	Shale, dark grey, carbonaceous.		3										
39	11	1	6	Shale, & siltstone, light brown interbdd.	1	6										
43	0	3	1	Shale, light brown, iron stained.	3	1										
45	0	2	0	Shale, grey, soft.	2	0										
48	6	3	6	Shale, grey & light grey, silty.	2	3										
48	9		3	Shale, dark grey, carbonaceous in part.		3										
48	11		2	Shale, black, carb. white clay veins.		2										
49	8		9	COAL, dull & bright cleated.		9										
50	2		6	COAL, dull & bright cleated.		5	1/BMR.					4.3	32.9	48.0	14.8	11,800
50	4		2	COAL, dull, shaley.		2										
50	9		5	Shale, black, carbonaceous.		5										
50	11½		2½	COAL, bright.		2½										
51	5½		6	Shale, grey, carbonaceous.		6										
51	7		1½	COAL, shaley.		1½										
52	0		5	COAL, broken.		5	2/BMR.					4.0	34.4	50.2	11.4	12,310
52	1½		1½	Siltstone, light grey.		1½				1½"						
52	4½		3	COAL, dull & bright.		3										
52	7		2½	Siltstone, as before.		2½										
53	0		5	COAL, dull & bright cleated.		5										
53	1		1	Shale, grey brown.		1										
54	0	11		COAL, broken.		11	3/BMR.			2"		4.3	30.0	45.5	20.2	11,020
54	1		1	Shale, black soft, carbonaceous.		1										

---Lower Liddell Seam---

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
54	6	5		COAL, mostly dull shaly in part.	5		Lower Liddell Seam									
54	8	2		COAL, dull broken	2											
56	8	2	0	Shale, dark grey, carbonaceous.	1	1										
59	11	3	3	Shale, grey, carbonaceous at top.	2	8										
62	4	2	5	Siltstone, partly sideritic, light grey.	1	5										
66	4	4	0	Greywacke, F.G. light grey, shaley at top.	4	0										
68	11	2	7	Greywacke, M.G. light brown.	2	7										
92	11	24	0	Greywacke, M.G. & Coarse grained, fractured, vertically, calcite filled light brown partly light grey, Rare thin carb. laminae and coal lenses.	23	6										
97	9	4	10	Shale, grey, silty.	4	4										
99	9	2	0	COAL, generally bright, broken to fragmentary.	2	0	4/BMR.					3.7	36.8	51.9	7.6	13,030
99	11	2		Shale, light grey.	2											
100	3	4		COAL, bright.	4											
100	5 1/2	2 1/2		Shale, light grey.	2 1/2											
100	10 1/2	5		COAL, generally dull.	5											
100	11 1/2	1		Shale, grey with carbonaceous streaks.	1											
101	0	1 1/2		COAL, dull, shattered.	1 1/2											
101	2 1/2	2 1/2		Shale, light grey & black.	2 1/2		5/BMR.			3 1/2"		4.4	33.4	51.7	10.5	12,430
101	11 1/2	9		COAL, dull fragmentary.	9											
102	3 1/2	4		Claystone, light brownish grey.	4											
104	0	1	9	COAL, dull with bright bands.	1	9	6/BMR.			1"		4.4	34.9	53.0	7.7	12,920
104	1 1/2	1		Shale, dark grey.	1											
104	7 1/2	6		COAL, bright.	6											
116	0	11	4 1/2	Greywacke, light grey, medium grained with shale bands.	10	2										

Hole completed.

Typed: 1.6.53.

BUREAU OF MINERAL RESOURCES

Name and No. of Bore BMR. 3T POND'S CREEK.

Cessnock

DISTRICT Muswellbrook COUNTY Durham PARISH Howick PORTION 121 LOCATION 750000 750000

Surveyed by N. Gorbunow Survey Method Theodolite Traverse Elevation 367.4' ASL Ref. Map BMR. N14-110

Logged by Paul G. Duff Cased 20' Datum Standard Ref. Report BMR. Records 1953/47

Sunk by Drilling Corp. of Aust. Type of Drill Mindrill E/1000 # 5 Depth 80'0" Date Begun/Finished 27.11.52/3.12.52

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
20	0	20	0	Surface clays, brown, sandy.	1	6										
30	0	10	0	Claystone, white, ferruginous mottling.	2	3										
47	0	17	0	Shale, grey.	8	0										
60	0	13	0	Shale, grey.	8	8										
74	6	14	6	Shale, grey.	8	6										
80	0	5	6	Shale, grey	4	6										
				Hole completed.	Typed: 5.6.53.											

BUREAU OF MINERAL RESOURCES

Name and No. of Bore BMR. 4T POND'S CREEK.

~~Cessnock~~

DISTRICT Miswellbrook COUNTY Durham PARISH Howick PORTION 121 LOCATION Howick

Surveyed by N. Gorbunov Survey Method Theodolite Traverse Elevation 377.1 ASL Ref. Map BMR. N14-110

Logged by Paul G. Duff Cased 28'0" Datum Standard Ref. Report BMR. Records 1953/47

Sunk by Drilling Corp. of Aust. Type of Drill Mindrill E1000# 5 Depth 105'0" Date Begun/Finished 3.12.52/10.12.52

[illegible]

Hole completed.

Typed: 5.6.53.

BUREAU OF MINERAL RESOURCES

Name and No. of Bore

BMR. 5T POND'S CREEK.

Cessnock		DISTRICT Muswellbrook		COUNTY Durham	PARISH Howick	PORTION 12	LOCATION 12
Surveyed by	N. Gorbunow	Survey Method	Theodolite Traverse	Elevation	392.9' ASL	Ref. Map	BMR. N14-110
Logged by	P.G. Duff & M.A. Renoult	Case	15'0"	Datum	Standard	Ref. Report	BMR. Records 1953/47
Sunk by	Drilling Corp. of Aust.	Type of Drill	Mindrill E/1000 # 5	Depth	170'0"	Date Begun/Finished	10.12.52/10.1.53

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
85	10		1 1/2	COAL, dull and bright banded.		1 1/2										
86	10	1	0	Siltstone, bk. carb. for 2" then grey	1	0										
87	2 1/2		4 1/2	Siltstone, grey slickensided.		4 1/2										
87	3		1 1/2	Shale, black carb. highly pyrite.		1 1/2										
87	3 3/4		1 1/4	COAL, dull & bright bdd. w. t. bk. slst. band.		3 3/4										
87	8 3/4		5	Siltstone, bk carb. sdy. w. foetid sdoni		5										
91	10	4	1 1/2	COAL, dull & bright bdd. irregularly cleated.	4	1 1/2	2/BMR.					3.1	33.3	47.5	16.1	11950
93	0		2	COAL, as above pyr. w. fine sh. lam. near bottom.	1	2	3/BMR.					3.7	31.5	57.5	7.3	13250
93	2		2	Siltstone br. to l. br. gy. sdy. at top with thin coal bands.		2										
93	3 1/2		1 1/2	COAL, lamd. to banded with thin slst. lenses		1 1/2										
93	4 1/4		1 1/4	Siltstone, as above.		1 1/4										
94	7 1/2	1	3 1/2	COAL, with thin lenses as above.	1	3 1/2	4/BMR.					3.5	32.9	47.5	16.1	11900
94	8 1/4		2 1/4	Siltstone, as above w. t. irreg. coal bds.		2 1/4										
94	10		1 1/2	COAL, dull & bright banded.		1 1/2										
95	2		4	COAL, dull & bright banded.		3										
95	5		3	Greywacke, fine grained.		3										
95	7 1/2		2 1/2	COAL, dull & bright banded.		2 1/2										
96	2		6 1/2	Siltstone, light brown grey soft, sandy.		6 1/2										
96	6		4	COAL, dull & bright banded.		4										
96	6 1/2		1 1/2	Siltstone, brown. (w. foetid odour)		1 1/2										
96	8 1/4		1 1/4	COAL, bright interbdd w. bk. carb. shale		1 1/4										
96	9		1 1/2	Siltstone, brown.		1 1/2										
96	10		1	COAL, dull & bright bdd. w. t. sl. lens.		1										
97	2 1/2		4 1/2	COAL, dull & bright bdd.		1										
97	6 1/2		4	Shale, black carbonaceous sandy.		4	5/BMR.					3.3	26.3	36.2	34.2	8710
97	11 1/2		5	COAL, dull & bright banded.		5										
98	2 1/2		3	Greywacke, coarse grained highly pyrite.		3										
99	1 1/2	11		Shale, bk. carb. w. t. bds. coal to gy. for 3".		11										
99	4		2 1/2	Greywacke, light grey fine-medium grd.		2 1/2										
100	6	1	2	Greywacke, as above with 4" slst. band.	1	2										
107	7	7	1	Siltstone, grey.	6	1										
141	0	33	5	Greywacke, m-c grd. w. occasional pebble bds. to f. grd. cgl. over bot. 6"	32	11										
145	6	4	6	Shale, grey.	4	6										

-----Artie's Seam-----

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
145	10		4	COAL, dull & bright bdd. w. sh.min vein.		4	6/BMR.	Upper Liddell Seam.			3.3	32.5	54.8	9.4	12980	
146	1		3	COAL, dull with bright bands.		3 1/2										
146	4 1/2		3 1/2	Shale, dark grey pyrite, sandy.		3 1/2										
148	7	2	2 1/2	COAL, dull w.t. bright bds. to dull and bright banded.	1	9										
150	10	2	3	COAL, as above 1'9" irreg. fractd. w. wh. min on fract. plane.	2	0	7/BMR.				3.1	35.3	52.8	8.8	13090	
150	11 1/2		1 1/2	Shale, dark grey, pyrite.		1 1/2										
152	7	1	7 1/2	COAL, dull & bright lamd. to bdd. broken.	1	4 1/2	8/BMR.				3.1	30.6	43.6	22.7	10980	
153	1		6	Shale, dark gy. carb. for 1/2 thin gy pry.		5										
155	6	2	5	Siltstone, to f.-m. grd. greywacke.	2	5										
158	5	2	11	Greywacke, medium grd. to v.f. grd. over bottom 3".	2	11										
159	1		8	Claystone, grey.		8	Middle Liddell Seam.	3.1	27.6	42.7	26.6	10010				
159	4 1/2		3 1/2	Clay-ironstone ? sideritic w. wh.calcite veins.		3 1/2										
159	7		2 1/2	Shale, bk. carb. sdy. pyrite to brown.		2 1/2										
161	9	2	2	COAL, dull w. bright bds. w. wh. min. on fract. planes.		11							9/BMR.			
162	5		8	COAL, dull with bright bands.		6										
163	5	1	0	Siltstone, carb. light grey, sandy ply.		8 1/2										
170	0	6	7	Greywacke, medium grained to fine grained.	5	9										
													typed 8.6.53			

BUREAU OF MINERAL RESOURCES

Name and No. of Bore

BMR. 6T. POND'S CREEK.

Cessnock		Durham		Howick		121	
DISTRICT	Muswellbrook	COUNTY		PARISH		PORTION	LOCATION
Surveyed by	N. Gorbunow	Survey Method	Theodolite	Elevation	420.3' ASL	Ref. Map	BMR. N14-110
Logged by	S.D. Henderson	Cased	No	Datum	Standard	Ref. Report	BMR. Records 1953/47
Sunk by	Drilling Corp. of Aust.	Type of Drill	Mindrill E/1000 # 5	Depth	166'0"	Date Begun/Finished	12.1.53/23.1.53

[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
67	4	10		Claystone, light grey		6										
73	2	5	10	Greywacke, fine grained	5	7										
176	6	3	4	Greywacke, coarse grained.	3	2										
79	0	2	6	Greywacke, coarse grained.	1	6										
79	9		9	Greywacke, fine grained.		6										
80	3		6	Siderite.		6										
81	3	1	0	Greywacke, medium to coarse grained.		10										
82	6	1	3	Claystone, light grey.		7										
82	7½		1½	Clay-ironstone.		1½										
84	0	1	4½	Claystone, light grey.		9										
85	9	1	9	COAL, dull, bright bds. broken parts.	1	2½										
86	0		3	COAL, dull to bright.		1½										
88	9	2	9	Greywacke, medium grained.	2	4										
89	10	1	1	Siltstone, grey with plants.	1	1										
97	6	7	8	Greywacke, medium to fine grd. coal streaks.	7	8										
99	6	2	0	Greywacke, fine grd. black streaks.	1	7										
100	11	1	5	Siltstone, grey with plants.		11										
101	11	1	0	Clay-ironstone, broken.		9										
104	6	2	7	Claystone, grey.		4										
109	11	5	5	Greywacke, fine grained.	5	5										
110	0		1	Greywacke, medium grained.		1										
113	8	3	8	Siltstone, grey.	3	8										
113	11		3	Greywacke, fine grained.		3										
118	10	4	11	Greywacke, fine grained siltstone bands.	4	2½										
119	10	1	0	Siltstone, grey.	1	0										
120	10	1	0	Clay-ironstone.		11										
121	1		3	Siltstone, grey.		1½										
121	5		4	Clay-ironstone.		2½										
121	9		4	Siltstone, grey.		2½										
124	7	2	10	Greywacke, fine grained.	2	10										
127	11½	3	4½	Claystone, fine grey.	3	4										
128	2		2½	COAL.		2½										
129	9½	1	7½	Greywacke, very fine to medium grained.	1	7½										
131	3½	1	6	Claystone, light brown, grey.	1	6										
131	6		2½	Greywacke, fine grained.		2½										
138	0	6	6	Greywacke, fine grd. w. slst. bands.	6	1										
139	0	1	0	Siltstone, grey.		11										
139	9		9	Ironstone, broken.		7										
140	6		9	Siltstone, dark grey.		6½										

Seam
A

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
141	5		11	Siltstone, with coal bands		11										
141	11 $\frac{1}{2}$		6 $\frac{1}{2}$	COAL, with shale bds. fragmentary.		5										
143	9 $\frac{1}{2}$	1	10	Siltstone, carbonaceous.	1	9										
144	3		5 $\frac{1}{2}$	COAL, dull with bright bands.		5 $\frac{1}{2}$										
144	6		3	Shale, coaly.		3										
145	6	1	0	COAL, bright with dull bands.		11 $\frac{1}{2}$	1/BMR.					3.6	30.0	47.5	18.9	11,120
148	0	2	6	COAL, bright with dull bds. bk. & fragy.	2	6										
148	3		3	COAL, bright.		3										
148	5 $\frac{1}{2}$		2 $\frac{1}{2}$	COAL, with white mineral veining.		2 $\frac{1}{2}$										
148	9		3 $\frac{1}{2}$	Claystone, brown grey.		3 $\frac{1}{2}$	2/BMR.					3.4	34.3	45.3	17.0	11,430
150	5	1	8	COAL, bright with dull bds. fragmentary.	1	8										
151	7	1	2	COAL, with white veining.	1	2										
152	1		6	Claystone, grey.		6										
152	3		2	COAL.		1										
152	11		8	Greywacke, medium-fine grained.		8										
156	2 $\frac{1}{2}$	3	3 $\frac{1}{2}$	COAL, dull with bright bands, black.	1	3										
156	4		1 $\frac{1}{2}$	Greywacke, fine grained.		1 $\frac{1}{2}$										
156	6		2	COAL, with white mineral veining.		2										
156	7		1	COAL, with white mineral veining.		1										
158	4	1	9	Siltstone, grey.	1	4										
160	0	1	8	Claystone, grey.	1	8										
162	6	2	6	Greywacke, fine grained.	1	6										
166	0	3	6	Greywacke, fine grained.												

Hole completed.

Typed: 8.6.53.

-----Artie's Seam-----

BUREAU OF MINERAL RESOURCES

Name and No. of Bore

BMR. 7T POND'S CREEK.

~~Cessnock~~

DISTRICT	Muswellbrook	COUNTY	Durham	PARISH	Howick	PORTION	121	LOCATION	
Surveyed by	N. Gorbunow	Survey Method	Theodolite Traverse	Elevation	446.1'	ASL		Ref. Map	BMR. N14-110
Logged by	S.D. Henderson	Cased	No	Datum	Standard			Ref. Report	BMR. Records 1953/47
Sunk by	Drilling Corp. of Aust.	Type of Drill	Mindrill E/1000 4 5	Depth	165'0"			Date Begun/Finished	4 .2.53

[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		
89	6		2	COAL, dull with bright bands.		2	1/BMR.	Seam A			3.6	33.2	55.2	8.0	12,850			
93	6	4	0	COAL, dull & bright banded	1	6 1/2												
98	0	4	6	Greywacke, fine to very fine grained.	3	4 1/2												
102	6	4	6	Greywacke, fine to very fine grained.	4	1												
104	0	1	6	Clay-ironstone.	1	2												
104	6		6	Clay-ironstone.		5 1/2												
112	0	7	6	Greywacke, fine to medium grained.	6	1 3/4												
113	11	1	11	Greywacke, very f. grd. w. slst. bands,	1	8 3/4												
116	0	2	1	Siltstone, grey.	1	10												
117	11	1	11	Greywacke, medium grained.	1	6												
123	0	5	1	Greywacke, very f. grd. w. slst. bands.	4	11	2/BMR.	1/4	Artie's Seam			3.4	33.4	53.4	9.8	12,600		
127	6	4	6	Greywacke, medium to very fine grained.	4	0												
134	6	7	0	Siltstone, gy. with claystone bands.	4	2												
141	6	7	0	Greywacke, fine grd. with slst. bands.	6	6												
144	6	3	0	Greywacke, fine to medium grained.	3	0												
146	0 1/2	1	6 1/2	Greywacke, fine grained.	1	6 1/2												
146	3 1/2		3	Siltstone, carbonaceous.		3												
147	6	1	2 1/2	COAL, dull broken.	1	2												
150	2 1/2	2	8 1/2	COAL, dull & bright banded.	2	8 1/2												
151	0		9 1/2	COAL, with thin clst. band, broken.		9 1/2												
152	2	1	2	COAL, dull with bright bands.	1	2	3/BMR.					3.6	33.5	49.4	13.5	12,040		
152	3		1	Siltstone, carbonaceous.		1												
152	10 1/2		7 1/2	COAL, dull bright bands, white mineral veining.		7 1/2												
153	4		5 1/2	Claystone, light grey.		5 1/2												
153	8 1/2		4 1/2	COAL, dull bright, fragmentary.		4 1/2												
153	11 1/2		3	Claystone, light grey.		3												
154	3		3 1/2	Siltstone, carbonaceous.		3 1/2												
154	6		3	COAL, dull.		1 1/2												
154	10		4	COAL, dull & bright, shattered.		4												
155	5 1/2		7 1/2	Siltstone, grey.		7 1/2				Hole completed.								
156	11 1/2		6	Greywacke, medium grained.	1	6												
158	6	1	6 1/2	Siltstone, grey.		3												
162	1 1/2	3	7 1/2	Siltstone, grey.	3	7 1/2												
162	10		8 1/2	Clay-ironstone.		8 1/2												
165	0	2	2	Greywacke, fine grd. with slst. bands,	1	9												

typed 8.6.53

typed 8.6.53

BUREAU OF MINERAL RESOURCES

BMR. 8T POND'S CREEK.

Cossneek

Name and No. of Bore

DISTRICT Muswellbrook COUNTY Durham PARISH Howick PORTION 121 LOCATION BMR. N14-110
Surveyed by N. Gorbunow Survey Method Theodolite Traverse Elevation 422.5' ASL Ref. Map BMR. Records 1953/47
Logged by S.D. Henderson Cased No Datum Standard Ref. Report 3.2.53/24.2.53
Sunk by Drilling Corp. of Aust. Type of Drill Mindrill E/1000# 5 Depth 148'6" Date Begun/Finished

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
2	0	2	0	Brown clay		4 1/2										
6	0	4	0	Greywacke, medium grained, weathered.	1	0										
10	0	4	0	Greywacke, medium grained.	3	1 1/2										
15	0	5	0	Greywacke, medium grained.	3	7										
20	0	5	0	Greywacke, medium grd. w. t. ironstone bd.	3	4										
25	0	5	0	Greywacke, medium to coarse grained.	2	9										
31	0	6	0	Greywacke, coarse grained.	2	8										
35	0	4	0	Greywacke, coarse grained.	3	1										
35	4 1/2		4 1/2	Ironstone, red.		4 1/2										
37	0	1	7 3/4	Greywacke, fine to medium grained.	1	2										
40	0	3	0	Greywacke, fine to medium grd. with clst. bands, broken.	1	3										
42	0	2	0	Greywacke, medium grained.		10 1/2										
46	0	4	0	Greywacke, medium to coarse grained.	4	0										
46	7		7	Greywacke, fine to medium grd. coaly traces.		1 1/2										
47	0		5	COAL, dull with bright bands, broken.		3 1/2										
48	9	1	9	COAL, dull & bright w. slst. bds, shattered.	1	6	1/BMR.					4.1	30.6	46.6	18.7	11,270
49	4		7	COAL, dull with thin bright bands.		7										
49	9		5	COAL, dull to bright, shattered.		3 1/2										
51	0	1	3	Claystone, grey, very soft.	1	0										
55	0	4	0	Claystone, grey, soft. No Recovery												
61	0	6	0	Claystone, grey, soft. (Possibly Coal) No Recovery												
63	6	2	6	Claystone, grey, soft. No Recovery												
67	0	3	6	Greywacke, fine grd. with clst. band.	1	6										
71	0	4	0	Greywacke, fine to medium grd. steep bedded	2	7										
71	8		8	Clay-ironstone.		4										
73	0	1	4	Greywacke, fine grained.		2										
78	0	5	0	Greywacke, medium grd. with thin clst. bds. soft.	1	4										
83	0	5	0	Greywacke, medium grained.	1	5										
90	0	7	0	Greywacke, coarse grained.	3	7										

---Artic's Seam---

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
96	0	6	0	Greywacke, coarse grained.	2	5										
103	0	7	0	Greywacke, coarse & medium grained.	4	2										
110	0	7	0	Greywacke, coarse grained.	5	0										
112	7	2	7	Greywacke, fine grained.	2	0										
113	5,	10		Siltstone, grey.		10										
115	0	1	7	Claystone, dark.	1	4										
115	5		5	COAL, bright, broken.		1½										
115	7		2	COAL, dull.		1										
116	7	1	0	Siltstone, grey.	1	0										
118	5	1	10	Greywacke, fine grained.	1	10										
119	7	1	2	Siltstone, grey.	1	0										
121	2	1	7	Siltstone, grey.		4										
122	0		10	COAL, dull.		3										
123	6	1	6	COAL, (core barrel jammed)		nil										
127	6	4	0	COAL, dull & bright banded.	1	7½	2/BMR.									
130	0	2	6	COAL, dull, fragmentary.		5						3.8	33.7	49.5	13.0	12,230
132	6	2	6	Siltstone, grey.		5										
137	6	5	0	Greywacke, coarse grained.	4	2										
140	4	2	10	Greywacke, medium to very fine grained.	2	10										
141	1		9	Siltstone, grey.		9										
141	6		5	Clay-ironstone.		5										
142	6	1	0	Greywacke, very fine grained.		7½										
142	10		4	Shale, carbonaceous.		4										
148	6	5	8	Greywacke, fine to medium grained.	4	8						Hole completed.	typed	8.6.53		

Upper
Liddell
Seam

BUREAU OF MINERAL RESOURCES

Name and No. of Bore BMR. 8 (T) R POND'S CREEK.

~~Cessnock~~

DISTRICT Muswellbrook COUNTY Durham PARISH Howick PORTION 121 LOCATION 121

Surveyed by N. Gorbunow Survey Method Theodolite Traverse Elevation 422.5' ASL Ref. Map BMR. N14-110

Logged by S.D. Henderson Cased No Datum Standard Ref. Report BMR. Records 1953/47

Sunk by Drilling Corp. of Aust. Type of Drill Mindrill E/1000#5 Depth 136'6" Date Begun/Finished 24.2.53/3.3.53

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
58	8		1	Greywacke, fine grained.		1										
58	9		1	COAL, bright, broken		1										
59	9	1	0	Greywacke, medium grained.	1	0										
60	4		7	COAL, dull with bright bands.		6										
60	9		5	Greywacke, medium grained.		5										
61	0 1/2		3 1/2	COAL, bright, broken.		2 1/2										
62	1 1/2	1	1	Greywacke, medium grd. with coal lenticles.	1	0										
62	11		9 1/2	COAL, bright with dull bds, shattered.		9										
63	6		7	Claystone, grey, soft, silty.		6										
69	6	6	0	Claystone, grey very soft.	1	6										
77	6	8	0	Greywacke, fine grd. sideritic bands.	1	0										
83	6	6	0	Greywacke, fine grained.		8										
90	6	7	0	Greywacke, medium grained.	4	11										
94	6	4	0	Greywacke, medium to coarse grained.	1	0										
95	0		6	Siltstone, grey.		3										
97	6	2	6	Greywacke, medium grained.		8										
103	6	6	0	Greywacke, medium grained. No Recovery												
106	6	3	0	Greywacke, medium grained.	1	6										
109	6	3	0	Greywacke, very fine grd. with slst. bds.	2	6										
110	6	1	0	Grey sandstone shattered with ironstone pebbles.		3										
113	6	3	0	Claystone, grey, slst. grey & coal, frag.		9										
116	6	3	0	Greywacke, very fine grained.	2	6										
117	2		8	Greywacke, fine grained, broken.		4										
117	8		6	Siderite.		3										
119	3	1	7	Siltstone, dk. grey with soft clst. bds.		8										
120	6	1	3	COAL, dull shattered at base.		9										
123	6	3	0	COAL, (not seen) No Recovery												
124	0		6	COAL, dull, fragmentary.		2										
124	2		2	Siltstone, carbonaceous.		1										
124	8		6	COAL, dull, fragmentary		2										
125	6	10		Siltstone, grey, fragmentary } Intermixed		4										
126	4	10		Siltstone, grey with soft coaly bed.		5										
128	6	2	2	Greywacke, fine to medium grained.	1	2										
136	6	8	0	Greywacke, coarse & medium grained.	4	10										

-Artie's-
SeamUpper
Liddell
Seam.

Hole completed.

typed 8.6.53

BUREAU OF MINERAL RESOURCES

Name and No. of Bore BMR. 9T POND'S CREEK.

DISTRICT Cossnook Muswellbrook COUNTY Durham PARISH Howick PORTION 121 LOCATION 392.0' ASL BMR. N14-110
Surveyed by N. Gorbunow Survey Method Theodolite Traverse Elevation Standard Ref. Map BMR. Records 1953/47
Logged by S.D. Henderson Cased No Datum Standard Ref. Report 3.3.53/18.3.53.
Sunk by Drilling Corp. of Aust. Type of Drill Mindrill E/1000# 4 Depth 242'6" Date Begun/Finished

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
5	0	5	0	Sand & clay.												
11	0	6	0	Greywacke, medium grained.	2	9										
15	6	4	6	Greywacke, fine grd. with yish. clst. bds.	2	11										
19	6	5	0	Greywacke, fine grd. with gy. slst. to claystone bands, weathered.	3	0										
21	6	2	0	Greywacke, fine to very fine grained.	1	3										
25	6	4	0	Greywacke, very fine grd. to medium grd.	4	0										
26	6	1	0	Siltstone, gy. with thin coal band.	1	0										
31	6	5	0	Greywacke, fine grained with slst. bands.	3	11										
32	10	1	4	Greywacke, medium grained.	1	2										
34	4	1	6	Siltstone, grey, brown.	1	5										
34	10		6	Siltstone, carbonaceous.		3 1/2										
35	4		6	Claystone, br. v. soft with coal fragments.		3 1/2										
35	11		7	COAL, dull with white mineral veining.		7										
36	11	1	0	Siltstone, dark grey.	1	0						Seam C				
37	1		2	COAL, bright with white veining.		2										
41	0	3	11	Greywacke, very fine grd. with slst. bds.	2	10										
46	0	5	0	Greywacke, medium grained.	4	8										
51	1	5	1	Greywacke, medium grained.	3	7										
56	6	5	5	Greywacke, medium to fine grained.	4	8										
57	8	1	2	Siltstone, grey.	1	1										
58	8	1	0	COAL, dull with bright bds. white veining.		11 1/2						Seam B				
59	4		8	COAL, dull & bright white veining, broken.		8										
60	1		9	Claystone, grey, silty.		9										
61	0		11	Siltstone, grey, sideritic.		11										
66	0	5	0	Greywacke, fine grd. with slst. bands.	5	9										
67	3	1	3	Siltstone.	1	0										
67	11		8	Clay-ironstone.		7										
71	0	3	1	Greywacke, medium grained, soft.		6										
76	0	5	0	Greywacke, very fine grained.	4	7										
76	11	1	0	Greywacke, very fine grained, slickensided		11										
79	0	2	1	COAL, dull with thin bright bands.	1	9 1/2						Seam A				

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
81	3	2	3	Greywacke, medium grained to fine grd.	1	5½										
84	6	3	3	Greywacke, fine to medium grained.	2	2										
84	10		4	Clay-ironstone.		3										
86	0	1	2	Greywacke, medium grd. with slst. bands.		10										
91	0	5	0	Greywacke, very fine to fine grained.	3	2										
96	0	5	0	Greywacke, medium grd. with very fine grd. bands.	4	6										
101	0	5	0	Greywacke, fine & medium grd. banded.	4	9										
106	0	5	0	Greywacke, fine & medium grd. with slst. bands.	3	8										
111	0	5	0	Siltstone, grey.	3	0										
116	0	5	0	Greywacke, medium grained.	4	1										
121	0	5	0	Greywacke, medium grained.	5	7										
126	0	5	0	Siltstone, light grey.	3	5										
126	6		6	Clay-ironstone.		4										
129	2	2	8	Siltstone, grey with bds. of very fine grd. greywacke.	2	8										
129	4		2	COAL, dull, broken.		2										
131	9	2	5	Siltstone, grey.	2	5										
132	2		5	Clay-ironstone, broken.		5										
133	0		10	Siltstone, light grey, broken.		7										
137	6	4	6	Siltstone, dark grey & very fine grd. greywacke, banded.	3	10										
138	0		6	Siderite, broken.		3										
144	0	6	0	Greywacke, fine grd. with bands of medium grained.	4	0										
146	6	2	6	Greywacke, fine grd. with bds. of gy. slst.	1	4										
149	0	2	6	COAL, dull with bright bands.	2	3										
149	4		4	COAL, dull & bright banded.		4						3.1	32.8	50.3	13.8	12,210
149	7½		3½	Claystone, grey, silty.		2½										
149	9½		2	COAL, dull & bright with white veining.		1½										
149	11		1½	Greywacke, fine grained.		1										
150	7½		8½	COAL, dull with white veining cleaved.		8½						3.0	30.1	45.8	21.1	11,160
151	6		10½	COAL, dull & bright banded.		9										
152	0½		6½	COAL, dull & bright banded, with white veining		5½										
152	6½		6	Claystone, grey with siltstone.		5										
153	6		11½	COAL, bright with dull bands.		10½										
153	6½		1½	Siltstone, carbonaceous.		½										
154	1½		7	COAL, dull with bright bands.		7				½"		3.1	31.9	49.3	15.7	11,940

1/BMR.

2/BMR.

3/BMR.

Artie's Seam-----

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			
154	3½		2	Greywacke, fine grained.		2													
155	1½		10	COAL, dull with bright bands, broken.		10	4/BMR.	Artie's Seam	1½"	3.2	30.8	46.5	19.5	11,280					
155	2		½	Siltstone, carbonaceous.		½													
155	8		6	COAL, dull, broken with grey clst. bands.		6													
156	3½		7½	Claystone, light grey, soft.		7½													
156	6		2½	Siltstone, dark grey, broken.		2½													
158	6	2	0	Siltstone, grey with bands of very fine grd.															
				greywacke.	1	4													
158	9		3	Siltstone, carbonaceous.		1													
160	9	2	0	Greywacke, medium grained.	1	7													
166	6	5	9	Greywacke, fine grained.	5	4													
167	6	1	0	Greywacke, medium grained.		6													
172	6	5	0	Greywacke, fine to medium grained.	4	1													
177	6	5	0	Greywacke, medium grained.	3	4													
187	6	10	0	Greywacke, medium grained.	66	44													
196	6	9	0	Greywacke, medium grained with coarse grd.															
				bands.	9	0													
197	0		6	Greywacke, medium grained.		6													
197	10		10	Greywacke, coarse grained.		10													
201	0	3	2	Greywacke, medium & fine grained, banded.	3	2													
201	10		10	Greywacke, very fine grained.		10													
202	6		8	Siltstone, grey.		8													
207	3	4	9	Siltstone, grey with plants.	3	9													
207	11		8	COAL, bright with dull bands.		7	5/BMR.	Upper Liddell-Seam	1½"	2.9	30.7	53.8	12.6	12,440					
208	5		6	COAL, dull.		5½													
212	0	3	7	COAL, mainly bright, dull bands broken frag.	3	5													
213	6	1	6	COAL, bright & dull, broken.	1	4½	6/BMR.								3.1	35.6	55.2	6.1	13,440
213	10		4	COAL, dull.		3½													
214	6		8	Siltstone, grey.		6½													
214	7		1	Claystone, grey, soft.		1													
217	5	2	10	Greywacke, fine to medium grained.	2	10													
219	1	1	8	Greywacke, fine grained.	1	8													
219	6		5	Siltstone, grey.		5													
222	0	2	6	Siltstone, grey with bands of gw. medium.	2	5													
222	4		4	Claystone, light grey.		2													
223	4	1	0	COAL, dull, broken.		10													
224	6	1	2	Greywacke, very fine grained.		8													

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
229	6	5	0	Greywacke, fine to medium grained.	3	10										
234	0	4	6	Greywacke, medium grained.	4	8										
242	6	8	6	Greywacke, medium grained.	8	6										
</																

Cessnock

Name and No. of Bore

DISTRICT	Muswellbrook	COUNTY	Durham	PARISH	Howick	PORTION	121	LOCATION	
	N. Gorbunow		Theodolite Traverse		335.2'	ASL	BMR. N14-110		
Surveyed by	S.D. Henderson	Survey Method	No	Elevation	Standard	Ref. Map	BMR. Records 1953/47		
Logged by	Drilling Corp. of Aust.	Cased	Mindrill E/1000 # 5	Datum	101'6"	Ref. Report	4.3.53/6.3.53		
Sunk by		Type of Drill		Depth		Date Begun/Finished			

[illegible]

BUREAU OF MINERAL RESOURCES

Name and No. of Bore BMR. 11T POND'S CREEK.

Cessnock

DISTRICT Muswellbrook COUNTY Durham PARISH Howick PORTION 121 LOCATION
Surveyed by N. Gorbunow Survey Method Theodolite Traverse Elevation 291.1' ASL Ref. Map BMR. N14-110
Logged by S.D. Henderson Cased No Datum Standard Ref. Report BMR. Records 1953/47
Sunk by Drilling Corp. of Aust. Type of Drill Mindrill E/1000 5 Depth 99'0" Date Begun/Finished 7.3.53/11.3.53

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
7	0	7	0	Sand & clay.		5										
26	0	19	0	Sand & siltstone, grey, dedomposed.		3										
34	0	8	0	Siltstone, gy. with t. clst. bds. weathered.	5	11										
38	0	4	0	Siltstone, light grey.	3	11										
46	0	8	0	Siltstone, grey, soft.	5	9										
54	0	8	0	Siltstone, grey with shaley cleavage.	8	1										
62	0	8	0	Siltstone, grey, soft with t. clst. bands.	5	8										
68	6	6	6	Siltstone, grey, soft with shaley cleavage.	5	3										
69	0		6	Limestone.		5										
72	0	3	0	Siltstone, grey, soft with clst. bands.	1	10										
74	9	2	9	Siltstone, greyish, brown, soft.	2	6										
75	0		3	Greywacke; fine to medium grained, sideritic.		3										
79	0	4	0	Siltstone, grey brown.	3	1										
87	0	8	0	Siltstone, grey with t. clst. bands and sideritic modules.	7	10										
95	0	8	0	Siltstone, grey, soft.	5	8										
99	0	4	0	Siltstone, grey, soft.	4	0										
Hole completed.												typed 9.6.53				

BUREAU OF MINERAL RESOURCES

Name and No. of Bore

BMR. 12T POND'S CREEK.

~~Geaneek~~

DISTRICT	Muswellbrook	COUNTY	Durham	PARISH	Howick	PORTION	121	LOCATION	
Surveyed by	N. Gorbunow	Survey Method	Theodolite	Traverse	Elevation	373.8'	ASL	Ref. Map	BMR. N 14-110
Logged by	S.D. Henderson	Cased	No		Datum	Standard		Ref. Report	BMR. Records 1953/47
Sunk by	Drilling Corp. of Aust.	Type of Drill	Mindrill	E/1000 4 5	Depth	154'0"		Date Begun/Finished	12.3.53/16.3.53

[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
111	1	5	1	Greywacke, v.f.grd. w.slst.gy. bdd.	4	9										
116	7	5	6	Siltstone, grey.	5	6										
119	6	2	11	Siltstone, grey with siderite modules.	2	11										
129	0	9	6	Siltstone,	8	11										
130	4	1	4	Siltstone, grey, broken.		10										
134	2	3	10	Siltstone, grey.	3	10										
134	9		7	Greywacke, fine grained.		7										
137	6	2	9	Siltstone, grey.	2	9										
138	0		6	Limestone,		6										
149	0	11	0	Siltstone, grey.	6	0										
153	5	4	5	Siltstone, grey.	4	5										
154	0		7	Claystone, light grey, soft.		7										
Hole completed.														typed 9.6.53		

BUREAU OF MINERAL RESOURCES

Name and No. of Bore BMR. 13T POND'S CREEK.

Cessnock
DISTRICT Muswellbrook COUNTY Durham PARISH Howick PORTION 12 LOCATION
Surveyed by N. Gorbunow Survey Method Theodolite Traverse Elevation 510.1' ASL Ref. Map BMR. N14-110
Logged by S.D. Henderson Cased No Datum Standard Ref. Report BMR. Records 1953/47
Sunk by Drilling Corp. of Aust. Type of Drill Mindrill E/1000# 5 Depth 101'0" Date Begun/Finished 17.3.53/19.3.53

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
5	0	5	0	Clay, yellow & brown.		6										
10	0	5	0	Siltstone, brown & grey, weathered.		7										
17	0	7	0	Siltstone, grey & brown, weathered.	4	1										
24	0	7	0	Siltstone,	nil											
25	0	1	0	Claystone, brown, silty, soft.		2										
26	6	1	6	Greywacke, fine grained, red.		9										
31	6	5	0	Siltstone, brown, & grey, weathered.	2	2										
36	0	4	6	Siltstone, brown, weathered.	2	8										
38	0	2	0	Siltstone, grey.	1	0										
40	0	2	0	Greywacke, fine grained, brown.	1	1										
43	6	3	6	Greywacke, very fine grained, brownish.	2	10										
50	6	7	0	Siltstone, greyish brown.	4	1										
56	3	5	9	Siltstone, grey.	5	9										
56	6		3	Siltstone, brown, sideritic, wood structure		2										
60	11 1/2	3	7 1/2	Siltstone, grey.	3	7 1/2										
60	7		5 1/2	Claystone, light grey, sandy.		5 1/2										
65	0	4	5	Siltstone, grey.	4	5										
73	0	8	0	Siltstone, grey.	5	6										
81	0	8	0	Siltstone, grey with bds. of very fine grd. greywacke,	7	2										
87	5	6	5	Siltstone, grey.	5	8										
87	7		2	Limestone, impure.		1										
90	0	2	5	Siltstone, dark grey.		9										
98	0	8	0	Siltstone, grey & dark grey, banded.	7	7										
101	0	3	0	Siltstone, dark grey.	1	3										
												Hole completed.				
												typed 9.6.53				

BUREAU OF MINERAL RESOURCES

Name and No. of Bore BMR. 14T POND'S CREEK.

Cessnock
DISTRICT Muswellbrook COUNTY Durham PARISH Howick PORTION 121 LOCATION
Surveyed by N. Gorbunow Survey Method Theodolite Traverse Elevation 341.8' ASL Ref. Map BMR. N14-110
Logged by S.D. Henderson Cased No Datum Standard Ref. Report BMR. Records 1953/47
Sunk by Drilling Corp. of Aust. Type of Drill Mindrill E/1000// 5 Depth 105'6" Date Begun/Finished 9.3.53/25.3.53

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
5	0	5	0	Sandy, clay.	nil											
10	0	5	0	Sandy, clay.	nil											
20	0	10	0	Clay, soft.	3	0										
27	0	7	0	Sand	nil											
29	6	2	6	Gravel with large rounded pebbles.		6										
39	6	10	0	Gravel with large rounded pebbles.	1	0										
44	6	5	0	Gravel with large rounded pebbles.		6										
45	6	1	0	Gravel with large rounded pebbles.		4										
46	0		6	Gravel with large rounded pebbles.		2										
50	0	4	0	Grave rounded pebbles, & clay.		6										
52	0	2	0	Gravel with rounded pebbles.		2										
55	0	3	0	Siltstone, grey, weathered & broken.	1	4										
58	0	3	0	Siltstone, grey, limestone modules at base.	2	6										
61	6	3	6	Siltstone, grey.	3	2										
63	9	2	3	Siltstone, grey.	1	6										
64	0		3	Limestone, impure.		3										
66	6	2	6	Siltstone, grey, dark.	1	6										
71	6	5	0	Siltstone, grey, dark.	4	8										
81	6	10	0	Siltstone, grey.	8	8										
85	2	3	8	Siltstone, grey.	3	6										
85	4		2	Limestone.		2										
90	6	5	2	Siltstone, grey with limestone module at 90'	4	10										
90	10		4	Limestone, broken.		3										
92	6	1	8	Siltstone, grey.	1	5										
94	4 1/2	1	10 1/2	Siltstone, grey, slickensided.	1	3										
94	6		1 1/2	Limestone.		1										
100	6	6	0	Siltstone, grey indurated sideritic bds.	4	9										
105	6	5	0	Siltstone, grey indurated, sideritic bands.	3	1										
								Hole completed.				typed 9.6.53				

BUREAU OF MINERAL RESOURCES

Name and No. of Bore

BMR. 15T POND'S CREEK.

Cosgrove

DISTRICT	Muswellbrook	COUNTY	Durham	PARISH	Howick	PORTION	121	LOCATION	
Surveyed by	N. Gorbunow	Survey Method	Theodolite	Traverse	Elevation	316.0'	ASL	Ref. Map	BMR. N14-110
Logged by	S.D. Henderson	Cased	No		Datum	Standard		Ref. Report	BMR. Records 1953/47
Sunk by	Price & Anderson	Type of Drill	Mindrill	E/1000# 5	Depth	110'6"		Date Begun/Finished	19.3.53/25.3.53

[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				
102	0	1	9	COAL, mainly dull, small bright band.	1	5	1/BMR.	Artie's Seam				3.9	31.0	55.0	10.1	12,760				
102	7		7	COAL, dull to bright		1 1/2														
102	9		2	Greywacke, fine grained.		1 1/2														
103	0		3	Siltstone, dark grey.		1 1/2														
104	6	1	6	COAL, dull, & bright banded.		7	2/BMR.									4.0	34.0	49.9	12.1	12,410
105	1		7	COAL, bright.		3 1/2														
105	5		4	Greywacke, fine grained.		3														
105	11		6	COAL, bright.		3														
107	0	1	1	COAL, dull		6														
107	6		6	Siltstone, dark grey.		2														
110	3	2	9	COAL, dull thin siltstone bands.		9														
110	6		3	Claystone, grey, silty.		1 1/2												typed 9.6.53		

Cessnock

Name and No. of Bore

DISTRICT	COUNTY	PARISH	PORTION	LOCATION	BMR.
N. Gorbunow	Theodolite Traverse	318.0	ASL	BMR. N14-110	
Surveyed by S.D. Henderson	Survey Method No	Elevation Standard	Ref. Map BMR. 1953/47		
Logged by Drilling Corp of Aust.	Cased Mindrill E/1000 7 5	Datum 328'6"	Ref. Report 26.3.53/28.4.53		
Sunk by	Type of Drill	Depth	Date Begun/Finished		

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Page

Name and No. of Bore

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
99 0	3 4	Greywacke, fine grained.	2 7								
103 3	4 3	Greywacke, fine grained.	3 10								
104 0		Siltstone, light grey.	8								
106 1	2 1	Greywacke, very fine grd. with coaly streaks.	2 0								
106 6		Siltstone, carbonaceous.	4								
109 0	2 6	COAL, dull broken parts.	2 3 1/2	1/BMR.			2.5	34.6	49.8	13.1	12,260
110 0	1 0	COAL, dull & bright shattered.	9	2/BMR.			3.0	32.9	55.5	8.6	12,850
111 3 1/2	1 3 1/2	COAL, dull with bright bands.	1 3	3/BMR.			2.9	35.7	49.9	11.5	12,470
111 10	6 3/4	COAL, dull with white veining, shattered.	5								
112 0		Claystone, light grey, soft.	1 1/2								
112 2	2	Siltstone, light grey, sandy.	1 1/2								
114 4 1/2	2 2 1/2	COAL, dull & bright bdd, broken.	2 0	4/BMR.			2.9	33.0	50.4	13.7	12,130
114 8	3 3/4	COAL, dull shattered.	2								
115 0	4	Claystone, light grey, silty.	3								
115 5	5	Claystone, light grey, soft.	5								
117 4	1 11	COAL, dull with bright bds. broken & shattered.	1 11	5/BMR.			3.1	33.6	49.4	13.9	12,050
117 9	5	Siltstone, carbonaceous.	4 1/2								
118 0	3	COAL, dull.	3								
118 9	9	Siltstone, carbonaceous.	6								
119 10	1 1	Greywacke, very fine grained.	9								
121 0	1 2	Siltstone, light grey with carb. bands.	9 1/2								
121 9	9	Siltstone, light grey.	6								
126 0	4 3	Greywacke, very fine grained.	2 10								
127 6	1 6	Greywacke, fine grained.	11								
135 6	8 0	Greywacke, medium grained.	4 11								
143 0	7 6	Greywacke, medium to coarse grained.	5 4								
151 0	8 0	Greywacke, coarse grained.	4 4								
158 0	7 0	Greywacke, coarse grained, dark grey.	4 4								
168 0	10 0	Greywacke, coarse to very coarse grd. dk. gy.	4 8								
168 4	4	Siderite.	2								
175 0	6 8	Greywacke, medium grained.	5 7								
184 0	9 0	Greywacke, medium grd. with bds. of gw. coarse grained, slst. gy, & clst. sideritic.	3 3								
193 0	9 0	Greywacke, medium grd. with thin slst. bds.	8 1								
201 0	8 0	Greywacke, medium grd. white.	6 10								
204 6	3 6	Greywacke, medium grained, grey.	2 6								
207 8	3 2	Gw. med. grd. & slst. dk. gy. t. bds. interbdd.	2 5								

-----Artie's Seam-----

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
208	5		9	Siltstone, dark grey.		7										
208	9		4	Siltstone, dark grey, sideritic.		3										
209	0		3	COAL, dull, broken.		1 $\frac{1}{2}$										
210	0	1	0	COAL, hard & dull, thin bright bands.		7 $\frac{1}{2}$										
212	0	2	0	COAL, bright, broken, dull bands.	1	8										
213	8	1	8	COAL, dull & bright banded.	1	3 $\frac{1}{2}$										
213	11		3	Shale with coal bands.		1 $\frac{1}{2}$										
214	3		4	Siltstone, carbonaceous.		3										
215	0		9	Greywacke, very fine grained.		8										
217	0	2	0	Greywacke, fine grained.	1	6										
219	0	2	0	Greywacke, medium grained.	1	6										
220	9	1	9	Greywacke, medium grd. & fine grd. bdd.	1	4										
221	0		3	Siderite.		2										
221	9		9	Siderite.		6 $\frac{1}{2}$										
222	6		9	Siltstone, dark grey with plants.		7										
223	8	1	2	COAL, dull, very hard.		11										
227	0	3	4	Siltstone, soft & carb. with thin coal bds.		7										
228	11	1	11	Siltstone, grey.	1	2										
230	11	2	0	Greywacke, medium grained.	1	5										
231	4 $\frac{1}{2}$		5 $\frac{1}{2}$	Greywacke, fine grained.		5 $\frac{1}{2}$										
232	2 $\frac{1}{2}$		10	Siltstone, grey, indurated.		10										
234	0	1	9 $\frac{1}{2}$	Limestone, hard, grey.	1	9 $\frac{1}{2}$										
235	6	1	6	Limestone, hard, grey, sideritic.	1	6										
237	0 $\frac{1}{2}$	1	6 $\frac{1}{2}$	Siltstone, grey.	1	6 $\frac{1}{2}$										
240	2 $\frac{3}{4}$	3	2 $\frac{3}{4}$	Siltstone, grey, soft.	2	2 $\frac{3}{4}$										
240	9 $\frac{1}{2}$		7	COAL, dull.		7										
241	7 $\frac{1}{2}$		10	Siltstone, carbonaceous with coal band.		10										
241	10 $\frac{1}{2}$		3	Siltstone, light grey band.		3										
243	3	1	4 $\frac{1}{2}$	COAL, dull, broken, thin silty band.	1	4 $\frac{1}{2}$										
244	6	1	3	COAL, bright broken, with thin slst. band.	1	3										
244	8		2	Claystone, light grey, very soft.		1										
247	2	2	6	Siltstone, dark grey, carbonaceous.	1	3										
252	0	4	8	Greywacke, very fine grd. white silty.	3	2										
253	2	1	2	Greywacke, very fine grd, white silty.	1	2										
253	8		6	Clay-ironstone.		5 $\frac{1}{2}$										
259	0	5	4	Greywacke, very fine grd, white silty.	5	1										
264	0	5	0	Siltstone, gy. very thin coaly streaks.	3	5 $\frac{1}{2}$										
267	0	3	0	Greywacke, fine grained, soft.	1	11 $\frac{1}{2}$										
269	0	2	0	Siltstone, grey brown, soft.	1	0										

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
269	1	1		COAL, bright.		1		Barrett's Seam--								
269	2 $\frac{1}{2}$	1 $\frac{1}{2}$		Claystone, soft, grey brown, silty.		1 $\frac{1}{2}$										
269	8 $\frac{1}{2}$	6		COAL, dull with bright bands.		6										
270	1	4 $\frac{1}{2}$		Shale, hard & dull carb. (canneloid)		4 $\frac{1}{2}$										
270	3	2		Claystone, light grey, soft, sandy.		2										
270	7	4		Siltstone, grey brown, hard, shaley.		4										
271	0	5		Siltstone, grey brown, sideritic.		5										
271	2	2		Siltstone, grey with clst. l. gy. bands.		2										
271	4 $\frac{1}{2}$	2 $\frac{1}{2}$		Shale indurated sideritic.		2 $\frac{1}{2}$										
271	9 $\frac{1}{2}$	5		COAL, dull.		5										
271	10 $\frac{1}{2}$	1		Smut.		1										
272	3	4 $\frac{1}{2}$		Siltstone, light grey, soft.		4 $\frac{1}{2}$										
272	11	8		Siltstone, light grey.		5										
273	1	2		Ironstone, clay.		1										
275	3	2	2	Siltstone, dark grey, soft.	1	6 $\frac{1}{2}$										
283	9	8	6	Siltstone, grey with thin very fine grd. greywacke bands.	2	7										
290	3	6	6	Greywacke, fine grained with thin slst. bands.	4	10										
291	0		9	Greywacke, medium grained, white.		3										
299	0	8	0	Greywacke, medium grained, white.	7	2 $\frac{1}{2}$										
307	0	8	0	Greywacke, medium grained, white.	1	7										
312	6	5	6	Greywacke, medium grained, white & l. gy.	9	3										
320	6	8	0	Greywacke, medium grained, whitish.	6	10 $\frac{1}{2}$										
328	6	8	0	Greywacke, medium grained, white with greyish bands.	7	11										

typed 10.6.53

BUREAU OF MINERAL RESOURCES

Name and No. of Bore BMR. 16T POND'S CREEK.

Cessnock
DISTRICT Muswellbrook COUNTY Durham PARISH Howick PORTION 12 LOCATION
Surveyed by N. Gorbunow Survey Method Theodolite Traverse Elevation 383.6' ASL Ref. Map BMR. N14-110
Logged by S.D. Henderson Cased No Datum Standard Ref. Report BMR. Records 1953/47
Sunk by Drilling Corp. of Aust. Type of Drill Mindrill E/1000# 5 Depth 298'3" Date Begun/Finished 23.3.53/29.4.53

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
5	0	5	0	Clay and sand.		6										
15	0	10	0	Sand.	-	-										
21	6	6	6	Greywacke, medium to coarse grained.	3	0										
31	6	10	0	Greywacke, medium grained.	5	7										
40	6	9	0	Greywacke, medium grained.	4	7										
45	10	5	4	Greywacke, medium to coarse grained.	2	10										
46	4		6	Greywacke, fine grained.		3										
46	6		2	Claystone, soft, yellow.		1										
47	6	1	0	Limestone.		6										
56	6	9	0	Claystone, very soft with weathered rock fragments.	3	0										
57	3		9	Ironstone, red, broken.		6										
61	6	4	3	Greywacke, fine grained, broken.		4										
62	6	1	0	Greywacke, fine grained, soft.		7										
66	6	4	0	Greywacke, medium grained.	2	3										
70	6	4	0	Greywacke, fine grained.	2	10										
71	6	1	0	Greywacke, very fine grd. with clst. bands.		11										
74	0	2	6	Greywacke, fine grained.	1	2										
76	6	2	6	Siltstone, greyish brown.	1	2										
78	6	2	0	COAL, dull with igneous intrusion.	1	5										
78	11		5	COAL, dull with igneous intrusion.		5										
81	6	2	7	Igneous rock, fine grained.	2	7										
82	3		9	Igneous rock, fine grained.		7										
83	6	1	3	COAL, dull with igneous intrusions.	1	2										
84	6	1	0	Siltstone, carb. with igneous intrusion.	1	0										
84	11		5	Siltstone, grey.		2										
85	1		2	COAL, dull to bright.		1										
85	6		5	Greywacke, very fine grained.		2										
87	6	2	0	Siltstone, dark grey, soft.		3										
89	6	2	0	Greywacke, fine grd. with coaly streaks.	1	2										
92	6	3	0	Greywacke, fine grd. with thin slst. bds.	1	9										

Lower Liddell Seam

Page

Name and No. of Bore

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
96	5	3	11	Greywacke, fine grained.	2	2										
97	0		7	Siltstone, light grey, hard.		7										
102	6	5	6	Greywacke, fine grd. to very fine grd, bdd.	4	2										
109	0	6	6	Greywacke, medium grd. with fine grd. bds.	6	1										
117	0	8	0	Greywacke, medium grd. with fine grd. bds.	6	9										
119	0	2	0	Greywacke, medium grd. slst. grey, banded.	1	5										
119	4		4	Greywacke, fine grained.		3										
121	0	1	8	Siltstone, light grey.	1	8										
121	7		7	Clay-ironstone.		6										
121	10		3	Claystone, light grey, silty & soft.		2 $\frac{1}{2}$										
122	3		5	COAL, dull with bright bands.		5	1/BMR.					3.2	38.4	53.1	5.3	13,640
123	9	1	6	COAL, dull with bright bands, hard.	1	5 $\frac{1}{2}$										
123	11		2	Claystone, grey, silty and hard.		2										
124	2		3	COAL, bright with white veins.		3	2/BMR.									
124	5		3	Siltstone, light grey.		3				3		3.6	33.8	52.2	10.4	12,680
125	1 $\frac{1}{2}$		8 $\frac{1}{2}$	COAL, hard & dull with bright bands.		8 $\frac{1}{2}$	3/BMR.									
125	4		2 $\frac{1}{2}$	Siltstone, grey brown.		2 $\frac{1}{2}$										
125	9		5	COAL, dull with white veins.		5						3.3	34.7	51.0	11.0	12,610
127	3	1	6	COAL, dull with white veins.	1	4 $\frac{1}{2}$										
127	10		7	Siltstone, dark grey.		6										
129	3	1	5	Siltstone, grey.	1	5										
129	8		5	Siltstone, light grey.		4										
132	11	3	3	Greywacke, fine grained with silty bands.	3	1										
134	10	1	11	Siltstone, light grey.	1	9										
136	3	1	5	Greywacke, fine grained.	1	1										
141	9	5	6	Greywacke, medium grained, white.	5	3										
145	3	3	6	Greywacke, medium grained, white.	2	7										
149	7	4	4	Greywacke, fine grained, white.	4	0										
150	0		5	Clay-ironstone.		4 $\frac{1}{2}$										
152	3	2	3	Greywacke, fine grained, grey.	2	1 $\frac{1}{2}$										
161	3	9	0	Greywacke, medium, fine grained, white.	8	4										
168	3	7	0	Greywacke, medium grained, white.	6	9										
172	9	4	6	Greywacke, medium, fine grained, white.	4	3										
174	9	2	0	Greywacke, medium, fine grd. white, coaly streaks.	1	2										
181	2	6	5	Greywacke, medium, fine grd, light grey.	6	3										
181	9		7	Siltstone, grey, soft.		5										
188	9	7	0	Greywacke, fine grained, grey.	6	0										

---Barrett's Seam---

Page

Name and No. of Bore

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
194	9	6	0	Greywacke, fine grained, grey.	5	6										
195	5		8	Greywacke, very fine grained, grey.		8										
197	3	1	10	Siltstone, dark grey, sandy bands.	1	10										
197	7		4	Limestone, white		4										
197	11		4	Siltstone, grey.		4										
198	4		5	Claystone, light grey, indurated.		5										
198	9		5	Siltstone, grey, sideritic.		2										
202	5	3	8	Greywacke, fine grained, grey.	2	7										
203	9	1	4	Limestone, grey, hard.	1	4										
205	3	1	6	Greywacke, very fine grd. with slst. bds.												
				dark grey.		11										
208	9	3	6	Greywacke, fine grained, grey.	2	9										
213	9	5	0	Greywacke, very fine grd. grey with slst. bands.	5	0										
215	9	2	0	Greywacke, very fine grained, grey.	1	3 $\frac{1}{2}$										
222	9	7	0	Siltstone, grey, hard.	4	2										
223	3		6	Clay-ironstone, jointed.		4										
225	6 $\frac{1}{2}$	2	3 $\frac{1}{2}$	Greywacke, fine grained.		2 $\frac{1}{2}$										
225	9		2 $\frac{1}{2}$	Clay-ironstone.		1 $\frac{1}{2}$										
235	9	10	0	Siltstone, dk. gy. hard, sideritic bands.	7	10										
240	9	5	0	Siltstone, dark grey, hard.	4	0										
250	9	10	0	Siltstone, dk. gy. hard white veins at 248'	8	9										
260	9	10	0	Siltstone, dark grey, hard.	9	3										
268	3	7	6	Siltstone, dark grey.	6	5										
270	9	2	6	Siltstone, dark grey.		6										
271	5		8	Siltstone, grey, hard.		7 $\frac{1}{2}$										
271	9		4	Claystone, white, calcareous, silty.		3										
274	6	2	9	Greywacke, fine grained, white.		7										
276	4	1	10	Siltstone, dark grey.	1	6 $\frac{1}{2}$										
276	9		5	Clay-ironstone.		4										
277	2		5	Siltstone, dark grey.		4										
277	4		2	Siltstone, light grey, calcareous.		1 $\frac{1}{2}$										
277	11		7	Limestone, light brown, impure.		7										
278	3		4	Siltstone, dark grey.		3										
280	9	2	6	Siltstone, dark grey.	1	8										
280	10		1	Siltstone, light grey, calcareous.		1										
288	3	7	5	Siltstone, dark grey.	6	4										
298	3	10	0	Siltstone, dark grey, shaley bands.	8	1										

Upper Marines.

typed 10.6.53

JERRY'S PLAINS SUBAREA.

BUREAU OF MINERAL RESOURCES

Name and No. of Bore..... BMR 1S JERRY'S PLAINS.

DISTRICT	Muswellbrook	COUNTY	Durham	PARISH	Howick	PORTION	9	LOCATION	Howick Trig. 290°0' 8180'
Surveyed by	N.Gorbunow	Survey Method	Theodolite Traverse	Elevation	325.0' ASL	Ref. Map	N14 - 110		
Logged by	M.A.Reynolds	Cased	nil.	Datum	Standard.	Ref. Report	BMR Records 47/1953		
Sunk by	BMR	Type of Drill	Failing 750/290	Depth	582' 5 "	Date Begun/Finished	30.10.52/28.11.52		

[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
88	5	1	4	Greywacke, l.gy. f. grd.	1	4										
90	5	2	0	Siltstone, dk. gy.	2	0										
91	0		7	Greywacke, l.gy. f. grd.		7										
91	3		3	Siltstone, dark grey.		3										
97	0	5	9	Interbdd. slst. & gw. as above fractd.	5	9										
98	6	1	6	Siltstone, grey.	1	6										
103	8	5	2	Greywacke, gy.v.f.grd. w.R.slst.band.	5	7										
104	10	1	2	Claystone, grey, s. shaly.		10										
105	2 $\frac{1}{2}$		4 $\frac{1}{2}$	Siltstone, grey.		4 $\frac{1}{2}$										
106	5	1	2 $\frac{1}{2}$	Shale, gy.to dk.gy. carb.w.t.irreg.bds.Coal	1	2 $\frac{1}{2}$										
107	6	1	1	COAL, mostly bright powdery w.some dull near top & w.R.t.sh.lens.	1	1	} 1/BMR					4.8	32.9	50.8	11.5	12,22 ⁰
108	5	11		COAL, mostly bright w.R.t.sh.lens.		11										
108	5 $\frac{1}{2}$		1 $\frac{1}{2}$	Shale, br. s. cly.		1 $\frac{1}{2}$										
109	0		6 $\frac{1}{2}$	COAL, as above		6 $\frac{1}{2}$	} 2/BMR					4.9	33.7	53.2	8.2	12,700
110	0	1	0	COAL, as above, broken	1	0										
110	2 $\frac{1}{2}$		2 $\frac{1}{2}$	Intermixed br.clay & bright COAL.		2 $\frac{1}{2}$										
110	7		4 $\frac{1}{2}$	COAL, bright broken w.t.bd. carb. shale.		4 $\frac{1}{2}$										
110	10		3	Siltstone, dk.grey.		3										
111	1 $\frac{1}{2}$		2 $\frac{1}{2}$	COAL, bright w. $\frac{1}{2}$ " siltstone bd. near bot.		2 $\frac{1}{2}$										
111	2 $\frac{1}{2}$		2	Claystone, grey.		2										
112	9	1	6 $\frac{1}{2}$	Interbdd. slst. & f. grained greywacke.	1	6 $\frac{1}{2}$										
115	4	2	7	Greywacke, l.gy. f.-m.grained.	2	7										
118	2	2	10	Siltstone, gy. sdy. micaceous.	2	10										
118	9 $\frac{1}{2}$		7 $\frac{1}{2}$	Clay-Ironstone.		7 $\frac{1}{2}$										
119	8		10 $\frac{1}{2}$	Siltstone as above		6 $\frac{1}{2}$										
123	1	3	5	Shale, gy. w. sdy.f-m.grd.w.t.bd.clay ironstone at bottom.	3	5										
123	10 $\frac{1}{2}$		9 $\frac{1}{2}$	Greywacke, gy.-l.gy. fine grained.		9 $\frac{1}{2}$										
124	3 $\frac{1}{2}$		5	Claystone, dark grey, silty.		5										
125	4 $\frac{1}{2}$	1	1	Claystone, l.gn.br.gy. ? tuffaceous becoming v.sdy. & bdd. near bottom.	1	1										
125	11 $\frac{1}{2}$		7	Shale, gn.l.gn. ? tuff. bentonitic.		7										
126	7 $\frac{1}{2}$		8	Siltstone, gy. tough.		8										
128	0	1	4 $\frac{1}{2}$	Greywacke, l.gy.f.grd. fractd.	1	0										
128	6		6	Siltstone, grey.		6										
135	4	6	10	Greywacke, l.gy. m.-c. grained.	6	10										

-----Seam Z-----

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
138	10	3	6	Interbdd.f.grd.gw. & gy.-dk.gy.slst.	3	6										
140	0	1	2	Greywacke, m.-c. grained as above.	1	2										
149	8	9	8	Interbdd.f.grd.greywacke, & siltstone.	9	8										
150	0		4	Shale, dk.grey, carbonaceous.		4										
151	7	1	7	Greywacke, m.-v.c.grained.	1	7										
151	11		4	COAL, bright pyrite.		4										
151	11 $\frac{1}{2}$		$\frac{1}{2}$	Shale, dark grey, br. carbonaceous.		$\frac{1}{2}$										
153		1	1	Greywacke, light grey, fine grd. micaceous.	1	1										
155		3	0	Shale, to clst.dk.gy.pyr.altering to slst. at bottom.	3	0										
159	2 $\frac{1}{2}$	3	2	Interbdd.gw.l.gy.f.grd.&gy. siltstone.	3	2										
160	8 $\frac{1}{2}$	1	6	Greywacke, dk.br.c.grd. tough.	1	6										
171	7	10	10 $\frac{1}{2}$	Slst.gy.-dk.gy.w.R.t.bd.gw.s.cly.near bot.	8	1										
176	6	4	11	Siltstone, gy. finely bdd. in part, mic.	4	11										
178	3	1	9	Greywacke, l.gy.c.grd. indurated & w. cal. veins	1	9										
180	3	2	0	Siltstone, grey.		11										
181	3	1	0	Interbdd.dk.gy.sh.&COAL dull & bright bdd		4										
195	10	14	7	Siltstone, w.t.gw.bds.& mic.as above	14	1										
196	1		3	COAL, mostly bright.		3										
196	2		1	Claystone, br. sdy.		1										
196	9		7	COAL, as above		7										
200	9	4	0	Siltstone as above.	4	0										
204	0	3	3	Greywacke, f.grd-v.f.grd.sid. at bottom.	3	3										
206	1	2	1	Siltstone as above	2	1										
209	6 $\frac{1}{2}$	3	5 $\frac{1}{2}$	Greywacke, f-v.f.grd. micaceous.	3	5 $\frac{1}{2}$										
209	11 $\frac{1}{2}$		5	Shale, gy. w. t. bds. COAL.		5										
210	4		4 $\frac{1}{2}$	Greywacke, v.f.grained. micaceous.		4 $\frac{1}{2}$										
210	9		5	Shale, gy. rich in leaves		5										
213	7	2	10	Siltstone to v.f.grd.gw. gy. micaceous.	2	10										
214	9	1	2	Greywacke, l.gy. f. grained.	1	2										
221	9	7	0	Siltstone, gy. as above w.t.bd.sh.& bright COAL slickensided	6	0										
221	10		1	COAL, bright $\frac{1}{2}$ " & dk.gy. carb. shale.		1										
223	6	1	8	Shale, grey.		10										
224	3 $\frac{1}{2}$		9 $\frac{1}{2}$	COAL, dull & bright banded		3 $\frac{1}{2}$										
225	5	1	1 $\frac{3}{4}$	Shale, dk.gy.carb.gy.w. $\frac{3}{4}$ " bd.COAL,near bot.	1	1 $\frac{3}{4}$										

UPPER Y
SEAM

[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
499	0	4	6	Siltstone; grey-dark grey.	2	9										
499	6		6	Shale, bk.carb.w.bright COAL lam.		3										
504	6	5	0	Interbdd.COAL & carb.sh.ind.& altered by ? andesitic apophyses	3	1										
510	6	6	0	? dolerite w. xenoliths of COAL & shale as above (brecciated)	6	0										
517	0	6	6	Interbdd. COAL & shale as above	2	11										
533	4	16	4	Siltstone; gy. to v.f.grd. gw. at bottom.	10	3										
547	11	14	7	Greywacke, l.gy.m-c.grd.w.pbly bands.	14	7										
549	3	1	4	Conglomerate fine grained.	1	4										
549	8		5	Siltstone; gy. with sandy bands		5										
562	6	12	10	Greywacke, l.gy. fine-medium grained	12	10										
575	6	13	0	Siltstone gy. w. occasional t.COAL bands	11	1										
580	0	4	6	COAL, bright.		5										
582	5	2	0	Greywacke, l.gy. s. fri.broken m.grained.	2	0										
				Hole Abandoned.												

STATE MINE RESERVE RAVENSWORTH.

BUREAU OF MINERAL RESOURCES

Name and No. of Bore BMR 1S STATE MINE RESERVE, REVENSWORTH

~~Cessnock~~

Approx.

DISTRICT Muswellbrook COUNTY Durham PARISH Liddell PORTION 147 LOCATION SWCnr.Ptn.147/30°/9494'

Surveyed by	R.W. Archer (SCMS)	Survey Method	Theodolite Traverse	Elevation	441.1'	Ref. Map	Liddell Parish Map
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Surveyed by	M.A.Reynolds-W.McKinnon	Survey Method	No	Elevation		Ref. Map	
Logged by		Cased		Datum	Railway Datum	Ref. Report	BMR Records 1953/47

Sunk by	BMR	Type of Drill	Failing 1500/293	Depth	746' 6"	Date Begun/Finished	10.2.53/16.4.53
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[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
73	10		2	Shale, dark grey, carbonaceous.		2										
75	10 $\frac{1}{2}$	2	0 $\frac{1}{2}$	COAL, dull & brt. bdd. mostly brt. powdery.	2	0 $\frac{1}{2}$										
76	3		4 $\frac{1}{2}$	Intermixed coal & dark grey shale.		4 $\frac{1}{2}$										
76	6 $\frac{1}{2}$		3 $\frac{1}{2}$	COAL, as above.		3 $\frac{1}{2}$										
77	4		9 $\frac{1}{2}$	Greywacke, grey, f. - v. f. grained.		9 $\frac{1}{2}$										
77	8		4	Clay-ironstone, brown grey, tough.		4										
80	3	2	7	Greywacke, fine grd. w. t. slst. bands.	2	7										
81	5	1	2	Siltstone, grey.		8 $\frac{1}{2}$										
82	2 $\frac{1}{2}$		9 $\frac{1}{2}$	Siltstone, br. gy. tough sideritic w. calcite veins.		9 $\frac{1}{2}$										
123	1	40	10 $\frac{1}{2}$	Interbdd. f. - m. grd. gw. indurated in part & gy. slst. w. R. t. bd. clay-ironstone.	40	7 $\frac{1}{2}$										
128	2	5	1	Greywacke, m. - c. grd. w. some pebbles.	5	1										
143	2	15	0	Conglomerate m. grd. friable in part w. coarse grained greywacke matrix.	14	5										
144	3	1	1	Greywacke, grey, fine grained.	1	1										
152	5	8	2	Greywacke, l. gy. m. - c. & v. c. grd. with occasional pebble bands.	8	2										
156	1	3	8	Greywacke, gy. v. f. grd. w. t. band clay-ironstone.	3	8										
165	7	9	6	Greywacke, light grey, fine - med. grd.	6	7										
166	4		9	COAL, dull & bright banded.		4										
166	6 $\frac{1}{2}$		2 $\frac{1}{2}$	Shale, br. sdy. w. t. coal bands & thin marcasite bands.		2 $\frac{1}{2}$										
166	11 $\frac{1}{2}$		5	COAL, mostly bright.		5										
167	0 $\frac{1}{2}$		1	Shale, black carbonaceous.		1										
167	1 $\frac{1}{2}$		1	COAL, as above.		1										
168	2 $\frac{1}{2}$	1	1	Shale, silty black carbonaceous.	1	1										
169	1 $\frac{1}{2}$		11	COAL, banded but mostly bright.		11										
169	4		2 $\frac{1}{2}$	Shale, black carbonaceous.		2 $\frac{1}{2}$										
169	11 $\frac{1}{2}$		7 $\frac{1}{2}$	COAL, as above.		7 $\frac{1}{2}$										
								3/BMR.		Pike's Gully Seam.		3"	3.9	33.1	54.9	8.1 13,100

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
334	9	8	5	Claystone, grey.	8	5										
336	6	1	9	Shale, w. clst. bds. gy. to bk. carb.	1	9										
337	3		9	Claystone, gy. v. dandy at bottom.		9										
337	7		4	COAL, bright.		4										
352	7	15	0	Shale, dk. gy. - gy. w. slst. bands. sideritic in parts & sdy. in places.	15	0										
352	11		4	Shale, carbonaceous cleated.		3										
356	0	3	1	COAL, mainly bright, strongly cleated, shattered, shaly in two small bds.	2	3	8/BMR.			1/2"		3.3	34.4	51.2	11.1	12,770
356	8		8	Siltstone to f. grd. gw. dk. gy. pyrite.		8										
364	10 1/2	8	2 1/2	COAL, bright mostly broken into small cleat fragments, unbroken at base.	7	11	9/BMR. 10/BMR. 11/BMR.					3.6	33.1	53.2	10.1	12,870
												3.5	35.3	55.4	5.8	13,530
												3.5	35.4	55.7	5.4	13,580
366	10 1/2	2	0	Siltstone, carb. pyr. w. coaly bands.	2	0										
367	0		1 1/2	Shale, coaly, soft and friable.		1 1/2										
371	6	4	6	COAL, bright & dull banded, cleated, fragmentary powdery at base.	4	6	12/BMR. 13/BMR.					3.0	37.3	51.5	8.2	13,280
												3.0	38.6	52.4	6.0	13,650
371	7		1	COAL, bright, cleated.		1										
372	1		6	Siltstone, dk. gy. to bk. pyr. in places.		6										
373	11	1	10	COAL, bright, cleated fragmentary.	1	9	14/BMR.					3.1	34.2	48.0	14.7	12,330
374	2		3	Shale, carb. and coaly bands.		2 1/2										
374	11		9	COAL, mostly bright cleated.		9										
375	2		3	Claystone, brown.		3										
375	10		8	COAL, mostly bright, cleated.		7										
382	8	6	10	Siltstone, l. gy. w. numerous plant remains & pyr. patches on cleavage planes.	4	10										
384	3	1	7	COAL, bright & dull banded.		6										
384	6		3	COAL, mainly bright, shattered.		3										
385	7	1	1	Siltstone, w. f. greywacke bands.	1	1										
385	10		3	COAL, mainly bright.		3										
391	10	6	0	Siltstone, gy. soft. grading into a claystone numerous plant remains.	4	2										
411	3	19	5	Greywacke, l. gy. - dk. gy. fine to coarse gy. cross-bedded.	19	5										
435	0	23	9	Siltstone, l. gy. to dk. gy. grading up into a fine grained greywacke.	23	7										
436	5	1	5	Shale, black carbonaceous.	1	5										

-----LIDDELL SEAM-----

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
436	7		2	COAL, bright.		2										
436	10		3	Shale, carbonaceous.		3										
441	9	4	11	COAL, mainly bright, cleated.	4	11	15/BMR. 16/BMR.					3.1 2.9	35.1 38.4	45.4 52.5	16.4 6.2	11,930 13,650
442	0		3	Shale, black, carbonaceous.		3										
444	10	2	10	COAL, mainly brt. w. minor dull bands.	2	10	17/BMR.					3.3	34.6	54.6	7.5	13,340
445	3		5	Siltstone, light br. - gy. w. minor bright coal bands.		5										
445	5		2	COAL, bright, cleated.		2										
445	5 1/2		1 1/2	Shale, black, carbonaceous.		1 1/2										
446	0		6 1/2	COAL, mainly bright banded.		6 1/2										
446	1		1	Siltstone, black carbonaceous.		1										
446	2		1	COAL, mainly bright, broken.		1										
447	0		10	Siltstone, l. br. - gy. numerous plant remains.		10										
447	5		5	Shale, very coaly, cleated.		5										
448	2		9	Siltstone, l. br. gy. soft with plant remains.		9										
484	0	35	10	Greywacke, l. gy. fine to medium grd.	35	10										
487	10		3	Siltstone, l. & dk. gy. bdd. with fine bands of light gy. fine grd. gw.		3										
491	5		3	Claystone, dk. gy. with plant remains grading into carb. shale at base.		3										
493	5		2	COAL, shaly with bright bands, broken.		2										
534	0	40	7	Greywacke, light grey, medium grained.	40	7										
549	0	15	0	Interbdd. f. to m. gw. w. bds. of dark grey, siltstone.		15										
568	0	19	0	Siltstone, dark grey with fine bands of fine grained greywacke.		19										
568	9		9	Crystal tuff. coarse grained dark grey with white grains.		9										
577	0		8	Interbdd. m. grd. gw. & slst. dk. gy.		8										
632	0	55	0	Greywacke, l. gy. m. grd. w. fine bands dark grey, siltstone.		54										
653	10	21	10	Greywacke, m. to f. grd. l. gy. with bands of siltstone.		21										
682	6	28	8	Siltstone, dk. gy. w. some bands of gw. fine to medium grained.		28										

---BARRETT'S SEAM---

Hebden Seam

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
685	5	2	11	Limestone, light grey, hard.	2	11										
687	4	1	11	Siltstone, dk. gy. w. bds. of m. grd. gw.	1	11										
689	0	1	8	Limestone, l. gy. w. a band of greywacke.	1	8										
711	0	22	0	Siltstone, dk. gy. w. some bds. gw. at top.	22	0										
746	6	35	6	Siltstone, dark grey.	35	6						typed 18.6.53				