

APPENDIX I

DESCRIPTIVE LOGS OF
DIAMOND DRILL HOLES

00100 (5)

Groundhog Coalfield
Descriptive Log, Diamond Drill Hole No. 1

Footage		Description	Seam Width	Core Rec. %
From	To			
0	37	Overburden		
37	39.5	Shale		
39.5	40.5	Coal seam	1.0 ft.	
40.5	43.5	Black shale		
43.5	103.0	Coarse grained grey sandstone		96
103.0	125.0	Black carbonaceous shale		
125.0	148.8	Grey to black coarse grained sandstone		
148.8	154.5	Coal seam	5.7	95
154.5	210.5	Interbedded sandstone and shale		95
210.5	212.3	Coal seam	1.8	99
212.3	263.0	Interbedded sandstone and shale		
263.0	310.0	Coarse grained grey sandstone		98
310.0	347.5	Interbedded sandstone and shale		
347.5	355.2	Coal seam	7.7	
355.2	359.0	Coal and carbonaceous shale		89
359.0	365.0	Coal seam with 1 foot shale	6.0	
365.0	468.5	Interbedded sandstone and shale		99
468.5	472.0	Coal seam	3.5	
472.0	474.0	Black carbonaceous shale		100
474.0	477.8	Coal seam	3.8	
477.8	517.0	Interbedded sandstone and shale		99
517.0	522.0	Coal seam	5.0	100
522.0	530.0	Interbedded sandstone and shale		
530.0	540.0	Faulting. Fractures 45 degrees to C.A.		97
540.0	585.0	Interbedded sandstone and shale		

Groundhog Coalfield
Descriptive Log, Diamond Drill Hole No. 2

Footage		Description	Seam Width	Core Rec. %
From	To			
0	119.0	Overburden		
119.0	194.6	Black carbonaceous shale		99
194.6	200.8	Coal seam. Upper Discovery Creek seam	6.2 ft.	100
200.8	243.0	Black carbonaceous shale		98
243.0	244.9	Coal seam	1.9	
244.9	248.9	Coal seam with shale	2.9	100
248.9	257.0	Black carbonaceous shale		97
257.0	258.2	Coal seam with shale	1.2	97
258.2	263.5	Black carbonaceous shale		97
263.5	265.6	Coal seam	2.1	96
265.6	336.2	Interbedded sandstone and shale		93
336.2	340.7	Coal seam	4.5	98
340.7	391.8	Interbedded sandstone and shale		98
391.8	395.3	Coal seam	3.5	98
395.3	524.7	Interbedded sandstone and shale		99
524.7	527.3	Coal seam	2.6	98
527.3	551.0	Interbedded sandstone, shale and mudstone		98
551.0	554.0	Coal seam	3.0	95
554.0	567.0	Interbedded sandstone and shale		89

Groundhog Coalfield
Descriptive Log, Diamond Drill Hole No. 3

Footage		Description	Seam Width	Core Rec. %
From	To			
0	35.0	Overburden		
35.0	49.0	Grey, medium grained sandstone		
49.0	53.5	Black carbonaceous shale		96
53.5	60.0	Coal. Lower Discovery Cr. seam	6.5 ft.	96
60.0	71.2	Interbedded sandstone and shale		81
71.2	76.0	Coal seam	4.8	97
76.0	116.0	Grey, medium grained sandstone		97
116.0	117.5	Coal seam	1.5	99
117.5	171.0	Grey, medium grained sandstone		
171.0	172.0	Minor coal seam		97
172.0	291.7	Interbedded sandstone and shale		
291.7	293.0	Coal seam	1.3	
293.0	295.5	Shale		87
295.5	297.3	Coal seam	1.8	
297.3	308.0	Interbedded sandstone and shale		
308.0	309.3	Coal seam	1.3	96
309.3	347.0	Interbedded sandstone and shale		98
347.0	351.5	Coal seam	4.5	93
351.5	379.5	Shale and mudstone		98
379.5	381.1	Coal seam	1.6	
381.1	383.5	Shale		97
383.5	388.0	Coal seam	4.5	
388.0	478.0	Interbedded sandstone and shale		98
478.0	480.6	Coal seam	2.6	
480.6	484.2	Shale		100
484.2	486.0	Coal	1.8	
486.0	495.3	Shale		95
495.3	498.9	Coal	3.6	90
498.9	588.0	Interbedded sandstone and shale		99

Groundhog Coalfield
Descriptive Log, Diamond Drill Hole No. 4

Footage		Description	Seam Width	Core Rec. %
From	To			
0	23.0	Overburden		
23.0	61.0	Black carbonaceous shale and mudstone		97
61.0	98.2	Grey sandstone with some mudstone		
98.2	100.2	Coal seam	2.0 ft.	98
100.2	134.0	Black shale		99
134.0	135.6	Coal seam	1.6	100
135.6	145.0	Black carbonaceous shale		
145.0	165.0	Light grey, coarse grained sandstone		98
165.0	172.0	Black carbonaceous shale		
172.0	203.0	Coarse grained, grey sandstone		
203.0	237.3	Interbedded sandstone and shale		
237.3	239.3	Coal seam	2.0	
239.3	240.9	Black shale		97
240.9	242.1	Coal seam	1.2	
242.1	259.7	Black carbonaceous shale		100
259.7	263.8	Coal seam	4.1	88
263.8	273.0	Black shale with coal partings		
273.0	443.3	Interbedded sandstone and shale		
443.3	444.9	Coal seam	1.6	
444.9	448.2	Black, pyritic shale		96
448.2	450.0	Coal seam	1.8	
450.0	505.0	Interbedded sandstone and shale		

Groundhog Coalfield
Descriptive Log, Diamond Drill Hole No. 5

Footage		Description	Seam Width	Core Rec. %
From	To			
0	28.0	Overburden		
28.0	52.0	Interbedded sandstone and mudstone		94
52.0	82.0	Medium grained grey sandstone		
82.0	120.0	Interbedded sandstone and mudstone		
120.0	135.0	Carbonaceous mudstone and shale		
135.0	183.0	Interbedded sandstone, mudstone and shale		
183.0	186.8	Coal seam	3.8 ft.	76
186.8	206.1	Carbonaceous mudstone and shale		100
206.1	209.5	Coal seam	3.4	
209.5	212.5	Black, carbonaceous shale		97
212.5	214.3	Coal seam	1.8	
214.3	215.3	Black shale		
215.3	217.8	Coal seam	2.5	
217.8	291.0	Interbedded sandstone and mudstone		
291.0	292.2	Coal seam, shaley with pyrite	1.2	95
292.2	362.0	Interbedded sandstone and shale		
362.0	366.0	Coal seam, shaley with quartz	4.0	80
366.0	429.5	Interbedded sandstone and shale		91
429.5	435.5	Coal seam, shaley with pyrite	6.0	85
435.5	495.0	Interbedded sandstone and mudstone		97
495.0	527.0	Carbonaceous shale and mudstone		
527.0	533.6	Coal seam, bright, hard clean coal	6.6	94
533.6	580.0	Interbedded sandstone, shale		96

Note: Faulting is prominent throughout the entire length of this drill hole.

Groundhog Coalfield
Descriptive Log, Diamond Drill Hole No. 6

Footage		Description	Seam Width	Core Rec. %
From	To			
0	29.0	Overburden	2.0 ft.	
29.0	45.0	Medium grained, grey sandstone		78
45.0	47.0	Coal seam		100
47.0	63.0	Interbedded sandstone and mudstone	2.3	98
63.0	63.7	Thin coal seam		
63.7	69.0	Carbonaceous mudstone		
69.0	85.0	Grey, medium grained sandstone		
85.0	133.0	Interbedded sandstone and mudstone		
133.0	154.5	Medium grained grey sandstone		
154.5	156.8	Coal seam	2.3	100
156.8	215.8	Interbedded sandstone and shale	1.3	97
215.8	217.1	Coal seam		
217.1	278.5	Interbedded sandstone and mudstone	5.1	75
278.5	283.6	Coal seam, dirty		
283.6	335.6	Interbedded sandstone and mudstone		
335.6	340.9	Coal seam. Hard, bright, clean coal	5.3	64
340.9	351.0	Carbonaceous mudstone	98	
351.0	372.0	Medium grained grey sandstone		
372.0	395.0	Carbonaceous mudstone		
395.0	419.0	Interbedded sandstone and mudstone		
419.0	438.0	Carbonaceous mudstone		
438.0	491.0	Interbedded sandstone and mudstone		
491.0	514.0	Medium to coarse grained grey sandstone		
514.0	552.0	Interbedded sandstone and mudstone		

Note: Rocks of the Coal-Bearing lithosome terminated at 351 feet and drill entered rocks of the McEvoy Ridge lithosome.

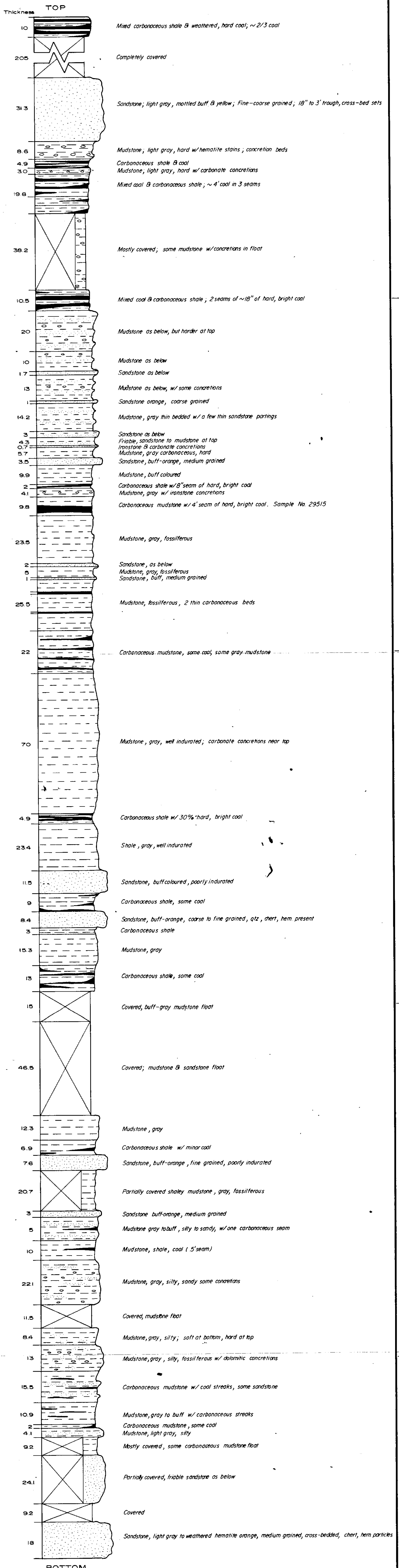
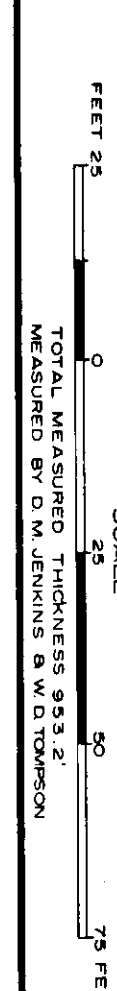


FIGURE 3
 GROUNDHOG COALFIELD PROJECT
 PARTIAL STRATIGRAPHIC SECTION
 OF COAL BEARING LITHOSOME
 DAVE CREEK

LAT. N. 106.800, DEP. E. 72,500



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