

Operator: Clinchfield Coal Corp.

Farm: Andrew Thomas

Well No.: 102

Location: Buchanan County

4300' S of 37° 10'

5200' W of 82° 10'

Elevation: 1373' Ground

Total Depth: 5847' (in Devonian shale)

Commenced: November 16, 1948

Completed: May 6, 1949

OWDD April 7, 1950

Result: Dry and Abandoned

Geologic log

Samples studied by R. J. Voigtsberger
Virginia Division of Mineral Resources
November, 1959

Pottsville group - Thickness 1770' - Depth Interval 0' - 1770'

DEPTH		
0' - 10'	10'	Sandstone, iron stained, fine to very coarse-grained, iron and clay cement, and a trace of shale, medium gray and red.
10' - 23'	13'	No samples.
23' - 35'	12'	Shale, medium gray, silty, and sandstone, same as 0' - 10'.
35' - 43'	8'	Sandstone, light gray, very fine to fine-grained, and shale, medium gray, silty.
43' - 50'	7'	Sandstone, white to light gray, fine-grained, chloritic, micaceous, and shale, medium gray, silty.
50' - 61'	11'	Siltstone, iron stained, sandy, and shale, medium gray, silty and with coal.
61' - 95'	34'	Sandstone, light gray, fine-grained, chloritic, micaceous, and shale, medium gray.
95' - 158'	63'	Shale, medium gray, with some sandstone, light gray, fine-grained, chloritic from 105' to 112' and from 117' to 124'. No samples 112' - 117'.
158' - 165'	7'	No samples.
165' - 207'	42'	Sandstone, light gray, fine to medium-grained, chloritic and micaceous, and a trace of shale, dark gray.
207' - 268'	61'	Shale, medium gray. No samples 225' - 230'.

DEPTH		
268' - 300'	32'	Sandstone, light gray, very fine to fine-grained, micaceous, chloritic, and shale, medium gray beginning at 275'. A trace of coal at top of interval and siltstone, medium gray at bottom of interval.
300' - 354'	54'	Sandstone, light gray, fine to medium-grained, micaceous, chloritic, silty, and shale, medium gray. Conglomerate 300' - 318' and 330' - 350'. Coal 318' - 330'.
354' - 357'	3'	Shale, medium gray, silty, and sandstone, white, fine to coarse-grained, chloritic.
357' - 362'	5'	Shale, as above.
362' - 367'	5'	No samples.
367' - 400'	33'	Sandstone, light to medium gray, fine-grained, micaceous, and chloritic and shale, medium gray with a trace of coal 375' - 383'.
400' - 482'	82'	Shale, medium gray with coal 458' - 464'.
482' - 501'	19'	Sandstone, light to medium gray, fine-grained, chloritic and micaceous, and siltstone and shale, medium gray.
501' - 521'	20'	Shale, dark gray.
521' - 535'	14'	Shale, medium gray, and sandstone, light gray, fine-grained.
535' - 582'	47'	Sandstone, white, fine-grained, silty, chloritic, and shale, medium gray. Conglomerate and a trace of coal 552' - 560'.
582' - 652'	* 70'	Sandstone, white, medium-grained, becoming coarser grained at base of interval, conglomeratic, clean, with a trace of shale 582' - 620'.
652' - 663'	* 11'	Sandstone, light to medium gray, very fine-grained, conglomeratic, silty, and shale, medium gray.
663' - 669'	6'	Shale, medium gray.
669' - 682'	13'	No samples.
682' - 711'	* 29'	Sandstone, white and a trace of rose and brown, medium-grained, conglomeratic, and a trace of shale. Coal 693' - 703'.

DEPTH		
711' - 716'	*5'	Sandstone, white to light gray, very fine to medium-grained, and siltstone, medium gray with coal.
716' - 720'	4'	Sandstone, light to medium gray, very fine-grained, micaceous, silty, and siltstone, medium gray with coal.
720' - 778'	58'	Siltstone, medium with coal and shale, medium gray from 740' - 745' and coal from 750' - 755'.
778' - 800'	22'	Sandstone, light to medium gray, fine-grained, micaceous, and siltstone, medium gray with coaly partings at base of interval.
800' - 820'	20'	Siltstone, medium gray, micaceous.
820' - 852'	32'	Siltstone and shale, medium gray, with a trace of coal 840' - 852'.
852' - 875'	23'	Siltstone, medium gray, and sandstone, light gray, fine-grained, chloritic increasing in amount toward base of interval until it represents the predominant lithology.
875' - 898'	23'	Siltstone, medium gray, micaceous with coal in upper half of interval.
898' - 911'	13'	Sandstone, light gray, very fine-grained, micaceous, dense, coaly partings, and siltstone, medium gray.
911' - 935'	24'	No samples.
935' - 989'	54'	Shale, medium gray with some silt at 970'.
989' - 1025'	36'	Sandstone, tan-gray, very fine-grained, micaceous, and siltstone, medium gray.
1025' - 1045'	20'	Shale, medium to dark gray with coal.
1045' - 1052'	7'	Siltstone, light to medium gray with coal.
1052' - 1125'	73'	Sandstone, light gray, fine-grained, micaceous with siltstone and shale, medium gray from 1052' - 1080' and from 1114' - 1125'. Coal from 1052' - 1060'.
1125' - 1200'	75'	Sandstone, light tan to medium gray, very fine-grained, micaceous, coaly partings with shale, medium gray, silty in basal 31' of interval.

DEPTH		
1200' - 1222'	22'	Shale, medium gray and coal.
1222' - 1230'	8'	Siltstone, light to medium gray and shale, medium gray.
1230' - 1285'	55'	Sandstone, light gray, fine-grained, micaceous and chloritic, with siltstone medium gray, micaceous, and shale, dark gray in upper 30' of interval.
1285' - 1306'	21'	Sandstone, as above, but with some iron stain. Shale 1285' - 1300'. Conglomerate 1295' - 1306'.
1306' - 1440'	134'	Sandstone, white, fine to medium-grained, clean, conglomeratic with a trace of shale, dark gray 1364' - 1370' and some smokey quartz.
1440' - 1477'	37'	Siltstone and shale, medium gray, micaceous with coal 1440' - 1450' and 1460' - 1470'. Some sandstone, light gray, fine-grained, micaceous and chloritic 1460' - 1477'.
1477' - 1487'	10'	Siltstone, tan-gray, micaceous with coal.
1487' - 1500'	13'	As above, but shale and siltstone, dark gray, with coal.
1500' - 1510'	10'	Siltstone and shale, medium to dark gray.
1510' - 1523'	13'	Sandstone, light to medium gray, fine-grained, and siltstone and shale, as above.
1523' - 1538'	15'	As above, but sandstone is predominantly clear quartz.
1538' - 1543'	5'	Shale, medium to dark gray.
1543' - 1550'	7'	Sandstone, white to tan-gray, fine-grained, and shale, medium gray.
1550' - 1582'	32'	Sandstone, white to light gray, fine to medium-grained, chloritic, and micaceous.
1582' - 1592'	10'	Siltstone and shale, medium gray with coal.
1592' - 1638'	46'	Sandstone, white, fine-grained, micaceous and chloritic with siltstone and shale, medium gray 1592' - 1620'. Coal 1592' - 1610'.
1638' - 1645'	7'	Sandstone, white, tan-gray, red-brown, fine-grained, and siltstone, dark gray.

DEPTH			
1645'	- 1759'	114'	Shale, medium gray.
1759'	- 1765'	6'	Siltstone, medium gray, and some sandstone, light gray, fine-grained.
1765'	- 1770'	5'	Shale, dark gray.
Bluestone formation - Top - 1770'			
1770'	- 1851'	81'	Shale, medium to dark gray, green-gray, red, and varigated green and red. Gray-green shale becoming somewhat silty at base of interval.
1851'	- 1858'	7'	Shale, medium tan-gray, and green-gray, silty, calcareous.
1858'	- 1898'	40'	Sandstone, light green-gray, very fine-grained, calcareous, and shale, tan-gray and green-gray, silty.
1898'	- 1905'	7'	Shale, dark gray, micaceous, and some sandstone, as above.
1905'	- 1908'	3'	No samples.
1908'	- 1934'	26'	Sandstone, white, fine-grained, micaceous, and shale, dark gray, micaceous, silty 1908' - 1918' and 1926' - 1934'.
1934'	- 1941'	7'	Siltstone, dark gray, micaceous.
1941'	- 1950'	9'	Siltstone, dark gray, brown, and brown-gray, micaceous.
1950'	- 1966'	16'	Siltstone, dark gray, micaceous, and sandstone, white, very fine-grained, micaceous.
1966'	- 2028'	62'	Sandstone, and siltstone, as above, and with some sandstone, tan-gray from 1977' to base of interval.
2028'	- 2130'	102'	Shale, medium gray. No samples 2090' - 2100'.
2130'	- 2161'	31'	Shale, dark gray to black.
2161'	- 2179'	18'	Shale, medium gray, and red-brown.
Princeton sandstone - Top - 2179'			
2179'	- 2188'	9'	Siltstone, medium to dark gray, and sandstone, white, very fine-grained.
2188'	- 2193'	5'	Shale, medium gray, silty.

DEPTH		
2193' - 2198'	5'	Siltstone, and shale, medium-grained, and sandstone, light gray, fine-grained.
2198' - 2218'	20'	Siltstone, medium gray, and sandstone, medium gray, fine-grained with some brown siltstone and sandstone in upper half of interval.
2218' - 2233'	15'	Sandstone, light gray, fine-grained, and siltstone and shale, medium gray.
2233' - 2250'	17'	Sandstone, white, fine-grained, and shale, dark gray.
2250' - 2285'	35'	Sandstone, white, fine to medium-grained, conglomeratic, and shale, dark gray.
2285' - 2291'	6'	Shale, dark gray, silty, and sandstone, white, medium-grained, conglomeratic, and limestone, tan-gray, very argillaceous with fossil fragments, crinoids and brachs.
Avis limestone - Top - 2291'		
2291' - 2342'	51'	Shale, and limestone, as above with pyrite 2320' - 2333'.
Hinton formation (proper) - Top - 2342'		
2342' - 2350'	8'	Shale, red, green, and medium gray.
2350' - 2365'	15'	As above, but with sandstone, light gray and tan-gray, fine-grained.
2365' - 2375'	10'	No samples.
2375' - 2405'	30'	Sandstone, white to light gray, fine-grained, micaceous, and shale, dark gray and red.
2405' - 2418'	13'	Sandstone, white, light gray, and green-gray, fine-grained, micaceous, and chloritic, and shale, medium gray, silty.
2418' - 2425'	7'	Sandstone, white to smokey, fine-grained, micaceous, and shale, dark gray.
2425' - 2505'	80'	Siltstone, and shale, medium to dark gray, red, green-gray, and tan-gray.
2505' - 2518'	13'	Sandstone, light gray-pink, very fine-grained, micaceous, and siltstone, and shale, red and medium gray.

DEPTH			
2518' - 2528'	10'	Shale, and siltstone, medium to dark gray, green-gray, and red.	
2528' - 2538'	10'	Sandstone, brown and medium gray, very fine-grained, and siltstone and shale, medium gray, brown, and red.	
2538' - 2555'	17'	Shale, medium gray, green-gray, and red.	
2555' - 2565'	10'	Shale, medium gray, and red with pyrite.	
2565' - 2575'	10'	Shale, medium gray.	
2575' - 2625'	50'	Sandstone, white, very fine-grained, and shale, medium to dark gray. Siltstone, medium to dark gray in upper 21' of interval.	
2625' - 2635'	10'	Shale, black, with pyrite.	
2635' - 2652'	17'	Siltstone, dark gray, micaceous with pyrite in upper half of interval.	
2652' - 2713'	61'	Sandstone, white and smokey, fine-grained, and shale, medium to dark gray. Siltstone, medium to dark gray in upper part of interval. Pyrite at 2668' - 2672' and 2693' - 2698'. No samples 2698' - 2705'.	
2713' - 2724'	11'	Sandstone, white, clear, fine-grained, and a trace of shale, dark gray with pyrite.	
2724' - 2735'	11'	Sandstone, white to light gray, very fine-grained and siltstone dark gray.	
2735' - 2785'	50'	Sandstone, white, fine-grained, and shale, dark gray with a trace of shale, red 2762' - 2771'.	
2785' - 2790'	5'	Shale, dark gray.	
2790' - 2799'	9'	Shale, medium to dark gray and sandstone, light gray, fine-grained.	
2799' - 2808'	9'	Sandstone, white, fine-grained, and shale, medium to dark gray.	
2808' - 2815'	7'	Shale, medium to dark gray, and sandstone, white to green-gray, fine-grained, and pyrite.	

DEPTH			
2815' - 2860'	45'	Sandstone, white, fine-grained, and shale and siltstone, medium to dark gray with pyrite at base of interval.	
2860' - 2923'	63'	Shale, medium gray, calcareous in lower portion of interval. Pyrite 2890' - 2900'.	
2923' - 2927'	4'	Shale, dark gray, and sandstone, white, fine-grained.	
Bluefield formation - Top - 2942'			
2927' - 2972'	45'	Shale, medium gray, with pyrite at top of interval, and sandstone, light green-gray, fine-grained 2935' - 2942'.	
2972' - 3000'	28'	Shale, medium to dark gray with sandstone, light green-gray and pink-gray, fine-grained, and shale, dark gray from 2972' - 2977'.	
3000' - 3010'	10'	Limestone, brown-gray, oolitic, argillaceous, and shale, dark gray.	
3010' - 3029'	19'	Shale, dark gray, and sandstone, light brown-gray.	
3029' - 3035'	6'	Shale, dark gray, crinoid stems and intercalated calcite.	
3035' - 3039'	4'	No samples.	
3039' - 3047'	8'	Shale, medium gray, and sandstone, light gray, fine-grained.	
3047' - 3050'	3'	No samples.	
3050' - 3058'	8'	Sandstone, light gray, fine-grained and shale, medium gray.	
3058' - 3061'	3'	No samples.	
3061' - 3126'	65'	Shale, medium gray, with sandstone, light gray, fine-grained 3061' - 3071' and 3080' - 3087'. Pyrite 3071' - 3078'. Crinoid stems and crystalline calcite 3100' - 3110'.	
3126' - 3160'	34'	No samples.	
3160' - 3188'	28'	Shale, medium gray, and a trace of limestone, medium gray, argillaceous, with pyrite 3160' - 3164'. No samples 3164' - 3174'.	
3188' - 3217'	29'	Shale, dark gray, silty, and some limestone, medium brown-gray. Dark gray oolites 3188' - 3197'. Pyrite 3200' - 3204'.	

DEPTH			
3217' - 3237'	20'	Shale, medium gray, silty, calcareous, pyritic.	
3237' - 3287'	50'	Shale, dark gray with limestone, medium gray 3237' - 3257' and 3266' - 3287'. Oolites and crinoids 3237' - 3245'. Brach fragments and pyrite 3250' - 3257'.	
3287' - 3327'	40'	Limestone, brown-gray, argillaceous, oolitic 3287' - 3304'. Crinoidal 3304' - 3310'. Shale, dark gray, very calcareous 3292' - 3304'.	
Greenbriar limestone - Top - 3350'			
3327' - 3363'	36'	Shale, dark gray to black, very calcareous, and a trace of limestone, tan-gray with oolites and pyrite occurring at top of interval.	
3363' - 3373'	10'	Limestone, light gray to brown-dark gray, argillaceous and oolitic.	
3373' - 3392'	19'	Limestone, tan-gray, slightly oolitic at base.	
3392' - 3405'	13'	Limestone, light gray to dark brown-gray, oolitic (at top of interval).	
3405' - 3475'	70'	Limestone, tan-gray, oolitic 3405' - 3410'. Very oolitic 3422' - 3463'. Pyrite 3436' - 3442'.	
3475' - 3482'	7'	Shale, dark gray, very calcareous.	
3482' - 3503'	21'	Limestone, medium to dark gray, very argillaceous.	
3503' - 3663'	160'	Limestone, tan-gray. Very oolitic 3503' - 3516'. Oolitic 3536' - 3579'. No samples 3523' - 3531'. Crystalline calcite 3531' - 3555' and 3571' - 3579'. Slightly crinoidal 3608' - 3621'. Light tan-milky chert 3635' - 3663'.	
3663' - 3671'	8'	Limestone, brown-gray, oolitic, and light green-gray, very argillaceous.	
3671' - 3691'	20'	Limestone, tan-gray, argillaceous with crystalline calcite at top of interval.	
3691' - 3736'	45'	Limestone, brown-gray, very argillaceous with chert, brown in basal 16' of interval.	

Maccrady shale - Top - 3736'

DEPTH		
3736' - 3768'	32'	Shale, medium gray with numerous chloritic inclusions at base of interval.
3768' - 3774'	6'	No samples.
3774' - 3815'	41'	Siltstone, medium gray, with a trace of brown at 3800' - 3806'.
3815' - 3874'	59'	Siltstone, light to medium gray.

Price sandstone - Top - 3874'

3874' - 3990'	116'	Sandstone, light to medium gray, very fine-grained, and siltstone, medium gray. A trace of sandstone, brown, very fine-grained 3917' - 3928'. Pyrite 3874' - 3884', 3902' - 3928', and 3981 - 3990'. Trace of shale, brown at base of interval.
3990' - 4047'	57'	Siltstone, medium gray, slightly calcareous, and some sandstone, light to medium gray, very fine-grained. Pyrite 3990' - 4018'. A trace of shale, medium gray and brown at base of interval.
4047' - 4060'	13'	Shale, medium gray, and brown, and siltstone, medium gray, micaceous.

Big Stone Gap shale - Top - 4060'

4060' - 4176'	116'	Shale, medium gray with a trace of shale, brown 4060' - 4091' and 4140' - 4176'.
4176' - 4450'	274'	Shale, dark gray with a trace of shale, dark brown at 4176' - 4267', 4297' - 4312', and 4339' - 4400'. Pyrite at 4245' - 4284', 4378' - 4415', and 4433' - 4450'.
4450' - 4472'	22'	Siltstone, medium gray to black, and quartzite, tan.
4472' - 4493'	21'	Shale, medium gray, pyritic, and quartzite, tan.
4493' - 4508'	15'	No samples.

T. D. 4508.

Summary

Pennsylvanian	in bottom	0' 1770'
Bluestone formation	top bottom	1770' 2178'
Princeton sandstone	top bottom	2178' 2291'
Avis limestone	top bottom	2291' 2342'
Hinton formation (proper)	top bottom	2342' 2772' ?
Stony Gap sandstone member	top bottom	2772' ? 2942'
Bluefield formation	top bottom	2942' 3350'
Greenbrier limestone	top bottom	3350' 3735'
Maccrady shale	top bottom	3735' 3875'
Price sandstone	top bottom	3875' 4060'
Big Stone Gap shale and Devonian shale undifferentiated in Devonian shale at	top T.D.	4060' 4508'