

COAL OWNED BY _____
 REDRILL FOR STORAGE

NEW LOCATION.....

DRILL DEEPER.....

ABANDONMENT.....

COMPANY THE MANUFACTURERS LIGHT & HEAT

ADDRESS 800 UNION TRUST BLDG., PGH., PA.

FARM OSCAR MCDOWELL

TRACT _____ ACRES 198 LEASE NO. 27447

WELL (FARM) NO. 2 SERIAL NO. 4686

ELEVATION (SPIRIT LEVEL) 1251.06'

QUADRANGLE LITTLETON NC

COUNTY MARSHALL DISTRICT MEADE

ENGINEER Robert M. Heill

ENGINEER'S REGISTRATION NO. 361-E. (J.F.)

FILE NO. _____ DRAWING NO. Y-25-50A

DATE 15 MAR. 62 SCALE 1" = 800'

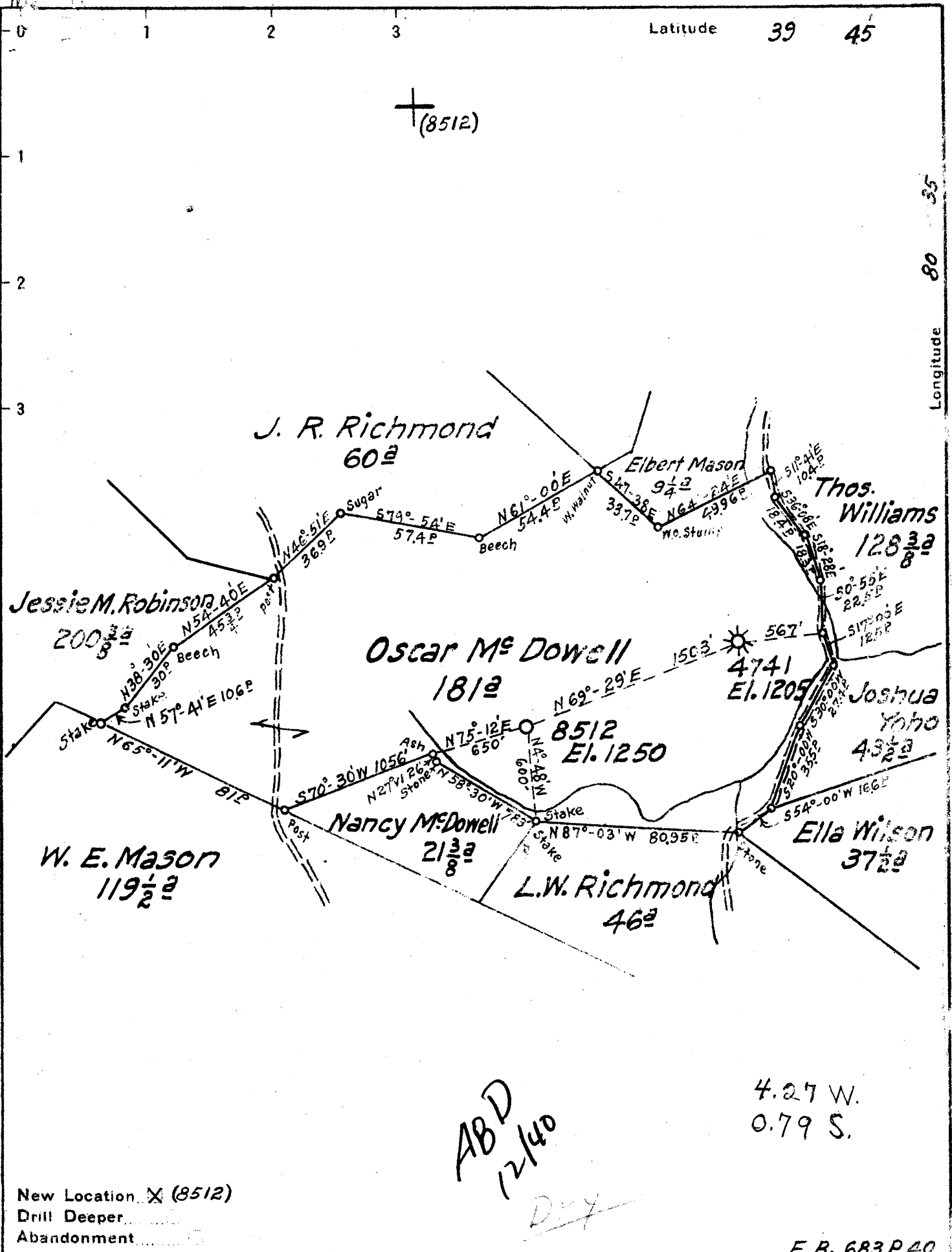
STATE OF WEST VIRGINIA
 DEPARTMENT OF MINES
 OIL AND GAS DIVISION
 CHARLESTON

WELL LOCATION MAP
 FILE NO. MARS-434-R
 (was 108)

+ DENOTES LOCATION OF WELL ON UNITED STATES TOPOGRAPHIC MAPS, SCALE 1 TO 62,500, LATITUDE AND LONGITUDE LINES BEING REPRESENTED BY BORDER LINES AS SHOWN.

- DENOTES ONE INCH SPACES ON BORDER LINE OF ORIGINAL TRACING.

(8512)



ABD
12/40

4.27 W.
0.79 S.

New Location X (8512)
Drill Deeper
Abandonment

F. B. 683 P 40

Company Hope Natural Gas Co
 Address Clarksburg, W. Va.
 Farm Oscar Mc Dowell
 Tract Acres 181 1/2 Lease No. 29956
 Well (Farm) No. _____ Serial No. 4741-8512
 Elevation (Spirit Level) 1205-1250
 Quadrangle Littleton
 County Marshall District Meade
 Engineer Wm Bowers
 Engineer's Registration No. 900
 File No. _____ Drawing No. _____
 Date June 12, 1940 Scale 1" = 50'

STATE OF WEST VIRGINIA
 DEPARTMENT OF MINES
 OIL AND GAS DIVISION
 CHARLESTON

WELL LOCATION MAP
 FILE NO. MARS-108

(Now Marshall 434)

+ Denotes location of well on United States Topographic Maps, scale 1 to 62,500, latitude and longitude lines being represented by border lines as shown.

- Denotes one inch spaces on border line of original tracing.



STATE OF WEST VIRGINIA
DEPARTMENT OF MINES
OIL AND GAS DIVISION

Quadrangle Littleton

Permit No. MARS-434-R

WELL RECORD

Stange
Oil or Gas Well GAS
(KIND)

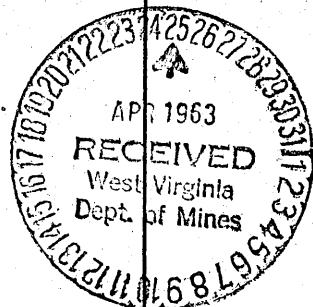
Company The Mfrs. Lt. and Ht. Co.
Address 800 Union Trust Bldg., Pittsburgh 19, Pa.
Farm Dexter McDowell Acres 198
Location (waters) _____
Well No. 4686 Elev. 1251.06'
District Meade County Marshall
The surface of tract is owned in fee by _____
Address _____
Mineral rights are owned by _____
Address _____
Drilling commenced August 23, 1962
Drilling completed February 13, 1963
Date Shot 2/13/63 From Maxton Sand
With Pitot Tube
Open Flow 10.0 /10ths Water in 4 1/2 Inch
/10ths Merc. in _____ Inch
Volume 1,650,000 Cu. Ft.
Rock Pressure 570 lbs. 24 hrs.
Oil _____ bbls., 1st 24 hrs.
Fresh water _____ feet
Salt water _____ feet

Casing and Tubing	Used in Drilling	Left in Well	Packers
Size			Kind of Packer
16			
18 3/8"	150'	150'	
10 3/4"	1054'	1054'	Size of
8 5/8"	1303'	1935'	
6"			Depth set
5 1/2" x 1 1/2"	2030'	2030'	
8			Perf. top
2			Perf. bottom
Liners Used			Perf. top
			Perf. bottom

CASING CEMENTED _____ SIZE _____ No. Ft. _____ Date _____

COAL WAS ENCOUNTERED AT 1043 FEET _____ INCHES
_____ FEET _____ INCHES _____ FEET _____ INCHES
_____ FEET _____ INCHES _____ FEET _____ INCHES

Formation	Color	Hardness x Soft	Top	Bottom	Oil, Gas or Water	Depth Found	Remarks
		THICKNESS					
Pittsburgh Coal		9	1043	1052			
Murphy Sand		9	1150	1159			
Big Dunkard Sand		78	1522	1600			
First Salt Sand		22	1766	1788			
Third Salt Sand		50	1904	1954			
Maxton Sand		34	2040	2074	Perforated 7" 4 sh/ft		
Big Lime		43	2106	2149			
Plug Back to				2100'			
13-3/8" Casing Set @			150'				
10-3/4" Casing Set @			1054'				
8-5/8" Casing Set @			1303'				
5-1/2" Casing Set @			2030'				
Old 7"			2030	2142			



STATE OF WEST VIRGINIA
DEPARTMENT OF MINES
OIL AND GAS DIVISION

195

WELL RECORD

Permit No. MAR-108

now 434

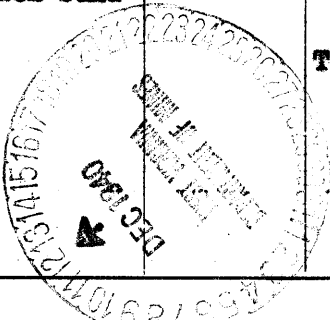
Oil or Gas Well Dry Hole
(KIND)

Company Hope Natural Gas Company
Address Clarksburg, W. Va.
Farm Oscar McDowell Acres 181
Location (waters) _____
Well No. 8512 Elev. 1250
District Meads County Marshall
The surface of tract is owned in fee by _____
Address _____
Mineral rights are owned by _____
Address _____
Drilling commenced July 25, 1940
Drilling completed November 15, 1940
Date shot 11/26/1940 Depth of shot Gordon Stray
Open Flow 9 /10ths Water in 3/4 Inch
_____ /10ths Merc. in _____ Inch
Volume 12.700 Cu. Ft.
Rock Pressure _____ lbs. _____ hrs.
Oil _____ bbls., 1st 24 hrs.
Fresh water 114 feet _____ feet
Salt water 1904-1922-2220 feet _____ feet

Casing and Tubing	Used in Drilling	Left in Well	Packers
Size			
16			Kind of Packer
18	152	Pulled	
10	1202	1202	Size of
8 1/4	1924	1924	
6 5/8	2130	2130	Depth set
5 3/16	2821	2821	
3			Perf. top
2			Perf. bottom
Liners Used			Perf. top
			Perf. bottom

CASING CEMENTED _____ SIZE _____ No. Ft. _____ Date
5-3/16" casing cemented 30ft.
COAL WAS ENCOUNTERED AT 949 FEET 24 INCHES
1042 FEET 72 INCHES _____ FEET _____ INCHES
_____ FEET _____ INCHES _____ FEET _____ INCHES

Formation	Color	Hard or Soft	Top	Bottom	Oil, Gas or Water	Depth Found	Remarks
Mapletown Coal			949	951			
Pittsburgh Coal			1042	1048			
Little Dunkard Sand			1400	1429	Show gas	1380-1400	
Big Dunkard Sand			1555	1595			2135
Gas Sand			1660	1720			1250
First Salt Sand			1755	1778			885
Second Salt Sand			1870	1952	Water	1904-1922	
Third Salt Sand			1965	1980			
Maxon Sand			2030	2070			
Sand			2100	2130			
Pencil Cave			2130	2135			
Big Lime			2135	2170			
Big Injun Sand			2170	2435	Water	2220	
Lime			2775	2790			
Lime			2815	2845			
Gordon Stray Sand			2980	2994	Gas	2985-2987	
Gordon Sand			3035	3065			
Total Depth				3092			



Formation	Color	Hard or Soft	Top	Bottom	Oil, Gas or Water	Depth Found	Remarks

Date **December 11,** 194**0**

APPROVED: **Hope Natural Gas Company**, Owner

By *[Signature]* **General Supt.**
(Title)

Meade District, Marshall County, W. Va.

By Hope Natural Gas Company, Clarksburg, W. Va.

Located 4.27 mi. W. of 80° 35' and 0.8 mi. S. of 39° 45' - NC - Littleton Quadrangle.

Elevation, 1250' L.

Permit Mars-108.

Drilling commenced July 25, 1940; completed, Nov. 15, 1940.

Shot in Gordon Stray, Nov. 26, 1940.

Volume, 12,700 cu. ft.

Fresh water, 114'; salt water, 1904-1922 and 2220'.

13" casing, 152'; 10", 1202'; 8½", 1924'; 6½", 2130'; 5", 2821'.

Section based on samples from surface to 3092' examined by J. H. C. Martens.

Martens' record from samples.

Top. Bottom. Thickness.

DUNKARD GROUP, 749+ FEET

0	-	10	10	Clay, brown
10	-	18	8	Shale and limestone, brown, weathered
18	-	25	7	Shale and siltstone, brown
25	-	40	15	Clay, red and yellow; also some brown siltstone and limestone
40	-	65	25	Siltstone and shale, yellow and brown; practically all of the material down to 65' appears weathered
65	-	73	8	Shale, gray, soft, 50%; light-gray limestone, 50%
73	-	87	14	Clay, gray, with a little limestone
87	-	91	4	Siltstone, light-gray, micaceous
91	-	101	10	Shale, gray
101	-	122	21	Sandstone, white to light-gray, fine, micaceous, and calcareous
122	-	130	8	Sandstone, gray, very fine, silty
130	-	138	8	Shale, light-brown, highly calcareous
138	-	152	14	Shale, gray, 70%; limestone, 20%; green siltstone, 10%
152	-	156	4	Shale, gray, soft
156	-	161	5	Shale, gray, green, and red; also some limestone
161	-	171	10	Shale, gray
171	-	181	10	Shale and siltstone, green, 50%; red and yellow clay, 40%; limestone, 10%
181	-	198	17	Sandstone, nearly white, fine, micaceous, and calcareous; also some limestone and green shale, perhaps cavings
198	-	225	27	Sandstone, light-green to white, fine, micaceous, slightly calcareous
225	-	245	20	Shale, gray, green, and brown, calcareous
245	-	259	14	Shale, gray, green, and brown, 70%; light-brown limestone, 30%
259	-	271	12	Clay, gray and red, 40%; gray to green silty shale, 40%; light-brown limestone, 20%
271	-	278	7	Shale, green, silty, calcareous
278	-	297	19	Sandstone, gray, fine, micaceous, and calcareous
297	-	306	9	Clay, red and yellow, 50%; green shaly siltstone with limestone nodules, 50%
306	-	314	8	Shale and siltstone, green
314	-	342	28	Sandstone, nearly white, fine
342	-	350	8	Shale, red, soft
350	-	357	7	Siltstone, green, shaly, micaceous, and calcareous
357	-	383	26	Shale, red, soft
383	-	390	7	Shale, green, silty
390	-	397	7	Clay, light-gray and green, with limestone nodules
397	-	410	13	Siltstone, light-green, micaceous, 60%; yellow limestone, 40%
410	-	418	8	Sandstone, white, medium-grained
418	-	426	8	Clay, red, calcareous
426	-	440	14	Sandstone, light-green, very fine, silty, calcareous

(OVER)

Top.	Bottom.	Thickness.	
440	- 470	30	Shale, light-gray to light-brown, soft and clay-like; contains many small limestone nodules
470	- 495	25	Shale, red, soft, calcareous
495	- 503	8	Shale, green, silty, calcareous
503	- 523	20	Sandstone, light-green, very fine, micaceous, and calcareous
523	- 527	4	Shale, gray and green, soft
527	- 542	15	Siltstone, light-green; also some gray to green shale
542	- 552	10	Sandstone, white, fine, calcareous
552	- 560	8	Limestone, very light brown
560	- 575	15	Clay, red, calcareous
575	- 584	9	Clay and shale, various colors
584	- 592	8	Shale, dark-gray, very silty
592	- 600	8	Sandstone, gray, fine, carbonaceous
600	- 608	8	Sandstone, gray, fine, 70%; gray to black shale, 30%
608	- 614	6	Coal and black shale, 50%; nearly white clay, 30%; fine white sandstone, 20% (Washington Coal)
614	- 629	15	Limestone, light-gray to yellow, 70%; gray calcareous siltstone, 30%
629	- 642	13	Sandstone, light-gray, very fine, silty, highly calcareous
642	- 668	26	Siltstone and shale, grayish-green, calcareous
668	- 687	19	Shale, dark-gray to brownish; also some brown limestone
687	- 702	15	Siltstone, light-green, calcareous; contains concretions of yellow limestone
702	- 725	23	Sandstone, white, coarse (Waynesburg Sandstone)
725	- 749	24	Shale, gray, soft, 90%; coal, 10%
MONONGAHELA FORMATION, 299 FEET			
749	- 767	18	Sandstone, white, fine; also much shale, probably cavings
767	- 790	23	Shale, red, calcareous
790	- 795	5	Shale, green, silty, calcareous
795	- 808	13	Clay and shale, gray, 50%; brown limestone, 50%; small amount of coal
808	- 816	8	Sandstone, white, fine
816	- 824	8	Clay, gray
824	- 860	36	Limestone, light-brown, 70 to 80%; green, red, and gray clay, 30 to 20%
860	- 868	8	Siltstone, green, sandy, calcareous
868	- 900	32	Limestone, light-brown to yellow
900	- 907	7	Limestone, grayish-yellow, 60%; green shale, 40%
907	- 949	42	Limestone, light-brown to yellowish; also small to moderate amounts of soft green and gray shale
949	- 951	2	Coal (Sewickley Coal)
951	- 956	5	Limestone, dark-gray, shaly
956	- 963	7	Clay, gray to dark-gray; also some limestone
963	- 990	27	Limestone, light-gray to light-brown
990	- 1004	14	Shale and siltstone, gray; also some limestone as above
1004	- 1038	34	Limestone, light-brown; small amounts of clay and shale
1038	- 1042	4	Shale, gray, silty, micaceous; also some limestone as above
1042	- 1048	6	Coal (Pittsburgh Coal)
CONEMAUGH FORMATION, 542 FEET			
1048	- 1055	7	Shale, white to light-green, soft, 80%; light-brown limestone, 20%
1055	- 1063	8	Sandstone, nearly white, fine
1063	- 1070	7	Shale, gray and light-green, soft
1070	- 1094	24	Limestone, gray to yellow, 50%; soft gray and green shale, 50%
1094	- 1102	8	Clay, red, gray, and green, calcareous
1102	- 1108	6	Limestone, light-gray to light-brown, 50%; light-green shale, 30%; red clay, 20%

Top.	Bottom.	Thickness.	
1108	- 1128	20	Siltstone, green, shaly, with small limestone nodules
1128	- 1150	22	Clay, red and yellow, calcareous
1150	- 1160	10	Clay, gray, green, and red, calcareous
1160	- 1198	38	Clay, red and yellow, calcareous; contains small limestone nodules
1198	- 1213	15	Siltstone, green, shaly
1213	- 1235	22	Clay, red, calcareous
1235	- 1258	33	Shale, green, silty; also large amount of red clay, perhaps cavings
1258	- 1273	15	Shale, gray to reddish; also large amount of red clay cavings
1273	- 1280	7	Shale, green, silty
1280	- 1287	7	Siltstone, green
1287	- 1303	16	Sandstone, light-green, fine, calcareous
1303	- 1330	27	Clay, red, calcareous
1330	- 1354	24	Shale and siltstone, green, calcareous; also large amount of red clay, perhaps cavings
1354	- 1362	8	Clay, red and yellow, calcareous
1362	- 1408	46	Sandstone, light-green and light-gray, very fine, almost a siltstone near top
1408	- 1425	17	Sandstone, very light brown, medium-grained
1425	- 1433	8	Clay, light-gray to yellowish, with a few red and green spots; has conchoidal fracture; some fragments are translucent on edges and resemble chert; does not disintegrate in water
1433	- 1441	8	Clay and soft shale, green and red
1441	- 1450	9	Clay, red and gray; fragments fall apart quickly when wet
1450	- 1457	7	Siltstone, green, sandy, calcareous; also much clay as above
1457	- 1465	8	Limestone, light-brown; also much siltstone, red clay, etc.
1465	- 1473	8	Shale, white to light-green, silty, micaceous, sideritic
1473	- 1480	7	Siltstone, grayish-green, shaly, micaceous
1480	- 1494	14	Siltstone, black, shaly, micaceous
1494	- 1510	16	Shale, very dark gray, silty, micaceous
1510	- 1535	25	Shale, dark-gray to black, with small amount of coal; some fragments of coal and shale are highly pyritic; there are a few fossil shells in the shale (Brush Creek Coal and Shale?)
1535	- 1542	7	Clay and soft shale, mostly gray, with some green and red
1542	- 1557	15	Shale, green, silty; also much gray and red clay and some limestone
1557	- 1574	17	Sandstone, white, fine
1574	- 1590	16	Sandstone, white, coarse
ALLEGHENY AND POTTSVILLE FORMATIONS, 488 FEET			
1590	- 1606	16	Shale, dark-gray to black, with a little coal and some siderite concretions
1606	- 1613	7	Clay, gray, red, and green (probably wrong depth on sample)
1613	- 1620	7	Coal, 20%; gray and black shale, 80%
1620	- 1630	10	Siltstone, gray to white, grading to sandstone
1630	- 1638	8	Sandstone, white, very fine
1638	- 1648	10	Shale, gray to black, 60%; brown impure limestone, 40%
1648	- 1657	9	Coal, 50%; gray and brown shale, 50%
1657	- 1680	23	Sandstone, white, medium- to coarse-grained
1680	- 1696	16	Siltstone, light-gray, very sandy
1696	- 1715	19	Sandstone, white, medium-grained
1715	- 1735	20	Shale, gray
1735	- 1754	19	Siltstone and shale, light-gray
1754	- 1778	24	Sandstone, white, medium-grained
1778	- 1779	1	Coal and nearly white shale

Top.	Bottom.	Thickness.	
1779	- 1787	8	Shale, very light gray
1787	- 1795	8	Shale, gray to dark-gray, 90%; coal, 10%
1795	- 1802	7	Shale, gray, soft
1802	- 1818	16	No sample
1818	- 1825	7	Shale, gray, soft, 80%; coal, 20%
1825	- 1864	39	Shale and siltstone? (depths on samples doubtful)
1864	- 1881	17	Shale, dark-gray, silty
1881	- 1890	9	Shale, dark-gray, with a little coal
1890	- 2010	120	Sandstone, white to nearly white, fine- to medium-grained
2010	- 2018	8	Shale, gray, silty
2018	- 2033	15	Sandstone, gray, very fine, silty
2033	- 2039	6	Sandstone, nearly white, medium-grained
2039	- 2050	11	No sample
2050	- 2066	16	Sandstone, white, coarse
2066	- 2078	12	Shale, dark-gray to black; a little dark-brown limestone (top of Mauch Chunk between 2070 and 2078')
MAUCH CHUNK GROUP, 57 FEET			
2078	- 2095	17	Shale, gray, soft, 50%; dark-brown limestone, 50%
2095	- 2104	9	Limestone, brown, 60%; soft gray shale, 40%; a little green shale
2104	- 2120	16	Sandstone, white, fine
2120	- 2125	5	Shale, gray, soft, distinctly laminated
2125	- 2135	10	No sample
GREENBRIER LIMESTONE, 39 FEET			
2135	- 2138	3	No sample (top of Greenbrier from driller's record)
2138	- 2157	19	Limestone, light-brown
2157	- 2174	17	No sample
LOWER MISSISSIPPIAN AND UPPER DEVONIAN, 920+ FEET			
2174	- 2200	26	Sandstone, light-green, fine, slightly calcareous; also considerable limestone from above
2200	- 2208	8	Sandstone, nearly white, medium-grained, 80%; light-green shale and siltstone, 20%
2208	- 2232	24	Sandstone, white, medium-grained (water, 2220')
2232	- 2271	39	Sandstone, light grayish green, very fine
2271	- 2397	126	Sandstone, white, medium-grained; a little siltstone, 2292-2300'
2397	- 2412	15	Siltstone, gray, shaly
2412	- 2427	15	Sandstone, white, fine
2427	- 2465	38	Shale, gray, silty
2465	- 2502	37	Siltstone and shale, gray
2502	- 2530	28	Shale, gray
2530	- 2538	8	Sandstone, light-gray, very fine, 60%; gray shale, 40%
2538	- 2576	38	Siltstone, gray, shaly
2576	- 2646	70	Sandstone, light-gray, very fine, slightly calcareous, almost a siltstone
2646	- 2686	40	Siltstone, gray, shaly
2686	- 2765	79	Shale, gray, silty
2765	- 2787	22	Siltstone, light-gray, sandy
2787	- 2820	33	Shale and siltstone
2820	- 2837	17	Siltstone, gray and green, 60%; gray shale, 40%
2837	- 2870	43	Shale, grayish-red; also considerable amount of gray shale
2870	- 2890	20	Siltstone, red
2890	- 2910	20	Shale, red, silty
2910	- 2921	11	Shale, red and gray
2921	- 2945	24	Shale, red, silty
2945	- 2977	32	Shale, gray
2977	- 2994	17	Sandstone, white, fine

(Continued on page 5)

Top.	Bottom.	Thickness.	
2994	- 3019	25	Shale, gray to grayish-red, 50%; white to gray siltstone and very fine sandstone, 50%
3019	- 3052	33	Sandstone, white, 60%; gray shale, 40%; sandstone is mostly fine with a few coarse grains
3052	- 3063	11	Shale, gray
3063	- 3069	6	Sandstone, white, fine, 60%; gray shale, 40%
3069	- 3075	6	Shale, gray
3075	- 3092	17	Sandstone, white to light-gray, very fine
	3092		Total depth