

(7-74-50)  
5/22/50  
C

Pocahontas Land Corporation No. 9249 Well.

Big Creek District, McDowell County, W. Va.

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

Located 3.53 Mi. S. of 37° 20' and 1.1 Mi. W. of 81° 30'

Welch Quadrangle - SE

Elevation 2292' L

Hermit McD - 40

Drilling commenced August 26, 1948; completed January 8, 1949

Shot Jan 1, 1949 at 4229-4249, with 60 Qts.

Volume, 67,000 Cu. Ft.

Rock pressure 650 lbs.

Fresh water at 75'

13" casing, 21'; 10", 274'; 8-1/4", 795'; 6-5/8", 2632'; all left in

No coal recorded

Show gas 2053-2088'; 2275'; gas at 3065' and 4239-4247'

Section based on samples from 35' to 4265'; examined by Russell R. Flowers.

Top Bottom Thickness

POTTSVILLE FORMATION, 127, plus, Feet

Top	Bottom	Thickness	Description
35	40	5	Siltstone to clay (silty), moderate to dark yellowish brown (colored with weathered iron oxides); some very fine to fine grained, pale yellowish brown sandstone
40	45	5	Sandstone, light-gray, fine-grained, chloritic and kaolinitic, a small amount of carbonaceous material
45	62	17	Sandstone, light-gray to moderate and dark yellowish brown (highly stained with iron oxides), fine- to medium-grained, subangular, argillaceous, chloritic, contains grains of dark (shaly) material; some medium- to medium dark, silty shale and some dusky yellowish brown to dusky-brown siderite at the bottom

62	79	17	Sandstone, very light to light-gray, subangular, many of the quartz grains have secondary crystal facets, chloritic, somewhat argillaceous, a very small amount of siderite
79	88	9	Shale, medium- to dark-gray, soft; some dark to dusky yellowish brown siderite
88	95	7	Shale, medium dark gray, very silty, micaceous
95	99	4	Siltstone to sandstone (very fine), medium light to medium-gray, calcareous, sideritic, chloritic and micaceous; some medium dark gray, silty shale
99	103	4	Shale, medium dark gray, some medium dark gray to dark greenish gray (very silty)
103	117	14	Siltstone to sandstone (very fine), calcareous and sideritic, micaceous, chloritic, and kaolinitic, shaly in part; some medium dark to dark-gray, silty shale
117	127	10	Shale, medium dark to dark-gray, some grayish-black, very silty; some medium-gray to olive-gray, somewhat calcareous and sideritic siltstone
MAUCH CHUNK SERIES, 2624 Feet.			
127	150	23	Clayshale, medium to medium dark gray mottled with grayish-brown; contains a very large amount of siderite <del>sphaerulites</del> spherulites
150	168	18	Shale, grayish-brown to dusky-brown
168	180	12	Siltstone (shaly), medium-gray to dark greenish gray
180	184	4	Siltstone and some sandstone (very fine), greenish-gray to medium and medium dark gray, shaly, kaolinitic and micaceous
184	194	10	Siltstone, greenish and dark greenish gray to medium and medium dark gray, shaly; some shale, medium dark gray to grayish-black, sideritic in part

194	198	4	Clay-shale, grayish-brown to brownish-gray; dark greenish gray and olive-gray to medium dark gray, calcareous in part; some medium dark to dark-gray, highly sideritic shale
198	205	7	Siltstone, dark greenish gray to medium dark gray; clay-shale, grayish-brown to brownish-gray with streaks of grayish-red, some dark greenish gray to medium dark gray (highly sideritic in part), calcareous in part
205	233	28	Clay-shale, grayish-brown to brownish-gray, dark greenish gray and olive-gray (highly calcareous) to medium dark-gray (highly sideritic in part)
233	248	15	<del>Sandstone</del> Shale, medium- to dark-gray, some brownish- and grayish-black (sideritic); siltstone, medium-gray to dark greenish gray to a light-gray, very fine sandstone, calcareous, chloritic and micaceous, kaolinitic
248	253	5	Sandstone, greenish-gray to dark greenish gray (highly chloritic), some light olive gray; some grayish-brown to brownish-gray and greenish-gray, highly calcareous clay-shale
253	264	11	Sandstone, greenish-gray, very fine grained, highly chloritic, kaolinitic, somewhat micaceous, calcareous in part (a large amount of shale cavings)
264	274	10	Sandstone (very fine) to siltstone, greenish-gray to dark greenish gray, highly chloritic; a large amount of grayish-brown siltstone and shale at the bottom
274	283	9	Siltstone, greenish-gray to dark greenish gray and medium dark gray, calcareous in part
283	298	15	Shale, brownish-gray to grayish-brown, silty shale and siltstone, dark greenish gray to medium-gray; some grayish-olive to olive-gray limestone nodules

298	318	20	Shale, grayish-brown to dusky-brown; some light-gray to greenish-gray, highly calcareous shale to an impure limestone
318	337	19	Shale, grayish-brown to dusky-brown; some dark greenish gray to medium dark gray siltstone; these samples are calcareous in part
337	352	15	Siltstone to sandstone (very fine), greenish-gray to dark greenish gray and medium dark gray, argillaceous, micaceous and chloritic; some grayish-brown to brownish-gray clay-shale with limestone nodules
352	358	6	Sandstone, light-gray (with greenish-gray, very silty shale streaks), chloritic, calcareous, some dark (shaly) material
358	367	9	Shale, medium dark to dark-gray, some olive-gray (calcareous) to medium dark gray; a large amount of grayish-brown to brownish-gray clay-shale
367	381	14	Siltstone and sandstone <sup>t</sup> (very fine), very light to medium-gray, calcareous, kaolinitic, some mica and chlorite
381	391	10	Siltstone, olive-gray to medium and medium dark gray; some shale medium- to dark-gray, a small amount of grayish-black
391	398	7	Siltstone and shale, medium- to dark-gray; some very fine, light-gray sandstone
398	406	8	Shale, medium dark to dark-gray
406	435	29	Clay, medium to medium dark gray; a large amount of shale, medium dark to dark-gray; some grayish-black to black, pyritized, fossiliferous, calcareous, shale nodules
435	450	15	Siltstone and some shale, greenish-gray to medium-gray, some dark greenish gray to medium dark gray, highly streaked and spotted with olive-gray to grayish-olive limestone

450	467	17	Siltstone, light greenish gray to light-gray, kaolinitic, micaceous, calcareous, a small amount of the siltstone contains siderite spherulites; a large amount of medium dark to dark-gray and some grayish-black shale at the top
467	480	13	Shale, medium dark to dark-gray, some dark to dusky yellowish brown (highly sideritic), silty, pyritic in part
480	510	30	Siltstone, light- to medium-gray and olive-gray, sandy in part, slightly calcareous, closely inter-laminated with a dark-gray shale
510	550	40	Shale, dark-gray to grayish-black, interlaminated with thin streaks of light-gray to olive-gray siltstone
550	618	68	Shale, dark-gray to grayish- and olive-black, with a few streaks of olive-gray siltstone
618	700	82	Shale, dark-gray to grayish-black, some olive-black, silty at the top and 660 to 676'
700	725	25	Shale, grayish-black to black (carbonaceous), some dark-gray, pyritic in part; a small amount of light- to medium-gray, fine sandstone (lenses?); a small amount of sideritic shale
725	775	50	Sandstone, very light to light -gray, very fine to fine-grained, angular to subangular, calcareous in part, contains some carbonaceous (shaly) streaks, small amounts of kaolinitic and chloritic material (Ravencliff Sand 725 to 778, from driller's log)
775	781	6	Shale, dark-gray, silty in part
781	796	15	Shale and some siltstone, medium to medium dark gray, soft, calcareous and sideritic in part
796	813	17	Shale, medium-gray, sandy and silty to a medium-gray and greenish-gray, silty, fine sandstone, calcareous and sideritic in part
813	830	17	Shale, medium dark to dark-gray, calcareous in part (with fossiliferous, limestone spots)
830	840	10	Shale and siltstone, dark greenish gray to medium dark gray; shale, medium dark gray to grayish-black with calcareous and sideritic spots

840	850	10	Siltstone, medium light to medium dark gray, closely interlayered with a dark-gray to grayish-black shale
850	874	24	Shale, dark greenish gray to medium dark gray, somewhat calcareous; some dark-gray to grayish-black, fossiliferous, calcareous shale
874	885	11	Shale, dark-gray to grayish-black; a large amount of medium to medium dark gray and some dark greenish gray, silty shale; these shales are calcareous in part
885	907	22	Shale, dark greenish gray to dark-gray, calcareous and dolomitic in part; shale, grayish-brown with some gray spots and streaks
907	945	38	Shale, grayish-brown, a little brownish-gray, soft, silty in part; shale (sandy) to sandstone (very fine, argillaceous), greenish-gray and dark greenish gray to dark-gray, calcareous in part
945	955	10	Shale to siltstone, medium to medium dark gray, some greenish-gray to medium-gray; some dark-gray to grayish-black shale with fossiliferous limestone spots; some grayish-brown shale (cavings ?)
955	962	7	Shales and siltstone, dark greenish gray to a medium dark gray, sandy and highly calcareous in part; shale, dark-gray to grayish-black, fossiliferous and highly calcareous
962	985	23	Shale and some siltstone, olive-gray and dark greenish gray to dark-gray, highly calcareous to a shaly limestone
985	1018	33	Siltstone to sandstone (very fine), very light to light-gray and greenish-gray, some medium-gray, contains carbonaceous specks and streaks, some chlorite and mica, some kaolinitic material, highly calcareous at the top

1018	1023	5	Siltstone, greenish-gray and light olive gray to olive-gray and medium dark gray (shaly); some dark-gray silty shale
1023	1043	20	Siltstone, light- to medium-gray, some olive-gray with dark-gray (shaly) streaks, kaolinitic, micaceous, somewhat chloritic
1043	1065	22	Shale, medium dark gray with dark-gray to brownish-black (very highly fossiliferous limestone)
1065	1077	12	Shale (highly calcareous) to limestone (shaly), dark-gray to brownish-black with light- to dark-gray, (fossiliferous) spots and streaks
1077	1095	18	Shale (calcareous) to limestone (very shaly), medium dark to dark-gray, dolomitic, fossiliferous in the lower part
1095	1122	27	Limestone (shaly) to shale (highly calcareous), dark-gray to brownish-black, somewhat fossiliferous, dolomitic in part (Avis Limestone ?)
1122	1150	28	Shale, very dusky red to grayish-brown (silty); shale and some siltstone, medium- to dark-gray, some grayish-black, some greenish-gray, highly calcareous and fossiliferous in part
1150	1191	41	Shale, very dusky red to grayish-brown, calcareous in part, soft
1191	1220	29	Shale, very dusky red to grayish-brown, some dusky-brown (very silty), highly calcareous in part
1220	1230	10	Siltstone, brownish-gray to grayish-brown, calcareous in part; shale grayish-brown to dusky-brown
1230	1248	18	Clay-shale, very dusky red to grayish-brown, some grayish-brown to brownish-gray (silty), some grayish-red, some brownish-gray, dark greenish-gray to medium dark-gray to grayish-black shale at the top, highly calcareous in part
1248	1264	16	Clay-shale, grayish-brown to very dusky-red; shale (silty) and siltstone grayish-brown to brownish-gray; some grayish-red and some brownish-gray shale; these shales are calcareous in part

1264	1284	20	Shale, grayish-brown to very dusky red, soft; a very large amount of dusky-brown to brownish-gray siltstone in the lower part; some limestone, light- to medium-gray, some greenish-gray (shaly), dolomitic in part
1284	1295	11	Shale, dark greenish gray to medium dark gray, some dark-gray to olive-black, soft; some siltstone, grayish-brown to brownish-gray, some dark greenish gray, calcareous in part; small amount of limestone
1295	1304	9	Siltstone and shale (silty), medium to medium dark gray, some dark greenish gray, calcareous in part; some grayish-black to black, carbonaceous shale
1304	1323	19	Siltstone, brownish-gray to dusky-brown, greenish-gray to medium-gray, calcareous, micaceous, chloritic in part; shale, medium dark to dark-gray, some grayish-black to black
1323	1354	31	Shale and siltstone, dark greenish gray to medium dark gray, calcareous in part
1354	1362	8	Shale, greenish-gray (dolomitic) to grayish-olive (calcareous dolomite), some mottled grayish-brown and grayish-olive (dolomite), some medium dark gray (dolomitic)
1362	1365	3	Siltstone, dusky-brown to brownish-gray, micaceous
1365	1377	12	Siltstone and shale (silty), dusky-brown to brownish-gray; shale, grayish-brown, some dark greenish gray to medium-gray, calcareous in part
1377	1387	10	Shale and some siltstone, grayish-brown, some dark greenish gray to dark-gray, calcareous in part
1387	1412	25	Siltstone, dusky-brown to brownish-gray, much greenish-gray to medium-gray in the lower part, micaceous, calcareous in part

1412	1436	24	Shale, grayish-brown to very dusky red, soft
<del>1436</del>	<del>1443</del>	7	Shale, dark greenish gray to medium dark gray, some grayish-black to black; some grayish-brown to brownish-gray siltstone and shale
1443	1453	10	Shale, grayish-brown to brownish-gray, some mottled grayish-brown and dark greenish gray; shale, dark greenish gray to medium dark gray, some grayish-black to black
1453	1465	12	Shale, grayish-brown to very dusky red; some brownish-gray, soft
1465	1475	10	Shale, grayish-brown to very dusky red, brownish-gray, soft
1475	1507	32	Shale, grayish-brown to brownish-gray, some very dusky red, greenish-gray to medium dark gray, some dark-gray to grayish-black, highly calcareous in part
1507	1525	18	Siltstone, dark-greenish-gray (chloritic) to shale, medium dark gray
1525	1533	8	Shale, medium dark to dark-gray, some grayish-black, some dark greenish gray, calcareous in part, small amount is sideritic
1533	1540	7	Shale, dark-gray, very silty, interlayered with thin bands and streaks of siltstone to sandstone (very fine), light- to medium-gray, calcareous
1540	1548	8	Shale, dark-gray to grayish-black, silty,; sandstone, light-gray, very fine, silty
1548	1560	12	Dolomite, olive-black to <del>to</del> brownish-black, highly calcareous, dark-gray to grayish-black shale; siltstone, greenish-gray and medium-gray to a medium dark gray, silty shale
1560	1580	20	Shale, dark greenish gray to medium dark gray, silty in part to a siltstone in the lower part; some dark-gray to brownish-black, shaly limestone
J 1580	1594	14	Shale, dark-gray (with calcite streaks) to limestone, brownish-black, shaly; much finely disseminated pyrite; some medium dark to dark greenish gray siltstone and shale

1594	1608	14	Shale, grayish-brown to brownish-gray, dark greenish gray to medium dark gray, calcareous shale to brownish-black, shaly limestone
1608	1625	17	Shale, dark greenish gray, dolomitic; some olive-gray to dark-gray, calcareous, shaly dolomite
1625	1666	41	Shale, medium dark to dark-gray, very silty; some medium-gray to olive-gray siltstone in the lower part; small amount is highly calcareous and sideritic at the bottom
1666	1690	24	Siltstone, light- to medium-gray and olive-gray, the lower part is darker in color, sandy (very fine) in part, interbedded with some medium dark gray to <del>is</del> grayish-black shale (mostly very silty)
1690	1700	10	Siltstone (coarse) to sandstone (very fine), greenish-gray to medium dark gray, streaked with a dark-gray to grayish-black, silty shale; some medium- to dark-gray, soft shale
1700	1707	7	✓ Sandstone, light-gray at top to very light gray at the bottom, very fine grained, quartzose, slightly dolomitic; some dark-gray to grayish-black shale
1707	1712	5	Shale, medium dark gray to grayish-black, some grayish-black to black ("coaly") highly pyritic in part; some medium to medium dark gray siltstone to silty shale; small amount of siderite
1712	1720	8	Sandstone, white to light-gray, fine to very fine grained, quartzose, dolomitic; some shale, medium to dark-gray; small amount of pyrite
1720	1732	12	Shale, medium- to dark-gray, grayish-black with black (very highly carbonaceous) streaks; some light- to medium-gray siltstone; small amount of pyrite
1732	1746	14	Shale, medium- to dark-gray, some dark greenish gray; some mottled grayish-olive (calcareous dolomite) and dark greenish gray shale

1746	1754	8	Shale, brownish-gray to dark greenish gray, some brownish-gray to very dusky red
1754	1765	11	Shale, brownish-gray to very dusky red and grayish-brown, dolomitic, calcareous to a shaly, calcareous dolomite; shale, dark greenish gray, dolomitic; a large amount of medium dark gray to grayish-black shale; small amount of brownish-black siderite
1765	1800	35	Siltstone, greenish-gray to medium-gray, some dark greenish gray to medium dark gray, calcareous in part; shale, reddish-gray, some very dusky red; some medium dark gray to grayish-black shale
1800	1830	30	Shale and some siltstone, medium dark gray to grayish- <del>red</del> and brownish-black (this shale is predominant at the bottom); some grayish-olive to olive-gray, shaly dolomite in the upper part
1830	1840	10	Shale, brownish-gray to grayish-brown and very dusky red, some dark greenish gray to medium dark gray; siltstone, medium-gray to a medium dark gray, very silty shale, highly calcareous in part
1840	1850	10	Shale, dark-gray to grayish-black, very silty, a few carbonaceous streaks, sideritic in part; some medium-gray siltstone
1850	1860	10	Siltstone, dusky-brown to shale, grayish-brown; some dark greenish gray, dolomitic shale
1860	1870	10	Shale, medium to medium dark gray, some grayish-black to black, some grayish-brown to dusky-brown
1870	1880	10	Shale, dark greenish gray, highly calcareous in part, some medium dark to dark-gray and grayish-black, some brownish-gray to grayish-brown
1880	1890	10	Shale, grayish-brown, dusky-brown (silty) to brownish-gray, dark greenish-gray; some medium to dark-gray to grayish-black
1890	1899	9	Shale, medium dark to dark-gray, soft, some carbonaceous streaks

1899	1904	5	Siltstone and shale, dark greenish gray to medium dark and dark-gray, some brownish-gray to grayish-brown, highly calcareous in part
1904	1914	10	Shale, grayish-black to black (carbonaceous), somewhat pyritic; siltstone and silty shale, medium to medium dark gray
1914	1931	17	Siltstone, light- to medium-gray and greenish-gray, highly pyritic at the top, kaolinitic and chloritic in the middle and lower parts, somewhat dolomitic, shaly with some medium dark gray shale; a large amount of grayish-black to black shale with highly carbonaceous streaks
1931	1956	25	Sandstone (very fine) to siltstone, greenish-gray to medium light gray, somewhat dolomitic, contains chlorite, kaolinitic material and some mica, occasional carbonaceous streaks
1956	1965	9	Dolomite, medium dark gray to grayish- and brownish-black, calcareous; a large amount of dark greenish gray to medium dark gray shale and siltstone
1965	1976	11	Shale and some siltstone, dark greenish gray to medium dark gray; some dark-gray to grayish-black
1976	1984	8	Shale, dark-gray to grayish-black, some grayish-black to black, highly calcareous and fossiliferous in part
1984	2001	17	Shale, dark-gray to grayish-black, highly calcareous in part, small amount is highly pyritic; some dark greenish gray to medium dark gray shale in the upper part and a large amount in the lower part
2001	2020	19	Shale, medium dark gray to dark greenish gray, some grayish-black; small amount of shaly limestone
2020	2026	6	Sandstone, very light to light-gray, fine-grained, very fine and silty at the bottom; some medium-gray to grayish-black shale (cavings ?)

2026	2032	6	Shale, dark-gray to grayish-black and black, silty; some medium dark gray siltstone and shale
2032	2047	15	Sandstone, very light to light-gray, very fine grained, silty; a large amount of shale at the top (cavings ?)
2047	2121	74	Sandstone, very light gray, some light-gray at the top and bottom, very fine to fine-grained, quartzose (mostly clear and glassy quartz
2121	2126	5	Dolomite, dark-gray to grayish-black, calcareous, very shaly; some medium dark gray shale in the lower part
2126	2139	13	Shale, medium to medium dark gray (silty), some dark-gray to grayish-black in the lower part; some siltstone, medium-gray to dark greenish gray
2139	2158	19	✓ Shale, dark greenish-gray, some medium dark gray; some brownish-gray to grayish-brown and olive-gray; some brownish-gray to grayish-brown and olive-gray siltstone; some dark-gray, shaly dolomite in the lower part
2158	2186	28	Shale, medium dark to dark-gray, dolomitic; some dark-gray to grayish-black, shaly, calcareous dolomite
2186	2208	22	Shale, medium dark to dark-gray, highly dolomitic to dolomite; limestone, brownish-black to grayish-black, dolomitic in part, fossiliferous and oolitic, highly pyritic and carbonaceous in part; a trace of white calcite
2208	2213	5	Limestone, dark-gray to grayish- and brownish-black, highly oolitic in part; some medium dark to dark-gray, dolomitic shale
2213	2224	11	Siltstone and shale (silty), dark-gray to grayish-black, some medium dark gray, highly calcareous, dolomitic in part
2224	2245	21	Shale and silty shale, medium dark to dark-gray, highly calcareous and dolomitic in part; some medium dark gray to olive-gray siltstone

2245	2260	15	Siltstone, greenish-gray to medium-gray, dolomitic in part, shaly to a dark-gray, silty shale; small amount of "coaly" shale
2260	2274	14	Sandstone (very fine, silty), light-gray to greenish-gray, some medium-gray, interbedded with some dark-gray to grayish-black, silty shale; some black ("coaly"), pyritic shale
2274	2292	18	Shale, dark-gray to grayish-black; some interbedded, greenish-gray to medium-gray siltstone; pyritic in part
2292	2385	93	Shale, medium dark to dark-gray; small amount of dusky, yellowish brown to brownish-black siderite
2385	2418	33	Limestone (shaly) to shale (calcareous), brownish-black <del>siderite</del> to grayish-black, fossiliferous; some medium dark to dark-gray <del>some dark</del> (somewhat dolomitic), shale
2418	2434	16	Shale, medium dark gray, some dark-gray, very highly calcareous, dolomitic
2434	2444	10	Shale and siltstone, medium dark gray, some medium dark gray to dark greenish gray; small amount of medium-gray, very highly calcareous sandstone (very fine)
2444	2466	22	Limestone, brownish-black, very shaly, highly fossiliferous
2466	2491	25	Limestone, grayish-black to black, mostly oolites with light- to medium-gray calcite cement; some brownish-black very shaly limestone
2491	2502	11	Limestone, brownish-black, very shaly
2502	2561	59	Shale, medium dark to dark-gray (with light and dark, fossiliferous limestone spots and streaks), calcareous, very silty in part
2561	2594	33	Shale, medium dark gray, some medium dark gray to dark greenish gray in the lower part; small amount is calcareous and dolomitic
2594	2599	5	Limestone, brownish- to grayish-black, with medium-gray spots, mostly oolites, fossiliferous

✓ 259 <sup>9</sup>	2621	22	Shale, dark-gray to brownish-black
2621	2636	15	Limestone, dark-gray to grayish-black, very highly fossiliferous, oolitic; some dark greenish gray, somewhat calcareous and dolomitic shale
2636	2652	16	Shale, dark greenish gray to brownish-gray, small amount of brownish-gray to grayish-brown, highly calcareous and dolomitic
2652	2696	44	No Sample
✓ 2696	2751	$\frac{5}{65}$	Shale, dark-gray to grayish- and brownish-black, highly calcareous, dolomitic
GREENBRIER LIMESTONE, 797 Feet.			
2751	2772	21	Limestone, brownish-gray to brownish-black with light- to medium-gray spots, highly oolitic and fossiliferous
2772	2793	21	Dolomite, dark greenish gray to medium dark gray, highly calcareous, shaly to a calcareous and dolomitic shale; a large amount of calcareous and dolomitic, dark-gray shale in the lower part
2793	2810	17	Limestone, brownish- to grayish-black with light- to medium-gray spots, highly fossiliferous and oolitic
2810	2844	34	Limestone, olive-black to grayish-black with medium-gray spots, shaly, silty, cherty in the middle part, oolitic in the lower part
2844	2856	12	Dolomite (very shaly) to shale (highly dolomitic); dark-gray to olive-black calcareous
2856	2875	19	Limestone, brownish- to grayish-black with medium-gray spots, very silty and shaly, fossiliferous
2875	2915	40	Limestone, brownish-black, very shaly to a highly calcareous in the middle and lower parts
2915	2927	12	Limestone, brownish-black to olive-black, very shaly, silty
2927	2945	18	Limestone, dark-gray to olive-black, dolomitic, silty, shaly

2945	2962	17	Limestone, olive-black to grayish-black, very shaly to a calcareous shale, somewhat dolomitic
2962	2993	31	Limestone, medium-gray to brownish-gray (highly oolitic), some olive-gray (shaly), some brownish-black (very shaly), fossiliferous, silty
2993	3003	10	Shale, dark greenish gray to olive-black, highly dolomitic, calcareous to a very shaly calcareous dolomite, silty, fossiliferous
3003	3038	35	Limestone, brownish-gray to brownish-black, silty and shaly, dolomitic in part, oolitic in part
3038	3048	10	Limestone, medium dark gray to olive-black, somewhat silty
3048	3058	10	Shale, dark greenish gray to olive-black, very highly dolomitic
3058	3073	15	Limestone, brownish-gray, oolites with some interstitial black material (oil residue ?), some very fine quartz crystals
3073	3149	76	Limestone, brownish- and olive-black to black, silty, somewhat shaly, dolomitic in part; a large amount of dark-gray to olive-black, highly dolomitic, calcareous, very silty shale in the lower half of this interval
3149	3170	21	Limestone, olive-black, dolomitic, very shaly and very silty; some brownish-gray, highly oolitic limestone (cavings ?)
3170	3191	21	Limestone, brownish-gray to olive-black (dolomitic, silty, shaly)
3191	3216	25	Limestone, brownish-gray to brownish-black (shaly); a very large amount of dark greenish gray to olive-black, dolomitic, calcareous shale
3216 <del>3216</del>	3226	10	Shale, dark greenish gray to medium dark gray, very highly calcareous, dolomitic; some dark-gray to brownish-black and grayish-black, oolitic and fossiliferous limestone
3226	3237	11	Limestone, brownish-black to grayish-black with medium-gray spots, very shaly, silty

3237	3270	33	Shale, (calcareous) to limestone (shaly, highly dolomitic), dark greenish gray to greenish-black; limestone, medium-gray to brownish-black, clastic texture, fossiliferous, shaly, trace of chert at the bottom
3270	3278	8	Limestone, brownish-black with some medium-gray spots, some brownish-gray, fossiliferous, very shaly; a very small amount of chert
3278	3291	13	Limestone, dark-gray to grayish-black with light- to medium-gray (highly fossiliferous) spots, somewhat shaly
3291	3308	17	Limestone, dark-gray to brownish-black, grayish-black to black (very shaly), some fossiliferous (medium-gray) spots
3308	3344	36	✓ Limestone, brownish-black, very fine textured, silty
3344	3363	19	Limestone, medium dark gray to brownish-black, oolitic and fossiliferous in part, very silty
3363	3372	9	✓ Siltstone (highly calcareous) to limestone (very silty), dark-gray; limestone, brownish-black, very highly oolitic in part
3272	3282	10	Limestone, brownish-black with light- to medium-gray spots, some dark-gray, silty, oolitic, fossiliferous
3382	3395	13	Shale, dark greenish gray to greenish-black, some olive-black, highly dolomitic
3394	3409	14	Shale, olive-black, some dark greenish gray to greenish-black, highly calcareous, dolomitic
3409	3416	7	Shale, olive-black, calcareous and dolomitic, very silty
3145	3432	16	Shale, dark greenish gray to olive-black, very silty, highly calcareous and dolomitic, some medium- to coarse (rounded quartz) grains; some brownish-black, shaly limestone
3432	3442	10	✓ Limestone, grayish-black to black with medium-gray spots, silty, shaly

3442	3459	17	Limestone (silty) to siltstone (highly calcareous), brownish-black to grayish-black, shaly, slightly cherty
3459	3469	10	Shale, dark-gray to olive-black, some dark greenish gray, highly dolomitic to dolomite (very shaly) silty; a very small amount of anhydrite
3469	3487	18	Limestone, dark-gray to grayish-black (at the top), dark-gray to brownish-black (at the bottom) contains light- to medium-gray spots, very shaly, somewhat fossiliferous
3487	3504	17	Limestone, dark-gray to grayish- and olive-black, dolomitic to dolomite (calcareous), very shaly, silty; trace of chert; a very large amount of grayish-black to black, somewhat cherty, shaly limestone at the bottom
3504	3513	9	Dolomite, medium- to dark-gray, very shaly, highly calcareous, silty; some grayish-black, shaly limestone; small amount of white anhydrite
3513	3538	25	Dolomite, grayish-black, calcareous in the upper part to limestone, brownish-black, somewhat dolomitic in the lower part, very shaly; some dark-gray to olive-black, shaly dolomite; small amount of <del>white</del> white <del>and</del> anhydrite
3538	3548	10	Shale, olive-black to grayish-black, highly calcareous, highly dolomitic; small amount of anhydrite
3548	3562	14 ✓	MACCRAVY AND POCONO FORMATION, 699 Feet. Shale, olive-gray to olive-black, dolomitic; some olive-black to grayish-black, very shaly dolomite; small amount of anhydrite
3562	3574	12	Shale, brownish-gray to olive-gray (sideritic) and dark-greenish gray with spots of white anhydrite, dolomitic; some grayish-brown shale; some dark-gray to grayish-black, highly dolomitic shale

3574	3582	8	Shale, grayish-brown to brownish-gray (dolomitic) to olive-gray (dolomitic and sideritic) with some spots of anhydrite; some medium dark gray to olive-black dolomite (shaly)
3582	3589	7	Siltstone to sandstone (very fine), dark greenish gray to medium dark-gray, dolomitic; shale, grayish-brown to brownish-gray (dolomitic) to olive-gray (sideritic and dolomitic), some dusky-brown to very dusky-red (silty); some medium dark gray to grayish-black, shaly dolomite
3589	3597	8	Siltstone (sandy, very fine), dark greenish gray to dark-gray, somewhat dolomitic and pyritic; some dark-gray to grayish-black, shaly dolomite
3597	3641	44	Shale, dark-gray to grayish-black; a very small amount of highly glauconitic siltstone
3641	3680	39	Siltstone, medium to medium dark gray, somewhat calcareous and dolomitic, contains fossil fragments, small amount is highly glauconitic; shale, dark-gray to grayish-black, mostly siltstone in the upper part and shale in the lower part
3680	3714	34	Siltstone (medium dark gray) to shale (dark-gray to grayish-black)
3714	3739	25	Siltstone, medium dark gray to olive-black and grayish-black (shaly), dolomitic in part, small amount is highly glauconitic; some grayish-black to black, silty shale at the bottom
3739	3754	15	Siltstone, grayish-black to black; some medium dark to dark-gray, somewhat dolomitic siltstone in the upper part
3754	3778	24	Siltstone medium dark to dark-gray in the upper part, medium dark gray (dolomitic) to olive-black (sideritic) in the lower part; some grayish-black to black, very silty shale
3778	3814	36	Siltstone, medium dark gray to olive-gray, some medium-gray in the lower part, sideritic; a large amount of interbedded, olive-black and grayish-black to black shale (very silty in part)

3814	3821	7	Siltstone, medium to medium dark gray, somewhat sideritic
3821	3833	12	Siltstone, medium dark to dark-gray, shaly, sideritic in part; some grayish-black shale
3833	3847	14	Siltstone, medium dark gray to olive-gray (sideritic) with dark yellowish brown siderite; some coarse, glassy to milky white quartz grains; some dark-gray to grayish black shale
3847	3869	22	Shale, dark-gray to grayish-black; some dark to dusky yellowish brown (sideritic to shaly siderite); some olive-gray to medium dark gray, sideritic siltstone
3869	3886	17	Siltstone, medium dark gray to olive-gray and olive-black (shaly), some brownish-black, sideritic in part; shale, dark-gray to grayish-black, some black
3886	3899	13	Shale, dark-gray to black, some olive-black (sideritic); some dark yellowish brown (siderite); some siltstone, brownish-black, medium dark gray to olive-gray and olive-black (sideritic)
3899	3935	36	✓ Shale, dark-gray to grayish-black, some dark yellowish brown (sideritic to siderite); small amount of olive-gray (sideritic) to medium dark gray, <del>xxxxxxxxxxxx</del> siltstone
3935	3954	19	Siltstone, olive-gray to medium dark gray, some olive-black (sideritic); some dark-gray to grayish-black shale, small amount of dark to dusky yellowish brown (sideritic to siderite)
3954	3960	6	Siltstone, medium to medium dark gray, shaly; some dark-gray (silty) to grayish-black shale
3960	3982	22	Siltstone, medium dark gray to olive-gray, interbedded with dark-gray (silty) to grayish-black shale; some dark yellowish brown siderite
3982	40 <del>84</del> <sup>3</sup>	52	Shale, dark-gray <del>xxxxx</del> (silty) to grayish-black; some olive-gray to medium dark gray siltstone; small amount of dark to dusky yellowish brown siderite

<del>4034</del>	4191	<del>127</del> <del>157</del>	Siltstone, medium dark gray to olive-gray; some dark-gray to olive-black, interbedded with dark-gray (silty) to grayish-black shale; small amounts of dark yellowish brown (sideritic)
4191	4205	14	Shale, dark-gray to grayish-black, some grayish-black to black; siltstone, olive-gray to medium dark gray
4205	4223	18	Shale, grayish-black to black, carbonaceous, somewhat sideritic (Sunbury Shale)
4223	4240	17	Sandstone, very light to light gray, very fine to coarse siltstone, pyritic at the top (Berea Sandstone)
4240	4247	7	Sandstone, white to light-gray, conglomeratic, very coarse sand grains to granules with a fine to medium grained, dolomitic sand matrix (Berea Sandstone)
			DEVONIAN SHALES 18, plus, FEET
4247	4265	18	Shale, dark-gray to grayish-black, silty to medium dark to dark-gray and olive-black siltstone