

JUN 14 1949

Anna M. Miller No. 1 (6150) Well.

Fetterman District, Taylor County, W. Va.

By Pittsburgh & West Virginia Gas Company, Clarksburg, W. Va.

Located 5.5 Mi. S. of 38° 25' and 3.71 Mi. W. of 79° 50' - C.

Thornton Quadrangle

Elevation - 1319' V. A.

Permit - Tay - 33

Drilling commenced July 22, 1944; completed November 11, 1944.

Gas well (?).

Fresh water, 85', hole full; 250'; 326'.

13" casing 24'; 10", 281'; 8-1/4", 1009'; 6-5/8", 1969'.

Coal was encountered at 524-530'.

Section based on samples from 0 to 4306', examined by Russell R. Flowers.

Top Bottom Thickness  
②

Conemaugh Formation, 47, plus, feet.

0	10	10	Clay, grayish-brown, very sandy
10-	47	37	Sandstone, yellowish-gray to very light gray and light greenish-gray, fine- to medium-grained at the top to medium- and coarse-grained at the bottom, subrounded, highly argillaceous, chloritic, somewhat micaceous (mostly muscovite); trace of calcite toward bottom

Allegheny Formation, 258 feet.

47	52	5	Coal, pyritic with interbedded medium- to dark-gray sandy, somewhat carbonaceous clay
52	71	19	Shale, medium-gray, silty, with interbedded, dusky yellowish brown, sideritic shale; sandy and silty, medium- to dark-gray clay; some coal
71	94	23	Clay-shale and shale, brownish-gray to dark yellowish brown, medium- to dark-gray (some carbonaceous material), greenish-gray, highly calcareous, and very highly dolomitic in part, somewhat sandy toward the bottom; trace of coal

94	117	23	Siltstone, (sandy) and some shale, medium light gray to medium dark gray; considerable interbedded, dark to dusky yellowish brown, highly sideritic, calcareous and dolomitic shale (concretions ?), highly sideritic sphereulites are scattered through much of the gray shale
117	161	44	Sandstone, very light gray to light-gray, fine- to medium-grained, subrounded, a few coarse, rounded and frosted quartz grains, somewhat chloritic, slightly micaceous, slightly calcareous, argillaceous (cement), somewhat shaly (cavings ?)
161	167	6	Clay-shale, dark-gray to brownish- and grayish-black, somewhat carbonaceous; small amount of dusky yellowish brown, sideritic shale
167	185	18	Shale, dark-gray and brownish-gray to grayish- and brownish-black, highly carbonaceous material in black streaks, slightly to moderately sideritic; small amount of dark to dusky yellowish brown, sideritic shale
<del>185x</del>	<del>195</del>		
185	195	10	Shale, brownish-black to black, very highly carbonaceous to coaly
195	203	8	Shale, brownish-black and black, very highly carbonaceous to coaly, dark-gray and brownish-gray with highly carbonaceous streaks, 50%; sandstone (silty) to siltstone (very sandy), light- to medium-gray to, brownish-gray, micaceous, kaolinitic, highly calcareous and dolomitic
203	217	14	Sandstone, very light to light-gray, medium-grained, subrounded to rounded, argillaceous, contains some carbonaceous material, a very small amount of chlorite and mica; small amount of calcareous and dolomitic shale; some interbedded, light- to medium-gray, sandy siltstone
217	225	8	Clay and clay-shale, light- to medium-gray, silty; siltstone and shale, medium-gray, calcareous in part; some brownish-black to black, highly carbonaceous shale

225	235	10	Shale, medium-gray and brownish-gray to brownish-black and black (highly carbonaceous), contains coaly streaks; some brownish-gray and greenish-gray siltstone; small amount of dark yellowish brown, sideritic shale and spherulites
235	243	8	✓ Coaly shale and black, highly carbonaceous shale; some, ✓ medium-gray siltstone and shale; near the bottom, a fine- to medium-grained, light-gray, argillaceous sandstone; small amount of dark-brown, sideritic shale
243	257	14	✓ Sandstone, very light to light-gray and light greenish-gray, fine- to medium-grained with some rounded, coarse grains, chloritic, somewhat micaceous, slightly calcareous, argillaceous with clay toward the bottom; some interbedded, medium- to dark-gray shale and siltstone; some coal <del>xxx</del> and black, highly carbonaceous shale
257	267	10	Shale, medium- to dark-gray with carbonaceous streaks, some brownish-gray (sideritic?), some black (highly carbonaceous); some coal; some interbedded, sandstone (very silty) to siltstone (sandy), light- to medium-gray; small amount of dark yellowish brown, sideritic shale
267	277	10	✓ Clay, medium- to light-gray to light olive gray, very silty with an occasional sand grain; some dark-brown, highly sideritic shale
277	287	10	Shale, medium- to medium dark gray, silty
287	295	8	✓ Sandstone (fine), siltstone, and shale, light olive gray to medium light gray and light brownish gray, kaolinitic, micaceous, 70%; "coaly", black shale and ✓ medium- to dark-gray, somewhat carbonaceous shale, 30%; small amount of dolomitic and sideritic shale
295	305	10	Siltstone (very highly argillaceous) to clay (very silty) with some fine to coarse quartz grains, medium- to dark-gray, sideritic in part, stained brown with iron rust

Pottsville Formation, 357 feet.

- |     |     |    |   |
|-----|-----|----|---|
| 305 | 360 | 55 | Sandstone, white to light-gray, fine- to medium-grained, fine- to coarse-grained at the top, fine-grained near the center, subangular to subrounded, some of the quartz grains show secondary crystal facets, contains some black, carbonaceous material and some coal at the bottom, very slightly chloritic and micaceous; some interbedded, medium- to dark-gray, very silty shale near the center   |
| 360 | 366 | 6  | ✓ Sandstone, light-gray with dark, highly silty and carbonaceous streaks, fine- to medium-grained, ✓ some kaolinitic material, some chlorite and mica; considerable interbedded, medium- to dark-gray siltstone and shale, highly micaceous and somewhat carbonaceous; some black, highly carbonaceous shale  |
| 366 | 402 | 36 | Sandstone, very light to light-gray, fine- to medium-grained, subangular to subrounded, somewhat kaolinitic and micaceous, slightly chloritic, some carbonaceous material; small amount of light-to dark-gray, <sup>s t</sup> silty shale   |
| 402 | 446 | 44 | Sandstone, nearly white to very light gray with dark (highly micaceous and carbonaceous) streaks, fine- to medium-grained at the top, medium-grained with coarse grains toward the middle, medium- to coarse-grained at the middle and lower parts, subangular to subrounded, mostly quartz grains (many of which have secondary crystal facets), the dark, silty streaks contain much kaolinitic material and some chlorite, this sandstone is moderately porous with occasional ✓ highly porous zones |
| 446 | 455 | 9  | Sandstone, very light to medium-gray, medium- to coarse-grained, some fine to very finegrained streaks, subangular to subrounded; some interbedded, dark, silty, highly micaceous, kaolinitic, and carbonaceous streaks with some chlorite  |

- 455 510 55 Sandstone, light-gray with medium- to dark-gray streaks, fine-grained with a large amount of medium grains and some very fine grains, subangular to subrounded, a few of the quartz grains show secondary crystal faces, the dark streaks contain much carbonaceous material, and carbonaceous and sideritic shale
- 510 515 5 ✓ Clay-shale, light olive gray (very silty), some dark-gray to black (highly carbonaceous); small amount of pyrite; trace of dark-brown, sideritic shale
- 515 521 6 Sandstone, brownish-gray to light olive gray, very fine to fine-grained, moderately sideritic, contains much kaolinitic material, some mica and carbonaceous material; a large amount of light olive gray to dark-gray, very silty shale; some grayish-black to black, carbonaceous shale; ~~some grayish black to black, carbonaceous shale~~; trace of pyrite; trace of dark yellowish brown, sideritic shale; a large amount of light-gray, medium- to coarse-grained sandstone (cavings ?)
- 521- 526 5 Shale, dark gray to black (highly carbonaceous); small amount of coal; considerable interbedded, very fine to fine-grained, medium-gray to brownish-gray, silty sandstone, highly micaceous and kaolinitic, some carbonaceous material, and moderately sideritic; ✓ small amount of dark yellowish brown, sideritic shale
- 526 549 23 Shale (very silty) to siltstone (very shaly) to sandstone (fine), medium- to dark-gray to brownish-gray, highly kaolinitic and micaceous, somewhat carbonaceous, moderately to highly sideritic; some grayish-black to black (highly carbonaceous) shale; trace of ✓ dark yellowish-brown, sideritic shale
- 549 562 13 Sandstone, very light to light-gray with medium- to dark-gray streaks (somewhat carbonaceous), fine to very fine grained, kaolinitic, slightly micaceous ✓ and slightly sideritic in part; some interbedded, ✓ medium-gray to black (carbonaceous), silty shale

- 562 570 8 ✓ Shale, medium dark gray to grayish-black and brownish-black (sideritic); ~~somewhat~~ moderate to dark yellowish brown, sideritic shale and siltstone
- 570 585 15 Shale, medium dark gray to black (carbonaceous), sideritic in part; interbedded clay-shale, light olive gray (slightly sideritic) to dark yellowish brown (highly sideritic)
- 585 597 12 ✓ Sandstone, light olive gray to medium-gray and brownish-gray, very fine to fine-grained, silty, sideritic in part, kaolinitic, and micaceous; some interbedded, medium- to dark-gray, very silty, shale; small amount of black, carbonaceous shale; a medium- to very coarse-grained, light-gray sandstone at bottom
- 597 636 39 Sandstone, yellowish-gray to very light gray, poorly sorted, medium to very coarse grained, granitic; some fine-grained streaks, subangular to subrounded, the coarse grains are rounded, small amount of calcite as grains and cement, very slightly chloritic and micaceous, a few carbonaceous streaks; considerable interbedded, medium-gray to black (carbonaceous), brownish-gray to brownish-black (sideritic), very silty, micaceous shale
- 636 662 26 Sandstone, very light gray with some medium-gray streaks, fine-grained with some medium and a few very coarse grains (rounded), fine to medium-grained at the top, subrounded, somewhat calcareous, slightly chloritic; ✓ some interbedded, medium-gray to black (carbonaceous), and brownish-gray to dark yellowish brown (sideritic), very silty shale
- Mauch Chunk Group, 313 feet.
- 662 667 5 ✓ Clay, greenish-gray, silty in part, ~~somewhat~~ moderate to dark yellowish brown, sideritic clay
- 667 892 25 Clay, grayish-brown to grayish-red; some greenish-gray, silty clay; small amount of brownish-gray to dark yellowish brown sideritic

- 692 697 5 Clay, grayish-brown; much fine to very coarse sandstone and dark-gray to black, carbonaceous and silty shale (probably cavings); small amount of greenish-gray clay
- 697 723 26 Clay-shale, grayish-brown and dusky-brown to very dusky ✓ red, greenish-gray to dark greenish-gray, highly calcareous in part
- 723 728 5 Clay-shale, greenish-gray, very silty, chloritic and micaceous; considerable grayish-brown clay; small amount of light olive gray limestone
- 728 735 7 Clay, grayish-brown, some very dusky red; some greenish-gray, silty clay-shale; small amount of brownish-gray limestone; trace of pyrite
- 735 743 8 Siltstone (argillaceous) to clay (very silty), greenish-gray, micaceous, chloritic and somewhat kaolinitic material; large amount of grayish-brown to very dusky red clay; small amount of brownish-gray limestone
- 743 749 6 ✓ Siltstone and shale, greenish-gray to dark greenish-gray, micaceous, chloritic and kaolinitic; clay, grayish-brown to very dusky red; small amount of brownish-gray limestone
- 749 782 33 Sandstone (very fine) to siltstone (coarse), greenish-gray, highly micaceous and chloritic, kaolinitic, some carbonaceous material; some interbedded, grayish-brown clay, calcareous and slightly dolomitic in part
- 782 809 27 Sandstone, light greenish gray to greenish-gray, fine to ✓ very fine-grained in the upper part, fine-grained in the lower part, subrounded, highly micaceous, chloritic, kaolinitic and some carbonaceous material, slightly calcareous and very slightly dolomitic; small amount of medium-gray to greenish-gray, silty shale; small amount of grayish-brown clay
- 809 827 18 Sandstone, very light to light-gray to light greenish gray, fine-grained, subrounded, micaceous, somewhat chloritic; a few carbonaceous streaks, highly calcareous and moderately dolomitic at the top to moderately calcareous and highly dolomitic at the bottom; considerable interbedded, medium-to dark-gray, silty shale; large amount of interbedded, brownish-gray to dark yellowish brown, sideritic shale

- 827 833 6 Clay, light olive gray, very silty, slakes instantly when wet; clay-shale and shale, medium-gray, silty; some brownish-gray to grayish-brown, calcareous <sup>C</sup> clay
- 833 838 5 Clay, grayish-brown to brownish-gray, some medium- to dark-gray (partly carbonaceous); clay, light brownish gray and light greenish gray, slakes instantly when wet
- 838 843 5 Clay and clay-shale, grayish-brown to brownish-gray (silty), some grayish-ged, medium-gray
- 843 860 17 Shale and silty shale, brownish-gray, grayish-brown and grayish-red, medium-gray to dark-gray, some greenish-gray, an increase in gray toward the bottom, slightly calcareous
- 860 898 38 Sandstone, very light gray to light greenish gray, mostly very fine grained, some very fine to fine grained quartz near the top, highly kaolinitic, micaceous, chloritic, and some carbonaceous material, slightly calcareous and dolomitic; considerable interbedded, medium- to dark-gray, very silty shale and some grayish- and dusky-brown shale near the top, which decreases in amount toward the bottom but is present in large amount at the bottom
- 898 923 25 Clay-shale, very dusky red to grayish-brown, some brownish gray and grayish-red, silty in part; interbedded, siltstone and shale, light- to medium-gray to greenish-gray, micaceous, moderately calcareous, highly dolomitic; some fine-grained, light-gray to light greenish-gray sandstone at the top
- 923 933 10 Shale (silty) and clay-shale, grayish-brown and dusky-brown to very dusky red, moderately dolomitic; interbedded, brownish- and greenish-gray micaceous siltstone, moderately calcareous and dolomitic, 40% at top to 60% at the bottom
- 933 948 15 Shale, medium- to dark-gray, soft, very highly calcareous, moderately dolomitic; a large amount of interbedded, grayish- and dusky-brown to very dusky red, silty shale, moderately dolomitic; interbedded, greenish-gray to dark greenish-gray siltstone and shale, moderately to slightly dolomitic; toward the bottom, decrease in gray shale but increase in greenish-gray and grayish-brown



- 948 954 6<sup>✓</sup> Clay, dark-gray; limestone, brownish-black with white spots, highly fossiliferous; trace of pyrite
- 954 966 12<sup>✓</sup> Shale, medium dark to dark-gray, somewhat dolomitic, 50%; shale, grayish-brown to grayish-red, moderately dolomitic, 40%; limestone, brownish-black and shale, grayish-green, slightly dolomitic, 10%
- 966 975 9 Clay, olive-gray to medium-gray, slightly dolomitic; shale, grayish-brown and grayish-red to very dusky red, somewhat dolomitic; some olive-gray limestone  
Greenbrier Limestone, 202 feet.
- 975 988 13 Limestone, pale yellowish brown to brownish-gray, crystalline texture, very fine grained; a very large amount of shale cavings
- 988 994 6 Limestone, medium-gray to brownish-gray, very shaly to a highly calcareous shale, silty; a large amount of shale cavings
- 994 998 4<sup>✓</sup> Limestone, pinkish-gray to pale yellowish-brown, crystalline texture, very fine grained, slightly shaly
- 988 1009 <sup>31</sup> 1 Limestone, light to medium-gray to brownish-gray, silty to a highly calcareous shale; very large amount of cavings
- 1009 1023 14<sup>✓</sup> Limestone, light to dark brownish-gray to very light gray, somewhat shaly, crystalline texture, fine-grained
- 1023 1035 12 Limestone, pale yellowish brown to light olive gray, <sup>texture</sup> crystalline structure, very fine to medium-grained; large amount of shale cavings
- 1035 1049 14 Limestone, brownish-gray, very shaly, fossiliferous?; crystalline texture, fine-grained, fine- to medium-grained in part
- 1049 1054 5 Dolomite, light olive gray, crystalline texture, very fine grained, moderately calcareous, 50%; limestone, brownish-black, crystalline, very fine grained, very shaly, 15%; sandstone (fine-grained), highly calcareous, medium-gray to very sandy limestone, grayish-brown, 10%; shale, greenish-gray, moderately dolomitic and calcareous

- 1054 1059 5 Limestone, nearly white to pale yellowish brown, clastic texture, somewhat oolitic and sandy, some calcareous dolomite, 60%; limestone, somewhat dolomitic to a moderately dolomitic shale, olive-gray to greenish-gray, 25%; limestone (sandy) to calcareous sandstone, light brownish-gray to medium-gray, 10%; shale, grayish-red, slightly calcareous and dolomitic, 5%
- 1059 1068 5<sup>1</sup> Dolomite, olive-gray to greenish-gray, shaly to very highly dolomitic shale, 50%; shale, grayish-red, moderately calcareous and dolomitic, 40%, limestone, brownish-gray, some light brownish-gray, clastic texture, somewhat sandy, 10%
- 1064 1093 29 Limestone (very sandy) to sandstone (highly calcareous), pale yellowish brown to light brownish-gray and medium light gray, clastic texture, fine- to medium-grained, rounded, considerable interbedded shale near the top, grayish-red, calcareous, and greenish-gray, calcareous and dolomitic, toward the bottom, some greenish-gray, calcareous shale
- 1093 1103 10 Dolomite, light olive gray, crystalline, very fine grained, shaly, 50%; shale, dark greenish-gray to dark-gray, sandy, moderately calcareous and dolomitic, 30%; limestone, brownish-black, silty and very shaly, 10%; calcareous sandstone to very sandy limestone, light to medium-gray, 10%
- 1103 1111 8<sup>1</sup> Shale, grayish-red to very dusky red, sandy in part, 60% at top to 40% at bottom; shale, light olive gray to greenish-gray, very sandy, moderately dolomitic, 20% at top to 10% at bottom; sandstone, very light to light-gray, fine- to medium-grained, rounded, highly calcareous and dolomitic, 20% at top to 50% at the bottom
- 1111 1120 9 Sandstone, yellowish-gray to light olive gray, fine-grained, rounded, very highly dolomitic, calcareous; some interbedded, greenish-gray, somewhat dolomitic shale, and some very dusky red shale

- 1120 1135 15 Sandstone, yellowish-gray to very light gray, fine to very fine grained, ~~somewhat~~ medium quartz grains at bottom, rounded, very highly dolomitic, calcareous at the top, highly dolomitic and moderately calcareous at the bottom; a large amount of interbedded, greenish-gray, very sandy, very slightly dolomitic shale
- 1135 1149 14 Dolomite, yellowish-gray, very sandy to almost a dolomitic sandstone, fine to very fine grained, somewhat calcareous (show of gas at 1148' to 1150')
- 1149 1174 25 Dolomite, yellowish-gray, clastic texture, very sandy, <sup>grains</sup> some dolomitic sandstone near the top, quartz ~~veins~~ are very fine to fine, subrounded to rounded, many medium to coarse rounded and frosted quartz grains in lower part, at the top 40% increasing to almost 100% at the bottom; limestone, medium-gray to brownish-gray, sandy, dolomitic in part, 40% at top to 20% at middle and trace at the bottom; limestone, brownish-black, shaly, somewhat sandy, 20% at top to a trace at the bottom; trace of glauconite
- 1174 1177 3 Dolomite, yellowish-gray, very sandy, fine to very fine, <sup>grains</sup> subrounded to rounded quartz grains, some rounded, medium grains
- Maccrady Formation, 27 feet.
- 1177 1182 5 Shale, very dusky red to dusky-brown; siltstone to very fine sandstone, greenish-gray, some medium-gray, chloritic, micaceous; small amount of blackish-red siltstone
- 1182 1204 22 <sup>grains</sup> Shale, dark-gray to dark greenish-gray, partly silty; ~~with~~ some interbedded, grayish-red, very dusky red to grayish-brown shale; some interbedded, dark greenish-gray siltstone containing mica, chlorite, kaolinitic material; some very dusky red to blackish-red, micaceous siltstone
- Pocono Formation, 426 feet.
- 1204 1225 21 Sandstone, light-gray to medium light gray, fine to very fine grained, subangular, hard, kaolinitic; contains some carbonaceous material, mica and a little chlorite; at the top, dolomite, yellowish-gray, sandy shale and siltstone, dark greenish-gray, dark-gray, grayish-red to blackish-red (cavings)

- 1440 1461 21 Shale, medium dark to dark-gray; small amount of olive-gray to dark yellowish-brown, sideritic shale
- 1461 1486 25 Sandstone, very light gray to yellowish-gray, some medium-gray, kaolinitic, fine-grained, subangular to subrounded, some coarse to very coarse, rounded quartz grains, moderately to slightly dolomitic, somewhat calcareous; considerable medium dark to dark-gray shale at the top, underlain by medium- to dark-gray to greenish-gray sandstone to sandy shale and shale, somewhat kaolinitic, moderately dolomitic and slightly carbonaceous
- 1486 1517 31 Shale, medium- to dark-gray; some siltstone, medium-gray to brownish-gray (sideritic), and greenish-gray, contains kaolinite, mica, and carbonaceous material; some brownish-gray to dark yellowish brown, sideritic shale
- 1517 1577 60 Siltstone and sandstone (fine), light olive gray to medium-gray to greenish-gray, highly kaolinitic, micaceous, somewhat carbonaceous with interbedded very silty, highly micaceous, shaly streaks; considerable interbedded, medium- to dark-gray, some grayish-black, silty and sandy shale; at the bottom mostly greenish-gray to light olive gray, highly micaceous and kaolinitic, fine sandstone and siltstone
- 1577 1592 15 Sandstone, very light to light gray, fine to very fine grained, kaolinitic, slightly shaly, slightly dolomitic and slightly calcareous; some interbedded, medium- to dark-gray, somewhat silty and sandy shale
- 1592 1600 8 Shale and siltstone, medium-gray to grayish-black, sandy, micaceous, kaolinitic, and slightly dolomitic
- 1600 1615 15 Shale, medium light to dark-gray, some greenish-gray, some brownish-gray to olive-gray, somewhat sandy toward the bottom; some dark-gray to grayish-black, silty and sandy shale containing some carbonaceous material and a little pyrite; some light olive gray to greenish-gray and medium-gray, silty, micaceous, kaolinitic, fine sandstone

- 2010 2021 11 Shale, medium-gray to olive-gray, some grayish-red and greenish-gray, very highly laminated, soft; considerable interbedded, medium-gray to greenish-gray sandstone (very fine) and siltstone (coarse); contains dark, highly micaceous and chloritic streaks, and some kaolinite; small amount of disseminated pyrite
- 2021 2046 25 Siltstone (coarse) and sandstone (very fine), grayish-red to very dusky red and greenish-gray, some medium-gray, mostly grayish-red and very dusky red at the top, highly micaceous, chloritic, and kaolinitic; near the top, considerable interbedded, medium-gray to greenish-gray, grayish-red shale decreasing in amount toward the bottom
- 2046 2060 14 Sandstone, light olive gray to greenish-gray (highly chloritic), some grayish-red, very fine grained, micaceous, chloritic and kaolinitic; some interbedded, grayish-red to very dusky red shale and siltstone toward the bottom
- 2060 2074 14 Shale, dolomitic to a dolomite, highly argillaceous, medium- to dark-gray to greenish-gray, very sandy, kaolinitic; some carbonaceous material and some finely disseminated pyrite; considerable interbedded, medium-gray to greenish-gray shale; a large amount of grayish-red and some medium-gray, clay-shale toward the bottom
- 2074 2085 11 No sample
- 2085 2095 10 Siltstone and shale, grayish-red to dusky-brown, somewhat sandy, micaceous; a little greenish-gray to medium-gray shale
- 2095 2121 26 Sandstone, light- to medium-gray to greenish-gray, somewhat argillaceous, slightly dolomitic, slightly calcareous toward the bottom, contains chlorite, mica, kaolinite and a small amount of carbonaceous material; considerable interbedded, grayish-red to dusky-brown, medium-gray siltstone and shale
- 2121 2134 13 No sample
- considerable medium-gray and some grayish-red shale (cavings ?)
- 2256 2269 18 Shale and siltstone, medium to medium dark gray;