

T. J. Glover No. 1 (1559) Well

Grant District, Wetsel County, W. Va.

By Carnegie Natural Gas Company, Pittsburgh, Pa.

Located 1.1 mi. W. of 90°30' and 0.6 mi. S. of 39°36' - SE - Littleton  
Quadrangle.

Elevation, 1464' L.

Permit Net - 254

Drilling commenced June 5, 1941; completed, Sept. 27, 1941.

Gas well; volume 158,530 cu. ft.

10" casing, 406'; 8 1/2", 1547'; 6 5/8", 2335'; 5 3/16", 3257.

Salt water 2044-48'; 2132-35'.

Section based on samples from 0 to 3449', examined by C. E. Apocuri and  
J. E. C. Martens.

Top Bottom Thickness

Dunkard Group and Monongahela Formation, 1152+ ft.

0	15	15	Clay, red
15	20	5	Sandstone, white, very fine, micaceous
20	50	30	Shale, yellow, with limy concretions
50	90	40	Sandstone, green to white, very fine
90	110	20	Shale, gray
110	135	25	Sandstone, white, very fine
135	150	15	Shale, red, soft, with small limy concretions
150	165	15	Shale, gray, silty
165	180	15	Sandstone, white, very fine, micaceous
180	210	30	Shale, red
210	225	15	Shale, green
225	231	6	Shale, red
231	236	5	Shale, green, silty
236	256	20	Sandstone, white, fine - to medium-grained
256	300	44	Shale, red, calcareous
300	310	10	Shale, gray
310	320	10	Siltstone, green, sandy
320	335	15	Shale, greenish-gray
335	352	17	Siltstone, green, 50%; brown shale, 50%
352	360	8	Shale, red
360	431	71	Shale, and siltstone, green and gray
431	440	9	Sandstone, very light gray, very fine
440	460	20	Shale, gray

Top	Bottom	Thickness	
460	480	20	Siltstone, light grayish green, sandy, 50%; red shale, 50%
480	528	48	Shale, gray; calcareous, 522-528'
528	545	17	Shale, red
545	600	55	Shale, green
600	630	30	Siltstone, white, sandy
630	650	20	Shale, red
650	665	35	Shale, gray and green
665	685	10	Shale, green, silty, with large amount of limestone nodules
685	720	35	Siltstone, green, sandy, micaceous
720	740	20	Shale, gray, with limy concretions
740	760	20	Shale, gray, calcareous
760	770	10	Siltstone, light gray
770	780	10	Shale, yellowish-green, clayey, calcareous
780	795	15	Shale, gray
795	800	5	Siltstone, greenish
800	840	40	Sandstone, white, micaceous
840	860	20	Shale, very light-grayish-green, calcareous
860	893	33	Sandstone, white, slightly micaceous
893	902	9	Limestone, light-brown, 50%; green and gray shale, 50%
902	911	9	Siltstone and shale, green
911	930	19	Shale, grayish-green, with limy concretions
930	953	23	Limestone, very light brown, 60%; light-gray, calcareous shale, 40%
953	958	30	Siltstone and shale, green
958	1020	32	Limestone, very light brown
1020	1030	10	Siltstone, green, sandy
1030	1040	10	Limestone, very light brown, 50%; green shale and siltstone, 50%
1040	1047	7	Limestone, very light brown
1047	1054	7	Shale, dark-gray
1054	1058	4	Coal (Mapletown or Sewickley Coal; S.L.M.)
1058	1077	19	Shale, light-gray
1077	1080	3	No samples

Top	Bottom	Thickness	
1080	1090	10	Limestone, light-brown
1090	1135	45	Limestone, very light gray, partly shaly, 65%; gray shale, 35%
1135	1140	5	Siltstone, gray, pyritic, 75%; very dark gray shale, 25%
1140	1152	12	Coal (Pittsburgh Coal) <u>Conemaugh Formation, 530 feet</u>
1152	1130	22	Shale, gray, soft
1130	1200	70	Shale, very light gray, with siderite spherulites
1200	1210	10	Limestone, light-brown
1210	1220	10	Siltstone, green, sandy
1220	1235	15	Sandstone, white
1235	1245	10	Shale, red, with small limy concretions
1245	1285	40	Shale, green
1285	1295	10	Shale, of various colors, very soft
1295	1305	10	Limestone, brown
1305	1315	10	Siltstone, light-green, sandy
1315	1340	25	Shale, red
1340	1351	11	Siltstone, green, sandy
1351	1335	16	Shale, red, green, yellow, etc., soft and clayey
1335	1430	95	Shale, yellow, clayey, with limy concretions
1430	1460	30	Shale, red, soft, with limy concretions
1460	1497	37	Shale, red, 50%; green shale, 50%
1497	1505	8	Shale, gray, red and yellow, calcareous
1505	1520	15	Shale, red, with limy concretions
1520	1530	10	Shale, light-gray, soft
1530	1547	17	Shale, green and gray; also some red shale, probably cavings
1547	1550	3	Sandstone, white, micaceous
1550	1570	20	Shale, green
1570	1580	10	Siltstone, green, sandy, 75%; white limestone, 25%
1580	1600	20	Sandstone, green, very fine
1600	1633	33	Shale, gray to green
1633	1672	39	Sandstone, white, very fine
1672	1682	10	Shale, gray

Top Bottom Thickness

Allegheny Formation, 224 feet

1692	1692	10	Shale, gray to green, 90%; coal and very dark gray shale, 10%
1692	1702	10	Siltstone, white, sandy, 50%; fine white sandstone, 50%
1702	1736	34	Shale, gray
1736	1765	29	Sandstone, white
1765	1771	6	Sandstone, white, very fine, 70%; brown limestone, 20%; dark-gray shale, 20%
1771	1791	20	Limestone, brown, 75%; dark-gray shale, 25%
1791	1795	4	Limestone, brown, 50%; gray to dark-gray shale, 50%
1795	1856	61	Sandstone, white
1856	1886	30	Shale, light-gray to gray
1886	1906	20	Siltstone, and shale, gray

Pottsville Formation, 314 feet

1906	1933	27	Sandstone, white, medium-grained
1933	1965	32	Shale, gray
1965	1992	27	Sandstone, white
1992	2000	8	Siltstone, black, micaceous
2000	2039	39	Shale, gray and black, with a little coal
2039	2100	61	Sandstone, white, medium-to coarse-grained nearly all quartz (salt water, 2044-2048')
2100	2116	16	Shale, very dark gray
2116	2140	24	Sandstone, white
2140	2150	10	Siltstone and shale, gray
2150	2190	40	Sandstone, white, medium- to coarse-grained, with a little coal
2190	2200	10	Shale and siltstone, gray, with siderite spherulites
2200	2220	20	Sandstone, very light green, very fine

Hauch Chunk Group, 125 feet

2220	2310	90	Shale, red
2310	2313	3	Shale, red, 50%; green shale, 50%
2313	2326	3	Limestone, brown ("Little Line")
2326	2345	19	Shale, gray, disintegrating in water

Top	Bottom	Thickness	
<u>Greenbrier Limestone, 145 ft.</u>			
2345	2375	30	Limestone, light-brown to nearly white; also shale carvings
2375	2428	53	Limestone, light-brown
2428	2470	42	Sandstone, white, fine, calcareous; larger grains are rounded and frosted (61,630 cu. ft. gas, 2455-2444')
2470	2490	20	Sandstone, nearly white, fine, highly dolomitic; larger grains are rounded and frosted; a little green shale, 2450-2490'
<u>Lower Mississippian and Upper Devonian, 959+ ft.</u>			
2490	2628	138	Sandstone, white, fine - to medium-grained (Big Injun Sand)
2628	2636	10	Siltstone, gray, 70%; darker gray shale, 30%
2636	2670	34	Shale, dark-gray, with a little siltstone
2670	2740	70	Siltstone, light-gray, sandy, 70 to 80%; gray to dark- gray shale, 30 to 20%
2740	2760	20	Sandstone, nearly white, very fine, 50%; gray shale and siltstone, 50%
2760	2770	10	Siltstone, gray, shaly, 60%; darker gray shale, 40%
2770	2790	20	Siltstone, gray to light-gray
2790	2800	10	Shale, dark-gray
2800	2870	70	Siltstone, gray, with darker gray shale which varies in amount from about 10 to 30%
2870	2910	40	Shale, dark-gray, silty
2910	2920	10	Shale, dark-gray, very silty, 60%; gray siltstone, 40%
2920	2940	20	Siltstone and silty shale, gray to dark-gray
2940	2950	10	Siltstone and shale, gray to dark-gray, 60%; very fine white sandstone, 20% (possibly Berea sandstone)
2950	2960	10	Siltstone, gray, 60%; light-gray, very fine sandstone, 40%
2960	2970	10	Shale, gray, 60%; light-gray siltstone and very fine sandstone, 40%
2970	2990	20	Sandstone, white to light-gray, very fine, silty
2990	3000	10	Shale and siltstone, gray
3000	3045	45	Shale, gray, with some silty and sandy streaks
3045	3059	14	Shale, red, silty, micaceous
3059	3090	31	Siltstone and shale, gray to greenish; also some red shale and siltstone

Top	Bottom	Thickness	
3090	3100	10	No samples
3100	3120	20	Shale, gray
3120	3131	11	Shale, gray, 70%; nearly white, very fine sandstone, 30%
3131	3150	19	Shale, gray; small amounts of siltstone and very fine sandstone
3150	3160	10	Sandstone, white, very fine, 50%; gray shale, 50%
3160	3180	20	Siltstone, gray, shaly
3180	3200	20	Sandstone, white to light-green, fine to very fine, 70%; gray shale and siltstone, 30%
3200	3210	10	Shale, gray, 80%; white, coarse sandstone, 20%
3210	3230	20	Shale, gray, silty
3230	3250	20	Shale, gray, partly sandy, 80%; nearly white fine to very fine sandstone, 20%
3250	3280	30	Sandstone, white to light-gray, fine to very fine, 80%; gray shale, 20%
3280	3305	25	Shale, gray
3305	3325	20	Sandstone, white, fine - to medium - grained, 70%; gray shale, 30%
3325	3395	70	Shale and siltstone, gray (driller's record gives Gordon Sand at 3337 to 3334', but samples in this interval do not show more than slight traces of sand; 112,000 cu. ft. gas, 3288-3290')
3395	3405	10	Shale, gray, very silty; a little nearly white sandstone
3405	3425	20	Shale, gray, very silty
3425	3435	10	Sandstone, white to light-green, very fine, 50%; gray shale, 50%
3435	3449	14	Shale and siltstone, gray
	3449		Total depth, 511