D. Bruce Mason et al No. 2(6129)

Booths Creek District, Taylor County, W. Va.

By Pittsburgh and West Virginia Gas Company, Pittsburgh, Pa.

Located 2.94 mi. S. of 39°25' and 1.75 mi. W. of 80°05' - C - Fairmont Quadrangle.

Elevation 1259' B.

Permit Tay - 17

Drilling commenced May 28, 1942; completed June 17, 1942.

Gas well; 82,000 cu. ft.

Rock pressure 250 lbs. in 19 hrs.

Fresh water, 250', 4 bailers per hour.

Coal 250', 36"; 397', 48".

10" casing 191'; 8¼", 557'; 6 5/8", 980'.

Section based on samples from 82 to 1092', examined by C. N. Apsouri.

Top	Bottom	Thickness	
			Conemaugh (lower part) and Allegheny, 385 ft.
0	25	25	Clay, yellow, soft
25	45	20	Lime, gray, hard
45	82	37	Sand, light, hard
82	115	33	Sandstone, white, fine
115	122	7	Siltstone, light-gray, shaly
122	130	8	Sandstone, white, fine, 80%; light-gray, silty shale, 20%
130	167	37	Sandstone, white, fine, containing chlorite, biotite, muscovite, and siderite
167	182	15	Siltstone, light-gray, sandy, 65%; gray shale, 35%
182	193	11	Shale, very light-gray, silty
193	214	21	Sandstone, white, very fine, containing mica and chlorite
214	238	24	Sandstone, white, very fine
238	250	12	Shale, gray
250	253	3	Coal
253	285	32	Shale, dark-gray
285	307	22	Shale, light-gray, silty
307	311	4	Coal
311	345	34	Shale, gray
345	385	40	Shale, light-brown, having the appearance of flint

Pottsville Formation, 215 feet

Top	Bottom	Thickness	
385	405	20	Sandstone, white, fine, nearly all quartz
405	425	20	Sandstone, white, coarse, nearly all quartz
425	443	18	Sandstone, white, medium-grained, nearly all quartz
443	456	13	Shale, dark-gray, very sandy
456	466	10	Sandstone, white, medium-grained, nearly all quartz
466	524	58	Siltstone, gray, shaly, micaceous
524	544	20	Siltstone, nearly black, sandy, micaceous
544	557	13	Shale, gray, 60%; light-gray fine sandstone, 30%; brown siderite, 10%
557	600	43	Shale, black, micaceous, with traces of coal

Mauch Chunk, 297 feet

600	614	14	Shale, red
614	626	12	Siltstone, light-green, highly calcareous
626	635	9	Shale, red
635	656	21	Siltstone, very light green, calcareous, grading into very fine sandstone
656	680	24	Sandstone, nearly white, very fine, 80 to 90%; dark-brown, silty shale, 20 to 10%
680	758	78	Sandstone, very light-green, fine
758	770	12	Sandstone, grayish-green, very fine, shaly and silty
770	798	28	Shale, red, with some green shale and siltstone
798	812	14	Siltstone, light-green, sandy
812	827	15	Shale, red
827	847	20	Siltstone, green, sandy, 75%; dark-gray shale, 25%
847	854	7	Shale, gray
854	873	19	Limestone, dark-brown, with some micro-fossils ("Little Lime")
873	881	8	Shale, gray, calcareous
881	897	16	Shale, greenish-grey, 60%; red shale, 40%

Greenbrier Limestone, 171 feet

897	911	14	Limestone, light-brown
911	969	58	Limestone, light-brown; a few oolites, 911-923'
969	975	6	Limestone, very light-brown, very sandy; a little green calcareous shale with small pyritic crystals

Top	Bottom	Thickness	
975	994	19	Sandstone, white, fine, calcareous; part of grains are rounded and frosted (gas 985-987')
994	1004	10	Sandstone, white, fine, calcareous, 70%; green, very sandy shale, 30%
1004	1020	16	Limestone, light-brown, very sandy, also some very fine white sandstone, 1015-1020'
1020	1031	11	Limestone, light-brown, 90%; green shale, 10%
1031	1049	18	Limestone, very light-brown, sandy, somewhat dolomitic
1049	1059	10	Limestone, very light brown, sandy, oolitic
1059	1068	9	Limestone, nearly white, sandy, dolomitic
			Maccrady and Pocono Formations, 24+ feet
1068	1074	6	Shale, red, 50%; gray and green silty shale, 50%
1074	1077	3	Sandstone, white to slightly greenish, fine, 50%; red and green shale, 50%
1077	1082	5	Shale, red, silty
1082	1092	10	Siltstone, grayish-green
	1092		Total depth, SLM

Taylor County

~~A. Y. McElroy well Tay-8 reports gas in Big Lime at 1042, above top of Greenbrier by sample sixty feet from top of it. no gauge.~~

There appears to have been a small amount of gas production from the Big Lime in this county. None of the few sets of samples available show an actual limestone pay but two sets of samples show a sandstone which yielded gas occurring within the Greenbrier Limestone formation and drillers records of a few other wells show that they encountered the same gas pay. Condensed sample record of the two wells follow.

D. Bruce Mason et al No. 2 (6129)
Booths Creek District, Taylor County, W. Va.
By Pittsburgh and West Virginia Gas Company,
Pittsburgh, Pa.
Located 2.94 mi. S. of 39°25' and 1.75 mi. W. of 80°05' -C- Fairmont Quadrangle.
Elevation 1259' B.
Permit Tay-17
Drilled in 1942
Gas well; 82,000 cu. ft.
Rock pressure 250 lbs. in 19 hrs.
Section based on samples examined by C. N. Afsomi and J. H. C. Martens

Taylor Co

Top	Bottom	Thickness	
	600		Base of Pottsville Formation
600	897	297	Marsh Chunk Group, 297 feet
			Greenbrier Limestone, 171 feet
897	975	78	Limestone, light-brown to very light brown
975	994	19	Sandstone, white, fine, calcareous (gas 985-987')
994	1004	10	Sandstone, white, fine, calcareous, 70%; green, sandy shale, 30%
1004	1068	64	Limestone, light-brown to nearly white, mostly sandy
			Lower Mississippian, 24+ feet
1068	1074	6	Shale, red, 50%; gray and green silty shale, 50%
1074	1077	3	Sandstone, white to slightly greenish, fine, 50%; red and green shale, 50%
1077	1082	5	Shale, red, silty
1082	1092	10	Siltstone, grayish-green
	1092		Total depth, SLM

This record shows the apparent absence of the Big Injun Sand from the section at this locality.

In view of the small amount of carbonate material in the gas pay in this well, only the amount of acid insoluble material was determined on the samples.

Partial Analyses of Drill Cuttings
D. Bruce Mason No. 2 Well
Homer A. Hoskins, Analyst

Depth	Per cent Acid Insoluble
775-980	83,10
980-983	90,40
983-988	92,10 gas at 985-987'
988-994	92.05

The soluble part is mostly calcite.

J. W. Tucker et ux. No. 1 (6128) Well
Flemington District, Taylor County, W. Va.
By Pittsburgh and West Virginia Gas Company,
Pittsburgh, Pa.
Located 2.44 mi, S. of 39°20' and 1.05 mi.
W. of 80°10' - SW - Fairmont Quadrangle,
Elevation 1289' B.
Gas well; 244,000 cu. ft.
Rock pressure, 525 lbs. in 64 hrs.
Section based on samples examined by C. N. Hoskins

Top	Bottom	Thickness	
	1000		Base of Pottsville Formation
1000	1288	288	Mauch Chunk Group, 288 feet
			Greenbrier Limestone, 166+ feet
1288	1371	83	Limestone, brown and gray, sandy at bottom
1371	1400	29	Sandstone, white, very fine to fine, calcareous, also some green sandy and calcareous shale in upper part of interval
1400	1408	8	Limestone, light-brown, sandy (show of gas, 1400 - 1401')
1408	1410	2	Sandstone, white, ~~very~~ fine, calcareous
1410	1415	5	Sandstone, white, ~~very~~ fine, 50 %; green sandy shale, 50 %
1415	1436	21	Sandstone, white, fine to very fine, calcareous, 85 to 90 %; green shale, 15 to 10 % (gas, 1428 - 1436')
1436	1441	5	Limestone, light-gray, highly dolomitic
1441	1454	13	Limestone, dark-brown
	1454		Total depth, SLM

It will be noted that although a sandstone corresponding in character, thickness and stratigraphic position to that containing the gas pay in the J. Bruce Mason et al No. 2 well is present in this well, the gas pay is in a stratigraphically lower sandstone.

The top of it is 122 feet below the top of the Big Lime as compared with 78 feet for the top of the sandstone containing the gas pay in the Mason well about seven miles to the northeast.

Partial Analyses of Drill Cuttings

J. W. Tucker et ux. No. 1 (6128) well

Homer A. Hoskins Analyst.

Depth	Per cent Acid Insoluble
1408 – 1410	
1410 – 1415	
1415 – 1419	
1419 – 1424	
1424 – 1430	
1430 – 1436	

The soluble portion is most calcite. All of the samples except the first contain some shale fragments which probable increase the per cent of insoluble material.

Taylor Co.

Well	Completion Date	Big Lime Top	Big Lime Bottom	Big Lime Thickness	Big Injun Top	Big Injun Bottom	Big Injun Thickness	R.P.	Remarks	
1										
2										
3										
4										
5	Feb. 28 1937	996	1087	91	1087	1160	73	[illegible]	Gas well in 50 ft [illegible] → Show of gas at 1010	
6	Jan 2 1944	747	827	80	827	860	33		Gas 851-55 4/10 W [illegible] Dry hole	
7	Apr 28 1941	672	760	88	760-786 86 Red rock 92 790-852 81			270 lbs 18 hrs	Gas 840-852	[illegible]
8	Aug 12 1941	1036	1125	51	1115-1205 90 Red rock			175 lbs 12 hrs	→ Gas 1042 Gas 1619-1624	[illegible]
9	July 17 1941	769	840	71	840-865 85 865-867 shale 867-927 3 87				Dry hole Show oil 916	
10	Aug 27 1941	627	716	89	716	810	94	238 42 hrs	(apparently from within Big Injun) Gas 729-730	123,000 cu ft
11	Oct 7 1941	880	970	90	970-1096 126 T.D. 1096			165 lbs 12 hrs	Gas 1086-91	555,000 cu ft
12	Nov 15 1941	924	1014	90	1014	1119	105	240 lbs 50 hrs	Gas 1026-1031	61,000 cu ft
13	[illegible]									
14	Feb 25 1942	922	1017	95	1017-1112 105 T.D. 3727				Dry hole	
15	May 13 1942	1294	1370	76	1370-1448 78 T.D. 1454			525 lbs 80 hrs	Sh gas [illegible] Gas 1428-1436	294,000 cu ft
16	May 27 1942	1101	1177	76	1177-1273 76 Break 1200-1202			Not given	Gas 1653-1656-1661 Fifty foot sand	[illegible]
17	June 17 1942	897	975	78	975	1082	107	250 lbs 19 hrs	Gas 985-987	82,000 cu ft
18	July 27 1942	916	996	80	996-1133 137 T.D. 1139			275 lbs 29 hrs	Gas 1108-1122 (might be below boundary)	202,000 cu ft
19	March 9 1943	1248	1319	71	1319	1406	87	482 lbs 12 hrs	Gas 1749-1752 1761-1765	482,000 [illegible] (in 50 ft sand)
20	Nov 5 1942	1087	1173	86	1173-1260 87 T.D. 2258				Dry hole	
21	Aug 29 1942	785	870	85	870	976	106	235 lbs 40 hrs	Gas 886-894	125,000 cu ft
22	Jan 9 1943	948	1046	98	1046	1166	120	19 lbs 17 hrs	Gas & oil 1138-1141 (below Greenbrier)	3,580 cu ft
23	July 3 1943	1354	1426	72	1426	1525	99	520 lbs 39 hrs	Gas 1872-1878 (fifty foot sand)	1,600,000 cu ft
24	Oct 28 1943	1130	1217	87	1217	1345	128	245 lbs 13 hrs	Gas 1236-40 2076-2081	45,000 cu ft
25	Sept 1943				T.D. 1192				Dry in Big Injun	
26	Sept 2 1943	895	977	82	977-995 18 T.D. 995			230 lbs 12 hrs	Gas 981-989	705,000 cu ft
27	No report									
28	March 6 1944	1250	1322	72	1322	1417	95		Sh gas 1402-1403	Dry hole
29	Nov 8 1943	889	982	93	982-1126 144			[illegible]	Gas 1062-1082	[illegible]
30	May 30 1944	1009	1090	81	1090-1203 [illegible]			[illegible]	[illegible]	

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Permit	Completion Date	Big Lime Top	Big Lime Bottom	Big Lime Thickness	Big Injun Top	Big Injun Bottom			
31	June 24 1944	1321	1398	77	1398	1490	92	36 5 lbs; Gas 1824-1827 [illegible] 3% mm. 3" opening; 50 ft sand	2/10 M when completed 1,819,500 cu ft
32	June [illegible] 1944				[illegible] T.D. [illegible]				Dry hole
33									
34	Aug 9 1944	1145	1230	85	1230	1248 1/2		[illegible] Gas 1233-1244; T.D. 1248 1/2	4,427,500 cu ft
35					T.D. 1728			Gas in 50 ft s.s.	116,500 cu ft
36									
37									
38									
39									
40									

25 records from V.C. Smith which give thickness of Big Lime. Smaller thickness is 51 and next to smallest is 75. Largest is 98.

Well drilled under permit No 34 had 4,427,500 cu ft gas at depth 1233-1244 which makes the top of the gas pay 88 ft below the top of the Big Lime. Look up location in relation to wells from which we have samples. Apparently only three of these wells had a show of gas in what the driller called Big Lime and one may have had somewhat more than a show although no definite amount is given. About ten wells (these 25) had gas pays in what the driller called Big Injun but at such a depth from the top of the Big Lime as to make it certain that the pays are really above the bottom of the Greenbrier limestone.

Thickness of Greenbrier in those wells sampled — — —

In some wells the entire thickness of what the driller called Big Injun actually belongs in the Greenbrier fo. and in other wells the lower part of the "Big Injun" is undoubtedly below the "Greenbrier