PRES-2

J. F. and Harrison Sisler No. 1 Well.

Portland District, Preston County, W. Va.

By W. E. Snee, West Elizabeth, Pa.

Located ~~4195~~ 4193 ± Mi. S. of 39°30' and 3.5 ± Mi. W. of 79° 30' — N. E. — Kingwood Quadrangle.

Elevation, 2186.48' L.

Permit Pres. - 2.

Drilled in 1944.

Starts in Chemung Formation.

Dry through Oriskany.

Section based on samples from 16' to 6018'; Examined by J. H. C. Martens.

Top. Bottom. Thickness. Chemung, Portage, and Genesee Formations, 4761± ~~plus~~ Feet.

Top	Bottom	Thickness	
0	16	16	No sample
16	27	11	Sandstone, brown, very fine, 50%; brown to gray siltstone and shale, 50%
27	35	8	Sandstone, brown, very fine
35	57	22	Sandstone, light-gray and brown, fine to very fine; amount of brown decreases downward
57	80	23	Shale, gray, 60 to 70%; light-gray siltstone and very fine sandstone, 40 to 30%
80	102	22	Siltstone, gray to light-gray, partly shaly
102	105	3	Siltstone, gray, 70%; gray shale, 30%; a few pieces of shale are slickensided
105	142	37	Siltstone, gray to nearly white, with rather abundant fossil shells
142	208	64	Siltstone, light-gray, with abundant fossil shells; mostly finer and more shaly than the siltstone above and below
208	285	77	Siltstone, gray and light-gray, and grayish-green, with fossil shells; a little gray shale in some samples

285	298	13	Siltstone, gray, partly sandy, with fossil shells, 80%; gray shale, 20%
298	322	24	Siltstone, gray, with some shell fragments
322	370	48	Siltstone, gray to light-gray, with a few fossil shells, 80%; gray shale, 20%
370	438	68	Siltstone, gray to grayish-green, most fine with a few fossil shells; very scarce fragments of white calcite, probably from veins; also some gray shale
438	454	16	Siltstone, gray and dark brownish gray; also some gray shale
454	479	25	Siltstone, light-gray, with smaller amount of dark-gray; a few shell fragments and a few cleavage fragments of white calcite
479	572	93	Siltstone, gray, light-brown, and grayish-green; with rather scarce shell fragments
572	583	11	Siltstone, gray, 80%; gray, slickensided shale, 20%
583	622	39	Siltstone, gray, light-gray, and grayish-green, with a few fossil shell fragments
622	648	26	Siltstone, light-gray to grayish-green, with fossil shells
648	683	35	Siltstone and shale, gray,,with fossil shells
683	708	25	Siltstone and shale, gray; shale fragments are much slickensided
708	729	21	Siltstone and shale, gray
729	742	13	No sample
742	798	56	Siltstone, gray, brown, and grayish-green, with fossil shells, 70%; gray shale, 30%
798	816	18	Shale, gray, 60%; gray siltstone with fossil shells, 40%
816	855	39	Siltstone, gray, 60 to 80%; gray shale, 40 to 20%
855	867	12	Shale, gray, 70%; gray siltstone, 30%
867	875	8	Siltstone, gray, 60%; gray shale, 40%

875	878	3	Siltstone, light-gray
878	973	95	Shale and fine siltstone, gray
973	983	10	Siltstone, gray, 90%; gray shale, 10%
983	1001	18	Siltstone, gray, 50%; gray shale, 50%
1001	1142	141	Shale and fine siltstone, gray
1142	1160	18	Siltstone, gray, 60%; gray shale, 40%
1160	1216	56	Shale and fine siltstone, gray
1216	1258	42	Siltstone, gray, 60 to 80%; gray shale, 40 to 20%; a few fossil shells in the siltstone
1258	1284	26	Siltstone, gray, with small amount of gray silty shale
1284	1310	26	Shale and fine siltstone, gray
1310	1402	92	Siltstone, gray, with fossil shells, 80%; gray shale, 20%
1402	1418	16	Siltstone and silty shale, gray and dark-gray; a few calcite veins; one fragment of siltstone with quartz crystals, 1402-1410'
1418	1432	14	Siltstone, gray
1432	1463	31	Siltstone, gray, 60%; gray shale, 40%
1463	1475	12	Siltstone, gray and brown, with fossil shells, 70%; gray shale, 30%
1475	1514	39	Siltstone, brown, with small amount of gray shale and siltstone
1514	1525	11	Siltstone, gray and brown
1525	1560	35	Siltstone, gray, 50 to 60%; gray shale, 50 to 40%
1560	1628	68	Siltstone, gray and light-gray, 80%; darker gray shale, 20%
1628	1653	25	Siltstone, gray, 60%; gray shale, 40%
1653	1698	45	Shale, gray to dark-gray, mostly silty, 70%; gray siltstone, 30%
1698	1808	110	Shale, gray, 50 to 80%; light-gray, light-brown and grayish-green siltstone, 50 to 20%
1808	1819	11	Shale, dark-gray, 60%; gray, slightly calcareous siltstone, 40%

1819	1929	110	Shale, dary-gray to very dark-gray, with a little gray siltstone
1929	1941	12	Shale, gray, with silty streaks
1941	1985	44	Shale, gray, 50 to 60%; gray and grayish-green siltstone, 50 to 40%; siltstone contains some small dolomite veins
1985	1996	11	Shale, dark-gray, 70%; gray siltstone, 30%
1996	2006	10	Shale, dark-gray, very silty
2006	2050	44	Shale, gray to grayish-green, 70%; grayish-green siltstone, 30%
2050	2234	184	Shale, dark-gray to very dark gray, 60 to 80%; fine gray and grayish-green siltstone, 40 to 20%
2234	2257	23	Siltstone, gray, fossiliferous, 60%; dark-gray shale, 40%
2257	2322	65	Shale, dark-gray, 50%; gray and grayish-green siltstone, 50%
2322	2345	23	Shale, dark-gray, partly silty
2345	2365	20	Shale and fine siltstone, dark-gray and dark brown
2365	2373	8	Shale, dark-gray, 60 to 80%; gray and brown fine siltstone, 40 to 20%
2373	2597	224	Shale, dark-gray and very dark-gray, 60 to 70%; gray siltstone, 40 to 30%
2597	2642	45	Siltstone, gray, 60%; dark-gray shale 40%; some fragments are fractured and contain small dolomite veins
2642	2830	188	Shale, dark-gray to very dark gray, 50 to 80%; gray and grayish-green fine siltstone 50 to 20%
2830	2846	16	Siltstone, grayish-green, shaly, 70%; dark-gray shale, 30%
2846	2875	29	Shale, dark-gray to very dark gray, silty
2875	2882	7	Siltstone, grayish-green, fine, 80%; dark-gray shale, 20%

2882	3134	252	Shale, dark-gray, very dark gray, and grayish-green, 70 to 90%; gray and grayish-green fine siltstone, 30 to 10%; a few small dolomite veins
3134	3160	26	Siltstone, gray and grayish-green, 60%; dark gray shale, 40%
3160	3281	121	Shale, dark-gray and very dark-gray, 60 to 80%; gray and grayish-green fine siltstone, 40 to 20%
3281	3341	60	Shale, very dark gray, with small amount of lighter gray, fine siltstone
3341	3379	38	Shale, dark-gray, with thin streaks of very dark gray shale and lighter gray siltstone
3379	3389	10	Siltstone, brownish-gray, with small dolomite veins, 70%; dark-gray shale, 30%
3389	3453	64	Shale, dark-gray, very dark gray and dark-brown, 60 to 80%; gray siltstone, 40 to 20%; small dolomite veins in many fragments
3453	3573	120	Shale, very dark gray, with some lighter gray shale and siltstone; some slickensided shale fragments and a few small dolomite veins
3573	3600	27	Siltstone, gray, fine, 50%; dark gray shale, 50%
3600	3650	50	Shale, dark-gray to very dark gray, with thin streaks of gray siltstone
3650	3661	11	Siltstone, dark-gray, fine; 80%; dark-gray shale, 20%
3661	3689	28	Shale and fine siltstone, dark-gray
3689	3700	11	Siltstone, gray to dark-gray, fine 60%; dark-gray shale, 40%
3700	3740	40	Shale, dark-gray, with some fine shaly siltstone; a few pieces of small dolomite veins
3740	4134	394	Shale, dark-gray, with a little fine gray to dark-gray siltstone
4134	4331	197	Shale, very dark gray and dark-gray

4331	4351	20	Shale, very dark gray to black
4351	4361	10	Siltstone, dark brownish gray with a few dolomite veins, 60%; very dark gray shale, 40%
4361	4379	18	Shale, very dark gray
4379	4556	177	Shale, dark-gray to very dark gray; a few fragments are slickensided and a few contain small veins of white calcite (show of gas,4495')
4556	4559	3	Shale, dark-gray to very dark gray, 70%; fine gray siltstone, 30%
4559	4624	65	Shale, dark-gray to very dark gray
4624	4643	19	Shale, very dark gray to black, slightly calcareous

Sisler No. 1 Well,

Near Terra Alta, Preston County, W. Va.

Top,	Bottom,	Thickness,	
4643	4698	45	Shale, black and very dark gray; a very few scattered limestone fragments
4698	4708	10	Shale, black and very dark gray, with a few pieces of light or gray fine shaly siltstone; some white vein calcite
4708	4712	4	Shale, gray to dark-gray; not so dark as samples from above and below
4712	4738	26	Shale, black and dark-gray, with a little white vein calcite
4738	4761	23	Shale, black and dark-gray, with a few pieces of brown to gray limestone and white vein calcite
			Tully Limestone, 28 feet
4761	4789	28	Limestone, brown to gray, very fine textured, 40 to 60%; dark gray to black shale, 60 to 40%
			Marcellus. Hamilton and Genesee Shales, 701 feet
4789	4855	66	Shale, black and dark gray; from 4789 to 4832' there are a few pieces of pyrite which are probably fragments of concretions; a few pieces of slickensided shale and vein calcite
4855	4863	8	Shale, black; appears more crumpled and slickensided than the samples above and below
4863	5061	198	Shale, black and dark-gray; a few pieces of white vein calcite
5061	5066	5	Shale, mostly dark-gray; contains some fragments which are lighter colored and more silty than the shale of the interval above
5066	5428	362	Shale, very dark gray to black; many samples contain fragments with small calcite or dolomite veins
5428	5444	16	Shale, black; some pieces are crumpled and slickensided; contains veins of calcite, dolomite, quartz, and pyrite; a few small loose salt crystals in one sample

Top	Bottom	Thickness	
5444	5551	107	Shale, very dark gray, to black; contains a little vein material mostly calcite; correction of 5 feet applied to depth at 5551
5546	5590	44	Shale, black with a little vein calcite
			Huntersville Chert (Onondaga Limestone), ~~Onondaga (Huntersville) Limestone and Chert~~, 255 feet
5590	5613	23	Limestone, gray and brown; also much black shale like that above and some brown silty shale
5613	5621	8	Chert, brown and gray, moderately calcareous
5621	5631	10	Chert, light-brown and gray, slightly calcareous; contains some small dolomite crystals
5631	5664	33	Chert, light-gray to nearly white, slightly calcareous; contains small quartz veins
5664	5699	35	Chert, light-gray to nearly white; contains some silt and traces of glauconite, some small quartz veins; chert contains some dolomite rhombs and scarcely any calcite; there was a little gas at 5692' and in the sample from that depth there are a very few fractures in the chert which are not completely filled
5699	5773	44	Chert, gray, mostly silty, not calcareous; a little darker than most of chert in interval above; contains some small quartz veins; chert becomes darker and more impure toward bottom of this interval
5773	5791	18	Chert, dark-gray, shaly; contains small veins of quartz and dolomite
5791	5829	38	Shale, very dark gray, mostly hard and cherty; a large part of this seems to be intermediate in nature between shale and chert
5829	5840	11	Shale, very dark gray; has appearance much more like an ordinary shale than the rock of the interval above; a few fragments contain calcite veins and a few consist mostly of pyrite
5840	5845	5	Chert, gray, silty, calcareous; also much dark shale as above
5985	6000	15	Sandstone, very light-gray, medium-grained, calcareous
6000	6007	7	Sandstone, gray, medium- to fine-grained; somewhat more calcareous than next interval above

The Hendricks sandstone has been traced from the type locality northward along the Cheat River valley to Rowlesburg. In this region it is considered as the top of the Chemung, or in places the top of the Chemung is considered as being about 100 feet higher. In the Rowlesburg section the ~~Upper~~ the thickness of the Catskill red beds is 601 feet and they are entirely above what is correlated as the Hendricks sandstone.

In the Shartzer well there is a thickness of 1631 feet at the top in which red beds of Catskill type occur. A we go eastward the earliest red beds of Catskill type occur progressively lower and lower in the section, but in a northeast direction along the strike we would not expect the change in facies to be very rapid. I would suggest that the sandstone from 1565 to 1597 in the Shartzer well might be the Hendricks sandstone, or possibly the sandstone from 1227 to 1317.

As to the Stratigraphic relationship between the upper part of the Shartzer well and the upper part of the Sisler No.1 well I am by no means certain but I would suggest that the sandstone from 1900 to 1972 in the Shartzer well might be the same as that from 16 to 57 in the Sisler No.1 , making a stratigraphic difference of about 1900 feet. The first dark-gray shale occurs at a depth of 3435 in the Shartzer well and 1653 in the Sisler No.1 making a stratigraphic difference of 1782 feet. The first very dark gray shale is at a depth of 4526 in the Shartzer well and 2642 in the Sisler No.1 making a difference of1882 feet.

The corresponding strata in the upper part of the Sisler well appear to be at about 1900 feet shallower depth than in the Shartzer well. Since the depth to the top of the Onondaga is 2300 feet more in the Shartzer well than in the Sisler No.1 there is apparently an increase in thickness of the section in the Shartzer well below 4526 amounting to about 400 feet which is probably due to faulting or steep dips.