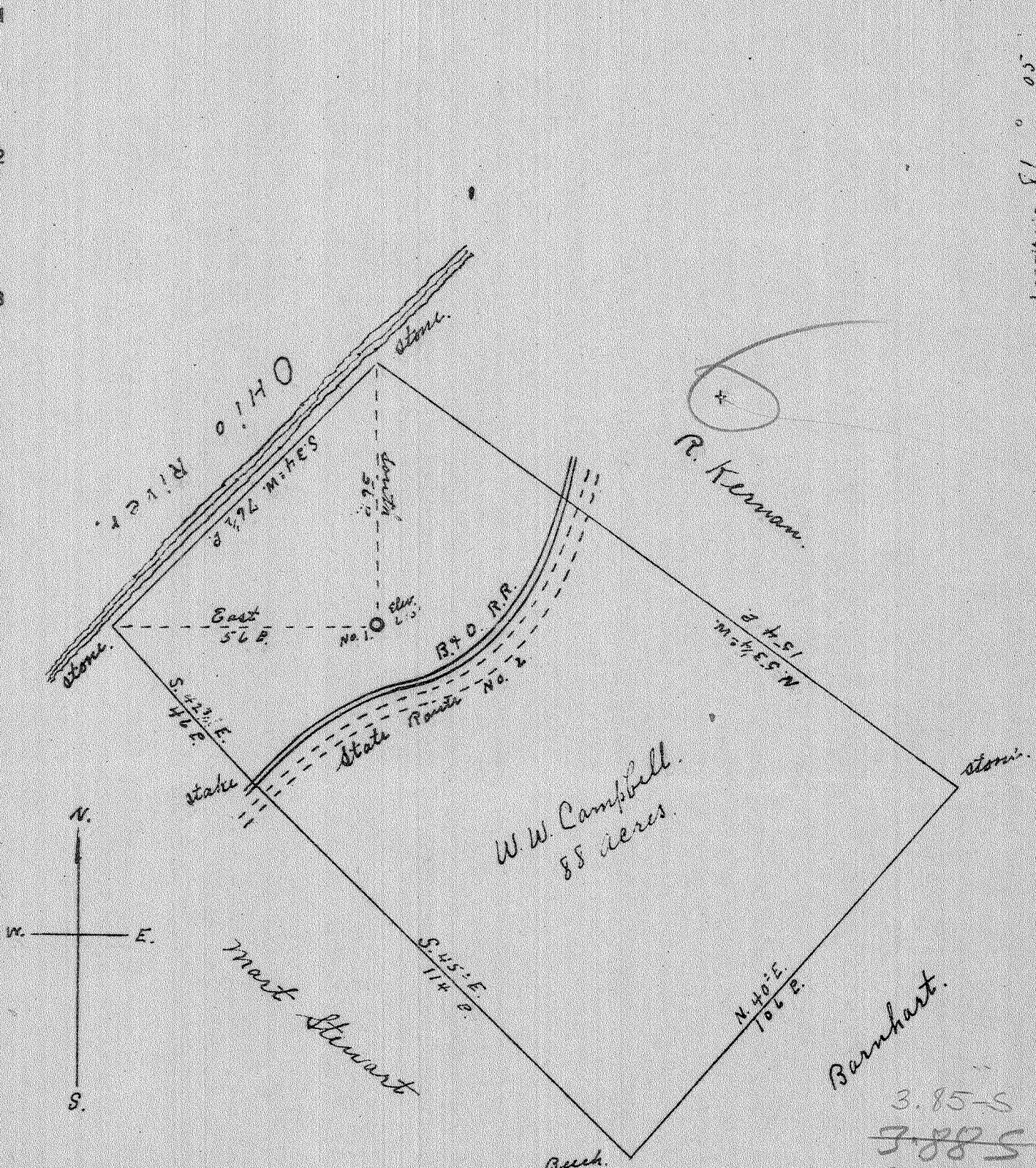


3520  
700



3.85-S  
~~3.88 S~~  
~~2.73 W~~  
 2.30-W  
 2.50 (F-7)

- New Location
- Drill Deeper
- Abandonment

Com. J. C. Bessard  
 Address Pittsburg Pa.  
 Farm W. W. Campbell  
 Fract \_\_\_\_\_ Acres 88 Lease No. \_\_\_\_\_  
 Well (Farm) No. 1 Serial No. \_\_\_\_\_  
 Elevation (Spirit Level) 610'  
 Quadrangle St. Marys - NC  
 County Pleasants District Union  
 Engineer Jno. Triplett  
 Engineer's Registration No. \_\_\_\_\_  
 File No. \_\_\_\_\_ Drawing No. \_\_\_\_\_  
 Date April 2 1942 Scale 1" = 30'

STATE OF WEST VIRGINIA  
 DEPARTMENT OF MINES  
 OIL AND GAS DIVISION  
 CHARLESTON

WELL LOCATION MAP  
 FILE NO. PLAS-21

+ Denotes location of well on United States Topographic Maps, scale 1 to 62,500, latitude and longitude lines being shown by border lines as shown.  
 - Denotes one inch spaces on original tracing.

WEST VIRGINIA DEPARTMENT OF MINES  
OIL & GAS DIVISION  
WELL RECORD

*Gas show*

Permit No. Pleas 212-P  
St. Marys Quad.  
Company  
Address  
Farm  
Location  
Well No  
District  
Surface  
Mineral  
Commenced  
Completed  
Fresh Water

J.C. Benedum  
St. Marys, West Virginia  
W.W. Campbell Acres 82  
Ohio River  
1 Elev. --  
Union Pleasants County  
W. W. Campbell, Bens Run, W. Va.  
W. W. Campbell, Est., Bens Run, W. Va.  
May 7, 1942  
Jan. 30, 1943  
55' 61'

--Well  
CASING & TUBING

16 58'9  
13 3/8 154'4  
10 1/2 961'  
8 5/8 1961'  
7 5273'9

Slate & Shells	0	90	Slate	Gr	5140	5185
Slate & Shale	90	135	Shale	Br	5185	5304
Slate	135	155	Lime	<i>HRVL</i>	5304	5516
Slate & Shells	155	190	Sand		5516	5564
Slate & Shells	190	230	Sandy Lime	<i>30RSK</i>	5564	5577
Red Rock	230	270				
Red Rock	<del>270</del>	330	5484 to 5485 show of gas			
Red Rock	330	350	Show of gas from 5518 to 5518 1/2			
Shale	350	410				
Red Rock	410	437				
✓ Cow Run Sand	437	448	Show of oil			
Slate	448	495				
Red Rock	495	512				
✓ Cow Run Sand	512	518				
Slate	518	700				
✓ Salt Sand	700	835				
Shale	835	850				
Slate	850	885				
✓ Salt Sand	885	938				
Shale & Slate	938	945				
✓ Salt Sand	945	958				
Shale	958	970				
Shale	970	1025				
✓ Salt Sand	1025	1138				
Slate	1138	1150				
Lime	1150	1200				
Slate	1200	1265				
✓ Lime <i>Big lime</i>	1265	1285	Show of gas 1281 to 1291			
Sand	1285	1515				
Slate & Shells	1515	2330				
Slate	2330	3030				
Slate	3030	3160				
Slate & Shells	3160	3180				
Slate & Shells	3180	3215				
Shale & Shells	3215	3285				
Slate & Shells	3285	3300				
Slate	3300	3390				
Slate & Shells	3390	3480				
Slate	3480	3530				
Slate & Shells	3530	3580				
Slate	3580	3650				
Slate & Shells	3650	3680				
Slate	3680	3920				
Slate	3920	4047				
Slate	4047	4070				
Slate Shell	Gr	H 4070				
Slate	Gr	4080				
Slate	Br	4133				
Slate	Lt Gr	4184				
Slate	Gr	4330				
Slate	Br	4363				
Slate	Gr	4380				
Slate	Dk Gr	4700				
Slate	Gr	4770				
Slate	Br	4830				
Shale	Br	4870				
		5140				

473  
*5516*  
*5304*  

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*212*

*5304*    *5516*  
*610*        *610*  

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*-4694 - 4906*

*1265*  
*610*  

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*655*

W. W. CAMPBELL NO. 1 WELL.

Union District, Pleasants County, W. Va.

By J. C. Benedum.

Martens' (Apsouri's) record from samples, Nov. 6, 1942.

212-P

Top.	Bottom.	Thickness.	
500	506	6	Shale, red, containing occasional very small limestone concretions, 97%; limestone, gray, 3%
506	512	6	Siltstone, light-gray, of sandy nature, containing chlorite and a few specks and a considerable number of siderite spherulites, 80%; shale, red, as above, 20%
512	530	18	Shale, dark-green, very silty, with a modicum of siderite spherulites, chloritic
530	536	6	Shale, greenish-gray, containing occasional small concretions of lime, 90%; limestone, grayish-brown, 10%
536	541	5	Limestone, as above, dense, 50%; shale, light silver-like gray, very sandy, 35%; shale, as above, 15%
541	549	8	Shale, brownish-gray, disintegrating in water, 60%; shale, dark-green, with spherulites of siderite, 30%; shale, red, 5%; limestone, as above, 5%
549	555	6	Siltstone, greenish-gray, of sandy nature, chloritic, with specks and spherulites of siderite
555	566	11	Siltstone, as above, 95%; shale, red, disintegrating in water
566	587	21	Shale, gray, slightly silty
587	593	6	Shale, as above, 60%; shale, dark-gray, 40%
593	600	7	Shale, gray, 40%; shale dark- to very dark gray, carbonaceous, associated with coal, 30%; clay or shale, light brownish-gray, disintegrating in water, 30%
600	606	6	Shale, gray, 40%; shale, dark-gray to gray, often containing streaks of pyrite, carbonaceous material and lime concretions or cement, 50%; shale, brown, very dense, 10%
606	612	6	Shale, very light yellowish-gray to very light-brown, containing occasional very small lime concretions imperceptible to the eye; it is unstable in water
612	618	6	Shale, as above, with red, yellow or brown patches, with spherulites of siderite in certain horizons
618	623	5	Shale, red and yellow, disintegrating in water, as above, 60%; siltstone, greenish-gray, chloritic, of sandy nature, with an abundance of muscovite, 40%
623	636	13	Shale, dark grayish green, with spherulites of siderite, 80%; siltstone, as above, 20%
636	642	6	Shale, grayish-green, containing small lime concretions, 90%; shale, red, 10%
642	648	6	Shale, red, containing very small concretions of lime, 60%; shales, gray, brownish-gray, green, and gray, 40%
648	660	12	Shale, grayish-green, silty, with spherulites of siderite, 90%; shale, almost white, silty, 10%

(CONTINUED) (OVER)

Top.	Bottom.	Thickness.	
660	- 671	11	Shale, as above, 90%; siltstone, gray, of sandy nature, containing white and black mica, few flakes of chlorite and specks of siderite, 10%
671	- 682	11	Shale, green, 50%; shale, brown to brownish-gray, 40%; shale, black, 5%; shale, brown, dense, 5%
682	- 687	5	Shale, green, 95%; shale, red, 5%
687	- 692	5	Shale, greenish-gray, 93%; shale, brownish-gray, dense, 2%; shale, red, containing lime concretions, 5%
692	- 697	5	Shale, gray, 97%; shale, brown, dense, 3%
697	- 700	3	Shale, grayish-green, 50%; shale, grayish-green, silty, 50%
700	- 705	5	Sandstone, white, almost a coarse siltstone, containing muscovite, biotite, specks of siderite and occasional flakes of chlorite
705	- 710	5	Sandstone, as above, 60%; shale, gray, 40%
710	- 728	18	Shale, greenish-gray, 85%; shale, gray, 5%; shale, brown, clayey, disintegrating in water, 10%
728	- 734	6	Shale, light brownish green, containing lime concretions and tending to disintegrate in water
734	- 740	6	Shale, as above, 70%; shale, brown, disintegrating in water, 30%
740	- 746	6	Shale, silty, silver-white, with a greenish tinge; it contains concretions of lime
746	- 751	5	Siltstone, green, chloritic, with specks of siderite and minute crystals of pyrite; of sandy nature
751	- 756	5	Shale, gray, with a green hue, slightly silty
756	- 761	5	Shale, gray, silty, 70%; siltstone, light-gray, of sandy nature, containing muscovite and few flakes of chlorite, 30%
761	- 766	5	Shale, gray, silty, with flakes of biotite, 75%; siltstone, as above, 25%
766	- 803	37	Sandstone, white, medium-grained, subangular to sub-rounded, moderately frosted, containing flakes of grass-green chlorite, and near the bottom siderite and biotite
803	- 815	12	Shale, gray, 45%; siltstone, brownish-gray, shaly, 50%; coal, 5%
815	- 823	8	Shale, brownish-gray, silty
823	- 842	19	Shale, gray, 45%; siltstone, light-gray, almost a very fine sandstone, 50%; shale, red, dense, 5%
842	- 848	6	Shale, gray, 80%; siltstone, brown, shaly, 20%
848	- 866	18	Shale, gray, 80%; shale, gray, silty, with few grains of quartz sand, 15%; limestone, light-gray, 5%
866	- 872	6	Shale, red, 80%; coal, 20%
872	- 878	6	Shale, brownish-gray, with carbonaceous material and pyrite
878	- 883	5	Shales, ranging in color from gray to brown, and tending to disintegrate in water; they contain concretions of lime, 90%; shale, black, carbonaceous, 10%
883	- 898	15	Sandstone, white, very fine grained, angular to sub-rounded, with a few larger rounded grains of quartz; it is slightly frosted and contains a conspicuous amount of muscovite, specks of siderite, and occasionally flakes of chlorite
898	- 903	5	Shale, brownish-gray, clayey, disintegrating in water, containing occasional streaks of carbonaceous material, 60%; sandstone, as above, 40%

Top.	Bottom.	Thickness.	
903	- 908	5	Shale, brownish-gray, 70%; sandstone, as above, 30%
908	- 914	6	Siltstone, gray, shaly, 90%; shale, as above, 10%
914	- 920	6	Shale, gray, silty
920	- 926	6	Shale, gray, as above, 80%; siltstone, white, almost a very fine sandstone, containing specks of siderite and mica
926	- 932	6	Siltstone, as above, 85%; shale, gray, slightly silty, 15%
932	- 938	6	Shale, gray, silty, 95%; siltstone, brown, of sandy nature, with abundance of siderite
938	- 946	8	Sandstone, white, very fine grained, subangular to subrounded, slightly frosted with cement of silt, 50%; shale, very dark gray, 30%; shale, brownish-gray, 20%
946	- 952	6	Siltstone, very light gray, almost a very fine grained sandstone, with specks of siderite and occasional flakes of chlorite
952	- 958	6	Siltstone, brownish-gray, with spherulites of siderite
958	- 966	8	Shale, gray, slightly silty, 90%; shale, very dark gray, carbonaceous, 10%
966	- 971	5	Shale, gray, slightly silty, with spherulites of siderite, 97%; shale, dark-gray, 3%
971	- 1001	30	Shale, gray, very silty
1001	- 1012	11	Shale, gray to very dark gray, pyritic, associated with coal, 65%; siltstone, white, of sandy nature, containing muscovite and siderite, 35%
1012	- 1020	8	Shale, gray, containing carbonaceous fragments and associated with coal, 85%; siltstone, as above, with carbonaceous fragments, 15%
1020	- 1026	6	Shale, gray, silty, 60%; siltstone, white, of sandy nature, 40%; both components contain carbonaceous material
1026	- 1032	6	Sandstone, white, very fine grained, angular, frosted, silty, with specks of siderite and an abundance of carbonaceous material
1032	- 1054	22	Sandstone, white, fine- to very fine grained, subangular to subrounded, partly frosted, containing siderite, biotite, some muscovite, and flakes of chlorite; the lower six or seven feet are coarser grained
1054	- 1060	6	Shale, silvery-gray, containing an abundance of muscovite and a very large number of very small spherulites of siderite
1060	- 1068	8	Sandstone, white, fine-grained, angular to subangular, mostly frosted, 75%; shale, light grayish brown, with numerous spherulites of siderite, 25%
1068	- 1080	12	Sandstone, 50%; and shale, 50%; as above
1080	- 1102	22	Shale, gray, 50%; siltstone, gray, with few spherulites of siderite, 38%; shale, very dark gray, carbonaceous, 10%; shale, brown, very dense, 2%
1102	- 1141	39	Sandstone, white, very fine grained, angular to subrounded, containing biotite, muscovite, specks of siderite, and flakes of chlorite
1141	- 1147	6	Shale, very dark gray, 90%; shale, brown, 10%
1147	- 1163	16	Shale, very dark gray
1163	- 1175	12	Shale, gray, silty, with specks of siderite
1175	- 1187	12	Shale, as above, 50%; siltstone, white, almost a very fine grained sandstone, angular, frosted, with specks of siderite and few flakes of chlorite, 10%

Top.	Bottom.	Thickness.	
1187	- 1195	8	Sandstone, as above
1195	- 1210	15	Shale, very light grayish brown, with a moderate amount of siderite spherulites, 65%; shale, very dark gray, carbonaceous, 35%
1210	- 1228	18	Shale, gray, very silty, 80%; shale, brown, 20%
1228	- 1234	6	Shale, grayish-brown, with occasional spherulites of siderite, 95%; shale, dark-gray, associated with coal, 5%
1234	- 1240	6	Shale, grayish-brown, as above, only of lighter hue, 55%; shale, gray, 40%; coal, 5%
1240	- 1251	11	Siltstone, very light gray, sandy, 90%; shale, brown, dense, 10%
1251	- 1265	14	Siltstone, as above, 90%; shale, gray, 5%; shale, very dark gray, 5%; the sample from the lowest seven feet shows a streak of sandstone; the sample effervesces vigorously, when treated with HCl
GREENBRIER LIMESTONE			
1265	- 1270	5	Limestone, brownish-white, slightly oolitic
1270	- 1282	12	Limestone, brownish-white, containing white, very fine grained sandstone, which is clear and cemented by calcite in addition to very coarse fragments of milky quartz
1282	- 1295	13	Sandstone, as above, cemented by calcite, admixed with a large amount of coarse fragments of milky quartz
1295	- 1320	25	Siltstone, white; but for size of the grains, it could have been a very fine grained sandstone; in certain horizons it contains a moderate amount of siderite spherulites
1320	- 1331	11	Siltstone, as above, 70%; shale, very light gray, 30%
1331	- 1336	5	Shale, gray, 70%; sandstone, white, very fine grained, subangular, with spherulites of siderite, 30%
1336	- 1349	13	Sediments, as above, only the sandstone is slightly coarser and contains in addition larger fragments of milky quartz and coarser, subrounded grains of quartz sand
1349	- 1359	10	Sandstone, as above
1359	- 1377	18	Sandstone, as above, without milky quartz
1377	- 1393	16	Sandstone, white, very fine grained, angular to subangular, with muscovite, biotite, and occasionally pyrite and specks of siderite
1393	- 1401	8	Sandstone, white, fine-grained, angular to subrounded, with specks of siderite; certain horizons are silty
1401	- 1414	13	Sandstone, as above, not silty
1414	- 1436	22	Sandstone, white, fine-grained, subangular, containing a few coarser grains of quartz, 95%; limestone, light-brown, dense, 5%
1436	- 1466	30	Sandstone, as above, 85%; shale, gray, 15%
1466	- 1483	17	Sandstone, white, medium- to coarse-grained, subangular, slightly frosted
1483	- 1488	5	Sandstone, white, fine-grained, angular, fairly well frosted, 80%; siltstone, gray, 20%
1488	- 1500	12	Sandstone, as above
1500	- 1517	17	Shale, gray
1517	- 1543	26	Shale, as above, 50%; siltstone, light-gray, 50%
1543	- 1552	9	Shale, gray, 75%; shale, brown, 25%
1552	- 1561	9	Shale, gray, 50%; siltstone, grayish-brown, 50%

Top.	Bottom.	Thickness.	
1561	- 1594	33	Shale, gray, slightly silty, with specks of siderite, 70%; siltstone, almost white, of sandy nature, with specks of siderite, 25%; shale, brown, 5%
1594	- 1600	6	Siltstone, gray, of sandy nature, fine-grained, with specks of siderite
1600	- 1615	15	Siltstone, as above, 90%; shale, gray, 10%
1615	- 1630	15	Shale, gray, slightly silty, 50%; siltstone, almost white, of sandy nature, with specks of pyrite, 50%
1630	- 1635	5	Shale, gray, silty
1635	- 1640	5	Shale, gray and brownish-gray, silty
1640	- 1652	12	Siltstone, brownish-gray, of sandy nature, with specks of siderite
1652	- 1663	11	Siltstone, as above, 50%; shale, gray, 50%
1663	- 1670	7	Shale, gray, as above, 60%; siltstone, very light gray, with specks of siderite, 40%
1670	- 1701	31	Sediments, as above; shale, 50%; siltstone, 50%
1701	- 1718	17	Shale, gray, slightly silty, 90%; siltstone, as above, 10%
1718	- 1725	7	Sediments, as above; shale, 50%; siltstone, 50%
1725	- 1731	6	Shale, gray, 50%; shale, gray, very slightly silty, 50%
1731	- 1738	7	Shale, gray
1738	- 1745	7	Shale, gray, as above, 75%; shale, gray, silty, 25%
1745	- 1751	6	Shale, gray, as above, 75%; shale, gray, silty, as above, 20%; shale, brown, 5%
1751	- 1764	13	Shale, gray, 80%; shale, light-gray, silty, 20%
1764	- 1785	21	Shale, gray, 50%; siltstone, light-gray, shaly, silty, specks of siderite, 50%
1785	- 1801	16	Shale, gray, 90%; shale, brown, dense, 10%
1801	- 1817	16	Shale, gray, 50%; siltstone, very light gray, of sandy nature, with specks of siderite, 50%
1817	- 1829	12	Shale, as above, 40%; siltstone, as above, 50%; shale, brown, dense, 10%
1829	- 1848	19	Siltstone, as above, 50%; shale, dark-gray, slightly silty, 50%
1848	- 1854	6	Shale, dark-gray, with occasional concretions of pyrite, 95%; siltstone, as above, 5% (Berea? horizon)?
1854	- 1866	12	Samples missing
1866	- 1872	6	Siltstone, white, of sandy nature, with a considerable amount of siderite specks and occasional very small crystals of pyrite; but for grain size, this rock could have been a very fine sandstone, 70%; shale, very light greenish gray, 30%
1872	- 1893	21	Siltstone, as above, 85%; shale, gray, 15%
1893	- 1900	7	Siltstone, light greenish gray, shaly, 80%; shale, gray to brownish-gray, 20%
1900	- 1917	17	Shale, gray to brownish-gray, 60%; siltstone, similar to the one between foot intervals 1866-1872, 40%
1917	- 1923	6	Shale, gray, 70%; siltstone, green to grayish-green, usually of sandy nature, though often shaly, with specks of siderite, 30%
1923	- 1932	9	Shale, gray
1932	- 1939	7	Shale, red, 80%; shale, gray, 10%; shale, greenish-gray, silty, 10%
1939	- 1949	10	Siltstone, light-gray, shaly, 70%; shale, gray, 30%
1949	- 1980	31	Sediments, as above, 90%; shale, red, 10%
1980	- 1995	15	Siltstone, gray, partly shaly, mostly shale
1995	- 2004	9	Shale, greenish-gray, silty, 50%; shale, red, silty, 50%

Top.	Bottom.	Thickness.	
2004	- 2014	10	Shale, red, slightly silty
2014	- 2026	12	Shale, as above, 75%; siltstone, grayish-green, of sandy nature, with specks of siderite and pyrite, 25%
2026	- 2059	33	Siltstone, as above, 70%; shale, as above, 30%
2059	- 2080	21	Shale, gray, 50%; siltstone, light-gray, of sandy nature, 50%
2080	- 2091	11	Shale, gray, very silty, 70%; shale, red, very silty, 30%
2091	- 2142	51	Siltstone, light-gray to gray, with specks of siderite, 75%; shale, red, silty, 25%
2142	- 2189	47	Shale, gray, 45%; siltstone, as above, 25%; shale, red, 30%
2189	- 2200	11	Siltstone, greenish-gray, of sandy nature, 70%; shale, reddish-gray, very silty, 30%
2200	- 2220	20	Shale, gray, 40%; shale, reddish-gray, 30%; siltstone, greenish-gray, 40%
2220	- 2230	10	Shale, light-gray to reddish gray, very silty
2230	- 2260	30	Shale, gray, 50%; siltstone, light greenish gray, of sandy nature, with specks of siderite, 50%
2260	- 2270	10	Shale, gray, 65%; siltstone, grayish-green, with specks of siderite, 35%
2270	- 2285	15	Shale, gray to greenish-gray
2285	- 2293	8	Shale, gray, 80%; siltstone, greenish-gray, of sandy nature, 20%
2293	- 2312	19	Siltstone, light-gray, with a greenish hue, 80%; shale, gray, 20%
2312	- 2348	36	Siltstone, greenish-gray to grayish-green, of sandy nature, 85%; shale, gray, 15%
2348	- 2371	23	Shale, gray, 60%; siltstone, as above, 40%
2371	- 2381	10	Shale, light-gray to gray, silty
2381	- 2423	42	Shale, gray; part of it may be silty
2423	- 2447	24	Shale, gray, 50%; siltstone, light-gray, of sandy nature, 50%
2447	- 2510	63	Siltstone, grayish-green, of sandy nature, with specks of siderite, 75%; shale, gray, 25%
2510	- 2598	88	Siltstone, grayish-green, shaly, 50%; shale, gray, 50%
2598	- 2608	10	Shale, gray, silty
2608	- 2618	10	Shale, gray, silty, as above, 95%; shale, brown, 5%
2618	- 2650	32	Shale, silty, as above, 90%; shale, gray, 10%
2650	- 2685	35	Shale, light-gray, silty, 75%; shale, dark-gray to gray, 25%
2685	- 2803	118	Shale, gray to light-gray, silty
2803	- 2805	2	Shale, gray, very slightly silty
2805	- 2845	40	Shale, as above, 50%; shale, dark-gray, 50%
2845	- 2869	24	Shale, dark-gray
2869	- 2936	67	Shale, gray, to dark-gray
2936	- 2948	12	Shale, gray to dark-gray, 80%; shale, light-gray, silty, of sandy nature, with specks of siderite, pyrite, and few flakes of chlorite, 20%
2948	- 2969	21	Shale, gray to dark-gray, very slightly silty
2969	- 2981	12	Shale, light-gray to gray, 95%; shale, light-gray, silty, of sandy nature, 5%
2981	- 2993	12	Shale, gray to dark-gray, 60%; shale, grayish-green, silty, 5%; shale, light-gray, silty, of sandy nature, with specks of pyrite, 35%
2993	- 3005	12	Shale, light-gray, very silty, of sandy nature, with specks of siderite, 70%; shale, dark-gray, 30%
3005	- 3030	25	Shale, gray, very silty, 50%; shale, gray to dark-gray, 50%



Top.	Bottom.	Thickness.	
3030	- 3060	30	Shale, dark-gray, 50%; shale, gray, 25%; shale, light-gray, very silty, of sandy nature, 25%
3060	- 3070	10	Shale, light-gray, 50%; shale, dark-gray, 20%; shale, light-gray, silty, of sandy nature, 30%
3070	- 3105	35	Shale, light yellowish gray, silty, 75%; shale, dark-gray, 25%
3105	- 3200	95	Shale, light-gray, very silty, of sandy nature, with specks of siderite and pyrite, 75%; shale, dark-gray, 25%
3200	- 3219	19	Shale, gray to light-gray, silty, 30%; shale, light-brown, 25%; shale, dark-gray, 45%
3219	- 3229	10	Shale, light-gray, very silty, of sandy nature, 60%; shale, gray, 25%; shale, dark-gray, 15%
3229	- 3320	91	Samples missing
3320	- 3331	11	Siltstone, very light gray, shaly, of sandy nature, 85%; shale, reddish-brown, silty, 15%
3331	- 3365	34	Shale, light-gray, 80%; siltstone, as above, 5%; shale, brown, 2%; shale, dark-gray, 3%
3365	- 3377	12	Shale, light-gray, 75%; shale, light-gray, silty, 15%; shale, brown, dense, 5%; shale, gray, 5%
3377	- 3464	87	Shale, light-gray, silty, 90%; shale, dark-gray, 10%
3464	- 3476	12	Shale, light-gray, eighty per cent. of which is silty
3476	- 3490	14	Shale, silty, as above, 85%; shale, gray, 15%
3490	- 3502	12	Shale, silty, as above, 60%; shale, light-gray, 20%; shale, dark-gray, very slightly silty, 20%
3502	- 3515	13	Siltstone, very light gray, shaly, of sandy nature, 75%; shale, gray to dark-gray, 25%
3515	- 3535	20	Shale, light-gray, partly silty, 80%; shale, gray to dark-gray, 20%
3535	- 3545	10	Shale, light-gray, silty, 70%; shale, light-gray, 20%; shale, gray, 10%
3545	- 3555	10	Shale, light-gray, very silty, 70%; shale, gray, 30%
3555	- 3595	40	Shale, light-gray, slightly silty, 80%; shale, dark-gray, 20%
3595	- 3622	27	Shale, light-gray to gray, 55%; shale, light-gray, silty, 30%; shale, gray to dark-gray, 15%
3622	- 3648	26	Shale, light-gray to gray, silty, 25%; shale, light-gray, 60%; shale, gray, 15%
3648	- 3662	14	Shale, light-gray, slightly silty, 50%; shale, dark-gray, 50%
3662	- 3694	32	Shale, gray, 55%; shale, light-gray, silty, 35%; shale, dark-gray, 10%
3694	- 3704	10	Shale, gray, 50%; shale, dark-gray, 50%
3704	- 3746	42	Shale, gray to dark-gray, 75%; shale, very light gray, silty, of sandy nature, 25%
3746	- 3768	22	Shale, gray to dark-gray, 80%; shale, gray, 20%
3768	- 3800	32	Shale, light-gray to gray, partly silty, 75%; shale, dark-gray, 25%
3800	- 3875	75	Shale, light-gray, 65%; shale, gray to dark-gray, 35%
3875	- 3886	11	Shale, light-gray to gray, partly slightly silty, 90%; shale, dark-gray, 10%
3886	- 3907	21	Shale, light-gray, 90%; shale, dark-gray, 10%
3907	- 3945	38	Shale, gray, 60%; shale, dark-gray, 40%
3945	- 3956	11	Shale, dark-gray, 70%; shale, gray, slightly silty, 30%
3956	- 3982	26	Shale, light-gray to gray, 50%; shale, gray, 50%

Top.	Bottom.	Thickness.	
3982	- 4004	22	Shale, light-gray, slightly silty, 50%; shale, grayish-green, silty, of sandy nature, 5%; shale, gray to very dark gray, 45%
4004	- 4014	10	Shale, light-gray, 55%; shale, dark-gray, 45%
4014	- 4035	21	Shale, light-gray, 60%; shale, light-gray, silty, of sandy nature, 15%; shale, dark-gray, 25%
4035	- 4047	12	Shale, light-gray, 90%; shale, dark-gray, 10%
4047	- 4065	18	Shale, light-gray
4065	- 4075	10	Shale, light-gray to gray, 50%; shale, reddish-brown, 50%
4075	- 4123	48	Shale, light-gray, 60%; shale, reddish-brown, 35%; shale, dark-gray, 5%
4123	- 4133	10	Shale, light-gray to gray, 80%; shale, dark-gray, 20%
4133	- 4167	34	Shale, light-gray, 50%; shale, dark-gray, 50%
4167	- 4184	17	Shale, dark-gray, 80%; shale, gray, 20%
4184	- 4196	12	Shale, gray to light-gray, 85%; shale, dark-gray, 15%
4196	- 4225	29	Shale, light-gray to gray, 80%; shale, light-gray, silty, 15%; shale, dark-gray, 5%
4225	- 4233	8	Shale, gray, very slightly silty, 90%; shale, gray to dark-gray, 10%
4233	- 4270	37	Shale, gray, 85%; shale, dark-gray, 15%
4270	- 4282	12	Shale, light-gray, 90%; shale, light-gray, silty, 10%
4282	- 4314	32	Shale, gray, 80%; shale, dark-gray, 20%
4314	- 4332	18	Shale, gray, 95%; shale, dark-gray, 5%
4332	- 4341	9	Shale, gray to light-gray, 85%; shale, light-brown, 10%; shale, light-gray, silty, with specks of siderite, very faintly effervescent, 5%
4341	- 4350	9	Shale, gray, 95%; shale, light-gray, partly silty, 5%
4350	- 4363	13	Shale, gray, 90%; shale, gray to dark-gray, 10%
4363	- 4381	18	Shale, dark-gray, 50%; shale, gray, slightly silty, 50%
4381	- 4391	10	Shale, gray, 95%; shale, dark-gray, 5%
4391	- 4441	50	Shale, gray, 90%; shale, dark-gray, 10%
4441	- 4451	10	Shale, gray, 97%; shale, dark-gray, 3%
4451	- 4462	11	Shale, gray, 90%; shale, light-gray, silty, 10%
4462	- 4515	53	Shale, gray, very slightly silty, in part, 80%; shale, gray to dark-gray, 20%
4515	- 4552	37	Shale, light-gray to gray, 90%; shale, dark-gray, 10%
4552	- 4572	20	Shale, light-gray to gray
4572	- 4663	91	Shale, light-gray, very slightly silty, 80%; shale, dark-gray, 20%
4663	- 4685	22	Shale, light-gray, 95%; shale, dark-gray, 5%
4685	- 4768	83	Shale, as above; light-gray, 80%; dark-gray, 20%
4768	- 4910	152	Shale, light-gray, 90%; shale, dark-gray, 10%
4910	- 4952	42	Shale, dark-gray
4952	- 4966	14	Shale, dark-gray, 50%; shale, gray, 50%
4966	- 4990	24	Shale, gray, 75%; shale, dark-gray, 25%
4990	- 5030	40	Shale, dark-gray
5030	- 5041	11	Shale, dark-gray, 90%; shale, gray, 10%
5041	- 5051	10	Shale, dark-gray, 50%; shale, gray, 50%
5051	- 5115	64	Shale, dark-gray, 75%; shale, gray, 25%
5115	- 5127	12	Samples missing
5127	- 5138	11	Shale, dark-gray, 95%; shale, gray, 5%
5138	- 5148	10	Samples missing
5148	- 5157	9	Shale, gray to dark-gray, slightly calcareous
5157	- 5165	8	Shale, gray
5165	- 5175	10	Shale, gray, 70%; shale, dark-gray, 30%
5175	- 5195	20	Shale, dark-gray, 90%; shale, gray, 10%
5195	- 5217	22	Shale, dark-gray, 95%; shale, light-gray, silty, 5%

Top.	Bottom.	Thickness.	
5217	- 5228	11	Shale, dark-gray
5228	- 5235	7	Shale, dark-gray, 90%; shale, gray, 10%
5235	- 5240	5	Shale, dark-gray, 90%; shale, gray, 3%; shale, light-gray, slightly silty, 7%
5240	- 5260	20	Shale, dark-gray, pyritiferous, in places, 85%; shale, light-gray, 15%

(TO BE CONTINUED WHEN OTHER SAMPLES RECEIVED)