

12/7/51



Solvay Salt Well No. 1,
or
Ohio Valley Industrial Corporation No. 1 Well.

Clay District, Marshall County, W. Va .

By Solvay Process Division, Allied Chemical and Dye Corporation,
Syracuse, N. Y.

Located 0.9 mile south of 39° 55' and 2.98 miles W. of 80° 45'

Clarrington Quadrangle - EC

Permit - Marshall 221

Drilling commenced June, 1951; completed November, 1951

Elevation - 639.23 L

Well was not shot

✓ Dry in Oriskany

Coal was encountered at 90'

Rock salt at 6415 to 6495; 6496½ to 6501'; 6521 to 6551'

Section based on samples from 383' to 6566'; examined by Russell R. Flowers.

Top	Bottom	Thickness	
0	383	383	No samples taken. Pittsburgh coal at 90'
			Conemaugh, Allegheny, and Pottsville Formations, 694, plus feet
383			<hr/>
383	390	7	Siltstone and shale; greenish-gray to dark greenish gray, highly calcareous in part and a little varicolored limestone; some red clay-shale and shale
390	400	10	Clay-shale and clay with limestone nodules, varicolored (greenish, brownish, and reddish); some grayish-black shale; trace of coal (probably at the bottom since the next sample was labelled (coal 1')); small amount of pyrite
400	408	8	Some coal, and black, highly carbonaceous shale; siltstone and some shale, Greenish-gray to dark greenish gray, sideritic in part; some dark gray to grayish-black shale; scattered varicolored limestone nodules; small amount of dusky yellowish brown siderite; small amount of pyrite
408	414	6	✓ Clay shale and clay, moderate olive brown intermixed with reddish-gray to very dusky red and blackish-red with pale-brown to light olive gray limestone nodules, silty
414	424	10	← Clay-shale, grayish-red to very dusky red and dusky-brown; clay, light- to medium-gray and greenish gray, some dark gray to grayish-black, some moderate olive brown to reddish-gray, contains varicolored limestone nodules
424	452	28	Siltstone and shale (silty), medium-gray to dark greenish gray, some light-gray at the top, highly chloritic and micaceous, highly sideritic (mostly spherulites), mostly shale in the lower part
452	459	7	Sandstone (very fine) to siltstone and some shale, medium-light to medium dark gray and dark greenish gray, highly chloritic and micaceous, sideritic in part
459	483	24	Shale and siltstone, medium dark gray (with greenish cast), highly chloritic and micaceous, sideritic, some dark yellowish brown (highly sideritic) at the bottom; some light- to medium-gray sandstone
483	506	23	Shale (silty) and siltstone (very shaly), dark-gray to grayish-black, carbonaceous and sideritic

506	513	7	Shale, dark-gray to grayish-black (somewhat lighter than the above interval), silty
513	522	9	Shale, dark-gray to grayish-black, somewhat pyritic; small amount of dark to dusky yellowish brown, shaly siderite
522	527	5	Shale, greenish-black to black, carbonaceous, fossiliferous (pyritized and calcified), pyritic; trace of coal; some medium dark to dark-gray shale
527	537	10	✓ Clay, medium dark gray with carbonaceous specks; small amount of light-gray to greenish-gray shale, sideritic in part
537	545	8	Shale, light olive gray to greenish-gray, siliceous, hard with conchoidal fracture (Ganister?), sideritic in part (spherulites)
545	552	7	Shale, medium dark gray to dark greenish gray, with sideritic spherulites
552	558	6	✓ Clay, medium- to medium dark gray, some medium gray to greenish-gray and dark greenish gray, very sandy with some argillaceous sandstone; some light greenish gray to light olive gray, siliceous shale (cavings?)
558	568	10	✓ Clay, medium dark to dark-gray and dark greenish gray with black (carbonaceous) specks; sideritic in part
568	574	6	Sandstone, light- to medium-gray, fine- to medium-grained, very shaly to a very sandy shale; some moderate to dark yellowish brown, very sandy sideritic; a large amount of medium- to dark-gray shale
574	625	51	Sandstone, very light to light-gray, fine- to medium-grained, some coarse grains, subrounded, some secondary crystal facets; some medium to medium dark siltstone and shale, micaceous
625	630	5	✓ Siltstone, light-gray, micaceous, sideritic (speckled with tiny dark brown spherulites), pyritic in part, waxy (very fine) in part; small amount of dark-gray to grayish-black shale; trace of black, "coaly", pyritic shale
630	640	10	✓ Sandstone, light greenish gray to light-gray, fine- to medium-grained, chloritic and micaceous; a large amount of siltstone and shale, medium- to medium dark gray, micaceous; a large amount of medium-gray to dark yellowish brown, highly calcareous siltstone to silty limestone; small amount of dark yellowish brown, shaly siderite
640	658	18	Shale, olive-gray to dusky yellowish brown and grayish black, very highly calcareous; some light olive gray to greenish-gray (some siderite spherulites) and dark-gray to grayish-black (calcareous in part) shale in the lower part
658	665	17	✓ Some coal and some dark-gray to black, carbonaceous shale; most of this sample is a clay-shale or clay, medium- to medium dark gray
665	673	8	Siltstone to sandstone (very fine), medium-gray some brownish-gray (siderite specks) and some dusky yellowish brown (very highly sideritic), very highly micaceous; some medium-gray shale to very fine siltstone
673	687	14	Sandstone, light- to medium-gray (salt and pepper), some brownish-gray and dark-gray, very fine grained, very highly micaceous (both biotite and muscovite)

687	698	11	✓ Shale, dark-gray to grayish-black, micaceous, speckled with dark-yellowish brown siderite, some carbonaceous streaks; some medium- to dark-gray siltstone, sideritic in part
698	708	10	Coal, a moderate amount, pyritic in part; a large amount of dark-gray to black (carbonaceous) shale; a large amount of light-gray to light olive gray, very highly argillaceous, very fine sandstone; some olive-gray to dark-gray, sandy clay-shale
708	718	10	Some coal and black, highly carbonaceous shale; a moderate amount of dark-gray to grayish-black shale; some medium dark gray clay to a medium light gray, very highly argillaceous sandstone (very fine to fine); a very large amount of sandstone, very light to light-gray (slightly dolomitic), some moderate yellowish brown (highly sideritic) with dusky-brown siderite spots, fine- to medium-grained
718	729	11	✓ Sandstone, very light gray, fine- to coarse-grained, subrounded, some very coarse grains; some of the grains have secondary crystal facets
729	738	9	Shale, dark-gray to grayish-black with some black (carbonaceous); a moderate amount of olive-gray to medium dark gray shale, sideritic, highly sideritic in part, silty, some dark-gray to grayish-black, very silty and sandy shale; a small amount of light- to medium-gray, very fine sandstone
738	745	7	✓ Siltstone to very fine sandstone, light- to medium-gray, micaceous, shaly; some olive-gray to brownish-gray, silty and sandy shale to a highly argillaceous, silty sandstone; a large amount of dark-gray to grayish-black shale; a little black (carbonaceous)
745	772	27	✓ Sandstone, very light to light-gray (with brownish-gray, siderite spots), fine- to medium-grained, subrounded, contains kaolinitic and chloritic material, somewhat micaceous, more sideritic at top
772	807	35	✓ Sandstone, very light gray, fine- to coarse-grained, subrounded to rounded, some very coarse grains to granules at 780 to 790', contains a little mica and chlorite, small amount is highly sideritic (dusky yellowish brown) at the bottom; some dark-gray to black (highly carbonaceous) shale streaked with coal at the bottom
807	850	43	✓ Sandstone (graywacke), light-gray, fine- to medium-grained, some coarse grains, mostly very fine to fine at the bottom, micaceous and chloritic, some shale grains; some medium dark gray, very highly micaceous, somewhat carbonaceous, shaly siltstone at the top; a very large amount of dark yellowish brown to light olive black gray, silty shale and some dusky yellowish brown, shaly siderite at the bottom
850	861	11	Sandstone, (very fine) to siltstone, medium light to medium dark gray, highly micaceous, chloritic, speckled with dusky yellowish brown siderite, some pieces are highly sideritic; some light olive gray to a medium-gray, silty shale
861	869	8	Sandstone, light- to medium-gray, very fine grained, micaceous; siltstone, medium dark to dark-gray, micaceous, shaly; small amount of dusky yellowish brown, shaly siderite
869	879	10	Shale and siltstone (shaly), medium dark to dark-gray and dusky yellowish brown (sideritic); some light- to medium-gray, very fine sandstone; small amount of coal and blackish (highly carbonaceous) shale

879	890	11	Shale, and clay-shale, light olive gray to dark yellowish brown (with many large siderite spherulites); a large amount of dark-gray, silty shale; small amount of black, highly carbonaceous shale
890	905	15	✓ Siltstone to shale, medium dark to dark-gray, highly speckled and spotted with dark yellowish brown siderite, sandy (very fine) in part, highly micaceous, somewhat carbonaceous; a moderate amount of coal and black, highly carbonaceous shale in the lower part
905	923	18	Shale, dark-gray, micaceous, silty in the upper part; some dark to dusky yellowish brown, shaly siderite in the lower part
923	932	9	✓ Some black, coaly shale; a large amount of medium dark gray to grayish-black shale; clay-shale and shale olive-gray to dark-gray and dark to dusky yellowish brown (highly sideritic), some of this shale has siderite/spherulites; a large amount of clay-shale, light olive gray to dark yellowish brown, sandy in part to a highly argillaceous sandstone, speckled with siderite spherulites
932 925	940	8	✓ Sandstone, yellowish-gray to light olive gray, somewhat argillaceous, contains scattered siderite spherulites; a large amount of clay-shale, light olive gray to olive-gray, dusky yellowish brown to dark-gray and grayish-black
940	948	8	Clay-shale, light olive gray to olive-gray and dark yellowish brown, contains some siderite spherulites; some dark-gray to grayish-black shale
948	955	7	Clay-shale, light olive gray to olive-gray and medium-gray, sideritic to highly sideritic (spherulites); shale, medium dark gray to grayish-black, some black
955	964	9	✓ Shale, grayish-black to black ("coaly"); a very large amount of shale and siltstone, light to olive-gray, sideritic in part, sandy in part to argillaceous sandstone (very fine)
964	971	7	Shale, dark-gray to grayish-black, silty in part; some light olive gray to olive-gray, sideritic shale and siltstone
971	978	7	Shale, dark-gray to grayish-black; a large amount of light olive gray to olive-gray shale and siltstone; some dark to dusky yellowish brown, shaly siderite
978	1002	24	Siltstone, dark-gray to grayish-black, very shaly, highly micaceous, somewhat carbonaceous, slightly sideritic; some light olive gray to olive-gray, sideritic (spherulites) shale and siltstone
1002	1020	18	✓ Sandstone, light to medium light gray, fine-grained, very fine to fine at the top, some medium grains in the middle, mostly very fine grained at the bottom, subangular to subrounded, argillaceous, some chlorite and mica; somewhat sideritic at the top and bottom
1020	1038	18	Siltstone, medium- to dark-gray, very shaly with black, carbonaceous streaks, micaceous, sideritic in part
1038	1059	21	✓ Siltstone to sandstone (very fine), light- to medium-gray (with dark-gray, shaly streaks and black, carbonaceous material), somewhat micaceous and chloritic; moderately sideritic (speckled with yellowish-brown siderite)

- 1 059 1071 12 Sandstone, light gray, fine-grained, subangular to to subrounded, many secondary crystal facets, contains medium- to dark-gray shaly and silty streaks that are micaceous, sideritic and somewhat carbonaceous
- 1071 1077 6 Sandstone, very light to light-gray, fine- to medium-grained, subrounded with many secondary crystal facets, some medium- to dark-gray, silty and shaly streaks with carbonaceous and sideritic material

Greenbrier Limestone, 48 Feet.

- 1077 1094 17 Limestone, light olive gray, somewhat argillaceous; slightly silty and sandy
- 1094 1103 9 Limestone, light olive gray to brownish-gray, silty, somewhat argillaceous, slightly sandy, very fine to subcrystalline
- 1103 1113 10 Limestone, pale yellowish brown to brownish-gray, very sandy to a highly calcareous sandstone, very fine to medium-grained, rounded to well rounded; much of the sample is sand-centered oolite
- 1113 1117 4 Limestone, dark yellowish brown to brownish-black; somewhat silty and sandy, slightly cherty; small amount of light-gray to brownish-gray, dolomitic, calcareous sandstone
- 1117 1125 8 Limestone, pale yellowish brown to olive gray, sandy and silty; sandstone, very light gray to light brownish gray, very fine to medium-grained, rounded, very highly calcareous, dolomitic, some dark yellowish brown limestone at the bottom

Pocono Formation, 640 Feet.

- 1125 1134 9 Siltstone to sandstone (very fine), medium-gray to dark greenish gray, contains some very coarse quartz grains to granules, speckled with dark-brown siderite (sphenulites), calcareous in part
- 1134 1161 27 Sandstone, light-gray, very fine to fine-grained, subangular to subrounded, fine-grained at the top, many of the grains show secondary crystal facets, slightly calcareous, somewhat sideritic; some light-gray to greenish-gray siltstone to very fine sandstone
- 1161 1183 22 Siltstone and shale, dark greenish gray to medium dark gray to grayish-black; sandstone, light- to medium-gray, very fine to fine-grained
- 1183 1205 22 Sandstone, very light gray, light-gray at the top, very fine to fine-grained, some medium to very coarse grains; some medium-dark to dark-gray siltstone and grayish-black to black shale
- 1205 1288 83 Sandstone, white to very light gray, 1205 to 1229 fine- to medium-grained with coarse to very coarse grains, 1229 to 1238 very fine to medium-grained (some coarse grains), ~~1258 to 1273~~ 1238 to 1273 very fine to fine with some medium grains, 1273 to 1288 conglomerate (fine to very coarse, some granules), subrounded with larger grains rounded, many secondary crystal facets scattered throughout; this sandstone as a whole is quartzose
- 1238 1323 35 Sandstone, very light to light-gray, fine-grained, subangular (with many secondary crystal facets), some very fine grains, very fine to fine at 1213 to 1323, some medium to coarse grains at the top, many shale (dark-gray) grains, a little chlorite and mica; a small amount of dark-gray siltstone and shale at 1292 to 1298

1323	1338	15	✓ Sandstone, light gray, very fine to fine-grained, subangular, contains shale fragments, some mica and chlorite, and some carbonaceous material; some medium- to dark-gray, micaceous shale and siltstone with carbonaceous and sideritic spots and streaks in the lower part
1318	1366	48	✓ Sandstone, very light to light-gray, very fine to fine-grained, subrounded to subangular (with many of the quartz grains showing crystal facets), contains scattered shale grains, a little carbonaceous and sideritic material; contains micaceous, carbonaceous and sideritic material and some siderite (cement, lumps and streaks) at bottom
1366	1384	18	✓ Sandstone, very light to light-gray, very fine grained, with scattered bands of carbonaceous material and siderite in the lower part; some medium dark to dark-gray, silty shale at the bottom
1384	1396	12	Sandstone, very light gray, very fine to fine-grained, a few scattered grains of siderite and shale; some medium dark to dark-gray shale and siltstone
1396	1401	5	Shale and siltstone, medium dark to dark-gray (micaceous) some dark to dusky yellowish brown (highly sideritic)
1401	1420	19	✓ Shale, medium dark to dark-gray, some olive-gray (highly calcareous), to dark yellowish brown (highly sideritic); siltstone, light to medium-gray in the upper part, medium dark gray (calcareous) to dark yellowish brown (highly sideritic) in the lower part
1420	1445	25 ²	✓ Shale, and siltstone, medium dark to dark-gray, some dark yellowish brown (highly sideritic)
1445	1487	42	✓ Siltstone, medium to medium dark gray (with greenish to olive cast); shale, medium dark to dark-gray
1487	1504	17	✓ Shale, mostly dark gray, silty
1504	1521	17	Siltstone, medium-gray, calcareous in part, some medium dark to dark-gray in the upper part; a large amount of medium dark to dark-gray siltstone and shale
1521	1537	16	Siltstone, medium-gray to shale, dark-gray
1537	1544	7	Siltstone to sandstone (very fine), light- to medium-gray; some shale, medium-dark to dark-gray, silty
1544	1560	6 or 16?	Shale, medium dark gray (silty) to dark-gray; some medium- to medium dark gray siltstone
1550	1576	26	✓ Sandstone (very fine) to siltstone, light-gray with some medium-gray (shaly) streaks, kaolinitic, with some mica and some carbonaceous specks; a large amount of medium dark gray siltstone to dark-gray, silty, shale at the bottom
1576	1585	9	Siltstone, light- to medium-gray (with some dark-gray, shaly streaks); some medium dark gray siltstone to dark-gray shale
1585	1591	6	Shale, dark-gray, silty; siltstone, light-gray to medium dark gray (shaly)
1591	1669	78	✓ Siltstone, medium to medium dark gray (with some dark-gray, shaly streaks); shale, medium dark to dark-gray, some dark yellowish brown (highly sideritic)

1669	1750	81	✓ Siltstone, medium dark gray, to shale, dark-gray (most of the siltstone and shale has brownish cast); a large amount of medium-gray siltstone at 1701 to 1712, the shale is somewhat darker at the bottom
1750	1765	15	✓ Shale, grayish-black, some grayish-black to black, somewhat carbonaceous (Sunbury shale); sandstone, light-gray, very fine grained, silty with some fine grains, kaolinitic, pyritic in part (Berea sandstone); some siltstone and shale, medium to medium dark gray
<u>Devonian Shales, 3803 Feet.</u>			
1765	1774	9	Siltstone and shale, medium- to dark-gray
1774	1808	34	✓ Siltstone, dark greenish gray to medium dark gray; shale, medium dark gray to dark-gray and olive-black, some olive-black to brownish-black at 1786 to 1800, mostly siltstone at the bottom. Casing point at 1808
1808	1835	27	✓ Siltstone, dark greenish gray to olive-gray and medium dark gray, some olive-black to brownish-black; shale and siltstone, dusky-brown to brownish-black
1835	1870	35	Shale, dusky-brown to brownish-black, very silty, micaceous; some olive-gray to medium dark gray siltstone
1870	1880	10	Siltstone, brownish-gray to dusky-brown, some olive-gray, some brownish-black, dolomitic in part; some medium dark gray to brownish-black and dusky-brown
1880	1894	14	Shale and siltstone, dusky-brown to brownish-black, some medium dark gray to olive-black
1894	1905	11	Siltstone to shale, medium dark and dark-gray, some olive-gray (sideritic) to dark yellowish brown (highly sideritic)
1905	1909	4	✓ Siltstone, medium dark gray, some dark greenish gray; shale, dark-gray, silty in part
1909	1931	22	Shale and siltstone, dusky-brown, some dusky-brown to brownish-black, some medium- to dark-gray and dark greenish gray
1931	1973	42	Siltstone and some shale, medium dark to dark-gray, some dark greenish gray to olive-black, some brownish-gray to dusky-brown; some light- to medium-gray siltstone at the top
1973	1985	12	✓ Siltstone, and some shale, medium to medium dark gray and dark greenish gray, some dark-gray
1985	2005	20	20 Shale, dusky-brown to brownish-black; siltstone and shale, medium dark gray to dark greenish gray and olive-black
2005	2020	15	✓ Sandstone, light-gray to light olive gray, very fine grained, slightly calcareous and dolomitic; siltstone and shale, medium dark to dark-gray, some dark greenish gray to olive-black, some brownish-black to dusky-brown
2020	2037	17	Siltstone and shale, dusky-brown to brownish-black (a large amount at the top), dark-gray (a large amount at the bottom)
2037	2052	15	✓ Siltstone and shale, medium dark to dark-gray, some dark greenish gray to olive-black; some light to medium-gray siltstone
2052	2074	22	✓ Siltstone and shale, brownish-gray to dusky-brown, medium to medium dark gray; some siltstone, light-gray to pale-brown and light olive gray

2074	2080	6	✓ Siltstone to sandstone (very fine), light- to medium-gray, calcareous in part; shale and siltstone, medium dark to dark-gray, brownish-gray to dusky-brown, some olive-black to brownish-black
2080	2090	10	Siltstone, and shale, medium dark to dark-gray, some dark greenish gray
2090	2101	11	✓ Siltstone and shale (silty), dusky-brown to brownish-black, medium dark to dark-gray, some medium dark gray to dark greenish gray, micaceous and chloritic
2101	2113	12	Shale, medium dark gray, some brownish-gray to dusky-brown; siltstone, dark greenish gray to olive-black
2113	2134	21	Shale, medium dark to dark-gray, some dusky-brown to brownish-black in the upper part; some medium dark gray to dark greenish gray siltstone; some light-gray, silty, very fine sandstone in the lower part
2134	2139	5	✓ Shale, medium dark gray, some dark-gray; some medium dark gray to dark greenish gray siltstone to sandstone (very fine)
2139	2165	26	✓ Shale and siltstone, medium dark to dark-gray, small amount of dusky-brown to brownish-gray at the top; some light to medium gray and dark greenish gray, silty sandstone at the top and bottom
2165	2190	25	Sandstone, light- to medium-gray with dark-gray (shaly) streaks, very fine grained, calcareous in part; some dark-gray, sandy shale in the lower part
2190	2220	30	✓ Shale and siltstone, dusky-brown, some dusky-brown to brownish-black, medium dark gray to dark greenish gray and olive-gray; some light- to medium-gray, silty, somewhat dolomitic, very fine sandstone at top
2220	2238	18	✓ Siltstone, light- to medium-gray, dolomitic; siltstone and shale, medium dark to dark-gray, some dusky-brown, a little dark greenish gray
2238	2260	22	Shale and some siltstone, medium- to dark-gray, some olive-gray to dark yellowish brown (highly sideritic) in the upper part
2260	2277	17	Siltstone, to sandstone (very fine), medium-gray to greenish-gray, some dark greenish gray, calcareous in part; a large amount of shale and siltstone, medium dark to dark-gray; some dusky-brown to reddish-gray and brownish-black in the lower part
2277	2311	34	Siltstone and shale, dusky-brown to brownish-gray and brownish-black, some medium dark gray to olive-gray and dark greenish gray, highly calcareous in part, micaceous
2311	2349	38	✓ Siltstone, dark greenish gray to olive-gray and medium dark gray; a large amount of shale, medium dark gray to olive black, some dusky-brown to brownish-black
2349	2391	42	✓ Siltstone and some shale, medium- to medium dark gray, medium dark gray to dark greenish gray, some dark-gray, calcareous in part
2391	2410	19	✓ Siltstone and some shale, medium- to dark gray and dark greenish gray; some medium dark to dark-gray and olive-black shale, less green in the lower part
2410	2757	³⁴⁷ 317	✓ Siltstone, medium- to medium dark gray (some of the siltstone has greenish cast); moderate to large amounts of medium dark to dark-gray shale
2757	2776	19	✓ Siltstone, medium-gray to light olive gray and greenish-gray, some medium dark gray to olive-black (shaly)

- 2776 2797 21 ✓ Siltstone, medium- to medium dark gray; some shaly siltstone, brownish-gray to olive-black
- 2797 2830 33 ✓ Siltstone and shale, medium- to medium dark gray (with greenish cast), some dark-gray, sandy in part
- 2830 2917- 87 ✓ Siltstone, medium- to medium dark gray, shale, brownish-gray to brownish-black, very silty
- 2917 3092 175 ✓ Siltstone and shale, medium dark gray to olive-gray and brownish-gray, some brownish-black in the upper part, a moderate amount of brownish-black from 2981 to 3092
- 3092 3157 65 ✓ Siltstone, medium- to medium dark gray, some light-gray; some shale, medium dark to dark-gray, a little olive-black to brownish-black (a moderate amount at the bottom)
- 3157 3272 115 ✓ Siltstone, medium- to medium dark gray; a large amount of silty shale, dark-gray to olive- and brownish-black; less dark shale from 3223 to 3272
- 3272 3592 320 ✓ Siltstone and some sandstone (very fine), medium- to medium dark gray; some shale; medium dark to dark-gray and olive-gray, a small amount of brownish-black, some brownish-black at 3337 to 3350 and 3459 to 3568, some brownish-gray from 3539 to 3577
- 3592 3618 26 ✓ Shale, medium- to dark-gray, some grayish-black; siltstone, medium- to medium dark gray
- 3618 3635 17 Siltstone and shale, medium- to dark-gray, some grayish-black
- 3635 3701 66 ✓ Siltstone, medium light to medium dark gray; some medium dark gray to grayish-black shale
- 3701 3731 30 ✓ Siltstone and shale, medium- to medium dark gray; some dusky-gray to grayish-black shale (with some plant spores) at the top to a large amount at the bottom
- 3731 3873 142 ✓ Shale, dark-gray to brownish- and grayish-black (containing many black plant spores), some brownish-black to black; a large amount of shale and siltstone to very fine sandstone, olive-gray to medium dark gray, some brownish-gray at 3885 to 3860
- 3873 4232 359 ✓ Siltstone and shale, medium- to medium dark gray, some olive-gray; a moderate to large amount of dark-gray to brownish- and grayish-black shale (with some plant spores), a moderate amount from 3988 to 4083; a large amount of brownish-black to black shale at 4208 to 4225
- 4232 4435 203 ✓ Siltstone and shale, medium- to medium dark gray, medium dark gray to dark greenish-gray; a large amount of dark-gray to grayish-black shale at 4274 to 4284, some at 4370 to 4382, a large amount at 4391 to 4397 and 4425 to 4435
- 4435 4743 308 Shale and siltstone, medium dark to dark-gray, medium dark gray to dark greenish gray, some olive-gray; a large amount of dark-gray to grayish-black shale at 4533 to 4544, some at 4622 to 4647, a large amount at 4647 to 4675
- 4743 4820 77 Siltstone and shale, medium- to dark-gray, some olive-gray, a large amount of dark-gray to grayish- black and black at 4783 to a moderate amount at 4803, a large amount of brownish black to black at the bottom
- 4820 4925 105 Shale and siltstone, medium dark to dark-gray, some olive-gray to medium dark gray

4925	5055	130	Shale and some siltstone, medium dark to dark-gray, olive-gray; a moderate amount of grayish-black to black
5055	5148	93	Shale, grayish-black to black, olive-gray to brownish-gray and medium dark gray; pyritic in part
5148	5296	148	Shale, brownish-black to black, somewhat calcareous
5296	5306	10	Shale, medium dark gray to brownish-black
5306	5344	38	Shale, medium dark to dark-gray, some grayish-black, some brownish-black at the bottom
5344	5393	49 ^{Mark}	Shale, brownish-black to black, medium dark gray to dark brownish gray
5393	5407	14	Shale, dark-gray to brownish-black, some black
5407	5436	29	Shale, brownish-black to black, carbonaceous, highly calcareous in part
5436	5443	7	Shale, black, highly carbonaceous, calcareous in part
5443	5473	30	Shale, black (carbonaceous), some brownish-black (at the top) to a large amount at the bottom; some medium dark gray to olive-gray, shaly limestone to calcareous shale; small amount of pyrite scattered throughout
5473	5492	19 ^{Sh}	Shale, brownish-gray to brownish-black, some black (highly carbonaceous), calcareous, with a small amount of shaly limestone
5492	5536	44	Shale, black, some brownish-black to black, highly carbonaceous, somewhat pyritic
5536	5548	12	Shale, black, highly carbonaceous, calcareous in part; a very small amount of dark-brown to brownish-black, micaceous shale (metabentonite)
5548	5568	20	Depth correction
<u>Huntersville Chert, 207 Feet.</u>			
5568	5584	16	Limestone, brownish-gray to brownish-black, very cherty (white to dark-gray); a very large amount of black and brownish-black shale cavings
5584	5586	2	Shale, brownish-black, highly siliceous to chert, light-gray to brownish-gray, highly calcareous
5586	5622	36	Limestone to chert (calcareous), brownish-gray to brownish-black (very shaly), much of the chert is light- to medium-gray (chalcedonic to ordinary); some dark-gray to brownish-black, somewhat glauconitic siltstone at 5615 to 5618; more highly siliceous and darker at the bottom
5622	5649	27	Limestone (silicified, very shaly) to chert (calcareous), shaly, brownish-black to dark-gray, somewhat dolomitic; some very light (chalcedonic, spicular) to medium-gray chert; mostly brownish-gray to brownish-black and dolomitic in the lower part
5649	5665	16	Limestone, brownish-gray with light-gray spots, some brownish-black, very shaly and very cherty
5665	5680	15	Limestone (silicified) to chert (highly calcareous), brownish-gray to brownish-black, some light to medium-gray, slightly dolomitic
5680	5712	32	Chert, light-gray to medium-gray and brownish-black, highly calcareous, silicified shale

- 5712 5719 7 Chert to siltstone, medium- to dark-gray (somewhat shaly), some light-gray, highly calcareous, glauconitic in the lower part
- 5719 5727 8 Limestone, medium-gray to brownish-gray and brownish-black, very shaly, cherty
- 5727 5733 6 Limestone (silty) to siltstone (calcareous), medium- to dark-gray, very shaly and very cherty, glauconitic with some brown detrital material (collophane?)
- 5733 5748 15 Chert, light- to medium-gray and brownish-gray, calcareous in part; limestone (to calcareous chert), dark-gray to brownish-black, somewhat shaly
- 5748 5755 7 Chert, medium dark gray to brownish-gray, some light- to medium-gray, calcareous; some dark-gray to brownish-black, shaly limestone to calcareous siltstone
- 5755 5760 5 Limestone, (very silty and shaly) to calcareous chert, dark-gray to brownish-black, some medium-gray to brownish-gray, somewhat glauconitic, some of the light chert is spicular
- 5760 5770 10 Chert, light-gray, (chalcedonic, spicular) to medium-gray and brownish-gray (calcareous), some dark-gray to brownish-black (very shaly, very highly calcareous)
- 5770 5775 5 Shale, dark-gray to grayish-black, very sandy (fine- to medium-grained, rounded) silty, very highly glauconitic; a large amount of light- to dark-gray, calcareous chert

Oriskany Sandstone, 46 Feet.

- 5775 5778 3 Sandstone, very light gray, fine- to coarse-grained, quartzose, rounded to well rounded, highly calcareous; some very light gray to medium-gray and brownish-gray very sandy limestone at the top
- 5778 5790 12 Sandstone, white to very light gray, fine- to medium-grained, some coarse grains at the top, quartzose, rounded, calcareous
- 5790 5797 7 Sandstone, very light gray, very fine to fine-grained, subrounded to rounded, quartzose
- 5797 5804 7 Sandstone, very light to light-gray, some medium-gray, very fine to fine-grained, subrounded to rounded, calcareous, very highly calcareous at the bottom
- 5804 5810 6 Sandstone, light-gray to brownish-gray, some medium- to dark-gray (somewhat shaly), very fine to fine-grained, subrounded to rounded, highly calcareous
- 5810 5813 3 Sandstone (very highly calcareous) and some limestone (very sandy), medium- to dark-gray, mostly very fine grained, some shaly material
- 5813 5817 4 Sandstone, medium-gray to brownish-gray with grayish-black shaly streaks, very fine grained, some fine grains, very highly calcareous
- 5817 5821 4 Sandstone, light-gray, some medium- to dark-gray (somewhat shaly), very fine grained with a few fine to medium, rounded grains, highly calcareous

Helderberg Formation, 297 Feet.

- 5821 5826 5 Sandstone, medium-gray (with dark-gray, shaly streaks), very fine grained, very highly calcareous, silty

5826	5849	23	Sandstone (very fine) to siltstone, medium- to dark-gray, some grayish-black (very shaly), very highly calcareous, slightly cherty, contains some fossil fragments and a trace of glauconite
5849	5861	12	Siltstone to shale, dark-gray to brownish-black, very highly calcareous, somewhat cherty, less shale and more siltstone in the lower part
5861	5871	10	Siltstone to very fine sandstone, medium- to dark-gray, some grayish-black (shaly) in the upper part, a large amount of brownish-black in the lower part, highly calcareous, very highly calcareous toward the bottom
5871	5880	9	✓ Limestone, light- to medium/dark gray, very sandy with some highly calcareous sandstone, very fine to fine-grained (rounded), very little sand at the bottom
5880	5889	9	✓ Limestone, light- to medium-gray, some dark-gray; a large amount of grayish-olive to olive-gray; light olive gray, some grayish-olive and sandy black in the lower part
5889	5894	5	Limestone, light- to medium-gray, very sandy (mostly very fine)
5894	5904	10	Limestone, light-to medium-gray, very sandy (mostly very fine)
5904	5915	11	✓ Limestone, medium- to medium dark gray, a large amount of light-gray (very cherty), very sandy (very fine) and cherty in the upper part, sandy and very cherty in the lower part
5915	5929	14	Limestone, medium-gray with light-gray spots, some dark-gray (silty), very sandy (very fine), cherty, (mostly interstitial chert)
5929	5939	10	✓ Chert, (calcareous) to limestone (very cherty), medium-gray, some dark-gray, silty and sandy (very fine)
5939	5948	9	Limestone, medium- to dark-gray, sandy (very fine) and silty at the top to very silty at the bottom, very cherty
5948	5950	2	✓ Chert (calcareous) to shale (highly silicified), highly calcareous, dark-gray to brownish-black, some grayish-black, silty in part
5950	5968	18	Chert (calcareous) to cherty siltstone and shale (highly calcareous) to limestone (very silty) medium- to dark-gray, some grayish-black, some light-gray, glauconitic in part
5968	5989	21	Limestone, (very silty) to chert (calcareous), medium dark to dark-gray, some light-gray, argillaceous; mostly medium-gray in the lower part
5989	5993	4	Limestone (very silty) to chert (highly calcareous in part), light- to medium-gray, some dark-gray
5993	6020	27	Limestone (very silty) to a highly calcareous siltstone and calcareous chert, medium- to dark-gray, some light-gray, somewhat shaly in the lower part
6020	6032	12	Limestone (very shaly) to shale (highly calcareous), brownish-black to grayish-black, cherty
6032	6040	8	Limestone, medium dark to dark-gray, some grayish-black (shaly), very silty, sandy (very fine), cherty
6040	6056	16	Limestone, brownish-gray to dark-gray, sandy at the top to very sandy (very fine) at the bottom, slightly shaly
6056	6066	10	Limestone, brownish-black at the top to brownish-gray at the bottom, very shaly, cherty

6066	6090	24	Limestone, brownish-gray to dark-gray, shaly, cherty and somewhat sandy (very fine) at the top to sandy and somewhat cherty at the bottom.
6090	6118	28	Limestone, grayish-black, some brownish-black to grayish-black, somewhat shaly, slightly cherty, shaly at top and middle
<u>Salina Formation, 448, plus, Feet</u>			
6118	6135	17	Limestone, brownish-gray, some brownish-black, brownish-black to dark yellowish brown in the lower part, somewhat shaly, dolomitic
6135	6151	16	Limestone, dark-gray to brownish-gray, somewhat shaly, a large amount of anhydrite
6151	6178	27	Limestone, (dolomitic) to dolomite (calcareous), brownish-gray to dark-gray, some light- to medium-gray, very cherty (transparent to milky), a moderate amount of anhydrite
6178	6212	34	Limestone (shaly) to shale (highly calcareous), dark-gray with light- to medium-gray spots, cherty, fossiliferous
6212	6317	105	Dolomite-anhydrite rock (more dolomite than anhydrite), brownish-black to black, a large amount of dark-gray to brownish-gray, shaly in part
6317	6327	10	Dolomite, brownish-gray (lithographic), brownish-black (shaly), contains moderate amount of anhydrite
6327	6335	8	Dolomite, dark-gray to brownish-black, somewhat shaly, some anhydrite, a large amount of dark colloidal material
6335	6343	8	Dolomite, brownish-black to black, very finely crystalline; a large amount of colloidal material, small amount of anhydrite
6343	6362	19	Limestone, brownish-black, extremely fine crystalline, dolomitic in part, shaly in part
6362	6380	18	✓ Dolomite-anhydrite rock, medium-gray to brownish-gray, dark-gray to brownish-black, very finely crystalline, shaly in part
6380	6400	20	Dolomite, with anhydrite, brownish-black, some brownish-gray; some of the pieces are encrusted with salt
6400	6413	13	Dolomite, with anhydrite, dark-gray to brownish-black at the top to dark yellowish brown (very shaly) and brownish-black at the bottom
6413	6422	9	Salt, with some dolomite and anhydrite
6422			Salt, dolomitic shale, anhydrite and dolomite
6422	6495	73	✓ Salt, some anhydrite at 6443 to 6448; some shale at 6456 to 6466 with some dolomite and anhydrite in the lower part
6495	6496½	1½	Shale and anhydrite, brownish-black, dolomitic
6496½	6501	4½	Salt
6501	6511	10	Salt and some anhydrite
6511	6521	10	Anhydrite and shale, brownish-black, dolomitic, some salt

6521	6551	30	Salt with some layers of anhydrite; this salt is even a lighter color than the salt in the above 73' interval but the lenses of anhydrite that are in this interval are practically nonexistent in the upper interval
6551	6566	15	Dolomite-anhydrite rock, brownish-black, some brownish-gray
	6566		TOTAL DEPTH