

S. R. KESSELL NO. L WELL

Grant District, Jackson County, W. Va.

By H. L. Starr, Ravenswood, W. Va.

Located 1.3 Mi. S. of 39° 00' and 0.03 Mi. W. of 81° 40', N. W.

Ripley Quadrangle 3 NE

Elevation - 774' L.

Permit Jac-672

Drilling commenced July 1, 1949; completed Nov. 5, 1949.

On N. side of Blood Run, on 100 acres.

Reached the Corniferous Limestone at 4628' and shot down at this depth to run casing on October 24, 1949.

Completed with a show of gas in the Oriskany.

Section based on samples from 1078' to 4788'.

Total Depth 4805'.

Examined by Russell R. Flowers.

Top	Bottom	Thickness	POTTSVILLE SERIES, 687+ feet
1078	1083	5	Sandstone, greenish-gray with light olive gray (sideritic) spots, mostly fine-grained, sub-angular, highly micaceous and chloritic; some medium- to dark-gray clay containing very small spots of siderite.
1083	1087	4	Sandstone, light-gray to greenish-gray, fine grained, some medium grained, micaceous and chloritic; moderately calcareous; some light- to dark gray clay with yellowish- and grayish-brown streaks.
1077	1107	20	Sandstone, very light gray, with light greenish gray (chloritic and micaceous) spots, fine- to coarse-grained, somewhat argillaceous.
1107	1119	12	Shale, clay-shale and some siltstone, medium-gray to greenish-gray, sideritic; contains scattered nodules of siderite and limestone
1119	1124	5	Clay-shale and shale (silty in part, some olive-gray, contains some nodules of siderite and limestone

Top	Bottom	Thickness	
1124	1131	7	Siltstone (greenish-gray, highly micaceous) to a clay-shale (light olive gray to medium- and dark-gray) contains many nodules of limestone, somewhat sideritic
1131	1145	14	Siltstone, medium-gray to greenish-gray, highly micaceous and chloritic, highly sideritic in the lower part
1145	1148	3	Shale, medium-gray to greenish-gray, soft
1148	1166	18	Sandstone, light-gray with green (micaceous and chloritic) spots, fine- to medium-grained, slightly calcareous; contains some dark-gray to black shale breaks in lower part
1166	1200	34	Siltstone to sandstone (very fine), light- to medium-gray, micaceous, sideritic in part with some dark yellowish brown siderite; some medium-gray to greenish-gray shale and clay-shale.
1200	1206	6	Shale (very silty in part) and clay-shale, medium-gray to greenish-gray, some olive-gray (sideritic) and some dark yellowish brown siderite
1206	1216	9	Siltstone and shale, medium-gray to greenish-gray and light olive gray; part of this sample is highly micaceous with carbonaceous streaks; some coal (pyritic in part) and some light-gray to light olive gray clay.
1215	1225	10	Siltstone, shale, and clay-shale, medium light to medium-dark gray and greenish-gray, some olive gray (sideritic) to dark yellowish brown (siderite).
1225	1231	6	Sandstone, light-gray with brown specks and streaks of siderite, calcareous in part, highly sideritic in part, chloritic and micaceous; some dark yellowish brown siderite.
1231	1238	7	Siltstone and shale (silty), medium light to medium dark gray, contains moduels of limestone and siderite.
1238	1245	7	Siltstone and shale, medium light to dark-gray; clay, greenish-gray; some highly sideritic shale and siderite.

Top	Bottom	Thickness	
1245	1257	12	Shale, medium- to dark-gray, some grayish-black (with black, carbonaceous streaks), some dark yellowish brown, (sideritic), some shaly, pyritic coal at the bottom.
1257	1269	12	Sandstone, light-gray, very fine to fine-grained, somewhat micaceous and chloritic; contains medium- to dark-gray (highly micaceous, carbonaceous, shaly) streaks
1269	1318	49	Sandstone, very light gray, very fine to medium-grained, subangular to subrounded (many of the quartz grains have crystal facets), chloritic and micaceous.
1318	1335	17	Sandstone, very light gray, fine- to medium-grained, subangular (some crystal facets) to rounded, contains a little chlorite and mica, some shaly (micaceous and carbonaceous streaks at the bottom.
1335	1345	10	Shale and siltstone, medium- to dark-gray, micaceous; clay, greenish-gray to medium- and dark-gray, a few impure limestone nodules.
1345	1355	10	Siltstone and shale, medium- to dark-gray; shale, grayish-black, carbonaceous, pyritic with a little coal
1355	1362	7	Clay, light- to medium-gray and greenish-gray, some dark-gray, many limestone nodules in the upper part.
1362	1422	60	Sandstone, very light to light-gray, mostly fine-grained, some medium grains, subangular to subrounded, all of the samples contain large amounts of clay(probably cavings)
1422	1426	4	Shale, medium light to medium dark gray, silty
1426	1431	5	Siderite and sideritic shale, dark to dusky yellowish-brown, 50%; clay, light- to medium-gray, 30%; siltstone, medium- to dark gray, 20%; all of the sample contains some pyrite
1431	1442	11	Shale and clay-shale, medium- to dark-gray, some dark yellowish brown (highly sideritic).

Top	Bottom	Thickness	
1442	1451	9	Shale, medium- to dark-gray, some grayish-black- to black carbonaceous with some coal in the lower part), a large amount of light olive gray to olive-gray in the upper part.
1451	1457	6	Clay, medium light gray to dark-gray, some light olive gray, contains limestone nodules; siltstone and shale, medium light to medium dark gray; siderite and sideritic shale, dark yellowish brown
1457	1465	8	Clay, light olive gray (sideritic in part), medium- to dark-gray and greenish gray, some limestone nodules.
1465	1468	3	Clay, light- to medium-dark gray and greenish-gray, some light olive gray; contains limestone nodules; some siltstone and shale, medium- to dark-gray, a small amount of black (carbonaceous)
1468	1473	5	Clay, light olive gray to greenish-gray and medium-gray; shale and silty shale, medium- to dark-gray, somewhat sideritic
1473	1479	6	Shale, medium- to dark-gray, some grayish-black mostly silty
1479	1485	6	Siltstone, light- to medium-gray, micaceous and chloritic; calcareous in part; some grayish-black to black shale with a small amount of coal
1485	1494	9	Siltstone, light- to dark-gray (shaly), micaceous, somewhat sideritic
1494	1498	4	Shale and some siltstone, light olive gray (soft), medium-gray to grayish-black, some black (carbonaceous), some dark yellowish brown (highly sideritic).
1498	1503	5	Shale, medium- to dark-gray (silty), some grayish-black with black ("coaly") streaks; some light olive gray to olive-gray (sideritic) shale
1503	1508	5	Siltstone, light- to medium-gray; shale, medium-gray and greenish-gray to dark-gray, contains carbonaceous streaks.
1508	1529	21	Sandstone, light-gray with green and brown specks, very fine grained, fine to very fine and calcareous at the bottom, contains highly micaceous (biotite) and chloritic spots

Top	Bottom	Thickness	
			somewhat sideritic; a large amount of medium- to dark-gray clay in the lower part.
1529	1578	49	Sandstone, very light gray, fine to very fine grained, subrounded (many grains have secondary crystal facets), some chlorite and mica, slightly calcareous; some medium- to dark-gray, highly micaceous shale 1533 to 1564.
1578	1596	18	Siltstone, light- to medium-gray, very closely interlayered with a grayish-black, carbonaceous shale, highly micaceous, somewhat sideritic, the siltstone is lighter in color with fewer layers of shale in the lower part.
1596	1601	5	Shale, medium- to dark-gray, silty
1601	1608	7	Shale, medium to medium dark gray, very silty
1608	1612	4	Shale, medium-gray to grayish-black
1612	1616	4	Shale, dark-gray to grayish-black; some dark yellowish brown (highly sideritic)
1616	1620	4	Shale, medium dark to dark-gray, some grayish-black, some dark yellowish brown (highly sideritic), sandy in part
1620	1624	4	Shale, dark-gray, silty, somewhat sideritic
1624	1628	4	Siltstone and some shale, medium dark to dark-gray; some olive-gray and some dark yellowish brown (highly sideritic) shale
1628	1633	5	Shale, dark-gray to grayish-black with black "coaly" streaks
1633	1637	4	Siltstone, light- to medium gray, micaceous, small amount of siderite
1637	1644	7	Sandstone, very light to light-gray, very fine-grained, some mica and chlorite; small amount of dark yellowish brown, shaly siderite
1644	1630	6	Shale, medium dark gray to grayish-black; some dark to dusky yellowish brown, sideritic shale and siderite

Top	Bottom	Thickness	
1630	1662	12	Siltstone to sandstone (very fine), medium light to medium dark gray, contains mica, chlorite and kaolinitic material; some medium to dark-gray clay in the lower part
1662	1667	5	Conglomerate, white to very light gray, the quartz is very coarse grained to pebbles, contains shale and siltstone (pebbles or cavings?)
1667	1673	6	Sandstone, white to very light gray, coarse to very coarse grained, contains some shale and small amount of chlorite
1673	1701	28	Sandstone, white to very light gray, fine-grained some medium and some coarse grained, subangular to subrounded (many of the grains have secondary crystal facets); a small amount of medium-to dark-gray clay
1701	1733	32	Sandstone, very light-gray, fine to very-fine grained, subangular (many of the quartz grains have secondary crystal facets) contains very small amount of chlorite and mica, slightly calcareous, a large amount of medium-gray to dark-gray and some greenish-gray. Clay at the top with moderate amounts in the other intervals; a few very coarse quartz grains at the bottom.
1733	1765	32	Sandstone, white to very light gray, fine- to coarse-grained, some very coarse grains, conglomeratic at the bottom, subangular to subrounded, mostly quartz (many grains have crystal facets), part of the bottom sample has a dolomitic cement

GREENBRIER LIMESTONE, 65 Feet

1765	1768	3	Dolomite, light-gray to light brownish gray
1768	1774	6	Limestone, light-gray to light brownish-gray, dolomitic in part
1774	1780	6	Limestone, dark yellowish brown to brownish-gray, with light gray spots, dolomitic in part
1780	1785	5	Limestone, brownish-gray, somewhat shaly, somewhat dolomitic
1785	1794	9	Sandstone, white, fine to very fine grained, highly dolomitic (cement), a large amount of clay (probably cavings)
1794	1800	6	Sandstone, light-gray, very fine to fine grained, some medium (well rounded) grains, highly calcareous, slightly dolomitic

Top	Bottom	Thickness	
1800	1820	20	Limestone, white to very light gray, highly oolitic
1820	1823	3	Limestone, medium-gray to brownish-gray, somewhat shaly, dolomitic in part
1823	1830	7	Limestone, brownish-gray to brownish-black, shaly; limestone, medium gray to brownish-gray, oolitic, somewhat dolomitic
<u>POCONO SERIES, 450 Feet</u>			
1830	1833	3	Siltstone, greenish gray, with spots of siderite; some dolomitic and sideritic, very fine sandstone
1833	1840	7	Sandstone, light-gray, fine- to medium-grained and many coarse grains in the lower part, poorly sorted, contains many pale-brown to moderate brown, highly sideritic, dolomitic spots and much dolomitic-siderite, particularly in the lower part
1840	1843	3	Siltstone, medium-gray to greenish-gray, sideritic in part
1843	1850	7	Siltstone, medium-gray to greenish-gray; shale medium- to dark-gray
1850	1855	5	Siltstone, greenish-gray to dark yellowish-brown (highly sideritic); some medium dark to dark-gray shale
1855	1866	11	Sandstone, light-gray, very fine grained, silty with many coarse sand grains in the upper part; a small amount of black "coaly" shale at the bottom
1866	1877	11	Shale, dark-gray, very silty
1877	1881	4	Shale, medium dark to dark-gray, very silty; siltstone, medium light to medium-gray
1881	1930	49	Siltstone to shale (very silty), medium dark to dark-gray, soft, contains micaceous, kaolinitic, and some carbonaceous material; some medium dark gray to brownish-gray, very sandy, highly sideritic shale at the bottom
1930	2014	84	Siltstone, medium light gray to medium-gray and light olive gray, calcareous, interbedded with a medium dark to dark-gray shale
2014	2041	27	Siltstone, medium light to medium-gray, dolomitic

Top	Bottom	Thickness	
2041	2117	76	Shale, medium dark to dark-gray, some dark yellowish brown (highly sideritic); some siltstone medium light to medium dark gray, some greenish-gray.
2117	2169	52	Siltstone, medium light to medium-gray, calcareous, interbedded with a medium dark to dark-gray shale; some of the siltstone and shale is sideritic
2169	2232	63	Shale, medium dark to dark-gray; some medium light to medium dark gray siltstone, calcareous in part
2232	2250	18	Shale, dark-gray to brownish-black, some medium to medium dark gray, pyritic in part
2250	2275	25	Shale, brownish-black to grayish-black, more highly carbonaceous and somewhat pyritic toward the the bottom (Sunbury Shale)
2275	2280	5	Sandstone, light-gray, very fine grained, silty, contains some pyrite and kaolinitic material, calcareous in part (Berea Sandstone)
2280	2296	16	<u>DEVONIAN SHALES, 2348 Feet</u> Siltstone and some shale, medium light to medium dark gray, calcareous
2296	4599	2303	Not described
4599	4628	29	Shale, brownish-black to grayish-black, carbonaceous
			<u>HUNTERSVILLE CHERT, 111 Feet</u>
4628	4651	23	Limestone, brownish-gray, very shaly; some brownish-gray to medium-gray chert; a small amount of brown, highly micaceous siltstone that is probably at the contact with the overlying shale (Top of chert at 4628 - from driller's log)
4651	4656	5	Limestone, brownish-gray, shaly, cherty to a calcareous medium-gray and brownish-gray chert
4656	4676	20	Chert (highly calcareous, shaly) and some limestone (cherty), light brownish gray to brownish-gray and medium-gray (with light-gray spots), lighter in color and more cherty in the lower part
4676	4685	9	Chert, medium-gray to brownish-gray (with light-gray spots and streaks), highly calcareous, shaly in part, contains some silt
4685	4697	12	Siltstone, light- to medium-gray and brownish-gray cherty, very cherty at the top, very highly calcareous, somewhat dolomitic

Top	Bottom	Thickness	
4697	4700	3	Siltstone to chert, medium light gray to light brownish gray, some medium-gray and brownish-gray, highly calcareous, somewhat shaly
4700	4715	15	Limestone, light- to medium-gray, some light brownish gray, very silty and cherty to a silty highly calcareous chert, dolomitic; trace of glauconite
4715	4724	9	Chert, medium-gray to brownish-gray, mostly brownish gray (somewhat shaly) in the lower part, very silty in the upper part, highly calcareous, somewhat dolomitic
4724	4729	5	Chert, medium- to brownish-gray, some dark-gray (shaly), highly calcareous, dolomitic, very sandy and glauconitic (with some brown phosphatic? material) in part
4729	4739	10	Chert, medium-gray to brownish-gray (in the lower part), some dark-gray (shaly) highly calcareous, moderately dolomitic; trace of glauconite
<u>ORISKANY SANDSTONE, 19, plus, Feet</u>			
4739	4747	8	Sandstone, light gray with medium-gray streaks, very fine grained with some fine and medium grains, contains occasional coarse grains, calcareous, contains some black oil residue in the interstices.
4747	4750	3	Sandstone, light-gray, very fine to medium-grained (larger grains are rounded), calcareous, contains some black oil residue in the interstices of part of the sample.
4750	4758	8	Sandstone, very light to light-gray, very fine to fine-grained, some medium grains in the upper part, calcareous, mostly quartz, some silty dark-gray shale in the lower part
4758	4776	18	No Sample
<u>HELDERBERG FORMATION, 12, plus Feet</u>			
4776	4788	12	Sandstone, light-gray, very fine to fine-grained, highly calcareous, some medium to coarse grains in the lower part; some dark-gray silty shale
	4805		TOTAL DEPTH