

X-13-51
 (C)

Hugh R. and James A. Fitzpatrick No. 1 Well.

Portland District, Preston County, West Virginia.
 By Nolle Oil & Gas Corp., 210 Park Way, Pittsburgh, Pa.
 Located 4.20 Mi. S. of 39° 30' and 4.20 Mi. West of 79° 30'
 NE - Kingwood Quadrangle.
 Elevation 2228' L.
 Permit - Preston - 11
 Drilling commenced Jan. 4, 1949; completed July 18, 1949.
 Well was not shot.
 Gas well - Volume 184,000 Cu. Feet.
 Rock pressure, 2100 lbs. in 74 hours.
 Fresh water 320'; 3 bbls 24 hours, 1615'.
 No packers used. Filled hole back to 5696'. Lead plug, 5698-5693½'.
 Well had 2½ - 6" bailers of salt water.
 Gas at 5527'-5530'; 5553-5555'; 5555'-5562'; 5652'-5653'.
 Section based on samples from 4839' to 6221'.
 Examined by Russell R. Flowers.

Top	Bottom	Thickness	
4839	4850	11	Shale, grayish-black to black (highly carbonaceous)
<u>Tully Limestone, 13 Feet</u>			
4850	4863	13	Limestone, olive-gray to dark-gray, very fine textured, very shaly, pyritic in part (Tully 4850 to 4863' - From driller's log); a very large amount of grayish-black to black (carbonaceous) shale; some dark-gray shale (probably most of the shale is cavings)
<u>Hamilton and Marcellus Formations, 622 Feet</u>			
4863	4875	12	Shale, medium-dark to dark-gray, calcareous with some very shaly limestone; a large amount of grayish-black to black shale
4875	4905	30	Shale, medium dark gray to grayish-black, some black (carbonaceous)
4905	4933	28	Shale, medium dark to dark-gray, some grayish-black; small amount of medium dark to dark-gray, highly calcareous shale
4933	4960	27	Shale, medium dark gray to grayish-black
4960	5004	44	Shale, dark-gray and grayish-black to black; a small amount of medium-to medium dark gray shale at the bottom
5004	5035	31	Shale, dark-gray to grayish-black, some medium dark gray, calcareous in part
5035	5070	35	Shale, medium dark to dark-gray, some grayish-black
5070	5160	90	Shale, dark-gray to grayish-black, silty in part; many of the fragments show slickensides
5160	5230	70	Shale, medium dark to dark-gray, silty in part; some grayish-black to black at 5195-5207

5230	5245	15	Shale, medium dark to dark-gray, some grayish-black; a little olive-gray, shaly limestone
5245	5260	15	Shale, dark-gray to grayish-black, some medium light gray, some grayish-black and black (carbonaceous), pyritic trace of calcite
5260	5398	138	Shale, dark-gray to grayish-black and black, (carbonaceous), pyritic in part
5398	5427	29	Shale, grayish-black to black, highly carbonaceous, pyritic and calcareous, highly pyritic and highly calcareous in the lower part
5427	5447	20	Limestone (shaly) to a calcareous shale, medium light to medium dark gray, some olive-gray; some dark-gray to black shale
5447	5482	35	Shale, grayish-black to black, highly carbonaceous, pyritic with a little calcite
5482	5485	3	Siltstone, dark brownish gray, shaly, very highly micaceous in part (benonitic? - Brown break 5482--5482 - from driller's log); a very large amount of grayish-black to black, somewhat calcareous shale

Huntersville Chert, 167 Feet

5485	5502	17	Limestone (shaly) to shale (calcareous), grayish-black to black; some grayish-black to black (carbonaceous) shale; a very small amount of dark grayish brown, shaly, highly micaceous siltstone (benonitic?)
5502	5507	5	Limestone (very shaly) to shale (calcareous), dark-gray to grayish-black, highly dolomitic; a large amount of chert, medium-to medium dark gray (with light-gray spots) dolomitic; shaly in part
5507	5509	2	Chert, light- to medium-gray, some dark-gray (very silty and shaly), calcareous, somewhat dolomitic; some dark-gray to black shale (cavings)
5509	5512	3	Chert, medium-gray (translucent) to dark-gray and grayish-black (very shaly, silty), calcareous and dolomitic
5512	5519	7	Chert, medium-gray (translucent to opaque) with light-gray spots and dark-gray (shaly) streaks, calcareous and dolomitic, many of the pieces contain large numbers of sponge spicules (?)
5519	5525	6	Chert, very light gray (translucent to "dead") to medium-gray (somewhat shaly), calcareous and dolomitic
5525	5530	5	Chert, white to medium light gray, transparent and translucent (milky) to "dead", some of the chert contains large numbers of siliceous sponge spicules (?), somewhat dolomitic
5530	5442	12	Chert, white to light-gray (transparent to translucent and milky) mottled and speckled with dark-gray shaly material, somewhat dolomitic, highly fractured with glassy quartz and dark (shaly) material fillings; much of this chert contains many siliceous, sponge spicules (?)

5542	5551	9	Chert, mottled very light to medium light gray (Transparent to milky) and medium- to dark-gray (very shaly), highly fractured in part with glassy quartz and dark (shaly) material fillings, small amount is dolomitic, many of the fragments contain abundant spicules (siliceous); some dark-gray, very silty shale
5551	5571	20	Siltstone to chert (silty), light olive gray and medium light gray to medium-gray, some medium- to dark-gray (shaly)
5571	5576	5	Siltstone to chert (silty), medium-light to medium dark gray, some dark-gray (shaly), slightly dolomitic
5576	5589	13	Siltstone to chert, medium light to medium dark gray to dark-gray shale, silty to siliceous, slightly dolomitic
5589	5604	15	Siltstone to chert, medium light to medium-gray, small amount is dolomitic; some dark-gray, silty to siliceous shale
5604	5617	13	Chert, medium-gray (silty) to dark-gray and grayish black (shaly to siliceous shale)
5617	5631	14	Chert to siliceous shale, dark-gray chert
5631	5647	16	Shale (siliceous) to shale, dark-gray to grayish-black, somewhat pyritic in the lower part
5647	5652 5625	5	Shale, dark-gray to grayish-black, some grayish-black to black; some dark-gray to grayish black, highly calcareous shale to shaly limestone, dolomitic; a small amount of chert; some pyrite
<u>Oriskany Sandstone 277 Feet</u>			
5652	5656	4	Sandstone, light- to medium light gray, fine- to medium-grained, subrounded; some rounded (medium) grains, highly calcareous, contains dark-gray to black interstitial material (oil residue?)
5656	5666	10	Limestone, medium-gray (with dark-gray to grayish-black shaly streaks), very sandy, fine- to very fine grained, some medium (rounded) grains
5666	5668	2	Sandstone, light-gray, fine- to very fine grained, mostly subrounded quartz, some medium (rounded) grains, highly calcareous
5668	5679	11	Sandstone (fine) and siltstone, medium- to medium dark gray, very highly calcareous to a very sandy limestone, contains many medium to coarse (rounded quartz) grains, shaly in part; some grayish-black shale
<u>Helderberg Formation, 542, (plus) Feet</u>			
5679	5688	9	Siltstone to sandstone (very fine), medium- to dark-gray, very shaly, very highly calcareous
5688	5692	4	Sandstone, light- to medium-gray (with dark-gray shaly spots) very fine to medium-grained, subround to subrounded, very highly calcareous, slightly dolomitic
5692	5698	6	Siltstone to sandstone (very fine), medium- to dark-gray (very shaly), some fine (well rounded quartz) grains, very highly calcareous

5698	5703	5	Sandstone, light-to medium light gray, very fine to fine-grained with some medium-grains, subrounded to rounded, very highly calcareous with some sandy limestone
5703	5711	8	Sandstone, light-gray, very fine to medium-grained, some coarse grains, subrounded to rounded, very fine to fine with some medium grains in the lower part, highly calcareous
5711	5717	6	Siltstone to sandstone (fine with some medium grains), dark-gray to grayish-black, very shaly, highly calcareous
5717	5722	5	Siltstone to sandstone (very fine), medium- to dark-gray, some fine-to medium quartz grains, very shaly, very highly calcareous
5722	5727	5	Sandstone, light- to medium-gray (shaly), fine- to coarse-grained, subrounded to rounded, silty in part, highly calcareous; some white calcite
5727	5732	5	Sandstone, light-to medium light gray, fine-grained, some medium-grains, subrounded to rounded, very highly calcareous with some limestone
5732	5737	5	Sandstone, light- to medium-gray (rounded) grains, highly calcareous with limestone spots, shaly in part
5737	5744	7	Sandstone, medium light to medium-gray, very fine with some fine grains, silty, contains dark-gray to grayish-black (silty shale) streaks, highly calcareous
5744	5750	6	Sandstone, light-gray, fine, calcareous
5750	5763	13	Limestone, light-gray, fine-grained, some medium- to dark-gray (very shaly) with light-gray spots, very sandy (very fine) with some highly calcareous sandstone, some fine quartz grains in the lower part medium- to dark-gray (very shaly) with light-gray spots, very sandy (very fine) with some highly calcareous sandstone, some fine quartz grains in the lower part
5763	5768	5	Sandstone, light-gray, fine-grained, some medium- and some very fine grains, highly calcareous to limestone (very sandy)
5768	5772	4	Limestone, light- to medium-gray (with dark-gray, shaly streaks), very silty, very sandy to a highly calcareous sandstone (very fine to medium-grained)
5772	5787	15	Sandstone (very fine), highly calcareous) to limestone (very sandy), medium light to medium dark gray (with some dark-gray, shaly streaks), very silty, some fine (quartz) grains at the top; a very small amount of very light gray chert
5787	5791	4	Limestone (very sandy) to sandstone (very fine, calcareous) medium- to dark-gray (very shaly) with light-gray spots, very silty
5791	5802	11	Sandstone, medium light to medium dark gray, some dark-gray (very shaly), very fine grained, very silty, some medium grains in the lower part, very highly calcareous; trace of chert
5802	5817	15	Limestone, medium- to dark-gray with light-gray spots, sandy (very fine to medium-grained) at the top, very sandy with spots of calcareous sandstone (mostly fine) in the lower part
5817	5824	7	Limestone, medium light to medium dark gray, very sandy (very fine to fine-grained)

5824	5830	6	Limestone, medium light to medium dark gray (with white to light-gray spots), very sandy (very fine to medium-grained), silty
5830	5862	32	Limestone, medium light to dark-gray (with white to light-gray spots), silty, sandy (very fine) some fine to medium grains, contains fossil fragments
5862	5877	15	Limestone, medium dark to dark-gray (with some light-gray spots), some dark-gray to grayish-black, (very shaly to shale), very silty, sandy (very fine), cherty, very cherty in the lower part
5877	5883	6	Limestone, brownish-gray to dark-gray (with light-gray spots), some grayish-black (very shaly), very silty and shaly, very cherty
5883	5892	9	Limestone, medium-gray to brownish- and grayish-black, very shaly to a very highly calcareous shale, silty, very cherty
5892	5944	52	Limestone (shaly) to shale (calcareous), brownish- to grayish-black (with light- to medium-gray spots), silty and somewhat cherty at the top, darker in color at the bottom
5944	5971	27	Shale (calcareous) to limestone, very shaly, brownish- and grayish-black to black (with some medium-gray spots)
5971	6080	109	Shale, grayish-black to black (with some medium-gray spots), calcareous to a very highly calcareous shale and shaly limestone; some of the shale at 6027-6035' and at 6065 to 6075' is discolored (too much heat in drying?)
6080	6090	10	Chert to limestone (cherty), light- to medium dark gray; a large amount of grayish-black to black shale (probably cavings)
6090	6096	6	Limestone, medium-gray (with light-gray spots and dark-gray, shaly streaks), very cherty; some grayish-black shale
6096	6107	11	Limestone, medium- to dark-gray (with light-gray spots), some grayish-black (very shaly), very silty (mostly tiny hexagonal quartz crystals), cherty, contains some fossil fragments
6107	6115	8	Limestone, dark-gray to grayish-black (with light- to medium-gray spots, very silty, mostly very small quartz crystals), cherty, somewhat shaly
6115	6132	17	Limestone, medium- to dark-gray (with light-gray spots), some grayish-black (shaly), the lower part has a calcite texture, very cherty, shaly and silty (tiny quartz crystals)
6132	6150	18	Limestone, grayish-black to black, brownish-black to grayish-black in the lower part, the residue contains a large amount of dark-brown colloidal material, silty, (tiny quartz crystals), somewhat dolomitic, a very small amount of chert
6150	6167	17	Limestone (very shaly) to a highly calcareous shale, brownish- and grayish-black, very silty, somewhat dolomitic
6167	6184	17	Shale (calcareous) to limestone (very shaly), dark-gray to grayish-black

6184 6221 37

Limestone, (very shaly), to a calcareous shale, dark-gray, some grayish-black, a large shale content at the top, silty in the middle part; some moderate-brown to brownish-gray calcareous shale and limestone at 6200-6206' (probably discolored by heat?)

6221

TOTAL DEPTH