

PIPE LINE CONSTRUCTION AND DRILLING COMPANY

Well No. 1, R. J. Carlson Farm

Location: Patterson Quadrangle, West Virginia-Virginia, Garden District,
Buchanan County, Virginia.

Elevation: 2122.62' G

D. C.: 1948

D. C. : 1949

<u>Interval</u>	<u>Description</u>
1055-1065	Siltstone, medium dark gray (N4)*, shaly, in clusters, very micaceous, many other black minerals, 50%; sandstone, light gray (N7), very fine-grained, sub-angular to angular, poorly sorted, in clusters, silty, micaceous, numerous green and black minerals, 40%; shale, medium dark gray (N4), very micaceous, 10%.
1065-1074	Coal, 40%; shale, as above, 30%; siltstone, as above, 20%; sandstone, as above, 10%; one piece shale, brownish gray (5YR 4/1).
1074-1082	Sandstone, light gray, very fine- to fine-grained, angular, poorly sorted, in clusters, slightly calcareous, micaceous, numerous black and green minerals (chlorite, hornblende?), 85%; shale, as above, 10%; siltstone, 5%.
1082-1089	Shale, medium dark gray (N4), very micaceous, some slightly silty, 75%; siltstone, between medium dark gray (N4) and brownish gray (5 YR 4/1), clustered, micaceous, shaly, 25%.
1089-1109	Shale, as above, 85%; siltstone, as above, 10%; sandstone, as in 1074-1082, 4%; coal, 1%.
1109-1125	Shale, as above, 70%; siltstone, as above, 5%; sandstone, medium light gray (N6), very fine-grained, angular, poorly sorted, silty, micaceous, many dark and black minerals, 25%.
1125-1135	Ditto.
1135-1141	Sandstone, as above, 75%; shale, as above, 20%; siltstone, as above, 5%.

*Color descriptions and numbers taken from National Research Council
Rock-Color Chart.

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- 1141-1150 Sandstone, as above, 80%; shale, as above, 20%.
- 1150-1166 Shale, medium dark gray (N4), very micaceous, 65%; sandstone, as in 1109-1125, 35%.
- 1166-1176 Shale, medium dark gray, very micaceous, 25%; shale, dark gray (N3), micaceous, 75%.
- 1176-1188 Shale, dark gray, as above, 90%; shale, medium dark gray, as above, 5%; coal, 5%.
- 1188-1196 Shale, medium dark gray (N4), some very micaceous, some very silty, 40%; shale, dark gray (N3), as above, 35%; siltstone, medium light gray (N6), micaceous, shaly, many black minerals, 20%; coal, 5%.
- 1196-1202 Shale, dark gray (N3), silty, micaceous, 50%; shale, medium dark gray, as above, 25%; shale, dark gray (N3), 15%; siltstone, as above, 5%; sandstone, as in 1109-1125, 5%; trace of coal.
- 1202-1212 Sandstone, white (N9), with slight mottling of black and green due to numerous black and green minerals, very fine- to medium-grained, rounded to subrounded, poorly sorted, micaceous, calcareous, few clusters, slightly iron stained, 75%; coal, 25%; few pieces of shales and siltstone, as above.
- 1212-1215 Sandstone, as above; few pieces of shales and siltstone, as above; trace of coal.
- 1215-1227 Sandstone, as above except medium light gray (N6), with numerous angular quartz fragments (conglomeratic?), medium grains well rounded, mostly in clusters, largely noncalcareous, much mica and green and dark minerals, 85%; shale, medium dark gray (N4), micaceous, some silty, 15%.
- 1227-1232 Shale, medium gray (N5), silty, micaceous, some slightly calcareous, 50%; shale, medium dark gray (N4), silty, micaceous, 10%; sandstone, as above, 25%; siltstone, medium light gray (N6) to light gray (N7), shaly, many dark and black minerals, 15%.
- 1232-1240 Shale, medium dark gray, slightly silty to very silty, micaceous 70%; siltstone, as above, 15%; sandstone, as above, 15%.
- 1240-1245 Shale, dark gray (N3), very finely micaceous, some slightly silty, 80%; sandstone, as above 15%; siltstone, 5%.
- 1245-1250 Sandstone, very light gray (N8), fine- to medium-grained rounded to subangular, poorly sorted, mostly loose grains, calcareous, micaceous, few to many green, dark and black minerals (chlorite?), some grains slightly iron-stained, 80%; shale, medium dark gray (N4), very micaceous, 12%; shale, dark gray (N3), as above, 8%.

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- 1250-1265 Sandstone, white (N9), fine- to medium-grained, rounded to sub-rounded, calcareous to noncalcareous, micaceous, few to many green and black minerals, mostly loose grains, some iron-stained, 75%; shale, medium dark gray (N4), as above, some silty, 25%.
- 1265-1282 Shale, medium dark gray, some silty.
- 1282-1302 Shale, as above, 95%; siltstone, light gray (N7), few black minerals, 5%.
- 1302-1322 Shale, as above, 100%.
- 1322-1330 Sandstone, brownish gray (5 YR 4/1), very fine-grained, with few fine-grained clusters, well rounded, very silty cement, 50%; shale, as in 1265-1282, 50%; trace of coal.
- 1330-1340 Sandstone, very light gray (N8), fine- to medium-grained, rounded to angular, mostly loose grains, micaceous, few black minerals, some iron-stained, 95%; shale, as in 1265-1282, 3%; sandstone, as above, 2%.
- 1340-1357 Siltstone, medium dark gray (N4), shaly, micaceous; trace of shale, as above.
- 1357-1370 Sandstone, medium light gray (N6), very fine- to fine-grained, subangular to angular, poorly sorted, very micaceous, many black minerals, 50%; shale, medium dark gray, slightly silty, very micaceous, 30%; siltstone, as above, 20%.
- 1370-1384 Sandstone, very light gray (N8), very fine- to medium-grained, rounded to angular, poorly sorted, slightly micaceous, silty cement, few green and many black minerals, 65%; sandstone, medium light gray (N6), as above, 30%; shale, as above, 5%.
- 1384-1407 Sandstone, very light gray (N8), medium- to coarse-grained, rounded to angular, very poorly sorted, loose and in clusters, silty cement, considerable black and white minerals other than quartz, 90%; sandstone, as above, 5%; shale, as above, 5%.
- 1407-1424 Shale, dark gray (N3), 99%; sandstone, as in 1322-1330, 1%.
- 1424-1431 Shale, medium gray (N3), slightly fissile.
- 1431-1451 Sandstone, very light gray (N8), very fine- to medium-grained, subrounded to angular, poorly sorted, loose and in clusters, considerable black mineral, some red and green minerals, micaceous, 99%; shale, as above, 1%.
- 1451-1480 Sandstone, very light gray, very fine-grained, rounded to subrounded, well sorted, in clusters, slightly micaceous, few black minerals; few pieces of sandstone, as above.

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- 1480-1533 Shale, medium dark gray (N4).
- 1533-1553 Ditto.
- 1553-1565 Sandstone, as in 1451-1480, loose and in clusters, 60%; shale, as above, micaceous, some silty, 40%; trace of coal.
- 1565-1577 Sandstone, very light gray (N8), very fine- to fine-grained, rounded to subangular, poorly sorted, mostly loose, few dark minerals, 75%; shale, as above, 25%; few pieces of coal.
- 1577-1583 Shale, medium dark gray (N4), slightly fissile.
- 1583-1596 Shale, as above, some slightly micaceous, some silty, 65%; sandstone, very light gray (N8), as in 1565-1577, 20%; siltstone, medium gray (N5), shaly, 15%.
- 1596-1624 Shale, medium dark gray, slightly fissile, micaceous.
- 1624-1633 Sandstone, very light gray (N8), very fine- to fine-grained, rounded to subangular, fairly well sorted, mostly loose, slightly micaceous, few black minerals, much iron-stained, 70%; shale, as above, 30%.
- 1633-1649 Sandstone, very light gray, very fine- to medium-grained, rounded to angular, very poorly sorted, nearly all loose grains, few black minerals, much iron stained, 90%; shale, as in 1596-1624, 10%.
- 1649-1661 Sandstone, as above, 90%; shale, as above, 10%.
- 1661-1669 Sandstone, as above, slightly silty (?), 95% (very dirty, sample needs washing); shale, as above, 5%.
- 1669-1680 Sandstone, as above, very fine- to fine-grained with few medium grains, 95%; shale, as above, 5%.
- 1680-1700 Sandstone, as above, with quartz conglomerate fragments, 100%; trace of coal.
- 1700-1723 Sandstone, white (N9), very fine- to medium-grained, rounded to angular, all loose grains, numerous conglomerate quartz fragments, very clean sandstone, much iron-stained.
- 1723-1735 Sandstone, as above, no conglomeratic fragments, but trace of green and black minerals.
- 1735-1750 Sandstone, as above, fine to coarse-grained, numerous angular quartz fragments of conglomerate (?), 85%; shale, dark gray (N3), 10%; coal, 5%.

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1750-1771 Sandstone, as above, conglomeratic, with numerous quartz conglomeratic fragments, many dark, green and black minerals, micaceous, very calcareous to noncalcareous, 80%; coal, 12%; shale, as above, 8%.

Samples run by P. T. Stafford, April 1949.