

PIPE LINE CONSTRUCTION AND DRILLING COMPANY

R. J. Carlson, Number 1

Topographic Location: 0.67 miles West of 81 $\frac{1}{2}$ 55'; 5.59 miles South of 37° 20'.
Patterson, West Virginia-Virginia quadrangle, Garden District, Buchanan County, Virginia.

Geographic Location: 600'NW of Spruce Branch of Dismal River.

Elevation: 2122.62' (ground).

Total Depth: 4731'.

Interval

- 638-650 Graywacke, slightly calcareous, light gray (N7), very fine-grained (approaching siltstone), subangular to subrounded, poorly sorted, about 80% quartzose, dark and brownish inclusions, micaceous, moderately poorly sorted, about 50%; shale, silty, medium dark gray (N4), slightly micaceous, about 50%.
- 650-657 Shale, slightly silty, medium dark gray (N4), finely micaceous; little grayish black, very carbonaceous shale and coals; slight trace pyrite.
- 650-657 (2 samples for same interval) Shale, very silty to slightly silty, medium dark gray (N4), micaceous to finely micaceous, about 75%; graywacke, as 638-650, about 20%.
- 657-665 No sample.
- 665-673 Shale, silty to slightly silty, medium gray (N5) micaceous to very slightly micaceous.
- 673-680 Shale, slightly to very slightly silty, medium gray (N5), very finely micaceous.
- 680-687 Shale, slightly silty, medium gray (N5), slightly micaceous; about 20% shale, very silty, very slightly calcareous to calcareous, medium light gray (N6).
- 687-694 Shale, slightly silty, as above, little very carbonaceous shale.
- 694-702 Shale, slightly silty to non-silty, medium gray (N5), slightly micaceous; about 20% shale, very silty, slightly calcareous, medium light gray (N6), trace mica.
- 702-709 Shale, medium gray (N5), slightly resinous luster, about 70%;

Interval-

graywacke, medium light gray (N6), very fine-grained, sub-rounded to subangular, very poorly sorted, about 75% quartzose, dark inclusions, micaceous, much shale and silt cement, about 30%.

- 709-717 Graywacke, very shaly, as above, about 50%; shale, very carbonaceous, to slightly carbonaceous, dark gray (N3), trace plant fossil; trace coal.
- 717-725 Shale, slightly silty, to part very silty, medium gray (N5), slightly micaceous.
- 725-735 Shale, slightly silty to non-silty, medium gray (N5), slight trace very finely micaceous material.
- 735-747 Shale, silty to very silty, very slightly to slightly calcareous, medium gray (N5), micaceous; trace blacky coal.
- 747-757 Ditto; some (about 20%), shaly, calcareous, medium light gray (N6), siltstone; no coal noted.
- 757-768 Ditto.
- 768-777 Shale, slightly silty, very slightly calcareous, medium gray (N5), finely micaceous.
- 777-787 Shale, non-silty to slightly silty, as above.
- 785-795 Shale, silty to slightly silty, medium gray (N5), very slightly calcareous, finely micaceous.
- 795-803 Shale, non-silty to slightly silty, medium dark gray (N4), slightly fissile, trace very finely micaceous material; part medium gray (N5), slightly calcareous to calcareous.
- 803-808 Shale, medium gray (N5), very slightly calcareous, slightly fissile, trace very finely micaceous material.
- 808-816 Graywacke, light gray (N7), very slightly calcareous, fine-grained, angular to subangular, very poorly sorted, (very fine-grained to medium-grained), about 70% quartzose, dark and green inclusions, micaceous (muscovite, some chlorite, and phlogopite), silt cement, moderately well cemented, much as loose grains.
- 816-825 Ditto, predominantly loose grains.
- 825-831 Ditto, very fine-grained, more green inclusions.
- 831-838 Ditto, very fine-grained to fine-grained.

Interval

- 838-844 Ditto, fine-grained, predominantly clustered.
- 844-850 Ditto, some chert, fine-grained pebbles.
- 850-857 Ditto, loose grains.
- 857-872 Ditto, extremely poorly sorted, (very fine-grained to coarse-grained).
- 872-881 No sample.
- 881-887 Graywacke, medium brownish gray (5YR 5/1), very fine-grained, subangular to subrounded, poorly sorted, about 60% quartzose, dark and browns and some green inclusions, micaceous, silt and shale cement, moderately well cemented, some brownish gray siltstone, micaceous, very well cemented.
- 887-894 Graywacke, light gray (N7), fine-grained, angular to subangular, very poorly sorted, (very fine-grained to medium-grained), about 75% quartzose, dark and some green inclusions, much silt cement and moderately well cemented, many loose grains, some shale, very silty, medium gray (N5), micaceous.
- 894-900 Siltstone, medium light gray (N6), very coarse-grained, subrounded, poorly sorted, dark inclusions, micaceous; and shale, medium dark gray (N4), very slightly silty to non-silty, slightly micaceous.
- 900-905 Shale, medium dark gray (N4), very slightly fissile, very finely micaceous.
- 905-916 Ditto.
- 916-923 Ditto.
- 923-943 Ditto.
- 943-957 Ditto.
- 957-969 Shale, very silty, medium light gray (N6), about 40%; shale, as above, about 60%.
- 969-981 Shale, non-silty to slightly silty, medium gray (N5), very finely micaceous; little very silty shale, as above.
- 981-994 Ditto.
- 994-1007 Siltstone, calcareous to very slightly calcareous, shaly, medium light gray (N6), coarse-grained, poorly sorted, dark inclusions, micaceous, about 50%; shale, very silty to non-silty, medium dark gray (N4), micaceous, about 50%.

Interval

- 1007-1021 Shale, medium dark gray (N4), trace very finely micaceous material.
- 1021-1035 Ditto, little siltstone, light gray (N7), very coarse-grained, subrounded, moderately well sorted, dark inclusions, slightly micaceous.
- 1035-1049 Shale, medium dark gray (N4), very slightly fissile, trace very finely micaceous material.
- 1049-1055 Graywacke, calcareous to slightly calcareous, light brownish gray to light gray (5YR 6/1 to N7), very fine-grained (approaching siltstone), subangular, poorly sorted, about 70% quartzose, brownish, dark, and few green inclusions, micaceous, much silt and shale cement; moderately well cemented, to well cemented.
- 1055-1065 Ditto, light brownish gray graywacke, calcareous; light gray, non-calcareous.

Samples previously run from 1065'-4712'.

Samples examined by Eloise T. Jacobsen
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Lexington, Kentucky
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