FRANKLIN REAL ESTATE CO. No. 1 (GW 796).

Nuttall District, Fayette County, W. Va.

By Columbian Carbon Company

Winona Quadrangle

Elevation 2344 ft.

Permit - Fay. 42

Drilling commenced May 1, 1945; completed November 8, 1947

Not shot

Dry hole

Fresh water 105' 2 - 14" blrs.; 133' hole full

Salt water 1990' Hole full; 7224-7227' 1/2 - 6" blr-hr; 7216' 1 blr - 2 hrs.

16" casing, 26' 8"; 13-3/8" 48#; 514' 11" (Pulled); 10-3/4" 40#; 1588' 10" (Pulled); 8-1/4 24#, 2151' 11" (Pulled); 7" 23#, 7164.1'

Coal at 23' 12" (drillers record)

Section based on samples from 7092' to 7403',

Examined by Russell R. Flowers.

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<thead>
<tr>
<th>Top</th>
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<td>7092</td>
<td>7131</td>
<td>39</td>
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<td>7131</td>
<td>7137</td>
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<td>7137</td>
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**MARCELLUS SHALE, 46+ FEET**

Shale, black to grayish-black, very highly carbonaceous, calcareous, highly calcareous and moderately dolomitic at 7104 to 7109', moderately dolomitic at the bottom, slightly pyritic

**Huntersville Chert, 79 Feet**

Shale, black to grayish-black (with medium-to-dark-gray spots, very highly calcareous to calcite), highly carbonaceous, a few of the pieces of shale show mickensides, very highly pyritic; some brownish-gray to brownish-black, highly pyritic shale, containing a large amount of altered biotite.

Shale, (highly calcareous) to limestone (very shaly), brownish-black to dark brownish gray (with some medium gray spots), pyritic in part; some medium-gray to brownish-gray, highly pyritic shale containing a large amount of altered biotite; large amount of grayish-black to black, (continued)
highly carbonaceous, calcareous shale (7140 DLM, 7115 SLM, top of Corniferous Lime - from drillers log)

7116 7121 5
Limestone, brownish-gray to brownish-black, some medium-gray spots, very shaly to a highly carbonaceous shale (brownish- and grayish-black to black); small amount of white to light-gray chert; a small amount of finely disseminated pyrite is scattered throughout the interval

7121 7125 4
No sample

7125 7134 9
Shale (highly calcareous) to limestone (shaly), brownish-gray to brownish-black with light- to medium-gray spots; shale, grayish-black to black, carbonaceous, silicified in part to a white to a very light gray chert, pyritic in part

7134 7137 3
Shale, brownish- and grayish-black to black, somewhat calcareous and dolomitic, silicified in part to cherty

7137 7138 1
No sample

7138 7147 9
Chert, light- to medium-gray, some brownish-gray, some dark-gray to black, (very shaly) somewhat calcareous, moderately dolomitic; small amount is highly glauconitic (probably a parting or thin layer)

7147 7158(?)
Chert, very light to medium-gray, somewhat calcareous, moderately dolomitic, slightly glauconitic; some medium- to dark-gray, calcareous, shaly chert

7150 7154 4
Chert, very light to medium-gray, some light olive gray, some dark-gray to grayish-black (shaly), somewhat calcareous and dolomitic; trace of glauconite
Chert, mottled light- to medium-gray and dark-gray to grayish-black (shaly), moderately dolomitic (included rhombs), silty, moderately to highly glauconitic, an increase in the amount of dark-gray to grayish-black at the bottom; a large amount of dark-gray to grayish-black shale at the top

Chert, light- to dark-gray, some grayish-black, moderately dolomitic at the top, slightly pyritic and glauconitic

Siltstone, medium- to dark-gray, some light-gray, some grayish-black to black (shaly), cherty, slightly to moderately dolomitic, highly glauconitic, very shaly and very highly glauconitic in the lower part; considerable dark-gray to grayish-black shale at the bottom (highly glauconitic)

Chert (medium light to dark-gray) to a silicified shale (grayish-black to black, carbonaceous), dolomitic in part, somewhat calcareous at the bottom, some glauconite, highly glauconitic at 7203-7207

Chert, medium light to dark-gray, some grayish-black to black (very shaly) at the top, somewhat dolomitic, moderately calcareous at the top to a highly calcareous at the bottom; very small amount of glauconite

Oriskany Sandstone, 11 Feet

Chert, medium light to dark-gray, some grayish-black to black (carbonaceous, shaly), highly calcareous, the highly calcareous and shaly parts contain some fine to medium sand grains; a very large amount of sandstone, white to very light gray, fine- to medium-grained (Oriskany at 7216-7239 - drillers log)
Sandstone, white to very light gray, quartzose, fine- (glassy, clear) to medium- (rounded and frosted), subrounded to rounded, slightly to moderately calcareous

Sandstone, white to light-gray, fine-grained, some medium and some very fine grains, quartzose, subrounded, some of the medium grains are rounded and frosted, moderately calcareous; some calcareous chert to silicious shale, medium-gray to grayish-black (cavings)

Sandstone, very light gray, fine-grained, some very fine grains, calcareous; a very large amount of siltstone and sandstone (very fine, highly calcareous) to limestone (silty, sandy and shaly), medium- to dark-gray

Helderberg Formation, 116, plus, Feet

Siltstone and sandstone (very fine) very highly calcareous and some limestone (sandy and silty), medium- to dark-gray (with light-gray spots), cherty, somewhat shaly, a few fossil fragments

Limestone (sandy and silty) to a fine sandstone and siltstone (highly calcareous), medium- to dark-gray, some grayish-black (very shaly), contains many fossil fragments, cherty

Limestone (very silty) to siltstone (very highly calcareous), dark-gray to grayish-black (very shaly), a moderate amount of medium-gray, very cherty, contains some fossil fragments

Sandstone, white to light-gray, some medium light to medium-gray, fine- to medium-grained, subrounded to rounded, highly calcareous, contains some carbonaceous, shaly material and some chert; a very highly calcareous sandstone to a limestone (sandy and silty), medium- to dark-gray, shaly cherty, some fossil fragments at the bottom and some at the top
No sample

Limestone, dark-gray to grayish-black, some medium-gray, silty, sandy, and shaly at the top to very silty, very shaly, very sandy at the bottom, cherty, some fossil fragments; a moderate amount of light-to medium-gray, highly calcareous sandstone at the bottom

Sample too highly stained with iron rust for description

Sandstone, light- to medium-gray (with dark-gray to greenish black, very shaly streaks), fine-grained, some medium grains, very highly calcareous

Sandstone, light- to medium-gray, fine-grained, some medium and some very fine grains, highly calcareous with some limestone (very sandy), somewhat shaly

No sample

Sandstone, light- to medium-gray, fine-grained, sub-rounded, some rounded medium grains, highly calcareous to a very sandy limestone

Limestone (very sandy) to sandstone (fine-grained highly calcareous), medium- to dark-gray, some light-gray, some grayish-black, very shaly, somewhat cherty

Sandstone, very light to light-gray, fine to very fine grained, mostly fine-grained at the top, highly calcareous; trace of carbonaceous material

Limestone (very sandy and silty) to chert (very shaly, highly calcareous), mottled light- to medium-gray and dark-gray to grayish-black

Limestone, mottled dark-gray to grayish-black (very shaly) and light- to medium-gray, very sandy, very silty, cherty, some fossil fragments

Limestone (very sandy) to a sandstone (very fine), silty, highly calcareous), medium to dark-gray, some light-gray and some grayish-black, shaly, very cherty
| No. 7316 | 7321 | 7325 | 4 | No sample
| No. 7321 | 7325 | 9 | Sandstone, light- to medium-gray, fine to very fine grained, very highly calcareous
| No. 7325 | 7334 | 9 | Limestone (very sandy and silty) to sandstone (very fine, silty, highly calcareous), light to medium dark gray, some dark-gray (shale and shaly limestone), cherty, fossil fragments at the bottom
| No. 7334 | 7353 | 19 | No samples
| No. 7353 | 7366 | 13 | Limestone, medium- to dark-gray, some grayish-black (shaly to shale at the middle), very sandy (fine) to sandstone (fine to medium-grained, highly calcareous at the bottom), cherty, moderately dolomitic
| No. 7366 | 7376 | 10 | Sandstone, light-gray with a few streaks of medium-gray, fine to very fine grained, highly calcareous, dolomitic; contains a few fossil fragments and a trace of glauconite
| No. 7376 | 7379 | 3 | Sandstone (very fine to fine, highly calcareous) to limestone (very sandy), medium- to dark-gray, some grayish-black (shaly), some light-gray, somewhat dolomitic, cherty, contains some fossil fragments
| No. 7379 | 7382 | 3 | Limestone, medium-gray to grayish-black, very sandy (very fine to medium grains), moderately dolomitic, very highly fossiliferous, somewhat shaly and cherty
| No. 7382 | 7403 | 21 | Chert to silicified shale, dark-gray to grayish-black, some medium-gray, highly calcareous and some limestone, very silty; some medium- to dark-gray, sandy, highly fossiliferous, limestone in the upper part
| No. 7406 | TOTAL DEPTH |