

COMMONWEALTH OF VIRGINIA

DEPARTMENT OF CONSERVATION AND ECONOMIC DEVELOPMENT

MAILING ADDRESS:

DIVISION OF MINERAL RESOURCES

OFFICE ADDRESS:

B 3667

JAMES L. CALVER, COMMISSIONER

McCormick Road

Charlottesville, VA 22903

WATER WELL COMPLETION REPORT

Charlottesville, Virginia

OWNER: U. S. Department of Agriculture Mailing Address: Roanoke, Virginia

TENANT: National Forest Service Work Center Mailing Address: Newcastle, Virginia

DRILLER: Frank W. Martin Drilling Company Mailing Address: Roanoke, Virginia

WELL LOCATION: County Craig Approx. 2.3 miles northeast (direction) of Newcastle, Virginia and 250 feet north (direction) of State Route 615

(GIVE DIRECTION AND DISTANCE IN FEET OR MILES FROM TWO REFERENCE POINTS - ROADS, TOWNS, RIVERS, ETC. - ON COUNTY HIGHWAY OR OTHER MAP.)

DATE STARTED: 7/8/71 DATE COMPLETED: 7/25/71

TYPE OF DRILL RIG USED: cable tool TOTAL DEPTH 136 feet

WATER LEVEL: Stands 56 feet below surface OR

has NATURAL flow of _____ gallons per minute.

YIELD TEST: Method pumped

Drawdown 4 1/2 feet

Rate 35 gal. per min.

Duration 24 hrs., 0 min.

HOLE SIZE: 10 inches from 0 to 72 feet

6 inches from 72 to 136 feet

_____ inches from _____ to _____ feet

SCREEN SIZE: _____ inches from _____ to _____ feet

_____ inches from _____ to _____ feet

_____ inches from _____ to _____ feet

WATER ZONES: from 115 to 117 feet

from _____ to _____ feet

from _____ to _____ feet

CASE SIZE: 6 inches from +1 to 73 feet

_____ inches from _____ to _____ feet

_____ inches from _____ to _____ feet

WATER: Color clear Taste good

Odor none Temp. ? °F

WELL TO SUPPLY: (check one) Home _____

Farm _____ Town _____ School _____

Industry _____ Other Gov't. work center

GROUTING: Method pumped

Material cement Depth 72 feet

PUMP: Type submersible

Capacity 35 gal. per min

Depth of intake 112 feet

WATER ANALYSIS AVAILABLE: Yes _____ No

DRILL CUTTINGS SAVED: Yes No _____

(DRILL CUTTINGS SHOULD BE COLLECTED AT 10 FOOT INTERVALS. THESE SAMPLES MAY BE SHIPPED TO THIS OFFICE EXPRESS COLLECT. SAMPLE BAGS ARE FURNISHED FREE OF CHARGE UPON REQUEST.)

REMARKS: _____

LOG

FURNISHED BY: Frank W. Martin DATE: 7/26/71

| DEPTH (feet) | | TYPE OF ROCK OR SOIL PENETRATED (gravel, clay, etc., hardness, color, etc.) | REMARKS (water, caving, shot, screen, sample, etc.) |
|--------------|-----|--|--|
| FROM | TO | | |
| 0 | 62 | Sand | |
| 62 | 65 | Sloping rock - hard | |
| 65 | 95 | Sandstone | |
| 95 | 136 | Black slate - hard | 2-foot opening @ 115-117 feet; water of brownish material |

OWNER: U. S. Forest Service
(Newcastle Work Center)
DRILLER: F. W. Martin Drilling Co.
COUNTY: Craig (Newcastle)

W # 3236
C # 14
TOTAL DEPTH: 136'

GEOLOGIC LOG

Depth
(in feet)

RIDGLEY (ORISKANY) SANDSTONE (0-95')

| | |
|-------|--|
| 0-10 | Sand – light orange-yellow; well rounded to sub-angular, well sorted, medium to coarse grained, slightly frosted, iron-oxide-stained quartz sand with a few granule-sized grains; a few fragments of hematite-cemented, fine-grained quartzite |
| 10-20 | " |
| 20-30 | " with only a trace of iron-oxide stains |
| 30-35 | " " |
| 35-45 | " " with fragments of carbonate-cemented sandstone |
| 45-50 | " " " |
| 50-60 | " " " |
| 60-70 | Sandstone – medium brown; medium to coarse grained, well sorted; iron-oxide cemented; vuggy |
| 70-78 | Sand – very light gray to white; medium grained, well rounded to sub-angular, moderately-frosted quartz sand with a trace of pyrite |
| 78-85 | Sandstone – light gray; medium grained, sub-angular; iron-oxide or pyrite-and calcite-cemented quartz sandstone with 5% limestone clasts |
| 85-95 | Calcareous sandstone – light to dark gray; medium grained, sub-angular to sub-rounded, well sorted; carbonate cemented; a few very dark-gray limestone inclusions |

OWNER: U. S. Forest Service -2-
(Newcastle Work Center)

W # 3236
C # 14

LICKING CREEK LIMESTONE (95-105') *

95-105 Limestone - very dark gray to black; pyrite-bearing micrite with trace of vein calcite

NEW CREEK (COEYMANS) LIMESTONE * (105-135')

105-115 Limestone - light to medium gray; very coarsely-crystalline; a few well-rounded, 2-4 mm frosted grains; some iron-oxide cemented sandstone and weathered limestone fragments; fossiliferous (brachiopod and crinoid fragments)

115-125 Limestone - dark gray; medium grained; limonite boxwork (80% of sample), fossiliferous limestone (10% of sample), and silicified spirifer brachiopod and crinoid fragments (10% of sample); material appears to be largely derived from solution-cavity debris

125-135 Limestone - medium to dark gray fossiliferous calcarenite

135-136 No sample

GEOLOGIC SUMMARY

| <u>Interval</u> | <u>Rock Unit</u> | <u>Age</u> |
|-----------------|---------------------------------|----------------|
| 0-95' | Ridgley (Oriskany) Sandstone | Early Devonian |
| 95-105' | Licking Creek Limestone * | " " |
| 105-135' | New Creek (Coeymans) Limestone* | " " |
| 135-136' | No sample | - |

* The 95-135' interval could be either the Licking Creek or the New Creek limestone in its entirety as neither formation is well-represented lithologically in this area.

Virginia Division of Mineral Resources
Thomas M. Gathright, II, Geologist
August 23, 1971