

COMMONWEALTH OF VIRGINIA
DEPARTMENT OF CONSERVATION AND ECONOMIC DEVELOPMENT

W-3652
C-91

MAILING ADDRESS:
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DIVISION OF MINERAL RESOURCES
JAMES L. CALVER, COMMISSIONER
WATER WELL COMPLETION REPORT

OFFICE ADDRESS:
McCormick Road
Charlottesville, Virginia

OWNER: Stone & Webster Engineering Co. Mailing Address: PO Box 38, Mineral Va 23117

TENANT: VEDCO Plant well #4 Mailing Address: _____

DRILLER: Atlantic Pump & Equipment Co., Inc. Mailing Address: PO Box 4009, Richmond VA 2322

WELL LOCATION: County LOUISA Approx. _____ feet _____ miles _____ (direction) of _____ and _____ feet _____ miles _____ (direction) of _____

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

DATE STARTED: April 1972 DATE COMPLETED: April 1972

TYPE OF DRILL RIG USED: Air Rotary TOTAL DEPTH 200 feet

WATER LEVEL: Stands 76 feet below surface OR
has NATURAL flow of _____ gallons per minute.

YIELD TEST: Method pump
Drawdown 22 96 feet
Rate 54 gal. per min.
Duration 48 hrs., _____ min.

HOLE SIZE: 10 inches from 0 to 100 feet
6 inches from 100 to 200 feet
_____ inches from _____ to _____ feet

WATER ZONES: from 120 to _____ feet
from 180 to _____ feet
from _____ to _____ feet

SCREEN SIZE: _____ inches from _____ to _____ feet
_____ inches from _____ to _____ feet
_____ inches from _____ to _____ feet

CASE SIZE: 6 inches from 0 to 135 feet
_____ inches from _____ to _____ feet
_____ inches from _____ to _____ feet

WATER: Color clear Taste new
Odor none Temp. 58 °F

WELL TO SUPPLY: (check one) Home _____
Farm _____ Town _____ School _____
Industry X Other _____

GROUTING: Method _____
Material _____ Depth 100 feet

WATER ANALYSIS AVAILABLE: Yes X No _____

PUMP: Type submersible
Capacity 50 gal per min
Depth of intake 172 feet

DRILL CUTTINGS SAVED: Yes X 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: Gray (Atlantic P&T Co) DATE: 9/1/72

| DEPTH (feet) | | TYPE OF ROCK OR SOIL PENETRATED (gravel, clay, etc., hardness, color, etc.) | REMARKS (water, caving, shot, screen, sample) |
|--------------|-----|--|--|
| FROM | TO | | |
| 0 | 5 | Fill | |
| 5 | 7 | Red clay | |
| 7 | 12 | Sandy " | |
| 12 | 37 | weathered granite | |
| 37 | 58 | Granite | |
| 58 | 60 | weathered granite w/ quartz | |
| 60 | 72 | light gray granite | |
| 72 | 82 | dark " " | |
| 82 | 87 | Granite w/ black mica | |
| 87 | 95 | light granite | |
| 95 | 97 | Brown rock | |
| 97 | 119 | gray granite | |
| 119 | 120 | Brown rock | 6 yds |
| 120 | 140 | Gray granite | |
| 140 | 144 | Dark " | |
| 144 | 147 | Rock quartz w/ black mica | |
| 147 | 153 | Gray granite | |
| 153 | 160 | " " w/ black mica | |
| 160 | 162 | light gray granite | 50 yds |
| 162 | 200 | light gray granite w/ black mica & quartz | |

(Plant well #4)

OWNER: Stone and Webster Engineering Co.,
DRILLER: Atlantic Pump and Equipment Co., Inc.
COUNTY: Louisa

W - 3652
C - 91
Total Depth: 200'

GEOLOGIC LOG

| <u>Depth in feet</u> | |
|----------------------|--|
| 0 - 10 | Quartz-feldspar-biotite-kaolinite saprolite - tan |
| 10 - 20 | Weathered leucogneiss - light-gray, fine-grained, composed of feldspar quartz and biotite |
| 20 - 30 | " |
| 30 - 40 | " |
| 40 - 50 | " |
| 50 - 60 | " |
| 60 - 70 | Biotite leucogneiss - gray, medium-grained fresh rock, biotite is oriented along foliation planes |
| 70 - 80 | " contains muscovite and epidote |
| 80 - 90 | " very-light-colored, some biotite-rich chips |
| 90 - 100 | " very-light-colored, contains muscovite and sulphides |
| 100 - 110 | " contains muscovite and epidote |
| 110 - 120 | " |
| 120 - 130 | " " |
| 130 - 140 | Mixed biotite leucogneiss and mesocratic epidote-biotite gneiss containing brown garnet |
| 140 - 150 | Biotite leucogneiss - contains some muscovite gneiss and some epidote-biotite gneiss chips, also pink microcline chips |
| 150 - 160 | Biotite leucogneiss - contains epidote-biotite gneiss and microcline (pegmatite) chips, sulphides common |

160 - 170 Mesocratic epidote-biotite gneiss - contains some garnet

170 - 180 " this sample is suspect. The interval is not present in the unwashed samples and the 160-170 interval is missing in the washed samples.

180 - 200 No sample

GEOLOGIC SUMMARY

| | <u>Rock Unit</u> | <u>Age</u> |
|-----------|---|-------------------|
| 0 - 10 | Saprolite | Mesozoic-Cenozoic |
| 10 - 60 | Weathered leucogneiss | Paleozoic (?) |
| 60 - 130 | Biotite leucogneiss | " |
| 130 - 150 | Mixed biotite leucogneiss and mesocratic epidote-biotite gneiss | " |
| 150 - 160 | Biotite leucogneiss | " |
| 160 - 180 | (?) Mesocratic epidote-biotite gneiss | " |
| 180 - 200 | No sample | |

Virginia Division of Mineral Resources
James F. Conley, Geologist
September 26, 1973