

COMMONWEALTH OF VIRGINIA
DEPARTMENT OF CONSERVATION AND ECONOMIC DEVELOPMENT

W-2484
C-31

MAILING ADDRESS:

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Charlottesville, VA 22903

DIVISION OF MINERAL RESOURCES

JAMES L. CALVER, COMMISSIONER

OFFICE ADDRESS:

McCormick Road
Charlottesville, Virginia

WATER WELL COMPLETION REPORT

OWNER: U.S. Forest Service Mailing Address: 920 S. Jefferson Street

TENANT: Cascades Recreation Area Mailing Address: Roanoke, Virginia 24016

DRILLER: J. T. Kesler Drilling Company Mailing Address: Rt. 4, Box 403, Roanoke, Va. 24018

WELL LOCATION: County Giles Approx. 2 ~~text~~ miles northeast (direction) of Pembroke and _____ ^{feet} miles at end (direction) of St. Rd. 623

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

DATE STARTED: March 1969 DATE COMPLETED: 3/28/69

TYPE OF DRILL RIG USED: air drill TOTAL DEPTH 125 feet

WATER LEVEL: Stands 57 feet below surface OR
has NATURAL flow of _____ gallons per minute.

YIELD TEST: Method pump
Drawdown 16 feet
Rate 20 gal. per min.
Duration 24 hrs., _____ min.

WATER ZONES: from 70 to 125 feet
from _____ to _____ feet
from _____ to _____ feet

WATER: Color _____ Taste sulfur*
Odor sulfur Temp. _____ °F

WELL TO SUPPLY: (check one) Home _____
Farm _____ Town _____ School _____
Industry _____ Other Gov't. Rec. Area

WATER ANALYSIS AVAILABLE: Yes No _____

DRILL CUTTINGS SAVED: Yes 13 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: * After 24 hrs. test there was a residue deposited on inside of pump pipe

HOLE SIZE: 8 inches from 0 to 63 feet
6 inches from 63 to 100 feet
5 inches from 100 to 125 feet

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

CASE SIZE: 6 inches from 0 to 63 feet
5 inches from 0 to 71-1/2 feet
_____ inches from _____ to _____ feet

GROUTING: Method pressure
Material cement & lime Depth 70 feet

PUMP: Type 1 H. P. Myers
Capacity 20 gal. per min
Depth of intake 105 feet

LOG

FURNISHED BY: J. T. Kesler Drilling Company DATE: March 29, 1969

DEPTH (feet)		TYPE OF ROCK OR SOIL PENETRATED (gravel, clay, etc., hardness, color, etc.)	REMARKS (water, caving, shot, screen, sample, etc.)
FROM	TO		
0	40	Clay and sandstone boulders	
40	50	Decomposed purple shale and boulders	
50	73	Fractured limestone	
73	100	Fractured limestone with formation changing color for a few feet at a time	
100	125	Gray limestone	

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DRILLER: J. T. Kesler Drilling Company

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COUNTY: Giles (Pembroke)

TOTAL DEPTH-125'

GEOLOGIC LOG

Depth
in feet

ALLUVIAL DEPOSITS (0-50')

10	Gravelly sand --	brown, oxidized, fine-grained to pebble-size gravel; composed of poorly-sorted quartzite fragments, most of which are iron-oxide stained and a few of which are ferruginous
20	"	with decrease in amount of fine-grained sand, increase in amount of pebble-gravel material
30	Gravel --	brown to maroon-brown, oxydized, pebble to coarse gravel with minor amounts of sand and silt; composed of quartzite and ferruginous sandstone fragments
40	"	"
50	"	"
60		No sample

MARTINSBURG FORMATION (70' - 124')

70	Calcilutite --	dark gray; a few fissile fragments
80	Calcareous shale --	brown to grayish-brown; silt and clay-size grains, poor to good parting; a few fossil fragments
90	Calcilutite --	dark gray; minor amount of calcareous shale; a few fragments have fracture cleavage
100	"	with a few fragments of vein calcite
110	"	only a trace calcareous shale; minor amount of vein calcite
115	Calcilutite --	dark gray; minor amount of vein calcite; a few fragments have fracture cleavage

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120	Calcilutite --	Dark gray; minor amount of vein calcite; a few fragments have fracture cleavage
124		"
125		No sample

GEOLOGIC SUMMARY

	<u>Rock Unit</u>	<u>Age</u>
0-50"	Alluvial gravels	Recent
50-70'	No samples	---
70-124'	Martinsburg Formation	Late Ordovician
124-125'	No sample	---

Virginia Division of Mineral Resources
Robert G. Willson, Geologist
June 5, 1969