

COMMONWEALTH OF VIRGINIA
DEPARTMENT OF CONSERVATION AND ECONOMIC DEVELOPMENT

W-2362
C- 84

MAILING ADDRESS:
B- 3667
C- Charlottesville, VA 22903

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

OFFICE ADDRESS:
McCormick Road
Charlottesville, Virginia

OWNER: Caroline County Mailing Address: Bowling Green, Virginia

TENANT: Bowling Green Jail Mailing Address: Bowling Green, Virginia

DRILLER: Douglas & Dickinson Inc. (B. Taylor) Mailing Address: Box 498, Warsaw, Virginia

WELL LOCATION: County Caroline Approx. 1/2 ~~xxx~~ miles east (direction) of
St. Rt. 2 and St. Rd. 1220 and 1/2 ~~xxx~~ miles south (direction) of St. Rt. 207

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

DATE STARTED: October 23, 1968 DATE COMPLETED: October 30, 1968

TYPE OF DRILL RIG USED: rotary TOTAL DEPTH 419 feet

WATER LEVEL: Stands 184 feet below surface OR

has NATURAL flow of _____ gallons per minute.

YIELD TEST: Method air-lift

Drawdown 30 feet

Rate 25 gal. per min.

Duration 6 hrs., 00 min.

WATER ZONES: from 376 to 396 feet

from _____ to _____ feet

from _____ to _____ feet

WATER: Color none Taste none

Odor none Temp. ? °F

WELL TO SUPPLY: (check one) Home _____

Farm _____ Town _____ School _____

Industry _____ Other jail

WATER ANALYSIS AVAILABLE: Yes _____ No x

DRILL CUTTINGS SAVED: Yes 40 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: _____

HOLE SIZE: 12 inches from 0 to 50 feet

6 inches from 50 to 320 feet

2 inches from 320 to 419 feet

SCREEN SIZE: 2 inches from 376 to 396 feet

_____ inches from _____ to _____ feet

_____ inches from _____ to _____ feet

CASE SIZE: 4 inches from 0 to 320 feet

2 inches from 320 to 376 feet

2 inches from 396 to 419 feet

GROUTING: Method tremie

Material neat cement Depth 50 feet

PUMP: Type _____

Capacity _____ gal. per min.

Depth of intake _____ feet

LOG

FURNISHED BY: Douglas & Dickinson, Inc.

DATE: December 19, 1968

DEPTH (feet)		TYPE OF ROCK OR SOIL PENETRATED (gravel, clay, etc., hardness, color, etc.)	REMARKS (water, caving, shot, screen, sample, etc.)
FROM	TO		
0	10	Red sandy clay	
10	21	" " "	
21	31	Fine sand with clay	
31	42	" " " "	
42	52	" " " "	
52	63	Red clay and gravel	
63	73	Red and blue clay	
73	84	Blue clay	
84	94	" "	
94	105	Red and blue clay	
105	115	Blue clay	
115	126	" "	
126	136	" "	
136	147	" " with shells	
147	158	" " " "	
158	168	" " " "	
168	179	Red and blue clay	
179	189	Blue clay	
189	200	Dark blue sand, clay and shell	
200	210	Blue clay	
210	221	Blue and reddish clay	
221	231	" " " "	
231	242	Blue clay	
242	252	" "	
252	263	Blue and white fine sand	
263	273	Red and blue clay	
273	284	" " " "	
284	294	Gray sandy clay	
294	305	" " "	
305	315	" " "	
315	326	White sand	
326	336	" " and clay	
336	347	Sanded blue clay	
347	357	Red and blue clay	
357	368	" " " "	
368	378	Bluish sand and clay	
378	389	White sand	
389	399	" "	
399	409	" " and clay	
409	419	" " " "	

(Use additional forms if necessary)

VIRGINIA DIVISION OF MINERAL RESOURCES
INTERVAL SHEET

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Well Repository No: 2362

Date rec'd: 12/27/68

Sample Interval: from 0 to: 419'

PROP: Bowling Green Jail

Number of samples: 40

COMP: Douglas & Dickinson, Inc.

Total Depth: 419'

COUNTY: Caroline (Bowling Green)

Oil or Gas: Water: Exploratory:

From-To	From-To	From-To	From-To
0 - 10	315 - 326	-	-
10 - 21	326 - 336	-	-
21 - 31	336 - 347	-	-
31 - 42	347 - 357	-	-
42 - 52	357 - 368	-	-
52 - 63	368 - 378	-	-
63 - 73	378 - 389	-	-
73 - 84	389 - 399	-	-
84 - 94	399 - 409	-	-
94 - 105	409 - 419	-	-
105 - 115	-	-	-
115 - 126	-	-	-
126 - 136	-	-	-
136 - 147	-	-	-
147 - 158	-	-	-
158 - 168	-	-	-
168 - 179	-	-	-
179 - 189	-	-	-
189 - 200	-	-	-
200 - 210	-	-	-
210 - 221	-	-	-
221 - 231	-	-	-
231 - 242	-	-	-
242 - 252	-	-	-
252 - 263	-	-	-
263 - 273	-	-	-
273 - 284	-	-	-
284 - 294	-	-	-
294 - 305	-	-	-
305 - 315	-	-	-

All intervals have both washed and unwashed samples.

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DRILLER: Douglas & Dickinson, Inc.
COUNTY: Caroline (Bowling Green)

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TOTAL DEPTH: 419'

GEOLOGIC LOG

Depth
in feet

COLUMBIA GROUP (0-63')

- 0-10 Sand — matrix (20%) of brick-red clay; fine to coarse, fairly well-sorted, subrounded; slightly to moderately feldspathic; trace of glauconite
- 10-21 Sand — matrix (10%) of orange-brown clay; 5% fine, rounded gravel; very fine to very coarse, poorly sorted, angular to rounded; slightly to moderately feldspathic, blue quartz common, trace of glauconite
- 21-31 Sand — brown, slightly clayey; coarse to very coarse, fairly well-sorted, angular to subrounded; slightly feldspathic, abundant blue quartz, accessory magnetite
- 31-42 " with 5-10% fine gravel
- 42-52 " medium to very coarse, rather poorly sorted
- 52-63 Sand and gravel — orange-brown, very slightly clayey (5%); 20% fine gravel, 75% very fine to very coarse, poorly sorted, moderately feldspathic sand

CALVERT FORMATION (63-158')

- 63-73 Clay — gray, moderately sandy; sand is very fine, very well-sorted, angular; traces of muscovite and magnetite
- 73-84 "
- 84-94 "
- 94-105 Clay — pinkish-gray, traces of silt and sand; trace of glauconite

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- 105-115 Clay — greenish-gray, slightly sandy; very slightly glauconitic
- 115-126 Sand — gray, moderately clayey (20%); fine to very fine, well-sorted, angular; traces of glauconite and muscovite
- 126-136 " with a few small shell fragments
- 136-147 " "
- 147-158 " "

MATTAPONI FORMATION (158-200')

- 158-168 Clay — gray, moderately sandy, 10% fine (10 mm), rounded quartz gravel; sand is fine to very fine well-sorted, angular; traces of muscovite and glauconite
- 168-179 "
- 179-189 "
- 189-200 Shell and sand — greenish-gray, trace of clay; 75% pelecypod and gastropod shells and shell fragments; 25% fine to medium, fairly well-sorted, slightly to moderately glauconitic sand; fish teeth and phosphatic fragments common; a few Robulus

PATAPSCO FORMATION (200-419')

- 200-210 Sand — abundant matrix (25%) of variegated clay; fine to coarse, moderately sorted, angular to sub-rounded; moderately feldspathic; small amounts of muscovite and glauconite
- 210-221 Clay — variegated, very sandy (40%); sand is fine to coarse, moderately sorted; feldspathic, slightly micaceous; traces of pyrite and glauconite
- 221-231 "
- 231-242 " slightly glauconitic

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- 242-252 Sand — pale greenish-gray, moderately clayey (20%); fine to coarse, moderately sorted, subangular; feldspathic, moderately micaceous (muscovite exceeds chloritized biotite); trace of glauconite
- 252-263 Sand — brown, slightly clayey; fine to medium, fairly well-sorted; feldspathic, micaceous
- 263-273 "
- 273-284 "
- 284-294 Clay — mottled, sandy; sand is fine to medium, fairly well-sorted, feldspathic, slightly glauconitic
- 294-305 Sand — abundant matrix (30%) of variegated clay; very fine to medium grained, fairly well-sorted, angular; moderately feldspathic, very slightly glauconitic
- 305-315 "
- 315-326 Sand — brown, slightly clayey (5%); fine to very coarse, rather poorly sorted, angular to subrounded; moderately feldspathic, trace of fine-grained glauconite
- 326-336 Sand — dark-greenish brown, clayey (30%); very fine to very coarse, poorly sorted, subangular; slightly feldspathic; traces of muscovite and glauconite
- 336-347 Clay — variegated, with reddish-brown aspect, moderately sandy; sand is fine to very fine, fairly well-sorted, angular; moderately feldspathic; traces of glauconite and muscovite
- 347-357 "
- 357-368 Clay — variegated, with reddish-brown aspect, sandy; sand is fine to medium, fairly well-sorted; slightly to moderately feldspathic; traces of muscovite, glauconite, and pyrite
- 368-378 "

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378-389	Sand — brown, slightly clayey (10%); very fine to medium, fairly well-sorted, angular to subangular; slightly to moderately feldspathic; traces of muscovite, glauconite, and pyrite
389-399	Sand — brown, very slightly clayey (5%); fine to coarse, poorly sorted, poorly rounded; moderately feldspathic
399-409	"
409-419	"

GEOLOGIC SUMMARY

	<u>Rock Unit</u>	<u>Age</u>
0-63'	Columbia Group	Pleistocene
63-158'	Calvert Formation	Middle Miocene
158-200'	Mattaponi Formation	Paleocene
200-419'	Patapsco Formation	Early Cretaceous

Virginia Division of Mineral Resources
Robert H. Teifke, Geologist
January 7, 1969