

COMMONWEALTH OF VIRGINIA  
DEPARTMENT OF CONSERVATION AND ECONOMIC DEVELOPMENT

VDMR: 2329  
WWCR: 74

MAILING ADDRESS:

B 3667  
Charlottesville, VA 22903

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

OFFICE ADDRESS:

McCormick Road  
Charlottesville, Virginia

OWNER: Mr. Thomas M. Brooks Mailing Address: R-1, Box 143, Quinton, VA 23141

TENANT: Five Lakes Subdivision Mailing Address: c/o Mr. T. M. Brooks

DRILLER: Mitchell's Well & Pump Company Mailing Address: R-1, Box 110, Col. Hgts. Va. 23834

WELL LOCATION: County New Kent Approx. 1/2 <sup>feet</sup>~~miles~~ below \_\_\_\_\_ (direction) of  
Bottoms Bridge and \_\_\_\_\_ <sup>feet</sup><sub>miles</sub> on \_\_\_\_\_ (direction) of U.S. Hwy. 60

(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 1968 DATE COMPLETED: October 1968

TYPE OF DRILL RIG USED: cable tool TOTAL DEPTH 306 feet

WATER LEVEL: Stands 79 feet below surface OR  
has NATURAL flow of \_\_\_\_\_ gallons per minute.

YIELD TEST: Method pumped  
Drawdown 101 feet  
Rate 240 gal. per min.  
Duration 44 hrs., 30 min.  
not continuous

WATER ZONES: from 286 to 306 feet  
from \_\_\_\_\_ to \_\_\_\_\_ feet  
from \_\_\_\_\_ to \_\_\_\_\_ feet

WATER: Color clear Taste good  
Odor none Temp. \_\_\_\_\_ °F

WELL TO SUPPLY: (check one) Home \_\_\_\_\_  
Farm \_\_\_\_\_ Town \_\_\_\_\_ School \_\_\_\_\_  
Industry \_\_\_\_\_ Other subdivision

WATER ANALYSIS AVAILABLE: Yes \_\_\_\_\_ No X

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: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

HOLE SIZE: 10 inches from 0 to 40 feet  
6 inches from 40 to 306 feet  
\_\_\_\_\_ inches from \_\_\_\_\_ to \_\_\_\_\_ feet

SCREEN SIZE: 5 inches from 286 to 306 feet  
with 11'2" blank above  
\_\_\_\_\_ inches from \_\_\_\_\_ to \_\_\_\_\_ feet  
\_\_\_\_\_ inches from \_\_\_\_\_ to \_\_\_\_\_ feet

CASE SIZE: 6 inches from 0 to 274'10" feet  
\_\_\_\_\_ inches from \_\_\_\_\_ to \_\_\_\_\_ feet  
\_\_\_\_\_ inches from \_\_\_\_\_ to \_\_\_\_\_ feet

GROUTING: Method poured  
cement and  
Material water Depth 40 feet

PUMP: Type Submersible  
Capacity 10 HP gal per min  
Depth of intake 200 feet

# LOG

FURNISHED BY: Mitchell's Well & Pump Co.      DATE: October 24, 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 mud	
10	20	mud, sand and shells	
20	30	ditto	
30	40	ditto	
40	50	ditto	
50	60	sand and shells	
60	70	ditto	
70	80	ditto	
80	90	ditto	
90	100	ditto	
100	110	mud, sand and shell	
110	120	ditto	
120	130	ditto	
130	140	red marl and shell	
140	150	marl and shell	
150	160	marl, shell and sand	
160	170	ditto	
170	180	ditto	
180	190	ditto	
190	200	ditto	
200	210	gray marl and mud	
210	220	red marl and mud	
220	230	mud and sand	
230	240	sand	
240	250	sand	
250	260	sand	
260	270	sand	
270	280	sand	
280	290	sand	
290	300	sand	
300	306	sand	

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OFFICE ADDRESS:

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Charlotteville, VA 22903

JAMES L. CALVER, COMMISSIONER

McCormick Road  
Charlotteville, Virginia

WATER WELL COMPLETION REPORT

W-2329

OWNER: Mr. Thomas M. Brooks Mailing Address: R-1, Box 143, Quinton, VA 23141

TENANT: Five Lakes Subdivision Mailing Address: c/o Mr. T. M. Brooks

DRILLER: Mitchell's Well & Pump Company Mailing Address: R-1, Box 110, Col. Hgts. Va. 23834

WELL LOCATION: County New Kent Approx. 1/2 <sup>mi</sup> miles below (direction) of  
Bottoms Bridge and feet on (direction) of U.S. Hwy. 60

(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 1963 DATE COMPLETED: October 1968

TYPE OF DRILL RIG USED: cable tool TOTAL DEPTH 306 feet

WATER LEVEL: Stands 79 feet below surface OR

has NATURAL flow of \_\_\_\_\_ gallons per minute.

YIELD TEST: Method pumped

Drawdown 101 feet

Rate 240 gal. per min.

Duration 44 hrs., 30 min.  
not continuous

WATER ZONES: from 286 to 306 feet

from \_\_\_\_\_ to \_\_\_\_\_ feet

from \_\_\_\_\_ to \_\_\_\_\_ feet

WATER: Color clear Taste good

Odor none Temp. \_\_\_\_\_ °F

WELL TO SUPPLY: (check one) Home \_\_\_\_\_

Farm \_\_\_\_\_ Town \_\_\_\_\_ School \_\_\_\_\_

Industry \_\_\_\_\_ Other subdivision

WATER ANALYSIS AVAILABLE: Yes \_\_\_\_\_ No X

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: QUINTON QUADRANGLE

ELEV. :

HOLE SIZE: 10 inches from 0 to 40 feet

6 inches from 40 to 306 feet

\_\_\_\_\_ inches from \_\_\_\_\_ to \_\_\_\_\_ feet

SCREEN SIZE: 5 inches from 286 to 306 feet  
with 11'2" blank above

\_\_\_\_\_ inches from \_\_\_\_\_ to \_\_\_\_\_ feet

\_\_\_\_\_ inches from \_\_\_\_\_ to \_\_\_\_\_ feet

CASE SIZE: 6 inches from 0 to 274'10" feet

\_\_\_\_\_ inches from \_\_\_\_\_ to \_\_\_\_\_ feet

\_\_\_\_\_ inches from \_\_\_\_\_ to \_\_\_\_\_ feet

GROUTING: Method poured

cement and

Material water Depth 40 feet

PUMP: Type Submersible

Capacity 10 HP gal per min

Depth of intake 200 feet

INTERVAL SHEET

Page 1 of 1

WWCR: 74  
VDMR Well No: 2329

Date rec'd: 11/25/68

Sample Interval: from 10 to: 306'

PROP: Thomas M. Brooks (Five Lakes Subdivision)

Number of samples: 30

COMP: Mitchell's Well and Pump Co.

Total Depth: 306'

COUNTY: New Kent (Bottoms Bridge)

Oil or Gas: Water: X Exploratory:

From-To	From-To	From-To	From-To
-	300 - 306	-	-
10 - 20	-	-	-
20 - 30	-	-	-
30 - 40	-	-	-
40 - 50	-	-	-
50 - 60	-	-	-
60 - 70	-	-	-
70 - 80	-	-	-
80 - 90	-	-	-
90 - 100	-	-	-
100 - 110	-	-	-
110 - 120	-	-	-
120 - 130	-	-	-
130 - 140	-	-	-
140 - 150	-	-	-
150 - 160	-	-	-
160 - 170	-	-	-
170 - 180	-	-	-
180 - 190	-	-	-
190 - 200	-	-	-
200 - 210	-	-	-
210 - 220	-	-	-
220 - 230	-	-	-
230 - 240	-	-	-
240 - 250	-	-	-
250 - 260	-	-	-
260 - 270	-	-	-
270 - 280	-	-	-
280 - 290	-	-	-
290 - 300	-	-	-

All intervals have both washed and unwashed samples.

OWNER: Mr. Thomas M. Brooks  
(Five Lakes Subdivision)  
DRILLER: Mitchell's Well and Pump Company  
COUNTY: New Kent (Bottoms Bridge)

VDMR: 2329  
WWCR: 74  
TOTAL DEPTH: 306'

GEOLOGIC LOG

Depth in  
feet

0-10            No sample

COLUMBIA GROUP (10-20')

10-20            Sand — orange-brown, moderately clayey (15%); fine to medium, well-sorted, angular to subangular; traces of feldspar and magnetite

CHESAPEAKE GROUP (20-60')

20-30            Sand and clay — dark-gray; 35% dark-gray clay; 65% fine to medium, well-sorted, angular sand; slightly micaceous

30-40            "            with a few pelecypod shells and shell fragments, small pebbles, and phosphatic nodules and bone fragments

40-50            Clay, silt, and sand — dark greenish-gray; subequal amounts of clay, coarse silt, and very fine grained, well-sorted, angular sand; 5% shell fragments; trace of glauconite

50-60            Sand and shell — gray, moderately clayey (15%); 50% fine to medium, well-sorted, angular sand; 35% pelecypod shell fragments; pelletal and fragmental phosphorite are common

NANJEMOY FORMATION (60-140')

60-70            Sand — greenish-gray, very slightly clayey; fine to medium, well-sorted, 55% angular quartz, 40% glauconite

70-80            "            5% shell fragments, 5% coarse, well-rounded quartz sand, 55% angular quartz, 30% glauconite

OWNER: Mr. Thomas M. Brooks (Five Lakes Subdivision) #2329

- 80-90 Sand and shell — gray, clayey (20%); 40% pelecypod shell fragments; 30% fine, well-sorted, slightly to moderately glauconitic sand; 10% coarse, well-rounded quartz sand
- 90-100 Sand, clay, shells, and limestone — 30% dark-gray clay, 35% fine, well-sorted, very glauconitic sand, 20% shells and shell fragments, 15% brownish-gray, sandy limestone
- 100-110 Sand and clay — 35% dark-gray clay; 60% very fine to medium, well-sorted, very glauconitic sand; 5% shell fragments
- 110-120 Clay and sand — medium-gray, silty, 5% shell fragments; sand (35%) is fine to medium, well-sorted, moderately glauconitic, slightly micaceous
- 120-130 " sand is very glauconitic
- 130-140 Clay — pinkish-orange, subordinately light-gray; slightly glauconitic
- MATTAPONI FORMATION (140-200')
- 140-150 Sand — dark-gray, moderately clayey (15-20%), 5% shell fragments; fine to very fine, well-sorted, glauconitic; foraminifers and ostracods common
- 150-160 Sand — dark-gray, moderately clayey (20%), 10% shell fragments; very fine to medium, well-sorted, very glauconitic; a few foraminifers and ostracods
- 160-170 " with 10% clay and 20% shells, mostly gastropods
- 170-180 " "
- 180-190 " "
- 190-200 Sand — gray, moderately clayey (10-15%), 5% fine (2-12 mm), rounded, quartz gravel; fine to very coarse, poorly sorted, glauconitic in fine grades, slightly feldspathic in coarse grades

OWNER: Mr. Thomas M. Brooks (Five Lakes Subdivision) #2329

PATUXENT FORMATION (200-306')

200-210	Clay — variegated, slightly sandy; sand is very fine to coarse, poorly sorted, moderately glauconitic
210-220	" moderately sandy; sand is fine to very fine, well-sorted, angular, slightly glauconitic and micaceous
220-230	Sand — tan, moderately clayey (15%); very fine to medium, well-sorted, angular; moderately feldspathic, slightly micaceous, trace of glauconite
230-240	Sand — gray; medium to very coarse, moderately sorted, angular to subangular; moderately feldspathic
240-250	Sand — gray; with 5-10% granule gravel; coarse to very coarse, fairly well-sorted, subangular to subrounded; feldspathic
250-260	" trace of granule gravel
260-270	Sand — gray, with 5-10% granule gravel; fine to very coarse, rather poorly sorted, angular to subrounded; feldspathic; slightly glauconitic in fine grades
270-280	"
280-290	Sand and gravel — gray; 25% feldspathic granule gravel; 75% medium to very coarse, moderately sorted, feldspathic sand
290-300	"
300-306	" with 5% granule gravel

OWNER: Mr. Thomas M. Brooks (Five Lakes Subdivision) #2329

GEOLOGIC SUMMARY

	<u>Rock Unit</u>	<u>Age</u>
0-10'	No sample	—
10-20'	Columbia Group	Pleistocene
20-60'	Chesapeake Group	Miocene
60-140'	Nanjemoy Formation	Middle Eocene
140-200'	Mattaponi Formation	Paleocene
200-306'	Patuxent Formation	Early Cretaceous

Virginia Division of Mineral Resources  
Robert H. Teifke, Geologist  
December 10, 1968



OWNER : Mr. Thomas M. Brooks      well # 2329  
 (Five Lake Subdivision)  
 DRILLER : Mitchell's Well and Pump Company      well # 74  
 COUNTY : New Kent (Bottoms Bridge)      TOTAL DEPTH : 306'

GEOLOGIC LOG

Depth in feet

0-10 No sample

COLUMBIA GROUP (10-20')

10-20 Sand - orange-brown, moderately clayey (15%); fine to medium, well-sorted, angular to sub-angular; traces of feldspar and magnetite

CHESAPEAKE GROUP (20-60') ST. MARY'S & CALVERT

20-30 Sand and clay - dark-gray; 35% dark gray clay; 65% fine to medium, well-sorted, angular sand; slightly micaceous

30-40 " with a few pelecypod shells and shell fragments, small pebbles, and phosphatic nodules and bone fragments

40-50 <sup>silt, and sand</sup> Clay - dark greenish-gray; subequal amounts of clay, some silt, and very fine grained, well-sorted, angular sand; 5% shell fragments; trace of glauconite

50-60 Sand and shell - gray, moderately clayey (15%); 50% fine to medium, well-sorted, angular sand; 35% pelecypod shell fragments; pellets and

frequent phosphate are common

NANTHEMOY FORMATION (60-140'<sup>-10</sup>)

60-70 Sand - greenish-gray, very slightly clayey; fine to medium, well-sorted; 55% angular quartz, 40% glauconite

70-80 " 5% shell fragments, 5% coarse, well-rounded quartz sand, 55% angular quartz, 30% glauconite

Page 2

80-90 Sand and shell - gray, clayey (20%); 40% pelecypod shell fragments; 30% fine, well-sorted, slightly to moderately glauconitic sand; 10% coarse, well-rounded quartz sand

90-100 Sand, clay, shells, and limestone - 30% dark-gray clay, 35% fine, well-sorted, very glauconitic sand, 20% shells and shell fragments, 15% brownish-gray, sandy limestone

100-110 Sand and clay - 35% dark-gray clay; 60% very fine to medium, well-sorted, very glauconitic sand; 5% shell fragments

110-120 Clay and sand - medium-gray, silty, 5% shell fragments; sand (35%) is fine to medium, well-sorted, moderately glauconitic, slightly micaceous

120-130 " sand is very glauconitic

130-140

Clay - pinkish-orange, subordinatedly light-gray; slightly glauconitic

MATTAPONI FORMATION (<sup>-90</sup>140-200')

140-150

Sand - dark-gray, moderately clayey (15-20%), 5% shell fragments; fine to very fine, well-sorted, glauconitic; foraminifers and ostracods common

TM

150-160

Sand - dark-gray, moderately clayey (20%), ~~with~~ 10% shell fragments; very fine to medium, well-sorted, very glauconitic; a few foraminifers and ostracods

160-170

" with 10% clay and ~~with~~ 20% shells, mostly gastropods

170-180

" "

180-190

" "

190-200

Sand - gray, moderately clayey (10-15%), 5% fine (2-12 mm), rounded, quartz gravel; fine to <sup>very</sup> coarse, poorly sorted, glauconitic in fine grades, slightly feldspathic in coarse grades

Page 3

PATUXENT FORMATION (<sup>-150</sup>200-306')

200-210

Clay - variegated, slightly sandy; sand is very fine to coarse, poorly sorted, moderately glauconitic

210-220

" moderately sandy; sand is fine to very fine, well-sorted, angular, slightly glauconitic and micaceous

220-236

L

Sand - tan, moderately clayey (15%); very fine to medium, well-sorted, angular; moderately feldspathic, slightly micaceous, trace of glauconite

230-240

LK

L

Sand - gray; medium to very coarse, moderately sorted, angular to subangular; moderately feldspathic

240-250

Sand - gray; with 5-10% granule gravel; coarse to very coarse, fairly well-sorted, subangular to subrounded; feldspathic

250-260

" trace of granule gravel

260-270

L

Sand - gray, with 5-10% granule gravel; fine to very coarse, rather poorly sorted, angular to subrounded; feldspathic; slightly glauconitic in fine grades

270-280

"

280-290

L

Sand and gravel - gray; 25% feldspathic granule gravel; 75% medium to very coarse, moderately sorted, feldspathic sand

290-300

"

300-306

" with 5% granule gravel

GEOLOGIC SUMMARY

	<u>Rock Unit</u>	<u>Age</u>
el 50	0-10'	No sample
	10-20'	Columbia Group
Tc 30	20-60'	<del>Chesapeake Group</del> <sup>Tc</sup>
Tn -10	60-140'	Nanjunday Formation
Tm -90	140-200'	Mataponi Formation
LK -150	200-306'	Patuxent Formation
		Early Cretaceous

JOHR  
 Robert H. Phipps - Geologist  
 December 10, 1968