

COMMONWEALTH OF VIRGINIA

W#: 4838

DEPARTMENT OF CONSERVATION AND ECONOMIC DEVELOPMENT

C#: 197

MAILING ADDRESS:

DIVISION OF MINERAL RESOURCES

OFFICE ADDRESS:

B 3667

JAMES L. CALVER, COMMISSIONER

Charlottesville, VA 22903

WATER WELL COMPLETION REPORT

McCormick Road

Charlottesville, Virginia

OWNER: Westmoreland State Park #3

Mailing Address: Box 465, Montross, VA 22520

TENANT: same

Mailing Address:

DRILLER: Sydnor Hydrodynamics, Inc.

Mailing Address: P.O. Box 27186, Richmond, VA 23261

WELL LOCATION: County Westmoreland

Approx. 1 miles North (direction) of

St. Rt. 3

and 200

feet

X

West (direction) of St. Rt. 347

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

DATE STARTED: November 22, 1976

DATE COMPLETED: January 12, 1977

TYPE OF DRILL RIG USED: rotary

TOTAL DEPTH 565 feet

WATER LEVEL: Stands 139' 8" feet below surface OR (completed at 490')

has NATURAL flow of -- gallons per minute

YIELD TEST: Method pump

HOLE SIZE: 12 inches from 0 to 500 feet

Drawdown 83 feet

9 7/8 inches from 500 to 565 feet

Rate 55 gal. per min.

inches from to feet

Duration 48 hrs., - min.

SCREEN SIZE: 4 inches from 384 to 404 feet

WATER ZONES: from to feet

4 inches from 423 to 438 feet

from to feet

4 inches from 463 to 478 feet

from to feet

CASE SIZE: 6 inches from +2 to 300 feet

WATER: Color Taste

4 inches from 300 to 565 w/spacer

Odor Temp. °F

inches from to feet

WELL TO SUPPLY: (check one) Home

GROUTING: Method

Farm Town School

Material Depth 50 feet

Industry Other Park

PUMP: Type

WATER ANALYSIS AVAILABLE: Yes X No

Capacity gal per min

DRILL CUTTINGS SAVED: Yes X No

Depth of intake feet

(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: Electric Log by driller.

COMMONWEALTH LOG

R. A. Turner

January 12, 1977

FURNISHED BY

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 - yellow clay		seen
10	30	Red sandy clay		Support Hydrogeodynamics, Inc.
30	60	Blue Clay		SOIL TEST
60	140	Green sandy clay		Mesoturbation
140	200	Dark green sandy clay		WELL LOGGING CO. LTD.
200	210	Green sandy clay and shells	002	E. R. 38
210	211	Rock		
211	214	Green sandy clay		November 25, 1946
214	214'6"	Rock		SOIL STRATIFICATION
214'6"	230	Soft green sandy clay		
230	230'6"	Rock		
230'1"	251	Soft Green and gray sandy clay		ROCK
251	253	Gray clay and rock streaks		" 8' 8" E. R.
253	300	Gray sandy clay		LEVEE
300	310	Tough gray clay		WATER
310	345	Gray clay and sand		
345	375	Tough green clay		
375	390	Sand with dark green clay		
390	400	Rock		
400	480	Fine to coarse sand, gray & black with some shells	88	WATER
480	520	Black sand, shells with clay streaks		
520	540	Tough tan clay		
540	550	Soft green sandy clay		
550	565	Tough clay (tan)		
test	100	most common		foot
test	150	most common		foot
test	200	most common		foot
test	250	most common		foot
test	300	most common		foot
test	350	most common		foot
test	400	most common		foot
test	450	most common		foot
test	500	most common		foot
test	550	most common		foot
test	600	most common		foot
test	650	most common		foot
test	700	most common		foot
test	750	most common		foot
test	800	most common		foot
test	850	most common		foot
test	900	most common		foot
test	950	most common		foot
test	1000	most common		foot
test	1050	most common		foot
test	1100	most common		foot
test	1150	most common		foot
test	1200	most common		foot
test	1250	most common		foot
test	1300	most common		foot
test	1350	most common		foot
test	1400	most common		foot
test	1450	most common		foot
test	1500	most common		foot
test	1550	most common		foot
test	1600	most common		foot
test	1650	most common		foot
test	1700	most common		foot
test	1750	most common		foot
test	1800	most common		foot
test	1850	most common		foot
test	1900	most common		foot
test	1950	most common		foot
test	2000	most common		foot
test	2050	most common		foot
test	2100	most common		foot
test	2150	most common		foot
test	2200	most common		foot
test	2250	most common		foot
test	2300	most common		foot
test	2350	most common		foot
test	2400	most common		foot
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test	2500	most common		foot
test	2550	most common		foot
test	2600	most common		foot
test	2650	most common		foot
test	2700	most common		foot
test	2750	most common		foot
test	2800	most common		foot
test	2850	most common		foot
test	2900	most common		foot
test	2950	most common		foot
test	3000	most common		foot
test	3050	most common		foot
test	3100	most common		foot
test	3150	most common		foot
test	3200	most common		foot
test	3250	most common		foot
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test	3750	most common		foot
test	3800	most common		foot
test	3850	most common		foot
test	3900	most common		foot
test	3950	most common		foot
test	4000	most common		foot
test	4050	most common		foot
test	4100	most common		foot
test	4150	most common		foot
test	4200	most common		foot
test	4250	most common		foot
test	4300	most common		foot
test	4350	most common		foot
test	4400	most common		foot
test	4450	most common		foot
test	4500	most common		foot
test	4550	most common		foot
test	4600	most common		foot
test	4650	most common		foot
test	4700	most common		foot
test	4750	most common		foot
test	4800	most common		foot
test	4850	most common		foot
test	4900	most common		foot
test	4950	most common		foot
test	5000	most common		foot
test	5050	most common		foot
test	5100	most common		foot
test	5150	most common		foot
test	5200	most common		foot
test	5250	most common		foot
test	5300	most common		foot
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test	7000	most common		foot
test	7050	most common		foot
test	7100	most common		foot
test	7150	most common		foot
test	7200	most common		foot
test	7250	most common		foot
test	7300	most common		foot
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test	7850	most common		foot
test	7900	most common		foot
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test	8000	most common		foot
test	8050	most common		foot
test	8100	most common		foot
test	8150	most common		foot
test	8200	most common		foot
test	8250	most common		foot
test	8300	most common		foot
test	8350	most common		foot
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test	8900	most common		foot
test	8950	most common		foot
test	9000	most common		foot
test	9050	most common		foot
test	9100	most common		foot
test	9150	most common		foot
test	9200	most common		foot
test	9250	most common		foot
test	9300	most common		foot
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test	9900	most common		foot
test	9950	most common		foot
test	10000	most common		foot
test	10050	most common		foot
test	10100	most common		foot
test	10150	most common		foot
test	10200	most common		foot
test	10250	most common		foot
test	10300	most common		foot
test	10350	most common		foot
test	10400	most common		foot
test	10450	most common		foot
test	10500	most common		foot
test	10550	most common		foot
test	10600	most common		foot
test	10650	most common		foot
test	10700	most common		foot
test	10750	most common		foot
test	10800	most common		foot
test	10850	most common		foot
test	10900	most common		foot
test	10950	most common		foot
test	11000	most common		foot
test	11050	most common		foot
test	11100	most common		foot
test	11150	most common		foot
test	11200	most common		foot
test	11250	most common		foot
test	11300	most common		foot
test	11350	most common		foot
test	11400	most common		foot
test	11450	most common		foot
test	11500	most common		foot
test	11550	most common		foot
test	11600	most common		foot
test	11650	most common		foot
test	11700	most common		foot
test	11750	most common		foot
test	11800	most common		foot
test	11850	most common		foot
test	11900	most common		foot
test	11950	most common		foot
test	12000	most common		foot
test	12050	most common		foot
test	12100	most common		foot
test	12150	most common		foot
test	12200	most common		foot
test	12250	most common		foot
test	12300	most common		foot
test	12350	most common		foot
test	12400	most common		foot
test	12450	most common		foot
test	12500	most common		foot
test	12550	most common		foot
test	12600	most common		foot
test	12650	most common		foot
test	12700	most common		foot
test	12750	most common		foot
test	12800	most common		foot
test	12850	most common		foot
test	12900	most common		foot
test	12950	most common		foot
test	13000	most common		foot
test	13050	most common		foot
test	13100	most common		foot
test	13150	most common		foot
test	13200	most common		foot
test	13250	most common		foot
test	13300	most common		foot
test	13350	most common		foot
test	13400	most common		foot
test	13450	most common		foot
test	13500	most common		foot
test	13550	most common		foot
test	13600	most common		foot
test	13650	most common		foot
test	13700	most common		foot
test	13750	most common		foot
test	13800	most common		foot
test	13850	most common		foot
test	13900	most common		foot
test	13950	most common		foot
test	14000	most common		foot
test	14050	most common		foot
test	14100	most common		foot
test	14150	most common		foot
test	14200	most common		foot
test	14250	most common		foot
test	14300	most common		foot
test	14350	most common		foot
test	14400	most common		foot
test	14450	most common		foot
test	14500	most common		foot
test	14550	most common		foot
test	14600	most common		foot
test	14650	most common		foot
test	14700	most common		foot
test	14750	most common		foot
test	14800	most common		foot
test	14850	most common		foot
test				

VIRGINIA DIVISION OF MINERAL RESOURCES
Box 3667, Charlottesville, VA 22903

INTERVAL SHEET

Page 1 of 1

Well Repository No.: W#: 4838
C#: 197

Date rec'd: 4-26-77 Date Processed: 8-9-77

Sample Interval: from 0 to: 565'

PROPERTY: Westmoreland State Park #3

Number of samples: 57

COMPANY: Sydnor Hydrodynamics

Total Depth: 565'

COUNTY: Westmoreland (Baynesville)

Oil or Gas: Water: Exploratory:

From-To	From-To	From-To	From-To	From-To
0 - 10	350 - 360	-	-	-
10 - 20	360 - 370	-	-	-
20 - 30	370 - 380	-	-	-
30 - 40	380 - 390	-	-	-
40 - 50	390 - 400	-	-	-
50 - 60	400 - 410	-	-	-
60 - 70	410 - 420	-	-	-
70 - 80	420 - 430	-	-	-
80 - 90	430 - 440	-	-	-
90 - 100	440 - 450	-	-	-
100 - 110	450 - 460	-	-	-
110 - 120	460 - 470	-	-	-
120 - 130	470 - 480	-	-	-
130 - 140	480 - 490	-	-	-
140 - 150	490 - 500	-	-	-
150 - 160	500 - 510	-	-	-
160 - 170	510 - 520	-	-	-
170 - 180	520 - 530	-	-	-
180 - 190	530 - 540	-	-	-
190 - 200	540 - 550	-	-	-
200 - 210	550 - 560	-	-	-
210 - 220	560 - 570	-	-	-
220 - 230	-	-	-	-
230 - 240	-	-	-	-
240 - 250	-	-	-	-
250 - 260	-	-	-	-
260 - 270	-	-	-	-
270 - 280	-	-	-	-
280 - 290	-	-	-	-
290 - 300	-	-	-	-
300 - 310	-	-	-	-
310 - 320	-	-	-	-
320 - 330	-	-	-	-
330 - 340	-	-	-	-
340 - 350	-	-	-	-

Washed and unwashed samples.

OWNER: Westmoreland State Park #3
DRILLER: Sydnor Hydrodynamics
COUNTY: Westmoreland
: (Baynesville)

W#: 4838
C#: 197
TOTAL DEPTH: 565'
QUAD: Stratford Hall

GEOLOGIC LOG

Depth
(feet)

- 0 - 10 Sand - very dark yellowish orange; heavily stained; slightly clayey; medium to coarse grained, some fine grains; subangular to subrounded; moderately well sorted; quartz; 10% ferricrete; feldspar; few opaques.
- 10 - 20 Sand - very dark yellowish orange; moderately to heavily stained; medium to coarse grained; subangular to subrounded; moderately well sorted; quartz; some feldspar; few grains of glauconite.
- 20 - 30 As above plus few granules; few pebbles.
- 30 - 40 Clay and sand - light olive gray; abundant clay; moderate sand; fine grained, some medium grains (stained); subangular to subrounded; well sorted; quartz; some ferricrete; some glauconite; few flakes of muscovite.
- 40 - 50 As above.
- 50 - 60 Clay - light olive gray, olive gray; slightly sandy; fine to medium grained; subangular to subrounded; moderately well sorted; quartz; some glauconite.
- 60 - 70 As above except moderate sand; few black phosphatic fragments; no glauconite.
- 70 - 80 Sand - light olive gray; moderate clay; fine grained, some medium grains; subangular to subrounded; well sorted; quartz; some black phosphatic material.
- 80 - 90 Clay - yellowish gray; abundant sand; fine grained, some medium grains; subangular to subrounded; well sorted; quartz; few black phosphatic fragments.
- 90 - 100 As above plus bone fragment.
- 100 - 110 As above except no bone fragment.
- 110 - 120 Sand - yellowish gray; abundant clay; fine grained; subangular to subrounded; well sorted; quartz; few black phosphatic fragments; few shell fragments.
- 120 - 130 As above except no shell fragments.

Depth
(feet)

- 130 - 140 Sand - yellowish gray; moderate clay; fine grained; subangular to subrounded; well sorted; quartz; few black phosphatic fragments; forams scarce (inc. Nonion and Buccella).
- 140 - 150 Sand - olive light gray; abundant clay; very fine to fine grained; subangular to subrounded; well sorted; quartz; few flakes of muscovite; forams (inc. Cibicides and Robulus).
- 150 - 160 As above except forams scarce (inc. Buccella).
- 160 - 170 Sand and clay - light olive gray; moderate clay; abundant sand; fine grained; subangular to subrounded; well sorted; quartz; some diatoms; few grains of glauconite; muscovite.
- 170 - 180 As above plus forams rare (inc. Textularia?)
- 180 - 190 Sand - olive light gray; moderate clay; fine grained; subangular to subrounded; well sorted; quartz; some diatoms; few black phosphatic fragments; few grains of glauconite.
- 190 - 200 As above except clay and sand; abundant clay; moderate sand.
- 200 - 210 Sand - olive light gray; moderate clay; medium to coarse grained, some fine grains, some granules; subangular to subrounded; moderately sorted; quartz; 2% glauconite; some black phosphatic material; some sandy limestone and shell fragments; few echinoid spines; forams rare (inc. Buccella).
- 210 - 220 Sand - olive light gray; moderate clay; medium grained, some fine grains, 10% granules, few pebbles; subangular to rounded; moderately sorted; quartz; 20% glauconite; 15% sandy limestone and shell fragments; 5% black phosphatic material; few flakes of muscovite; forams.
- 220 - 230 Sand - light olive gray; abundant clay; fine to medium grained; subangular to rounded; moderately well sorted; quartz; 30% glauconite; 10% sandy limestone and shell fragments; few flakes of muscovite; few black phosphatic fragments; few echinoid spines; forams (inc. Buccella, Robulus and Cibicides?)
- 230 - 240 As above except 20% glauconite; 2% sandy limestone and shell fragments; no Robulus.
- 240 - 250 Sand - olive light gray; slightly clayey; medium to coarse grained, some fine grains; subangular to subrounded; moderately well sorted; quartz; 3% glauconite; few black phosphatic fragments; forams scarce.
- 250 - 260 Sand - olive light gray; moderate clay; fine to coarse grained, few granules; subangular to subrounded; moderately sorted; quartz; 2% glauconite; some muscovite; some shell fragments; few black phosphatic fragments.

Depth
(feet)

- 260 - 270 Sand - olive light gray; moderate clay; fine to medium grained; some coarse grains; subangular to rounded; moderately well sorted; quartz; 35% glauconite; 5% shell fragments; some muscovite; ostracode.
- 270 - 280 As above except slightly clayey; no Robulus.
- 280 - 290 Sand - olive light gray; slightly clayey; fine to medium grained, some coarse grains; subangular to subrounded; moderately well sorted; 50% glauconite; quartz; 7% shell fragments; few flakes of muscovite; few bone fragments; forams scarce (inc. Buccella); ostracodes.
- 290 - 300 Sand - olive light gray; moderate clay; fine to medium grained; subangular to subrounded; moderately well sorted; quartz; 15% glauconite; 3% shell fragments; some muscovite; forams (inc. Robulus and Globulina); bone fragment; ostracode.
- 300 - 310 Sand - olive light gray; abundant clay; medium grained, some coarse grains; subangular to rounded; well sorted; 70% glauconite; quartz; few shell fragments; muscovite.
- 310 - 320 As above plus some fine grains; moderately well sorted.
- 320 - 330 Sand - olive light gray; slightly clayey; medium to coarse grained, some fine grains; subrounded to rounded; moderately well sorted; 60% glauconite; quartz, few flakes of muscovite; few shell fragments.
- 330 - 340 As above.
- 340 - 350 As above except moderate clay; some shell fragments.
- 350 - 360 Sand - olive light gray; abundant clay; fine to coarse grained; subangular to rounded; moderately sorted; 50% glauconite; quartz; some shell fragments; few flakes of muscovite.
- 360 - 370 Sand - olive light gray; some stained grains; slightly clayey; medium to coarse grained, some fine grains, some granules; subangular to rounded; moderately sorted; 50% glauconite; quartz; few shell fragments; muscovite.
- 370 - 380 As above except moderate clay - olive light gray, light gray, grayish orange pink.
- 380 - 390 Sand - olive light gray; some stained grains; moderate clay; medium to coarse grained, few granules; subangular to rounded; moderately well sorted; 50% glauconite (black, brown); quartz; some sandy limestone and shell fragments; few flakes of muscovite.
- 390 - 400 As above except no clay.

Depth
(feet)

- 400 - 410 Sand - olive light gray; slightly clayey; medium to coarse grained; subangular to subrounded; moderately well sorted; quartz; 40% glauconite (black, brown); few shell fragments; muscovite.
- 410 - 420 As above.
- 420 - 430 Sand - olive light gray; medium to coarse grained; subangular to rounded; moderately well sorted; quartz; 40% glauconite (black, green, brown); few shell fragments; muscovite; forams rare (inc. Nodosaria).
- 430 - 440 As above plus some fine grains; no Nodosaria.
- 440 - 450 As above plus few sandy limestone fragments; forams (inc. Buccella).
- 450 - 460 Sand - olive light gray; medium grained, some coarse grains, few granules; subangular to rounded; well sorted; quartz; 40% glauconite; 2% sandy limestone and shell fragments; few flakes of muscovite; forams (inc. Buccella and Robulus).
- 460 - 470 As above except 50% glauconite; forams scarce (inc. Buccella).
- 470 - 480 As above plus some slightly to heavily stained grains; forams rare (inc. Nodosaria).
- 480 - 490 As above except slightly clayey; forams scarce (inc. Nodosaria and Robulus).
- 490 - 500 Sand - olive light gray; medium to coarse grained; subangular to rounded; moderately well sorted; quartz; 40% glauconite; 5% sandy limestone fragments; few shell fragments; muscovite; forams (inc. Buccella and Robulus).
- 500 - 510 As above except 50% glauconite; few sandy limestone fragments; forams scarce (inc. Robulus and Nodosaria).
- 510 - 520 As above except 2% sandy limestone and shell fragments; forams (inc. Buccella and Dentalina?).
- 520 - 530 Sand - olive light gray; slightly clayey; medium to coarse grained, few granules; subangular to rounded; moderately well sorted; quartz; 40% glauconite; 3% sandy limestone and shell fragments; few flakes of muscovite; forams (inc. Buccella).
- 530 - 540 As above except 25% glauconite.
- 540 - 550 As above except 3% granules; moderately sorted; 10% sandy limestone and shell fragments; forams scarce (inc. Buccella).

OWNER: Westmoreland State Park #3 - 5 -

W#: 4838

Depth
(feet)

550 - 560 Sand - olive light gray; moderate clay; coarse grained to granular; subangular to subrounded; moderately sorted; quartz; 20% glauconite; some feldspar; few flakes of muscovite.

560 - 565 As above plus some light brown clay; 15% glauconite.

Logged by: Michael T. Currie
May 7, 1979

GEOLOGIC SUMMARY

<u>Depth (feet)</u>	<u>Thickness (feet)</u>	<u>Rock Unit</u>	<u>Time Rock Unit</u>
0- 30	30	Columbia Group	Pleistocene
30- 80	50	Choptank Formation	Miocene
80- 200	120	Calvert Formation	Miocene
200- 370	170	Nanjemoy Formation	Eocene
370- 380	10	Marlboro Clay	Eocene
380- 565	185	Aquia Formation	Eocene-Cretaceous

VIRGINIA DIVISION OF MINERAL RESOURCES

David A. Hubbard, Jr., Geologist

June 28, 1979