

COMMONWEALTH OF VIRGINIA  
DEPARTMENT OF CONSERVATION AND ECONOMIC DEVELOPMENT

MAILING ADDRESS:  
Box 3667  
Charlottesville, VA 22903

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

OFFICE ADDRESS:  
McCormick Road  
Charlottesville, Virginia

OWNER: Va. Dept. of Hwys. & Trans. #2 Mailing Address: 1221 E. Broad St. Richmond, VA 23219

TENANT: I-64 East-bound lane rest area Mailing Address: \_\_\_\_\_

DRILLER: Sydnor Hydrodynamics, Inc. Mailing Address: P.O. Box 27186 Richmond, VA 23261

WELL LOCATION: County New Kent Approx. 450 <sup>feet</sup> ~~miles~~ south (direction) of  
East Bound Lane I-64 and 620 <sup>feet</sup> ~~miles~~ east (direction) of Rest area exit

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

DATE STARTED: July 7, 1975 DATE COMPLETED: August 8, 1975

TYPE OF DRILL RIG USED: mud rotary TOTAL DEPTH 402' feet

WATER LEVEL: Stands 105'8 1/2" feet below surface OR  
has NATURAL flow of \_\_\_\_\_ gallons per minute

YIELD TEST: Method pump  
Drawdown 24'7" feet  
Rate 50 gal. per min.  
Duration 48 hrs., \_\_\_\_\_ min.

HOLE SIZE: 12 1/2 inches from 0 to 402 feet  
\_\_\_\_\_ inches from \_\_\_\_\_ to \_\_\_\_\_ feet  
\_\_\_\_\_ inches from \_\_\_\_\_ to \_\_\_\_\_ feet  
SCREEN SIZE: 6 inches from 280 to 285 feet

WATER ZONES: from 280 to 285 feet  
from 355 to 360 feet  
from 392 to 397 feet

\_\_\_\_\_ 6 inches from 355 to 360 feet  
\_\_\_\_\_ 6 inches from 392 to 397 feet  
CASE SIZE: 6 inches from +2 to 280 feet

WATER: Color \_\_\_\_\_ Taste \_\_\_\_\_  
Odor \_\_\_\_\_ Temp. \_\_\_\_\_ °F

\_\_\_\_\_ 6 inches from 285 to 355 feet  
\_\_\_\_\_ 6 inches from 360 to 392 feet  
\_\_\_\_\_ 6 inches from 397 to 402 feet

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

GROUTING: Method \_\_\_\_\_  
Material \_\_\_\_\_ Depth 50 feet

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

PUMP: Type \_\_\_\_\_  
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: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

# LOG

FURNISHED BY: Charles P. Mitchell

DATE: \_\_\_\_\_

DEPTH (feet)		TYPE OF ROCK OR SOIL PENETRATED (gravel, clay, etc., hardness, color, etc.)	REMARKS (water, caving, shot, screen, sample, etc.)
FROM	TO		
0	1	Brown sand	
1	7	Silty sand clay	
7	10	Brown clay	
10	19	Brown sand clay	
19	35	Brown sand, clay, coarse sand	
35	55	Yellow and brown silty clay	
55	75	Yellow and brown clay, some gravel	
75	105	Fine brown silty sand	
105	112	Shells, sand and clay	
112	118	Grey clay	
118	125	Shell rock with black & grey sand streaks	
125	155	Shell rock with silty sandy streaks	
155	170	Silty black sand	
170	185	Grey and black clay	
185	212	Dark grey clay	
212	282	Dark gray and black silty sand clay	
282	295	Coarse gray sand with thin clay streaks	
295	308	Grey sand clay	
308	315	Pink and grey clay	
315	339	Tough brown clay	
339	356	Tough brown and red clay	
356	368	Grey sand	
368	392	Hard green and brown clay	
392	402	Grey sand clay mixed with some white clay	

(Use additional forms if necessary)

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

INTERVAL SHEET

Page 1 of 1

Well Repository No: W#: 4443  
 C#: 83

Date rec'd: 9/22/75 Date Processed: 8/2/76

Sample Interval: from:- to:-  
 0 400

PROPERTY: Va. Dept. of Hwy. & Trans. #2

Number of samples: 40

COMPANY: Sydnor Hydrodynamics

Total Depth: 402'

COUNTY: New Kent (Windsor Shades)

Oil or Gas: Water: Exploratory:

From-To	From-To	From-To	From-To
0 - 10	250 - 260	-	-
10 - 20	260 - 270	-	-
20 - 30	270 - 280	-	-
30 - 40	280 - 290	-	-
40 - 50	290 - 300	-	-
50 - 60	300 - 310	-	-
60 - 70	310 - 320	-	-
70 - 80	320 - 330	-	-
80 - 90	330 - 340	-	-
90 - 100	340 - 350	-	-
100 - 110	350 - 360	-	-
110 - 120	360 - 370	-	-
120 - 130	370 - 380	-	-
130 - 140	380 - 390	-	-
140 - 150	390 - 400	-	-
150 - 160	-	-	-
160 - 170	-	-	-
170 - 180	-	-	-
180 - 190	-	-	-
190 - 200	-	-	-
200 - 210	-	-	-
210 - 220	-	-	-
220 - 230	-	-	-
230 - 240	-	-	-
240 - 250	-	-	-

ashed and unwashed samples

OWNER: Va. Dept. of Highways  
and Transportation  
DRILLER: Sydnor  
COUNTY: New Kent  
(I-64 rest area)

W#: 4443  
C#: 83  
TOTAL DEPTH: 400'  
QUAD.: Providence Forge

GEOLOGIC LOG

DEPTH  
(FEET)

- 0-10 Sand — dark yellowish orange; slightly stained; slightly clayey; fine to coarse grained; subangular to subrounded; moderately sorted; quartz; feldspar; 2% glauconite; some opaques.
- 10-20 As above except few grains of glauconite; few opaques.
- 20-30 Sand — dark yellowish orange; slightly clayey; medium grained, some fine grains, some coarse grains, 3% granules; subangular to subrounded; moderately well sorted; quartz; feldspar; some opaques; few grains of glauconite.
- 30-40 Sand — very pale yellowish orange; slightly clayey; fine to medium grained, some coarse grains, few granules; subangular to subrounded; moderately well sorted; quartz; some feldspar; some opaques.
- 40-50 As above plus 2% granules.
- 50-60 Sand — grayish orange; slightly clayey; fine to medium grained, few granules; subangular to subrounded; moderately well sorted; quartz; some feldspar; few opaques; few grains of glauconite; ferricrete; few black phosphatic fragments.
- 60-70 As above plus few pebbles.
- 70-80 As above.
- 80-90 Sand — very pale orange; slightly clayey; fine to medium grained, some coarse grains, few granules; subangular to subrounded; moderately sorted; quartz; some black phosphatic material; few grains of glauconite; few shell fragments; bone fragment.
- 90-100 As above except 3% black phosphatic material.
- 100-110 Sand — light yellowish gray; slightly clayey; fine to coarse grained, some granules; subangular to subrounded; moderately sorted; quartz; 2% black phosphatic material; some shell fragments; few bone fragments.
- 110-120 Sand — light yellowish gray; slightly clayey; fine to coarse grained, few granules; subangular to subrounded; moderately sorted; quartz; 5% sandy limestone and shell fragments; 2% glauconite; 2% black phosphatic material; few flakes of muscovite; bone fragment.

GPCCM  
C-510A

TC 22 TCUA

CALL

DEPTH  
(FEET)

- 120-130 Sand — light olive gray; slightly clayey; fine to medium grained; subangular to rounded; moderately well sorted; quartz; 15% glauconite (black, green); 5% sandy limestone and shell fragments; ostracodes abundant; some pyrite; forams (inc. Buccella, Discorbis, and Cibicides).
- 130-140 Sand — light olive gray; slightly clayey; fine to coarse grained; subangular to rounded; moderately sorted; quartz; 20% glauconite (black, brown, green); 15% sandy limestone and shell fragments; forams abundant (inc. Buccella, Robulus, Bulimina, Textularia, Pyrulina, Discorbis, and Globigerina); ostracodes common; some spines; some pyrite.
- 140-150 As above except forams common (inc. Buccella, Robulus, Bulimina, and Globulina).
- 150-160 As above except forams abundant (inc. Buccella, Robulus, and Textularia).
- 160-170 Sand — light olive gray; slightly clayey; fine to very coarse grained, some granules; subangular to rounded; poorly sorted; quartz; 15% glauconite (black, brown, green); 15% sandy limestone and shell fragments; forams common (inc. Buccella and Quinqueloculina); few spines; pyrite; ostracodes.
- 170-180 Sand — light olive gray; slightly clayey; fine to medium grained, some coarse grains, some granules; subangular to rounded; moderately sorted; quartz; 35% glauconite (black, green); 15% sandy limestone and shell fragments; forams (inc. Buccella); few spines; muscovite.
- 180-190 As above except 30% glauconite; 10% sandy limestone and shell fragments; some black phosphatic material.
- 190-200 As above except moderate clay; 20% sandy limestone and shell fragments; forams (inc. Buccella and Robulus).
- 200-210 Clay and sand — olive light gray; abundant clay — olive light gray, moderate orange pink; moderate sand; fine to medium grained, 5% pebbles; subangular to rounded; moderately sorted; quartz; 20% sandy limestone and shell fragments; 15% glauconite; forams abundant (inc. Buccella, Robulus, Quinqueloculina, and Siphogenerina); pyrite.
- 210-220 Clay — olive light gray, moderate orange pink, very light gray; slightly sandy; fine to medium grained, some pebbles; subangular to subrounded; moderately sorted; 15% sandy limestone and shell fragments; quartz; glauconite 10% of sand sized fraction; some muscovite; forams scarce (inc. Robulus); few spines.

N A S

DEPTH  
(FEET)

- 220-230 Sand — salt and pepper; slightly clayey; medium grained to granular; subrounded to rounded; moderately sorted; quartz; feldspar; 15% glauconite; some garnet; muscovite; forams scarce (inc. Buccella). (out of place?)
- 230-240 Sand — olive gray; slightly clayey; fine to medium grained; subangular to rounded; moderately well sorted; quartz; 45% glauconite; some muscovite; few shell fragments; few sandy limestone fragments; forams rare (inc. Robulus).
- 240-250 As above except 35% glauconite.
- 250-260 Sand — olive gray; slightly clayey; medium grained, some fine grains; subangular to rounded; well sorted; 65% glauconite; quartz; some shell fragments; pyrite; forams rare (inc. Nodosaria).
- 260-270 As above except fine to medium grained; moderately well sorted; 60% glauconite.
- 270-280 Sand — olive gray; slightly clayey; medium grained, some fine grains, some coarse grains, 7% granules, few pebbles; subrounded to rounded; poorly sorted; quartz; 40% glauconite; few shell fragments; muscovite; pyrite.
- 280-290 Sand — salt and pepper; medium grained to granular; subrounded to rounded; moderately sorted; quartz; 30% glauconite; feldspar; few shell fragments; few grains of garnet; muscovite.
- 290-300 Sand — salt and pepper; medium grained; subangular to subrounded; well sorted; quartz; 10% glauconite; few shell fragments; few grains of feldspar.
- 300-310 As above plus some coarse grains.
- 310-320 Sand — yellowish gray; slightly clayey; fine to coarse grained; subangular to subrounded; moderately sorted; quartz; feldspar; 7% glauconite; muscovite.
- 320-330 Sand — yellowish gray; slightly clayey — yellowish gray, reddish brown (clasts); fine to very coarse grained; subangular to subrounded; poorly sorted; quartz; feldspar; 7% glauconite; muscovite; few shell fragments.
- 330-340 Sand — light brown; slightly clayey (some clasts); medium grained to granular, some fine grains, some pebbles; subangular to subrounded; poorly sorted; quartz; feldspar; 5% glauconite; few shell fragments.
- 340-350 As above.

AQUA

Depth  
(feet)

- 350-360 Sand — white; medium to very coarse grained, 3% granules, some pebbles; subrounded; poorly sorted; quartz; feldspar; some glauconite; few grains of garnet; musconite.
- 360-370 Sand — white; coarse grained to granular, few pebbles; subrounded; moderately sorted; quartz; feldspar; some glauconite; muscovite; few grains of garnet; few shell fragments.
- 370-380 Sand — light olive gray; slightly clayey; medium to very coarse grained, some granules, some pebbles; subangular to subrounded; moderately sorted; quartz; feldspar; 5% glauconite (black,green); muscovite.
- 380-390 Sand — light olive gray; slightly clayey; medium to coarse grained, some fine grains, some granules; subangular to subrounded; moderately sorted; quartz; feldspar, some glauconite; muscovite; few shell fragments.
- 390-400 As above.

Logged by: Michael T. Currie

OWNER: Va. Dept. of Highways & Transportation W# 21443

## GEOLOGIC SUMMARY

Depth (feet)	Thickness (feet)	Real Unit	Time Rock Unit
0-50	50	Bacon's Castle (?) Formation	Pleistocene
50-100	50	Yorktown Formation	Pliocene-Miocene
100-120	20	Calvert (?) Formation	Miocene-Eocene
120-220	100	Nanjungan Formation	Eocene
220-230	10	Out of Place Sample	
230-280	50	Mattaponi Formation	Eocene-Cretaceous
280-400	120	Patauxent Formation	Cretaceous

VIRGINIA DIVISION OF MINERAL RESOURCES  
David A. Hubbard, Jr., Geologist  
November 6, 1978