

COMMONWEALTH OF VIRGINIA
DEPARTMENT OF CONSERVATION AND ECONOMIC DEVELOPMENT

MAILING ADDRESS:

DIVISION OF MINERAL RESOURCES

OFFICE ADDRESS:

Box 3667

JAMES L. CALVER, COMMISSIONER

McCormick Road

Charlottesville, VA 22903

WATER WELL COMPLETION REPORT

Charlottesville, Virginia

Commonwealth of Virginia

OWNER: Dept. of Conservation & Economic Dev't Mailing Address: Richmond, Virginia

TENANT: Div. of Water Resources, Well GW-OWC-3 Mailing Address: 7th. Floor, 911 East Broad Richmond, Virginia

DRILLER: Sydnor Hydrodynamics, Inc. Mailing Address: P.O. Box 27186, Richmond, Va. 231

WELL LOCATION: County Sussex County Approx. 2 1/2 feet miles North (direction) of

Intersection SR 40 and SR 35 and feet miles Eastside (direction) of Rt. 40

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

DATE STARTED: 6-1-71 DATE COMPLETED: 6-18-71

TYPE OF DRILL RIG USED: Rotary TOTAL DEPTH 554 feet

WATER LEVEL: Stands 71 feet below surface OR

has NATURAL flow of gallons per minute.

YIELD TEST: Method Airlift

HOLE SIZE: 12 1/2 inches from 0 to 554 feet

Drawdown 464 feet

Rate 150 gal. per min.

Duration 7 hrs., 30 min.

inches from to feet

inches from to feet

SCREEN SIZE: 4 inches from 279 to 284 feet

WATER ZONES: from 279 to 284 feet

from 358 to 363 feet

from 439 to 444 feet

4 inches from 358 to 363 feet

4 inches from 439 to 444 feet

CASE SIZE: 6 inches from +1 1/2 to 204 feet

WATER: Color X Taste

Odor Temp. °F

4 inches from 204 to 279 feet

4 inches from 284 to 358 feet

4 inches from 363 to 439 feet

4 inches from 444 to 467 feet

WELL TO SUPPLY: (check one) Home

Farm Town School

Industry Other Observation well

GROUTING: Method Gravity

Material Cement-Water Depth 30 feet

WATER ANALYSIS AVAILABLE: Yes No X

Capacity gal. per min

DRILL CUTTINGS SAVED: Yes 56 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: Division of Water Resources ran geophysical logs. (USGS & Schlumberger)

LOG

FURNISHED BY: Sydnor Hydrodynamics, Inc.

DATE: 6/21/71

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	Top Soil-Black Top	
1	2	Red Clay	
2	3	Red Clay - Wood	
3	5	Red - Yellow Clay	
5	10	Yellow-Red Sandy Clay	
10	20	Red-Yellow Clay	
20	30	Gray Clay	
30	35	Gravel, shells and clay mixed	
35	75	Shells, sand and clay	
75	100	Gray clay	
100	110	Black sand, shells and some clay	
110	125	Tough dark gray clay	
125	140	Coarse sand	
140	145	Dark gray clay	
145	165	Gray sand, gravel and shells	
165	195	Sandy clay	
195	215	Sand-gravel mixed	
215	220	Tough clay	
220	235	Gray clay-sand mixed	
235	270	Sand-big gravel	
270	305	White sandy clay, sand and gravel mixed	
305	310	Reddish clay	
310	320	Gray sandy clay	
320	385	Sand, gravel & white sandy clay	
385	410	Sand, gravel, white sandy clay & shells	
410	415	Dark gray clay	
415	420	Pink clay	
420	500	Gray sand, gravel & streaks of clay mixed	
500	520	Gray clay, little sand & shale mixed	
520	540	Gray clay & shale	
540	545	Shale	
545	554	Hard Rock	

(Use additional forms if necessary)

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

INTERVAL SHEET

C-226

Page 1 of 1 Well Repository No: 3220

Date rec'd: 6/29/71 ; processed 7/8/71 Sample Interval; from 0 to: 554'

PROPERTY: Va. Div. of Water Resources (Obs. well GW-OWC-3) Number of samples: 56

COMPANY: Sydnor Hydrodynamics, Inc. Total Depth: 554'

COUNTY: Sussex (Homeville) Oil or Gas: Water: ~~X~~ Exploratory:

From-To	From-To	From-To	From-To
0 - 10	250 - 60	490 - 500	-
10 - 20	260 - 70	500 - 10	-
20 - 30	270 - 80	510 - 20	-
30 - 40	280 - 90	520 - 30	-
40 - 50	290 - 300	530 - 40	-
		540 - 50	-
50 - 60	300 - 10	550 - 554	-
60 - 70	310 - 20	-	-
70 - 80	320 - 30	-	-
80 - 90	330 - 40	-	-
90 - 100	340 - 50	-	-
100 - 10	350 - 60	-	-
110 - 20	360 - 70	-	-
120 - 30	370 - 80	-	-
130 - 40	380 - 90	-	-
140 - 50	390 - 400	-	-
150 - 60	400 - 10	-	-
160 - 70	410 - 20	-	-
170 - 80	420 - 30	-	-
180 - 90	430 - 40	-	-
190 - 200	440 - 50	-	-
200 - 10	440 - 50	-	-
210 - 20	-	-	-
220 - 30	460 - 70	-	-
230 - 40	470 - 80	-	-
240 - 50	480 - 90	-	-

All intervals have both washed & unwashed samples.

OWNER: Va. Div. of Mineral Resources
(Ob. well #GW-OWC-3)
DRILLER: Sydnor Hydrodynamics, Inc.
COUNTY: Sussex (Homeville)

W#3220
C#226
TOTAL DEPTH: 554'

0 - 20	Coarse sand-gravel over banded clay as in well #W-2209
20 - 80	Shell-bearing gray clay, 30-80' clean w/s shell-sand becoming coarser downsection; locally cemented by calcium bicarbonate (a calcitic shell sandstone)
80 - 120	Soft dark-gray to black clays with shells and sand
120 - 160	Fine clean speckled with fine-grained phosphatic sands with 10-20% rounded quartz-phosphate sandstone gravel (basal Mattaponi formation)
160 - 190	Black (wet) micaceous clays with quartzose silt-sand and minor slightly feldspathic gravel; possibly these are "transitional beds"
190 - 300	Clean, white, arkosic coarse sands and fine gravel with granite; 210-230' is mottled (gray-brown) clay
300 - 310	Mottled (red-green) clay
310 - 400	Clean, tan, arkosic sands and fine gravel with granite; 350-380' is relatively fine-grained
400 - 430	Clean, tan, arkosic sands and gravels with laminae of dark-gray clay-silt
430 - 500	Clean, tan, arkosic sands and gravels with granite
500 - 545	Slightly-decomposed, dense, black, finely-crystalline rock with appreciable pyrite and biotite.

OWNER: Va. Division of Water Resources W#3220
(Exp. Hole GW-OWC-3, ob well) C#226
DRILLER: Sydnor Hydrodynamics, Inc. TD: 554'
COUNTY: Sussex (Homeville)

GEOLOGIC SUMMARY

<u>Depth</u> (feet)	<u>Rock Unit</u>	<u>Age</u>
0- 20	Columbia Group	Pleistocene
20- 80	Yorktown and St. Marys formations	Late Miocene
80-160	Mattaponi Formation	Paleocene
160-500*	Patuxent Formation	Early Cretaceous
500-554	Basement Rocks	Precambrian (?)

Virginia Division of Mineral Resources
Robert H. Teifke, Geologist
July 12, 1971

*160-190 interval may be transitional (upper Cretaceous) strata