

COMMONWEALTH OF VIRGINIA
DEPARTMENT OF CONSERVATION AND ECONOMIC DEVELOPMENT

W#: 4441
C#: 182

MAILING ADDRESS:

DIVISION OF MINERAL RESOURCES

OFFICE ADDRESS:

B 3667

JAMES L. CALVER, COMMISSIONER

McCormick Road

Charlottesville, VA 22903

WATER WELL COMPLETION REPORT

Charlottesville, Virginia

OWNER: Syndor Hydrodynamics, Inc. Mailing Address: 2111 Magnolia St., Richmond, Va.
23220

TENANT: Walnut Grove #3 Mailing Address: _____

DRILLER: Syndor Hydrodynamics, Inc. Mailing Address: 2111 Magnolia St., Richmond, Va.
23220

WELL LOCATION: County Hanover Approx. 80 ^{feet}~~miles~~ South (direction) of
St. Rd. 1181 and 1000 ^{feet}~~miles~~ West (direction) of St. Rd. 1180

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

DATE STARTED: 06/04/75 DATE COMPLETED: 06/26/75

TYPE OF DRILL RIG USED: rotary TOTAL DEPTH 425 feet
(completed at 395')

WATER LEVEL: Stands 182 feet below surface OR
has NATURAL flow of -- gallons per minute.

YIELD TEST: Method pump HOLE SIZE: 12 1/4 inches from 0 to 425 feet
Drawdown 101 feet _____ inches from _____ to _____ feet
Rate 80 gal. per min. _____ inches from _____ to _____ feet
Duration 48 hrs., _____ min. SCREEN SIZE: 6 inches from 346 to 356 feet
6 inches from 370 to 390 feet

WATER ZONES: from 346 to 356 feet
from 370 to 390 feet
from _____ to _____ feet
CASE SIZE: 6 inches from +2 to 346 feet
6 inches from 356 to 370 feet
6 inches from 390 to 395 feet

WATER: Color _____ Taste _____
Odor _____ Temp. _____ °F

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

GROUTING: Method _____
Material _____ Depth 100 feet

WATER ANALYSIS AVAILABLE: Yes No _____
Capacity _____ gal. per min.
DRILL CUTTINGS SAVED: Yes 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"

LOG

FURNISHED BY: C. P. Brooken

DATE: June 26, 1975

DEPTH (feet)		TYPE OF ROCK OR SOIL PENETRATED (gravel, clay, etc., hardness, color, etc.)	REMARKS (water, caving, shot, screen, sample, etc.)
FROM	TO		
0	9	Top Soil - Red Clay	
9	10	Red Sand	
10	20	Brown Sand	
20	30	White Sand	
30	40	Brown and white sand	
40	50	Fine green sand	
50	60	Fine green sand clay	
60	80	Hard gray clay	
80	100	Gray clay and gravel	
100	120	Blue clay, black sand and gravel	
120	130	Gray clay and black sand	
130	131	Shell rock	
131	140	Gray clay	
140	150	Gray clay, black sand	
150	180	Gray clay	
180	190	Gray clay, trace of shells and black sand	
190	200	Black sand, clay and shells	
200	210	Gray clay, black sand and shells	
210	220	Sand, shells, streaks of clay	
220	230	Sand, gravel, streaks of clay	
230	240	Sand, shells, some clay	
240	250	Sand, gravel, some clay	
250	270	Sand, gravel, streaks of clay	
270	290	Sand, gravel, some clay	
290	300	Sand, gravel, sand clay	
300	310	Coarse sand and gravel with clay	
310	320	Coarse sand and gravel	
320	330	Gray, black sand with streaks of rock	
330	370	Coarse sand and gravel	
370	390	Coarse sand and gravel with trace of clay	
390	410	Sand and gravel	
410	420	Sand clay	
420	425	Bed rock	

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

INTERVAL SHEET

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Well Repository No.: W#: 4441
 C#: 182

Date rec'd: 9/22/75 Date Processed: 7/30/76

Sample Interval: from 0 to: 425'

PROPERTY: Sydnor Utility (Walnut Grove #3)

Number of samples: 42

COMPANY: Sydnor Hydrodynamics

Total Depth: 425'

COUNTY: Hanover (Ellerson Mill)

Oil or Gas: Water: Exploratory:

From-To	From-To	From-To	From-To	From-To
0 - 10	300 - 310	-	-	-
10 - 20	310 - 320	-	-	-
20 - 30	320 - 330	-	-	-
30 - 40	330 - 340	-	-	-
40 - 50	340 - 350	-	-	-
50 - 60	350 - 360	-	-	-
60 - 70	360 - 370	-	-	-
70 - 80	370 - 380	-	-	-
80 - 90	380 - 390	-	-	-
90 - 100	390 - 400	-	-	-
100 - 110	400 - 410	-	-	-
110 - 120	410 - 425	-	-	-
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	-	-	-	-
-	-	-	-	-
-	-	-	-	-
-	-	-	-	-
-	-	-	-	-
-	-	-	-	-

Washed and unwashed samples

OWNER: Sydnor Hydrodynamics
(Walnut Grove #3)
DRILLER: Sydnor Hydrodynamics
COUNTY: Hanover

W#: 4441
C#: 182
TOTAL DEPTH: 425'
QUAD: Seven Pines

GEOLOGIC LOG

Depth
(feet)

- 0 - 10 Sand - grayish orange; slightly clayey; medium grained, some fine grains, some coarse grains; subangular to subrounded; moderately well sorted; quartz; feldspar; some opaques.
- 10 - 20 Sand - pale yellowish orange; moderately stained; coarse grained, some medium grains; subangular to subrounded; well sorted; quartz; feldspar; some opaques.
- 20 - 30 Sand - white; coarse to very coarse grained, some medium grains, few granules; subangular to subrounded; moderately well sorted; quartz; feldspar; some opaques.
- 30 - 40 As above except light grayish orange; slightly to moderately stained.
- 40 - 50 Sand - light olive gray; fine to medium grained, some coarse grains; subangular to subrounded; moderately well sorted; quartz; 3% opaques; 2% garnet; few grains of feldspar; muscovite.
- 50 - 60 Sand - light olive gray; fine to coarse grained; subangular to subrounded; moderately sorted; quartz; 3% opaque; some garnet; few shell fragments; muscovite.
- 60 - 70 As above.
- 70 - 80 Granules - light olive gray; some fine grains; subangular to subrounded; well sorted; quartz; feldspar; some opaques; few shell fragments.
- 80 - 90 Sand and granules - light olive gray; fine grained, 35% granules; subangular to subrounded; poorly sorted; quartz; some feldspar (granules), some glauconite; few shell fragments; muscovite.
- 90 - 100 Granules and sand - light olive gray; moderate clay; fine grained, some medium grains, 60% granules; subangular to subrounded; poorly sorted; quartz; feldspar (granules); some opaques; few flakes of muscovite.
- 100 - 110 Gravel - light olive gray; slightly clayey; moderate sand; medium grained, some fine grains, 5% granules; subangular to rounded; moderately well sorted; quartz; 7% glauconite; feldspar (granules and pebbles); some shell fragments; few black phosphatic fragments; muscovite.

Depth
(feet)

- 110 - 120 As above except abundant sand.
- 120 - 130 Sand - olive light gray; slightly clayey; fine grained to gravel; subangular to rounded; poorly sorted; quartz; 40% glauconite; some black phosphatic material; some muscovite, some shell fragments; bone fragment.
- 130 - 140 Sand - olive light gray; moderate clay; fine to medium grained, some granules, few pebbles; subangular to subrounded; moderately well sorted; quartz; 35% glauconite; 2% muscovite; few shell fragments.
- 140 - 150 As above except 50% glauconite; some muscovite.
- 150 - 160 As above except 35% glauconite; few black phosphatic fragments.
- 160 - 170 Sand - olive light gray; abundant clay - olive light gray, very light gray (clasts); fine grained, some medium grains, few granules; subangular to subrounded; well sorted; quartz; 5% shell fragments; 3% glauconite; some muscovite; few black phosphatic fragments; forams (inc. Robulus and Discorbus?); ostracode.
- 170 - 180 Sand - olive light gray; moderate clay; fine to medium grained, 2% granules, some pebbles; subangular to subrounded; moderately well sorted; quartz; 5% glauconite; 2% black phosphatic material; some muscovite; some shell fragments.
- 180 - 190 Sand - olive light gray; slightly clayey; fine to coarse grained, few granules; subangular to rounded; moderately sorted; quartz; 30% glauconite; 2% shell fragments; some muscovite; few black phosphatic fragments.
- 190 - 200 As above except fine to medium grained, some coarse grains; 10% shell fragments.
- 200 - 210 As above plus some granules some pebbles; 25% glauconite; shark's tooth.
- 210 - 220 Sand - off white; coarse grained to granular, 5% pebbles; subangular to subrounded; moderately sorted; quartz; feldspar; 15% glauconite; 3% shell fragments; few flakes of muscovite.
- 220 - 230 As above except 5% glauconite.
- 230 - 240 Sand - off white; coarse to very coarse grained, some medium grains, 10% granules, few pebbles; subangular to subrounded; moderately sorted; quartz; feldspar, 5% glauconite; 2% shell fragments; few flakes of muscovite.
- 240 - 250 As above except coarse grained to granular, 5% pebbles.
- 250 - 260 As above except some pebbles.

Depth
(feet)

- 260 - 270 Sand - off white; slightly silty; coarse grained to granular, some medium grains, 2% pebbles; subangular to subrounded; moderately sorted; quartz; feldspar; 5% glauconite; some shell fragments; few flakes of muscovite.
- 270 - 280 As above except 10% pebbles.
- 280 - 290 As above.
- 290 - 300 Sand - off white; slightly silty, coarse grained to granular, 7% pebbles; subangular to subrounded; moderately sorted; quartz; feldspar; 3% glauconite; few shell fragments; muscovite.
- 300 - 310 As above except coarse to very coarse grained, 5% granules, few pebbles.
- 310 - 320 As above except some granules; no pebbles no shell fragments.
- 320 - 330 Sand - off white; coarse grained, some medium grains; subangular to subrounded; well sorted; quartz; feldspar; 5% glauconite; few shell fragments; muscovite.
- 330 - 340 As above plus 5% granules.
- 340 - 350 Sand - off white; coarse grained to granular, some medium grains, some pebbles; subangular to subrounded; moderately sorted, quartz; feldspar; 3% glauconite; few flakes of muscovite.
- 350 - 360 As above except coarse to very coarse grained, some medium grains, 5% granules, few pebbles.
- 360 - 370 As above except 3% pebbles.
- 370 - 380 As above except 7% pebbles.
- 380 - 390 As above except 2% pebbles; 2% glauconite.
- 390 - 400 As above except 7% pebbles.
- 400 - 410 As above except 3% pebbles.
- 410 - 425 As above except 5% pebbles.

Logged by: Michael T. Currie
May 30, 1979

GEOLOGIC SUMMARY

<u>Depth</u> <u>(feet)</u>	<u>Thickness</u> <u>(feet)</u>	<u>Rock Unit</u>	<u>Time Rock Unit</u>
0- 40	40	Columbia Group	Pleistocene
40-120	80		
120-210	90	Nanjemoy-Mattaponi Formations	Eocene-Cretaceous
210-425	215	Patuxent Formation	Cretaceous

VIRGINIA DIVISION OF MINERAL RESOURCES
David A. Hubbard, Jr., Geologist
July 6, 1979