

COMMONWEALTH OF VIRGINIA
DEPARTMENT OF CONSERVATION AND ECONOMIC DEVELOPMENT

MAILING ADDRESS:

DIVISION OF MINERAL RESOURCES

OFFICE ADDRESS:

B-3667
Charlottesville, VA 22903

JAMES L. CALVER, COMMISSIONER

McCormick Road
Charlottesville, Virginia

WATER WELL COMPLETION REPORT

OWNER: A. A. Beiro Construction Company Mailing Address: 3013 Calvin St. - Alexandria, VA

TENANT: U. S. Government - Camp A. P. Hill Mailing Address: Bowling Green, Virginia
Ammunications Storage Area 22314

DRILLER: Sydnor Hydrodynamics, Inc. Mailing Address: P. O. Box 1476 - Richmond, VA
23212

WELL LOCATION: County Caroline Approx. feet (direction) of

Intersection of Blue Gill and Fortune Roads miles north (direction) of Bowling Green

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

DATE STARTED: 3/10/70 DATE COMPLETED: 4/6/70

TYPE OF DRILL RIG USED: Rotary TOTAL DEPTH 510 feet

WATER LEVEL: Stands 180 1/4 feet below surface OR
has NATURAL flow of gallons per minute.

YIELD TEST: Method submersible pump
Drawdown 18 1/6 feet
Rate 33 gal. per min.
Duration 48 hrs., 0 min.

HOLE SIZE: 10 inches from 0 to 510 feet
 inches from to feet
 inches from to feet
SCREEN SIZE: 6 inches from 460 to 470 feet
6 inches from 480 to 490 feet
 inches from to feet

WATER ZONES: from 456 to 494 feet
from to feet
from to feet

CASE SIZE: 6 inches from +1 to 460 feet
6 inches from 470 to 480 feet
6 inches from 490 to 495 feet

WATER: Color Clear Taste
Odor None Temp. °F

GROUTING: Method Gravity
Material cement and water Depth 14 feet
Class #A Const.

WELL TO SUPPLY: (check one) Home
Farm Town School
Industry Other Army base

PUMP: Type
Capacity gal. per min
Depth of intake feet

WATER ANALYSIS AVAILABLE: Yes X No

DRILL CUTTINGS SAVED: Yes 50 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: Electric log ran by driller

LOG

FURNISHED BY: Sydnor Hydrodynamics, Inc.

DATE: 3/31/71

DEPTH (feet)		TYPE OF ROCK OR SOIL PENETRATED (gravel, clay, etc., hardness, color, etc.)	REMARKS (water, caving, shot, screen, sample, etc.)
FROM	TO		
0	9	Red - brown clay	
9	17	Brown - yellow sand clay	
17	20	Brown sand clay	
20	30	Yellow and red clay	
30	45	Pink clay	
45	83	Yellow sandy clay	
83	120	Tough gray and greenish clay	
120	160	Gray clay	
160	193	Gray clay ... traces of shell	
193	240	Black silty clay and some shells	
240	270	Silty black and gray clay	
270	293	Green silty clay	
293	306	Fine gray sand	
306	312	Gray clay	
312	315	Gray sand	
315	317	Clay	
317	319	Gray sand	
319	338	Silty brown clay	
338	350	Brown clay	
350	385	Tough brown sandy clay	
385	448	Tough sticky brown clay	
448	465	Hard blue	
465	495	Brown and gray sand with sand clay	
495	510	Tough gray clay	

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

INTERVAL SHEET

C-90

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Well Repository No: 2937

Date rec'd: 5/18/70; processed 9/25/70

Sample Interval: from 0 to: 510'

PROPERTY: U. S. Army Camp A. P. Hill

Number of samples: 50

COMPANY: Sydnor Hydrodynamics, Inc.

Total Depth: 510'

COUNTY: Caroline (Camp A. P. Hill)

Oil or Gas: Water: x Exploratory:

From - To	From - To	From - To	From - To
0 - 10	250 - 260	500 - 510	-
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	-	-	-
110 - 120	360 - 370	-	-
120 - 130	370 - 380	-	-
130 - 140	380 - 390	-	-
140 - 150	390 - 400	-	-
150 - 160	400 - 410	-	-
160 - 170	410 - 420	-	-
170 - 180	420 - 430	-	-
180 - 190	430 - 440	-	-
190 - 200	440 - 450	-	-
200 - 210	450 - 460	-	-
210 - 220	460 - 470	-	-
220 - 230	470 - 480	-	-
230 - 240	480 - 490	-	-
240 - 250	490 - 500	-	-

Owner: Camp A. P. Hill
Driller: Sydnor
County: Caroline

W# 2937
C# 90
Total Depth 510'
Quad:

Depth
(feet) WELL LOG

0-10 Sand - grayish orange (10YR 7/4); medium, sub-angular; some coarse; well sorted; quartz. 1% very fine, black phosphatic fragments.

10-20 Sand - pale grayish orange (10YR 8/4); medium to granule; sub-angular; poor sorting; quartz; 1% very fine, black phosphatic fragments.

20-30 Sand - grayish orange pink (5YR 7/2); very sparse clay; sparse silt; sand - as above; 10% granules; fragments - as above.

30-40 Sand - orange pink (5YR 6/2); as above, except: moderate clay; some phosphatic fragments.

40-50 Sand - as above, except: grayish orange pink (5YR 7/2); abundant medium and large granules; coarse to very coarse.

50-60 Sand - as above, except: abundant medium grain size; some coarse to granule.

60-70 Sand - as above, except: abundant granules; mica; epidote.

70-80 Sand - as above, except: grayish orange (10YR 7/4); 20% granules.

80-90 Clay - light olive gray (5Y 6/1) and dark yellowish orange (10YR 6/6); abundant sand, medium to granule; poorly sorted; quartz.

90-100 Clay - as above.

100-110 Sandy clay - light olive gray (5Y 5/2); abundant fine, granular and pellet clay; abundant sand; fine; some larger grains well sorted; quartz; fragment or two of shells.

110-120 Sandy clay - as above.

120-130 Clay - as above, except: sparse sand; very fine to fine; moderate sorting.

130-140 Clay - as above, except: medium olive gray (5Y 4/2).

COLUMBIA
COUNTY

Depth
(feet)

140-150 Clay - as above.

150-160 Clay - as at 100-110; moderate sand; 7% glauconite; 1% shell fragments; bone fragments.

160-170 Clay - as above, except: 15% shell fragments.

170-180 Sandy clay - as above, except: 7% shell fragments.

180-190 Clayey sand - as above, except: moderate granular clay; sparse shell fragments.

190-200 Sand - as above, except: 30% shell fragments - Turritella.

200-210 Sand - as above, except: foram - Robulus.

210-220 Clayey sand - as above, except: moderate olive gray (5Y 4/2); moderate clay; 25% glauconite; 10% shell fragments; forams - Nodosaria.

220-230 Sand - as above, except: 15% shell fragments; forams - Nonion.

230-240 Sand - as above; 15% glauconite.

240-250 Sand - light olive gray (5Y 5/2); sparse clay, gray, orange, rose; sand - fine and medium, as above (with grayish color) and coarse - very coarse (white); poorly sorted; quartz; 5% glauconite; rose and blue quartz; shell bits; mica.

250-260 Sand - as at 130-140, except: abundant clay, abundant sand; fine to very coarse; poor sorting; quartz; 5% glauconite; mica.

260-270 Sand - light olive gray (5Y 6/1); moderate fine grained, small pellet clay (white); fine to granular; angular to sub-angular; poorly sorted; quartz; rose quartz; 3% fine, green glauconite.

270-280 Sand - medium yellow gray (5Y 7/2); as above, except: more granules; feldspar.

280-290 Sand - as above, except: sparse clay; some pebbles.

290-300 Sand - as above, except: medium to very coarse sand; 2% glauconite; no clay.

Depth
(feet)

300-310 Sand - as above, except: moderate clay; 5% glauconite; 50% rose quartz.

310-320 Sand - as above, except: medium to granule; some fine; cleanly washed sand.

320-330 Sand - as above, except: white frosted effect on 50% grains. Feldspar?

330-340 Sand - as above, except: some clay; rose quartz.

340-350 Sand - as above.

350-360 No sample.

360-370 Sand - salt and pepper; some clay clasts; sand in various colors; coarse to granular; 25% fine to medium; yellow quartz; feldspar; rose quartz.

370-380 Sand - light yellow brown (10YR 6/4); fine to granule; sub-angular; poor sorting; quartz; (fine quartz in the yellow of above sample); rose quartz; few glauconite; iron.

380-390 Sand - as above, except: moderate clay clasts of moderate brown (5YR 4/4) color; 2 types of above sands now blended - fine to granule; sub-angular; poor sorting; quartz; some glauconite; iron; pyrite; feldspar.

390-400 Clayey sand - dark yellowish brown (10YR 4/2); abundant clay in sand clasts; fine to granule - as above; clear, not yellow; quartz; glauconite; iron; bone fragments.

410-420 Sandy clay - as above, except: abundant clay; abundant sand.

420-430 Sandy clay - as above.

430-440 Sandy clay - as above.

440-450 Clay - as above, except: moderate sand.

450-460 Sand - light olive gray (5Y 6/1); sparse clay as above; fine to very coarse; sub-angular to sub-rounded; poorly sorted; quartz; rose quartz; glauconite; feldspar.

460-470 Sand - as above, except: medium to granule.

Owner: Camp A. P. Hill

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W# 2937

Depth
(feet)

470-480	Sand - as above, except: coarse to granule.
480-490	Sand - as above, except: fine to granule.
490-500	Sand - as above, except: medium to very coarse.
500-510	Sand - as above, except: medium to granule.

Logged by: J. K. Polzin
June 30, 1980

OWNER: U. S. Army Camp A. P. Hill
DRILLER: Sydnor Hydrodynamics, Inc.
COUNTY: Caroline (Camp A. P. Hill)

VDMR # 2937
WWCR # 90
TOTAL DEPTH : 510'

GEOLOGIC SUMMARY

<u>Depth</u> <u>(feet)</u>	<u>Rock Unit</u>	<u>Age</u>
0-80	Columbia Group	Pleistocene
80-150	Calvert Formation	Middle Miocene
150-190	Nanjemoy Formation	Middle Eocene
190-260	Mattaponi Formation	Paleocene - Late Cretaceous
260-510	Patuxent Formation	Early Cretaceous

Virginia Division of Mineral Resources
Robert H. Teifke - Geologist
February 16, 1971