

COMMONWEALTH OF VIRGINIA
DEPARTMENT OF CONSERVATION AND ECONOMIC DEVELOPMENT

MAILING ADDRESS:
3667
Charlottesville, VA 22903

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

OFFICE ADDRESS:
McCormick Road
Charlottesville, Virginia

OWNER: Glendale Associates, Inc. Mailing Address: 501 Rt. 111, Hauppauge, N.Y. 11768

TENANT: Cabin Point Subdivision Well #2 Mailing Address: _____

DRILLER: SYDNOR HYDRODYNAMICS, INC. Mailing Address: P.O. Box 27186, Richmond, Va. 23261

WELL LOCATION: County Westmoreland Approx. 5 ^{miles} North (direction) of
St. Route 202 and 1 ^{miles} East (direction) of St. Rd. 626
1500' South of Well #1
(GIVE DIRECTION AND DISTANCE IN FEET OR MILES FROM TWO REFERENCE POINTS - ROADS, TOWNS, RIVERS, ETC. - ON COUNTY HIGHWAY OR OTHER MAP.)

DATE STARTED: 8/28/72 DATE COMPLETED: 10/9/72

TYPE OF DRILL RIG USED: Rotary TOTAL DEPTH 748* feet

WATER LEVEL: Stands 17 feet below surface OR
has NATURAL flow of _____ gallons per minute.

YIELD TEST: Method turbine pump
Drawdown 62 feet
Rate 800 gal. per min.
Duration 24 hrs., 0 min.

HOLE SIZE: 23 inches from 0 to 53 feet
19 inches from 53 to 735 feet
9-7/8 inches from 735 to 748 feet

WATER ZONES: from 342 to 362 feet
424 444
from 524 to 540 feet
568 580
from 694 to 714 feet

SCREEN SIZE: 8 inches from 342 to 362 feet
8 424 444
8 inches from 524 to 540 feet
8 568 580
8 inches from 694 to 714 feet

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

CASE SIZE: 10 inches from +2 to 342 feet
8 362 424
8 inches from 444 to 524 feet
8 540 568
8 inches from 580 to 694 feet
8 714 720

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

GROUTING: Method Pressure
Material Cement & Water Depth 53 feet

WATER ANALYSIS AVAILABLE: Yes X No _____

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

DRILL CUTTINGS SAVED: Yes 75 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: Cabin Point Well #2 - Electric Log Ran by driller

* Well construction completed at 720'

LOG

FURNISHED BY: SYDNOR HYDRODYNAMICS, INC.

DATE: 10/9/72

DEPTH (feet)		TYPE OF ROCK OR SOIL PENETRATED (gravel, clay, etc., hardness, color, etc.)	REMARKS (water, caving, shot, screen, sample, etc.)
FROM	TO		
0	20	Yellow sandclay	
20	30	Blue Clay-Gravel	
30	40	Gravel - Some Clay	
40	48	Blue Clay - Shells	
48	140	Tough Blue Clay	
140	178	Blue Gray Clay with green mixed	
178	180	Shell Rock	
180	209	Clay and Shells, Some Black Sand	
209	213	Hard Rock	
213	220	Black-Green Sand-Clay	
220	249	Green Sand Clay	
249	308	Fine Gray Sand and Clay	
308	340	Sand and Clay Streaks of fine sand	
340	345	Soft gray fine sand	
345	346	Shell Rock	
346	394	Soft Sand, Shells with clay streaks	
394	395	Rock	
395	425	Hard Gray shells and clay	
425	426	Gray Rock	
426	470	Gray sand and shells - some clay	
470	504	Shells, sand, clay, white, grand and purple	
504	515	Tough Purple Clay	
515	543	Gray Sand-Clay	
543	550	Tough Gray Black Clay	
550	560	Soft Sand-Clay Sand Shells	
560	563	Tough Sand Clay	
563	575	Soft Sand Clay, Streaks of Shells	
575	600	Gray Clay some sand and gravel	
600	605	Soft sand	
605	635	Tough gray clay	
635	695	Tough gray clay, some gravel, shells	
695	748	Soft Gray sand clay-Some pink clay	

(Use additional forms if necessary)

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

INTERVAL SHEET

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W#: 3714

Well Repository No: C#: 185

Date rec'd: 10/16/72 Date Processed: 4/6/73

Sample Interval: from: 0 to: 748'

PROPERTY: Glendale Assoc., Inc.
(Cabin Point #2)

Number of samples: 75

COMPANY: Sydnor Hydrodynamics

Total Depth: 748'

COUNTY: Westmoreland

Oil or Gas: Water: Exploratory:

From-To	From-To	From-To	From-To
0 - 10	250 - 260	500 - 510	-
10 - 20	260 - 270	510 - 520	-
20 - 30	270 - 280	520 - 530	-
30 - 40	280 - 290	530 - 540	-
40 - 50	290 - 300	540 - 550	-
50 - 60	300 - 310	550 - 560	-
60 - 70	310 - 320	560 - 570	-
70 - 80	320 - 330	570 - 580	-
80 - 90	330 - 340	580 - 590	-
90 - 100	340 - 350	590 - 600	-
100 - 110	350 - 360	600 - 610	-
110 - 120	360 - 370	610 - 620	-
120 - 130	370 - 380	620 - 630	-
130 - 140	380 - 390	630 - 640	-
140 - 150	390 - 400	640 - 650	-
150 - 160	400 - 410	650 - 660	-
160 - 170	410 - 420	660 - 670	-
170 - 180	420 - 430	670 - 680	-
180 - 190	430 - 440	680 - 690	-
190 - 200	440 - 450	690 - 700	-
200 - 210	450 - 460	700 - 710	-
210 - 220	460 - 470	710 - 720	-
220 - 230	470 - 480	720 - 730	-
230 - 240	480 - 490	730 - 740	-
240 - 250	490 - 500	740 - 748	-

All intervals have both washed and unwashed samples.

OWNER: Glendale Assoc. Inc.
(Cabin Point #2)
DRILLER: Sydnor Hydrodynamics
COUNTY: Westmoreland

W#: 3714
C#: 185
TOTAL DEPTH: 748'
QUAD: St. Clements Island

GEOLOGIC LOG

Depth
(feet)

- 0 - 10 Sand - grayish orange; slightly clayey; fine grained to gravel (25%); subangular to subrounded; poorly sorted; quartz; feldspar; some biotite; few fragments of ferricrete; few fragments of granite; glauconite.
- 10 - 20 Sand and gravel - yellowish gray; slightly clayey; fine to coarse grained, 60% pebbles; subangular to subrounded; poorly sorted; quartz; feldspar; 5% ferricrete; few opaques; muscovite.
- 20 - 30 Sand - yellowish gray; slightly clayey; fine to medium grained, some coarse grains, some granules, some pebbles; subangular to subrounded; moderately sorted; quartz; feldspar; few flakes of biotite; glauconite; granite.
- 30 - 40 Sand - light olive gray; moderate clay; fine grained, some medium grains, some granules, some pebbles; subangular to subrounded; moderately sorted; quartz; 20% shell fragments; 3% black phosphatic material; feldspar; few grains of glauconite; few bone fragments; muscovite.
- 40 - 50 As above except 3% pebbles; 5% shell fragments; 2% black phosphatic material.
- 50 - 60 As above except 3% shell fragments.
- 60 - 70 Clay - light olive gray; moderate sand; fine to medium grained, 60% pebbles; subangular to subrounded; poorly sorted; quartz; 3% shell fragments; 2% black phosphatic material; few grains of glauconite; muscovite.
- 70 - 80 Clay - light olive gray; some fine grained quartz sand, 25% pebbles; subangular to subrounded; moderately well sorted; quartz; some shell fragments; few black phosphatic fragments; glauconite; biotite.
- 80 - 90 As above except 7% pebbles.
- 90 - 100 As above.
- 100 - 110 Clay - olive gray; abundant sand; fine grained; subangular; well sorted; quartz; few black phosphatic fragments; bone fragment; forams rare (inc. Buccella).

Depth
(feet)

- 110 - 120 Clay - light olive gray; moderate sand; fine grained; subangular; well sorted; quartz; few black phosphatic fragments; muscovite; glauconite; granite fragments.
- 120 - 130 Clay - yellowish gray; some fine to medium grained quartz sand.
- 130 - 140 Clay - yellowish gray; some fine to medium grained quartz sand, few pebbles; few grains of glauconite; muscovite; forams scarce (inc. Textularia).
- 140 - 150 Clay - yellowish gray; slightly sandy; very fine to medium grained; subangular to subrounded; moderately well sorted; quartz; glauconite 10% of sand sized fraction; some echinoid spines; few black phosphatic fragments; few diatoms forams rare (inc. Nonion); ostracode.
- 150 - 160 Clay - yellowish gray; moderate sand; medium grained, some fine grains; subangular to subrounded; well sorted; quartz; 5% shell fragments; 3% black phosphatic material inc. shark's tooth; few echinoid spines; glauconite.
- 160 - 170 Clay - light olive gray; abundant sand; medium grained, some granules, some pebbles; subangular to subrounded; moderately well sorted; quartz; 40% sandy limestone and shell fragments, 7% black phosphatic material; some glauconite; few flakes of muscovite.
- 170 - 180 Sand - light olive gray; slightly clayey; medium grained, some coarse grains; subangular to rounded; well sorted; quartz; 30% sandy limestone and shell fragments; 20% glauconite (black, green); some black phosphatic material; few echinoid spines; forams (inc. Nonion, Buccella, Textularia, and Globulina).
- 180 - 190 As above except abundant clay; few grains of pyrite; forams rare (inc. Nonion).
- 190 - 200 Sand and coquina - light olive gray; abundant clay; medium to coarse grained; subangular to rounded; moderately well sorted; quartz; 40% sandy limestone and shell fragments; 10% glauconite (green, black); few black phosphatic fragments, inc. shark's tooth; few echinoid spines; muscovite; forams (inc. Buccella and Robulus).
- 200 - 210 Coquina - light olive gray; slightly clayey; slightly sandy; medium to coarse grained; subangular to rounded; moderately well sorted; 90% sandy limestone and shell fragments; quartz; 2% glauconite; few flakes of muscovite; forams (inc. Buccella and Robulus); ostracode.

Depth
(feet)

- 210 - 220 Sand - light olive gray; abundant clay; fine to medium grained; subangular to rounded; moderately well sorted; 50% glauconite; quartz; 10% sandy limestone and shell fragments; few flakes of muscovite; pyrite; forams (inc. Buccella).
- 220 - 230 Sand and coquina - light olive gray; moderate clay; fine to medium grained, some pebbles; subangular to rounded; moderately sorted; 50% sandy limestone and shell fragments; quartz; 15% glauconite; few flakes of muscovite; forams scarce (inc. Buccella).
- 230 - 240 Sand - olive light gray; slightly clayey; medium grained, some fine grains; subangular to rounded; well sorted; quartz; 20% glauconite; some sandy limestone and shell fragments; muscovite; forams rare (inc. Cibicides).
- 240 - 250 Sand - olive light gray; moderate clay; medium grained, some coarse grains; subrounded to rounded; well sorted; 70% glauconite; quartz; few flakes of muscovite.
- 250 - 260 As above plus few pebbles; 60% glauconite.
- 260 - 270 Sand - light olive gray; moderate clay; fine to medium grained, some coarse grains; subangular to rounded; moderately well sorted; quartz; 40% glauconite; few flakes of muscovite; few sandy limestone fragments.
- 270 - 280 Sand - light olive gray; abundant clay; medium to very coarse grained; subrounded to rounded; moderately sorted; 65% glauconite; quartz; few flakes of muscovite; few sandy limestone and shell fragments; forams rare (inc. Robulus).
- 280 - 290 As above except olive light gray; moderate clay; 7% sandy limestone and shell fragments.
- 290 - 300 Sand - olive light gray; moderate clay; coarse to very coarse grained, some fine grains; rounded; moderately well sorted; 70% glauconite; quartz; few sandy limestone and shell fragments, muscovite.
- 300 - 310 As above except light olive gray; abundant clay.
- 310 - 320 Sand - olive light gray; abundant clay; medium to coarse grained, some very coarse grains, few pebbles; subangular to rounded; moderately sorted; 65% glauconite; quartz; few shell fragments; muscovite.
- 320 - 330 Sand - olive light gray; some stained grains; moderate clay; medium to coarse grained, few pebbles; subangular to rounded; moderately well sorted; 60% glauconite (black, brown, green); quartz; 2% sandy limestone and shell frag-

Depth
(feet)

- ments; few flakes of muscovite; forams scarce (inc. Robulus).
- 330 - 340 As above plus 3% granules (moderately to heavily stained); 7% sandy limestone and shell fragments.
- 340 - 350 Sand - olive light gray; some moderately to heavily stained grains, medium to coarse grained, some granules, few pebbles; subangular to rounded; moderately well sorted; 50% glauconite (black, green, brown); quartz; 5% sandy limestone and shell fragments; few flakes of muscovite; pyrite.
- 350 - 360 As above except 40% glauconite.
- 360 - 370 Sand - olive light gray; abundant clay; medium to coarse grained, few granules; subrounded to rounded; moderately well sorted; quartz; 40% glauconite (brown, black, green); 3% sandy limestone fragments; few shell fragments; muscovite.
- 370 - 380 Sand - grayish olive; moderate clay; medium to coarse grained, few granules; subangular to rounded; moderately well sorted; quartz; 35% glauconite (brown, black, green); some sandy limestone and shell fragments.
- 380 - 390 As above plus few pebbles; shark's tooth.
- 390 - 400 Sand - grayish olive; slightly clayey; medium grained, some coarse grains, some granules, some pebbles; subangular to subrounded; moderately well sorted; quartz; 30% glauconite; 3% sandy limestone and shell fragments; some feldspar; few flakes of muscovite; forams scarce (inc. Nodosaria and Dentalina).
- 400 - 410 Sand - olive light gray; abundant clay; medium grained, some coarse grains; subangular to rounded; well sorted; 50% glauconite; quartz; 3% sandy limestone and shell fragments; few flakes of muscovite.
- 410 - 420 As above except moderate clay; some granules; few pebbles; moderately sorted; 7% sandy limestone and shell fragments; forams rare (inc. Nodosaria).
- 420 - 430 Sandy limestone and sand - white, moderate brown; medium to coarse grained, few granules; rounded; moderately well sorted; 50% sandy limestone fragments; 35% glauconite (brown, black); quartz.

Depth
(feet)

- 430 - 440 Sand - olive light gray; medium to coarse grained, some granules, 5% pebbles; subangular to subrounded; moderately sorted; 40% glauconite (black, brown, green); quartz; 30% sandy limestone and shell fragments; forams (inc. Buccella and Robulus).
- 440 - 450 Sand and coquina - olive light gray; abundant clay; medium to coarse grained, 5% pebbles; subangular to rounded; moderately sorted; quartz; 40% sandy limestone and shell fragments; 20% glauconite (brown, black, green); forams abundant (inc. Buccella, Robulus, Guttulina, Discorbis, and Globigerina); few flakes of muscovite. (Note: Forams are badly damaged and many are unidentifiable).
- 450 - 460 As above except some pebbles; forams (inc. Buccella).
- 460 - 470 As above except medium to coarse grained, 15% granules, 7% pebbles; poorly sorted; feldspar; foram.
- 470 - 480 Sand - light olive gray; slightly clayey; medium grained to gravel (30%); subangular to subrounded; poorly sorted; quartz; 15% glauconite; feldspar; 7% sandy limestone and shell fragments; few flakes of muscovite.
- 480 - 490 As above except moderate clay; yellowish gray; 25% sandy limestone and shell fragments; 7% glauconite.
- 490 - 500 As above except 15% pebbles.
- 500 - 510 Sand and coquina - light olive gray; medium grained to gravel; subangular to subrounded; poorly sorted; 50% sandy limestone and shell fragments; quartz; feldspar; 5% glauconite; some muscovite.
- 510 - 520 Coquina - light olive gray; moderate clay; moderate sand; medium grained to gravel; subangular to subrounded; poorly sorted; 80% limestone and shell fragments; quartz; some glauconite; few flakes of muscovite. (unwashed sample only).
- 520 - 530 Sand - salt and pepper; some moderately stained grains; medium to coarse grained, few pebbles; subangular to subrounded; moderately well sorted; quartz; feldspar; 10% glauconite; 5% limestone and shell fragments; few flakes of muscovite.
- 530 - 540 As above except 10% limestone and shell fragments.
- 540 - 550 Sand - light olive gray; moderate clay; medium to coarse grained, few granules, few pebbles; subangular to subrounded; moderately sorted; quartz; feldspar; 15% limestone and shell fragments; 10% glauconite; few flakes of muscovite.

Depth
(feet)

- 550 - 560 As above except abundant clay.
- 560 - 570 As above.
- 570 - 580 Sand - salt and pepper; medium to coarse grained, 5% granules; subangular to subrounded; moderately well sorted; quartz; feldspar; 15% glauconite; 5% limestone and shell fragments; few flakes of muscovite.
- 580 - 590 Sand and clay - light olive gray; moderate clay; abundant sand; medium to coarse grained, few granules; subangular to subrounded; moderately well sorted; quartz; feldspar; 15% glauconite; few flakes of muscovite.
- 590 - 600 As above plus 15% pebbles; moderately sorted.
- 600 - 610 Sand - light olive gray; moderate clay; medium to coarse grained; subangular to subrounded; moderately well sorted; quartz; feldspar; 15% glauconite; some limestone and shell fragments; few flakes of muscovite; garnet; forams rare (inc. Buccella)
- 610 - 620 As above plus few granules; few pebbles.
- 620 - 630 As above plus some light brown clay.
- 630 - 640 Sand - light olive gray; moderate clay - light olive gray, grayish orange pink; medium grained to gravel; subangular to rounded; poorly sorted; quartz; 20% glauconite; feldspar; some shell fragments; few flakes of muscovite; forams scarce (inc. Nodosaria).
- 640 - 650 Sand - light olive gray; abundant clay; medium to coarse grained, some fine grains, some granules, some pebbles; subangular to subrounded; moderately sorted; quartz; 15% glauconite; feldspar; few flakes of muscovite; few shell fragments.
- 650 - 660 Sand and clay - light olive gray; moderate clay; abundant sand; medium to coarse grained, few granules; subangular to subrounded; moderately well sorted; quartz; 10% glauconite; some feldspar; few limestone and shell fragments; muscovite.
- 660 - 670 As above plus some pebbles; moderately sorted.
- 670 - 680 Sand - light olive gray; moderate clay; medium to coarse grained, few granules; subangular to subrounded; moderately well sorted; quartz; 15% glauconite; feldspar; few shell

Depth
(feet)

fragments; muscovite; forams scarce (inc. Robulus).

- 680 - 690 Clay - light olive gray; abundant sand; medium to coarse grained; subangular to subrounded; moderately well sorted; quartz; feldspar; 10% glauconite; few flakes of muscovite.
- 690 - 700 Sand - salt and pepper; slightly clayey (clasts); medium to coarse grained; subangular to subrounded; moderately well sorted; quartz; feldspar; 10% glauconite; few shell fragments; muscovite.
- 700 - 710 Sand and gravel - salt and pepper; medium to coarse grained, 40% pebbles; subangular to subrounded; poorly sorted; quartz; feldspar; 7% glauconite; few flakes of muscovite.
- 710 - 720 As above plus moderate clay.
- 720 - 730 Sand and clay - light olive gray; moderate clay; abundant sand; medium to coarse grained, few pebbles; subangular to subrounded; moderately well sorted; quartz; feldspar; 10% glauconite; few flakes of muscovite.
- 730 - 740 As above.
- 740 - 748 As above except clay; abundant sand.

NOTE: Several washed samples appeared to have been mixed up during washing.

Logged by: Michael T. Currie
April 2, 1979

OWNER: Glendale Assoc., Inc.
(Cabin Point #2)

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W#: 3714

GEOLOGIC SUMMARY

<u>Depth</u> <u>(feet)</u>	<u>Thickness</u> <u>(feet)</u>	<u>Rock Unit</u>	<u>Time Rock Unit</u>
0- 20	20	Columbia Group	Pleistocene
20- 60	40	Choptank Formation	Miocene
60-170	110	Calvert Formation	Miocene
170-520	350	Nanjemoy-Aquia Formation	Eocene-Cretaceous
520-748	228	Potomac Group	Cretaceous

VIRGINIA DIVISION OF MINERAL RESOURCES
David A. Hubbard, Jr., Geologist
April 3, 1979