

COMMONWEALTH OF VIRGINIA
DEPARTMENT OF CONSERVATION AND ECONOMIC DEVELOPMENT

W-4902
C-416

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: State Water Control Board
Ground Water Research Station TW SE 77-5 Mailing Address: _____

TENANT: _____ Mailing Address: _____

DRILLER: SWCB Mailing Address: _____

WELL LOCATION: County Southampton Approx. _____ feet
_____ and _____ miles (direction) of _____

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

DATE STARTED: 3/9/77 DATE COMPLETED: 3/18/77

TYPE OF DRILL RIG USED: _____ TOTAL DEPTH 835 feet

WATER LEVEL: Stands 125 feet below surface OR
has NATURAL flow of _____ gallons per minute.

YIELD TEST: Method _____
Drawdown _____ feet
Rate _____ gal. per min.
Duration _____ hrs., _____ min.

HOLE SIZE: 6 inches from _____ to _____ feet
SCREEN SIZE: _____ inches from 714 to 724 feet

WATER ZONES: from _____ to _____ feet
from _____ to _____ feet
from _____ to _____ feet

CASE SIZE: 4 inches from _____ to _____ feet

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

GRROUTING: Method _____
Material _____ Depth _____ feet

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

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

WATER ANALYSIS AVAILABLE: Yes _____ No _____
DRILL CUTTINGS SAVED: Yes _____ 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: Picked up from SWCB 8/29/77

LOG

FURNISHED BY: _____

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 | 10 | Fine-Medium Brown Sand | |
| 0 | 20 | Fine-Coarse Gray Sand, Small Clay Lumps | |
| 20 | 30 | Fine Gray Clayey Sand | |
| 30 | 40 | Fine Gray Clayey Sand, Shell Chips | |
| 40 | 50 | Fine Gray Sand | |
| 50 | 60 | Fine Black Clayey Sand, Shell Chips | |
| 60 | 70 | Medium Black Sand, Shell Chips | |
| 70 | 80 | Fine-Medium Black, Shell Chips | |
| 80 | 90 | Fine Black Sand | |
| 90 | 100 | Fine Black Sand | |
| 100 | 110 | Fine-Medium Gray Sand, Shell Chips | |
| 110 | 120 | Fine-Coarse Gray Sand, Rust Color Rock ? | |
| 120 | 130 | Fine Gray Sand | |
| 130 | 140 | Fine Gray Sand | |
| 140 | 150 | Fine-Medium Gray Sand | |
| 150 | 160 | Fine-Medium Gray Sand | |
| 160 | 170 | Medium-Gray Sand | |
| 170 | 180 | Medium-Gray Sand | |
| 180 | 190 | Medium-Coarse Sand | |
| 190 | 200 | Medium-Coarse Sand | |
| 200 | 210 | Medium-Coarse Sand | |
| 210 | 220 | Coarse Gray Sand | |
| 220 | 230 | Fine Gray Sand, Gray Clay Lumps | |
| 230 | 240 | Fine-Medium Gray Sand, Shell Chips | |
| 240 | 250 | Fine Gray Sand | |
| 250 | 260 | Fine Gray Sand | |
| 260 | 270 | Fine Gray Sand, Shell Chips | |
| 270 | 280 | Fine Gray Sand, Shell Chips | |
| 280 | 290 | Fine Gray Sand, Shell Chips | |
| 290 | 300 | Fine Gray Sand, Shell Chips | |
| - | - | Mud Turned Reddish Brown | |
| 300 | 310 | Fine Sand, Shell Chips | |
| 310 | 320 | Fine-Medium Black and Brown Sand | |
| - | - | Good Water Bearing Sand Starts | |
| 320 | 330 | Fine Sand | |
| 330 | 340 | Fine-Medium Sand, Clay Lumps | |
| 340 | 350 | Medium Coarse Sand | |
| 350 | 360 | Medium Coarse Sand | |
| 360 | 370 | Medium Sand, Bits of Shale | |
| 370 | 380 | Medium Coarse Sand | |
| 380 | 390 | Coarse Clear Sand | |
| 390 | 400 | Coarse Clear Sand | |
| 400 | 410 | Coarse Clear Sand | |
| 410 | 420 | Coarse Clear Sand | |
| 420 | 430 | Medium Clear Sand | |
| 430 | 440 | Coarse Clear Sand | |
| 440 | 450 | Medium Coarse Clear Sand | |
| 450 | 460 | Medium Coarse Clear Sand | |
| 460 | 470 | Medium Coarse Clear Sand | |
| 470 | 480 | Medium Coarse Clear Sand | |
| 480 | 490 | Medium Clear Sand | |
| 490 | 500 | Medium Clear Sand | |

(Cont. p. 2)

(Use additional forms if necessary)

Driller's Log (Cont.)

Owner: State Water Control Board
(GW Station TW SE 77-5)

W# 4902
C# 416

Driller: SWCB

| <u>Depth (feet)</u> | | <u>Type of Rock or Soil Penetrated</u> |
|---------------------|-----|---|
| 500 | 510 | Fine-Medium Sand |
| 510 | 520 | Fine-Medium Sand |
| 520 | 530 | Fine-Medium Sand |
| 530 | 540 | Medium-Coarse Clear Sand |
| 540 | 550 | Medium Coarse Clear Sand |
| 550 | 560 | Medium Coarse Clear Sand |
| 560 | 570 | Coarse Clear Sand |
| 570 | 580 | Coarse Clear Sand |
| 580 | 590 | Medium-Coarse Sand |
| 590 | 600 | Coarse Sand |
| 600 | 610 | Medium Coarse Sand |
| 610 | 620 | Medium Coarse Sand |
| 620 | 630 | Medium-Coarse Sand |
| 630 | 640 | Coarse Sand |
| 640 | 650 | Coarse Clear Sand |
| 650 | 660 | Very Coarse Clear Sand |
| 660 | 670 | Very Coarse Sand |
| 670 | 680 | Solid Clay |
| 680 | 690 | Coarse Sand, Gray Clay Lumps and Shavings |
| 690 | 700 | Coarse Sand w/Fine Gravel, Red Clay |
| 700 | 710 | Coarse Sand w/Fine Gravel, Gray Clay Lumps |
| 710 | 720 | Coarse Sand w/Fine Gravel, Gray Clay Lumps |
| 720 | 740 | Coarse Sand w/Fine Gravel, Clay Streaks first 15, Solid Clay last 5' |
| 740 | 750 | Coarse Sand w/Fine Gravel |
| 750 | 760 | Fine Sand - Fine Gravel, Red, Gray and Yellow Clay Streaks |
| 760 | 780 | Red, Gray, and Yellow Clay, Some Fine- Medium Sand, Small Black Stones |
| 780 | 800 | Red and Gray Clay |
| 800 | 810 | Red, Green, and Black Clay, Some Medium Sand |
| 810 | 820 | Clay, More Medium Sand; 815 - Rock Band |
| 820 | 830 | Red and Gray Clay, Semi-Consolidated Medium- Coarse Sand, Shell Fragments |
| 830 | 835 | Red, Gray, and Yellow Clay, Stone and Shell Fragments, Medium Sand Bedrock at 835' |

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

INTERVAL SHEET

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C-416
Well Repository No.: W-4902

Date rec'd: 8/29/77 Date Processed: 10/14/77

Sample Interval: from 0 to: 835

PROPERTY: State Water Control Board
(GW Station TW SE 77-5)

Number of samples: 80

COMPANY: SWCB

Total Depth: 835'

COUNTY: Southampton (Vicksville)

Oil or Gas: Water:XX Exploratory:

| From-To | From-To | From-To | From-To | From-To |
|---------|---------|---------|---------|---------|
| 0-10 | 300-310 | 600-610 | - | - |
| 10-20 | 310-320 | 610-620 | - | - |
| 20-30 | 320-330 | 620-630 | - | - |
| 30-40 | 330-340 | 630-640 | - | - |
| 40-50 | 340-350 | 640-650 | - | - |
| 50-60 | 350-360 | 650-660 | - | - |
| 60-70 | 360-370 | 660-670 | - | - |
| 70-80 | 370-380 | 670-680 | - | - |
| 80-90 | 380-390 | 680-690 | - | - |
| 90-100 | 390-400 | 690-700 | - | - |
| 100-110 | 400-420 | 700-710 | - | - |
| 110-120 | - | 710-720 | - | - |
| 120-130 | 420-430 | 720-740 | - | - |
| 130-140 | 430-440 | - | - | - |
| 140-150 | 440-450 | 740-750 | - | - |
| 150-160 | 450-460 | 750-760 | - | - |
| 160-170 | 460-470 | 760-780 | - | - |
| 170-180 | 470-480 | - | - | - |
| 180-190 | 480-490 | 780-790 | - | - |
| 190-200 | 490-500 | 790-800 | - | - |
| 200-210 | 500-510 | 800-810 | - | - |
| 210-220 | 510-520 | 810-820 | - | - |
| 220-230 | 520-530 | 820-830 | - | - |
| 230-240 | 530-540 | 830-835 | - | - |
| 240-250 | 540-550 | - | - | - |
| 250-260 | 550-560 | - | - | - |
| 260-270 | 560-570 | - | - | - |
| 270-280 | 570-580 | - | - | - |
| 280-290 | 580-590 | - | - | - |
| 290-300 | 590-600 | - | - | - |

Washed and unwashed samples.

Owner: State Water Control Board
TW SE 77-5
Driller: SWCB
County: Southampton

W# 4902
C# 416
Total Depth: 835'
Quad: Riverdale
Elev: 23'

Depth
(feet)

WELL LOG

- 0-10 Sand - yellow orange (10YR 6/4); medium to coarse, subangular, well sorted; rare phosphatic fragments.
- 10-20 Sand - very pale orange (10YR 8/2); fine to granule, subangular, poor sorting; some feldspar; phosphate fragments; iron staining - on granules only.
- 20-30 Sand - yellow-gray (5Y 7/2); very sparse clay; fine to very coarse, subangular, well sorted; phosphate fragments.
- 30-40 Sand - light olive gray (5Y 6/1); fine to very coarse, subangular, well sorted; 2% phosphate fragments; 10% finely ground shell fragments; pyrite; hematite.
- 40-50 Sand - light olive gray (5Y 6/1); medium, subangular, well sorted; 3% glauconite and phosphate fragments; 7% ground shell fragments; 1% echinoid spines; forams - Dentalina, Nonionella, Textularia, Gyroidina, Nonion; very sparse mica.
- 50-60 Sand, Glauconitic - light and dark gray; medium to coarse with some very coarse, angular and subangular, moderate sorting; 50% glauconite; 7% shell fragments; pyrite; rare clay clasts.
- 60-70 Sand, Glauconitic - dusky green (5G 3/2); medium to coarse with some very coarse, angular and subangular, no sorting; 95+% glauconite; 10% shell fragments; 1% pyrite on glauconite grains.
- 70-80 Sand, Glauconite - grayish black (5GY 2/1); very coarse, subangular, no sorting; 98+% glauconite; 6% shell fragments; pyrite.
- 80-90 Sand, Glauconitic - dark and light gray; medium to coarse, subangular; no sorting; 20% glauconite; sparse to 1% shell fragments; 1% ostracods; forams - Nonion, Gyroidina, Bolivina, Robulus L., Cibicides, Nodosaria; 1% echinoid spines.
- 90-100 Sand, Glauconitic - dark and light gray; very sparse clay in clasts; sparse sand; medium to very coarse, subangular, poor sorting; 60% glauconite; 20% mixture of: ostracods/forams/echinoderm spines/shell fragments; pyrite.

Depth
(feet)

- 100-120 Sand - light and dark gray; very fine to coarse and very coarse at 110-120, angular and subangular, moderate sorting; 10% glauconite; 1% shell fragments; ostracods; forams - Nodosaria; garnet; 110-120 - mica; iron oxide nodules.
- 120-140 Sand - light olive brown (5Y 5/4); very sparse clay; fine to very coarse, angular and subangular, moderate sorting; 5% glauconite; sparse shell fragments; 120-130 tooth (not shark); mica; iron stained clay.
- 140-180 Sand - yellowish gray (5Y 6/2); fine to very coarse, angular and subangular, moderately well sorted; sparse to 1% glauconite (160-170); feldspar; mica; garnet; 160-170 - wood fragment; 170-180 - pyrite, no garnet; 140-150 - medium to very coarse.
- 180-200 Sand - yellowish gray (5Y 6/2); very fine to granules; subangular, with some angular, poor sorting; 10% glauconite, very rare shell fragments; mica; garnet.
- 200-220 Sand - yellowish gray (5Y 6/2); very fine to granules, subangular with some angular; poor sorting; 5% glauconite; very rare shell fragments; mica; garnet; 210-220 - feldspar; phosphate nodules and bone chip.
- 220-230 Sand - yellowish gray (5Y 6/2); very fine to granule, subangular with some angular, moderate sorting; 10% glauconite; few shell fragments; mica; garnet; phosphate nodules; vertebra.
- 230-240 Sand - yellowish gray (5Y 6/2); very fine to granule, subangular with some angular, poor sorting; 10% glauconite; 5% shell fragments; garnet; mica; phosphate fragments.
- 240-250 Sand - yellowish gray (5Y 6/2); sparse clay; very fine to granule, angular and subangular, poor sorting; 8% glauconite; rare shell fragments; 1% mica; some forams and ostracods.
- 250-260 Sand - yellowish gray (5Y 6/2); sparse clay in clasts; fine to very coarse, angular and subangular, well sorted; 10% glauconite; 3% shell fragments; 3% mica; very rare phosphate fragments; garnet.
- 260-270 Sand - dark and light gray; very fine to very coarse, angular and subangular, moderate sorting; 8% glauconite; 10% shell fragments, phosphate fragments; mica; garnet.

Owner: State Water Control Board W# 4902
TW SE 77-5 C# 416

Depth
(feet)

- 270-280 Sand - light and dark gray; very fine to very coarse, angular and subangular, moderate sorting; 8% glauconite; 8% shell fragments - Ostrea; 1% mica.
- 280-290 Sand - light and dark gray; very fine to very coarse; angular and subangular; moderate sorting; 8% glauconite; 3% shell fragments, finely ground; 3% mica; feldspar; garnet; ostracod.
- 290-300 Sand, Glauconitic - light and dark gray; very fine to very coarse, angular and subangular, poor sorting; 50% glauconite; 5% shell fragments; garnet; phosphate fragments.
- 300-310 Sand - moderate yellowish brown (10YR 5/4); very sparse clay; very fine to very coarse, angular and subangular, moderate sorting; 15% glauconite; 3% shell fragments; 1% mica; 2% hematite fragments; phosphate fragments; bone fragment.
- 310-320 Sand - moderate yellow brown (10YR 5/4); very fine to very coarse, angular and subangular, moderate sorting; 35% glauconite; 5% shell fragments; coral; 1% mica; feldspar; lignite; phosphate and bone fragments.
- 320-330 Sand - moderate yellowish brown (10YR 6/4); medium to very coarse, angular and subangular, moderate sorting; few grains glauconite; rare shell fragments; asbestos fragment; very rare feldspar, very rare mica, phosphate fragments; hematite.
- 330-340 Sand - moderate yellowish brown (10YR 6/4); medium to very coarse, angular and subangular, moderate sorting; few mica; feldspar.
- 340-360 Sand - moderate yellowish brown (10YR 6/4); some medium to coarse, mostly very coarse, angular and subangular, moderately well sorted; garnet.
- 360-380 Sand - moderate yellowish brown (10YR 6/4); medium to very coarse, angular and subangular, moderate sorting; few clay clasts, glauconite grains, shell fragments and mica; 370-380 - few feldspar, shell fragments and mica.
- 380-390 Sand - moderate yellowish brown (10YR 6/4); medium and very coarse, angular and subangular, moderately well sorted; very rare mica, feldspar, garnet and grains of glauconite.

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TW SE 77-5

W# 4902
C# 416

Depth
(feet)

- 390-400 Sand - moderate yellowish brown (10YR 6/4); medium to granule, angular and subangular, poor sorting; very rare feldspar and glauconite.
- 400-410 No Sample.
- 410-420 Sand - moderate yellowish brown (10YR 6/4); very fine to granule, angular and subangular, poor sorting; 8% glauconite; 3% shell fragments; asbestos fragment; very rare phosphate fragments; hematite; garnet; very rare clay clasts.
- 420-430 Sand - moderate ~~rusty~~ yellowish brown (10YR 6/4); medium to coarse with some very coarse, angular and subangular, moderate sorting; 8% glauconite, few shell fragments; mica.
- 430-440 Sand - moderate yellowish brown (10YR 6/4); very coarse with some medium to coarse, angular and subangular, well sorted; very rare glauconite grains, feldspar and rare garnet.
- 440-460 Sand - moderate yellowish brown (10YR 5/4); medium to very coarse, angular and subangular, moderate sorting; 440-450 - very rare glauconite and some garnet; 450-460 - 10% glauconite; very rare mica; hematite; garnet.
- 460-470 Sand - moderate yellowish brown (10YR 6/4); medium to very coarse, angular, mostly subangular, moderate sorting; 8% glauconite; few shell fragments; feldspar; garnet.
- 470-480 Sand - moderate yellowish brown (10YR 6/4); fine to very coarse, some granules; subangular, poorly sorted; 8% glauconite; feldspar; garnet.
- 480-490 Sand - moderate yellowish brown (10YR 6/4); medium to very coarse, mostly coarse, subangular, well sorted; 1% glauconite; few shell fragments; feldspar; garnet.
- 490-500 Sand - pale yellow brown (10YR 6/2); medium to very coarse, angular and subangular, well sorted; few grains glauconite and shell fragments; feldspar; garnet.
- 500-510 Sand - pale yellowish brown (10YR 6/2); medium to very coarse, angular and subangular, well sorted; few glauconite and shell fragments; feldspar; garnet.

Owner: State Water Control Board
TW SE 77-5

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C# 416

Depth
(feet)

- 510-520 Sand - pale yellowish brown (10YR 6/2); coarse, subangular, well sorted; few grains glauconite; very sparse shell fragments, feldspar and garnet.
- 520-540 Sand - pale yellowish brown (10YR 6/2); medium to granule, subangular, poor sorting; very sparse glauconite, feldspar at 520-530; 530-540 - very sparse garnet, feldspar.
- 540-550 Sand - pale yellowish brown (10YR 6/2); medium to very coarse, subangular, moderate sorting; very sparse garnet; feldspar and glauconite.
- 550-560 Sand - pale yellowish brown (10YR 6/2); granules, subangular, well sorted; some feldspar; garnet.
- 560-590 Sand - pale yellowish brown (10YR 6/2); medium to granule, subangular, moderate sorting; rare to very rare feldspar, garnet and glauconite; 580-590 - 10% glauconite; foram - Nodosaria; rose quartz; mica; phosphate nodules.
- 590-600 Sand - pale yellowish brown (10YR 6/2); medium to granule, subangular, poor sorting; 1% glauconite; few shell fragments; pyrite; garnet; feldspar.
- 600-610 Sand - pale yellowish brown (10YR 6/2); very coarse, some medium to coarse, subangular, poor; few feldspar.
- 610-620 Sand - pale yellowish brown (10YR 6/2); coarse to very coarse, subangular, well sorted; few feldspar, glauconite.
- 620-660 Sand - pale yellowish brown (10YR 6/2); medium to granule, subangular, poor sorting; few glauconite and feldspar.
- 660-670 Sand - pale yellowish brown (10YR 6/2); fine to granule, subangular, poor sorting; garnet.
- 670-690 Sand - pale yellowish brown (10YR 6/2); very fine to granule, subangular, very poorly sorted; rare feldspar; garnet; amethyst - dark; glauconite; shell fragments.
- 690-700 No Sample.
- 700-710 Sand - pale yellowish brown (10YR 6/2); granular, some mixed grains; well ? sorted; very sparse clay on granules.

Owner: State Water Control Board
TW SE 77-5

W# 4902
C# 416

Depth
(feet)

- 710-720 Sand - pale yellowish brown (10YR 6/2); very fine to very coarse with granules; subangular, poor sorting; very sparse clay on granules; few glauconite.
- 720-730 Sand - pale yellow brown (10YR 6/2); very fine to very coarse and granules, subangular, poor sorting; clay clasts.
- 730-740 Gravel - mixed; granules with some fine and very coarse, subangular, poor sorting; clay clasts; rose quartz.
- 740-750 Gravel - mixed colors; very sparse clay; granule with some fine to very coarse, subangular, poor sorting; 1% rose quartz.
- 750-760 Gravel - mixed colors; sparse clay (grayish orange pink); fine to very coarse with granules, subangular, poor sorting; some mixed glauconite/phosphatic fragments.
- 760-790 Sand - pale yellow brown (10YR 6/2); rare clay clasts; fine to granule, subangular, very poor sorting; rare mixed glauconite; phosphatic fragments; mica; plant debris.
- 790-800 Clay - pale yellowish brown (10YR 6/2); very fine to very coarse, subangular, angular, poor sorting; very sparse glauconite and shell fragments.
- 800-810 Clay - light olive gray (5Y 6/2); very fine to very coarse, angular and subangular, poor sorting; debris from above; plant debris also.
- 810-820 Sand - light olive gray (5Y 6/2); moderate clay; very fine to granule, angular and subangular, poor sorting; plant debris.
- 820-830 Sand - moderate dusky yellow (5Y 6/4); moderate clay in clasts; very fine to granule, abundant large granules, angular and subangular, poor sorting; some debris from above.

Logged by: J. K. Polzin
August 6 & 7, 1980