COMMONWEALTH OF VIRGINIA
DEPARTMENT OF CONSERVATION AND ECONOMIC DEVELOPMENT

W# 4592
C# 219

MAILING ADDRESS:
B[illegible]3667
C[illegible]ottesville, VA 22903

DIVISION OF MINERAL RESOURCES
JAMES L. CALVER, COMMISSIONER

WATER WELL COMPLETION REPORT

OFFICE ADDRESS:
McCormick Road
Charlottesville, Virginia

OWNER: Emanuel Baptist Church — Mailing Address: 221 W. Washington St. Smithfield, VA c/o Walter L. Blount, Sr. 23430

TENANT: _____ — Mailing Address: _____

DRILLER: J. J. Mitchell, III — Mailing Address: 16815 Happy Hill Rd. Col. Hgts. Va. 23834

WELL LOCATION: County Isle of Wight — Approx. _____ feet/miles _____ (direction) of Route 708 and .4 ~~xxxxx~~ miles East (direction) of Rt. 680

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

DATE STARTED: December 1975 — DATE COMPLETED: April 1976

TYPE OF DRILL RIG USED: Rotary & Cable tool — TOTAL DEPTH 450 feet

WATER LEVEL: Stands 132 feet below surface OR

has NATURAL flow of _____ gallons per minute. (20 hrs)

YIELD TEST: Method pumped

Drawdown 33 feet

Rate 12 gal. per min.

not continuous
Duration 20 hrs., _____ min.

WATER ZONES: from 427 to 437 feet

from _____ to _____ feet

from _____ to _____ feet

WATER: Color _____ Taste _____

Odor _____ Temp. _____ °F

WELL TO SUPPLY: (check one) Home _____

Farm _____ Town _____ School _____

Industry _____ Other church

WATER ANALYSIS AVAILABLE: ~~xxx~~ No _____

DRILL CUTTINGS SAVED: ~~xxx~~Yes No _____

HOLE SIZE: 10 inches from 0 to 51 feet

5 inches from 51 to 336' 9" feet

4 inches from 336' 9" to 427' 7" feet

SCREEN SIZE: 4 inches from 427 to 437 feet

_____ inches from _____ to _____ feet

_____ inches from _____ to _____ feet

CASE SIZE: 4 inches from 0 to 336' 9" feet

3 inches from 336' 9" to 427' 7" feet

_____ inches from _____ to _____ feet

GROUTING: Method _____

Material surface Depth 50 feet

PUMP: Type _____

Capacity _____ gal. per min

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: _____

(LOG OF WELL) OVER

LOG

FURNISHED BY: _____ DATE: _____

DEPTH (feet) FROM	TO	TYPE OF ROCK OR SOIL PENETRATED (gravel, clay, etc., hardness, color, etc.)	REMARKS (water, caving, shot, screen, sample, etc.)
			Samples #
0		top soil	1
10		tan dirt	2
20		gray dirt	3
30		gray dirt & shells	4
40		Ditto	5
50	70	"	6,7, 8
80	300	gray dirt & shell fragments	9-31
310	340	green dirt	32thru 35
350	360	gray & black sand	36 thru 37
370	390	gray sand	38 thru 40
400	410	gray dirt	41 & 42
420	450	gray sand	43 thru 46

(Use additional forms if necessary)

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

INTERVAL SHEET

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Well Repository No: W# 4592 C# 219

Date rec'd: 7/16/76 Date Processed: 3/18/77

Sample Interval: from: 0 to: 450'

PROPERTY: Emanuel Baptist Church

Number of samples: 46

COMPANY: Mitchell P&W Co.

Total Depth: 450'

COUNTY: Isle of Wight (Magnet)

XXXXXXXXXXXX: Water: XXXXXXXXXXXX:

From-To	From-To	From-To	From-To
- 0	- 300	-	-
- 10	- 310	-	-
- 20	- 320	-	-
- 30	- 330	-	-
- 40	- 340	-	-
- 50	- 350	-	-
- 60	- 360	-	-
- 70	- 370	-	-
- 80	- 380	-	-
- 90	- 390	-	-
- 100	- 400	-	-
- 110	- 410	-	-
- 120	- 420	-	-
- 130	- 430	-	-
- 140	- 440	-	-
- 150	- 450	-	-
- 160	-	-	-
- 170	-	-	-
- 180	-	-	-
- 190	-	-	-
- 200	-	-	-
- 210	-	-	-
- 220	-	-	-
- 230	-	-	-
- 240	-	-	-
250			
260			
270			
280			
290			

Both washed and unwashed samples.

OWNER: Emanuel Baptist Church
DRILLER: Mitchell's P & W Co.
COUNTY: Isle of Wight (Magnet)

W# 4592
C# 219
Total Depth 450'
Quad: Smithfield

GEOLOGIC LOG

Depth (feet)	
0	Sand - yellowish gray; moderate clay; fine to medium grained; subangular to subrounded; moderately well sorted; quartz; feldspar; some opaques.
0-10	Sand - light brownish gray; slightly clayey; medium to coarse grained, some fine grains; subangular to subrounded; moderately sorted; quartz; feldspar; some opaques.
10-20	Sand - yellowish gray; slightly clayey; fine to coarse grained; subangular to subrounded; moderately sorted; quartz; feldspar; few opaques; few black phosphatic fragments.
20-30	Sand - olive light gray; slightly clayey; fine to coarse grained; subangular to subrounded; poorly sorted; quartz; 30% shell fragments; some feldspar; some black phosphatic material; spines; forams (inc. Amphistegina, Buccella, and Textularia).
30-40	Sand - olive light gray; moderate clay; medium to coarse grained; subangular to subrounded; moderately well sorted; quartz; 35% shell fragments; some glauconite; some black phosphatic material; spines; forams (inc. Nonion, Quinqueloculina, and Textularia); bone fragment.
40-50	Sand - olive light gray; moderate clay; fine to coarse grained; subangular to subrounded; moderately sorted; quartz; 20% shell fragments; 2% black phosphatic material; spines; forams scarce (inc. Nonion); ostracode.
50-60	Sand - olive light gray; slightly clayey; very fine to fine grained, some medium grains; subangular to subrounded; moderately well sorted; quartz; 20% shell fragments; some spines; some black phosphatic material; forams (inc. Nonion, Textularia, and Amphistegina); ostracode.
60-70	Shell hash - olive light gray; slightly clayey; abundant sand; fine to medium grained; subangular to subrounded; moderately well sorted; 70% shell fragments inc. gastropods; quartz; some black phosphatic material; spines; some glauconite; forams (inc. Quinqueloculina and Nonion).
70-80	Shell hash - olive light gray; abundant clay; moderate sand; fine to medium grained; subangular to subrounded; moderately well sorted; 60% shell fragments; quartz; some black phosphatic material; spines; forams (inc. Quinqueloculina, Nonion, and Buccella).

Depth (feet)	
80-90	As above except Buccella.
90-100	As above plus some glauconite.
100-110	Shell hash - olive light gray; moderate clay; abundant sand; medium grained; some fine grains; subangular to subrounded; well sorted; 55% shell fragments; quartz; 2% black phosphatic material; spines; few grains of glauconite; forams (inc. Nonion).
110-120	Shell hash and sand - olive light gray; moderate clay; fine to medium grained; subangular to subrounded; moderately well sorted; 50% shell fragments; quartz; some black phosphatic material; some glauconite; few spines; forams (inc. Quinqueloculina).
120-130	Clay - olive light gray; abundant sand; fine to medium grained; subanglulr to subrounded; moderately sorted; 40% shell fragments; quartz; some black phosphatic material; some spines; few grains of glauconite; forams (inc. Nonion).
130-140	As above except very fine to fine grained; well sorted.
140-150	Shell hash - olive light gray; abundant clay; moderate sand; fine grained; subangular to subrounded; well sorted; 60% shell fragments; quartz; some black phosphatic material; few spines; forams scarce (inc. Quinqueloculina).
150-160	Clay - olive light gray; moderate sand; very fine to fine grained; subangular to subrounded; well sorted; 40% shell fragments; quartz; some black phosphatic material; spines; forams.
160-170	As above except Textularia.
170-180	As above except fine to medium grained; moderately well sorted; 30% shell fragments.
180-190	Clay - olive light gray; moderate sand; fine to medium grained; subangular to subrounded; moderately well sorted; 35% shell fragments; quartz; some black phosphatic material; some glauconite; few spines.
190-200	As above plus forams (inc. Nonion and Textularia).
200-210	As above except 40% shell fragments; forams; (inc. Nonion and Buccella); bone fragments.
220-220	As above except 30% shell fragments; ostracode.
220-230	Clay - olive light gray; moderate sand; fine to medium grained, some coarse grains; subangular to subrounded; moderately sorted; 35% shell fragments; quartz; some black phosphatic material; few grains of glauconite; forams (inc. Nonion).

Depth (feet)	
230-240	As above plus some grayish brown clay; 25% shell fragments; some glauconite.
240-250	Clay - grayish brown; abundant sand; medium to coarse grained; sub-angular to subrounded; moderately well sorted; 40% shell fragments; quartz; some black phosphatic material; some glauconite; some spines; forams (inc. Nonion and Textularia).
250-260	Sand - olive light gray; abundant clay; fine to coarse grained; sub-angular to rounded; moderately sorted; quartz; 30% shell fragments; 10% glauconite (black-green); few sandy limestone fragments; few black phosphatic fragments; few spines; bone fragments; foram.
260-270	As above except 40% shell fragments; 15% glauconite; forams (inc. Dentalina, Nonion and Robulus).
270-280	Sand - olive light gray; moderate clay; fine to coarse grained; sub-angular to rounded; moderately sorted; quartz; 35% shell fragments; 20% glauconite (black,green); some sandy limestone fragments; few spines; bone fragment.
280-290	Shell hash - olive light gray; moderate clay; abundant sand; fine to very coarse grained; subangular to rounded; poorly sorted; 50% shell fragments; quartz; some sandy limestone fragments; forams rare(inc. Robulus);bone fragment.
290-300	Sand - olive light gray; abundant clay; medium to coarse grained; sub-angular to rounded; moderately sorted; quartz; 35% shell fragments; 20% glauconite (black,green); few sandy limestone fragments.
300-310	Sand - greenish gray; moderate clay; medium to coarse grained; rounded; moderately well sorted; 85% glauconite (black,green,brown); quartz; few limestone fragments.
310-320	Sand - dark yellowish green; moderate clay; medium to coarse grained, few granules; rounded; moderately well sorted; 80% glauconite (black, green,brown); quartz; few shell fragments.
320-330	As above except 85% glauconite.
330-340	As above.
340-350	Sand - white, dark green, medium to coarse grained, 10% angular granules; subangular to rounded; moderately sorted; quartz; 30% glauconite (black,green,brown); some garnet; few sandy limestone fragments; few shell fragments.
350-360	Sand - salt and pepper; medium to coarse grained; subangular to rounded; well sorted; quartz; 20% glauconite; (black,brown,green); feldspar; few grains of garnet.

Depth (feet)	
360-370	As above except slightly clayey (clasts); 3% glauconite.
370-380	Sand - salt and pepper; abundant clay (clasts); medium grained to granular; subangular to rounded; moderately sorted; quartz; glauconite 50% of sand sized fraction; feldspar; few shell fragments; pyrite.
380-390	Sand - salt and pepper; medium grained, some granules; sub-angular to rounded; moderately well sorted; quartz; feldspar; 10% glauconite.
390-400	Sand - yellowish gray; moderate clay; medium grained to granular; subrounded to rounded; poorly sorted; quartz; 20% glauconite (black-green) feldspar; few grains of garnet.
400-410	Sand - yellowish gray; moderate clay (some clasts); fine to very coarse grained, some granules; subangular to rounded; poorly sorted; quartz; 35% glauconite (black,green); feldspar; few shell fragments; muscovite.
410-420	Sand - salt and pepper; slightly clayey; medium grained, some coarse grains; subangular to subrounded; well sorted; quartz; feldspar; 7% glauconite (black,green,brown); muscovite.
420-430	As above except 5% glauconite.
430-440	As above plus some fine grains; moderately well sorted.
440-450	Sand - white; medium to coarse grained, few granules; subangular to subrounded; moderately well sorted; quartz; feldspar; 2% glauconite.

Logged by: Michael T. Currie

W# 4592

GEOLOGIC SUMMARY

Depth (feet)	Thickness (feet)	Rock Unit	Time Rock Unit
0-20	20	Windsor Formation	Pleistocene
20-120	100	Yorktown Formation	Pliocene-Miocene
120-250	130	Calvert Formation	Miocene-Eocene
250-300	50	Nanjemoy Formation	Eocene
300-350	50	Mattaponi Formation	Eocene-Cretaceous
350-450	100+	Patuxent Formation	Cretaceous

VIRGINIA DIVISION OF MINERAL RESOURCES
David A. Hubbard, Jr., Geologist
September 18, 1978