

INTERVAL SHEET

WWCR - 162

Page 1 of 1

VDMR Well No: 1850

Date rec'd: 4/10/67

Sample Interval: from 0 to 193

PROP: Burchett Estates Subdivision

Number of samples: 19

COMP: Mitchell's Well & Pump Co.

Total Depth: 193

COUNTY: Prince George (Hopewell)

Oil or Gas: Water^X Exploratory:

From-To	From-To	From-To	From-To
0 - 10	-	-	-
10 - 20	-	-	-
20 - 30	-	-	-
30 - 40	-	-	-
40 - 50	-	-	-
50 - 60	-	-	-
60 - 70	-	-	-
70 - 80	-	-	-
80 - 90	-	-	-
90 - 100	-	-	-
100 - 110	-	-	-
110 - 120	-	-	-
120 - 130	-	-	-
130 - 140	-	-	-
140 - 150	-	-	-
150 - 160	-	-	-
160 - 170	-	-	-
170 - 175	-	-	-
175 - 193	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-

All intervals have both washed and unwashed samples.

OWNER: J. J. Mitchell, Jr. (Birchett Estates)
DRILLER: Mitchell's Well & Pump Company
COUNTY: Prince George (Hopewell)

VDMR: 1850
WWCR: 162
TOTAL DEPTH: 193'

GEOLOGIC LOG

Depth in feet

COLUMBIA GROUP (0' - 30')

- 0-10 Clay - orange-brown, mottled red, moderately sandy; sand is fine- to medium-grained, well-sorted, subangular to subrounded; small amount decomposed feldspar; traces of magnetite and muscovite.
- 10-20 Sand - brown, very clayey; fine- to medium-grained, fairly well-sorted, angular to subrounded; traces of feldspar, magnetite, muscovite and goethite.
- 20-30 Sand - brownish-orange, clayey, a few small pebbles (up to 10 mm); fine- to coarse-grained, moderately sorted (skewed fine), subangular; minor amounts feldspar, goethite, and magnetite.

CHESAPEAKE GROUP (30' - 60')

- 30-40 Sand - bluish-gray, moderately clayey; fine- to medium-grained, fairly well-sorted, angular to subangular; traces of fine-grained phosphorite and glauconite.
- 40-50 Clay - bluish-gray, sandy; sand is fine, angular; traces of pyrite, glauconite, and phosphorite.
- 50-60 Sand - dark greenish-gray, moderately clayey; fine-grained, very well-sorted, angular to subangular; traces of phosphorite, glauconite, magnetite, muscovite, and epidote.

AQUIA FORMATION (60' - 100')

- 60-70 Sand - black, clayey; very fine- to medium-grained, moderately sorted; 60% fresh glauconite, 40% clear to greenish, angular quartz; a few nodules of brown phosphorite; a few shell fragments and Aquia foraminifers.
- 70-80 Sand - black, clayey; fine- to very fine-grained, well-sorted; 70% fresh glauconite, 30% clear angular quartz; a few shell fragments; trace of phosphorite.
- 80-90 " "

90-100

Sand - dark-gray, very clayey; medium- to very fine-grained, rather poorly sorted; 50% fresh glauconite, 30% clear to greenish, angular quartz, and 20% molluscan shell fragments; trace amounts of muscovite, phosphorite and pyrite; a few bone fragments; ostracods moderately abundant, a few foraminifers.

PATUXENT FORMATION (100' - 193')

100-110

Sand - gray, moderately clayey, about 10% fine-grained gravel; very fine- to very coarse-grained, poorly sorted, variably rounded; 15-20% very fine- to medium-grained fresh glauconite, feldspathic in coarser grades; minor muscovite and pyrite; a few ostracods and molluscan shell fragments.

110-120

" "

120-130

Clay - dull greenish-yellow, sandy, 10% fine-grained gravel (up to 20 mm); sand is fine- to very coarse-grained, poorly sorted, variably rounded; clear quartz, moderately feldspathic, slightly glauconitic.

130-140

Sand - white, clean, 15% fine-grained gravel; coarse- to very coarse-grained, fairly well-sorted, subangular; clear quartz, moderately feldspathic; traces of glauconite, garnet, brown epidote and pyrite.

140-150

" iron-oxide staining common; very feldspathic.

150-160

Sand - white, clean, about 5% fine-grained gravel; coarse to very coarse-grained, well-sorted, subrounded; very feldspathic; trace of brown epidote.

160-170

Clay - brown, slightly to moderately sandy, a few small pebbles; sand is fine, slightly feldspathic, micaceous (muscovite and biotite); trace of glauconite.

170-175

Clay - dark-gray, abundant silt and fine-grained sand; micaceous.

175-193

Sand - white, clean; medium- to very coarse-grained, moderately sorted, angular to subrounded; very feldspathic; traces of garnet and brown epidote.

GEOLOGIC SUMMARY

	<u>Rock Name</u>	<u>Age</u>
0' - 30'	Columbia Group	Pleistocene
30' - 60'	Chesapeake Group	Miocene
60' - 100'	Aquia Formation	Eocene
100' - 193'	Patuxent Formation	Early Cretaceous

VDMR - 1850 ✓
WWCR - 162

COMMONWEALTH OF VIRGINIA
DEPARTMENT OF CONSERVATION AND ECONOMIC DEVELOPMENT
DIVISION OF MINERAL RESOURCES

Box 3667, University Station, Charlottesville, Virginia

WATER WELL COMPLETION REPORT

Va.

OWNER: J. J. MITCHELL, JR. Mailing Address: Route 1, Box 110, Colonial Heights
 TENANT: Birchett Estates Subdivision Mailing Address: _____
 DRILLER: Mitchell's Well & Pump Co. Mailing Address: Rt 1, Box 110, Colonial Heights, Va.
 WELL LOCATION: County Prince George Approx. 1 1/2 ft. miles
South (direction) of Hopewell city limits and ----- ft. miles ----- on Route 156

(Give direction and distance in feet or tenths of mile from two reference points - roads, towns, rivers, etc. - on county highway or other map)

WATER CONDITIONS

DEPTH
 STATIC WATER LEVEL 54'
 WATER ZONES (fissures or formations supplying water)
 (from) (to) (from) (to)
 _____ ft. _____ ft.
 _____ ft. _____ ft.

QUANTITY OF WATER

WELL PUMPED (or bailed) at 75 Gal. per Min. with
96 feet DRAWDOWN after 30 HOURS PUMPING.
 FLOW (natural) _____ G.P.M. HEAD not continuous ft. (above ground) W
 REMARKS: _____

QUALITY OF WATER

COLOR clear TASTE good
 ODOR none OTHER _____
 ANALYSIS: AVAILABLE - Yes No ATTACHED Yes No
 TEMPERATURE _____
 WATER (from) _____ ft. (to) _____ ft.
(salt, brackish, iron, sulfur, acid, other)

USE OF WATER: Domestic Town Industry Farm Public

CONSTRUCTION

RIG TYPE (or method) cable tool
(rotary, cable, bored, driven, etc.)
 DATE: Started Feb 66; Completed Feb 66
 TOTAL DEPTH 193 ft.
 BEDROCK at none ft.

GROUTING INFORMATION

METHOD USED _____
 GROUTING MATERIAL cement & water
 DEPTH OF GROUTING 50

HOLE SIZE

(diam) (from) (to)
10" in. 0 ft. 50 ft.
6" in. 193 ft. _____

CASING SIZE

(diam) (from) (to)
6" in. 0 ft. 181 ft.
7" in. _____

SCREEN (or perforations)

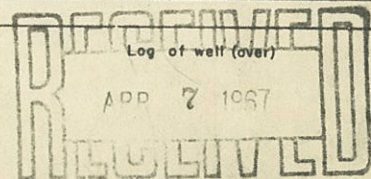
(diam) (from) (to) (opening size)
6" in. 183 ft. 193 ft. #20

PUMP (installed)

TYPE submersible Cap. (gpm) 75 gpm @ 50#
 H.P. 7 1/2 Depth of intake 170' of 2 1/2" ft.

REMARKS: _____

VIRGINIA DIVISION OF



MINERAL RESOURCES

OWNER : J. V. Mitchell, Jr. (Birchett Estates) VDMR : 1850
 DRILLER : Mitchell's Well & Pump Co. WPCR : 162
 COUNTY : Prince George (Hopewell) TOTAL DEPTH : 193'

GEOLOGIC LOG

Depth
in ft.

COLUMBIA GROUP (0'-30')

0-10 Clay — orange-brown, mottled red, moderately sandy; sand is fine- to medium-grained, well-sorted, subangular to subrounded; small amount decomposed feldspar; traces of magnetite and muscovite.

10-20 Sand — brown, very clayey; fine- to medium-grained, fairly well-sorted, angular to subrounded; traces of feldspar, magnetite, muscovite, and goethite.

20-30 Sand — brownish-orange, clayey; a few small pebbles (up to 10 mm); fine- to coarse-grained, moderately sorted (skewed fine), subangular; minor amounts feldspar, goethite, and magnetite.

CHESAPEAKE GROUP (30'-60')

30-40 Sand — bluish-gray, moderately clayey; fine- to medium-grained, fairly well-sorted, angular to subangular; traces of fine-grained phosphite and glauconite.

40-50

Clay - bluish-gray, sandy; sand is fine, angular; traces of pyrite, glauconite, and phosphonite.

50-60

Sand - dark greenish-gray, moderately clayey; fine-grained, very well-sorted, angular to subangular; traces of phosphonite, glauconite, magnetite, muscovite, and epidote.

AQUIA FORMATION (60'-100')

60-70

Sand - black, clayey; very fine- to medium-grained, moderately sorted; 60% fresh glauconite, 40% clear to greenish, angular quartz; a few nodules of brown phosphonite; a few shell fragments and Aquia foraminifers.

70-80

Sand - black, clayey; fine- to very fine-grained, well-sorted; 70% fresh glauconite, 30% clear angular quartz; a few shell fragments; trace of phosphonite.

80-90

||

||

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ATLIXENT FORMATION (100' - 193')

100-110 Sand — gray, moderately clayey, about 10% fine-grained gravel; very fine- to very coarse-grained, poorly sorted, variably rounded; 15-20% very fine- to medium-grained fresh glauconite, feldspathic in coarser grades; minor muscovite and pyrite; a few ostracods and molluscan shell fragments.

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Clay — brown, slightly to moderately sandy, a few small pebbles; sand is fine, slightly feldspathic, micaceous (muscovite and

biotite); trace of glauconite.

170-175 Clay - dark-gray, abundant silt and fine-grained sand; micaceous.

175-193 Sand - white, clean; medium- to very coarse-grained, moderately sorted, angular to subrounded; very feldspathic; traces of garnet and brown epidote.

GEOLOGIC SUMMARY

	<u>Rock Name</u>	<u>Age</u>	
0'-30'	Columbia Group	Pleistocene	Pleistocene
30'-60'	Chesapeake Group	Miocene	Miocene
60'-100'	Aquia Formation	Eocene	Eocene
100'-193'	Potomac Formation	Early Cretaceous	Cretaceous

VDMR

Robert H. Trifke - Geologist

June 5, 1967