

INTERVAL SHEET WWCR: 81

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VDMR Well No: 2238

Date rec'd: 9/11/68

Sample Interval: from 0 to 375'

PROP: Webb Motel (J. S. Steward)

Number of samples: 38

COMP: Mitchell's Well & Pump Co.

Total Depth: 375'

COUNTY: Caroline (Bowling Green)

Oil or Gas: Water: X Exploratory:

From-To	From-To	From-To	From-To
0 - 10	300 - 310	-	-
10 - 20	310 - 320	-	-
20 - 30	320 - 330	-	-
30 - 40	330 - 340 *	-	-
40 - 50	340 - 350	-	-
50 - 60	350 - 360	-	-
60 - 70	360 - 370	-	-
70 - 80	370 - 375	-	-
80 - 90	-	-	-
90 - 100	-	-	-
100 - 110	-	-	-
110 - 120	-	-	-
120 - 130	-	-	-
130 - 140	-	-	-
140 - 150	-	-	-
150 - 160	-	-	-
160 - 170	-	-	-
170 - 180	-	-	-
180 - 190	-	-	-
190 - 200	-	-	-
200 - 210	-	-	-
210 - 220	-	-	-
220 - 230	-	-	-
230 - 240	-	-	-
240 - 250	-	-	-
250 - 260 *	-	-	-
260 - 270 *	-	-	-
270 - 280 *	-	-	-
280 - 290	-	-	-
290 - 300	-	-	-

* Unwashed samples only.

OWNER: Mrs. Jessie S. Steward
DRILLER: Mitchell's Well & Pump Co.
COUNTY: Caroline (Bowling Green)

VDMR: 2238
WWCR: 81
TOTAL DEPTH: 375'

GEOLOGIC LOG

Depth in
feet

COLUMBIA GROUP (0-50')

- 0-10 Sand - clayey (orange brown), fine- to very coarse-grained, poorly sorted; coarse-grained feldspar and blue quartz are common; trace of glauconite
- 10-20 Sand - moderately clayey (pinkish-orange), fine- to coarse-grained, poorly sorted; slightly feldspathic
- 20-30 " , except: with trace of fine-grained gravel
- 30-40 Sand - slightly clayey (orange); fine- to coarse-grained, moderately sorted; slightly feldspathic
- 40-50 " , except: very fine- to coarse-grained, poorly sorted

CALVERT FORMATION (50-120')

- 50-60 Sand - moderately clayey, greenish-gray; fine- to very fine-grained, very well-sorted; clear and greenish quartz with traces of glauconite and muscovite
- 60-70 Clay - slightly sandy, light bluish-gray; sand is fine-grained, well-sorted; clear and greenish quartz with 2-3 percent glauconite; traces of lignitic material and phosphorite
- 70-80 Clay - sandy, greenish-gray; sand is fine-grained; well-sorted; clear and greenish quartz; a few phosphatic nodules and bone fragments; trace of glauconite; small shell fragments (10 percent)
- 80-90 Sand - moderately clayey, dark brownish-gray; fine- to very fine-grained, well-sorted; clear and greenish quartz with a trace of glauconite, a few bone and shell fragments
- 90-100 " , except: grayish-brown; quartz is clear to yellowish
- 100-110 Silt - clayey, pale greenish-gray; coarse-grained, well-sorted
- 110-120 Sand - clayey (dark brownish-gray), 5 percent fine-grained gravel, mainly phosphate nodules; sand is fine-grained, well-sorted; quartz (90 percent); glauconite (10 percent); abundant concretionary pyrite; trace of muscovite

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NANJEMOY FORMATION (120-150')

- 120-130 Silt and Sand - clayey (brownish-gray dark); coarse-grained silt and very fine-grained sand; very well-sorted; very slightly micaceous and glauconitic; trace of bone phosphorite
- 130-140 Sand - clayey, dark-gray; fine- to very fine-grained, well-sorted; clear and greenish quartz; slightly glauconitic and micaceous; 5 - 10 percent small shell fragments and a very few foraminifers
- 140-150 " , except: 10-15 percent shell fragments; foraminifers common but not abundant

MATTAPONI FORMATION (150-200')

- 150-160 Sand - clayey, dark-gray; fine- to medium-grained, well-sorted; clear and greenish quartz (65 percent); dark-green glauconite (35 percent); muscovite common; 5-10 percent small shell fragments, foraminifers common, but not abundant
- 160-170 " , except: very dark-gray, fine-grained, well-sorted
- 170-180 Sand - moderately clayey, very dark-gray; fine-grained, well-sorted; clear and greenish quartz (75 percent), glauconite (25 percent); muscovite common; a few shell fragments and foraminifers
- 180-190 " , except: medium-gray; fine- to medium-grained, fairly well-sorted; 15 percent small shell fragments
- 190-200 Sand - clayey (dark-gray); fine- to medium-grained, fairly well-sorted; clear and greenish quartz (60 percent), dark green glauconite (40 percent); abundant muscovite; 5 percent shell fragments; foraminifers common

TRANSITIONAL BEDS (200-350')

- 200-210 Sand - clayey, trace of granule gravel, buff; very fine- to very coarse-grained, poorly sorted; slightly glauconitic in finest fraction, moderately feldspathic in coarser fractions; pyrite common; a few plant fragments
- 210-220 Clay - moderately sandy, yellowish-brown; sand is fine-grained, well-sorted; clear quartz with some feldspar and a trace of glauconite

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- 220-230 Clay - sandy, hematite, bright brownish-red, mottled light-gray and white; sand is very fine- to very coarse-grained, poorly sorted; quartz (50 percent), feldspar (5 percent), pelletal hematite (45 percent); trace of glauconite
- 230-240 Clay - compact, slightly sandy, trace of granule gravel, mottled light-gray, yellow, and red; sand is very fine- to very coarse-grained, poorly sorted; quartz (50 percent), hematite (50 percent); minor feldspar; trace of glauconite
- 240-250 " , except: light gray clay is predominant; sand is 70 percent quartz, 30 percent hematite
- 250-260 Clay - compact, with trace of sand, mottled gray and yellowish-brown
- 260-270 Clay - compact, with trace of sand, mottled reddish-brown, yellowish-brown, and gray
- 270-280 Clay - compact, gray and yellowish-brown
- 280-290 Clay - silty, moderately sandy to sandy, light brown; sand is fine- to very fine- grained, very well-sorted; moderately feldspathic; trace of muscovite
- 290-300 " , except: sandy, moderately feldspathic; a few plant fragments
- 300-310 Clay - compact, slightly sandy, purplish-brown; sand is very fine- to coarse-grained, poorly sorted; quartz (70 percent), hematite (25 percent), feldspar (5 percent)
- 310-320 Clay - compact, medium gray
- 320-330 Clay - small amount of fine-grained, well-sorted quartz sand; brownish-gray and yellowish-brown
- 330-340 Clay - compact, light-gray
- 340-350 Clay - moderately sandy to sandy, pale brownish-gray; sand is white; fine- to very fine-grained, very well-sorted; trace of muscovite

PATUXENT FORMATION (350-375')

- 350-360 Sand - clean, white, fine- to coarse-grained, fairly well-sorted, skewed fine; moderately feldspathic in coarse fraction; accessory magnetite

OWNER: Mrs. Jessie S. Steward

- 360-370 Sand - trace of clay, light-tan; medium- to coarse-grained, well-sorted, subangular; slightly to moderately feldspathic
- 370-375 Sand - clean, pale reddish-brown; medium- to very coarse-grained, moderately sorted, subangular to subrounded; slightly to moderately feldspathic

GEOLOGIC SUMMARY

	<u>Rock Unit</u>	<u>Age</u>
0-50'	Columbia Group	Pleistocene
50-120'	Calvert Formation	Miocene
120-150'	Nanjemoy Formation	Eocene
150-200'	Mattaponi Formation	Paleocene
200-350'	Transitional beds	Late Cretaceous
350-375'	Patuxent Formation	Early Cretaceous

Virginia Division of Mineral Resources
Robert H. Teifke, Geologist
October 10, 1968

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March 7, 1972