INTERVAL SHEET WWCR: 112

Page 1 of 1

VDMR Well No: 2224

Date rec'd: 8/21/68

Sample Interval: from 0 to: 410'

PROP: Cherrydale Sub. (Sydnor Hydrodynamics)

Number of samples: 40

COMP: Sydnor Hydrodynamics, Inc.

Total Depth: 412'

COUNTY: Hanover (Mechanicsville)

Oil or Gas: Water: X Exploratory:

From-To	From-To	From-To	From-To
0 - 10	300 - 310	-	-
10 - 20	310 - 320	-	-
20 - 30	-	-	-
30 - 40	330 - 340	-	-
40 - 50	340 - 350	-	-
50 - 60	350 - 360	-	-
60 - 70	360 - 370	-	-
70 - 80	370 - 380	-	-
80 - 90	380 - 390	-	-
90 - 100	390 - 400	-	-
100 - 110	400 - 410	-	-
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	-	-	-

All intervals have both washed and unwashed samples.

OWNER: Sydnor Hydrodynamics, Inc. VDMR: 2224
(Cherrydale Subdivision) WWCR: 112
DRILLER: Sydnor Hydrodynamics, Inc. TOTAL DEPTH: 412'
COUNTY: Hanover (Mechanicsville)

GEOLOGIC LOG

Depth in feet	
COLUMBIA GROUP (0-50')	
0-10	Sand - orange, clayey; fine, moderately sorted, slightly feldspathic
10-20	" brown, with 15 percent fine, rounded, quartzo-feldspathic gravel
20-30	" brown, fine, well-sorted
30-40	" brown, with 50 percent fine, well-sorted, rounded, quartzo-feldspathic gravel
40-50	Gravel - orange-brown, slightly clayey, 25 percent fine, well-sorted sand; gravel is fine (2-6 mm), well-sorted, subrounded, quartzo-feldspathic; a few rock fragments
CALVERT FORMATION (50-130')	
50-60	Clay - gray, sandy; sand is fine, well-sorted; trace of muscovite
60-70	" dark-gray, very sandy
70-80	" dark gray, very sandy
80-90	" dark-gray, very sandy; a few small rounded quartz pebbles
90-100	" dark-gray, very sandy
100-110	Sand - gray, clayey; medium- to very fine, fairly well-sorted; very clear quartz, with a few fragments and small nodules of phosphorite
110-120	" abundant matrix of drab-brown clay; fine- to coarse, poorly sorted; with 10-15 percent fine-grained, dark-green glauconite

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120-130 Sand - gray, sparse matrix of drab-brown clay; fine- to medium-grained, fairly well-sorted; very clear quartz with a few fragments and small nodules of phosphorite; trace of glauconite

NANJEMOY FORMATION (130-190')

130-140 Sand - dark-gray, very clayey; 40 percent fine- to medium, dark-green glauconite; 55 percent fine- to medium, angular, clear quartz; 5 percent coarse, rounded quartz; a few phosphate nodules and cleavage fragments of fresh, alkalic feldspar

140-150 " 10 percent coarse, rounded quartz; phosphate nodules common

150-160 Clay - greenish-gray and very sandy; locally white and sand-free; sand is fine- to very fine, well-sorted; 50 percent glauconite, 50 percent greenish quartz; muscovite abundant; a few phosphate nodules

160-170 " "

170-180 " 65 percent quartz, 35 percent glauconite of a grain size slightly larger than the fine- to very fine-grained quartz

180-190 Sand - drab greenish-gray, clayey, with abundant lenses of pale bluish-gray and orange-pink, essentially sand free clays; sand is fine- to medium, well-sorted, moderately glauconitic (about 20 percent); micaceous; a few small rounded pebbles of quartz, feldspar, and phosphorite; a few large lenticulenid foraminifers

MATTAPONI FORMATION (190-220')

190-200 Sand - dark-gray, clayey; fine, well-sorted; 65 percent clear and greenish angular quartz; 35 percent dark-green glauconite; micaceous; Dentalina and Robulus common but not abundant; a few ostracods

200-210 " 75 percent quartz, 25 percent glauconite

210-220 Gravel and Sand - gray, moderately clayey; 65 percent fine, multi colored, quartzo-feldspathic gravel (greenish particles dominant); 35 percent fine, well-sorted sand; sand consists of greenish quartz and dark-green glauconite; decomposed shell fragments common in both fractions; a few phosphate nodules and fish teeth

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PATUXENT FORMATION (220-412')

220-230	Gravel - gray, very slightly clayey; fine (2-8 mm), well-sorted, poorly rounded; quartz (several types), feldspar (rounded, decomposed), and crystalline rock fragments
230-240	Gravel and Sand - gray, slightly clayey; 60 percent fine, quartzo-feldspathic, slightly lithic gravel; 40 percent very coarse, feldspathic sand
240-250	" 25 percent gravel, 75 percent sand
250-260	" 30 percent gravel, 70 percent sand
260-270	" 60 percent gravel (2-15 mm), 40 percent sand
270-280	Sand - brownish-gray, trace of clay, 15 percent fine gravel; medium- to very coarse, moderately sorted; feldspathic; traces of rock fragments and glauconite
280-290	" "
290-300	" "
300-310	Sand - brown, trace of clay, 15 percent fine gravel; medium- to coarse, well-sorted; feldspathic; minor glauconite
310-320	" 5 percent fine gravel; fine- to medium, well-sorted
320-330	No sample
330-340	Sand and Gravel - brown, slightly clayey; 70 percent medium- to very coarse sand; 30 percent granule gravel; feldspathic; trace of glauconite
340-350	" 50 percent sand, 50 percent granule gravel
350-360	" 40 percent sand, 60 percent granule gravel
360-370	" 75 percent sand, 25 percent granule gravel
370-380	" 65 percent sand, 35 percent granule gravel
380-390	" 50 percent sand, 50 percent granule gravel

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390-400	Gravel - gray, slightly clayey, 10 percent medium- to very coarse, feldspathic sand; fine (2-10 mm), well-sorted, quartzose; subordinately lithic and feldspathic
400-410	Sand and Gravel - brown, slightly clayey; 20 percent granule gravel; 80 percent medium- to very coarse sand; moderately feldspathic
410-412	No sample

GEOLOGIC SUMMARY

	Rock Unit	Age
0-50'	Columbia Group	Pleistocene
50-130'	Calvert Formation	Miocene
130-190'	Nanjemoy Formation	Eocene
190-220'	Mattaponi Formation	Paleocene - Late Cretaceous
220-412'	Patuxent Formation	Early Cretaceous

Virginia Division of Mineral Resources
Robert H. Teifke, Geologist
October 4, 1968

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March 6, 1972