

INTERVAL SHEET

VDMR WELL NO.: 780 WWCR # 141

Sample Interval: from 0 to 550

Total Depth 550

Oil Gas Water Exploratory

Cuttings Core Other

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 Date 1/28/63
 PROP: Town of Tappahannock Well #3
 COMP: Layne Atlantic Inc.
 COUNTY: Essex

From-To	From-To	From-To	From-To	From-To
-	0 - 10	290 - 300	-	-
-	10 - 20	300 - 310	-	-
-	20 - 30	310 - 320	-	-
-	30 - 40	320 - 330	-	-
-	40 - 50	330 - 340	-	-
-	50 - 60	340 - 350	-	-
-	60 - 70	350 - 360	-	-
-	70 - 80	360 - 370	-	-
-	80 - 90	370 - 380	-	-
-	90 - 100	380 - 390	-	-
-	100 - 110	390 - 400	-	-
-	110 - 120	400 - 420	-	-
-	120 - 130	420 - 445	-	-
-	130 - 140	445 - 455	-	-
-	140 - 150	455 - 465	no sample	-
-	150 - 160	465 - 471	-	-
-	160 - 170	470 - 480	-	-
-	170 - 180	480 - 490	-	-
-	180 - 190	490 - 500	-	-
-	190 - 200	500 - 510	-	-
-	200 - 210	510 - 520	-	-
-	210 - 220	520 - 530	-	-
-	220 - 230	530 - 540	-	-
-	230 - 240	540 - 550	-	-
-	240 - 250	-	-	-
-	250 - 260	-	-	-
-	255 - 265	-	-	-
-	260 - 270	-	-	-
-	270 - 280	-	-	-
-	280 - 290	-	-	-

Insufficient quantity of material to wash

OWNER: Town of Tappahannock
DRILLER: Layne Atlantic Company
COUNTY: Essex

VDMR # 780
WWCR # 141
TOTAL DEPTH : 542

GEOLOGIC LOG

Columbia Group (0-30)

- 0-10 Sand - tan, coarse to fine grained, subangular to subrounded, slightly argillaceous and silty
- 10-20 Clay - tan to gray, very sandy, slightly silty, small amount of gravel
- 20-30 Sand - tan, coarse to fine grained, subangular, slightly argillaceous and silty, small amount of gravel

Calvert Formation (30-150)

- 30-40 Clay - tan to gray, slightly sandy and silty
- 40-50 Clay - brown to gray, slightly sandy and silty
- 50-60 Clay - tan to gray, slightly sandy and silty
- 60-70 Clay - tan to gray, very silty, slightly sandy, trace of lignite
- 70-80 Sand - gray, coarse to fine grained, angular to subangular, slightly silty, trace of clay, small amount of gravel
- 80-90 Sand - gray, coarse to fine grained, angular to subangular, slightly silty, trace of clay
- 90-100 Clay - light gray, slightly sandy, small number of diatoms (Coscinodiscus)
- 100-110 Clay - light gray, slightly sandy, small number of diatoms (Coscinodiscus)
- 110-120 Clay - light gray, slightly sandy and silty, large number of shell fragments
- 120-130 Clay - light gray, very sandy and silty, large number of shell fragments
- 130-140 Sand - gray, coarse to fine grained, angular, very argillaceous and silty, trace of glauconite
- 140-150 As above

Nanjemoy Formation (150-260)

- 150-160 Sand - gray, coarse to fine grained, angular, very argillaceous and silty, slightly glauconitic, small number of shell fragments
- 160-170 As above
- 170-180 Sand - gray, coarse to fine grained, angular, very argillaceous and silty, slightly glauconitic
- 180-190 Sand - gray, coarse to fine grained, angular, very argillaceous and silty, slightly glauconitic, small number of shell fragments
- 190-200 Sand - gray, coarse to fine grained, angular to subangular, slightly argillaceous and silty, very glauconitic, small number of shell fragments
- 200-210 Sand - grayish green, medium to fine grained, angular, slightly argillaceous and silty, very glauconitic, small number of shell fragments
- 210-220 Sand - grayish green, medium to fine grained, angular, very argillaceous (pink), slightly silty, very glauconitic
- 220-230 Sand - grayish green, medium to fine grained, angular, very argillaceous (pink), slightly silty, very glauconitic, small number of shell fragments
- 230-240 Sand - grayish green, medium to fine grained, angular, slightly argillaceous and silty, very glauconitic, small number of shell fragments
- 240-250 As above
- 250-260 Sand - brownish green, medium to fine grained, angular, slightly argillaceous and silty, very glauconitic, small number of shell fragments
- 255-265 Sand - grayish green, medium to fine grained, angular, very argillaceous (pink), slightly silty, very glauconitic,

Marlboro Clay (260-290)

- 260-270 Clay - gray, trace of sand and silt
- 270-280 As above
- 280-290 Clay - gray, trace of sand, silt, and glauconite

Aquia Formation (290-420)

- 290-300 Sand - grayish green, medium to fine grained, angular, very argillaceous and glauconitic, slightly silty
- 300-310 Sand - grayish green, medium to fine grained, angular, slightly argillaceous and silty, very glauconitic
- 310-320 As above
- 320-330 As above
- 330-340 As above
- 340-450 Sand - grayish green, medium to fine grained, angular, very argillaceous and glauconitic, slightly silty
- 350-360 Sand - grayish green, medium to fine grained, angular, very argillaceous and glauconitic, slightly silty, large number of Foraminifera (Cibicides, Globigerina)
- 360-370 As above
- 370-380 As above
- 380-390 Clay - gray, slightly sandy, silty, and glauconitic, small number of colophane pellets, large number of Foraminifera (Cibicides, Globigerina)
- 360-370 As above
- 370-380 As above
- 380-390 Clay - gray, slightly sandy, silty, and glauconitic, small number of colophane pellets, large number of Foraminifera (Cibicides, Globigerina), small amount of gravel and shell fragments
- 390-400 Sand - grayish green, coarse to fine grained, angular to subangular, slightly argillaceous and silty, very glauconitic, large number of Foraminifera (Cibicides, Globigerina)
- 400-420 Sand - grayish green, coarse to fine grained, angular, slightly argillaceous and silty, very glauconitic, large number of Foraminifera (Cibicides, Globigerina)

Patuxent Formation (420-550)

- 420-445 Sand - light gray, coarse to fine grained, angular, slightly arkosic, trace of silt, clay, and glauconite
- 445-455 Sand - light gray, coarse to fine grained, angular to subangular, slightly arkosic, trace of silt, clay, and glauconite.

OWNER: Town of Tappahannock (continued)

#78 0

455-465 No sample
465-471 Clay - dull red to gray, slightly sandy, silty, and glauconitic
470-480 Sand - light gray, medium to fine grained, angular, very argillaceous, slightly silty and glauconitic, trace of iron
480-490 Sand - gray, medium to fine grained, angular, slightly argillaceous, silty, and glauconitic, trace of iron
490-500 Sand - light gray, medium to fine grained, angular to subangular, trace of silt, clay, glauconite, and feldspar
500-510 Sand - light gray, coarse to fine grained, angular to subangular, slightly arkosic, trace of clay
510-520 As above
520-530 As above
530-540 As above
540-550 Sand - gray, coarse to medium grained, subangular, slightly arkosic, argillaceous, and silty, trace of iron and glauconite

GEOLOGIC SUMMARY

	<u>AGE</u>	<u>ROCK UNIT</u>
0-30	Pleistocene	Columbia group
30-150	Miocene	Calvert formation
150-260	Eocene	Nanjemoy formation
260-290	"	Marlboro clay
290-420	"	Aquia formation
420-550	Lower Cretaceous	Patuxent formation

Virginia Division of Mineral Resources
James L. Ruhle - Geologist
February 5, 1963