

INTERVAL SHEET

WWCR 153

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VDMR Well No: 1635

Date rec'd: June 24, 1966

Sample Interval: from 15 to 536

PROP: Town of West Point

Number of samples: 49

COMP: Layne-Atlantic Company

Total Depth: 538

COUNTY: King William

Oil or Gas: Water ~~XX~~ Exploratory:

From-To	From-To	From-To	From-To
-	315 - 325	-	-
15 - 25	325 - 335	-	-
25 - 39	335 - 345	-	-
39 - 49	345 - 359	-	-
49 - 59	359 - 369	-	-
59 - 69	369 - 380	-	-
69 - 79	380 - 390	-	-
79 - 89	390 - 400	-	-
89 - 103	400 - 410	-	-
103 - 113	410 - 420	-	-
113 - 123	420 - 430	-	-
123 - 133	430 - 445	-	-
133 - 140	445 - 455	-	-
140 - 150	455 - 465	-	-
150 - 160	465 - 475	-	-
160 - 170	475 - 485	-	-
170 - 178	485 - 495	-	-
178 - 190	495 - 505	-	-
190 - 200	505 - 515	-	-
200 - 210	515 - 526	-	-
210 - 220	526 - 536	-	-
220 - 230	-	-	-
230 - 240	-	-	-
240 - 250	-	-	-
250 - 260	-	-	-
260 - 270	-	-	-
270 - 280	-	-	-
280 - 290	-	-	-
290 - 305	-	-	-

All intervals have both washed and unwashed samples

OWNER: Town of West Point
DRILLER: Layne-Atlantic Company
COUNTY: King William

VDMR 1635
WWCR 153
TOTAL DEPTH: 538'

GEOLOGIC LOG

0 - 15 No sample

YORKTOWN FORMATION (15 - 150')

- 15 - 25 Sand — gray, moderately argillaceous; very fine grained, very well sorted, angular; small amounts of muscovite and very finely divided magnetite, carbonophosphorite, and glauconite
- 25 - 39 Sand and Gravel — gray, argillaceous, 10-15% rounded quartz pebbles up to 8 mm.; fine to medium grained, moderately sorted, angular to subangular; minor magnetite, carbonophosphorite, muscovite, and glauconite
- 39 - 49 Clay — gray, very sandy, a few small rounded pebbles up to 10 mm.; sand is poorly sorted (skewed fine), poorly rounded; traces of muscovite, magnetite, and nodular black phosphorite; a few abraded shell fragments
- 49 - 59 " about 10% fine gravel
- 59 - 69 " 5 - 10% fine gravel
- 69 - 79 " very few pebbles
- 79 - 89 " "
- 89 - 103 " "
- 103 - 113 Clay — greenish gray, silty and sandy; sand is very fine grained, very well sorted, angular
- 113 - 123 Sand and Shell — gray to very dark gray, argillaceous, 10-15% pelecypod shell fragments; very fine to coarse grained, moderately sorted, angular to slightly subrounded; clear quartz, with moderate amounts of finely divided phosphorite and magnetite; traces of glauconite and muscovite; a very few foraminifers and ostracods

123 - 133 Sand and Shell — gray, very argillaceous, 25-30% shell fragments and a very few small rounded pebbles up to 8 mm.; fine to coarse grained, fairly well sorted, angular to subangular; clear quartz with small amounts of magnetite, sandy greenish-gray limestone, finely divided phosphorite; traces of garnet; shell material mostly pelecypods with a few gastropods, fish teeth, vertebrae, and echinoid spines, and a small amount of yellowish-brown phosphatic shells; moderate abundance of foraminifers (mostly Siphogenerina), and a very few ostracods

133 - 140 " very few microfossils (same assemblage as in overlying interval)

140 - 150 " very few microfossils, about 15% shell material

NANJEMOY FORMATION (150 - 260')

150 - 160 Limestone and Sand — limestone (75%): gray, sandy, locally glauconitic, fossiliferous; abundant granules of quartz and a few of phosphorite; abundant shell material consisting of pelecypods and a few bryozoans, corals, and echinoids; pyrite locally abundant; sand (25%): fine-to medium-grained, fairly well sorted, angular to subangular clear quartz; small amount of finely-divided phosphorite; a few small foraminifers and ostracods

160 - 170 " 60% limestone, 40% sand

170 - 178 Sand and Limestone — Sand (50-60%): fine to coarse grained, rather poorly sorted; 25-30% glauconite, and 70-75% clear, angular quartz; Limestone (40-50%): gray, sandy (glauconitic), moderately pebbly (quartz granules), fossiliferous, locally pyritic; moderate abundance of foraminifers and ostracods in sand intervals

178 - 190 Sand and Limestone — Sand (55-65%): fine- to medium-grained, well sorted; 50-60% black glauconite, and 40-50% clear angular quartz; Limestone (35-45%); gray, very sandy (very glauconitic), moderately pebbly (quartz granules and a few rounded pebbles of 10 mm.), fossiliferous, locally pyritic; moderate abundance of foraminifers in sand intervals

190 - 200 "

200 - 210 " 65-75% sand, 25-35% limestone

- 210 - 220 Sand — gray, argillaceous, 15% limestone fragments and a few large shell fragments, quartz granules and small pebbles; fine to coarse grained, moderately sorted; black glauconite (60%) and quartz (25%); a very few foraminifers and ostracods
- 220 - 230 "
- 230 - 240 " 80-85% black glauconite, 15-20% quartz; no limestone
- 240 - 250 " 45% glauconite, 45% quartz, 10% limestone
- 250 - 260 " 45% glauconite, 45% quartz, 5% limestone, 5% gravel (rounded pebbles up to 10mm.); pink clay binder in part

MATTAPONI FORMATION (260-536')

- 260 - 270 Sand — gray, argillaceous (pink clay in part), very fine to coarse grained, poorly sorted; 50% fresh black glauconite, 50% angular to subangular clear quartz; scattered fragments of white sandy (glauconitic) limestone, and of brown massive phosphorite and phosphatic accretions; a few pelecypod fragments, bone fragments, shark teeth, and vertebrae; scattered foraminifers
- 270 - 280 "
- 280 - 290 "
- 290 - 305 Sand — dark gray, moderately argillaceous, a very few small pebbles and phosphate nodules; medium to coarse grained, well sorted; 85% fresh glauconite, 15% quartz, trace of phosphorite; a very few foraminifers
- 305 - 315 No sample
- 315 - 325 Sand — dark gray, slightly argillaceous; medium grained, well sorted; 65% black and green glauconite, 35% clear to yellowish quartz, traces of pyrite and phosphorite; a few pelecypod shell fragments and echinoid spines
- 325 - 335 Sand — brownish gray, slightly argillaceous; 45% fine-to very coarse-grained, fairly well sorted (skewed coarse), subangular to subrounded quartz, 50% medium-to coarse-grained fresh glauconite, and 5% feldspar; traces of garnet, limestone and phosphorite; a very few shell fragments, fish teeth, and foraminifers

- 335 - 345 Sand — brownish gray, moderately argillaceous (tan clay), a very few granules and very small pebbles; medium grained, moderately sorted; 65% quartz (including some feldspar), and 35% fresh glauconite; traces of muscovite and shell material
- 345 - 359 "
- 359 - 369 Sand — grayish-brown, very argillaceous (variegated clay); medium grained, moderately sorted; 65% quartz (and feldspar), and 35% glauconite; moderately micaceous (muscovite); a few small shell fragments
- 369 - 380 Sand — grayish brown, moderately argillaceous, a few granules and very small pebbles; fine to coarse grained, rather poorly sorted; 25% fresh glauconite, 70% quartz, and 5% feldspar; traces of garnet, muscovite and shell material
- 380 - 390 "
- 390 - 400 "
- 400 - 410 Sand and Gravel — gray, slightly to moderately argillaceous; 25 -30% granule gravel, and 70-75% rather poorly sorted and poorly rounded sand; arkosic; slightly glauconitic; scattered grains of muscovite and garnet
- 410 - 420 "
- 420 - 430 "
- 430 - 445 " a very few shell fragments
- 445 - 455 Sand — gray, moderately argillaceous, 10-15% granule gravel; poorly sorted; arkosic; slightly glauconitic; traces of muscovite and garnet
- 455 - 465 "
- 465 - 475 "
- 475 - 485 "
- 485 - 495 " a very few granules, very slightly glauconitic
- 495 - 505 " "
- 505 - 515 " "
- 515 - 526 " "
- 526 - 536 " "

536 - 538 No sample

GEOLOGIC SUMMARY

	<u>ROCK UNIT</u>	<u>AGE</u>
0 - 15	No sample	
15 - 150	Yorktown Formation	Miocene
150 - 260	Nanjemoy Formation	Eocene
260 - 536	Mattaponi Formation	Upper Cretaceous-Paleocene
536 - 538	No sample	

Virginia Division of Mineral Resources
Robert H. Teifke, Geologist
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