

OWNER: Belruh Oyster Company
DRILLER: Sydnor Hydrodynamics, Inc.
COUNTY: Westmoreland (Kinsale)

VDMR: 1771
WWCR: 158
TOTAL DEPTH: 331'

GEOLOGIC LOG

Depth in feet

CALVERT FORMATION (0-170')

0-10	Clay - grayish-green, moderately sandy (locally); a very few granules of dark-gray phosphorite, trace of glauconite; abundant surface contamination - oyster shells, plant material, coarse-grained sand
10-20	Clay and Sand - greenish-gray clay (85-90%) is locally glauconitic. Sand (10-15%) is coarse-grained, moderately sorted, rather poorly-rounded, slightly feldspathic; the grains are coated with and loosely cemented by limonitic material; trace of diatoms
20-30	Clay - greenish-gray, with orange-brown mottles, sandy, about 5% rounded granules and small pebbles of quartz and sandstone; sand is poorly-sorted, glauconitic (limonite after glauconite, especially in orange-brown areas); shell fragments moderately abundant; a few plant fragments; slightly diatomaceous
30-40	" a few rounded pebbles up to 25 mm
40-50	Clay - greenish-gray, uniformly compact, with a very few rounded pebbles up to 25 mm; slightly diatomaceous
50-60	" "
60-70	" "
70-80	" "
80-90	" "
90-100	" a few foraminifers
100-110	Clay - greenish-gray, with orange-brown mottles, very slightly-sandy; trace of glauconite; a few shell fragments, plant fragments, and foraminifers; slightly to moderately diatomaceous

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- 105-115 Sand and Shell - gray, slightly clayey; sand (40-50%) is medium- to coarse-grained, well-sorted, subrounded; trace of glauconite; 50-60% shell fragments and sandy (glauconitic) limestone; limestone is locally pyritic
- 110-120 Clay - greenish-gray, uniformly compact, with a very few rounded quartz pebbles up to 20 mm; trace of glauconite
- 115-125 Limestone - gray, sandy (quartz and glauconite), pyritic; consists in large part of coarse molluscan shells and shell fragments
- 120-130 Clay - greenish-gray, uniformly compact, with scattered, rounded pebbles up to 20 mm; locally glauconitic
- 125-135 Limestone - gray, sandy (quartz and glauconite), pyritic; consists in large part of coarse molluscan shells and shell fragments
- 130-140 Clay - greenish-gray, uniformly compact, with scattered, rounded pebbles up to 20 mm; trace of glauconite
- 135-145 Limestone - gray, sandy (mostly quartz, some glauconite), slightly pyritic and phosphatic; abundant pelecypod shells and shell fragments, and a few bryozoans, sharkteeth, and foraminifers
- 140-150 Clay - greenish-gray, with orange-brown mottles, uniformly compact and slightly silty; a few small shell fragments, and fragments of carbonaceous material
- 145-155 Sandstone - gray, medium- to coarse-grained, calcitic, slightly to moderately glauconitic, pyritic; abundant shell material, including pelecypods, bryozoans, and a few foraminifers
- 150-160 Clay - greenish-gray, uniformly compact and slightly silty, a few small pebbles; a few shell fragments; moderately diatomaceous
- 155-165 Limestone - gray, very sandy (coarse-grained quartz and glauconite), a few pebbles; pyritic; abundant shell fragments and a few echinoid spines and foraminifers
- 160-170 Clay - greenish-gray, uniformly compact, a few rounded pebbles up to 20 mm; scattered fragments of carbonaceous material, trace of glauconite, diatomaceous

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CHICKAHOMINY (?) AND NANJEMOY FORMATIONS (170-285')

- 165-175 Clay - greenish-gray, uniformly compact, a few rounded pebbles up to 20 mm; scattered fragments of carbonaceous material, trace of glauconite, diatomaceous; abundant fragments of shell and sandy limestone
- 175-185 " "
- 185-195 Clay and Limestone - clay is greenish-gray, silty; limestone is sandy, moderately glauconitic; abundant shell fragments, and a few pebbles
- 195-205 " "
- 205-215 " "
- 215-225 " "
- 225-235 Sand and Limestone - gray (speckled), clean; 10-20% fragments of sandy, fossiliferous, slightly pyritic, and glauconitic limestone; sand (80-90%) is coarse-grained, fairly well-sorted, subrounded to rounded with 25% black to brown glauconite; trace of gypsum, scattered shell fragments and poorly-preserved foraminifers
- 235-245 " "
- 245-255 " "
- 255-265 Sand - gray, slightly clayey, a few fragments of sandy, glauconitic limestone; medium- to coarse-grained, well-sorted; 60% subrounded to rounded quartz, and 40% blackish-green to brown (limonitized) glauconite; trace of gypsum, a few shell fragments, and scattered foraminifers and ostracods
- 265-275 " 60% sand, 40% limestone; foraminifers moderately abundant
- 275-285 Sand - brownish-gray, trace amounts of clay and granules; medium- to very coarse-grained, moderately-sorted; 50% clear to brownish quartz, and 50% black to brown glauconite; traces of pyrite and gypsum; a few foraminifers, ostracods, and shell fragments

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MATTAPONI FORMATION (285-331')

285-295	Sand - gray, speckled, coarse	
295-305	"	
305-315	"	with about 5% granule gravel
315-331	"	"

GEOLOGIC SUMMARY

	<u>Rock Unit</u>	<u>Age</u>
0-170'	Calvert Formation	Middle Miocene
170-285'	Chickahominy (?) and Nanjemoy Formations	Late(?) and Middle Eocene
285-331'	Mattaponi Formation	Paleocene

Virginia Division of Mineral Resources
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