

OWNER: Smithfield Packing Co. (Luter's #5)  
DRILLER: R. L. Magette  
COUNTY: Isle of Wight (Smithfield)

VDMR: 1838  
WWCR: 205  
TOTAL DEPTH: 540'

GEOLOGIC LOG

Depth in  
feet

COLUMBIA GROUP (0-40+)

0-40 No samples

40 Clay — bright orange-brown, locally greenish-gray and white to light-gray, very sandy; sand is poorly-sorted, variably-rounded; quartzose, and slightly feldspathic

YORKTOWN FORMATION (40+-240+)

60 Silt-Sand — gray, clayey; coarse-grained silt and very fine-grained sand, well-sorted, angular; locally limonitic; trace of glauconite; a few foraminifers; echinoid spines, and shell fragments

80 Sand — gray, very slightly clayey; fine- to medium-grained, fairly well-sorted, subangular to subrounded; a few shell fragments, echinoid spines common

100 Sand — greenish-gray, moderately clayey; fine- to medium-grained, moderately-sorted, subangular to subrounded; traces of glauconite, feldspar, phosphorite, and muscovite; locally goethitic and limonitic; about 10% pelecypod shell debris

120 Sand — gray, with greenish cast, slightly clayey; medium-grained, fairly well-sorted, subrounded; minor amounts of glauconite, phosphorite, feldspar; 5-10% pelecypod shell fragments

140 "

160 Sand — gray, with greenish cast, moderately clayey; very fine-grained, very well-sorted, angular; slightly micaceous (muscovite); about 10% pelecypod shell fragments, and a very few foraminifers

180 " plant fragments common; locally limonitic

200 Shell, Clay, and Sand — pelecypod shell fragments (50-60%) in matrix of greenish-gray clay and poorly-sorted quartz sand

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220 Clay — greenish-gray, silty, slightly sandy; 15-25% pelecypod shell fragments; plant remains common; a few foraminifers (Textularia, Nonion)

240 "

CALVERT FORMATION (240+-280+)

260 " about 5% shell material; dolomitic sandstone common; foraminifers fairly abundant (Nonion, Siphogenerina, Dentalina); bone fragments common

280 Sand — brownish-gray, clayey; medium- to coarse-grained, moderately-sorted; 60% clear subangular quartz, 30% greenish-black to light-green, to brown glauconite; pyritic; phosphatic fragments (mostly with organic, vertebrate structure) common; a few fragments of sandy, glauconitic, cream-colored limestone; about 10% pelecypod shell fragments and a few foraminifers and echinoid spines

MATTAPONI FORMATION (280+-360+)

300 Sand — dark gray, clayey; medium-grained, fairly well-sorted; 75% fresh- to slightly-decomposed glauconite, and 20% clear, variably-rounded quartz; slightly pyritic and phosphatic (brown phosphorite with organic structure); 5% pelecypod shell fragments and a few foraminifers

320 "

340 " light- and bluish-green glauconite abundant; very few pelecypod shell fragments; very little phosphorite

360 " "

PATUXENT FORMATION (360+-540+)

380 Sand — brownish-gray, moderately-clayey, 5% granule gravel; medium- to very coarse-grained, moderately-sorted; 30% glauconite, 60-65% subrounded quartz, and 5-10% feldspar; trace of garnet; a few shell fragments

400 "

420 " 10% glauconite, 10-15% feldspar

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- 440 Sand — brownish-gray, moderately-clayey, 5% granule gravel; medium- to very coarse-grained, moderately-sorted; 10% glauconite, 75-80% subrounded quartz, and 10-15% feldspar; trace of garnet; a few shell fragments
- 460 "
- 480 Sand — brownish-gray, slightly-clayey; coarse-grained, well-sorted, subangular to rounded; moderately-feldspathic, slightly glauconitic; trace of garnet
- 500 "
- 520 "
- 540 " medium- to very coarse-grained, fairly well-sorted

GEOLOGIC SUMMARY

<u>INTERVAL (feet)</u>	<u>ROCK UNIT</u>	<u>AGE</u>
0-40+	Columbia Group	Pleistocene
40+-240+	Yorktown Formation	Late Miocene
240+-280+	Calvert Formation	Middle Miocene
280+-360+	Mattaponi Formation	Paleocene
360+-540+	Patuxent Formation	Early Cretaceous

Note: Nanjemoy Formation (Eocene) may be present between 280' and 300'

Virginia Division of Mineral Resources  
Robert H. Teifke, Geologist  
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