



OWNER: Naval Mine Depot, well #<sup>3</sup>2  
DRILLER: Virginia Machinery & Well  
COUNTY: York

VDMR: 260  
WWCR: 61  
TOTAL DEPTH: 470

GEOLOGIC LOG

Depth in feet

CHESAPEAKE GROUP (0-327)

- 0 - 210 No samples
- 210 - 220 Clay — brown to dark-gray, moderate amount of quartz silt and very fine-grained sand.
- 220 - 253 No samples
- 253 - 253+ Sand (floated sample) — brown and gray; medium- to very coarse-grained, moderately sorted; 25-30% black, brown, and yellowish "glaucinite", and 70-75% stained, rounded to slightly subangular quartz.
- 253+ - 280 No samples
- 280 - 291 Sand — medium-gray, very slightly clayey; medium- to coarse-grained, fairly well-sorted, subangular to subrounded; clear quartz with 2-5% shell fragments, 2% fine-grained, platy black phosphorite, and traces of glauconite and iron ores; a few foraminifers (globigerinids common).
- 291 - 310 No samples
- 310 - 327 Sand — gray, clean; medium- to coarse-grained, fairly well-sorted, subrounded clear quartz, with about 2% fine-grained black glauconite; a few shell fragments and echinoid spines; very small foraminifers abundant.
- 327 - 330 No samples

CHICKAHOMINY FORMATION (330+ - 390+)

- 330 - 330+ Clay (floated sample) — brownish-gray, sandy; sand is predominantly clear, poorly sorted and poorly rounded quartz, but fresh glauconite is fairly abundant in finest fractions; small amount (2-5%) pelecypod and echinoid shell debris; abundant Jackson age foraminifers. \*
- 330+ - 360 No samples

360 - 360+ Clay (floated sample) -- brownish-gray, sandy; sand is predominantly clear, poorly sorted and poorly rounded quartz, but fresh glauconite is fairly abundant in finest fractions; small amount (2%) pelecypod and echinoid shell debris; abundant Jackson age foraminifers. \*

360+ - 390 No samples

390 - 390+ Sand -- gray, moderately clayey (brownish clay); fine- to very coarse-grained, poorly sorted, variably rounded; sand is 50% quartz, 40% black to dark-green glauconite, 5% pelecypod fragments, and 5% fragments of cream-colored glauconitic limestone; small number of Jackson age foraminifers. \*

390+ - 400 No samples

#### MATTAPONI FORMATION (390+ - 468)

400 - 410 Sand (floated sample) -- speckled; fine- to very coarse-grained, poorly sorted; 50% quartz, 30% black to dark-green glauconite, 15% cream-colored glauconitic limestone, and 2% each of feldspar and rock fragments (other than limestone); trace amounts of garnet, muscovite, pelletal and platy black phosphorite, and hematite after glauconite; a few pelecypod fragments, bryozoans, and poorly preserved foraminifers.

410 - 415 No sample

415 - 415+ Clay (floated sample) -- highly variegated, with reddish-brown aspect; slightly to moderately sandy; sand is poorly sorted, quartz-glauconitic (glauconite present in various stages of decomposition, but none is fresh); small amount of cream-colored glauconitic limestone

415+ - 430 No samples

430 - 430+ Sand (floated sample) -- fine-grained angular, and coarse angular silt in matrix of variegated clay (mostly deep red, with subordinate browns and greens); clear quartz with about 5% partially decomposed glauconite; a few fragments of cream-colored glauconitic limestone.

430+ - 440 No samples

440 - 440+ Sand -- gray, clayey (pale-brown clay); medium- to coarse-grained, moderately sorted, poorly rounded; clear quartz with appreciable amount of clear to dull-white feldspar, and traces of muscovite and glauconite.

440+ - 450 No samples

450 - 468 Sand — white, clean, about 10% very fine-grained gravel; coarse-  
to very coarse-grained, well sorted, subrounded; arkosic  
(fresh feldspar); traces of garnet, glauconite, muscovite,  
kyanite.

### GEOLOGIC SUMMARY

	<u>Rock Unit</u>	<u>Age</u>
0 - 327	Chesapeake Group	Miocene
327 - 390	Chickahominy Formation	Late Eocene
390 - 468	Mattaponi Formation	Late Cretaceous

\* Jackson age foraminiferal assemblage in this interval includes the following species:

*Angulogerina danvillensis*  
*Ceratobulimina rotundata*  
*Cibicides sculpturatus*  
*Dentalina bevani*  
*Dentalina capitata*  
*Dentalina intermedia*  
*Dentalina soluta*  
*Frondicularia virginiana*  
*Guttulina hantkeni*  
*Gyroidina orbicularis*  
*Planularis crassilimbata*  
*Plectofrondicularia virginiana*  
*Pseudoglandulina virginiana*  
*Pullenia quinqueloba*  
*Robulus gutticostatus*  
*Sigmoidella plummerae*

Virginia Division of Mineral Resources  
Robert H. Teifke - Geologist  
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