

OWNER: Naval Mine Depot, well #³2
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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