



Well: N. & W. RR. Well # 217  
Property: Norfolk and Western Railway  
Driller: Norfolk and Western Railway  
Location: New Bohemia, at intersection of NWRR and Rte. 629;  
77° 19' 15" W, 37° 11' 00" N  
Elevation: 152 feet  
Total Depth: 90 feet  
Started drilling: October, 1966      Completed drilling: October, 1966  
Sample description by: R. H. Teifke, Virginia Division of Mineral  
Resources, September, 1968

GEOLOGIC LOG \*

Depth in  
feet

✓  
COLUMBIA GROUP ( 0-20')

- 0-10      Sand -- abundant matrix of orange-brown, yellow-brown, and light-gray clays; very fine--to coarse-grained, moderately sorted (skewed fine), angular to sub-angular; clear and yellowish (iron-stained) quartz; moderately feldspathic in coarser grades
- 10-20      Sand -- binder of subtly variegated clay with brown aspect; fine--to coarse-grained, moderately sorted, angular to subangular; clear quartz, subordinately yellowish (iron-stained), and appreciable dull-white decomposed feldspar; abundant green epidote; minor amounts of garnet; rutile, tourmaline, muscovite, kyanite, and hornblende

✓  
YORKTOWN FORMATION ( 20-<sup>66'</sup>~~73'~~)

- 20-30      Clay -- laminated orange-brown and bluish-gray, slightly sandy and pebbly, small amounts of ferricrete; sand is fine--to very coarse-grained, poorly sorted; decomposed feldspar common in coarse grades, small amounts of muscovite, gypsum, and decomposed glauconite

VDMR Well No. 2021

- 30 -59.5 No samples
- 59.5 Sand and shell - moderately abundant matrix of greenish-brown clay; 35% large, decomposed pelecypod shells; 65% fine--to medium-grained, well-sorted, angular--to subangular sand, composed of clear quartz, with 5-10% small fragments of carbonophosphatic material, and a small amount of decomposed glauconite; foraminifers common
- 62.5 Shell and sand - binder of pale yellowish-gray clay; 40% coarse shells and shell fragments; 60% fine--to very coarse-grained sand, consisting of subequal amounts of small, abraded shell fragments and clear quartz; pelecypods, small gastropods, echinoid spines and plates, corals, bryozoans, and scaphopods; foraminifers common  
(Amphistegina prominent)
- 64 " 60% coarse shells and shell fragments; 40% fine -to medium-grained, fairly well-sorted, clear quartz sand
- MATTAPONI FORMATION (66-85')
- 66 Clay - greenish-gray, silty, moderately sandy, 10% decomposed pelecypod shell fragments; sand is fine--to medium-grained, fairly well-sorted, angular; 10% of sand fraction is fine-grained, dark-green glauconite; foraminifers, ostracods, and echinoid spines are fairly abundant
- 68 " very sandy; sand is fine-grained, well-sorted, angular
- 70 Shell and sand - binder of yellowish-gray clay; 60% pelecypod, gastropod, echinoderm and bryozoan shells and shell fragments; 40% fine--to medium-grained, fairly well-sorted, angular to subangular clear quartz sand; very slightly glauconitic; a few foraminifers

VDMR Well No. 2021

73 Sand — binder of greenish-gray clay, locally orange-brown, fine-grained, very well-sorted, angular; clear and yellowish quartz, with a trace of glauconite and a few small iron-stained shell fragments and echinoid spines, anhydrite pseudomorphs after selenite are common

73-80 No samples

~~MATTAPONI AND~~  
PATUXENT FORMATION <sup>S</sup> (80-90')

~~80-90~~ Gravel, sand and shell — binder of gray clay; 50% fine, (2-10 mm) glauconite-stained, quartzo-feldspathic gravel; 10% abraded pelecypod shell fragments; 40% fine- to very coarse-grained, quartzo-feldspathic sand; a very few phosphate nodules; traces of glauconite and garnet

GEOLOGIC SUMMARY

	<u>Rock Unit</u>	<u>Age</u>
0-20	Columbia Group	Pleistocene
20-73 66	Yorktown Formation	<del>(Late)</del> Miocene
66-85 <del>73-80</del>	<del>No Sample</del>	
85-80-90	<del>Mattaponi Formation</del> Patuxent Formation	<del>Paleocene - Late Cretaceous</del> Early Cretaceous

\* The use of the lithologic term, "clay" includes all size ranges of particles less than 1/32 mm.

R. H. Tiefhe  
3/3/72

VDMR-Well No. 2021  
County: Prince George

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