

OWNER: Greenfield Village Sub. #4 (Sydnor)  
DRILLER: Sydnor Hydrodynamics, Inc.  
COUNTY: Spotsylvania (Fredericksburg)

VDMR: 1697  
WWCR: 482465  
TOTAL DEPTH: 277'

GEOLOGIC LOG

Depth in feet

- 0- 10 Sand — reddish-brown, clean, about 5% granules; coarse- to very coarse-grained, well sorted, subrounded; arkosic (dull-white to yellowish, decomposed feldspar), 3-5% pseudomorphs of limonite-hematite-goethite after glauconite, a few decomposed schistose rock fragments; most of grains have thin coating of clay.
- 10- 20 Sand and Gravel — orange-brown, trace of clay; 70% coarse- to very coarse-grained sand, and 30% granule gravel; fairly well sorted (0.5-3.0 mm); arkosic, moderately lithic (decomposed metamorphic rock fragments); black, organic (?) coating on many grains; trace of plant material.
- 20- 30 Gravel and Sand — orange-brown, slightly clayey; 65% granule gravel, and 35% medium- to coarse-grained sand; rather poorly sorted; arkosic, limonitic, slightly lithic.
- 30- 40 Sand — gray, slightly clayey, about 15% gravel (granules, very small pebbles, and fragments of larger pebbles); medium- to coarse-grained, moderately sorted, poorly rounded; arkosic.
- 40- 50 Sand — gray, slightly clayey; coarse- to very coarse-grained, fairly well sorted, subrounded; arkosic.
- 50- 60 " 5-10% granule gravel, including fragments of larger pebbles.
- 60- 70 Sand — grayish-brown, slightly clayey, 5-10% granule gravel; medium- to very coarse-grained, moderately sorted, subrounded to rounded; arkosic.
- 70- 80 Clay — dark reddish-brown mottled greenish-gray, very sandy; sand is coarse, moderately sorted, subrounded, arkosic.

80- 90	Clay — bright reddish-brown mottled greenish-gray, very sandy; sand is coarse, moderately sorted, subrounded, arkosic.
90-100	" " dark reddish-brown.
100-110	Clay — mottled gray, green, and reddish-brown, moderate amount of arkosic sand, and a few small pebbles.
110-120	Gravel — gray, matrix of brown and gray clays and coarse-grained, well sorted, arkosic sand; gravel (80% of sediment) is well sorted, subrounded to rounded, 5-10 mm.
120-130	Sand — gray, with greenish cast, clayey, about 5% granules and very small pebbles; coarse-grained; arkosic.
130-140	Sand — brownish-gray, slightly clayey; coarse-grained, well sorted, subrounded; arkosic (dull-white potassic feldspar).
140-150	" " moderately clayey, coarse- to very coarse-grained, 10-20% granule gravel.
150-160	Sand — brownish-gray, clayey; fine- to coarse-grained, rather poorly-sorted, angular to subrounded; arkosic.
160-170	Sand — grayish-brown, moderately clayey; medium- to coarse-grained, fairly well sorted, subangular to subrounded; very arkosic.
170-180	" " clayey.
180-190	" " very clayey (gray and greenish clays).
190-200	Sand — tan, slightly clayey; medium- to coarse-grained, well sorted, subangular to subrounded; arkosic.
200-210	" " medium- to very coarse-grained, fairly well sorted.
210-220	" " "
220-230	" " "

230-240	Sand — gray, slightly clayey; coarse-grained, fairly well sorted, subangular to subrounded; arkosic.
240-250	" coarse- to very coarse-grained.
250-260	Sand — grayish-brown, moderately clayey, 5-10% granule gravel; coarse- to very coarse-grained, fairly well sorted, subrounded; arkosic.
260-270	" slightly clayey, medium- to very coarse-grained, moderately sorted.
270-277	" "

GEOLOGIC SUMMARY

	<u>Rock Unit</u>	<u>Age</u>
0-277	Potomac Group	Early Cretaceous

Virginia Division of Mineral Resources  
Robert H. Teifke - Geologist  
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