

OWNER: Fairfield Water Corp. (Hechler # 3)
DRILLER: Sydnor Pump & Well Co., Inc.
COUNTY: Henrico (Richmond)

W- 1612
C- 186
TOTAL DEPTH: 302

GEOLOGIC LOG

Depth in
feet

COLUMBIA GROUP (0-30)

- 0-10 Sand - orange-brown, very argillaceous; fine- to coarse-grained, rather poorly sorted, variably rounded; small amount of white, weathered feldspar
- 10-20 "
- 20-30 Sand and Gravel - very argillaceous (gray clay); gravel (about 30 percent) is rather poorly sorted (2-30 mm), subrounded to rounded; sand (about 70 percent) is very fine- to very coarse-grained, poorly sorted, variably rounded; some feldspar present in both fractions

CALVERT FORMATION (30-70)

- 30-40 Clay and Gravel - subequal amounts of gray to buff, sandy clay, and rounded pebbles 10-35 mm in diameter; trace of glauconite
- 40-50 Clay - medium-gray, slightly sandy, trace of glauconite
- 50-60 " very slightly sandy
- 60-70 " slightly- to moderately-sandy and glauconitic

NANJEMOY FORMATION (70-130)

- 70-80 Sand and Clay - gray, sand (50 percent) is fine- to very fine-grained, well-sorted, angular; clay (50 percent) occurs as dark brownish-gray matrix to sand, and as light gray, virtually sand-free masses; moderately glauconitic; slightly micaceous
- 80-90 "
- 90-100 "
- 100-110 "
- 110-120 Clay - mottled pinkish-orange and gray; slightly sandy; small amount of glauconite
- 120-130 "

MATTAPONI FORMATION (130-150)

- 130-140 Sand - dull brownish-gray, argillaceous; very fine- to fine-grained, well sorted, angular; moderately glauconitic and slightly micaceous; a few shell fragments
- 140-150 " abundant finely-divided, chalky shell fragments

PATUXENT FORMATION (150-302)

- 150-160 Sand - dull brownish-gray, 5-10 percent very fine gravel, medium- to very coarse-grained, moderately sorted, subangular to subrounded; arkosic; slightly glauconitic
- 170-180 Sand and Gravel- gray, slightly- to moderately-argillaceous; 60 percent poorly sorted sand, and 40 percent very fine-grained gravel (mostly granules); arkosic; a very few shell fragments
- 180-190 "
- 190-200 Gravel and Sand - brown, slightly argillaceous; gravel (80 percent) consists of fairly well-sorted, rather poorly rounded granules and very small pebbles; sand (20 percent) is poorly sorted, subangular; moderately arkosic; some nodules and crusts of iron oxides
- 200-210 Gravel and Sand - gray, slightly argillaceous; gravel (60 percent) consists of rather poorly rounded granules and a few very small pebbles; sand (40 percent) is medium- to very coarse-grained, moderately sorted, rather poorly rounded; arkosic; trace of glauconite
- 210-220 " gravel is coarser, and more poorly sorted
- 220-230 Sand - dull brown, trace of clay, a few granules; coarse- to very coarse-grained, well sorted, subangular to subrounded; arkosic
- 230-240 Sand and Gravel - gray, slightly to moderately argillaceous; sand (50 percent) is medium- to very coarse-grained, fairly well sorted, subangular to subrounded; gravel (50 percent) consists of subrounded granules and very small pebbles up to 8 mm; arkosic; trace of glauconite
- 240-250 " about 10 percent pebbles 8-15 mm in diameter
- 250-260 " 2-5 percent pebbles 8-15 mm in diameter; small amounts of garnet and muscovite
- 260-270 "
- 270-280 "
- 280-290 " fine- to very coarse-grained, poorly sorted, poorly rounded; moderately micaceous (mostly biotite)

290-302 Sand and Gravel - gray, slightly- to moderately argillaceous; sand (50 percent) is medium- to very coarse-grained, fairly well sorted, subangular to subrounded; gravel (50 percent) consists of subrounded granules and very small pebbles up to 8 mm; arkosic; trace of glauconite; abundant biotite and rock fragments

GEOLOGIC SUMMARY

	<u>Rock Unit</u>	<u>Age</u>
0-30	Columbia Group	post-Miocene
30-70	Calvert Formation	Miocene
70-130	Nanjemoy Formation	Eocene
130-150	Mattaponi Formation	Paleocene - Late Cretaceous
150-302	Patuxent Formation	Early Cretaceous

Note: The 270-300 foot interval appears to be slightly reworked biotite-microcline granite and granite gneiss; because it appears to have undergone some transport, it is included in the Patuxent Formation.

Virginia Division of Mineral Resources
Robert H. Teifke - Geologist
July 21, 1966

Robert H. Teifke
March 2, 1972