

OWNER: Bush Development Corporation VDMR #1170
(Apt. Bldg. between Atlantic & Pacific) WWCR #52
DRILLER: Sydnor Pump & Well Company, Inc. TOTAL DEPTH: 1693'
COUNTY: Princess Anne (Virginia Beach)

GEOLOGIC LOG

- 0-800 No samples.
Pamunkey Group (800-1118')
- 800- Clay and Sand — layers of greenish-gray, virtually sand- and silt-free, coherent clay; layer(s) of sand; sand medium-grained, moderately well-sorted, subangular to subrounded with scattered, rounded granules of quartz; slightly glauconitic (about 5%); slightly arkosic (white, subrounded to rounded, mottled yellow microcline with iron staining); much of quartz is iron stained; traces of garnet, tourmaline, muscovite, and phosphorite; small amount pelecypod shell fragments; a few foraminifera and phosphatic fish teeth.
- 800-850 Clay — gray, sandy; sand rather poorly sorted, subangular to rounded; slightly glauconitic; traces of garnet, phosphorite, blades of clear gypsum; scattered pelecypod shell fragments, foraminifera, and echinoid spines.
- 850-858 No sample.
- 858-877 Sand — gray, slightly argillaceous and silty; scattered, subangular quartz granules; sand coarse- to very-coarse-grained, fairly well-sorted, subangular; clear quartz is predominant; slightly arkosic (fresh, white, subrounded microcline); small amounts of glauconite and phosphorite; traces of muscovite, clear kyanite, pyrite, and green epidote; some quartz grains with crusts of very-fine-grained, azure colored mineral; scattered pelecypod shell fragments; rare foraminifera.
- 877-902 As above.
- 902-927 As above.
- 927-952 As above — but finer-grained (medium- to very-coarse-grained) and slightly more argillaceous.
- 952-977 Sand — gray, very argillaceous (greenish-gray clay); a few subrounded granules of quartz; sand very-fine- to very-coarse-grained, poorly sorted, subangular to subrounded; very slightly glauconitic; trace of feldspar; small amounts of bladed gypsum, small pyritic nodules and concretions, phosphorite, and muscovite; scattered pelecypod shell fragments; rare foraminifera.
- 977-1008 No sample.

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1008-1027 Sand — gray, very argillaceous (greenish-gray clay); a few subrounded granules of quartz; sand very-fine- to very-coarse-grained, poorly sorted, subangular; very slightly glauconitic; small amounts of pyrite, phosphorite, muscovite, and magnetite; trace of kyanite; moderately abundant pelecypod shell fragments; rare foraminifera, echinoid spines, and fish teeth.

1027-1052 As above.

1052-1077 As above.

1077-1102 Sand — gray, very argillaceous; considerable gravel-sized fraction (up to 8 mm) consisting essentially of abraded pelecypod shell fragments and worm tubes with a few quartz pebbles; sand fine- to very-coarse-grained, poorly sorted, subangular to subrounded; small amounts glauconite, phosphorite, gypsum; traces muscovite, pyrite; abundant pelecypod shell fragments and worm tubes.

1102-1118 As above — but with smaller amount shell material.

Potomac Group (1118-1593')

1118-1143 Sand — gray; slightly argillaceous; small amount of gravel-sized material (up to 6 mm), mostly shell fragments; sand fine- to very-coarse-grained, poorly sorted, angular to subrounded; yellow- (iron) and green- (glauconite) stained quartz common; slightly arkosic (green- and brown-stained, microcline); small amounts concretionary pyrite, glauconite, gypsum, and phosphorite; traces of garnet, muscovite, and green epidote; abundant pelecypod shell fragments, some worm tubes, and rare foraminifera.

1143-1168 As above.

1168-1193 As above — but less argillaceous and slightly less arkosic.

1193-1218 No sample.

1218-1243 Sand — brown, very slightly argillaceous, pebbly (subrounded to round quartz pebbles up to 10 mm); sand medium- to very-coarse-grained (very coarse grains predominant), fairly well-sorted subrounded to rounded; slightly arkosic; traces of glauconite, muscovite, pyrite, phosphorite, epidote, and garnet; rare foraminifera.

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- 1227-1240 Sand — buff, very slightly argillaceous, (including small amounts of gray-green, slightly sandy clay); sand medium- to coarse-grained, well-sorted, subangular; very small amounts of glauconite and gray microcline; traces of muscovite, garnet, epidote, pyrite, magnetite, phosphorite, and tourmaline; a few pelecypod shell fragments.
- 1240-1268 As above — but without balls of gray-green clay.
- 1268-1293 Sand — gray, slightly argillaceous; sand medium- to coarse-grained, well-sorted, subangular; very slightly arkosic; traces of glauconite, garnet, epidote; a few elongate grains of carbonaceous, coaly material interlaminated with fine-grained pyrite; a few shell fragments.
- 1293-1318 Sand — buff, very slightly argillaceous, slightly pebbly (subrounded to rounded quartz up to 8 mm); sand medium- to very-coarse-grained, well-sorted, subangular to well-rounded (roundness increases as grain size?); very slightly arkosic (gray microcline, in part); scattered grains of glauconite; traces of pyrite, epidote, tourmaline, chlorite; scattered pelecypod shell fragments.
- 1318-1348 No sample.
- 1348-1418 Sand and Clay — reddish-brown; subequal amounts of variegated (red, reddish brown, brown, yellow, pale green) clay; sand coarse-grained, fairly well-sorted, subangular to rounded, quartz; a few small pebbles of quartz.
- 1418-1518 No sample.
- 1518-1530 Sand — gray, very slightly argillaceous, moderately pebbly (subrounded quartz granules and small pebbles, 2 to 5 mm); sand medium- to very-coarse-grained, fairly well-sorted, subangular to subrounded; slightly arkosic; traces of epidote, tourmaline, garnet, muscovite, glauconite, hematite, pyrite, and phosphorite; trace of shell fragments.
- 1530-1593 As above — but more brown than gray, and more argillaceous (variegated clay).
- 1593-1693 No sample.

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GEOLOGIC SUMMARY

	<u>ROCK UNIT</u>	<u>TIME ROCK UNIT</u>
0-800	No samples	
800-1118	Pamunkey Group	Paleocene-Eocene
1118-1593	Potomac Group	Lower Cretaceous
1593-1693	No sample	

Virginia Division of Mineral Resources
Robert H. Teifke, Geologist
February 3, 1965