

OWNER: Town of Exmore - Well #2
DRILLER: Sydnor Pump & Well Co., Inc.
COUNTY: Northampton (Exmore)

VDMR #1322
WWCR #216
TOTAL DEPTH: 228'

GEOLOGIC LOG

Terrace Deposits (0-40')

- 0-10 Sand — brown; a few small pebbles (2-4 mm) of quartz, chert; coarse- to very-coarse-grained, well-sorted, subrounded; white to yellowish quartz and small amounts of black to brownish chert, and weathered white microcline.
- 10-20 Sand — brown; 5-10% subrounded granules (2-4 mm) of quartz and black chert; fine- to very-coarse-grained, bimodal (modes at 1/4 and 1-1/2 mm), modes well-sorted, angular to subangular; clear to yellowish quartz, and small amounts black chert and weathered white microcline.
- 20-30 Sand — gray, with violet cast; medium- to very-coarse-grained, well-sorted, subrounded; clear to white quartz, with small amounts black chert and white microcline; small amount garnet; trace of epidote.
- 30-40 As above.

Yorktown Formation (40-228')

- 40-50 Sand — gray; medium- to coarse-grained with a small amount very-coarse-grained material, well-sorted, subangular; clear to white quartz, with small amount of gray K-feldspar; minor gray chert, garnet, and brown epidote; small amount chalky shell fragments (pelecypods and gastropods) and on occasional ostracod.
- 50-60 Sand — brown; medium- to coarse-grained, well-sorted; subrounded; clear to yellowish quartz with scattered grains of dark-gray chert and dull-white microcline; trace of garnet.
- 60-70 As above — but slightly coarser, and with a few shell fragments.
- 70-80 Sand — gray; about 10% subrounded to rounded granules; medium- to very-coarse-grained, bimodal (modes at 1/2 and 1-1/2 mm), modes well sorted, subangular to subrounded; very slightly arkosic quartz sand.
- 80-90 Clay — gray; very sandy; scattered granules, sand is coarse-grained, poorly sorted, subangular to subrounded; quartz, with scattered grains of chert, feldspar, and phosphorite; scattered shell fragments, and a few foraminifera.

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- 90-100 Clay — gray; very sandy; scattered granules, sand is coarse-grained, poorly sorted, subangular to subrounded; quartz, with scattered grains of chert, feldspar, and phosphorite; scattered shell fragments, and a few foraminifera.
- 100-110 As above.
- 110-120 As above.
- 120-130 Sand — gray; argillaceous (gray clay); small amount small gravel (2-5 mm); fine- to very-coarse-grained, poorly sorted, subangular to subrounded; quartz, with scattered grains of dark-gray chert and dull white feldspar; a few shell fragments.
- 130-140 Sand — brownish-gray; slightly argillaceous; medium- to coarse-grained, well-sorted, subrounded; quartz, with small amount dull white microcline; trace of garnet.
- 140-150 Clay — bluish-gray; slightly to moderately sandy; trace of pyrite; trace of plant material.
- 150-160 Sand — gray; slightly argillaceous; a few small pebbles (2-4 mm); medium- to very-coarse-grained, well-sorted, subangular to subrounded; quartz, with small amount white feldspar, and black chert, and accessory garnet, brown epidote, and glauconite; a few shell fragments, and a trace of plant material.
- 160-170 As above.
- 170-180 As above.
- 180-190 As above.
- 190-200 Sand and Gravel — gray; gravel component (50% of sediment) fine-grained (2-5 mm), well-sorted, subrounded; sand component (50% of sediment) coarse- to very-coarse-grained, moderately sorted to well-sorted, subangular to subrounded; quartz, with small amounts of chert and phosphorite (black, platy); traces of garnet, glauconite, brown epidote; abundant blue-gray pelecypod fragments in both fractions.
- 200-210 Gravel, Sand, and Shells — gray; gravel component (50% of sediment) fine-grained (2-6 mm), well-sorted, subrounded; sand component (50% of sediment) medium- to very-coarse-grained, moderately sorted, subangular to subrounded; small amounts of chert and phosphorite (black to brown, platy); traces of garnet and glauconite; pelecypod shell fragments very abundant in both fractions.

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- 210-220 Gravel, Sand, and Shells — gray; gravel component (50% of sediment) fine-grained (2-6 mm), well-sorted, subrounded; sand component (50% of sediment) medium- to very-coarse-grained, moderately sorted, subangular to subrounded; small amounts of chert and phosphorite (black to brown, platy); traces of garnet and glauconite; pelecypod shell fragments very abundant in both fractions.
- 220-228 As above — but with more phosphorite (phosphatic shell fragments).

GEOLOGIC SUMMARY

	<u>ROCK UNIT</u>	<u>TIME ROCK UNIT</u>
0-40	Terrace Deposits	Pleistocene
40-228	Yorktown Formation	Miocene

Virginia Division of Mineral Resources
Robert H. Teifke, Geologist
June 21, 1965