

OWNER: A. M. Hamlet
DRILLER: Mitchell's Well & Pump Company
COUNTY: Prince George

VDMR #1185
WWCR #150
TOTAL DEPTH: 183'

GEOLOGIC LOG

Columbia Group (0-30')

- 0-10 Clay - yellow, sandy (poorly-sorted and poorly-rounded quartz), ferruginous (limonitic), some plant material.
- 10-20 Clay - red, very sandy, dominantly red, but variegated, sand very fine to very coarse grained, poorly sorted, angular to subangular, small amount granules, quartz weak, irregular shape, has highly weathered aspect, abundant coarse muscovite, carbonaceous flecks, epidote, tourmaline, small amounts plant material.
- 20-30 Clay - yellow, very sandy, clay essentially yellow, ferruginous (limonitic), sand poorly sorted, subangular, small amount of small, poorly-rounded gravel, quartz weak, irregular, has highly weathered aspect, abundant muscovite, arkosic (abundant, highly-decomposed microcline), moderate amount of earthy iron oxides grains, trace of epidote, trace of plant material.

Chesapeake Group (30-183')

- 30-40 Sand - orangeish yellow, very argillaceous, sand very fine to very coarse grained, poorly sorted, subangular to subrounded, moderate amount small, subangular gravel, clay essentially orangeish brown, but somewhat variegated, moderate amount muscovite, arkosic (abundant, highly decomposed, white and pink feldspar), ferruginous, trace of epidote, trace of carbonaceous material.
- 40-50 Clay - bluish-gray, slightly silty and sandy, minor muscovite, limonite, carbonaceous flecks.
- 50-60 Clay - greenish-gray, sandy, considerable amount of glauconitic clay, and a few glauconite pellets, trace of tourmaline, very fossiliferous, small amount of coarse shell material, varied fossil assemblage includes pelecypods, echinoid spines, foraminifera, ostracods, gastropods, oysters, worm borings, scaphopods, corals, some phosphatic shell material.

- 60-70 Clay - brown, very coherent, sandy, clay predominantly reddish-brown but pale green clay abundant, sand coarse to very coarse grained and subangular, small amount of small, subangular to subrounded gravel.
- 70-80 Clay - brown and green, very coherent, sandy, sand coarse to very coarse grained, subangular to subrounded, moderate amount small gravel, moderately arkosic (feldspar is gray and white orthoclase, fresh, and slightly more rounded than the quartz), ferruginous.
- 80-90 Clay - greenish-gray, coherent, moderately sandy.
- 90-100 Sand - gray, argillaceous, moderate amount small gravel (up to 5 mm), sand very fine to very coarse grained, poorly sorted, angular to subangular, slightly arkosic, slightly glauconitic (most of glauconite occurs as clay binder for groups of sand grains), small amounts of garnet, muscovite, and limonitic clay, and phosphate, very abundant abraded shell fragments (pelecypods, colonial corals, echinoid spines).
- 100-110 Sand - gray, medium to very coarse grained, fairly well sorted, angular to subangular, very slightly argillaceous, small amount small gravel (up to 10 mm), arkosic, (fresh, gray feldspar, better rounded than quartz), some orange quartz, small amounts of glauconitic clay, phosphate (nodules and plates), muscovite, and garnet, trace of copper-iron sulfide minerals, small amount abraded shell material.
- 110-120 As above.
- 120-130 Sand - gray, medium to very coarse grained, fairly well sorted, angular to subangular, moderately argillaceous, small amount small gravel, arkosic (fresh, gray feldspar, better rounded than quartz), some orange quartz, small amounts of muscovite and garnet.
- 130-140 As above.
- 140-150 Sand - gray, coarse to very coarse grained, fairly well sorted, angular to subrounded, slightly argillaceous, moderate amount small, subangular gravel, arkosic (fresh, gray feldspar), small amounts muscovite and garnet.

150-160 No sample.

160-170 Sand - gray, medium to very coarse grained, rather poorly sorted, angular to subangular, slightly silty and argillaceous, small amount subangular granules and very small pebbles, slightly arkosic, small amounts of glauconite (clay and scattered pellets), phosphate, muscovite, and garnet, very abundant, abraded, shell fragments (pelecypods and echinoid spines recognized).

170-183 Sand - gray, with pinkish cast, fine to very coarse grained, poorly sorted, angular to subangular, slightly silty and argillaceous, abundant fine grained, purplish red, subangular rock fragment and dark gray to black, fine grained rock fragments, small amounts feldspar muscovite and garnet.

GEOLOGIC SUMMARY

	<u>ROCK UNIT</u>	<u>TIME ROCK UNIT</u>
0-30	Columbia group	Quaternary
30-183	Chesapeake group	Miocene

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Robert H. Teifke, Geologist
December 16, 1964

- 150-160 No sample.
- 160-170 Sand - gray, medium to very coarse grained, rather poorly sorted, angular to subangular, slightly silty and argillaceous, small amount subangular granules and very small pebbles, slightly arkosic, small amounts of glauconite (clay and scattered pellets), phosphate, muscovite, and garnet, very abundant, abraded, shell fragments (pelecypods and echinoid spines recognized).
- 170-183 Sand - gray, with pinkish cast, fine to very coarse grained, poorly sorted, angular to subangular, slightly silty and argillaceous, abundant fine grained, purplish red, subangular rock fragment and dark gray to black, fine grained rock fragments, small amounts feldspar muscovite and garnet. 174

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	<u>ROCK UNIT</u>	<u>TIME ROCK UNIT</u>
0-30	Columbia group	Quaternary
30-183	Chesapeake group	Miocene

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