

OWNER: Mitchell Water Supply ,
(South Plains Sub., Well # 2)
DRILLER: Mitchell's Well & Pump Co.
COUNTY: Prince George (Petersburg)

VDMR: 2240
WWCR: 167
TOTAL DEPTH: 156'

GEOLOGIC LOG

Depth in
feet

COLUMBIA GROUP (0-30')

- 0-10 Clay - yellow, sandy; sand is fine-grained; well-sorted, quartzose
- 10-20 Sand - binder of orange-brown and light-gray clay; fine- to coarse-grained, poorly sorted; slightly feldspathic; trace of muscovite
- 20-30 Sand - white, slightly clayey; fine- to medium-grained, fairly well-sorted, angular; slightly feldspathic; green epidote relatively abundant; small amounts of muscovite, hornblende, and tourmaline

YORKTOWN FORMATION (30-80')

- 30-40 Clay - gray, slightly sandy; sand is fine-grained, well-sorted, angular, quartzose
- 40-50 Shell and Sand - abundant matrix of gray clay; 65 percent small pelecypod shell fragments; 35 percent fine- to coarse-grained, poorly sorted, angular to subangular, clear quartz sand; minor amounts of epidote and magnetite; a few foraminifers (miliolids prominent)
- 50-60 Sand and Shell - abundant matrix of gray clay; 35 percent pelecypod and gastropod shells and shell fragments; 65 percent medium- to very fine-grained, moderately sorted sand; clear and greenish quartz, with traces of magnetite, muscovite, hornblende, and glauconite
- 60-70 Shell - abundant matrix of moderately sandy gray clay; coarse pelecypod shells and shell fragments, with a few gastropods, worm tubes and echinoid spines; traces of glauconite and muscovite
- 70-80 Sand and Shell - gray, slightly clayey; 35 percent coarse pelecypod shell debris; 65 percent fine- to medium-grained, well-sorted, angular to subangular, clear quartz sand; traces of magnetite, phosphorite, hornblende, epidote, and garnet

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CALVERT FORMATION: (80-120')

- 80-90 Sand - greenish-gray, slightly clayey, trace of shell; fine- to medium-grained, fairly well-sorted, angular to subangular; clear and pale green quartz, with 3 to 5 percent small fragments of phosphorite, and traces of glauconite, epidote, and garnet
- 90-100 " "
- 100-110 Clay - gray, slightly sandy, a few iron-stained shell fragments, echinoid spines, and plant fragments; sand is fine-grained, well-sorted, angular; traces of glauconite, magnetite, muscovite, and phosphorite
- 110-120 Clay - gray, slightly sandy, a few shell fragments, plant fragments, small quartz pebbles, and phosphate nodules; diatomaceous; sand is fine-grained, well-sorted, angular; traces of glauconite and muscovite; a very few foraminifers

MATTAPONI FORMATION (120-130')

- 120-130 Sand - abundant matrix of dark greenish-gray clay; fine-grained, well-sorted, angular; clear and pale green quartz, with 5 to 10 percent fine- to medium-grained dark green glauconite; traces of phosphorite and muscovite

PATUXENT FORMATION (130-156')

- 130-135 Gravel - clean, 5 percent sand; angular fragments of quartz, various rock types, and feldspar, 2-10 mm in diameter; minor amount of garnet
- 135-145 Sand and Gravel - clear; 25 percent fine (2-10 mm) quartzo-feldspathic gravel; 75 percent coarse- to very coarse-grained, subrounded, feldspathic sand; minor amount of chert; trace of garnet; limited pyrite cementation
- 145-156 " 15 percent gravel

GEOLOGIC SUMMARY

	<u>Rock Unit</u>	<u>Age</u>
0-30'	Columbia Group	Pleistocene
30-80'	Yorktown Formation	Miocene
80-120'	Calvert Formation	Miocene
120-130'	Mattaponi Formation	Paleocene - Late Cretaceous
130-156'	Patuxent Formation	Early Cretaceous

Robert H. Teifke
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Virginia Division of Mineral Resources
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