

OWNER: Easthampton Rubber Thread Co., Well #8
DRILLER: Sydnor Pump and Well Co., Inc.
COUNTY: Patrick (Stuart)

VDMR #1352
WWCR #84
TOTAL DEPTH: 340'

GEOLOGIC LOG

Overburden (0-26')

- 0-4 Residual Gneiss — medium-orange-brown, medium-sand to coarse-pebble-size fragments of quartz, feldspar and fine-grained biotite gneiss; some of the pebbles show rounding; the sand is angular, micaceous and iron stained.
- 4-10 As above — less iron stain, more pebbles; minor hornblende gneiss.
- 10-20 As above.
- 20-26 As above — less sand; drill cuttings more angular, this probably indicates that larger pebbles, gravel or boulders were present; fragments of granitic vein material and saprolitic biotite gneiss are present.

Lynchburg Formation (26-340')

- 26-32 Saprolitic Biotite Gneiss — medium-light-brownish-gray, medium-grained; quartz, biotite, muscovite, feldspar, minor staurolite, garnet, and hornblende.
- 32-34 As above — no staurolite or garnet.
- 34-40 Gneiss — medium-light-gray, medium-grained, foliated; quartz, alkali-feldspar, andesine, biotite, muscovite; minor epidote, hornblende; trace calcite; slight iron oxide stain.
- 40-50 As above.
- 50-60 As above — dark bands of biotite with corrugated foliation, white bands of quartz and feldspar; less iron stain.
- 60-70 As above — euhedral pyrite, drill bit fragments with associated iron oxides.
- 70-80 As above — more feldspar; no drill bit fragments; less pyrite.
- 80-90 As above — drill bit fragments and associated iron oxide.
- 90-100 Hornblende Gneiss — medium-gray; medium-coarse-grained; alkali-feldspar hornblende, quartz, biotite, muscovite, epidote, minor zircon.

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- 100-110 Gneiss — light-gray, coarse-grained, alkali-feldspar quartz, biotite, muscovite, hornblende, trace pyrite; minor drill bit fragments and associated iron oxide.
- 110-120 Feldspar Gneiss — almost white, very coarse-grained; microcline, and quartz, minor biotite, hornblende, muscovite; trace calcite epidote and magnetite.
- 120-130 As above — more biotite.
- 130-140 Gneiss — light-gray, medium-grained, alkali-feldspar, quartz, biotite, muscovite, minor epidote.
- 140-146 As above — slightly darker.
- 146-148 Gneiss — medium-light-bluish-gray, medium-grained; gray and blue quartz, alkali-feldspar, biotite, muscovite, minor apatite and epidote.
- 148-158 As above — less blue quartz; trace calcite.
- 158-163 As above — with a white quartz-feldspar band or vein.
- 163-173 As above — less white quartz-feldspar rock.
- 173-183 Gneiss — light-gray to dark-gray, banded, fine-grained; alkali-feldspar, quartz, biotite, muscovite; minor hornblende and epidote.
- 183-193 As above.
- 193-203 As above — minor porphyroblasts of feldspar.
- 203-210 As above — minor pyrite and drill bit fragments.
- 210-220 Gneiss — light-gray, medium-grained, quartz, feldspar, biotite, muscovite, chlorite; minor apatite and epidote; minor drill bit fragments and associated iron oxide.
- 220-230 As above.
- 230-240 Feldspar Gneiss — almost white, very coarse-grained; alkali-feldspar and quartz; minor chlorite, calcite, sericite, biotite; minor drill bit fragments and associated iron stain.
- 240-250 Gneiss — light-gray, fine- to medium-grained; quartz, feldspar, biotite, minor chlorite.
- 250-260 As above — slightly darker.
- 260-270 As above.

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- 270-280 Gneiss — medium-gray, fine- to medium-grained, quartz, feldspar, biotite, minor chlorite, minor amphibole.
- 280-290 Hornblende Gneiss — white and medium-gray to black, very very- coarse- to medium-grained; quartz, microcline, oligoclase, hornblende, biotite, and muscovite.
- 290-300 Gneiss — light-gray to medium-gray, medium- to coarse-grained; quartz, feldspar, biotite, muscovite; minor hornblende gneiss as above.
- 300-310 Hornblende Gneiss — medium-dark-gray, coarse-grained; hornblende, feldspar, quartz, biotite, minor apatite.
- 310-320 As above — finer-grained, less hornblende, more biotite.
- 320-330 Gneiss — medium-light-gray, medium-grained; feldspar, quartz, biotite, minor hornblende, muscovite, and epidote.
- 330-340 As above — minor drill bit fragments and associated iron oxide.

GEOLOGIC SUMMARY

	<u>ROCK UNIT</u>	<u>TIME ROCK UNIT</u>
0-26	Overburden	Recent
26-340	Lynchburg Formation (Hornblende Gneiss at 90'-100', 280-292', and 300-315').	Precambrian

Virginia Division of Mineral Resources
Hollis N. Walker, Geologist
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