

OWNER: Division of Mineral Resources
Douthat State Park - Well #1
DRILLER: Sydnor Pump & Well Co., Inc.
COUNTY: Bath (Clifton Forge)

VDMR #1085
WWCR #27
TOTAL DEPTH: 336'

GEOLOGIC LOG

- 0-1 Overburden — light-brown, fine-grained, sandy clay, fragments of dark gray sandy shale.
- 1-5 Overburden — medium-light-brown, coarse- and medium-grained sand; grains from red, green, and white sandstones; angular quartz fragments.

Brallier Formation (5-120')

- 5-10 Shale — medium-greenish-gray and minor light-gray; brown staining, very-fine-grained; minor red sandstone fragments; gray clay.
- 10-15 Shale — medium-blue-gray with brown and green, fine-grained.
- 15-20 As above — no green shale, veins partially filled by quartz crystals.
- 20-25 Shale — medium light-blue-gray, very-fine-grained, with pyrite, pyrrhotite minor mica, trace cassiterite.
- 25-30 As above — no pyrite or pyrrhotite.
- 30-35 As above.
- 35-40 Shale — light-blue-gray, very-fine-grained, some porous layers: very minor fine-grained red sandstone.
- 40-45 Shale — medium-blue-gray, fine-grained, very minor mica.
- 45-50 As above.
- 50-55 As above — medium-gray.
- 55-60 As above — slightly green.
- 60-65 Shale — medium-gray, very-fine-grained; minor silty shale, minor mica.
- 65-70 As above.
- 70-75 As above — minor pyrite.
- 75-80 As above — no pyrite.

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- 80-85 Shale — medium-gray, very-fine-grained; slightly silty.
- 85-90 As above — minor quartz vein.
- 90-95 As above.
- 95-100 As above.
- 100-105 Shale — medium-gray, very-fine-grained, minor mica.
- 105-110 As above — very minor pyrite.
- 110-115 As above — no pyrite.
- 115-120 As above — with vein quartz and ankerite, pyrite, trace of cassiterite.
- Millboro Shale (120-336')
- 120-125 Shale — dark-gray, fine-grained, minor mica, pyrite, and vein quartz.
- 125-130 Shale — medium-gray, very-fine-grained iron stains, minor silty shale.
- 130-135 Shale — dark-gray, fine-grained, minor pyrite, ankerite, and quartz.
- 135-140 As above — no pyrite, minor silty shale.
- 140-145 Shale — medium-dark-gray very-fine-grained, quartz, and calcite veins, minor pyrite; slickensides.
- 145-150 As above — less calcite.
- 150-155 As above.
- 155-160 Shale — dark-gray fine-grained, calcite veins, and minor silty shale; slickensides.
- 160-165 As above — no slickensides.
- 165-170 As above — with very minor pyrite.
- 170-175 As above — with minor dolomite veins, no calcite.
- 175-180 As above — no veins.
- 180-185 Shale — medium-gray, fine-grained, slightly silty, very minor fine-grained buff colored sandstone.

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- 185-190 Shale — medium-gray, fine-grained, slightly silty.
- 190-195 As above.
- 195-200 As above.
- 200-205 Shale — medium- and dark-gray, fine-grained, very minor dolomite, mica, pyrite.
- 205-210 As above — no mica.
- 210-215 As above — with slickensides.
- 215-220 As above — no dolomite; with minor mica.
- 220-225 As above.
- 225-230 Shale — medium-gray to dark-gray, fine-grained, minor silty shale.
- 230-235 As above — with minor dolomite veins, very minor pyrite; slickensides.
- 235-240 As above — no slickensides; minor mica.
- 240-245 Shale — dark-gray, fine-grained, minor silty shales, vein quartz and dolomite; slickensides.
- 245-250 As above — less dolomite.
- 250-255 Shale — medium-blue-gray, fine-grained, very minor dolomite and pyrite; slickensides.
- 255-260 Shale — medium-dark-gray, very-fine-grained, very minor vein dolomite, minor silicified shale.
- 260-265 Shale — dark-gray, fine-grained, minor vein dolomite, very minor mica, quartz, and pyrite; minor slickensides.
- 265-270 As above — minor chlorite; no dolomite or mica.
- 270-275 As above — with minor brown siltstone.
- 275-280 Shale — dark-gray, fine-grained, minor vein quartz and dolomite, minor slickensides.
- 280-285 Shale — medium-gray, fine-grained, very minor dolomite and quartz.

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- 285-290 Shale — dark-gray, fine-grained, minor micaceous silty shale; minor pyrite.
- 290-295 Shale — medium-blue-gray, fine-grained, minor micaceous silty shale, minor quartz vein; slickensides.
- 295-300 Shale — dark-gray, fine-grained, slightly silty; minor dolomite, quartz, and mica.
- 300-305 As above — minor pyrite.
- 305-310 As above — minor chlorite; no pyrite.
- 310-315 As above — very minor pyrite.
- 315-320 Shale — dark-gray, fine-grained, minor dolomite, quartz, and mica.
- 320-325 As above — no dolomite or quartz.
- 325-330 As above — with minor pyrite.
- 330-336 As above — minor dolomite; no pyrite.

GEOLOGIC SUMMARY

	<u>ROCK UNIT</u>	<u>TIME ROCK UNIT</u>
0-5	Overburden	Quaternary
5-120	Brallier Formation	Devonian
120-336	Millboro Shale	Devonian

Virginia Division of Mineral Resources
 Hollis N. Walker, Geologist
 December 21, 1964