

OWNER: Sydnor Hydrodynamics, Inc.
(Holly Ridge #1)
DRILLER: Sydnor Hydrodynamics, Inc.
COUNTY: Hanover (Atlee)

VDMR: 1791
WWCR: 99
TOTAL DEPTH: 632'

GEOLOGIC LOG

Depth in feet

COLUMBIA GROUP (0-50')

- 0- 10 Sand — reddish-brown, moderately silty and clayey; fine-- to very fine-grained, fairly well sorted, angular; slightly micaceous.
- 10- 20 Sand — brownish-red, moderately silty and clayey; fine- to medium-grained, fairly well sorted, angular to sub-angular; clay varigated, but dominantly hematitic.
- 20- 30 Sand — dull-red, slightly clayey; fine- to medium-grained, well sorted, subangular to subrounded; clay varigated, but dominantly hematitic; accessory iron-ore minerals.
- 30- 40 Sand — tan, with reddish cast, slightly to moderately clayey, a few very small pebbles; fine- to very coarse-grained, poorly sorted, angular to subrounded; slightly feldspathic; clay very varigated.
- 40- 50 Sand — yellowish-brown, clean, about 15% granules and very small pebbles, and a few fragments of larger pebbles; medium- to coarse-grained, well sorted (shewed fine), subangular to rounded; slightly feldspathic; accessory magnetite; traces of garnet and kyanite; yellow-stained quartz grains.

CALVERT FORMATION (50-150')

- 50- 60 Sand — gray, silty and clayey; fine.
- 60- 70 " " " "
- 70- 80 " " " trace of shell.
- 80- 90 Sand — gray, very clayey, slightly pebbly; fine; 2-5% shell fragments.
- 90-100 " " " "
- 100-110 " " " "

Yell. Tan quartz

110-120 Clay — gray, sandy; scattered plant fragments; trace of shells and phosphorite; locally limonitic and pyritic.

120-130 "

130-140 "

140-150 "

NANJEMOY FORMATION (150-170')

150-160 Clay — gray and pale-orange, very sandy; trace of glauconite; a few plant fragments and fish teeth.

160-170 "

AQUIA FORMATION (170-230')

170-180 Sand — dark-gray, silty and clayey; fine- to very fine-grained; slightly glauconitic; trace of muscovite; trace of shell fragments.

180-190 "

190-200 "

200-210 "

210-220 Gravel — gray, fine, sand matrix; some glauconite; a few shell fragments and foraminifers (Nodosaria, Rabulus).

220-230 "

PATUXENT FORMATION (230-320')

230-240 Gravel — gray, fine-grained, matrix of very coarse-grained sand; arkosic; slightly glauconitic; trace of shell fragments.

240-250 "

250-260 "

260-270 "

270-280 "

280-290 "

290-300 "

300-310 "

310-320 "

PETERSBURG GRANITE (320-630')

320-330	Granite gneiss — gray, partially weathered; quartz, biotite, muscovite, plagioclase, clay.
330-340	Granite gneiss — gray, pulverized by drill; quartz, biotite, muscovite, plagioclase, clay.
340-350	"
350-360	"
360-370	"
370-380	"
380-390	"
390-400	"
400-410	"
410-420	"
420-430	"
430-440	No sample.
440-450	Granite gneiss — gray, pulverized by drill; quartz, biotite, muscovite, plagioclase, clay.
450-460	"
460-470	"
470-480	"
480-490	"
490-500	"
500-510	"
510-520	"
520-530	Gneiss — gray, fine-grained; quartz, biotite (5-10%), plagioclase, trace of pyrite.

530-540	Biotite gneiss — gray, fine-grained; quartz, biotite (40%), plagioclase.
540-550	" 15% biotite.
550-560	" 30% biotite; accessory garnet and pyrite.
560-570	" "
570-580	" "
580-590	" "
590-600	Pegmatite gneiss — gray; quartz, plagioclase, biotite (coarser, up to 5 mm).
600-610	Gneiss — gray, fine-grained; quartz, biotite, plagioclase.
610-620	No sample.
620-630	Gneiss — gray, fine-grained; quartz, biotite, plagioclase.
630-632	No sample.

GEOLOGIC SUMMARY

	<u>Rock Unit</u>	<u>Age</u>
0- 50	Columbia Group	Pleistocene
50-150	Calvert Formation	Miocene
150-170	Nanjemoy Formation	Eocene
170-230	Aquia Formation	Eocene
230-320	Patuxent Formation	Early Cretaceous
320-630	Petersburg Granite	Late Paleozoic
630-632	No sample	

Virginia Division of Mineral Resources
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