

OWNER: National Park Service
(Richmond National Battlefield Park)
DRILLER: Sydnor Pump & Well Co.
COUNTY: Hanover (Cold Harbor)

VDMR # 652
WWCR # 94
DEPTH: 280

SAMPLE EXAMINATION

0-5 Sand-quartz, medium to fine grained, subangular, trace blue quartz and apatite nodules, (Apatite determination by x-ray analysis)

5-10 Sand-as above with increase in medium grained sand

10-15 Sand-quartz, medium to coarse grained, subangular, 1% blue quartz sand

15-20 Sand-quartz, fine to medium grained, subangular, 1% blue quartz sand

20-25 Sand-as above, fine to coarse grained

25-30 As above

30-35 Sand-quartz, fine to coarse grained, subangular, 1% blue quartz sand, trace orthoclase feldspar

35-40 Sand-same as above with small increase in orthoclase feldspar

40-45 Sand-quartz, very fine to fine grained, subangular, micaceous and argillaceous

45-50 Sand-quartz, very fine grained, gray, micaceous, subangular, trace blue quartz

50-55 Sand-quartz, fine to coarse grained, gray, micaceous, subangular, trace of blue quartz and apatite nodules

55-60 Sand-quartz, fine to very coarse grained, gray, trace blue quartz and apatite nodules

60-65 Sand-quartz, fine grained, gray and green, glauconitic, calcareous, 5% shell fragments.

65-70 Sand-quartz, very fine grained, gray, calcareous, trace shell fragments

70-75 As above with trace mica

75-80 Missing

80-85 Sand, quartz, very fine grained, gray, calcareous, subangular, 2% shell fragments

- 85-90 Sand-quartz, very fine grained, gray, calcareous, micaceous, subangular, 1% shell fragments, trace apatite nodules
- 90-95 As above with increase in apatite
- 95-100 Mudstone-silty, gray, glauconitic, sericitic
- 100-105 Sand-quartz, very fine grained, gray, argillaceous, trace apatite
- 105-110 Sand-quartz, very fine to coarse grained, gray, 1% apatite
- 110-115 Sand-quartz, fine to coarse grained, gray-black, calcareous, micaceous, glauconitic, 3% apatite, 1% shell fragments
- 115-120 Sand-quartz, 5% apatite, fine to medium grained, white to gray, glauconitic, calcareous, micaceous, shell fragments
- 120-125 Silt-quartz, very fine grained, gray, highly calcareous, sericitic
- 125-130 Silt-quartz & apatite, very fine grained, gray, sericitic, calcareous, trace shell fragments
- 130-135 Sand-quartz and apatite; fine to medium grained, gray, calcareous, highly glauconitic, shell fragments
- 135-140 Sand-quartz, 5% apatite, fine to medium grained, gray to black, highly glauconitic, subangular, calcareous, sericitic shell fragments
- 140-145 As above
- 145-150 Silt-quartz and apatite, very fine grained, gray, calcareous, sericitic, shell fragments, ostracods and foraminifers
- 150-155 Sand-quartz and apatite, fine to coarse grained, gray, subangular, calcareous, sericitic, ostracods, shell fragments.
- 155-160 Silt-quartz and some apatite, fine to very fine grained, gray, calcareous, sericitic, shell fragments
- 160-165 Silt-feldspar and quartz, fine to very fine grained, flesh colored, sericitic
- 165-170 Silt-quartz and apatite, very fine to medium grained, gray, sericitic, calcareous, shell fragments

- 170-175 As above
- 175-180 As above
- 180-185 As above
- 185-190 As above
- 190-195 Sand-quartz and apatite, fine to medium grained, subangular, gray, 30% shell fragments
- 195-200 Sand-quartz and apatite, fine to coarse grained, subangular to rounded, gray, calcareous, ostracods, one small shark's tooth
- 200-205 Sand-quartz, fine to pea gravel size grains, subangular to rounded, apatite nodules
- 205-210 As above
- 210-215 As above with trace chert and glauconite
- 215-220 Sand-quartz, fine to pea gravel size grains, subangular to rounded, trace apatite nodules
- 220-225 As above
- 225-230 As above
- 230-235 As above
- 235-240 Sand-quartz, fine to very coarse grained, subangular to rounded, trace apatite nodules
- 240-245 Same as above with trace glauconite
- 245-250 Sand-quartz, fine to very coarse grained, subangular to rounded, trace of glauconite and apatite
- 250-255 As above
- 255-260 As above with trace of weathered feldspathic material
- 260-265 Sand-quartz, fine to very coarse grained, subangular to rounded, trace of glauconite and apatite
- 265-270 As above
- 270-275 As above
- 275-280 Sand-quartz, medium to very coarse grained, subangular to rounded, glauconitic, trace apatite and orthoclase

GEOLOGIC SUMMARY

<u>DEPTH</u>	<u>PERIOD</u>	<u>GROUP</u>	<u>FORMATION</u>
?-60	Miocene	Chesapeake	Calvert
60-200	Eocene	Pamunkey	(Nanjemoy
200-280	Lower cretaceous	Potomac	(Aquia Patuxent

VIRGINIA DIVISION OF MINERAL RESOURCES
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