INTERVAL SHEET

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VDMR	WELL	NO.	611	

Total Depth ____ 200'

Sample Interval: from 5 to 200

PROP: Richmond National Battlefield Park (Watt House) COMP: Sydnor

COUNTY: Hanover

Oil____Gas___Water_x_Exploratory____

Cuttings_x_Core___Other____

From-To	From-To	From-To	WASHED SAMPLES From-To	From-To
-	5 - 10 - 15 - 20 - 25 -	155 - 160 - 165 - 170 - 175 -	Complete-set of sampled intervals - - -	
	30 - 35 - 40 - 45 - 50 -	180 - 185 - 190 - 195 - 200 -	- - - -	
-	55 - 60 - 65 - 70 - 75 -	-		
-	80 - 85 - 90 - 95 - 100 -	-	-	
-	105 - 110 - 115 - 120 - 125 -	-		
	130 - 135 - 140 - 145 - 150 -			

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Owner:Richmond National Battlefield Park ServiceVDMR #611Driller:Sydnor Pump & Well Co.WWCR #30County:HanoverDepth 200'

SAMPLE EXAMINATION (washed)

- 5 10 Sand, fine-medium, sub-rounded-rounded, white-clear, with some tan brown clay.
- 10 15 Sand, medium, sub-rounded, round, white-clear.
- 15 20 Sand, as above with some tan clay.
- 20 25 Sand, as above, some very coarse rounded grains.
- 25 30 Sand, poorly sorted, fine-very coarse, rounded-angular, white-clear-gray-yellow, some brown clay.
- 30 35 Sandstone, poorly consolidated, fine grained, micaceous, white-dark gray, some dark gray-black mafic material.
- 35 40 Sand, fine grained as above.

40 - 45 Sand as above with traces of gray feldspar.

- 45 50 Sand, very poorly sorted, fine-pebble size angular-rounded grains, white-green-gray, traces of gray feldspar, mica, black mafic material, dolomite concretion with pyrite specks.
- 50 55 Sand as above.
- 55 60 Sand as above.
- 60 65 Sand as above.
- 65 70 Sand as above.
- 70 75 Sand, fine grained-coarse, clear-light gray with fragments of biotite gneiss and some light green clay material.
- 75 80 Sand with biotite gneiss fragments as above.
- 80 85 Sand as above.
- 85 90 Sand as above.
- 90 95 Sand as above.

95 - 100	Sand, medium-coarse, very glauconitic, white-clear grains, sub-angular, trace of fossil fragments and con- siderable black, vitreous dolomite, conchoidal fracturing, some silvery phyllite fragments. (TOP OF PAMUNKEY GROUP)
100 - 105	Greensand, medium grained, considerable fossil fragments, and mica flakes.
105 - 110	Greensand and fossil fragments, increase in mica content.
110 - 115	Greensand as above with some biotite gneiss and phyllite fragments.
115 - 120	Greensand, with considerable amounts of fossil fragments, sharks teeth, and black, concretionary, vitreous dolomitic material, traces of gneiss and phyllite.
120 - 125	Greensand with fossil fragments, coarse quartz grains, and black dolomitic material - about 90% glauconite.
125 - 130	Greensand, with fossil fragments and gray siltstone, mica.
130 - 135	Greensand as above.
135 - 140	Greensand as above.
140 - 145	Greensand as above.
1 <mark>45 -</mark> 150	Clay, pink, with glauconite and quartz grains imbedded in it.
150 - 155	Greensand, fossil fragments, coarse quartz grains.
155 - 160	Greensand as above.
160 - 165	Clay, pink, with quartz grains and glauconite imbedded in it.
165 - 170	Greensand, fine grained, micaceous, some fossil fragments, with traces of buff silty clay.
170 - 175	Greensand as above.
175 - 180	Greensand as above with considerable fossil fragments.
180 - 185	Greensand as above with some silty gray clay.

185 - 190	Sand, medium-very coarse grained, sub-angular, white-
	clear, arkosic, traces of fossils and glauconite (TOP OF
	POTOMAC GROUP) - probably a good water sand.

- 190 195 Sand, coarse-very coarse, white-buff-yellow, sub-angular, arkosic, probably a good water sand.
- 195 200 Sand as above, with uphole cavings.
- 200 TD Sand, arkosic as above, many uphole cavings of fossil fragments and glauconite etc.

GEOLOGIC SUMMARY

Chesapeake Gp - surf Pamunkey Gp - 95 feet Potomac Gp - 185 feet

> VIRGINIA DIVISION OF MINERAL RESOURCES Laurence H. Gardner II, Geologist December 28, 1961