INTERVAL SHEET

Page 1 of 1 VDMR Well No: 2022

Date rec'd: 10-16-67 Sample Interval: from 0 to: 65

PROP: N & W RR. Well # 218 Number of samples: 7

COMP: Prince George Total Depth: 65

COUNTY: Oil or Gas: Water: Exploratory: X

From-To	From-To	From-To	From-To
0 - 10 10 - 20 20 - 30 30 - 40 40 - 50	- · · · · · · · · · · · · · · · · · · ·	-	- - - -
50 _ 60 65 _ - -		- - - -	- - - -
- - -	- - -	- - -	- - -
- - - -	- - - -	- - - -	- - - -
- - -	- - - -	- - - -	
- - -	- - -	- - - -	- - -
_			

bulled 10/66 Continental

CONFIDENTIAL

PG-T-9 NW 218

VDHR 2022

INTERVAL SHEET

L/E/G Geologic Log V Strip Log ELEV: 92' Page of 1

PROP:

VDMR Well No:

Date rec'd: 7/7/67

SW city limit Hope -

well at x NWRR

and Rte. 648. COMP: (HOPEWELL SHEET)

Sample Interval: from 0 to 65

Number of samples: /

Total Depth: 65 '

er: Exploratory:

From-To

	/	01 01000		
COUNTY: /	Prince Georg	e	Oil or Ga	as: Water
	UNW			
	From-To	From-To	From-	-To
92' -> ==	~			
sandy clay	0 - 10		-	
= to VC yell sud	10 - 20	-	-	
O gray cloy 3 94P.	:20 - 30	W/ 73 (PG-T-8)	-	
FS WS Q= glouro +	30 - 40	W/90-100 (PG-T-7)	-	
in black, locally yell al.)	40 - 50	_	-	
gray clay w/ ostra-	1: flood of astracod	s (unprecedented)		
M to VC orkosic	* G1	Camprecedent ea)		
sand str. clay	50 - 60		_	
V. avKosic Cto VC 3000	. 65-	_	_	
sand a gravel	_	-	-	
	-	-	-	
	-	-	-	
			-	
	-	-	_	
	-		-	
	-	-	_	
		_	_	
			-	
			_	

COMPIDENTIAL

Well: N & W RR. Well # 218

Property: Norfolk and Western Railway Driller: Norfolk and Western Railway

Location: Hopewell, at intersection of NWRR and Rte. 648;

77° 19' 00" W, 37° 16' 30" N

Elevation: 92 feet Total Depth: 65 feet

Started drilling: October, 1966 Completed drilling: October, 1966

Sample description by: R.H. Teifke, Virginia Division of Mineral

Resources, September, 1968

GEOLOGIC LOG *

Depth in feet

COLUMBIA GROUP (0-20')

- 0-10 Clay laminated orange-brown and light-gray, silty, slightly sandy; sand is fine-grained, well-sorted, angular; clear quartz, with traces of green epidote, decomposed glauconite, muscovite, and magnetite
- 10-20 Sand yellowish-brown, very slightly sandy, fine-to very coarse-grained, poorly sorted, angular to subangular; clear and yellow-stained quartz, with some feldspar in the coarser grades

MATTAPONI FORMATION (20-50)

20-30 Sand - binder of medium-gray clay, mottled orange-brown, a few small (15 mm), rounded pebbles of quartz and quartzite; very fine-grained, very well-sorted; abundant selenite and anhydrite pseudomorphs after selenite; small amount of very fine-to medium-grained glauconite

VDMR Well No. 2022

30-40 Sand — binder of very dark-gray clay, locally pale-yellow; fine- to very fine-grained, well-sorted; 50% clear angular quartz, and 50% dark-green glauconite; glauconite is slightly coarser than quartz; minor gypsum; trace of muscovite

Clay and sand — light-gray, dark-gray, and tan; variably calcareous and coherent; non-clay fraction (an estimated 50% of the sample) consists of a sand-size aggregate of shell fragments, fine-grained quartz and glauconite, abundant foraminifers, abundant ostracods; minor amounts of gypsum, garnet, and muscovite

PATUXENT FORMATION (50-65')

50-60 Sand — gray, slightly clayey, a few granules and small pebbles of quartz and feldspar; medium—to very coarse-grained, fairly well-sorted, subangular to subrounded; slightly glauconitic in finest grade; very feldspathic in coarser grades; minor garnet and muscovite

Sand and gravel — gray, trace of clay; 50% subrounded to rounded granule gravel, and a few pebbles up to 10 mm; 50% coarse—to very coarse-grained, fairly well-sorted, subangular to rounded sand; both fractions contain abundant, fresh to slightly decomposed alkalicfeldspar, small amount of fine—to medium-grained glauconite; traces of garnet and muscovite

GEOLOGIC SUMMARY

	Rock Unit	Age
0-20	Columbia Group	Pleistocene
20-50	Mattaponi Formation	Paleocene - Late Cretaceous
50-65	Patuxent Formation	Early Cretaceous

* The use of the lithologic term, "clay" includes all size ranges of particles less than 1/32 mm.

R.H. Terfae 3/3/12

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