#### INTERVAL SHEET

Page 1 of 1 VDMR Well No: 2049

Sample Interval: from 0 to: 220

Date rec'd:

Number of samples: 22

PROP: C-168

COMP:

Total Depth: 220

COUNTY: Southampton

Oil or Gas: Water: Exploratory: X

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## CONFIDENTIAL

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#### INTERVAL SHEET

Page / of /

VDMR Well No: WELL NO. 2049

Date rec'd: 7/19/67

Sample Interval: from o to 220

PROP:

at W. city limit

Number of samples: 22

COMP:

R.R.

Total Depth: 220 '

COLDIENT		(HOLLAND (15") SHE		
COUNTY:	Southam	pton	Oil or Gas: Water:	Exploratory: <
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Well: C-168

Property: Seaborad Air Line Railway Driller: Norfolk and Western Railway

Location: Southampton at western city limit of Franklin, on railroad

right-of-way; 76°56'00" W, 36°40'00"N

Elevation: 30 feet Total Depth: 220 feet

Started drilling: June, 1966 Completed drilling: June, 1966

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

Resources, August, 1968

## GEOLOGIC LOG \*

## Depth in feet

#### COLUMBIA GROUP (0-20')

0 - 10

Sand and gravel — abundant matrix of tan and lightgray clays; 50% fine- to very fine-grained,
very well-sorted, angular sand, consisting
of clear and yellowish quartz, with subordinate feldspar and minor amounts of glauconite and muscovite; 30% fine (5-15 mm),
quartzo-feldspathic gravel, including numerous
composite grains (rock fragments)

10-20

Clay — tan and light-gray, sandy, a few small (5-15 mm) pebbles; sand is fine- to very fine-grained, very well-sorted, angular; slightly feldspathic; very slightly micaceous and glauconitic; a few diatoms

#### YORKTOWN FORMATION (20-80')

20-30

Clay — light-gray, locally orange-brown, slightly to moderately sandy; sand is fine- to very fine-grained, well-sorted, angular; slightly feldspathic; abundant selenite; traces of muscovite and glauconite; a few diatoms and foraminifers

30-40	shell fra coarse- fine), an moderat very sli	- light-gray, sandy; 20% pelecypod agments; sand fraction is fine- to grained, moderately sorted (skewed ngular to subangular; clear quartz, tely feldspathic in coarsest grade; ghtly glauconitic; traces of phosphorite, ite, and garnet
40-50	greenisi shell fra well sor fresh gl	moderately abundant matrix of dark h-gray clay; 25% pelecypod and Turritella agments; 65% fine- to medium-grained, eted, angular quartz sand, with 2-3% auconite and traces of muscovite and phosphorite; a few bone fragments
50-60	tt	sand is fine-grained, very well- sorted
60-70	ŧŧ	sand is fine-grained, very well- sorted
70-80	gray cla fine- to sand; sa	wery abundant matrix of greenish- ny; 25% pelecypod shell fragments; 60% very fine-grained, very well-sorted and is 75% angular quartz, 25% fresh ite; a few phosphatic bone fragments and ifers
MATTAPONI FO	RMATION (80-1	30')
80-90	few she grained to medi chthono is local	green, slightly to moderately clayey, a ll fragments; 55% fine- to very fine-, angular, clear quartz; 35% very fine-um-grained, dark- to light-green, auto-us glauconite; well-sorted; clay matrix ly dolomitic; a few phosphatic bone fragforaminifers and ostracods
90-100	(dolomi sandsto fine- to dark- to 35% cle	matrix of green (glauconitic) and tan tic) clays, locally a calcitic or dolomitic ne, a very few pelecypod shell fragments; coarse-grained, moderately sorted; 65% o light-green, autochthonous glauconite, ar, angular quartz; a few bone fragments ite concretions, a very few foraminifers racods

100-110

Sand — sparse matrix of green (glauconitic) and tan (dolomitic) clays, locally a calcitic or dolomitic sandstone, a very few pelecypod shell fragments; fine- to coarse-grained, moderately sorted; 65% dark- to light-green, autochthonous glauconite, 20% clear, angular quartz; a few bone fragments and pyrite concretions, a very few foraminifers and ostracods

110-120

11

120-130

Sand — gray, slightly clayey, a few shell fragments and fragments of calcitic, glauconitic sandstone; fine- to coarse-grained, moderately sorted; 40% clear, angular quartz, 35% darkgreen glauconite, 5% fresh feldspar (concentrated in coarse grade); minor phosphorite (mostly bone fragments) and muscovite; trace of garnet; a few foraminifers and ostracods

# TRANSITIONAL BEDS [TUSCALOOSA FORMATION] (130-220')

130-140

Sand — gray, very slightly clayey, 10% quartzofeldspathic granule gravel, 5% fragments of
calcitic, glauconitic sandstone; sand is mediumto coarse-grained, moderately sorted, angular
to subrounded, and consists of fresh and
weathered feldspar (20%), dark-green glauconite
(10%), and quartz (55%); muscovite common,
garnet relatively abundant; a few bone fragments
and foraminifers

140-150

Sand and gravel — gray, slightly clayey, 10% fragments of calcitic, glauconite-bearing sandstone, a very few shell fragments; 20% quartzo-feldspathic granule gravel; 70% fine- to very coarse-grained, poorly sorted, variably rounded sand; moderately feldspathic; slightly glauconitic; garnet relatively abundant; minor muscovite and phosphorite

150-160

brown, clayey; sand is fine, well-sorted, slightly feldspathic

160-170	sorted, of calcit quartzo to very rounded glauconi	- brown, clayey; sand is fine, well-slightly feldspathic; 10% fragments ic, glauconite-bearing sandstone, 10%-feldspathic granule gravel; 60% fine-coarse-grained, poorly sorted, variably sand; moderately feldspathic; slightly itic; garnet relatively abundant; minor ite and phosphorite		
170-180	silty (si a few fr	y — grayish-brown, fairly compact, moderately silty (silt is micaceous and slightly glauconitic); a few fragments of shell and carbonaceous material		
180-190	Ħ	silty		
190-200	<b>11</b>	very silty and sandy (very fine- grained sand)		
200-210	11	<b>f</b> 1		
210-220	**	***		

## GEOLOGIC SUMMARY

	Rock Unit	Age
0-20	Columbi a Group	Pleistocene
20-80 <sup>1</sup>	Yorktown Formation	<b>Late</b> Miocene
80-130'	Mattaponi Formation	Paleocene-Late Crefescous
130-2201	Tuecaloosa Formation Transitional beds	Late Cretaceous

\*The use of the lithologic term, "clay" includes all size ranges of particles less than 1/16 mm.

R. H. Tulle 3/1/12

VDMR Well No. 2049 County: Southampton

Well: C-168

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Driller: Norfolk and Western Railway

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Depth in feet

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10-20

Clay — tan and light-gray, sandy, a few small (5-15 mm) pebbles; sand is fine- to very fine-grained, very well-sorted, angular; slightly feldspathic; very slightly micaceous and glauconitic; a few diatoms

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40-50	Sand and shell — moderately abundant matrix of dark greenish-gray clay; 25% pelecypod and <u>Turritella</u> shell fragments; 65% fine- to medium-grained, well sorted, angular quartz sand, with 2-3% fresh glauconite and traces of muscovite and pelleted phosphorite; a few bone fragments
50-60	sand is fine-grained, very well-sorted
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MATTAPONI FO	DRMATION (80-130')
80-90	Sand — grass-green, slightly to moderately clayey, a few shell fragments; 55% fine- to very fine- grained, angular, clear quartz; 35% very fine- to medium-grained, dark- to light-green, auto- chthonous glauconite; well-sorted; clay matrix is locally dolomitic; a few phosphatic bone fragments, foraminifers and ostracods
90-100	Sand — sparse matrix of green (glauconitic) and tan (dolomitic) clays, locally a calcitic or dolomitic

and ostracods

sandstone, a very few pelecypod shell fragments; fine- to coarse-grained, moderately sorted; 65% dark- to light-green, autochthonous glauconite, 35% clear, angular quartz; a few bone fragments and pyrite concretions, a very few foraminifers

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