

INTERVAL SHEET

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VDMR Well No: 2013

Date rec'd: 10-10-67

Sample Interval: from 0 to:230

PROP: N & W RR. Well # 211

Number of samples: 20

COMP:

Total Depth: 230

COUNTY: Southampton

Oil or Gas: Water: Exploratory: X

From-To	From-To	From-To	From-To
0- 10	-	-	-
10- 20	-	-	-
-	-	-	-
30- 40	-	-	-
40- 50	-	-	-
50- 60	-	-	-
60- 70	-	-	-
70- 80	-	-	-
80- 90	-	-	-
90- 100	-	-	-
100- 110	-	-	-
110- 120	-	-	-
120- 130	-	-	-
-	-	-	-
140- 150	-	-	-
150- 160	-	-	-
-	-	-	-
170- 180	-	-	-
180- 190	-	-	-
190- 200	-	-	-
200- 210	-	-	-
210- 220	-	-	-
220- 230	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-

x - no slides
 All intervals have both washed and unwashed samples

Dilled 10/66
 Continental
 ELEV.: 80'

CONFIDENTIAL

50-C-8

NW 211

VDMR 2013

9
 Geol. Log ✓
 Strip Log ✓

INTERVAL SHEET

Page 1 of 1

VDMR Well No:

Date rec'd: 7/18/67

Sample Interval: from 0 to 230

PROP:  NWRR at Ivor.

Number of samples: 20 + 1 section core

COMP:  (IVOR SHEET)

Total Depth: 230

COUNTY: Southampton

Oil or Gas: Water: Exploratory: ✓

LNW	From-To	CORE From-To	From-To	From-To
	0 - 10	170 - 174	-	R-3426
20 BS	10 - 20	-	-	-
30 BS	30 - 40	-	-	-
	40 - 50	-	-	-
	50 - 60	-	-	-
	60 - 70	-	-	-
	70 - 80	-	-	-
	80 - 90	-	-	-
	90 - 100	-	-	-
	100 - 110	-	-	-
	110 - 120	-	-	-
	120 - 130	-	-	-
	140 - 150	-	-	-
156 BS	150 - 160	-	-	-
160 BS	170 - 174	core only	R-3426	-
170 BS	170 - 180	-	-	-
	180 - 190	-	-	-
	190 - 200	-	-	-
	200 - 210	-	-	-
220 BS	210 - 220	-	-	-
230 BS	220 - 230	-	-	-
(T.O.)	-	-	-	-
	-	-	-	-
	-	-	-	-
	-	-	-	-
	-	-	-	-
	-	-	-	-

CONFIDENTIAL

VDMR Well No. 2013
County: Southampton

Well: Norfolk and Western Railway Well # 211
Property: Norfolk and Western Railway
Driller: Norfolk and Western Railway
Location: At Ivor, on Norfolk and Western Railway right-of-way;
76° 54' 00" W, 36° 54' 00" N
Elevation: 80 feet
Total Depth: 230 feet
Started drilling: October, 1966 Completed drilling: October, 1966
Sample description by : Robert H. Teifke, Virginia Division of Mineral
Resources, May, 1968

GEOLOGIC LOG *

Depth in
feet

✓
COLUMBIA GROUP (0-^{30'}204)

0-10 Sand - abundant matrix of white and orange-brown clays;
fine--to medium-grained, fairly well-sorted,
angular to subangular; slightly feldspathic; very-
slightly glauconitic and micaceous

10-20 Sand and gravel - abundant matrix of orange-brown clay,
locally white and gray; 25% fine quartz gravel
(2-10 mm); sand is fine--to coarse-grained,
moderately sorted, angular to subrounded;
moderately feldspathic; very-slightly glauconitic;
traces of muscovite and magnetite

20-30 No sample

✓
YORKTOWN FORMATION (30-^{170'}160)

30-40 Sand -- binder of bluish-gray clay; fine--to very fine-
grained, very well-sorted, angular; gypsum
common; traces of glauconite and muscovite

VDMR Well No. 2013

- 40-50 Shell — matrix of sandy, brownish-gray clay; coarse predominantly black, pelecypod shell debris; 10% poorly sorted, slightly glauconitic sand; a few foraminifers and ostracods
- 50-60 Shell and sand — binder of brownish-gray clay; 70% pelecypod shells (15 mm) and shell fragments; 25% fine-grained, well-sorted sand, consisting of 65% angular quartz, 25% bioclasts and 5% dark-green glauconite; minor muscovite and gypsum; foraminifers fairly abundant; a few ostracods
- 60-70 Shell and sand — abundant matrix of greenish-gray clay; 50% pelecypod shells (15 mm) and shell fragments, including a few Turritella; 35% fine--to coarse-grained, moderately sorted sand, consisting of 60% angular to rounded quartz, and 38% glauconite; minor muscovite and gypsum, a few foraminifers and ostracods
- 70-80 Shell — binder of sandy gray clay; pelecypod shells and shell fragments up to 35 mm; trace of glauconite; foraminifers and ostracods common
- 80-90 "
- 90-100 Sand and shell -- moderately abundant matrix of dark-gray clay; 25% coarse pelecypod shell debris; sand is fine--to medium-grained, well-sorted, angular; clear and greenish quartz, with 5% glauconite and a trace of muscovite; a very few foraminifers and ostracods
- 100-110 Sand — abundant matrix of silty, greenish-brown clay, 5% shell fragments; fine-grained, well-sorted, angular; clear to yellowish quartz; micaceous; very slightly glauconitic
- 110-120 Clay -- greenish-gray, silty and sandy, 10% pelecypod shell and shell fragments, non-clay fraction consists of silt--to fine-grained sand, fairly well-sorted, angular; gypsiferous; very slightly glauconitic; trace of muscovite; foraminifers rare

- 120-130 Sand — abundant matrix of greenish-gray clay, 3-5% shell fragments; fine--to very fine-grained, very well-sorted, angular; very-slightly glauconitic, micaceous, and gypsiferous; foraminifers common (Nonion)
- 130-140 No sample
- 140-150 Clay — brownish-gray, slightly sandy, 10% shell fragments; sand is poorly sorted, very slightly glauconitic; very gypsiferous; a few foraminifers
- 150-160 " moderately sandy, 20% shell fragments; small amount pelletal and bone phosphorite
- 160-170 No sample

✓ MATTAPONI FORMATION (170-220')

- 170-180 Sand — moderately-abundant matrix of dark-green and brown, slightly dolomitic clays, a few shell fragments; medium-to coarse-grained, well-sorted; sand consists of 80% dark--to light-green glauconite, 20% clear quartz; gypsiferous; slightly pyritic and phosphoritic
- 180-190 " very pyritic, slightly gypsiferous
- 190-200 Sand — moderately abundant matrix of blackish-brown clay, a few shell fragments; medium-grained, well-sorted; sand consists of 90% dark-green, subordinately brown glauconite; 10% poorly rounded clear quartz; slightly gypsiferous; a few phosphorite nodules
- 200-210 Sand — abundant matrix of drab-gray and bright-green, slightly dolomitic clays, a few shell fragments; medium--to coarse-grained, fairly well-sorted; sand consists of 80% blackish-green to light-green and brown glauconite, 20% clear, angular quartz; traces of gypsum and phosphorite

210-220 Sand — abundant matrix of light-brown and light-green clays, a few shell fragments and small pebbles; fine- to medium-grained, well-sorted; sand consists of 70% dark-green glauconite, 30% clear angular quartz; minor gypsum, muscovite, pyrite, and nodular phosphorite

✓
TRANSITIONAL BEDS
TUSCALOOSA FORMATION (220-230')

220-230 Sand — moderately abundant matrix of light-gray clay, 5% shell fragments; fine--to medium-grained, well-sorted; sand consists of 65% clear angular quartz, 15% glauconite, 10% white potassic feldspar; minor muscovite and gypsum

GEOLOGIC SUMMARY

	<u>Rock Unit</u>	<u>Age</u>
0- 30 ³⁰	Columbia Group	Pleistocene
20-30	No sample	
30-160 170	Yorktown Formation	<u>Late</u> Miocene
160-170	No sample	
170-220	Mattaponi Formation	Paleocene - Late Cretaceous
220-230	<u>Tuscaloosa Formation</u> transitional beds	Late Cretaceous

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

R. H. Telford
 3/3/72

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