

INTERVAL SHEET

WWCR - 81

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VDMR Well No: 1739

Date rec'd: November 2, 1966

Sample Interval: from 1 to 490

PROP: Spring Land Corporation

Number of samples: 49

(Springfield Terrace)

COMP: Mitchell's Pump & Well Company

Total Depth: 490

COUNTY: York (Williamsburg)

Oil or Gas: Water:  Exploratory:

From-To	From-To	From-To	From-To
1 - 10	300 - 310	-	-
10 - 20	310 - 320	-	-
20 - 30	320 - 330	-	-
30 - 40	330 - 340	-	-
40 - 50	340 - 350	-	-
50 - 60	350 - 360	-	-
60 - 70	360 - 370	-	-
70 - 80	370 - 380	-	-
80 - 90	380 - 390	-	-
90 - 100	390 - 400	-	-
100 - 110	400 - 410	-	-
110 - 120	410 - 420	-	-
120 - 130	420 - 430	-	-
130 - 140	430 - 440	-	-
140 - 150	440 - 450	-	-
150 - 160	450 - 460	-	-
160 - 170	460 - 470	-	-
170 - 180	470 - 480	-	-
180 - 190	480 - 490	-	-
190 - 200	-	-	-
200 - 210	-	-	-
210 - 220	-	-	-
220 - 230	-	-	-
230 - 240	-	-	-
240 - 250	-	-	-
250 - 260	-	-	-
260 - 270	-	-	-
270 - 280	-	-	-
280 - 290	-	-	-
290 - 300	-	-	-

All intervals have both washed and unwashed samples

OWNER: Spring Land Corporation  
DRILLER: Mitchell's Well & Pump Company  
COUNTY: York (Williamsburg)

VDMR: 1739  
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TOTAL DEPTH: 490'

GEOLOGIC LOG

Depth in feet

COLUMBIA GROUP (1-30)

1-10 Sand -- orange-brown, slightly clayey; fine- to medium-grained, well-sorted, subangular to subrounded  
10-20 Clay -- orange, mottled light-gray, sandy; sand is fine- to medium- grained, moderately-sorted  
20-30 "

YORKTOWN FORMATION (30-150)

30-40 Sand -- dull brownish-gray, very clayey; fine-tto coarse-grained, rather poorly-sorted; abundant shell debris, including a few foraminifers  
40-50 Clay -- gray, sandy; slightly glauconitic; abundant shell debris, including a few foraminifers  
50-60 "  
60-70 Sand -- gray, moderately clayey; fine- to medium-grained, fairly well-sorted; trace of glauconite; 15-20% coarse shell debris  
70-80 "  
80-90 "  
90-100 Sand -- greenish-gray, very slightly clayey; medium-grained, well-sorted; trace of glauconite; about 15% coarse shell debris  
100-110 Sand -- light gray, clean; fine- to medium-grained, well-sorted, subangular; small amount of magnetite, trace of glauconite; a few shell fragments  
110-120 Sand -- greenish-gray, slightly clayey; fine- to medium-grained, well-sorted, subangular to subrounded; trace of glauconite; about 5% shell debris (mostly echinoid spines, and a very few foraminifers)

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- 120-130 Sand -- light gray, clayey, calcareous; fine- to medium-grained, moderately-sorted; 5% of shell debris; a few foraminifers
- 130-140 Sand -- greenish-gray, moderately-clayey; fine-grained, fairly well-sorted; very slightly glauconitic; 5% shell debris; a few foraminifers
- 140-150 "

CALVERT FORMATION (150-310)

- 150-160 Clay -- dark greenish-gray, very silty to very fine-grained sandy; slightly glauconitic; about 5% coarse shell debris; fish teeth and bone fragments common
- 160-170 Clay -- medium greenish-gray, compact, slightly sandy; small amount brown biotite; a very few shell fragments, including Turritella; abundant concretionary pyrite
- 170-180 Clay -- light gray, with purple cast; a few shell fragments, including Turritella
- 180-190 Clay -- dark greenish-gray, very little sand-silt; about 2% shell fragments and a few foraminifers, mostly Nonion; Turritella present; concretionary pyrite
- 190-200 "
- 200-210 Clay -- greenish-gray, compact, moderately silty; a few pyrite concretions and shell fragments
- 210-220 Clay -- greenish-gray, compact, slightly silty and sandy, trace of gravel
- 220-230 " brownish-green, very silty
- 230-240 Clay -- light greenish-gray, compact, slightly sandy
- 240-250 Clay -- dark greenish-gray, silty; a very few shell and plant fragments; moderately foraminiferal
- 250-260 Clay -- light greenish-gray, slightly diatomaceous and foraminiferal
- 260-270 " medium brownish-gray, slightly sandy; abundant foraminifers (Siphogenerina, Nonion)

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- 270-280 Sand -- gray, slightly- to moderately-clayey; medium- to coarse-grained, fairly well-sorted, subangular to subrounded; traces of gypsum and dark gray phosphorite; very slightly glauconitic; 2-3% shell debris and a few foraminifers
- 280-290 " 5% shell debris
- 290-300 Sand -- medium gray, slightly clayey; medium- to coarse-grained, fairly well-sorted, subangular to subrounded; a few shell fragments and 2-5% foraminifers by volume
- 300-310 Sand -- abundant dark brownish-gray clay matrix; trace of fine gravel; fine- to coarse-grained, rather poorly-sorted, variably rounded; about 5% glauconite, gypsum and pyrite present; small amount of microfossil shell debris; foraminifers moderately abundant

NANJEMOY FORMATION (310-340)

- 310-320 Sand -- moderately abundant matrix of green-brown clay; fine- to coarse-grained, rather poorly-sorted 30-40% oxidized glauconite (browns and greens); fine-grained pyrite abundant; a few foraminifers; a few small pebbles and phosphate nodules (coarse brown-sand (allocthonous) and fine to medium green-sand (slightly reworked autocthonous))
- 320-330 "
- 330-340 "

MATTAPONI FORMATION (340-460)

- 340-350 Sand -- blue-gray clay matrix; sand consists of coarse-grained green to black glauconite; trace of pyrite; trace of shell debris; foraminifers moderately abundant
- 350-360 Clay -- light gray; slightly glauconitic and micaceous (muscovite)
- 360-370 Clay -- pink; slightly glauconitic and micaceous (muscovite)
- 370-380 Sand -- dark bluish-green, clean; coarse-grained, well-sorted; 95% glauconite, 5% quartz
- 380-390 Sand -- bright bluish-green, moderately clayey; coarse-grained, well sorted; 85-95% green glauconite, 5-15% quartz; a few shell fragments and foraminifers
- 390-400 "

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- 400-410 Sand -- medium gray, with greenish cast, slightly to moderately clayey; medium-grained, fairly well-sorted; 80% glauconite, 20% quartz
- 410-420 Sand -- gray ("salt-and-pepper"), slightly to moderately clayey; medium- to very coarse-grained, moderately-sorted; 45% glauconite, 50% subrounded quartz, 5% feldspar
- 420-430 "
- 430-440 "
- 440-450 Sand -- gray ("salt-and-pepper"), slightly to moderately clayey; medium- to very coarse-grained, moderately-sorted; 35% glauconite, 70% subrounded quartz, 5% feldspar
- 450-460 "

PATUXENT FORMATION (460-490)

- 460-470 Sand -- white, clean, a few small pebbles; medium- to very coarse-grained, fairly well-sorted, subrounded; 60% quartz, 10% fresh glauconite, 30% fresh feldspar; traces of garnet and pyrite
- 470-480 "
- 480-490 "

GEOLOGIC SUMMARY

<u>Thickness</u>	<u>Rock Unit</u>	<u>Age</u>
1-30'	Columbia Group	Pleistocene
30-150'	Yorktown Formation	Miocene
150-310'	Calvert Formation	
310-340'	Nanjemoy Formation	Eocene
340-460'	Mattaponi Formation	Paleocene - Late Cretaceous
460-490'	Patuxent Formation	

Virginia Division of Mineral Resources  
 Robert H. Teifke, Geologist  
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