

VIRGINIA DIVISION OF MINERAL RESOURCES
Box 3667, Charlottesville, VA 22903

INTERVAL SHEET

Page 1 of 1 Well Repository No: C-150 3093
Date rec'd: 2/16/71 ; processed 3/2/71 Sample Interval; from 0 to: 730'
PROPERTY: River Bend Estates Number of samples: 73
COMPANY: Sydnor Hydrodynamics, Inc. Total Depth: 730'
COUNTY: Northumberland (Burgess) Oil or Gas: Water: Exploratory:

From-To	From-To	From-To	From-To
0 - 10	250 - 260	500 - 510	-
10 - 20	260 - 270	510 - 520	-
20 - 30	270 - 280	520 - 530	-
30 - 40	280 - 290	530 - 540	-
40 - 50	290 - 300	540 - 550	-
50 - 60	300 - 310	550 - 560	-
60 - 70	310 - 320	560 - 570	-
70 - 80	320 - 330	570 - 580	-
80 - 90	330 - 340	580 - 590	-
90 - 100	340 - 350	590 - 600	-
100 - 110	350 - 360	600 - 610	-
110 - 120	360 - 370	610 - 620	-
120 - 130	370 - 380	620 - 630	-
130 - 140	380 - 390	630 - 640	-
140 - 150	390 - 400	640 - 650	-
150 - 160	400 - 410	650 - 660	-
160 - 170	410 - 420	660 - 670	-
170 - 180	420 - 430	670 - 680	-
180 - 190	430 - 440	680 - 690	-
190 - 200	440 - 450	690 - 700	-
200 - 210	450 - 460	700 - 710	-
210 - 220	460 - 470	710 - 720	-
220 - 230	470 - 480	720 - 730	-
230 - 240	480 - 490	-	-
240 - 250	490 - 500	-	-

All intervals have both washed and unwashed samples



Owner: River Bend Estates
Driller: Sydnor
County: Northumberland

W# 3093
C# 150
Total Depth: 730'
Quad: Lancaster
Elev: 79'

Depth
(feet)

WELL LOG

- 0-20 Sand - Dark yellowish orange (10yr 6/6); very sparse clasts of clay, ~~and~~ sparse at 10-20'; medium to very coarse, subangular, well sorted; 2% fine glauconite (brown).
- 20-40 Sand - Grayish orange (10yr 7/4); very sparse clay; medium to very coarse, subangular, moderate sorting; 2% fine glauconite; iron oxide particles.
- 40-50 Sand - Dusky yellowish orange (10yr 3/6); coarse to very coarse with few granules, subrounded, well sorted; iron oxide particles and staining on granules.
- 50-70 Clay - Light olive gray (5y 6/1); abundant sand; medium with some larger grains, subangular, well sorted; clay at 60-70' is gray, brown and dark yellow orange; iron oxide and stained ~~clay~~.
- 70-80 Clay, Sandy - Pale yellowish brown (10yr 6/2); abundant sand; medium to granule, subangular, moderately well sorted; 1% mica; iron oxide particles.
- 80-100 Sand - Light olive brown (5y 4/6); sparse clay; fine to medium, with some larger, subangular, moderately well sorted; very rare mica; iron oxide and stained clay clasts.
- 100-130 Sand - Light olive gray (5y 5/1); very sparse to sparse clay; medium with some larger grains, subangular, well sorted; 5% fine phosphate fragments; 5% shell fragments, 10% at 110-130' - Dentalium, Mercenaria, Gastropods, Pectens; 1% phosphate fragments at 120-130'.
- 130-150 Sand - Light olive gray (5y 5/1); very sparse clay in clasts; medium, subangular, well sorted; 1% fine phosphate fragments; 2-3% shell fragments; mica.
- 150-180 Sand - Light olive gray (5y 5/1); abundant clay in pellets; medium, subangular, well sorted; 1-2 shell fragments; iron oxide clasts.
- 180-200 Clay - Light olive gray (5y 5/1); abundant sand; medium, subangular, well sorted; very rare shell fragments; iron oxide fragments.
- 200-210 Sand - Light olive gray (5y 4/1); medium, subangular, moderate sorting; few phosphate fragments; very rare shell fragments.

Owner:
Page 2

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(feet)

- 210-220 Sand - Light olive gray (5y 4/2); abundant clay; medium with a few granules, subangular, well sorted; 1% phosphate fragments; 1% shell fragments; iron stained granules.
- 220-230 Sand - Light olive gray (5y 6/1); sparse clay; medium, subangular, well sorted; 3% phosphate fragments; very rare shell fragments; iron stained granules; bone fragments.
- 230-240 Sand - Light olive gray (5y 6/1); abundant clay; medium, subangular, well sorted; phosphate fragments; very rare shell fragments; Bryozoa.
- 240-250 Clay - Light olive gray (5y 6/1); abundant sand; medium, subangular, well sorted; 3% phosphate fragments; very rare shell fragments; iron staining.
- 250-260 Sand - Light olive gray (5y 6/1); abundant clay; medium, subangular, well sorted; phosphate fragments; very rare shell fragments; Forams-Nonion.
- 260-270 Sand - Light olive gray (5y 6/1); moderate clay; medium to coarse, subangular, well sorted; 5% phosphate fragments; very rare shell fragments; Echinoderm spines; iron oxide particles.
- 270-280 Sand - Light olive gray (5y 6/1); sparse clay; medium to very coarse, subangular, well sorted; 5% phosphate fragments; very rare shell fragments; Echinoderm spines; iron staining.
- 280-340 Clay - Light olive gray (5y 6/1); abundant to moderate sand; medium to coarse with some granules until 300-10' when it's medium only, subangular, moderately well sorted; 1% to few phosphate fragments at 280-300'; Diatoms, abundant ~~clastons~~ at 300-310'; Forams-Robulus, Nonion; Echinoderm spines.
- 340-350 Sand - Moderate olive brown (5y 4/4); abundant clay; medium to very coarse, subangular, moderate sorting; 4% phosphate fragments; 20% shell fragments; Forams-Robulus, Nonion.
- 350-360 Gravel, Shell - Light and Dark gray; sparse clay; medium to granule, subangular, poorly sorted; very rare large phosphate fragments; 60% shell fragments; Forams-Bolivina.

Owner:
Page 3

River Bend Estates

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<u>Depth (feet)</u>	
360-400	Sand - Light olive gray (5y 5/1); sparse clay, moderate clay at 380'; medium to granule until 380', then fine to granule, subangular, poorly sorted; 380-400' - 2% phosphate fragments; Forams-Bolivina, Robulus, Nonion; bone fragment at 390-400'; shell fragments: 360-370' - 10% 370-380' - 40% 380-400' - 25%
400-440	Gravel - Mixed colors; sparse clay; medium to granule, sub-angular to subrounded, poorly sorted; 3% phosphate fragments - brown; rare shell fragments, and very rare at 410-420'.
440-460	Sand - Light and dark brown; very sparse clay; medium to small granule, subangular to subrounded, poorly sorted; 8% glauconite; iron staining on granules.
460-480	Sand - Light and dark brown; few clay/sand clasts; fine to granule, subangular and subrounded, poorly sorted; 20% glauconite; very rare shell fragments; iron staining on granules.
480-520	Sand, Glauconitic - Light and dark brown; sparse clay in clasts; 50% glauconite - green; fine to granule, subangular to sub-rounded, poorly sorted; 10% brown glauconite, 5% at 500-520'; very rare shell fragments; iron staining on granule; mica at 490-500'.
520-550	Sand, Glauconitic - Light and dark gray; 80% glauconitic; sparse to moderate clay; moderate clay in clasts; fine to granule, subangular to subrounded, poor sorting; few brown glauconite; very rare shell fragments; Forams-Nodosaria, Robulus; iron stained particles and granules.
550-570	Clay, Gravelly - Light olive gray (5y 6/1); clay clasts of 50% gravel (abundant granules) of which 40%+ is glauconite; loose and in clasts sand is fine to granule, subangular to subrounded, poorly sorted; very rare shell fragments.
570-600	Gravel, Clayey - Light olive gray (5y 6/1); abundant clay; fine to large granules, subangular to subrounded, poorly sorted; clasts of clay with mixed gravel of pinkish gray; at 590-600' clay has 50% dark green glauconite.

Owner:
Page 4

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<u>Depth (feet)</u>	
600-610	Sand, Glauconitic - Greenish black (5gy 2/1); 90% glauconite, black, medium grained; very sparse clay; sparse sand medium to granule, subangular to subrounded, poor sorting.
610-630	Sand - Light and Dark gray; moderate clay in clasts; fine to granules, <u>angular</u> to subangular, moderate sorting; 40% glauconite.
630-640	Sand - Light olive gray (5y 7/1); moderate clay in clasts; fine to granules, angular to subangular, poor sorting; 30% glauconite; mica.
640-670	Sand - Light olive gray (5y 7/1); sparse to moderate clay in sand clasts; fine to granules, angular to subangular, poorly sorted; mica 640-660'; Forams at 650-660'; 30% glauconite at 640-650', 20% glauconite at 650-660', 25% glauconite at 660-670'; (some pale yellow brown).
670-700	Sand - Light olive gray (5y 7/1); very sparse clay; coarse to granule, angular to subangular, moderate sorting; garnet; at 670-680 - 15% glauconite, 680-690 - 7% glauconite, 690-700 - 10% glauconite.
700-710	Sand - Yellowish brown (10yr 5/2); abundant clay in gray and brown sand clasts; coarse to granule, angular to subangular, poorly sorted; 10% glauconite.
710-730	Sand - Light yellowish brown (10yr 6/4); abundant clay in clasts; medium to very coarse with some granules, angular and subangular, moderate sorting; 10% glauconite.

Logged by: J. K. Pölzin
August 15, 1980

OWNER: River Bend Estates
DRILLER: Sydnor Hydrodynamics, Inc.
COUNTY: Northumberland (Burgess)

VDMR # 3093
WWCR # 150
TOTAL DEPTH: 730'

GEOLOGIC SUMMARY

<u>Depth (feet)</u>	<u>Rock Unit</u>	<u>Age</u>
0-40	Columbia Group	Pleistocene
40-90	Yorktown Formation	Late Miocene
90-390	Calvert Formation	Middle Miocene
390-460	Nanjemoy Formation	Eocene
460-650	Mattaponi Formation	Paleocene
650-730	Patuxent Formation	Early Cretaceous

Virginia Division of Mineral Resources
Robert H. Teifke - Geologist
April 2, 1971