

COMMONWEALTH OF VIRGINIA
DEPARTMENT OF CONSERVATION AND ECONOMIC DEVELOPMENT

MAILING ADDRESS:

DIVISION OF MINERAL RESOURCES

OFFICE ADDRESS:

B 3667
Charlottesville, VA 22903

JAMES L. CALVER, COMMISSIONER

McCormick Road
Charlottesville, Virginia

WATER WELL COMPLETION REPORT

OWNER: Clifford Lawson Mailing Address: Sunnybank, Virginia

TENANT: Crab Fishing Wharf Mailing Address: _____

DRILLER: Douglas & Dickinson, Inc. Mailing Address: Box 498, Warsaw, Virginia

WELL LOCATION: County Northumberland Approx. 1/4 ~~xxxx~~ miles east (direction) of
Sunnybank P. O. and 1000 ~~xxxx~~ feet east (direction) of St. Rd. 644

(GIVE DIRECTION AND DISTANCE IN FEET OR MILES FROM TWO REFERENCE POINTS - ROADS, TOWNS, RIVERS, ETC. - ON COUNTY HIGHWAY OR OTHER MAP.)

DATE STARTED: March, 1970 DATE COMPLETED: April 14, 1970

TYPE OF DRILL RIG USED: Rotary TOTAL DEPTH 698 feet

WATER LEVEL: Stands _____ feet below surface OR
has NATURAL flow of 5 gallons per minute.

YIELD TEST: Method _____
Drawdown 40 feet
Rate 40 gal. per min.
Duration _____ hrs., _____ min.

HOLE SIZE: 6 inches from 0 to 147 feet
3 7/8 inches from 147 to 633 feet
3 inches from 633 to 698 feet
SCREEN SIZE: 2 inches from 633 to 653 feet

WATER ZONES: from 633 to 653 feet
from _____ to _____ feet
from _____ to _____ feet

CASE SIZE: 4 inches from 0 to 147 feet
2 inches from 147 to 633 feet
2 inches from 653 to 698 feet

WATER: Color _____ Taste _____
Odor _____ Temp. _____ °F

GROUTING: Method _____
Material _____ Depth _____ feet

WELL TO SUPPLY: (check one) Home _____
Farm _____ Town _____ School _____
Industry X Other _____

PUMP: Type _____
Capacity 40 gal. per min
Depth of intake _____ feet

WATER ANALYSIS AVAILABLE: Yes _____ No X

DRILL CUTTINGS SAVED: Yes 66 No _____

(DRILL CUTTINGS SHOULD BE COLLECTED AT 10 FOOT INTERVALS. THESE SAMPLES MAY BE SHIPPED TO THIS OFFICE EXPRESS COLLECT. SAMPLE BAGS ARE FURNISHED FREE OF CHARGE UPON REQUEST.)

REMARKS: _____

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

INTERVAL SHEET

C-147

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Well Repository No: 3061

Date rec'd: 5/11/70 ; processed 1/25/71

Sample Interval: from 0 to: 698'

PROPERTY: Clifford Lawson
 (Crab Fishing Wharf)

Number of samples: 66

COMPANY: Douglas & Dickinson, Inc.

Total Depth: 698'

COUNTY: Northumberland (Sunnybank)

Oil or Gas: Water: x Exploratory:

From-To	From-To	From-To	From-To
0 - 10	264 - 275	529 - 539	-
10 - 21	275 - 285	539 - 550	-
21 - 31	285 - 296	550 - 560	-
31 - 42	296 - 306	560 - 571	-
42 - 52	306 - 317	571 - 582	-
52 - 63	317 - 327	582 - 593	-
63 - 73	327 - 338	593 - 603	-
73 - 84	338 - 348	603 - 614	-
84 - 94	348 - 359	614 - 624	-
94 - 105	359 - 370	624 - 635	-
105 - 115	370 - 380	635 - 645	-
115 - 126	380 - 391	645 - 656	-
126 - 137	391 - 402	656 - 666	-
137 - 148	402 - 412	666 - 677	-
148 - 159	412 - 423	677 - 687	-
159 - 170	423 - 433	687 - 698	-
170 - 180	433 - 444	-	-
180 - 191	444 - 454	-	-
191 - 201	454 - 465	-	-
201 - 212	465 - 476	-	-
212 - 222	476 - 487	-	-
222 - 233	487 - 497	-	-
233 - 243	497 - 508	-	-
243 - 254	508 - 518	-	-
254 - 264	518 - 529	-	-

Unwashed only

Owner: Clifford Lawson (Sonny Banks)
Driller: Douglas & Dickinson
County: Northumberland

W# 3061
C# 147
Total depth: 688'
Quad: Burgess
Elev: 3'

Depth
(feet)

WELLLLOG

- 0-10 Sand - moderate yellowish brown (10yr 5/4); medium to very coarse, subangular, poor sorting; very rare phosphatic fragments.
- 10-31 Sand - dark yellowish orange (10yr 6/6); medium to very coarse, subangular, poor sorting; 10-20 moderately sparse clay in sand clasts; 21-31 1% glauconite.
- 31-42 Sand - dark dusky yellow (5y 5/4); moderate clay; medium to very coarse, subangular, poorly sorted; 1% glauconite; 7% shell fragments.
- 42-126 Clay - light olive gray (5y 5/2); abundant sand; medium to very coarse, subangular, poorly sorted; 1% glauconite; shell fragments varying from 7% (42-63); to 5% (63-84), to 3% (84-94); to few fragments at 115-126.
- 126-159 Clay - light olive gray (5y 6/1); abundant sand; medium to very coarse, subangular, poorly sorted; few glauconite and shell fragments.
- 159-180 Clay - light olive gray (5y 6/1); abundant sand, medium to very coarse, subangular, poorly sorted; mica; moderate sand at 159-170.
- 180-191 Clay - light olive gray (5y 6/1); abundant sand; medium to very coarse, subangular, poorly sorted; few shell fragments; mica.
- 191-285 Clay - light olive gray (5y 6/1); abundant sand; medium to very coarse, subangular, poorly sorted; very rare phosphate fragments and shell fragments; mica at most intervals in varying, slight amounts.
- 285-350 Clay - moderate yellow gray (5y 6/2); abundant sand; medium to very coarse, subangular, poorly sorted; diatoms shell fragments; mica.
- 360-370 No Sample.
- 370-402 Sand - moderate olive gray (5y 5/1); sparse clay in clasts; medium to granules, angular, poorly sorted; few phosphate fragments, 10% shell fragments; garnet; 391-402 1% shell fragments.
- 402-433 Sand - moderate olive gray (5y 5/1); moderate clay in clasts with 5% glauconite and 5% shell fragments only in these (rounded) clasts medium to very coarse, angular, poorly sorted; clay clasts broken from 412' onward; shell and glauconite decreases to rare in clasts from 412' on.

Depth
(feet)

- 433-444 Sand, Glauconitic - moderate olive gray (5y 5/1); moderate clay in clasts with rare glauconite and shell fragments in clasts; medium and granular, subangular poorly sorted; 50% (loose) glauconite.
- 444-465 Sand - light olive gray (5y 5/2); abundant clay; medium to very coarse, some pebbles, angular, poorly sorted; 40% glauconite; rare shell fragments and also glauconite in clay clasts; feldspar.
- 465-497 Sand - light olive gray (5y 5/1); abundant clay; medium to granule; angular and subangular, poorly sorted; 30% glauconite; rare shell fragments with glauconite in clay clasts.
- 497-518 Sand - light olive gray (5y 5/1); medium to granule with some pebbles, subangular and rounded, poorly sorted; 30% glauconite; very rare to no shell fragments.
- 518-550 Sand, Glauconitic - light olive gray (5y 5/1); 50% glauconite green, medium grained; medium to granule; subangular, poorly sorted; 539-550 few shell fragments; mica.
- 550-570 Sand, Glauconitic - light olive gray (5y 5/1); 80%+ glauconite green, medium grained; medium to granule, subangular, poorly sorted; few shell fragments; mica; 560-570 sparse clay no shells or mica.
- 570-582 Clay, Glauconitic - light olive gray (5y 6/1); 50%+ glauconite, green, medium grained; moderate sand; medium to granule, subangular, poorly sorted; forams Nodosaria, Robulus L.; mica.
- 582-593 Clay, Glauconitic - light olive gray (5y 6/1); 40% glauconite; moderate sand, medium to granule subangular, poorly sorted, very sparse shell fragments.
- 593-603 Sand, Glauconitic - dark greenish gray (5gy 4/1); 70%+ glauconite; very sparse clay; very sparse sand; medium to granule, subangular; no sorting; 30% shell fragments; Forams; "Peach" Calcite.
- 603-624 Sand, Glauconitic - dark greenish gray (5gy 4/1); 60%+ glauconite, green and medium grained; very sparse clay; sparse sand; medium to granule, subangular poorly sorted; 20% shell fragments; Forams; 1% shell fragments at 614-624.
- 624-635 Sand - light olive gray (5y 6/1); coarse to granule, subangular, moderate sorting; 25% shell fragments; feldspar.
- 635-645 Sand - light olive gray (5y 6/1); very sparse clay, yellowish orange; medium to very coarse subangular, moderate sorting; 25% shell fragments.

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C# 147

Depth
(feet)

- 645-656 Sand - light olive gray (5y 6/1); no clay; fine to very coarse, subangular, moderate sorting; 10% shell fragments, feldspar.
- 656-666 Sand - light olive gray (5y 6/1); moderate clay; fine to very coarse, subangular, poorly sorted; 40% shell fragments plant debris.
- 666-677 Clay - light olive gray (5y 5/1); 50% clay; 50% sand; medium to granule, subangular, poorly sorted; very sparse shell fragments; Forams.
- 677-688 Sand - light olive gray (5y 5/1); abundant clay; medium to granule, subangular, poorly sorted; 40% glauconite (loose); mica.

Logged by: J. K. Polzin
August 19/28, 1980

OWNER: Clifford Lawson (Crab Fishing Wharf)
DRILLER: Douglas & Dickinson, Inc.
COUNTY: Northumberland (Sunnybank)

VDMR # 3061
WWCR # 147
TOTAL DEPTH : 698'

GEOLOGIC SUMMARY

<u>Depth (feet)</u>	<u>Rock Unit</u>	<u>Age</u>
0-31	Columbia Group	Pleistocene
31-145	Yorktown and St. Marys formations	Late Miocene
145-445	Calvert Formation	Middle Miocene
445-510	Nanjemoy Formation	Middle Eocene
510-698	Mattaponi Formation	Paleocene-Late Cretaceous

Virginia Division of Mineral Resources
Robert H. Teifke - Geologist
February 4, 1971

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VDMR # 3061
WWCR # 147
TOTAL DEPTH: 698'
ELEV: ~10'

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31-145' silty gray micaceous clay w/ shell (acc. to State Map = St. Marys Fm.)
immediately underlain by tough gray Calvert clays
264-370 gray-white Calvert clays (X-ray analysis shows ϕ + mixed layer clays)
basal Nanjemoy unusually coarse (very coarse sand - fine gravel) and well-rounded.

No bright clay interval ~~between~~ observed from 510-698; bottom sample
appears to be basal Mattaponi.

Section is essentially in agreement w/ isopach maps.