

COMMONWEALTH OF VIRGINIA
DEPARTMENT OF CONSERVATION AND ECONOMIC DEVELOPMENT

W# 4920
C# 164

MAILING ADDRESS:
Box 3667
Charlottesville, VA 22903

DIVISION OF MINERAL RESOURCES
JAMES L. CALVER, COMMISSIONER
WATER WELL COMPLETION REPORT

OFFICE ADDRESS:
McCormick Road
Charlottesville, Virginia

OWNER: Northumberland County Mailing Address: Heathsville, Virginia

TENANT: Sewage Plant, Reedville & Tibitha Mailing Address: _____

DRILLER: Douglas Drilling Co., Inc. Mailing Address: Box 498, Warsaw, Va. 22572

WELL LOCATION: County Northumberland Approx. 0.3 ^{feet}/_{miles} West (direction) of
intersection of Rt. 657 & Rt. 659 near end of Reedville Airport.
and _____ (direction) of _____

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

DATE STARTED: _____ DATE COMPLETED: October 14, 1976

TYPE OF DRILL RIG USED: Rotary TOTAL DEPTH 725' feet

WATER LEVEL: Stands 27 feet below surface OR
has NATURAL flow of _____ gallons per minute.

YIELD TEST: Method air
Drawdown 33 feet
Rate 40 gal. per min.
Duration 2 hrs., _____ min.

HOLE SIZE: 6 1/2 inches from 0 to 145 feet
3 7/8 inches from 145 to 725 feet
_____ inches from _____ to _____ feet

WATER ZONES: from _____ to _____ feet
from _____ to _____ feet
from 694 to 714 feet

SCREEN SIZE: _____ inches from _____ to _____ feet
#20G 2 inches from 694 to 714 feet
_____ inches from _____ to _____ feet

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

CASE SIZE: 4 inches from 0 to 147 feet
2 inches from 147 to 694 feet
2 inches from 714 to 725 feet

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

GROUTING: Method none
Material _____ Depth _____ feet

WATER ANALYSIS AVAILABLE: Yes _____ No X

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

DRILL CUTTINGS SAVED: Yes X 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: This is a CLASS II TYPE A Well of materials and construction as per specifications of Virginia Health Department publication "Drilled Wells for Public Water Supply" dated 9 Feb.

Drill Cutting Samples delivered to VSWCB. Copies of this report delivered to VSWCB, Virginia Health Dept. Bureau of Sanitary Engineering, and to Owner.

DEPTH (feet)		LOG OF WELL			REMARKS (water, caving, shot, screen, sample, etc.)
		TYPE OF ROCK OR SOIL PENETRATED (gravel, clay, etc.; hardness, color, etc.)			
From	To				
0'	approx.	10'	tan/orange	fine sand with clay binder, lens of white sand	
10'	approx.	60'	grey	fine sand with clay binder	
60'	approx.	250'	blue/grey	fine sand with varying % clay binder, shell, and sand	
250'	approx.	330'	green/olive	fine sand with varying % clay binder, shell, and sand	
330'	approx.	410'	green	fine sand, green rocky shellbed with varying % sand	
410'	approx.	530'	blue/grey	fine sand with varying % black sandy clay binder, black sand, and shell	
530'	approx.	660'	black/green	fine sand, black sand with varying % black sandy clay binder	
660'	approx.	690'	green/white	fine sand, medium and coarse sand with green/white clay binder	
690'	approx.	720'	white	fine sand, medium and coarse sands. SCREEN.	
720'	approx.	725'	grey	fine sand with clay binder	
		TOTAL DEPTH 725'			
		Drill Cuttings delivered to VSWCB Richmond office with this report.			
		Copy of this report delivered to Owner and Virginia Health Department's Bureau of Sanitary Engineering, Richmond office.			
NOTE:		This is a CLASS II TYPE A Well of materials and construction as per specifications of Virginia Health Department publication "Drilled Wells for Public Water Supply" dated 9 February 1970.			
		The well is drilled and cased to a depth of more than 100 feet, with the drill hole passing through more than 100 feet of unconsolidated formations of less pervious material than fine sand.			
		All formation samples from 0 to 145 feet (the 6½ inch drill hole) contained a clay binder and were less pervious than fine sand. The 147 feet of 4 inch casing was driven approximately 2 feet into the clay bottom for a positive seal. The 3 7/8 inch drill hole from 145 to 725 feet was then drilled and cased entirely from INSIDE the positively sealed 4 inch casing, which was left undisturbed as part of the well. The 4 inch and 2 inch casings also have another positive seal joining them where they overlap at approximately 147 feet.			

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

INTERVAL SHEET

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Well Repository No.: W- 4920
C- 164

Date rec'd: 8/29/77 Date Processed: 11/9/77

Sample Interval: from 0 to: 725

PROPERTY: County Sewage Plant

Number of samples: 62

COMPANY: Douglas Drilling Co.

Total Depth: 725

COUNTY: Northumberland (Reedville)

Oil or Gas: Water: X Exploratory:

From-To	From-To	From-To	From-To	From-To
0-10	314-324	700-715	-	-
10-21	324-335	715 725	-	-
21-31	335-345	-	-	-
31-42	345-356	-	-	-
42-52	356-366	-	-	-
		washed and unwashed samples.		
52-63	366-377	-	-	-
63-73	377-387	-	-	-
73-84	387-398	-	-	-
84-94	398 408	-	-	-
94-105	408-419	-	-	-
105-115	419-430	-	-	-
115-126	430-441	-	-	-
126-136	441-452	-	-	-
136-147	452-463	-	-	-
147-157	463-474	-	-	-
157-168	474-496	-	-	-
168-178	496-518	-	-	-
178-189	518-530	-	-	-
189-199	530-541	-	-	-
199-210	541-563	-	-	-
210-220	563-585	-	-	-
220-231	585 607	-	-	-
231-241	607-629	-	-	-
241-252	629-640	-	-	-
252-262	640-650	-	-	-
262-273	650-660	-	-	-
273-283	660-670	-	-	-
283-294	670-680	-	-	-
294-304	680-690	-	-	-
304-314	690-700	-	-	-

OWNER: County Sewage Plant
DRILLER: Douglas
COUNTY: Northumberland

W# 4920
C# 164
Total Depth: 725'
Quad: Reedville
Elev: 12'

Depth
(feet)

Well Log

- 0-10 Clay - moderate yellowish gray (5y 6/2); abundant sand, medium to very coarse, subangular, poorly sorted.
- 10-21 Sand - light olive gray (5y 5/2); abundant clay; medium to very coarse, subangular, poorly sorted.
- 21-42 Clay - pale yellowish brown (10yr 6/2); moderate sand; medium to very coarse, subangular, poorly sorted; mica.
- 42-84 Clay - pale yellowish brown (10yr 6/2); abundant sand; fine to coarse at 42-52', ^{fine} at 52-63' and rest fine, some coarse; subangular, poorly sorted; ~~some~~ lignite at 42 to 52'; 1% mica at 52-63'.
- 84-105 Clay - light olive gray (5y 5/1); abundant sand; fine with some coarse, subangular, poorly sorted; mica.
- 105-126 Clay - light olive gray (5y 4/1); abundant sand; fine with some coarse, subangular, well sorted; mica.
- 126-146 Sand - light olive gray (5y 5/2); abundant clay; fine to coarse, subangular, moderate sorting; 8% shell fragments - fine; mica.
- 146-168 Clay - light olive gray (5y 5/1); abundant sand; medium, subangular, well sorted; 1%+ fine shell fragments.
- 168-189 Sand - light olive gray (5y 5/1); moderate clay clasts; medium, subangular, well sorted; 1%+ fine shell fragments.
- 189-294 Clay - light olive gray (5y 6/1); abundant sand; medium, subangular, well sorted; very rare shell fragments at 220-230', 240-252' to 273-283'; Diatoms at 230-294'; Forams at 210-220', and 230-240' to 263-273'. ~~some (5y 5/1) clay at 283-294'~~
- 294-304 Sand - light olive gray (5y 5/1); abundant clay; medium to very coarse, subangular, moderate sorting; 40% shell fragments.
- 304-314 Gravel, Shell - light olive gray (5y 5/1); abundant clay; 50% shell fragments - Corbula Scutata; medium to very coarse, subangular, moderately sorted.

OWNER: County Sewage Plant
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Depth
(feet)

- 314-335 Sand - light olive gray (5y 5/1); abundant clay; medium to very coarse with some granules, subangular, poorly sorted; 30% fine shell fragments; shark tooth.
- 335-356 CoQuina - light olive gray (5y 5/1); limestone with some glauconite, pyrite and sparse quartz sand; medium to granule, subangular and poorly sorted; garnet.
- 356-366 CoQuina - yellowish gray (5y 6/2); limestone with mixed amounts and sizes of glauconite/sand.
- 366-408 Gravel, Shell - yellowish gray (5y 6/2); 80+% shell fragments; sparse sand until 387-398', then moderate and abundant at 398-408; medium to granule, subangular, poorly sorted; sparse coquina fragments; 8% brown glauconite from 377-398' and 10% green glauconite at 398-408'.
- 408-419 Gravel, Glauconitic - light and dark brown; 60% glauconite; fine to pebble, subangular and rounded, poorly sorted; 30% shell fragments.
- 419-441 Gravel, Glauconitic - light and dark brown; 50% glauconite; abundant clay; fine to granule, subangular, poorly sorted; 40% shell fragments, fine; Forams at 419-430'.
- 441-463 Sand, Glauconitic - olive gray (5y 3/2); 90% glauconite; moderate to sparse clay; ~~moderate sand~~ fine to very coarse with some granules at 452-463'; subangular with some rounded at 452-463'; poorly sorted; Echinoderm spines.
- 463-496 Sand, Glauconitic - olive black (5y 2/1); 98% glauconite; sparse clay; fine to very coarse, subangular, few grains; Forams - Robulus, Nodosaria.
- 496-530 Clay, Glauconitic - light and dark gray; 50% glauconite; moderate sand; medium, subangular, moderately well sorted; mica.
- 530-585 Clay - light olive gray (5y 6/1); moderate sand; medium with few larger grains, subangular, moderately well sorted; 5% glauconite at 530-541' and few thereafter; Diatoms; mica; garnet at 563-585'.

OWNER: County Sewage Plant
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W# 4920
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Total Depth: 725'
Quad: Reedville
Elev: 12'

Depth
(feet)

- 585-607 Clay, Glauconitic - light olive gray (5y 4/1); 50% glauconite; abundant sand; medium, subangular, moderately well sorted; Diatoms.
- 607-640 Sand, Glauconitic - light and dark green; 85+% glauconite; coarse to granule, subangular and angular, poorly sorted; 20% shell fragments; shark tooth; Bryozoa; Foram - Nodosaria and Echinoderm spines at 629-640.
- 640-660 Sand, Glauconitic - light and dark green; 80% glauconite; moderate clay; fine to granule, subangular and angular, poorly sorted; 10% shell fragments; Forams - Nodosaria, Robulus.
- 660-670 Sand - light olive gray (5y 6/1); abundant clay in small light colored clasts; medium to coarse, subangular and angular, moderately well sorted; 20% glauconite; very rare shell fragments; feldspar; mica.
- 670-680 Sand - light olive gray (5y 6/1); sparse clay; fine to very coarse, subangular and angular, moderate sorting; 8% glauconite; garnet; feldspar.
- 680-715 Sand - light olive gray (5y 6/1); sparse to very sparse clay; fine to granule, subangular and angular, moderate sorting; very rare glauconite; garnet; feldspar.
- 715-725 Sand - light olive gray (5y 6/1); very sparse clay; medium to coarse, subangular and angular, moderately well sorted; very rare glauconite; rare shell fragments; garnet; feldspar; mica.

Logged by: J. K. Polzin
Sept. 24/5, 1980