

COMMONWEALTH OF VIRGINIA  
DEPARTMENT OF CONSERVATION AND ECONOMIC DEVELOPMENT

W#: 5053  
C#: 201

MAILING ADDRESS:

DIVISION OF MINERAL RESOURCES

OFFICE ADDRESS:

B 3667

JAMES L. CALVER, COMMISSIONER

McCormick Road

Charlottesville, VA 22903

WATER WELL COMPLETION REPORT

Charlottesville, Virginia

OWNER: Thomas Arnest Mailing Address: Rt. 1, Box 430 Hague, Va.

TENANT: same Mailing Address: \_\_\_\_\_

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

WELL LOCATION: County Westmoreland Approx. 0.3 feet South (direction) of  
on St. Rd. 612 from junction of St. Rds.  
612 & 626 and 1000 feet West (direction) of St. Rd. 612

(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: January 30, 1976

TYPE OF DRILL RIG USED: rotary TOTAL DEPTH 340' feet

WATER LEVEL: Stands 124 feet below surface OR

has NATURAL flow of -- gallons per minute.

YIELD TEST: Method air

Drawdown 76 feet

Rate 20 gal. per min.

Duration 48 hrs., -- min.

WATER ZONES: from - to - feet

from - to - feet

from 320 to 330 feet

WATER: Color \_\_\_\_\_ Taste \_\_\_\_\_

Odor \_\_\_\_\_ Temp. \_\_\_\_\_ °F

WELL TO SUPPLY: (check one) Home \_\_\_\_\_

Farm \_\_\_\_\_ Town \_\_\_\_\_ School \_\_\_\_\_

Industry \_\_\_\_\_ Other oyster housr

WATER ANALYSIS AVAILABLE: Yes \_\_\_\_\_ No X

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: \_\_\_\_\_

HOLE SIZE: 6 1/4 inches from 0 to 252 feet

3 7/8 inches from 252 to 340 feet

\_\_\_\_\_ inches from \_\_\_\_\_ to \_\_\_\_\_ feet

SCREEN SIZE: \_\_\_\_\_ inches from \_\_\_\_\_ to \_\_\_\_\_ feet

2 inches from 320 to 330 feet

\_\_\_\_\_ inches from \_\_\_\_\_ to \_\_\_\_\_ feet

CASE SIZE: 4 inches from 0 to 252 feet

2 inches from 252 to 320 feet

2 inches from 330 to 340 feet

GROUTING: Method none: drilled and cased  
thru more than 100' of unconsolidated formations

Material \_\_\_\_\_ Depth \_\_\_\_\_ feet

PUMP: Type Myers - Submersible

Model # SGK 1521-15C

Capacity 20 gal per min  
at 200'

Depth of intake 231 feet

# LOG

FURNISHED BY: Douglas Drilling Co., Inc.

DATE: January 30, 1976

DEPTH (feet)		TYPE OF ROCK OR SOIL PENETRATED (gravel, clay, etc., hardness, color, etc.)	REMARKS (water, caving, shot, screen, sample, etc.)
FROM	TO		
0'	approx.	10' tan/red, gravel and sand	
10	"	20' red sandy clay	
20'	"	50' sandy with tan & yellow clays	
50'	"	75' sand	
75'	"	85' sand with grey clay	
85'	"	125' grey clay	
125'	"	135' grey sand	
135'	"	170' grey clay with trace creamy shell	
170'	"	270' grey clay	
270'	"	293' grey clay with creamy shell -- crusty at 277'	
293'	"	294' rock	
294'	"	304' black sand with some clay	
304'	"	305' rock	
305'	"	313' crusty, black sand, creamy shell, grey clay	
313'	"	314' rock	
314'	"	334' grey sand	screen, water 320 - 330'
334'	"	340' clay	

(Use additional forms if necessary)



OWNER: Thomas Arnest  
DRILLER: Douglas Drilling Co.  
COUNTY: Westmoreland  
(Machodoc)

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TOTAL DEPTH: 340'  
QUAD.: Machodoc

GEOLOGIC LOG

Depth  
(feet)

- 0 - 10 Sand - grayish orange, slightly clayey; medium grained to granular, some fine grains, 7% pebbles; subangular to subrounded; poorly sorted; quartz; feldspar; some opaques.
- 10 - 21 Sand and granules - grayish orange; slightly clayey; medium to coarse grained, 40% granules, 15% pebbles; subangular to subrounded; poorly sorted; quartz; feldspar; some opaques.
- 21 - 31 Sand - dusky yellow; moderate clay; medium to coarse grained, 5% granules, few pebbles; subangular to subrounded; moderately well sorted; quartz; feldspar; 5% ferricrete; few opaques.
- 31 - 42 Sand - pale yellowish orange; moderate clay; medium to coarse grained, 5% granules; subangular to subrounded; moderately well sorted; quartz; feldspar; some opaques; some ferricrete.
- 42 - 52 As above except grayish orange; 15% granules; few fragments of ferricrete.
- 52 - 63 As above plus few grains of glauconite.
- 63 - 73 Sand - grayish orange; slightly clayey; medium grained to granular, few pebbles; subangular to subrounded; poorly sorted; quartz; feldspar; some opaques; some ferricrete.
- 73 - 83 Sand - light olive gray; abundant clay - light olive gray, grayish orange; medium to coarse grained, some granules; subangular to subrounded; moderately well sorted; quartz; feldspar; few opaques; muscovite.
- 83 - 93 Clay and sand - light olive gray; abundant clay; moderate sand; medium to coarse grained, 3% granules; subangular to subrounded; moderately sorted; quartz; few opaques; feldspar; glauconite; muscovite.
- 93 - 104 As above plus some fine grains, few granules.
- 104 - 114 As above except no opaques; no feldspar.
- 114 - 125 Sand - light olive gray; moderate clay; fine to coarse grained, some granules; subangular to subrounded; moderately sorted; quartz; few flakes of muscovite; glauconite.

Depth  
(feet)

- 125 - 135 As above except fine to medium grained, some coarse grains; moderately well sorted.
- 135 - 146 Sand and clay - light olive gray; moderate clay; abundant sand; fine to medium grained, some coarse grains, few granules; subangular to subrounded; moderately well sorted; quartz; some shell fragments; few gypsum crystals; few black phosphatic fragments.
- 146 - 156 Clay and sand - light olive gray; abundant clay; moderate sand; fine grained, some medium grains, few granules; subangular to subrounded; moderately well sorted; quartz; 3% shell fragments; few black phosphatic fragments; glauconite; gypsum; muscovite.
- 156 - 166 As above except no black phosphatic material.
- 166 - 176 Sand - yellowish gray; fine grained, some medium grains; subangular to subrounded; well sorted; quartz; few shell fragments; few black phosphatic fragments.
- 176 - 187 As above.
- 187 - 197 As above except some shell fragments; few grains of glauconite.
- 197 - 208 Sand and clay - yellowish gray; moderate clay; abundant sand; fine to coarse grained; subangular to subrounded; moderately sorted; quartz; some shell fragments; few grains of glauconite.
- 208 - 218 As above except light olive gray; few black phosphatic fragments.
- 218 - 229 As above except few shell fragments.
- 229 - 249 No sample.
- 249 - 259 Clay - light olive gray; abundant sand; medium to coarse grained, some fine grains, few granules; subangular to subrounded; moderately sorted; quartz; some shell fragments; some black phosphatic material; few grains of glauconite; few echinoid spines, foram.
- 259 - 270 Sand - light olive gray; moderate clay; medium to coarse grained, few granules; subangular to subrounded; moderately well sorted; quartz; 15% shell fragments; some black phosphatic material; some glauconite; few gypsum crystals.
- 270 - 280 Sand - light olive gray; fine to medium grained, some coarse grains; subangular to subrounded; moderately well sorted; quartz; 7% glauconite, 2% shell fragments; forams scarce (inc. Robulus); ostracode. (washed sample only).

Depth  
(feet)

- 280 - 291 Sand - light olive gray; slightly clayey; medium to coarse grained; subangular to rounded; moderately well sorted; quartz; 15% glauconite; 3% shell fragments; few black phosphatic fragments; pyrite.
- 291 - 340 No sample.

Logged by: Michael T. Currie  
May 14, 1979

OWNER: Thomas Arnest

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GEOLOGIC SUMMARY

<u>Depth</u> <u>(feet)</u>	<u>Thickness</u> <u>(feet)</u>	<u>Rock Unit</u>	<u>Time Rock Unit</u>
0- 83	83	Columbia Group	Pleistocene
83-135	52	Choptank Formation	Miocene
135-229	94	Calvert Formation	Miocene
229-249	20	No Sample	
249-291	42	Nanjemoy-Aquia Formation	Eocene
291-340	49	No Sample	

VIRGINIA DIVISION OF MINERAL RESOURCES

David A. Hubbard, Jr., Geologist

June 29, 1979