

COMMONWEALTH OF VIRGINIA
DEPARTMENT OF CONSERVATION AND ECONOMIC DEVELOPMENT

VDMR: 2105
WWCR: 176

MAILING ADDRESS:

DIVISION OF MINERAL RESOURCES

OFFICE ADDRESS:

3667
Charlottesville, VA 22903

JAMES L. CALVER, COMMISSIONER

McCormick Road
Charlottesville, Virginia

WATER WELL COMPLETION REPORT

OWNER: Hedgerow Water Corporation Mailing Address: _____

TENANT: _____ Mailing Address: _____

DRILLER: R. L. Magette Drilling Co. Mailing Address: Smithfield, Va.

WELL LOCATION: County Nansemond Approx. _____ feet miles _____ (direction) - of _____
Near Churchland and _____ feet miles _____ (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: October 1, 1967 DATE COMPLETED: October 28, 1967

TYPE OF DRILL RIG USED: Rotary TOTAL DEPTH 580 feet

WATER LEVEL: Stands 30 feet below surface OR

has NATURAL flow of _____ gallons per minute.

YIELD TEST: Method Pump

Drawdown 120 feet

Rate 700 gal. per min.

Duration _____ hrs., _____ min.

WATER ZONES: from 530 to 550 feet

from 560 to 580 feet

from _____ to _____ feet

WATER: Color _____ Taste _____

Odor _____ Temp. _____ °F

WELL TO SUPPLY: (check one) Home _____

Farm _____ Town _____ School _____

Industry _____ Other Subdivision

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.)

MARKS: * packed w/pea gravel; 8" x 6" bushing @ 275', ball plug @ 580'

Electric Log by driller

HOLE SIZE: 20 inches from 0 to 50 feet

15 1/2 inches from 50 to 520 feet

* 36 inches from 520 to 580 feet

SCREEN SIZE: 6 inches from 530 to 550 feet

6 inches from 560 to 580 feet

_____ inches from _____ to _____ feet

CASE SIZE: 16 inches from 0 to 50 feet

8 inches from 0 to 275 feet

6 inches from 275 to 580 feet

GROUTING: Method poured

Material cement Depth 50 feet

PUMP: Type _____

Capacity _____ gal. per min

Depth of intake _____ feet

LOG

FURNISHED BY: R. L. Magette

DATE: February 1968

DEPTH (feet)		TYPE OF ROCK OR SOIL PENETRATED (gravel, clay, etc., hardness, color, etc.)	REMARKS (water, caving, shot, screen, sample, etc.)
FROM	TO		
1	6	fine brown sand	
6	20	fine gray "	
20	30	" " " and trace of shell	
30	63	coarse shell and fine gray sand	
63	120	fine brown sand and trace of shell	
120	255	medium shell, fine sand and trace of shell	
225	380	hard clay and shell	
380	485	hard clay and trace of shell and sand	
485	500	brown sand and trace of shell	
500	530	black and white sand	
530	580	coarse white and black sand and trace of clay	

(Use additional forms if necessary)

INTERVAL SHEET

WWCR 176

Page 1 of 1

VDMR Well No: 2105

Date rec'd: 2/9/68

Sample Interval: from 20' to: 580'

PROP: Hedgerow Water Corp.

Number of samples: 29

COMP: R. L. Magette

Total Depth: 580'

COUNTY: Nansemond (Churchland)

Oil or Gas: Water: Exploratory:

From-To	From-To	From-To	From-To
20 -	-	-	-
40 -	-	-	-
60 -	-	-	-
80 -	-	-	-
100 -	-	-	-
120 -	-	-	-
140 -	-	-	-
160 -	-	-	-
180 -	-	-	-
200 -	-	-	-
220 -	-	-	-
240 -	-	-	-
260 -	-	-	-
280 -	-	-	-
300 -	-	-	-
320 -	-	-	-
340 -	-	-	-
360 -	-	-	-
380 -	-	-	-
400 -	-	-	-
420 -	-	-	-
440 -	-	-	-
460 -	-	-	-
480 -	-	-	-
500 -	-	-	-
520 -	-	-	-
540 -	-	-	-
560 -	-	-	-
580 -	-	-	-
-	-	-	-

All intervals have both washed and unwashed samples

OWNER: Hedgerow Water Corporation
DRILLER: R. R. Magette Drilling Co.
COUNTY: Nansemond (Churchland)

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TOTAL DEPTH: 580'

GEOLOGIC LOG

Depth in
feet

YORKTOWN FORMATION (0-380') Top of formation defined on basis of other information.

- 20 Clay and Sand - 50% dark-gray, sand-free, slightly-pyritic clay, with abundant carbonaceous material and plant fragments; 50% medium, fairly well-sorted, angular to subrounded sand; minor glauconite, goethite after glauconite, feldspar, magnetite; trace of epidote; trace of shell fragments
- 40 Sand - gray, moderately clayey, 5% shell fragments; medium- to coarse-grained, moderately sorted, angular to rounded; slightly feldspathic; minor glauconite; clay is moderately carbonaceous; accessory epidote, garnet, tourmaline, kyanite, and iron ores
- 60 Sand - tan, very slightly clayey, 20% shell fragments; medium, fairly well-sorted, subangular to rounded; slightly feldspathic and glauconitic; minor muscovite, epidote, magnetite, garnet and rutile; echinoid spines common; very few foraminifers
- 80 Sand - tan, clean, 10% shell fragments; fine- to medium-grained, moderately sorted, angular to subrounded; slightly feldspathic; very slightly glauconitic; varied assemblage of accessory minerals; trace of plant material
- 100 Sand - light-brown, slightly clayey, 10-15% shell fragments; fine- to coarse-grained, moderately sorted, subangular to rounded; slightly glauconitic; feldspar common in coarser fraction; accessory magnetite
- 120 Sand - greenish-gray, slightly clayey, 10% shell fragments; fine- to medium-grained, fairly well-sorted, angular to subrounded; slightly feldspathic and glauconitic; varied assemblage of accessory minerals
- 140 Sand - gray, slightly clayey; medium to very coarse-grained, moderately sorted; subrounded quartz and bioclasts with 25% shell fragments larger than 2 mm; quartz is concentrated in medium and coarse fractions; minor feldspar and partially decomposed glauconite; forams and ostracods common, but not abundant; echinoid spines abundant

- 160 Sand - greenish-gray, moderately clayey, 25% pelecypod shell fragments; fine- to medium-grained, fairly well-sorted, subangular; 5% glauconite; much of quartz has greenish cast; very few foraminifers
- 180 " fine- to coarse-grained; very slightly glauconitic
- 200 Sand and Shell - greenish-gray, moderately clayey; 50% coarse pelecypod shell fragments; 50% fine- to medium-grained, fairly well-sorted, angular to subangular quartz sand; very slightly glauconitic; a few foraminifers, including textularids
- 220 Sand - greenish-gray, very clayey, 5% shell fragments; fine-grained, fairly well-sorted, angular to subangular; very slightly glauconitic; a few plant fragments; foraminifers common, but not abundant
- 240 Sand and Shell - gray, moderately clayey to clayey; 30% pelecypod and echinoid shell debris; 70% fine, angular, very slightly glauconitic sand; a few foraminifers, ostracods, plant fragments, and spores
- 260 " 20% shell fragments
- 280 " 20% shell fragments
- 300 Sand - light grayish-brown, slightly clayey; a few shell fragments; medium- to coarse-grained, well-sorted, subrounded; slightly feldspathic; abundant and varied accessory mineral assemblage
- 320 Sand - gray, moderately clayey, a few shell fragments; medium- to coarse-grained, fairly well-sorted, angular to subrounded; slightly feldspathic; abundant and varied assemblage of accessory minerals; plant fragments common; very few foraminifers
- 340 Sand - gray, moderately clayey, a few shell fragments; medium- to coarse-grained, fairly well-sorted, angular to subrounded; slightly feldspathic; abundant and varied assemblage of accessory minerals; plant fragments common; very few foraminifers
- 360 " "
- CALVERT FORMATION (380-435')
- 380 Clay - greenish-brown, sand-free, uniformly silty clay; plant fragments common

- 400 Clay - greenish-gray, compact, uniformly silty, 5% shell fragments; abundant plant fragments and spores; foraminifers common, but not abundant
- 420 Sand - moderately abundant matrix of greenish-gray clay, a few granules and shell fragments; fine- to very coarse-grained, fairly well-sorted (Skewed coarse), angular to rounded; clear quartz with 5% brownish fragmental-to-nodular phosphorite; few foraminifers

MATTAPONI FORMATION (435-510') Top of formation defined on basis of other information.

- 440 Clay - gray to greenish-gray, very sandy, a few shell fragments; sand is medium, moderately sorted, poorly rounded; moderately glauconitic (about 20% of sand fraction); minor phosphorite and feldspar; a few fragments are calcitic, glauconitic sandstone; foraminifers common
- 460 Sand - gray, clayey, a few shell fragments; fine- to very coarse-grained, poorly sorted, variably rounded; 15% glauconite; minor feldspar, pyrite, earthy hematite, phosphorite; a few foraminifers (Dentalina, Robulus, globigerinids)
- 480 " "
- 500 " "

TRANSITIONAL BEDS (510-580') Top of formation defined on basis of other information.

- 520 Clay - gray and greenish-gray, locally reddish-brown, very sandy, 10% granule gravel; sand is fine- to very coarse-grained, poorly sorted; 10% glauconite; feldspathic in coarser grades; minor pyrite and phosphorite; rock fragments common; a very few foraminifers
- 540 Sand and Gravel - slightly clayey; 65% fine (2-6 mm), well-sorted, quartzo-feldspathic gravel; 35% fine- to very coarse-grained, poorly sorted, feldspathic, slightly glauconitic sand; authigenic, cementing pyrite relatively abundant; minor muscovite
- 560 " "
- 580 " 80% gravel, 20% sand

GEOLOGIC SUMMARY

	<u>Rock Unit</u>	<u>Age</u>
0-380'	Yorktown Formation	Miocene
380-435'	Calvert Formation	Miocene
435-510'	Mattaponi Formation	Paleocene - Late Cretaceous
510-580'	Transitional beds	Late Cretaceous

Virginia Division of Mineral Resources
Robert H. Teifke, Geologist
March 8, 1968
Robert H. Teifke
March 6, 1972

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Rate 700 gal. per min.

Duration hrs., min.

WATER ZONES: from 530 to 550 feet

from 560 to 580 feet

from to feet

WATER: Color Taste

Odor Temp. °F

WELL TO SUPPLY: (check one) Home

Farm Town School

Industry Other Subdivision

WATER ANALYSIS AVAILABLE: Yes No X

DRILL CUTTINGS SAVED: Yes X No

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EL. : 15'

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coquina
glauconite

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