

COMMONWEALTH OF VIRGINIA  
DEPARTMENT OF CONSERVATION AND ECONOMIC DEVELOPMENT

W-3119  
C-151  
OFFICE ADDRESS:  
McCormick Road  
Charlottesville, Virginia

MAILING ADDRESS: DIVISION OF MINERAL RESOURCES  
Box 3667  
James L. Calver, Commissioner  
Charlottesville, VA 22903

**WATER WELL COMPLETION REPORT**

OWNER: H. & S. Realty Co., Mr. L. J. Duggan Mailing Address: Tappahannock, Virginia

TENANT: Gwynnfield Subdivision Well #2 Mailing Address: Tappahannock, Va.

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

WELL LOCATION: County Essex Approx. 5 ~~feet~~ miles northwest (direction) of  
Tappahannock on Rt. 360 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: November 10, 1970 DATE COMPLETED: November 1970

TYPE OF DRILL RIG USED: Rotary TOTAL DEPTH 554 feet

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

YIELD TEST: Method drill rig  
Drawdown \_\_\_\_\_ feet  
Rate 20 gal. per min.  
Duration \_\_\_\_\_ hrs., \_\_\_\_\_ min.

WATER ZONES: from 528 to 548 feet  
from \_\_\_\_\_ to \_\_\_\_\_ 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 \_\_\_\_\_

DRILL CUTTINGS SAVED: Yes 52 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: 8 inches from 0 to 204 feet  
5 7/8 inches from 204 to 554 feet  
\_\_\_\_\_ inches from \_\_\_\_\_ to \_\_\_\_\_ feet

SCREEN SIZE: 3 inches from 528 to 548 feet  
\_\_\_\_\_ inches from \_\_\_\_\_ to \_\_\_\_\_ feet  
\_\_\_\_\_ inches from \_\_\_\_\_ to \_\_\_\_\_ feet

CASE SIZE: 6 inches from 0 to 204 feet  
3 inches from 204 to 528 feet  
3 inches from 548 to 554 feet

GROUTING: Method tremie pipe  
Material cement Depth 100 feet

PUMP: Type \_\_\_\_\_  
Capacity \_\_\_\_\_ gal. per min.  
Depth of intake \_\_\_\_\_ feet

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

INTERVAL SHEET

Page 1 of 1  
 Date rec'd: 12/21/70 ; processed 4/2/71  
 PROPERTY: L. J. Duggan  
 (Gwynnfield Sub. #2)  
 COMPANY: Douglas & Dickinson, Inc.  
 COUNTY: Essex (Tappahannock)

C-151  
 Well Repository No: 3119  
 Sample Interval; from 0 to: 547'  
 Number of samples: 52  
 Total Depth: 554'  
 Oil or Gas: Water; \*Exploratory:

From-To	From-To	From-To	From-To
0 - 10	263 - 274	526 - 536	-
10 - 21	274 - 284	536 - 547	-
21 - 31	284 - 295	-	-
31 - 42	295 - 305	-	-
42 - 52	305 - 316	-	-
52 - 63	316 - 326	-	-
63 - 73	326 - 337	-	-
73 - 84	337 - 347	-	-
84 - 94	347 - 358	-	-
94 - 106	358 - 368	-	-
106 - 116	368 - 379	-	-
116 - 127	379 - 389	-	-
127 - 137	389 - 400	-	-
137 - 148	400 - 410	-	-
148 - 158	410 - 421	-	-
158 - 169	421 - 431	-	-
169 - 179	431 - 442	-	-
179 - 190	442 - 452	-	-
190 - 200	452 - 463	-	-
200 - 211	463 - 473	-	-
211 - 221	473 - 484	-	-
221 - 232	484 - 494	-	-
232 - 242	494 - 505	-	-
242 - 253	505 - 515	-	-
253 - 263	515 - 526	-	-

All intervals have both washed and unwashed samples

(Gwynefield Sub. #2)  
OWNER : L. G. Duggan  
DRILLER: Douglas and Dickinson  
COUNTY : Essex (Tappahannock)

W# : 3119  
C# : 151  
TOTAL DEPTH: 554'  
QUAD : Mount Landing

GEOLOGIC LOG

Depth  
(feet)

- 0-10 Sand- grayish-orange, light brown; slightly clayey; some silt; fine to coarse with some very coarse and granular grains, a few pebbles; subangular; poorly sorted; quartz; feldspar; some opaques; few grains of glauconite.
- 10-21 Silt, sand, and gravel- yellowish-gray, olive gray; clayey; very fine to medium with coarse to very coarse grains and 30% gravel; subangular; moderately sorted; quartz; feldspar; few opaques; few grains of glauconite.
- 21-31 Clay and silt- light olive gray, olive gray; abundant sand, fine to medium with some coarse grains, a few pebbles; subangular to subrounded; moderately sorted; quartz; some lignite; some phosphatic material.
- 31-42 Clay- yellowish-gray; assorted sands from fine to coarse grained; quartz; muscovite; diatoms; lignite.
- 42-52 As above with diatoms more plentiful and forams common (inc. Nonion, Bulimina, Textularia, Robulus, and Globigerina).
- 52-63 Sand and clay- light olive gray; abundant clay; abundant sand; fine grained; subangular; very well sorted; quartz; 5% phosphatic material; muscovite; forams (inc. Textularia); spines; diatoms.
- 63-73 Sand and clay- light olive brown; silty; fine grained; very well sorted; quartz; phosphatic material; muscovite; forams (inc. Bulimina).
- 73-84 Sand- olive light gray; moderate clay; fine to coarse grained; subangular to subrounded; poorly sorted; quartz; 5% phosphatic material; forams (inc. Bulimina, Nonion, Cibicides?, Pyruclina, Uvigerina?, and Bolivina?); spines; few flakes of muscovite.
- 84-94 Sand- olive light gray; moderate clay; medium with some fine and coarse grains; subangular to subrounded; moderately well sorted; quartz; 3% shell fragments; some phosphatic material; spines; forams (inc. Nonion); few grains of glauconite; lignite.

(Gwynefield Sub. #2)

OWNER: L. G. Duggan

W#: 3119

Depth  
(feet)

- 94-106 Sand- light olive gray; abundant clay; fine to medium with some coarse grains; subangular to subrounded; moderately sorted; quartz; 10% shell fragments; 6% glauconite; forams common (inc. Uvigerina, Discorbis, Textularia, Globigerina, Guttulina, and Lagena?); spines; few phosphatic fragments.
- 106-116 Sand and limestone- light olive gray; slightly clayey; medium to coarse with some very coarse grains; subangular to rounded; poorly sorted; quartz; sandy limestone fragments; 20% glauconite; 5% shell fragments; forams (inc. Uvigerina, Bolivina, and Buccella); spines; ostracode.
- 116-127 Sand- light olive gray; slightly clayey; medium to coarse grained; subangular to rounded; moderately sorted; quartz; 30% glauconite; 15% sandy limestone fragments; 5% shell fragments; spines; forams.
- 127-137 Sand- light olive gray; moderately clayey; medium to coarse grained; subangular to rounded; moderately sorted; quartz; 22% glauconite; 15% sandy limestone fragments; 3% shell fragments; forams (inc. Rotalia); spines.
- 137-148 Sand- light olive gray; moderate clay; fine to coarse with some very coarse grains; subangular to rounded; moderately sorted; quartz; 30% glauconite; 10% sandy limestone and shell fragments; forams (inc. Rotalia and Nonion); spines; ostracode.
- 148-158 Sand- light olive gray; slightly clayey; medium to coarse with some fine grains; subrounded to rounded; moderately well sorted; quartz; 40% glauconite; 20% sandy limestone fragments; spines; forams (inc. Uvigerina); ostracodes.
- 158-169 Sand- light olive gray; abundant clay; fine to coarse grained; subangular to rounded; moderately sorted; quartz; 15% glauconite; 3% sandy limestone fragments; muscovite common; forams (inc. Cibicides and Guttulina); spines; ostracodes.
- 169-179 As above except forams (inc. Nodosaria and Robulus?).
- 179-190 Sand- olive light gray; moderate clay; fine to coarse grained; subangular to rounded; poorly sorted; quartz; 25% glauconite (black and green); muscovite; forams (inc. Robulus? and Guttulina); spines.

(Gwynefield Sub. #2)

OWNER: L. G. Duggan

W#: 3119

Depth  
(feet)

- 190-200 Sand- olive light gray to olive gray; moderate clay; fine to coarse with some very coarse grains; rounded; moderately well sorted; quartz; 45% glauconite (black and green); some shell and sandy limestone fragments; muscovite; spines; forams; ostracodes; diatom.
- 200-211 Sand- olive light gray; abundant clay; some silt; fine to coarse with some very coarse grains; rounded; moderately well sorted; quartz; 45% glauconite; muscovite abundant; some sandy limestone fragments; spines; forams; ostracodes; few shell fragments.
- 211-221 As above except 50% glauconite; a few sandy limestone fragments.
- 221-232 Clay and sand- light olive gray; moderate to abundant clay; moderate to abundant sand; very fine to coarse grained; rounded; moderately well sorted; quartz; glauconite; muscovite; forams.
- 232-242 Clay and sand- light olive gray, grayish-orange-pink; very fine to coarse grained; rounded; moderately sorted; quartz; glauconite; muscovite.
- 242-253 Sand- olive light gray and olive gray; slightly clayey; few grayish-orange-pink clasts; medium to coarse grained, few very coarse and granular grains; rounded; moderately well sorted; quartz; 47% glauconite (black, green, and brown); few flakes of muscovite; few shell fragments; spines.
- 253-263 Clay and sand- grayish-orange-pink, olive light gray; pure to slight clay; up to abundant sand; fine to coarse grained; rounded; moderately sorted; quartz; glauconite 47% of sand; few flakes of muscovite.
- 263-274 As above except sand and clay; 40% glauconite.
- 274-284 Sand- salt and pepper olive gray; few grayish-orange-pink clay clasts; slightly silty; medium with some coarse grains; rounded; well sorted; quartz; 40% glauconite (black, green, and brown).
- 284-295 Sand and clay- salt and pepper olive gray, light olive gray, and grayish-orange-pink clasts; slightly clayey; clay clasts; medium to coarse grained; rounded; moderately sorted; quartz; 45% glauconite (black, green, and brown).
- 295-305 Sand- salt and pepper olive gray; slightly clayey; medium to coarse grained; rounded; moderately sorted; quartz; 42% glauconite (black, green, and brown); a spine; a Nodosaria foram.

(Gwynefield Sub. #2)

OWNER: L. G. Duggan

W#: 3119

Depth  
(feet)

- 305-316 Sand- salt and pepper olive gray; moderately clayey; includes some grayish-orange-pink clasts; fine to coarse grained; rounded; moderately sorted; 50% glauconite (black, green, and brown); quartz; 2% shell fragments; forams (inc. Nodosaria and Globigerina); spines.
- 316-326 Clay and sand- grayish-orange-pink, olive light gray; fine to coarse grained; rounded; moderately sorted; quartz; 40% glauconite; few shell fragments; forams (inc. Nodosaria and? Dentalina); few flakes of muscovite; spines.
- 326-337 Sand- olive light gray; moderate clay, few grayish-orange-pink clasts; silt; fine to medium with some coarse grains; quartz; 30% glauconite (black, green, and brown); 30% forams (inc. Cibicides, Nonion, Guttulina, Globigerina, and Nodosaria); some muscovite; ostracodes; spines.
- 337-347 Clay- grayish-orange-pink, olive light gray; up to moderate sand; fine to coarse grained; rounded; quartz; glauconite (black, green, and brown); forams common; muscovite.
- 347-358 Sand and clay- light olive gray, grayish-orange-pink; pure to slight clay; up to abundant sand; medium to coarse grained; subangular to subrounded; moderately sorted; quartz; feldspar; 7% glauconite; muscovite; forams.
- 358-368 Sand- dusky yellow, grayish-orange-pink, light olive gray; slightly clayey with 7% clay clasts; medium to coarse grained; subangular to subrounded; quartz; feldspar; 6% glauconite; muscovite; foram; pyrite.
- 368-379 Clay- light olive gray, grayish-orange-pink, grayish olive; up to moderate sand; medium to coarse grained; subangular to subrounded; quartz; feldspar; glauconite; muscovite; phosphatic pebble.
- 379-389 Sand- yellowish-gray; few clay clasts, light olive gray, grayish-orange-pink, grayish-orange; medium to coarse with some very coarse grains; subangular to subrounded; moderately sorted; quartz; feldspar; 5% glauconite; garnet; few books of muscovite.
- 389-400 Sand- light olive gray; slightly clayey; clasts of grayish-orange-pink; coarse to very coarse, some medium and granular grains; subangular to subrounded; moderately sorted; quartz; feldspar; 2% glauconite; garnet; a pyrite grain; foram (Dentalina).

(Gwynefield Sub. #2)

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W#: 3119

Depth  
(feet)

- 400-410 Sand and clay- light olive gray, grayish-orange-pink; moderate to pure clay; up to abundant sand; medium to coarse with some fine grains; subangular to rounded; poorly sorted; quartz; 10% glauconite; feldspar; forams; muscovite; few shell fragments.
- 410-421 As above.
- 421-431 Clay- light olive gray, grayish-orange-pink; slightly sandy, assorted sizes of quartz, glauconite, and feldspar grains; some muscovite.
- 431-442 Sand and clay- light olive gray, grayish-orange-pink; slight to pure clay; up to abundant sand; fine to medium with some coarse grains; quartz; glauconite 20%; forams common; muscovite; feldspar; a phosphatic pebble.
- 442-452 Clay and sand- pale yellowish-brown, grayish-orange-pink; abundant to pure clay; silty; moderately sandy; fine to medium with some coarse grains; subangular to subrounded; quartz; glauconite; feldspar; muscovite; forams.
- 452-463 As above.
- 463-473 As above except very fine to fine with some medium grains.
- 473-484 Sand- pale yellowish-brown; abundant clay; silty; very fine to fine with some medium grains; subangular; moderately well sorted; quartz; 7% glauconite; forams; muscovite.
- 484-494 Sand- pale yellowish-brown; abundant clay, some clasts; very fine to medium with some coarse grains; subangular to subrounded; moderately sorted; quartz; glauconite 6%; forams; some muscovite.
- 494-505 As above.
- 505-515 As above.
- 515-526 Sand- yellowish-gray; some silt; medium to coarse grained; subangular to subrounded; moderately well sorted; quartz; feldspar; some muscovite; few grains of glauconite.
- 526-536 As above.

(Gwynefield Sub. #2)

OWNER: L. G. Duggan

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Depth  
(feet)

536-547 As above except some glauconite; a few books of muscovite.

547-554 No sample.

Logged by: David A. Hubbard  
September 10, 1979



OWNER: L. J. Duggan (Gwynnfield #2)  
DRILLER: Douglas & Dickinson, Inc.  
COUNTY: Essex (Tappahannock)

VDMR # 3119  
WWCR # 151  
TOTAL DEPTH: 554'

GEOLOGIC SUMMARY

<u>Depth (feet)</u>	<u>Rock Unit</u>	<u>Age</u>
0-42	Columbia Group	Pleistocene
42-63	Yorktown and St. Marys formations	Late Miocene
63-211	Calvert Formation	Middle Miocene
211-340	Nanjemoy Formation	Middle Eocene
340-463	Mattaponi Formation	Paleocene
463-547	Patuxent Formation	Early Cretaceous
547-554	No sample	-

Virginia Division of Mineral Resources  
Robert H. Teifke - Geologist  
April 19, 1971