

COMMONWEALTH OF VIRGINIA
DEPARTMENT OF CONSERVATION AND ECONOMIC DEVELOPMENT

W-4827
C-220

MAILING ADDRESS:

Box 3667
Charlottesville, VA 22903

DIVISION OF MINERAL RESOURCES

JAMES L. CALVER, COMMISSIONER

OFFICE ADDRESS:

McCormick Road
Charlottesville, Virginia

WATER WELL COMPLETION REPORT

OWNER: Narox, Incorporated Well #3 Mailing Address: P.O. Box 339 Hopewell, Virginia 23860

TENANT: _____ Mailing Address: P.O. Box 27186

DRILLER: Sydnor Hydrodynamics, Incorporated Mailing Address: Richmond, Virginia 23261

WELL LOCATION: County Chesterfield Approx. 1 1/4 ^{feet}/_{miles} nort h (direction) of
Route 10 and 80 ^{feet}/_{miles} east (direction) of Route 827

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

DATE STARTED: January 31, 1977 DATE COMPLETED: February 16, 1977

TYPE OF DRILL RIG USED: Rotary TOTAL DEPTH 260 feet

WATER LEVEL: Stands 43'7" feet below surface OR
has NATURAL flow of _____ gallons per minute.

YIELD TEST: Method Pump HOLE SIZE: 12 1/4 inches from 0 to 260 feet
Drawdown 52'7" feet _____ inches from _____ to _____ feet
Rate 200 gal. per min. _____ inches from _____ to _____ feet
Duration 24 hrs., _____ min.

WATER ZONES: from _____ to _____ feet
from _____ to _____ feet
from _____ to _____ feet
SCREEN SIZE: 6 inches from 120 to 135 feet
6 inches from 166 to 186 feet
6 inches from 199 to 204 feet
6 inches from 214 to 224 feet

WATER: Color _____ Taste _____
Odor _____ Temp. _____ °F
CASE SIZE: _____ inches from _____ to _____ feet
8 inches from +2 to 120 feet
6 inches from 135 to 166 feet
6 inches from 186 to 199 feet
6 inches from 204 to 214 feet
6 inches from 224 to 230 feet

WELL TO SUPPLY: (check one) Home _____
Farm _____ Town _____ School _____
Industry Other _____
GROUTING: Method yes
Material _____ Depth 50 feet

WATER ANALYSIS AVAILABLE: Yes No _____
by: Froehling and Roberts
DRILL CUTTINGS SAVED: Yes 28 No _____
Depth of intake _____ feet

(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: Type of logs: electric and gamma.

LOG

FURNISHED BY: C.P. Brooken
2111 Magnolia Street
Richmond, Virginia 23223

DATE: _____

DEPTH (feet)		TYPE OF ROCK OR SOIL PENETRATED (gravel, clay, etc., hardness, color, etc.)	REMARKS (water, caving, shot, screen, sample, etc.)
FROM	TO		
0	10	Brown clay	
10	20	Hard yellow clay	
20	30	Brown clay with streaks of sand	
30	40	Coarse sand and gravel, some clay	
40	50	Coarse brown sand and gravel	
50	60	Brown clay and gravel	
60	100	Hard sand and gravel	
100	120	Gravel with thin layers of white clay	
120	130	Coarse sand, gravel and clay	
130	140	Gravel with layers of sand clay	
140	150	Green sand clay and gravel	
150	160	Green white clay with some gravel	
160	180	Gravel, sand with thin layers of clay	
180	190	Coarse gray sand	
190	210	Coarse sand with streaks of gray clay	
210	220	Gray clay, sand and gravel	
220	230	Gray clay, coarse sand and gravel	
230	240	Gray clay with streaks of sand and gravel	
240	250	Gray and red clay with sand and gravel	
250	260	Gray clay with streaks of rock	

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

INTERVAL SHEET

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Date rec'd: 4/26/77 Date Processed: 8/3/77

PROPERTY: Narox, Inc.

COMPANY: Sydnor Hydrodynamics

COUNTY: Chesterfield
 (Bermuda Hundred)

Well Repository No: W# 4827
 C# 220

Sample Interval: from: to:
 0 260

Number of samples: 26

Total Depth: 260'

Oil or Gas: Water: Exploratory:

From-To	From-To	From-To	From-To
0 - 10	50 - 60	-	-
10 - 20	-	-	-
20 - 30	-	-	-
30 - 40	-	-	-
40 - 50	-	-	-
50 - 60	-	-	-
60 - 70	-	-	-
70 - 80	-	-	-
80 - 90	-	-	-
90 - 100	-	-	-
100 - 10	-	-	-
10 - 20	-	-	-
20 - 30	-	-	-
30 - 40	-	-	-
40 - 50	-	-	-
50 - 60	-	-	-
60 - 70	-	-	-
70 - 80	-	-	-
80 - 90	-	-	-
90 - 200	-	-	-
200 - 10	-	-	-
10 - 20	-	-	-
20 - 30	-	-	-
30 - 40	-	-	-
40 - 50	-	-	-

Washed & unwashed samples

OWNER: Narox, Inc.
DRILLER: Sydnor Hydrodynamics
COUNTY: Chesterfield
(Bermuda Hundred)

W#: 4827
C#: 220
TOTAL DEPTH: 260'
QUAD: Hopewell
ELEV: 47'

GEOLOGIC LOG

Depth
(feet)

- 0 - 10 Clay -- pale yellowish orange, very light gray; some very fine to medium grained sand; subangular to subrounded; moderately sorted; quartz; feldspar.
- 10 - 20 As above plus few grains of glauconite.
- 20 - 30 Sand -- dark yellowish orange; moderately stained; abundant clay; very fine to medium grained; subangular to subrounded; moderately sorted; quartz; feldspar; muscovite; few grains of glauconite.
- 30 - 40 Sand and gravel -- light olive brown; slightly clayey; medium grained to granular, 40% pebbles; angular to rounded; poorly sorted; quartz; 15% glauconite; some feldspar; few flakes of muscovite.
- 40 - 50 Sand -- dusky yellow; slightly clayey; coarse grained to gravel; subrounded; poorly sorted; quartz; feldspar; 2% glauconite; few flakes of muscovite.
- 50 - 60 As above.
- 60 - 70 Sand -- yellowish gray; slightly clayey; coarse grained to granular, 5% pebbles; subangular to subrounded; poorly sorted; quartz; feldspar; few grains of jasper.
- 70 - 80 Gravel -- yellowish gray; slightly clayey; abundant coarse to very coarse grained sand, 15% granules; angular to subangular; moderately sorted; quartz; feldspar; few grains of glauconite.
- 80 - 90 As above plus few grains of garnet.
- 90 - 100 Sand and gravel -- light gray; moderate clay - light gray, yellowish gray; coarse grained to granular, 50% pebbles; angular to subrounded; poorly sorted; quartz; feldspar, few flakes of muscovite.
- 100 - 110 As above plus few grains of garnet.
- 110 - 120 As above except abundant clay; some medium grains; few grains of glauconite.
- 120 - 130 Sand and gravel -- off white; slightly clayey; coarse grained to granular, 40% pebbles; angular to subrounded; poorly sorted; quartz; feldspar; few flakes of muscovite.
- 130 - 140 As above.

Depth
(feet)

- 140 - 150 As above except medium light gray; moderate clay; few grains of glauconite.
- 150 - 160 As above except off white.
- 160 - 160 Sand and gravel -- light olive gray; slightly clayey; coarse grained to granular, some medium grains, 50% pebbles; subangular to subrounded; poorly sorted; quartz; feldspar; some glauconite.
- 170 - 180 As above except angular to subrounded; few grains of garnet; muscovite.
- 180 - 190 Granules -- off white; moderate coarse to very coarse grained sand, 3% pebbles; subrounded; moderately well sorted; quartz; feldspar; few grains of glauconite; garnet.
- 190 - 200 Sand -- light olive gray; moderate clay; coarse grained to granular, 5% pebbles; subrounded; poorly sorted; quartz; feldspar; few grains of glauconite; garnet; muscovite.
- 200 - 210 As above except slightly clayey.
- 210 - 220 Sand and gravel -- medium light gray; moderate clay; coarse grained to granular, 40% pebbles, subangular to subrounded; poorly sorted; quartz; feldspar; few flakes of muscovite.
- 220 - 230 Sand -- medium light gray; moderate clay - medium light gray, pale yellowish orange; coarse grained to granular, 10% pebbles; subrounded; poorly sorted; quartz; feldspar; few grains of glauconite; muscovite.
- 230 - 240 As above except 5% pebbles.
- 240 - 250 Clay and sand -- multicolored; abundant clay - light brown, pale yellowish orange, medium gray, light olive gray, very light gray, light olive gray, very light gray; moderate sand; coarse grained to gravel; subrounded; poorly sorted; quartz; feldspar; few grains of glauconite; muscovite.
- 250 - 260 Sand -- dusky yellow; abundant clay; coarse grained to granular, some medium grains, some pebbles; subangular to subrounded; moderately sorted; quartz; feldspar; few grains of glauconite; garnet; muscovite.

Logged by: Michael T. Currie
December 26, 1978

OWNER: Narox, Inc.

W# 4827

GEOLOGIC SUMMARY

<u>Depth</u> (feet)	<u>Thickness</u> (feet)	<u>Rock Unit</u>	<u>Time Rock Unit</u>
0-30	30	Columbia Group	Pleistocene
30-40	10	Aquia → Manjemooy Formation	Eocene
40-260	220	Patuxent Formation	Cretaceous

VIRGINIA DIVISION OF MINERAL RESOURCES

David A. Hubbard, Jr., Geologist

December 28, 1978