

C 1 1297 SEQUENCE NO. (MDE USE ONLY)

STATE OF MARYLAND WELL COMPLETION REPORT

THIS REPORT MUST BE SUBMITTED WITHIN 45 DAYS AFTER WELL IS COMPLETED.

(THIS NUMBER IS TO BE PUNCHED IN COLS. 3-6 ON ALL CARDS)

COUNTY NUMBER

ST/CO USE ONLY DATE Received MM DD YY 03 23 12

DATE WELL COMPLETED MM DD YY 03 20 12 Depth of Well 22 500 26 (TO NEAREST FOOT)

PERMIT NO. FROM "PERMIT TO DRILL WELL" HO - 95 - 2106

OWNER Elm Street Development WELL SITE ADDRESS Long Corner Rd TOWN Mt Airy SUBDIVISION Chelsea Knolls SECTION LOT 11

WELL LOG Not required for driven wells

STATE THE KIND OF FORMATIONS PENETRATED, THEIR COLOR, DEPTH, THICKNESS AND IF WATER BEARING

Table with columns: DESCRIPTION, FEET (FROM, TO), check if water bearing. Rows include Soil, Brown shale, Med Gray Schist, Soft Gray Schist, Med Gray Schist, Well #1-450' (Dry), Well #2-300' (Dry), Well #3-300' (Dry), Well #4-300' (Dry), Well #5-300' (Dry), Well #6-500' (Dry). All Dry holes backfilled to 30' w/ dr. ll cuttings, then sealed with cement from 30' to grade.

GROUTING RECORD

WELL HAS BEEN GROUTED (Circle Appropriate Box) YES NO 44 44 TYPE OF GROUTING MATERIAL (Circle one) CEMENT CM BENTONITE CLAY BC NO. OF BAGS 7 NO. OF POUNDS 638 GALLONS OF WATER 42 DEPTH OF GROUT SEAL (to nearest foot) from 0 TOP 52 ft. to 20 BOTTOM 58 ft. (enter 0 if from surface)

CASING RECORD casing types insert appropriate code below ST STEEL CO CONCRETE PL PLASTIC OT OTHER

MAIN CASING TYPE PL Nominal diameter top (main) casing (nearest inch)! 6 Total depth of main casing (nearest foot) 20

OTHER CASING (if used) diameter inch depth (feet) from to PL 4.5 20 60

SCREEN RECORD screen type or open hole ST STEEL BR BRASS HO OPEN HOLE PL PLASTIC OT OTHER

DEPTH (nearest ft.) 1 Ho 60 500

SCREEN RECORD (continued) 2 23 24 26 30 32 36 3 38 39 41 45 47 51

SLOT SIZE 1 2 3 DIAMETER OF SCREEN (NEAREST INCH) 56 60

GRAVEL PACK IF WELL DRILLED WAS FLOWING WELL INSERT F IN BOX 68

MDE USE ONLY (NOT TO BE FILLED IN BY DRILLER) T (E.R.O.S.) W Q 70 72 74 75 76 TELESCOPE CASING LOG INDICATOR OTHER DATA

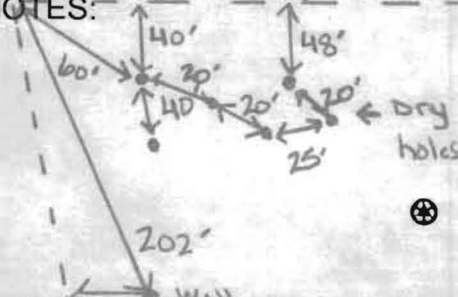
C 3 PUMPING TEST

HOURS PUMPED (nearest hour) 6 8 9 PUMPING RATE (gal. per min.) 1.33 11 15 METHOD USED TO MEASURE PUMPING RATE Submersible WATER LEVEL (distance from land surface) BEFORE PUMPING 32 17 20 ft. WHEN PUMPING 132 22 25 ft. TYPE OF PUMP USED (for test) A air P piston T turbine C centrifugal R rotary O other (describe below) J jet S submersible

PUMP INSTALLED

DRILLER INSTALLED PUMP (CIRCLE) (YES or NO) YES NO IF DRILLER INSTALLS PUMP, THIS SECTION MUST BE COMPLETED FOR ALL WELLS. TYPE OF PUMP INSTALLED PLACE (A,C,J,P,R,S,T,O) IN BOX 29 CAPACITY: GALLONS PER MINUTE (to nearest gallon) 31 35 PUMP HORSE POWER 37 41 PUMP COLUMN LENGTH (nearest ft.) 43 47 CASING HEIGHT (circle appropriate box and enter casing height) + above - below LAND SURFACE (nearest foot) 50 51

LATITUDE 39.31530 LONGITUDE 77.15213 (DEFAULT COORD. WGS 84)



NUMBER OF UNSUCCESSFUL WELLS: 6

WELL HYDROFRACTURED YES NO Y N

CIRCLE APPROPRIATE LETTER A A WELL WAS ABANDONED AND SEALED WHEN THIS WELL WAS COMPLETED E ELECTRIC LOG OBTAINED P TEST WELL CONVERTED TO PRODUCTION WELL

I HEREBY CERTIFY THAT THIS WELL HAS BEEN CONSTRUCTED IN ACCORDANCE WITH COMAR 26.04.04 "WELL CONSTRUCTION" AND IN CONFORMANCE WITH ALL CONDITIONS STATED IN THE ABOVE CAPTIONED PERMIT, AND THAT THE INFORMATION PRESENTED HEREIN IS ACCURATE AND COMPLETE TO THE BEST OF MY KNOWLEDGE.

DRILLERS LIC. NO. 1 MWD 355

DRILLERS SIGNATURE (MUST MATCH SIGNATURE ON APPLICATION)

LIC. NO. 1 MSD 066

SITE SUPERVISOR (sign. of driller or journeyman responsible for sitework if different from permittee)

B 1 2148

SEQUENCE NO. (MDE USE ONLY)

STATE OF MARYLAND APPLICATION FOR PERMIT TO DRILL WELL

STATE PERMIT NUMBER

40-95-2106 fill in this form completely

Date Received (APA)

OWNER INFORMATION

21m Street Development 1355 Beverly Rd, Suite 240 McLean, VA 22101

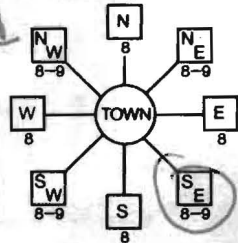
LOCATION OF WELL

Howard County Chelsea Knolls mt Airy 4 miles from town

DRILLER INFORMATION

Michael Barlow M ND 355 Barlow Well Drilling Service 522 Underwood Lane, Belair, Md

DIRECTION OF WELL FROM TOWN (CIRCLE BOX)



LONG CORNER Rd ON WHICH SIDE OF ROAD (CIRCLE APPROPRIATE BOX) DISTANCE FROM ROAD ENTER FOR MD TAX MAP: 12 BLK: 2 PARCEL 9

WELL INFORMATION

APPROX. PUMPING RATE 5 GAL. PER MIN. AVERAGE DAILY QUANTITY NEEDED 750 GAL. PER DAY

USE FOR WATER (CIRCLE APPROPRIATE BOX)

- DOMESTIC POTABLE SUPPLY & RESIDENTIAL IRRIGATION (circled) FARMING (LIVESTOCK WATERING & AGRICULTURAL IRRIGATION) INDUSTRIAL, COMMERCIAL, DEWATERING PUBLIC WATER SUPPLY WELL TEST, OBSERVATION, MONITORING GEO-THERMAL

NOT TO BE FILLED IN BY DRILLER HEALTH DEPARTMENT APPROVAL

Howard County 4515039 STATE SIGNATURE DATE ISSUED 4/27/11 CO SIGNATURE 4/27/11 NORTH GRID 539 000 EAST GRID 6756 000

APPROXIMATE DEPTH OF WELL 250 FEET APPROXIMATE DIAMETER OF WELL 6 INCH NEAREST

METHOD OF DRILLING (circle one)

BORED (or Augered) JETTED Jetted & DRIVEN AIR-ROTary AIR-PERcussion ROTARY (Hydraulic Rotary) CABLE REVERSE-ROTary DRIVE-POINT

REPLACEMENT OR DEEPEMED WELLS (CIRCLE APPROPRIATE BOX)

- THIS WELL WILL NOT REPLACE AN EXISTING WELL THIS WELL WILL REPLACE A WELL THAT WILL BE ABANDONED AND SEALED THIS WELL WILL REPLACE A WELL THAT WILL BE USED AS A STANDBY-CONTACT LOCAL APPROVING AUTHORITY FOR POLICY ON STANDBY WELLS THIS WELL WILL DEEPEM AN EXISTING WELL PERMIT NUMBER OF WELL TO BE REPLACED OR DEEPEMED (IF AVAILABLE)

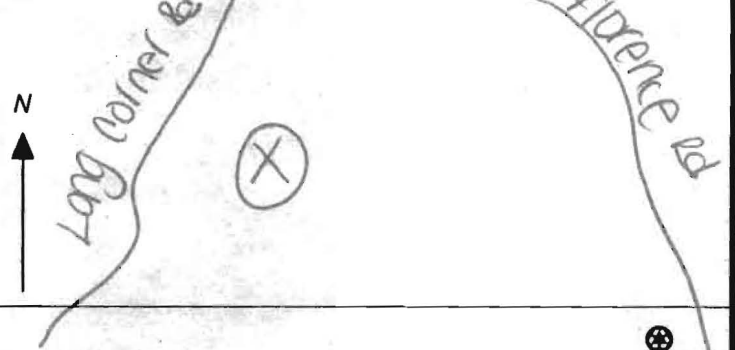
SHOW MAJOR FEATURES OF BOX & LOCATE WELL WITH AN X

SOURCES OF DRILLING WATER 1. Well

WRITE THE BOX NUMBER FROM THE MAP HERE

E 7506 N 5309

DRAW A SKETCH BELOW SHOWING LOCATION OF WELL IN RELATION TO NEARBY TOWNS AND ROADS AND GIVE DISTANCE FROM WELL TO NEAREST ROAD JUNCTION



Not to be filled in by driller (MDE OR COUNTY USE ONLY) APPROP. PERMIT NUMBER H02002G005(3) PERMIT No. 40-95-2106

SPECIAL CONDITIONS



MICHAEL BARLOW WELL DRILLING & SERVICE, INC.
 522 Underwood Lane Bel Air, Maryland 21014
 (410) 838-6910 Fax (410) 838-3582

WELL YIELD REPORT

Date Test Completed:		March 19, 2012	
Well Depth:		500	feet
Customer	Elm Street Development	Permit #	HO-95-2106
Road	Long Corner Road	Subdivision	Chelsea Knolls
City	Mt. Airy	Section	
State	Maryland	Lot #	11

Time	Water Level feet	Time to Fill 1-gallon bucket seconds	G.P.M
9:30 AM	32	4	15.00
9:45 AM	97	7	8.57
10:00 AM	128	30	2.00
10:15 AM	132	45	1.33
10:30 AM	132	45	1.33
10:45 AM	132	45	1.33
11:00 AM	132	45	1.33
11:15 AM	132	45	1.33
11:30 AM	132	45	1.33
11:45 AM	132	45	1.33
12:00 PM	132	45	1.33
12:15 PM	132	45	1.33
12:30 PM	132	45	1.33
12:45 PM	132	45	1.33
1:00 PM	132	45	1.33
1:15 PM	132	45	1.33
1:30 PM	132	45	1.33
1:45 PM	132	45	1.33
2:00 PM	132	45	1.33
2:15 PM	132	45	1.33
2:30 PM	132	45	1.33
2:45 PM	132	45	1.33
3:00 PM	132	45	1.33
3:15 PM	132	45	1.33
3:30 PM	132	45	1.33
3:45 PM	132	45	1.33
4:00 PM	132	45	1.33
4:15 PM	132	45	1.33

This yield test report is for informational purposes only. Please note the yield may increase or decrease over time and the GPM indicated above is not a guarantee.

HOWARD COUNTY HEALTH DEPARTMENT
 BUREAU OF ENVIRONMENTAL HEALTH
 WELL & SEPTIC PROGRAM
 TEL: (410)313-1771 FAX: (410)313-2648

Information Form for the Installation of the Well Pump, Pitless Adapter, and Supply Piping

NOTE: The installer is responsible for requesting an inspection prior to 9 am on the day of the desired inspection. No work is to be covered until approved by the Health Department. All installations must comply with the National Standard Plumbing Code (NSPC, as amended locally) and COMAR 26.04.04 (MD Well Construction Regulations). Submission of a complete form is required prior to Use and Occupancy approval.

Company Name: _____ Telephone #: _____
 Address: _____

(Must circle one) Licensed Plumber Licensed Well Driller Licensed Well Pump Installer
 License # and name of individual responsible for the field installation:
 Name (Print): _____ License# _____

*A licensed individual must perform the actual installation. Apprentices must be under the supervision of a licensed journeyman or master plumber, pump installer or well driller. Licenses may be subjected to field verification. Unlicensed individuals may be reported to the appropriate licensing agency.

Name of Property Owner: _____ Telephone #: _____
 Subdivision: _____ Lot #: 11 Well Tag #: HO-95-2106
 Site Address: 18376 Chesapeake Knolls Dr.

<u>Submersible Pump Data</u>	<u>Pitless Adapter</u>	<u>Well Cap and Electric Conduit</u>
Make: _____	Make: _____	Two piece watertight cap: _____
Model #: _____	Model#: _____	Screened, vented well cap: _____
Pump Capacity _____ GPM	Depth: _____ (36" min)	Cap secured to casing: _____
Well Yield: _____ GPM	NSF/WSC approved: _____	Conduit min 18" B.G.: _____
Depth of well encountered at time of pump installation: _____ (feet)		Conduit secured to well cap: _____
If pump capacity exceeds well yield, a low water cut off switch is required by NSPC 1990 Section 17.8.4		
Torque arrestors, Cable guards, or other acceptable method used- Must circle one		
Safety rope, if used, attached to brass rope adapter or other acceptable method <u>inside of well casing</u>		

<u>Piping to house</u>	<u>House Connection</u>
Type: _____	PVC sleeve to undisturbed soil at wall penetration: _____
PSI: _____ (160 psi min)	Length of sleeve (5' minimum from foundation): _____
Depth of supply line: _____ (36" min)	Sleeve sealed properly: _____

The water supply line is required to be at least ten feet from the septic tank, pump chamber, sewage piping, distribution box, drainfields, and sewage reserve area. If this cannot be accomplished, contact this office for approval prior to installation.

Signature of company representative responsible for installation _____ date _____

For Health Department Use Only - Not to be completed by Installer

Date Insp. Requested: _____ Date Insp. Approved: 11/5/2015 Inspector: BB

Inspection Data: Pitless adapter watertight & water supply line at least 36" below grade	✓
Two piece cap installed and attached to casing securely	✓
Elec. conduit extends at least 18" below grade/attached to cap properly	✓
Safety rope not outside of well cap/casing	✓
Correct well tag attached properly and casing 8" above finished grade	✓
Water supply line sleeved adequately at house connection	✓
Adequate grout observed below pitless adapter	✓

None Seen to 5' - 4' of Fill Above Original Grade

FOUNTAIN VALLEY ANALYTICAL LABORATORY, INC.

1413 Old Taneytown Rd. Westminster, MD (410) 848-1014 (410) 876-4554 FAX (410) 848-0298

REPORT OF ANALYSIS

Laboratory ID #: 104212 Account #: 6488
Reference: Lot 11 Company: Hatfield's Equipment, Inc.
Location: 18376 Chelsea Knolls Road Requested By: Kenny Hatfield
Mount Airy, MD 21771 Source: Well Water
Date/ Time Collected: 11/12/2015 1350 Site: Pressure Tank
Date/Time Rec'd: 11/12/2015 1450 Treatment: Prior to Reverse Osmosis
Chlorine ppm: Free: ND Total: ND pH: 6.5
Collected By: J. Yeager 6176JY Well #: HO-95-0653

PARAMETERS	RESULTS	UNITS	REFERENCE	METHOD	DATE/TIME/ANALYST
Bacteria, Coliform, Total, MPN	129.8	MPN/ 100 ml	<1.0	SM18 9223	11/13/2015 / 1015 / BCD
Bacteria, E. coli, MPN	<1.0	MPN/ 100 ml	<1.0	SM18 9223	11/13/2015 / 1015 / BCD
Nitrate	<1.0	mg/L	10	601	11/13/2015 / 0945 / BCD
Turbidity	1.83	NTU	<10	SM18 2130B	11/13/2015 / 1000 / BCD
Sand	NS	mg/L	5	Visual/Gravimetric	11/13/2015 / 1000 / BCD

NOTES

- 1 mg/L = milligrams per liter (also, parts per million)
- 2 MPN/ 100 ml = Most Probable Number [of viable bacteria] per 100 ml of sample.
- 3 NS = None Seen (NS indicates less than 5 mg/L)
- 4 NTU = Nephelometric Turbidity Units
- 5 Results less than or within the reference range are considered satisfactory and within potable water limits at the time of sampling.
- 6 ND:None Detected
- 7 pH & Chlorine level tested on site
- 8 Visual well check: Sealed, vented cap

Reason for Test : Use & Occupancy
Building Permit # : B15002160

Date Reported: 11/13/2015

FOUNTAIN VALLEY ANALYTICAL LABORATORY, INC.

1413 Old Taneytown Rd. Westminster, MD (410) 848-1014 (410) 876-4554 FAX (410) 848-0298

REPORT OF ANALYSIS

Laboratory ID #: 104307 Account #: 6488
Reference: Lot 11 Company: Hatfield's Equipment, Inc.
Location: 18376 Chelsea Knolls Road Requested By: Kenny Hatfield
Mount Airy, MD 21771 Source: Well Water
Date/ Time Collected: 11/17/2015 1440 Site: Pressure Tank
Date/Time Rec'd: 11/17/2015 1530 Treatment: Prior to Reverse Osmosis
Chlorine ppm: Free: ND Total: ND pH: 7.7
Collected By: J.M. Robbins 5606JR Well #: HO-95-0653

PARAMETERS	RESULTS	UNITS	REFERENCE	METHOD	DATE/TIME/ANALYST
Bacteria, Coliform, Total, MPN	<1.0	MPN/ 100 ml	<1.0	SM18 9223	11/18/2015 / 0930 / LLO
Bacteria, E. coli, MPN	<1.0	MPN/ 100 ml	<1.0	SM18 9223	11/18/2015 / 0930 / LLO

OK.

NOTES

- 1 MPN/ 100 ml = Most Probable Number [of viable bacteria] per 100 ml of sample.
- 2 Results less than or within the reference range are considered satisfactory and within potable water limits at the time of sampling.
- 3 ND:None Detected
- 4 pH & Chlorine level tested on site
- 5 Visual well check: Sealed, vented cap

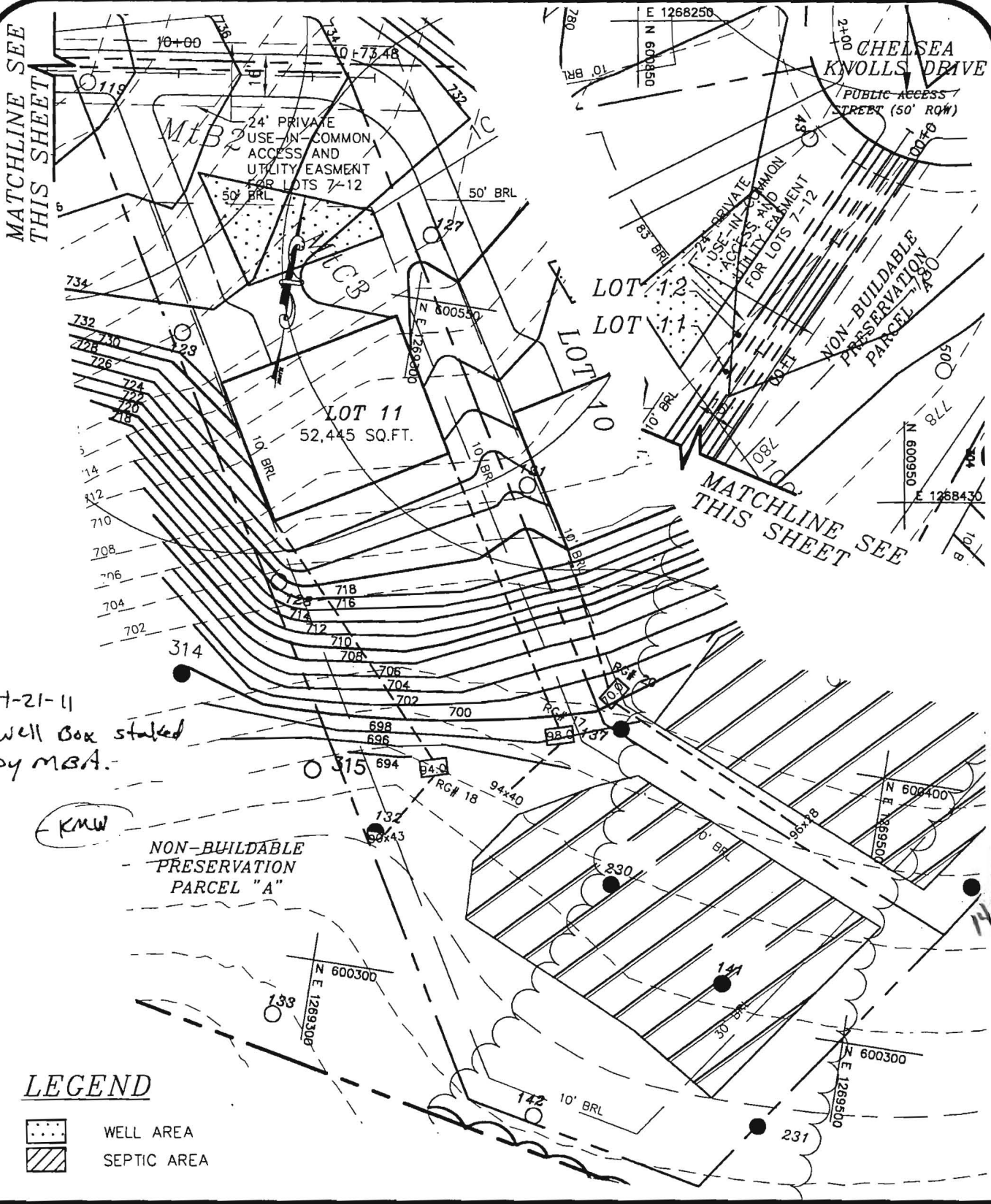
Reason for Test : Use & Occupancy

Building Permit # : B15002160



Date Reported: 11/18/2015

MATCHLINE SEE THIS SHEET

MATCHLINE SEE THIS SHEET



LEGEND

-  WELL AREA
-  SEPTIC AREA

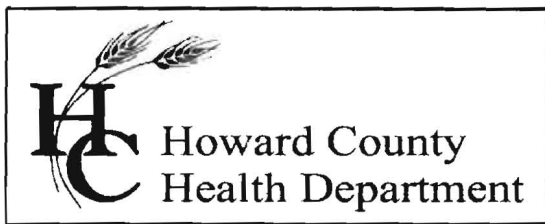
WELL PERMIT
CHELSEA KNOLLS LOT 11

MILDENBERG BOENDER, & ASSOC., INC.

Engineers Planners Surveyors
 6800 Deerpath Road, Suite 150, Elkridge, Maryland 21075
 (410) 997-0296 Balt. (410) 997-0298 Fax.

FOURTH ELECTION DISTRICT	HOWARD COUNTY, MARYLAND		
SCALE: 1"=50'	DRAWN BY: MMM	DATE: APRIL	PN-01-009

H:\01-009\dwg\Well-Permit\01-009-well.dwg



Bureau of Environmental Health

8930 Stanford Blvd., Columbia, MD 21045
Main: 410-313-2640 | Fax: 410-313-2648
TDD 410-313-2323 | Toll Free 1-866-313-6300
www.hchealth.org

Facebook: www.facebook.com/hocohealth
Twitter: HowardCoHealthDep

Maura J. Rossman, M.D., Health Officer

INTERIM CERTIFICATE OF POTABILITY

Expiration Date – MAY 18th, 2015

November 18, 2015

Homeowner
18376 Chelsea Knolls Drive
Mr. Airy, MD 21771

**RE: Chelsea Knolls, Lot 11
18376 Chelsea Knolls Drive
Building Permit: B15002160
Well Permit: HO-95-2106**

Dear Homeowner:

This is to advise you that the septic system installation and water well construction for the above referenced property have been inspected and approved. Final approval of the septic system was granted on **11/5/2015**. Final approval of the well line connection to the dwelling was granted on **11/5/2015**. The well construction was completed on **3/20/2012**. Water samples were collected on **11/12/2015 & 11/17/2015**.

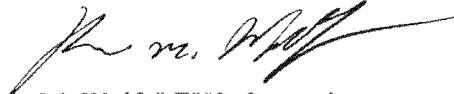
The water sample results indicate that the water samples submitted for testing were free of coliform and fecal coliform bacteria at the time of sampling and are bacteriologically safe for drinking. This certifies that the initial sampling requirements of COMAR 26.04.04 "Well Regulations" have been met for the water supply system installed under well permit HO-95-2106. Although the submitted sample results are in compliance with COMAR standards, the Health Department does not guarantee water supplies.

This Interim Certificate of Potability will expire **six months** from the date of issuance. Submission of a second bacteriological test indicating the water is free of coliform and fecal coliform bacteria is required prior to the expiration date, after which time a Final Certificate of Potability will be issued. **Failure to submit an additional sample and obtain a Final Certificate of Potability will result in a Notice of Violation and is punishable as a misdemeanor under the Annotated Code of Maryland, Environment Article, 9-1311, subject to a fine of up to \$500 or imprisonment not to exceed three months.**

Please contact (410) 313-1773 to schedule a final water sample appointment or contact a Maryland certified water laboratory to schedule a water sample. A list of laboratories certified by the state of Maryland may be found at the following website:
<http://www.mde.state.md.us/assets/document/WSP-Labs-2010apr16.pdf>

In closing, please refer to our "Homeowner Fact Sheet" which illustrates a better understanding for your Best Available Technology (BAT). You will also find a link to Maryland Department of the Environments website which describes in further detail operation and maintenance of your BAT.

Approving Authority,

A handwritten signature in black ink, appearing to read "Kevin M. Wolf", written over a horizontal line.

Kevin M. Wolf, LEHS, Supervisor
Groundwater Management Section
Well & Septic Program

cc: Howard County Dept. of Inspections, Licenses, and Permits
Community Hygiene Program
File