

C 1 52472 SEQUENCE NO. (MDE USE ONLY)

STATE OF MARYLAND
WELL COMPLETION REPORT
 FILL IN THIS FORM COMPLETELY
 PLEASE TYPE

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

COUNTY NUMBER

1 2 3 4 5 6
 (THIS NUMBER IS TO BE PUNCHED
 IN COLS. 3-6 ON ALL CARDS)

ST/CO USE ONLY
 DATE RECEIVED
 MM 09 / DD 11 / YY 17

DATE WELL COMPLETED
06 / 14 / 17

Depth of Well
400
 (TO NEAREST FOOT)

PERMIT NO.
 FROM "PERMIT TO DRILL WELL"
HO-17-0116

OWNER Elm Street Development
 WELL SITE ADDRESS HAVILAND MILL RD TOWN CLARKSVILLE
 SUBDIVISION MILL CREEK SECTION Well #1 LOT 19

WELL LOG
 Not required for driven wells

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

DESCRIPTION (Use additional sheets if needed)	FEET		check if water bearing
	FROM	TO	
Soil	0	5	
Red Clay	5	10	
Brown shale	10	42	
Hard Gray Rock	42	400	
		310	
Attempt #1 - 600'			
Dry - Backfilled			

NUMBER OF UNSUCCESSFUL WELLS: 1

WELL HYDROFRACTURED YES NO

- 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. M D 355

DRILLERS SIGNATURE (MUST MATCH SIGNATURE ON APPLICATION)
WRD 113

LIC. NO. WRD 113

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

GROUTING RECORD
 WELL HAS BEEN GROUTED (Circle Appropriate Box) YES NO

TYPE OF GROUTING MATERIAL (Circle one)
 CEMENT BENTONITE CLAY
 NO. OF BAGS 19 NO. OF POUNDS 1425
 GALLONS OF WATER 95
 DEPTH OF GROUT SEAL (to nearest foot)
 from 0 ft. to 43 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) 45

OTHER CASING (if used)
 diameter inch depth (feet) from to

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

DEPTH (nearest ft.)
HO 45 400

DIAMETER OF SCREEN (NEAREST INCH)
58 60
 from to

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
 PUMPING RATE (gal. per min.) 75
 METHOD USED TO MEASURE PUMPING RATE Submersible

WATER LEVEL (distance from land surface)
 BEFORE PUMPING 40 ft.
 WHEN PUMPING 79 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. 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 LAND SURFACE (nearest foot)
 - below 1 (nearest foot)

LATITUDE 39.18472
 LONGITUDE 76.99918
 (DEFAULT COORD. WGS 84)

Pursuant to §10-624 of the State Govt. Article of the Maryland Code personal info. requested on this form is used in processing this form pursuant to COMAR 26.04.04. Failure to provide the info. may result in this form not being processed. You have the right to inspect, amend, or correct this form. The Maryland Department of the Environment is subject to the Maryland Public Information Act. This form may be made available on the Internet via MDE's website and is subject to inspection or copying, in whole or in part, by the public and other governmental agencies, if not protected by federal or state law.

B 1 **32975** SEQUENCE NO. (MDE USE ONLY) STATE OF MARYLAND STATE PERMIT NUMBER
559843-R APPLICATION FOR PERMIT TO DRILL WELL please type **HO -17 -0116**
70 fill in this form completely 79

Date Received (APA) **11/16/16**
 OWNER INFORMATION
Elm Street Development
 15 Last Name Owner First Name 34
1355 Beverly Rd, Suite 240
 36 Street or RFD 55
Madison, VA 22101
 57 Town 70 State 72 Zip 76

B 3 LOCATION OF WELL
Howard 8 COUNTY 21
Mill Creek 23 SUBDIVISION 42
 SECTION **19** LOT 48 50
Marksville 52 NEAREST TOWN 71

DRILLER INFORMATION
Michael Barion MWD 355
 76 Driller's Name License No. 81
Barion Well Drilling
 Firm Name
532 Underwood Ln, Bel Air 21014
 Address
MB 11-3-16
 Signature Date

B 4 SOURCES OF DRILLING WATER
 1 **Well**
 2
 3 **616**
 -1-1.5 gpm
 -43' static
 -9:30 am test start
 Collected NaCl
Haviland Mill Rd 11 STREET ADDRESS 30
 ON WHICH SIDE OF ROAD (CIRCLE APPROPRIATE BOX)
 NORTH N
 WEST W EAST E
 SOUTH S
 34 **1000** 37 DISTANCE FROM ROAD
 ENTER FT OR MI 38 39
 TAX MAP: **39** BLK: **6** PARCEL **0001**

B 2 WELL INFORMATION
 APPROX. PUMPING RATE (GAL. PER MIN.) **5** 8 12
 AVERAGE DAILY QUANTITY NEEDED (GAL. PER DAY) **750** 14 20

USE FOR WATER (CIRCLE APPROPRIATE BOX)
 DOMESTIC POTABLE SUPPLY & RESIDENTIAL IRRIGATION
 FARMING (LIVESTOCK WATERING & AGRICULTURAL IRRIGATION)
 INDUSTRIAL, COMMERCIAL, DEWATERING
 PUBLIC WATER SUPPLY WELL
 TEST, OBSERVATION, MONITORING
 OPEN LOOP GEOTHERMAL
 CLOSED LOOP GEOTHERMAL

NOT TO BE FILLED IN BY DRILLER HEALTH DEPARTMENT APPROVAL
HOWARD 555364 13
 COUNTY NAME COUNTY NO.
 STATE SIGNATURE INSERT S → 41
 DATE ISSUED **3/6/17** **ART** **3/6/18**
 43 MM DD YY 48 CO SIGNATURE EXP. DATE
 DON: 3/13/17 (SC) DOG: DOY: 5/30/17 (SC)
 6/14/17 (SC)

APPROXIMATE DEPTH OF WELL **300** FEET 24 28
 APPROXIMATE DIAMETER OF WELL **6** NEAREST INCH

PROPOSED LOCATION OF WELL ON LOT
 SHOW PERMANENT STRUCTURES SUCH AS BUILDINGS, SEPTIC SYSTEM, ROADS AND/OR LANDMARKS AND INDICATE NOT LESS THAN TWO DISTANCE MEASUREMENTS TO WELL
3/13 **5/23**
12/4/17
 - setting up rig
 - drilled to 500', dry hole (~3/4 gpm)
 - must stake well box before drilling 2nd site
 N **6/5**
 - finished drilling #3 -1.5 gpm. 400'
 - ex hole deepened to 600', ~1 gpm
 - yield test, 0.7 gpm + dropping after 2 hrs pumping
 - at 600' on hole #2, no water
 - drilling hole #3, rods in ground + drillers not on site
 - appear. to have

METHOD OF DRILLING (circle one)
 BORED (or Augered) JETTED Jetted & DRIVEN
 30 AIR-ROTARY AIR-PERCussion ROTARY (Hydraulic Rotary)
 37 CABLE REVERSE-ROTARY Drive-POINT
 other

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) 41 _____ 52

Not to be filled in by driller (MDE OR COUNTY USE ONLY)
 APPROX. PERMIT NUMBER **HO 2010G002**
 PERMIT No. **HO-17-0116**
 70 71 72 73 74 75 76 77 78 79

SPECIAL CONDITIONS **SEE ATTACHED MEMO** **Na/SODIUM/CHLORIDE hit water at yield**



MICHAEL BARLOW WELL DRILLING & SERVICE, INC.

522 Underwood Lane
(410) 838-6910

Bel Air, Maryland 21014
Fax (410) 838-3582

WELL YIELD REPORT

Date Test Completed:	June 14, 2017		
Well Depth:	400	feet	
Customer	Elm Street Development	Permit #	HO-17-0116
Road	Haviland Mill Road	Subdivision	Mill Creek
City	Clarksville	Section	Well #1
State	Maryland	Lot #	19

Time	Water Level feet	Time to Fill 1-gallon bucket seconds	G.P.M.
10:30 AM	40	7	8.57
10:45 AM	100	80	0.75
11:00 AM	100	80	0.75
11:15 AM	100	80	0.75
11:30 AM	98	80	0.75
11:45 AM	94	80	0.75
12:00 PM	92	80	0.75
12:15 PM	90	80	0.75
12:30 PM	88	80	0.75
12:45 PM	86	80	0.75
1:00 PM	84	80	0.75
1:15 PM	80	80	0.75
1:30 PM	80	80	0.75
1:45 PM	80	80	0.75
2:00 PM	80	80	0.75
2:15 PM	80	80	0.75
2:30 PM	80	80	0.75
2:45 PM	79	80	0.75
3:00 PM	79	80	0.75
3:15 PM	79	80	0.75
3:30 PM	79	80	0.75
3:45 PM	79	80	0.75
4:00 PM	79	80	0.75
4:15 PM	79	80	0.75
4:30 PM	79	80	0.75
4:45 PM	79	80	0.75
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, Pifless Adapter, and Supply Line

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: Coggeswell Pump & Water Treatment, LLC Telephone #: 410 795 5670
 Address: 530 Church Rd
JYKESVILLE, MD 21784

(Must circle one): Licensed Plumber Licensed Well Driller Licensed Well Pump Installer
 License # and name of individual responsible for the field installation:
 Name (Print): David C Fogle License #: MSD226

*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: NUR Telephone #: _____
 Subdivision: mill creek Lot #: 19 Well Tag #: HO-17-0165
 Site Address: 13645 mill creek ct
CLARKSVILLE, MD 21029

Submersible Pump Data		Pifless Adapter	Well Cap and Electric Conduit
Make: <u>Goulds</u>	Model #: <u>1H510422</u>	Make: <u>Campbell</u>	Model #: <u>NA</u>
Pump Capacity: <u>7</u> GPM	Well Yield: <u>15</u> GPM	Depth: <u>36</u> (36" min)	NSE/WSC approved: <u>YES</u>
Depth of well encountered at time of pump installation: <u>600</u> (feet)		Well Cap and Electric Conduit	
If pump capacity exceeds well yield, a low water cutoff switch is required by NSPC 1990 Section 17.8.4		Two piece watertight cap: <u>YES</u>	
Torque wrenches, Cable guards, or other acceptable method used - Must circle one		Screened, vented well cap: <u>YES</u>	
Safety rope, if used, attached to brass rope adaptor or other acceptable method inside of well casing: <u>NA</u>		Cap secured to casing: <u>YES</u>	
		Conduit min 1 1/2" R.G.: <u>YES</u>	
		Conduit secured to well cap: <u>YES</u>	

Piping to house: 1" poly pipe House Connection: tie into existing line
 Type: 1" poly pipe PVC sleeve to undisturbed soil at wall penetration: YES
 PSI: 200 (180 psi min) Length of sleeves (minimum from foundation): _____
 Depth of supply line: 36" (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: David C Fogle date: 2-26-19

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

Date Insp. Requested: 2/26/19 Date Insp. Approved: 2/26/19 Inspector: SC
 Inspection Data: Pifless 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 casing ✓
 Correct well tag attached properly and casing 8" above finished grade ✓
 Water supply line sleeved adequately at house connection ✓
 Adequate grout observed below pifless adapter ✓

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

March 7, 2018

Homeowner

Clarksville, MD 21029

Dear Homeowner,

The Health Department received results from the testing for sodium, chloride, and total dissolved solids (TDS) from the well on this lot.

Elevated sodium levels in drinking water may affect individuals on low-salt diets. The action level for sodium is 20 milligrams per liter (mg/L); **sodium from the well measured 6.26 mg/L from well HO-17-0116 and 6.64 mg/L from well HO-17-0165.**

Chloride and TDS are both considered secondary contaminants, meaning high concentrations may affect taste, color, odor, or corrosive properties of water but present no risk to health. The secondary maximum contaminant level for chloride is 250 mg/L; **chloride from the well measured <10 mg/L from well HO-17-0116 and <10 mg/L from well HO-17-0165.** The secondary maximum contaminant level for TDS is 500 mg/L; **TDS from the well measured 76 mg/L from well HO-17-0116 and 94 mg/L from well HO-17-0165.**

Feel free contact me at the number or email below with any questions regarding the results of water sampling.

Sincerely,



Sarah Collins, L.E.H.S.
Howard County Health Department
Well & Septic Program
SCollins@howardcountymd.gov
410-313-6287

Cc: Community Hygiene Program
File

INTERIM CERTIFICATE OF POTABILITY

Expiration Date – NOVEMBER 9, 2019

May 9, 2019

Homeowner
13845 Mill Creek Court
Clarksville, MD 21029

RE: Mill Creek, Lot 19
13845 Mill Creek Court
Building Permit: B18003849
Well Permit: HO-17-0113 & 17-0116

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 **5/9/2019**. Final approval of the well line connection to the dwelling was granted on **2/26/2019**. The well construction was completed on **6/14/2017**. Water samples were collected on **4/4/2019, 4/9/2019**.

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-17-0113 & 17-0116. 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>

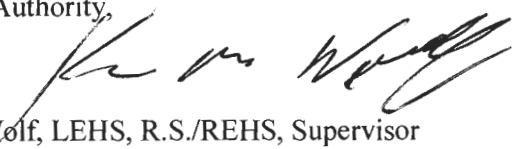


Bureau of Environmental Health
8930 Stanford Blvd | Columbia, MD 21045
410.313.2640 - Voice/Relay
410.313.2648 - Fax
1.866.313.6300 - Toll Free

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

In closing, please refer to our "Homeowner Fact Sheet" which illustrates a better understanding for your Onsite Sewage Disposal System. You will also find a link to Maryland Department of the Environments website which describes in further detail operation and maintenance of your septic system.

Approving Authority,



Kevin M. Wolf, LEHS, R.S./REHS, Supervisor
Groundwater Management Section
Well & Septic Program

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

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 #: 129483 Account #: 1933
Reference: Mill Creek Lot 19 Company: Fogles Well Pump & Treatment
Location: 13845 Mill Creek Court Requested By: Dave Fogle
Clarksville, MD 21029 Source: Well Water
Date/ Time Collected: 4/9/2019 1200 Site: Pressure Tank
Date/Time Rec'd: 4/9/2019 1538 Treatment: None
Chlorine ppm: Free: ND Total: ND pH: 6.0
Collected By: B. Wilkerson 9315BW Well #: HO-17-0116

PARAMETERS	RESULTS	UNITS	REFERENCE	METHOD	DATE/TIME/ANALYST
Bacteria, Coliform, Total, MPN	<1.0	MPN/ 100 ml	<1.0	SM20 9223B	4/10/2019 / 1030 / CRS
Bacteria, E. coli, MPN	<1.0	MPN/ 100 ml	<1.0	SM20 9223B	4/10/2019 / 1030 / CRS
Nitrate	2.66	mg/L	10	601	4/9/2019 / 1620 / RER
Turbidity	1.02	NTU	<10	SM20 2130B	4/9/2019 / 1620 / RER
Sand	NS	mg/L	5	Visual/Gravimetric	4/9/2019 / 1620 / RER

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 Sample collected by client, analyzed as received
- 7 ND:None Detected
- 8 Visual well check: Sealed, vented cap
- 9 pH and Chlorine level tested in lab (pH tested after recommended holding time)

Reason for Test : Use & Occupancy
Building Permit # : 18003849

Date Reported: 4/10/2019

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 #: 129395 Account #: 1933
Reference: Mill Creek Lot 19 Company: Fogles Well Pump & Treatment
Location: 13845 Mill Creek Court Requested By: Dave Fogle
Clarksville, MD 21029 Source: Well Water
Date/ Time Collected: 4/4/2019 0730 Site: Pressure Tank
Date/Time Rec'd: 4/4/2019 1330 Treatment: None
Chlorine ppm: Free: ND Total: ND pH: 6.9
Collected By: B. Wilkerson 9315BW Well #: HO-17-0165

PARAMETERS	RESULTS	UNITS	REFERENCE	METHOD	DATE/TIME/ANALYST
Bacteria, Coliform, Total, MPN	<1.0	MPN/ 100 ml	<1.0	SM20 9223B	4/5/2019 / 1000 / RER
Bacteria, E. coli, MPN	<1.0	MPN/ 100 ml	<1.0	SM20 9223B	4/5/2019 / 1000 / RER
Nitrate	<1.0	mg/L	10	601	4/4/2019 / 1400 / RER
Turbidity	2.34	NTU	<10	SM20 2130B	4/4/2019 / 1430 / RER
Sand	NS	mg/L	5	Visual/Gravimetric	4/4/2019 / 1430 / RER

math.
240
755
737B

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 Sample collected by client, analyzed as received
- 7 ND:None Detected
- 8 Visual well check: Sealed, vented cap
- 9 pH and Chlorine level tested in lab (pH tested after recommended holding time)

Reason for Test : Use & Occupancy
Building Permit # : 18003849

Date Reported: 4/5/2019

 WATER WELL ABANDONMENT SEALING REPORT FORM

SUBMIT COPIES OF COMPLETED FORM TO:

- * COUNTY ENVIRONMENTAL AGENCY (contact MDE, WMA if address needed)
- * WELL OWNER
- * MDE, WATER MANAGEMENT ADMINISTRATION, WELL PROGRAM

DATE WELL ABANDONED: 6/14/17 (month/day/year)

* PERMIT NUMBER OF ABANDONED WELL (if any)

* PERMIT NUMBER OF REPLACEMENT WELL:

HO-17-0165

* PERSON ABANDONING WELL: Michael Barkow

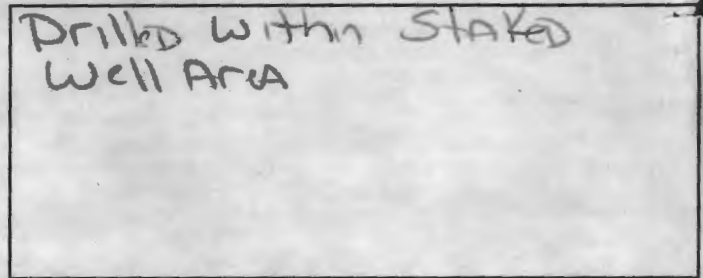
WELL DRILLER'S LICENSE NUMBER: 355

* OWNER'S NAME: Elm Street Development

CIRCLE: MWD / MSD / MGD

* WELL LOCATION: Howard
 COUNTY: Howard
 NEAREST TOWN: Clarksville
 TAX MAP 39 BLOCK 6 PARCEL 0001
 SUBDIVISION: Mill Creek
 SECTION: _____ LOT: 19
 STREET ADDRESS: HAVILAND Mill Rd

SITE LOCATION MAP



LATITUDE 3 9.18472
 LONGITUDE 7 6.99918

LOG OF SEALING MATERIAL

MATERIAL	FEET	
	FROM	TO
Drill cuttings	600	25
Cement GROUT	25	0
VOLUME OF MATERIAL USED		
<u>525^{lb} Cement GROUT</u>		

* TYPE OF WELL BEING ABANDONED:

- DRILLED JETTED
- BORED HAND DUG
- OTHER (specify) _____

* USE CODE:

- DOMESTIC MUNICIPAL/PUBLIC
- IRRIGATION INDUSTRIAL
- TEST/OBSERVATION GEOTHERMAL

* TYPE OF CASING:

- STEEL PLASTIC
- CONCRETE OTHER (specify) Drill Hole

SIZE OF CASING: 6 INCHES IN DIAMETER

DEPTH OF WELL: 600 FEET DEEP

WAS ANY CASING REMOVED? YES NO
 If yes, length removed, in feet: _____

WAS CASING RIPPED OR PERFORATED? YES NO

SIGNATURE-MASTER WELL DRILLER OR SUPERVISING SANITARIAN [Signature] LICENSE# 355

CIRCLE ONE MWD / MSD / MGS DATE 12/18/17

COUNTY _____

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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

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

LOT 19

MEMORANDUM

TO: Barlow Well Drilling

FROM: Ryan Rappaport, L.E.H.S. 
Well and Septic Program

DATE: March 1, 2017

RE: **State Water Appropriation and Use Permit for Crawford Property/Mill Creek Subdivision #HO2016G002(01) & Special Conditions**

The State Water Appropriation and Use Permit for the Crawford Property/Mill Creek Subdivision has a requirement regarding well spacing and testing:

15. The Permittee shall conduct simultaneous yield tests of wells closer than 100 feet apart, if at least one of the wells is on a lot less than one acre in size. The yield testing shall be conducted to ensure that the minimum yield requirements of COMAR 26.04.04.26 are met. In the event that a well that has been tested simultaneously with other wells does not meet minimum yield standards, the Permittee may relocate a well so as to achieve the 100-foot separation distance, deepen or otherwise modify the well to improve its yield or drill a second well to be used in tandem to meet the minimum yield standards during simultaneous testing. All wells shall comply with well construction standards.

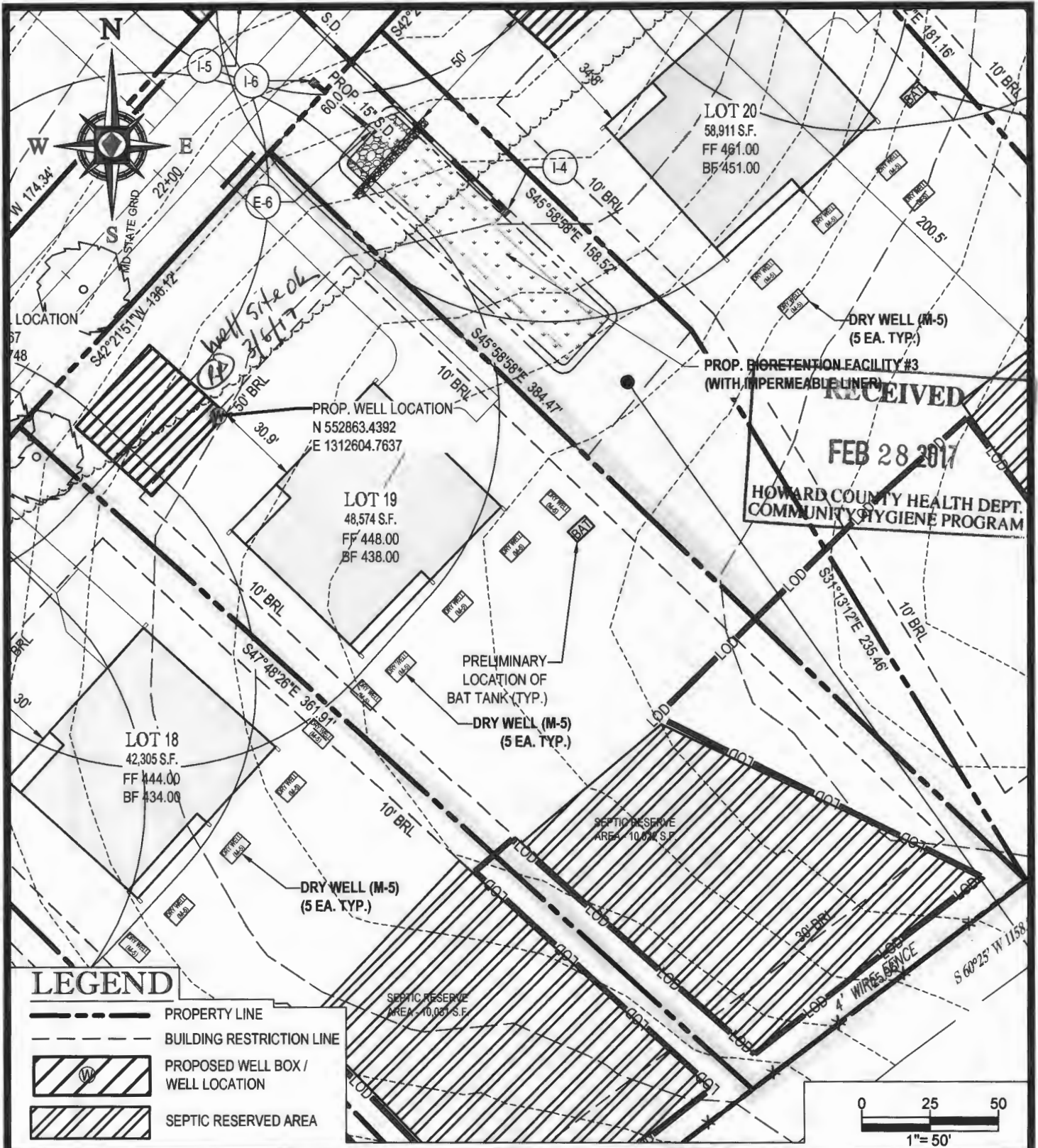
The lots of the Crawford Property/Mill Creek Subdivision that are less than an acre are lots 2, 3, 12, 13 and 18. If a well on one of these lots is within 100' of another well, a simultaneous yield test of both wells will be required.

SPECIAL CONDITIONS

- All drilling, grouting and yields must be called into the Health Department for inspection. Call 410-313-1771 for scheduling.
- Since all 23 lots have the well locations staked and not the lot's well boxes it is required that if during the drilling a dry hole is encountered, the Health Department must be notified immediately before any additional drilling is completed on that particular lot.
- The wells on lots 1, 7, 15 and 19 will require TDS, sodium and chloride water samples during the yield test.
- The wells on lots 20 and 21 must be drilled using steel casing that extends to at least 50 feet depth or 10 feet into competent bedrock, whichever is deeper.

Feel free to contact me with any questions at 410-313-1781 or RRappaport@howardcountymd.gov.

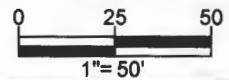
Cc: File



RECEIVED
FEB 28 2017
 HOWARD COUNTY HEALTH DEPT.
 COMMUNITY HYGIENE PROGRAM

LEGEND

- PROPERTY LINE
- BUILDING RESTRICTION LINE
- PROPOSED WELL BOX / WELL LOCATION
- SEPTIC RESERVED AREA



PROJECT NAME: **MILL CREEK SUBDIVISION**
PROPOSED LOTS 1-23 & NONBUILDABLE PRESERVATION PARCEL A - G HO-17-0116
 6780 HAVILAND MILL ROAD, CLARKSVILLE, MD

SHEET TITLE: **WELL EXHIBIT - LOT 19**
 10F1

SCALE: 1" = 50' DATE: 11-01-16 CAD ID: EX0 PROJECT NUMBER: MD142038



BOHLER
ENGINEERING
 22636 DAVIS DRIVE, SUITE 250 STERLING, VA 20164
 PHONE: (703) 709-9500 FAX: (703) 709-9501



State of Maryland
 DHMH-Laboratories Administration
 Division of Environmental Chemistry
INORGANICS ANALYTICAL LABORATORY
 1770 Ashland Avenue, Baltimore, Maryland 21205
 Robert Myers, Ph.D., Director



Certificate of Analysis

HOWARD CO ENVIRONMENTAL HLTH
 8930 STANFORD BLVD
 COLUMBIA, MD 21045

Lab Project NoE17004960 Date Coll. 06/14/2017 Date Received 06/15/2017 Submitted By:Collins

Field ID: HO-17-0116-B
 Lab No.: E17004960002

<u>Analyte</u>	<u>Method</u>	<u>Result</u>	<u>Units</u>	<u>Date Analyzed</u>
Chloride	SM 4500-Cl E	<10	mg/L	06/19/2017
Total Dissolved Solids	SM 2540C	76	mg/L	06/16/2017

Comments:

Approved by: *Shahin Aneli* Approval date: 06/27/2017

*The following methods are included in our A2LA Scope of Accreditation: EPA150.1, EPA 353.2, EPA 375.2, SM4500F C, SM 4500-CN G & QCM-CN, QCM-CN.

This document contains confidential health information that is privileged, confidential and exempt from disclosure under law. If you have received this information in error, please call (410) 767-6190 and arrange for return or destruction.

Send Report To: Bert Nixon

Howard Co. Health Dept.


Bureau of Environmental Health

8930 Stanford Blvd.

Columbia, MD 21045

State of Maryland
DHMH - Laboratories Administration
Division of Environmental Chemistry
TRACE METALS LABORATORY
1770 Ashland Avenue
Baltimore, Maryland 21205

Lab No. Date Received
WT-6/15/17



E17004963002
Received: 06/15/2017
Metals HO-17-0116B

LABORATORY ANALYSIS REQUEST

Please Print

Sample ID No: HO-17-0116-B Site Name: Mill Creek - lot 19 County: Howard

Sample Source: Haviland Mill Road Highland Collector: S. Collins
Street Town or City Name

Date Collected: 6/14/2017 Time Collected: 12:45 a.m. 12:45 p.m. Phone #: 410-313-6287

Sample Preserved By: Field ESRL WMRL Central Lab

Preservative Used: HNO₃ mL pH: 2

Sample Type: Drinking Water Landfill Source (Raw Water) Liquid
Data Category: Community Stream Distribution (Treated) Solid
Code Non-Community Sediment Other _____
 Private

Specify Program: SDWA NPDES CWA RCRA Consumer Products Other _____

Type of Sample Preparation: Total Metals Total Metals TCLP Dissolved Metals
(field preparation required)

Remarks: Sample collected during yield test.

✓	Element	Results (ppm)	✓	Element	Results (ppm)
	Antimony (Sb)			Copper (Cu)	
	Arsenic (As)			Lead (Pb)	
	Barium (Ba)			Silver (Ag)	
	Beryllium (Be)			Zinc (Zn)	
	Cadmium (Cd)			Aluminum (Al)	
	Chromium (Cr)			Iron (Fe)	
	Mercury (Hg)			Manganese (Mn)	
	Nickel (Ni)			Calcium (Ca)	
	Selenium (Se)			Magnesium (Mg)	
✓	Sodium (Na) <u>SH</u>			Potassium (K)	
	Thallium (Tl)			Uranium (U)	
				Vanadium (V)	

Lab Supervisor: _____

Date Reported: / /

• Phone: (443) 681-3857

• Fax: (443) 681-4507

DHMH 4432 (05/15)

SUBMITTER'S COPY



State of Maryland
DHMH-Laboratories Administration
Division of Environmental Chemistry
TRACE METALS LABORATORY
1770 Ashland Avenue, Baltimore, Maryland 21205
Robert Myers, Ph.D., Director



Certificate of Analysis

HOWARD CO ENVIRONMENTAL HLTH
8930 STANFORD BLVD
COLUMBIA, MD 21045

Lab Project No: E17004963 Date Coll.: 06/14/2017 Date Received 06/15/2017 Submitted By: Collins

Field ID: HO-17-0116B
Lab No.: E17004963002

<u>Method</u>	<u>Element</u>	<u>Result</u>	<u>Units</u>	<u>Date Analyzed</u>
EPA 200.7	Sodium	6.26	ppm	06/19/2017

Comments:

Approved by: *Sadia Ahmed*

Approval date: 06/21/2017

*The following methods are included in our A2LA Scope of Accreditation: EPA 200.7, EPA 200.8, EPA 245.1.

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State of Maryland
DHMH-Laboratories Administration
Division of Environmental Chemistry
INORGANICS ANALYTICAL LABORATORY
1770 Ashland Avenue, Baltimore, Maryland 21205
Robert Myers, Ph.D., Director



Certificate of Analysis

HOWARD CO ENVIRONMENTAL HLTH
8930 STANFORD BLVD
COLUMBIA, MD 21045

Lab Project NoE17004960 Date Coll. 06/14/2017 Date Received 06/15/2017 Submitted By:Collins

Field ID: HO-17-0116-A
Lab No.: E17004960001

<u>Analyte</u>	<u>Method</u>	<u>Result</u>	<u>Units</u>	<u>Date Analyzed</u>
Chloride	SM 4500-Cl E	<10	mg/L	06/19/2017
Total Dissolved Solids	SM 2540C	94	mg/L	06/16/2017

Comments:

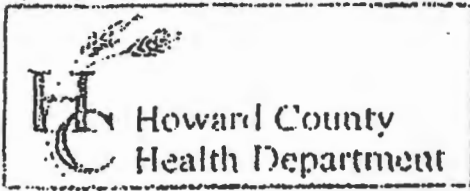
Approved by:

Shahla Aneli

Approval date: 06/27/2017

*The following methods are included in our A2LA Scope of Accreditation: EPA150.1, EPA 353.2, EPA 375.2, SM4500F C, SM 4500-CN G & QCM-CN, QCM-CN.

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Howard County
Health Department

3525 H Ellicott Mills Drive, Ellicott City, MD 21043
(410) 313-2640 Fax (410) 313-2648
TDD (410) 313-2323 Toll Free 1-866-313-6300
website: www.hchealth.org

Penny E. Borenstein, M.D., M.P.H., Health Officer

TO ALL INTERESTED PARTIES

When submitting a well permit application for a proposed well for new construction, please indicate one of the following:

INDIVIDUAL

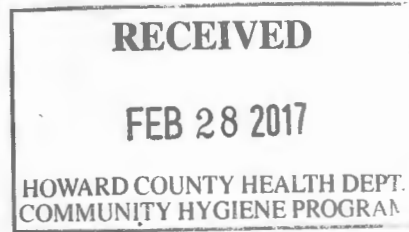
well sites have been staked for Mill Creek

The well site has been staked by Bohler Engineering
(professional land surveyor or company employing professional land surveyors)
on 2/24/17 (date) and does not require a site inspection.

The well driller, builder or property owner will call the Health Department to schedule a time to meet in the field to verify the proposed well site location.

This sheet, along with two copies of an acceptable well site plan, must be attached to the green well permit application.

Revised 6/10/03



Not sure which well
these samples came
from. (Sc)



State of Maryland
DHMH-Laboratories Administration
Division of Environmental Chemistry
INORGANICS ANALYTICAL LABORATORY
1770 Ashland Avenue, Baltimore, Maryland 21205
Robert Myers, Ph.D., Director



Certificate of Analysis

HOWARD CO ENVIRONMENTAL HLTH
8930 STANFORD BLVD
COLUMBIA, MD 21045

Lab Project NoE17004821 Date Coll. 06/06/2017 Date Received 06/07/2017 Submitted By:Collins

Field ID: HO-17-0116
Lab No.: E17004821001

<u>Analyte</u>	<u>Method</u>	<u>Result</u>	<u>Units</u>	<u>Date Analyzed</u>
Chloride	SM 4500-Cl E	<10	mg/L	06/12/2017
Total Dissolved Solids	SM 2540C	63	mg/L	06/09/2017

Comments:

Approved by:

Approval date: 06/13/2017

*The following methods are included in our A2LA Scope of Accreditation: EPA150.1, EPA 353.2, EPA 375.2, SM4500F C, SM 4500-CN G & QCM-CN, QCM-CN.

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Send Report To: Bert Nixon

Howard County Health Department
Bureau of Environmental Health
 8930 Stanford Blvd.
 Columbia, Maryland 21045

State of Maryland
 DHMH - Laboratories Administration
 Division of Environmental Chemistry
TRACE METALS LABORATORY
 1770 Ashland Avenue
 Baltimore, Maryland 21205



E17004819001
 Received: 06/07/2017
 Metals HO-17-0116

Do not write above this line

LABORATORY ANALYSIS REQUEST

Please Print

Sample ID No: HO-17-0116 Site Name: Mill Creek - Lot 19 County: Howard

Sample Source: Haviland Mill Rd. Highland Collector: S. Collins
Street Town or City Name

Date Collected: 6/6/2017 Time Collected: _____ a.m. 1 p.m. Phone #: 410-313-6287

Sample Preserved By: Field ESRL WMRL Central Lab

Preservative Used: HNO₃ _____ ml. pH: 4.2

Sample Type: Drinking Water Landfill Source (Raw Water) Liquid
 Community Stream Distribution (Treated) Solid
 Data Category Code Non-Community Sediment Other _____
 Private

Specify Program: SDWA NPDES CWA RCRA Consumer Products Other _____

Type of Sample Preparation: Total Metals Total Metals TCLP Dissolved Metals
(field preparation required)

Remarks: Sample collected during yield test.

✓	Element	Results (ppm)	✓	Element	Results (ppm)
	Antimony (Sb)			Copper (Cu)	
	Arsenic (As)			Lead (Pb)	
	Barium (Ba)			Silver (Ag)	
	Beryllium (Be)			Zinc (Zn)	
	Cadmium (Cd)			Aluminum (Al)	
	Chromium (Cr)			Iron (Fe)	
	Mercury (Hg)			Manganese (Mn)	
	Nickel (Ni)			Calcium (Ca)	
	Selenium (Se)			Magnesium (Mg)	
✓	Sodium (Na) <u>SM5</u>			Potassium (K)	
	Thallium (Tl)			Uranium (U)	
				Vanadium (V)	

Lab Supervisor: _____

Date Reported: / /

• Phone: (443) 681-3857

• Fax: (443) 681-4507



State of Maryland
DHMH-Laboratories Administration
Division of Environmental Chemistry
TRACE METALS LABORATORY
1770 Ashland Avenue, Baltimore, Maryland 21205
Robert Myers, Ph.D., Director



Certificate of Analysis

HOWARD CO ENVIRONMENTAL HLTH
8930 STANFORD BLVD
COLUMBIA, MD 21045

Lab Project No: E17004819 Date Coll.: 06/06/2017 Date Received 06/07/2017 Submitted By: Collins

Field ID: HO-17-0116
Lab No.: E17004819001

<u>Method</u>	<u>Element</u>	<u>Result</u>	<u>Units</u>	<u>Date Analyzed</u>
EPA 200.7	Sodium	6.06	ppm	06/13/2017

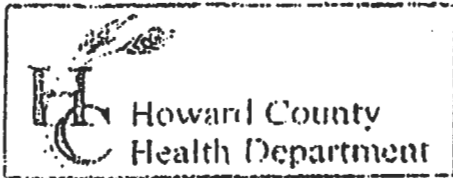
Comments:

Approved by: *Sadia Alameen*

Approval date: 06/16/2017

**The following methods are included in our A2LA Scope of Accreditation: EPA 200.7, EPA 200.8, EPA 245.1.

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(410) 313-2640 Fax (410) 313-2648
TDD (410) 313-2323 Toll Free 1-866-313-6300
website: www.hchealth.org

Penny E. Borenstein, M.D., M.P.H., Health Officer

TO ALL INTERESTED PARTIES

When submitting a well permit application for a proposed well for new construction, please indicate one of the following:

All individual well sites for lots 2-23 of Mill Creek are staked + properly labeled

The well site has been staked by Bohler Engineering,
(professional land surveyor or company employing professional land surveyors)
on 3/3/17 (date) and does not require a site inspection.

The well driller, builder or property owner will call the Health Department to schedule a time to meet in the field to verify the proposed well site location.

This sheet, along with two copies of an acceptable well site plan, must be attached to the green well permit application.

Revised 6/10/03

RECEIVED
MAR -6 2017
HOWARD COUNTY HEALTH DEPT.
COMMUNITY HYGIENE PROGRAM

B 1	SEQUENCE NO. (MDE USE ONLY) 55217	STATE OF MARYLAND APPLICATION FOR PERMIT TO DRILL WELL please type	STATE PERMIT NUMBER HO-17-0165 <small>70</small> fill in this form completely <small>79</small>
------------	---	--	---

Date Received (APA) 07 12 17
8 MM DD YY 13

OWNER INFORMATION

15 Last Name **Elm Street Development** 34
Owner First Name

36 Street or RFD **1355 Beverly Rd Suite 240** 55

57 Town **Maclean** 70 State **VA** 72 Zip **22101** 76

B 3 LOCATION OF WELL

8 COUNTY **Howard** 21

23 SUBDIVISION **M:11 Creek** 42

SECTION **44** 46 LOT **19** 48 50

52 NEAREST TOWN **Clarksville** 71

DRILLER INFORMATION

76 Driller's Name **Michael Barlow M WD 355** 81 License No.

Firm Name **Barlow Well Drilling**

Address **522 Underwood Ave 21014**

Signature **[Signature]** Date **6/20/17**

B 4 SOURCES OF DRILLING WATER

1. **Well**

2.

3.

11 STREET ADDRESS **HAVILAND M:11 RD** 30

ON WHICH SIDE OF ROAD (CIRCLE APPROPRIATE BOX)

NORTH
 WEST
 EAST
 SOUTH

34 DISTANCE FROM ROAD **1000** 37

ENTER FT OR MI **FT** 38-39

TAX MAP: **39** BLK: **6** PARCEL **0001**

B 2 WELL INFORMATION

APPROX. PUMPING RATE (GAL. PER MIN.) **5** 8 12

AVERAGE DAILY QUANTITY NEEDED (GAL. PER DAY) **750** 14 20

USE FOR WATER (CIRCLE APPROPRIATE BOX)

D DOMESTIC POTABLE SUPPLY & RESIDENTIAL IRRIGATION

F FARMING (LIVESTOCK WATERING & AGRICULTURAL IRRIGATION)

I INDUSTRIAL, COMMERCIAL, DEWATERING

P PUBLIC WATER SUPPLY WELL

T TEST, OBSERVATION, MONITORING

O OPEN LOOP GEOTHERMAL

C CLOSED LOOP GEOTHERMAL

NOT TO BE FILLED IN BY DRILLER HEALTH DEPARTMENT APPROVAL

COUNTY NAME **Howard** COUNTY NO. **13**

STATE SIGNATURE _____ INSERT S → 41

DATE ISSUED **7/24/17** 43 MM DD YY 48

CO SIGNATURE **Sub Cell** EXP. DATE **7/24/18**

APPROXIMATE DEPTH OF WELL **500** FEET 24 28

APPROXIMATE DIAMETER OF WELL **6** INCH NEAREST

METHOD OF DRILLING (circle one)

BORED (or Augered) JETTED Jetted & DRIVEN

30 AIR-ROTARY **AIR-PERMISSION** ROTARY (Hydraulic Rotary)

37 CABLE **REVERSE-ROTARY** DRIVE-POINT

other _____

REPLACEMENT OR DEEPEINED WELLS (CIRCLE APPROPRIATE BOX)

N THIS WELL WILL NOT REPLACE AN EXISTING WELL **USED IN TANDUM**

Y THIS WELL WILL REPLACE A WELL THAT WILL BE ABANDONED AND SEALED

39 S THIS WELL WILL REPLACE A WELL THAT WILL BE USED AS A STANDBY-CONTACT LOCAL APPROVING AUTHORITY FOR POLICY ON STANDBY WELLS

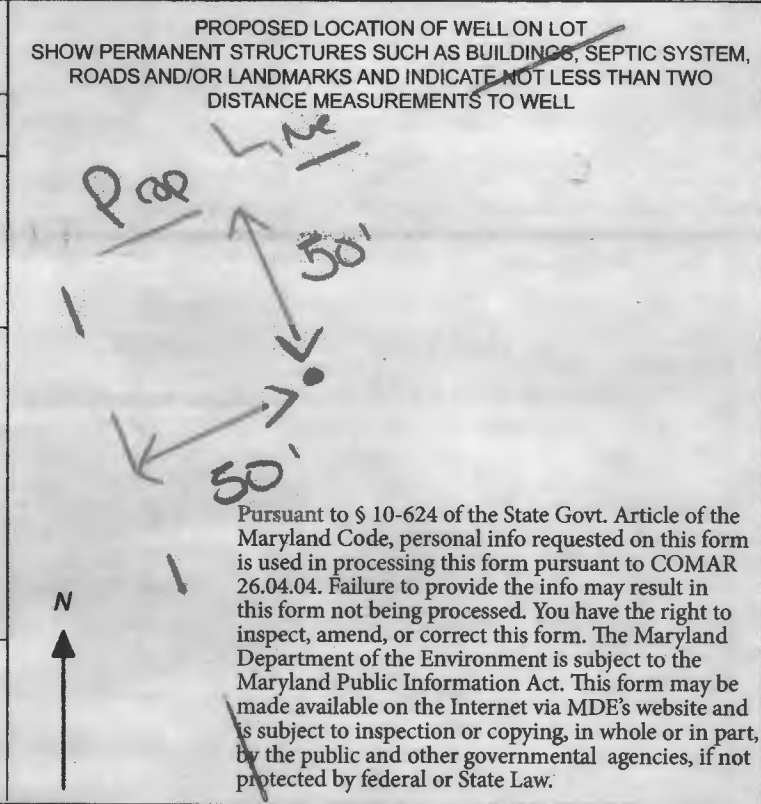
D THIS WELL WILL DEEPEIN AN EXISTING WELL

PERMIT NUMBER OF WELL TO BE REPLACED OR DEEPEINED (IF AVAILABLE) 41 _____ 52

Not to be filled in by driller (MDE OR COUNTY USE ONLY)

APPROX. PERMIT NUMBER _____ **G** _____

PERMIT No. **HO-17-0165** 70 71 72 73 74 75 76 77 78 79



SPECIAL CONDITIONS

NOTE APPROVING AUTHORITIES SHOULD USE SEPARATE SHEET IF NEEDED

[Eastern well on lot - must tie into house along with HO-17-0116]

C1 52473

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 09/11/17

DATE WELL COMPLETED MM 06/14/17

Depth of Well 600 (TO NEAREST FOOT)

OK 12/4/17

PERMIT NO. FROM "PERMIT TO DRILL WELL" HO 17-0165

OWNER Elm Street Development WELL SITE ADDRESS Haviland Mill Rd TOWN Clarksville SUBDIVISION Mill Creek SECTION Well # 2 LOT 19

WELL LOG table with columns: DESCRIPTION, FEET (FROM, TO), check if water bearing. Rows include Soil, Red clay, Brown shale, Hard gray rock.

GROUTING RECORD form with fields for WELL HAS BEEN GROUTED, TYPE OF GROUTING MATERIAL, CEMENT, BENTONITE CLAY, NO. OF BAGS, NO. OF POUNDS, GALLONS OF WATER, DEPTH OF GROUT SEAL.

CASING RECORD form with fields for casing types insert appropriate code below, MAIN CASING TYPE, Nominal diameter top (main) casing, Total depth of main casing.

SCREEN RECORD form with fields for screen type or open hole, insert appropriate code below, DEPTH (nearest ft.), DIAMETER OF SCREEN.

PUMPING TEST form with fields for PUMPING TEST, HOURS PUMPED, PUMPING RATE, METHOD USED TO MEASURE PUMPING RATE, WATER LEVEL, TYPE OF PUMP USED.

PUMP INSTALLED form with fields for DRILLER INSTALLED PUMP, TYPE OF PUMP INSTALLED, CAPACITY, PUMP HORSE POWER, PUMP COLUMN LENGTH, CASING HEIGHT.

WELL HYDROFRACTURED form with YES/NO options.

CIRCLE APPROPRIATE LETTER form with options A, E, P.

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...

DRILLERS LIC. NO. M W3355, DRILLERS SIGNATURE, LIC. NO. WRB0113

OTHER CASING (if used) form with fields for diameter, depth.

DEPTH (nearest ft.) table with columns 1-51 and rows A-C-S-E-N.

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

TELESCOPE CASING, LOG INDICATOR, OTHER DATA

LATITUDE 39.18475 LONGITUDE 76.99901 (DEFAULT COORD. WGS 84)

Pursuant to §10-624 of the State Govt. Article of the Maryland Code personal info. requested on this form is used in processing this form pursuant to COMAR 26.04.04. Failure to provide the info. may result in this form not being processed.



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:	June 14, 2017		
Well Depth:	600	feet	
Customer	Elm Street Development	Permit #	HO. 17-0165
Road	Haviland Mill Road	Subdivision	Mill Creek
City	Clarksville	Section	Well #2
State	Maryland	Lot #	19

Time	Water Level feet	Time to Fill 1-gallon bucket seconds	G.P.M.
10:30 AM	30	4	15.00
10:45 AM	120	120	0.50
11:00 AM	120	120	0.50
11:15 AM	120	120	0.50
11:30 AM	120	120	0.50
11:45 AM	119	120	0.50
12:00 PM	119	120	0.50
12:15 PM	119	120	0.50
12:30 PM	119	120	0.50
12:45 PM	119	120	0.50
1:00 PM	118	120	0.50
1:15 PM	118	120	0.50
1:30 PM	118	120	0.50
1:45 PM	118	120	0.50
2:00 PM	118	120	0.50
2:15 PM	118	120	0.50
2:30 PM	118	120	0.50
2:45 PM	118	120	0.50
3:00 PM	117	120	0.50
3:15 PM	117	120	0.50
3:30 PM	117	120	0.50
3:45 PM	117	120	0.50
4:00 PM	117	120	0.50
4:15 PM	117	120	0.50
4:30 PM	117	120	0.50
4:45 PM	117	120	0.50
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.			

Send Report To: Bert Nixon

Howard Co Health Dept.

Bureau of Environmental Health

8930 Stanford Blvd.
Columbia MD 21045

State of Maryland
DHMH - Laboratories Administration
Division of Environmental Chemistry
TRACE METALS LABORATORY
1770 Ashland Avenue
Baltimore, Maryland 21205

Lab No. 6715/17 Date Received

E17004963001
 Received: 06/15/2017
 Metals HO-17-0116A

LABORATORY ANALYSIS REQUEST

Please Print

Sample ID No: HO-17-0116-A Site Name: Mill Creek - lot 19 County: Howard

Sample Source: Haviland Mill Rd Highland Collector: S. Collins
Street Town or City Name

Date Collected: 6/14/2017 Time Collected: 12:45 a.m. p.m. Phone #: 410-313-6287

Sample Preserved By: Field ESRL WMRL Central Lab
Preservative Used: HNO₃ mL pH: 2

Sample Type: Drinking Water Landfill Source (Raw Water) Liquid
Data Category: Community Stream Distribution (Treated) Solid
Code Non-Community Sediment Other
 Private

Specify Program: SDWA NPDES CWA RCRA Consumer Products Other

Type of Sample Preparation: Total Metals Total Metals TCLP Dissolved Metals
(field preparation required)

Remarks: Sample collected during field test

✓	Element	Results (ppm)	✓	Element	Results (ppm)
	Antimony (Sb)			Copper (Cu)	
	Arsenic (As)			Lead (Pb)	
	Barium (Ba)			Silver (Ag)	
	Beryllium (Be)			Zinc (Zn)	
	Cadmium (Cd)			Aluminum (Al)	
	Chromium (Cr)			Iron (Fe)	
	Mercury (Hg)			Manganese (Mn)	
	Nickel (Ni)			Calcium (Ca)	
	Selenium (Se)			Magnesium (Mg)	
✓	Sodium (Na) <u>SHS</u>			Potassium (K)	
	Thallium (Tl)			Uranium (U)	
				Vanadium (V)	

Lab Supervisor: _____

Date Reported: / /

• Phone: (443) 681-3857 • Fax: (443) 681-4507



State of Maryland
DHMH-Laboratories Administration
Division of Environmental Chemistry
TRACE METALS LABORATORY
1770 Ashland Avenue, Baltimore, Maryland 21205
Robert Myers, Ph.D., Director



Certificate of Analysis

HOWARD CO ENVIRONMENTAL HLTH
8930 STANFORD BLVD
COLUMBIA, MD 21045

Lab Project No: E17004963 Date Coll.: 06/14/2017 Date Received 06/15/2017 Submitted By: Collins

Field ID: HO-17-0116A
Lab No.: E17004963001

<u>Method</u>	<u>Element</u>	<u>Result</u>	<u>Units</u>	<u>Date Analyzed</u>
EPA 200.7	Sodium	6.64	ppm	06/19/2017

Comments:

Approved by: *Sadia Muneer*

Approval date: 06/21/2017

**The following methods are included in our A2LA Scope of Accreditation: EPA 200.7, EPA 200.8, EPA 245.1.

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