



HOWARD COUNTY HEALTH DEPARTMENT

61540

WS

DATE 9/25/17

Received From

Disaster Relief Systems PHONE # 789-5020

For

WV PERMIT - 5350
Ambrosia Rd

CASH

CHECK

NO.

37910 One hundred sixty Dollars

\$ 100.00

Received By

gking

C1 48245

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. 3-8 ON ALL CARDS)

COUNTY NUMBER 13

DATE RECEIVED 01/09/18

DATE WELL COMPLETED 11/03/2017

DEPTH OF WELL 320

OK 1/24/18 SC

PERMIT NO. FROM "PERMIT TO DRILL WELL" HO-17-0199

OWNER Isacco Philip, WELL SITE ADDRESS 5350 Ambrosia Drive, TOWN Ellicott City, MD 21043

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. Includes entries for Silt clay, Rock, hard gray, and geothermal wells.

GROUTING RECORD

WELL HAS BEEN GROUTED (Y), TYPE OF GROUTING MATERIAL (CM, BC), NO. OF BAGS 18, NO. OF POUNDS 400, GALLONS OF WATER 378, DEPTH OF GROUT SEAL 0 to 320 ft.

CASING RECORD

MAIN CASING TYPE, Nominal diameter top (main) casing, Total depth of main casing, OTHER CASING (if used) diameter and depth.

SCREEN RECORD

screen type or open hole (ST, BR, HO, PL, OT), DEPTH (nearest ft.) table with depth intervals.

GRAVEL PACK

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

MDE USE ONLY (NOT TO BE FILLED IN BY DRILLER)

TELESCOPE CASING, LOG INDICATOR, OTHER DATA

PUMPING TEST

HOURS PUMPED (nearest hour) N/A, PUMPING RATE (gal. per min.) N/A, METHOD USED TO MEASURE PUMPING RATE N/A, WATER LEVEL (distance from land surface) BEFORE PUMPING 30 ft, WHEN PUMPING N/A ft, TYPE OF PUMP USED (for test) air, piston, turbine, centrifugal, rotary, other, jet, submersible.

PUMP INSTALLED

DRILLER INSTALLED PUMP (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 3 (nearest foot).

LATITUDE 39.225107, LONGITUDE 76.767440, (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.

B 1	SEQUENCE NO. (MDE USE ONLY) 57961	STATE OF MARYLAND APPLICATION FOR PERMIT TO DRILL WELL 52d340 please type	STATE PERMIT NUMBER HO-17-0199 <small>70 79</small> Fill in this form completely
Date Received (APA) 09/28/17 <small>8 MM DD YY 13</small>		B 3 LOCATION OF WELL	
OWNER INFORMATION		Howard County	
15. Last Name Owner First Name Isaac Philip		8 COUNTY 21	
36 Street or RFD 5350 Ambrosia Drive		23 SUBDIVISION 42	
57 Town 70 State 72 Zip 76 Ellicott City, MD 21043-4656		SECTION 44 46 LOT 3 48 50	
DRILLER INFORMATION		52 NEAREST TOWN 71 Ellicott City	
Driller's Name License No. Jeff Corran MWD 5167		B 4 SOURCES OF DRILLING WATER 1. municipal 2. 3.	
Firm Name Chesapeake Geosystems, Inc.			
Address 16720 Fort Smallwood Rd Balt. 21226			
Signature Date Jeff Corran 9/26/17		11 STREET ADDRESS 30 5350 Ambrosia Drive	
B 2 WELL INFORMATION		ON WHICH SIDE OF ROAD (CIRCLE APPROPRIATE BOX) 34 170 37 DISTANCE FROM ROAD FT ENTER FT OR MI 38 39 TAX MAP: 31 BLK: 16 PARCEL 641	
APPROX. PUMPING RATE (GAL. PER MIN.) 8 12 N/A			
AVERAGE DAILY QUANTITY NEEDED (GAL. PER DAY) 14 20 N/A			
USE FOR WATER (CIRCLE APPROPRIATE BOX)		NOT TO BE FILLED IN BY DRILLER HEALTH DEPARTMENT APPROVAL	
<input type="checkbox"/> DOMESTIC POTABLE SUPPLY & RESIDENTIAL IRRIGATION <input type="checkbox"/> FARMING (LIVESTOCK WATERING & AGRICULTURAL IRRIGATION) <input type="checkbox"/> INDUSTRIAL, COMMERCIAL, DEWATERING <input type="checkbox"/> PUBLIC WATER SUPPLY WELL <input type="checkbox"/> TEST, OBSERVATION, MONITORING <input type="checkbox"/> OPEN LOOP GEOTHERMAL <input checked="" type="checkbox"/> CLOSED LOOP GEOTHERMAL		COUNTY NAME Howard COUNTY NO. 13 STATE SIGNATURE _____ INSERT S → DATE ISSUED 10/16/17 CO SIGNATURE SEL GLL EXP. DATE 10/16/18 <small>43 MM DD YY 48</small>	
APPROXIMATE DEPTH OF WELL 24 28 FEET 320' (3 bores) 480' (4 bores)		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 Distances ① 39' to A, 24' to B ② 42' to B, 75' to D ③ 27' to B, 64' to D ④ 11' to B, 48' to D ⑤ 21' to C, 18' to D ⑥ 33' to C, 30' to D ⑦ 39' to C, 45' to D 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.	
APPROXIMATE DIAMETER OF WELL 6 NEAREST INCH			
METHOD OF DRILLING (circle one)		Ambrosia Dr 10/23/17 @ materials onsite 10/24/17 @ Bore 7 ~ 60' Deep using steel casing 10/26/17 @ Bore 7 deep set 10/27/2017 @ Bore Hole 6 + 5 great man 11/2/17 @ Bore holes 1, 2, 3, 4 drilled	
<input checked="" type="checkbox"/> BORED (or Augered) JETTED Jettied & DRIVEN <input checked="" type="checkbox"/> AIR-ROTARY AIR-PERCussion ROTARY (Hydraulic Rotary) <input type="checkbox"/> CABLE REVERSE-ROTARY DRIVE-POINT other _____			
REPLACEMENT OR DEEPEMED WELLS (CIRCLE APPROPRIATE BOX)			
<input checked="" type="checkbox"/> THIS WELL WILL NOT REPLACE AN EXISTING WELL <input type="checkbox"/> THIS WELL WILL REPLACE A WELL THAT WILL BE ABANDONED AND SEALED <input type="checkbox"/> THIS WELL WILL REPLACE A WELL THAT WILL BE USED AS A STANDBY-CONTACT LOCAL APPROVING AUTHORITY FOR POLICY ON STANDBY WELLS <input type="checkbox"/> 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 _____ G _____			
PERMIT No. HO-17-0199 <small>70 71 72 73 74 75 76 77 78 79</small>			
SPECIAL CONDITIONS <small>NOTE: APPROVING AUTHORITIES SHOULD USE SEPARATE SHEET IF NEEDED</small>			

39.225055 -76.767583

ST/CO USE ONLY DATE Received **01/09/18** DATE WELL COMPLETED **11/03/2017** Depth of Well **480** (TO NEAREST FOOT) **DK** PERMIT NO. FROM "PERMIT TO DRILL WELL" **10-17-0199**

OWNER **Isacco Philip** WELL SITE ADDRESS **5560 Ambrosia Drive** TOWN **Ellicott City, MD 21043-4636** SUBDIVISION _____ SECTION _____ LOT **3**

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	
Silt, clay			
Small boulders			
Hard	0	40	
Rock, hard gray	40	480	✓

(x4 wells)
Installed 1.25" closed loop geothermal wells to 480'

GROUTING RECORD YES NO
WELL HAS BEEN GROUTED (Circle Appropriate Box) **Y** **N**
TYPE OF GROUTING MATERIAL (Circle one)
CEMENT **CM** BENTONITE CLAY **BC**
NO. OF BAGS **32** NO. OF POUNDS **1,600**
GALLONS OF WATER **672**
DEPTH OF GROUT SEAL (to nearest foot)
from **0** ft. to **480** 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 Nominal diameter top (main) casing (nearest inch) Total depth of main casing (nearest foot)
60 **61** **63** **64** **66** **70**

OTHER CASING (if used)
EACH CASING 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

NUMBER OF UNSUCCESSFUL WELLS: **0**
WELL HYDROFRACTURED **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.: **M WD 567**
DRILLERS SIGNATURE **William**
LIC. NO.: **D**

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

C 2 DEPTH (nearest ft.)
E 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80

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) **N/A**
PUMPING RATE (gal. per min.) **N/A**
METHOD USED TO MEASURE PUMPING RATE **N/A**
WATER LEVEL (distance from land surface)
BEFORE PUMPING **30** ft.
WHEN PUMPING **N/A** 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 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 } LAND SURFACE
- below } **3** (nearest foot)

LATITUDE **39.225033**
LONGITUDE **76.767604**
(DEFAULT COORD. WGS 84)

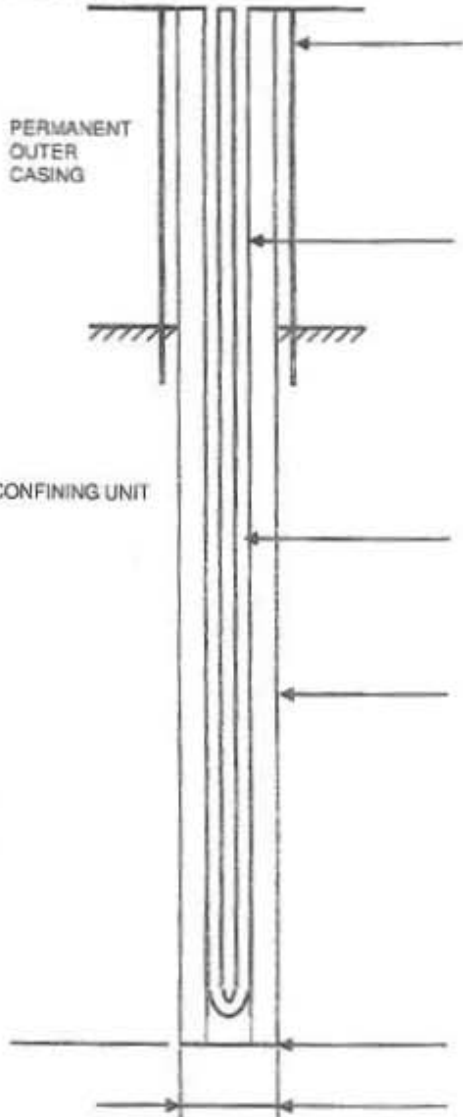
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WELL SCHEMATIC FORM

GROUND SURFACE

PERMANENT OUTER CASING

CONFINING UNIT



PERMANENT OUTER CASING (if area contaminated)

MATERIAL _____
 DIAMETER _____
 LENGTH _____
 DEPTH INTO CONFINING UNIT _____

TUBE CASING (if not regular, single loop)

ATTACH HORIZONTAL SCHEMATIC
 NUMBER OF TUBES PER BOREHOLE _____
 DIAMETER OF TUBES _____
 MATERIAL _____
 SHAPE AND LENGTH _____
 TUBE CONNECTION METHOD _____
 TUBE CONNECTION MATERIAL _____

LOOP PIPE CASING (regular, single loop)

MATERIAL HDPE? YES NO
 DIAMETER 1.25"
 LENGTH 480' ± 320'

GROUT

MATERIAL Thermex Bentonite
 PERMEABILITY _____
 WATER / GROUT RATIO _____
 PERCENT SOLIDS _____
 TRENCH GROUTED FROM BOTTOM OF BOREHOLE? YES NO
 USING A POSITIVE DISPLACEMENT PUMP? YES NO

DEPTH TO THE BOTTOM OF HOLE 480' ± 320'

DIAMETER OF BOREHOLE 6"

WELL ADDRESS 5350 Ambrose Drive Ellicott City Md
 LOT NUMBER: 3
 SQUARE NUMBER: _____

WELL OWNER: Phillip Isacco
 OWNER ADDRESS: 5350 Ambrose Drive, Ellicott City Md

FILE INQUIRY NOTES

DATE	RESULTS OF REVIEW FOR FILE
10/13/17	Spoke with Wes from Chesapeake Geo. Told him that setbacks to future pool are 20' - he says homeowner is aware and the priority now is drilling geothermal wells. (SC)
10/23/17	<p style="text-align: center;">Pipe Specs:</p> <p>1 1/4" Silverline Geo Stripe PE-4710 445574c DR-11 PR, 200 PSI @ 73°F ASTM D-3035 NSF-Geo</p> <p>Qty: 3 [1 1/4" x 405'] 4 [1 1/4" x 505'] (D)</p>
10/24/2017 [13:15]	<p>Property was in utility trench blasting area. Hitting fractured bedrock at 2'. Driller finding blasting caps in yard.</p> <p>Drilling Bore #7 ~ 60' deep. Using steel casing + leaving it due to underground conditions (D)</p>
	<p>Grant Spec:</p> <p style="border: 1px solid black; padding: 5px; display: inline-block;">Lot # 10261623 / 20:03B (D)</p>
10/26/17	<p>On site for setting of geo loop on bore #7</p> <p>480' Deep (D)</p>
10/27/2017 13:00	<p>Bore hole G dug. Onsite after casing set on Bore hole 5. Shooting on Man (D)</p>
11/2/17	<p style="border: 1px solid black; padding: 5px; display: inline-block;">Lot: 07181723 / Lance (D)</p> <p>Bores 1,2,3 drilled. Completing Bore 4.</p>

11/3/17 - To Do
1 320
1 480

→ Top everything off

To be completed on Monday.

Grat mixer needs repair. ⊕

11/6/17

Grouting Complete ⊕