



HOWARD COUNTY HEALTH DEPARTMENT

65487

DATE
5/13/19

OS
PHONE # 301-776-8370

Received From

Allied Environmental Services

For

Well Point App - 9217 Turmeric Tree

CASH

CHECK

NO.

4554

one hundred sixty

\$

160.00

00/100 Dollars

Received By

[Signature]

e1-44997

SEQUENCE NO. (MDE USE ONLY)

STATE OF MARYLAND WELL COMPLETION REPORT

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

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

COUNTY NUMBER

ST/CO USE ONLY DATE RECEIVED MM/DD

DATE WELL COMPLETED

Depth of Well

PERMIT NO. FROM "PERMIT TO DRILL WELL"

OWNER Wells, Robert + Lindee WELL SITE ADDRESS 1217 Tunevicker Farm TOWN Columbia, MD SUBDIVISION SECTION LOT 138

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 (Use additional sheets if needed), FEET (FROM, TO), check if water bearing. Includes entries for 'Brn Clay' and 'Gray Rocks'.

GROUTING RECORD

WELL HAS BEEN GROUTED (Circle Appropriate Box) YES NO

TYPE OF GROUTING MATERIAL (Circle one) CEMENT CM BENTONITE CLAY BC NO. OF BAGS 46 NO. OF POUNDS 650 GALLONS OF WATER DEPTH OF GROUT SEAL (to nearest foot)

CASING RECORD

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

OTHER CASING (if used)

SCREEN RECORD screen type or open hole insert appropriate code below

DEPTH (nearest ft.)

GRAVEL PACK IF WELL DRILLED WAS FLOWING WELL INSERT F IN BOX 68 MDE USE ONLY (NOT TO BE FILLED IN BY DRILLER)

C 3

PUMPING TEST

HOURS PUMPED (nearest hour) PUMPING RATE (gal. per min.) METHOD USED TO MEASURE PUMPING RATE WATER LEVEL (distance from land surface) BEFORE PUMPING WHEN PUMPING TYPE OF PUMP USED (for test)

PUMP INSTALLED

DRILLER INSTALLED PUMP (CIRCLE) (YES or 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) PUMP HORSE POWER PUMP COLUMN LENGTH (nearest ft.) CASING HEIGHT (circle appropriate box and enter casing height) LAND SURFACE (nearest foot)

LATITUDE 39.13740 LONGITUDE 76.83270 (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.

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. MS D 106 DRILLERS SIGNATURE LIC. NO. D SITE SUPERVISOR (sign. of driller or journeyman responsible for sitework if different from permittee)

TELESCOPE CASING LOG INDICATOR OTHER DATA

B 1 SEQUENCE NO. (MDE USE ONLY) **63690** STATE OF MARYLAND APPLICATION FOR PERMIT TO DRILL WELL **56587** please type STATE PERMIT NUMBER **HD - 18 - 0088** fill in this form completely

Date Received (APA) **05/13/19** OWNER INFORMATION
Potts Robert + Linlee
 Last Name Owner First Name
9217 Tunemaker Ter
 Street or RFD
Columbia MD 21045
 Town State Zip

B 3 LOCATION OF WELL
Howard
 COUNTY
23 SUBDIVISION
 SECTION **44** LOT **138**
Columbia
 NEAREST TOWN

DRILLER INFORMATION
Marshal Arnette M SD 106
 Driller's Name License No.
Allied Well Drilling
 Firm Name
PO Box 129 Annapolis Junction MD 20701
 Address
Marshal Arnette 05/08/19
 Signature Date

B 4 SOURCES OF DRILLING WATER
 1. **Public**
9217 Tunemaker Ter
 STREET ADDRESS
 ON WHICH SIDE OF ROAD (CIRCLE APPROPRIATE BOX)
 NORTH N
 WEST W EAST E
 SOUTH S
 34 **75** 37
 DISTANCE FROM ROAD
 ENTER FT OR MI **FK**
 TAX MAP: **0042** BLK: **-** PARCEL **0401**

B 2 WELL INFORMATION
 APPROX. PUMPING RATE (GAL. PER MIN.) **8** / **12**
 AVERAGE DAILY QUANTITY NEEDED (GAL. PER DAY) **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 **1 bore**

NOT TO BE FILLED IN BY DRILLER HEALTH DEPARTMENT APPROVAL
Howard COUNTY NAME COUNTY NO. **13**
 STATE SIGNATURE _____ INSERT S → **41**
 DATE ISSUED **5/22/19** CO SIGNATURE **RAA** EXP. DATE **5/22/20**
 43 MM DD YY 48

APPROXIMATE DEPTH OF WELL **240** FEET
 APPROXIMATE DIAMETER OF WELL **6** INCH 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

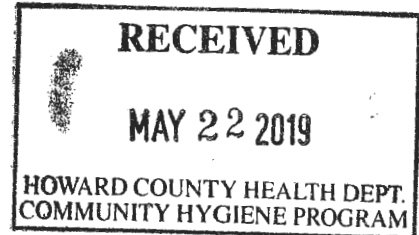
Pursuant to § 10-624 of the State Govt. Article of the Maryland Code, personal info requested on this form is used in processing this form pursuant to COMAR 26.04.04. Failure to provide the info may result in this form not being processed. You have the right to inspect, amend, or correct this form. The 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.

METHOD OF DRILLING (circle one)
 BORED (or Augered) JETTED Jetted & DRIVEN
 AIR-ROTary AIR-PERcussion ROTARY (Hydraulic Rotary)
 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)
 APPROP. PERMIT NUMBER _____ **G** _____
 PERMIT No. **HO - 18 - 0088**
 70 71 72 73 74 75 76 77 78 79

SPECIAL CONDITIONS
 NOTE APPROVING AUTHORITIES SHOULD USE SEPARATE SHEET IF NEEDED- **grout well from bottom to top.**



Ryan Rappaport, LEHS
Howard County Health Department
Bureau of Environmental Health
8930 Stanford Blvd.
Columbia, MD. 21045

RE: Tunemaker Terrace Well Location Variance

Mr. Rappaport,

We understand that whereas MDE has no setbacks to foundations, Howard County does have a setback of 20 feet from the foundation. We also understand the purpose of the Howard County setback is to help prevent problems with the foundation while the drilling is occurring.

Allied has explained this to us and has reiterated that their drilling procedures - specifically using a reamer in overburden and the installation of casing in unconsolidated materials - helps to prevent any such problems during the installation of our geothermal wells.

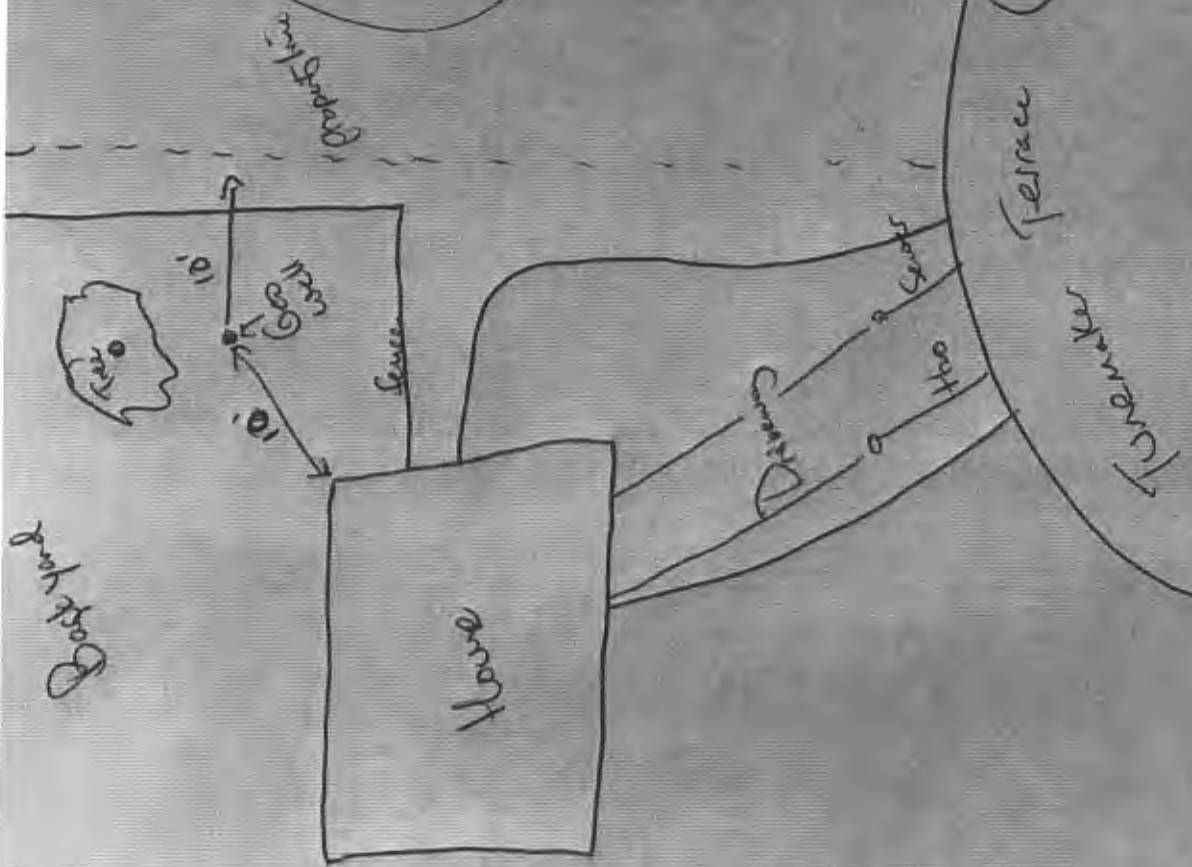
Robert Potts Jr.
Homeowner - Print Name

[Handwritten Signature]
Homeowner - Signature

HO-18-0088

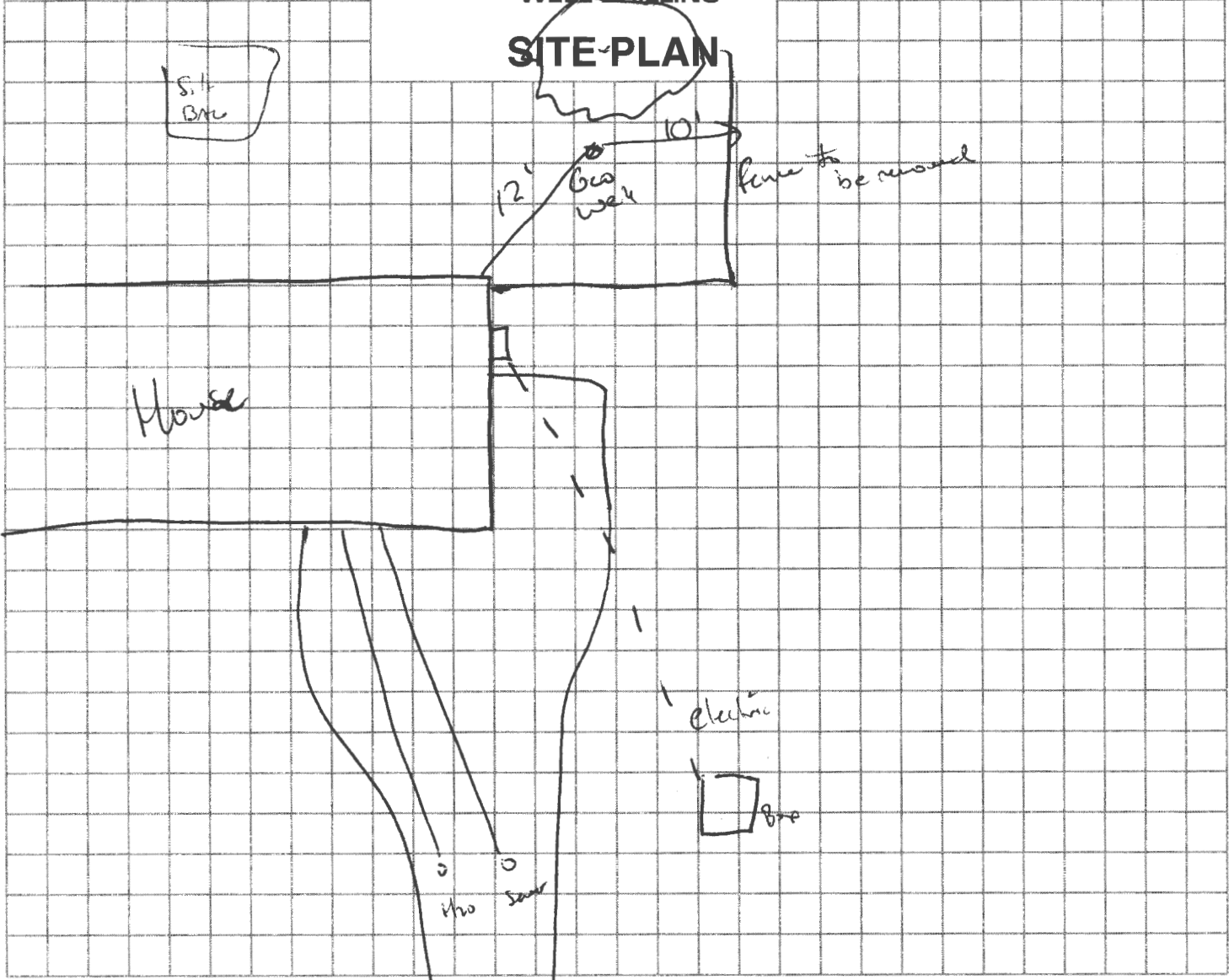
Well site approved
w/ homeowner's consent
of well location close
to foundation. 5/22/19
well stake verified
5/22/19

RECEIVED
MAY 22 2019
HOWARD COUNTY HEALTH DEPT
COMMUNITY HYGIENE PROGRAM





SITE PLAN



Sediment Control Protocol: _____

Distance From House: ~ 12
From Septic: NA
From Sewer: 40'
From Property Line: ~ 15
From Street: _____

Trees Nearby: yes - not big
Utility Issues: NO
Mats Needed: NO
Access For H/U: N/A
Neighboring Tags: _____

Comments: _____

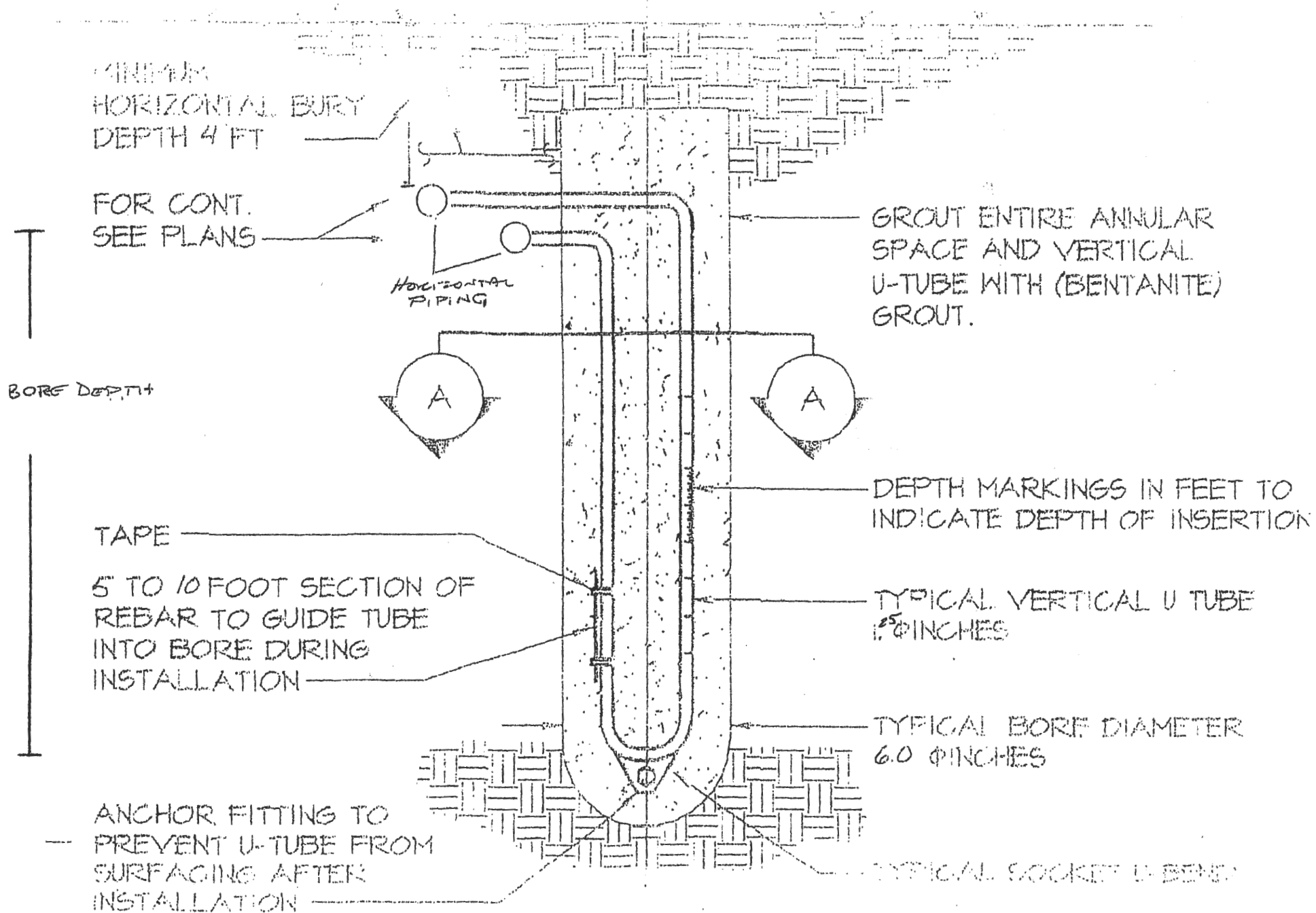
Person Completing Form: _____

HOWARD COUNTY GROUTING PROCEDURE

Boreholes will be grouted from the bottom to the top via a tremie pipe and positive displacement pump. Bentonite grout, known as Quik-Grout will be used according to the manufacturer's specifications to achieve a consistency of at least 20% solids (24 gallons potable water/50 lb. sack of grout) and a permeability no more than $2.5 \text{ E}(-08) \text{ cm/sec}$. Grouting will be completed immediately after installing the geothermal loop and no later than twenty-four (24) hours after installing the geothermal loop. Open boreholes/annular space will be protected as necessary to prevent the entry of surface water or pollutants.

GRADE

EACH BORE HOLE (TYP.)



DEPARTMENT OF INSPECTIONS,
 LICENSES & PERMITS
 3430 COURT HOUSE DRIVE
 ELLICOTT CITY, MD 21043
 PERMITS (410) 313-2455
 INSPECTIONS (410) 313-1850

**HOWARD COUNTY
 RESIDENTIAL
 HEATING-VENTILATION-AIR
 CONDITIONING AND
 REFRIGERATION PERMIT
 APPLICATION**

HVACR PERMIT # **M19000446**
 BUILDING PERMIT #

BUILDING ADDRESS: **9217 Tunemaker Terrace** SUITE/APT:
 SUBDIVISION:
 CENSUS TRACT: SECTION: AREA:
 LOT: TAX MAP: **4** PARCEL:
 BLOCK: ZONE: **0401**
 PROPERTY ID: **16-093203** MAP COORDINATES:
 TYPE OF IMPROVEMENTS: USE: **RES.**

OWNERS NAME: **Robert + Lin Potts**
 ADDRESS: **9217 Tunemaker Terrace**
 CITY: **Columbia**
 STATE: **MD** ZIP CODE: **21045**
 HOME PHONE: **410-381-4561** WORK PHONE:

CHECK ONE	HOW MANY
SINGLE FAMILY DWELLING <input checked="" type="checkbox"/>	<u>1</u> ZONES
SINGLE FAMILY TOWNHOUSE <input type="checkbox"/>	___ ZONES
MULTI-FAMILY / HOTEL/MOTEL <input type="checkbox"/>	___ ROOMS
ASSISTED LIVING HOMES (16 OR FEWER RESIDENTS) <input type="checkbox"/>	___ ROOMS

COMPANY NAME: **Ground Loop Heating & Air Cond., Inc.**
 LICENSEE NAME: **Michael E. Cullum**
 ADDRESS: **1701 Whiteford Road**
 CITY: **Darlington**
 STATE: **MD** ZIP CODE: **21034**
 PHONE: **410-836-1706** HVACR LICENSE NO: **6539**

- New**
- Heating and Air Conditioning
 - Geo Thermal System
 - Heating System Only
 - Ductless Mini Splits
 - Other Work (Describe):
 - Thru The Wall Systems
- Replacement**
- Heating
 - Air Conditioning
 - Heating and Air Conditioning
- Equipment:**
WATER FURNACE 3 TON
NDV038
- Additions and Alterations**
- Heating
 - Air Conditioning
 - Heating and Air Conditioning

****Replacement Geo Thermal Systems are not required; However, if a tax credit is being sought a permit is required****

Zones	Rooms
Permit Fee = # of Zones x \$40 = <u>\$40.00</u>	Permit Fee = # of Rooms x \$80 = <u> </u>
Technology Fee (10% of Permit Fee) = <u>\$4.00</u>	Technology Fee (10% of Permit Fee) = <u> </u>
Plus Application Fee <u>\$50.00</u>	Plus Application Fee \$50 <u>\$50.00</u>
Total Fees Due = <u>\$94.00</u>	Total Fees Due = <u> </u>

I HAVE CAREFULLY EXAMINED AND READ THIS APPLICATION AND KNOW IT IS TRUE AND CORRECT. THE WORK DESCRIBED HEREIN WILL BE PERFORMED BY A STATE HVACR LICENSED PERSON(S), AND ALL WORK WILL BE PERFORMED IN COMPLIANCE WITH APPLICABLE CODES AND STANDARDS OF HOWARD COUNTY THE STATE OF MARYLAND.

SIGNATURE OF LICENSEE: Michael Cullum DATE: 5/30/19
 PRINT NAME OF LICENSEE: MICHAEL CULLUM
 Email Address: linda @ ground loop . com

Validation

Check Number: 25483
 Case: Approved Septic System Plan
 Receipt Number: 57450
 Howard County Health Department

Signature: [Signature] Date: 06/11/2019

RECEIVED

JUN 04 2019

WELLS

M19000446

WaterFurnace Energy Analysis				
ASHRAE Single Zone Load Calculation Ver. 8.3				
Dealer-	Ground Loop Heating & Air Cond		Client-	Potts
	1701 Whiteford Rd Darlington Md 21034			
Design Conditions-	Winter	Summer	Daily Range:	
Outside Temp:	12 ° F	92 ° F	23	
Inside Temp:	70 ° F	72 ° F	° F	
Difference:	58 ° F	20 ° F		
General Information-			Exposed Ducts:	15%
Glass Type:	0 Clear		Duct Loss Factor:	0.15
Roof Color:	0 Dark		Duct Gain Factor:	0.15
Occupancy:	4 People			
Light/Appliance:	2000 btuh			
Infiltration Evaluation:	Qty	Code		
Fireplace:	1	1	Std-Damper	
Fans/Vents:	2	1	W/ Damper	
Attic Access:	0	1		
Window AC:	0	0		
Fossil Furnace:	0	0		
Fossil DHW Heater:	0	0		
Exposed Duct System:		0	Poorly Sealed	
Building # Stories:		1		
Wind Shielding:		2	Moderate	
BUILDING LOAD SUMMARY - WHOLE HOUSE	AREA	LOSS	GAIN	
WALLS/PARTITIONS-				
EXT. WALL- R13	866	6093	1984	
CONCR-4' BEL GRD-R11	960	3341		
WINDOWS/DOORS-				
D.H./SLDG-WOOD-DOUBLE	173	9064	5371	
D.H./SLDG-WOOD-DOUBLE				
DOOR-WOOD-STRM	41	1375	419	
SLDG DR-WOOD-DOUBLE				
CEILINGS/FLOORS-				
FRAME CEILING-R30	851	2253	1351	
FRAME FLOOR-R11	851	4573	1187	
PEOPLE			1200	
LIGHT/APPLIANCE			2000	
EXPOSED DUCT SYSTEM	15%	601	304	
MOISTURE REMOVAL			4145	
OTHER LOSS/GAIN-		0	0	
TOTAL LOAD (BTU/HR)		27300	17962	

POTTS

M19000446

Back yard

