



# HOWARD COUNTY HEALTH DEPARTMENT

86777

CODES
Geothermal
Well

DATE
8 / 18 / 24

WS

<input checked="" type="checkbox"/> CASH
<input checked="" type="checkbox"/> CHECK
NO.
33237

Received From

Allied Environmental Services

For

Well Repair 100-PL-2 Geothermal Well

One hundred dollars

Dollars

\$ 160.00
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Received By

*[Handwritten Signature]*

C1 70270 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.

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

COUNTY NUMBER

ST/CO USE ONLY DATE Received MM DD YY

DATE WELL COMPLETED MM DD YY 22 3 20 26

PERMIT NO. FROM "PERMIT TO DRILL WELL" HO-22-0145

OWNER, WELL SITE ADDRESS, TOWN, SUBDIVISION, SECTION, LOT

WELL LOG table with columns: DESCRIPTION, FEET (FROM, TO), check if water bearing. Includes handwritten entries like 'TO 20K', 'Silt, TR', 'Mica, Brn', 'Dry', 'Weathered', 'Rock Hard', 'Grey'.

GROUTING RECORD: WELL HAS BEEN GROUTED (Y), TYPE OF GROUTING MATERIAL (CM, BC), NO. OF BAGS, NO. OF POUNDS, GALLONS OF WATER, DEPTH OF GROUT SEAL.

CASING RECORD: MAIN CASING TYPE (ST, PL), Nominal diameter, Total depth, OTHER CASING (if used).

SCREEN RECORD: screen type or open hole (ST, BR, PL, HO, OT).

DEPTH (nearest ft.) table with columns for casing and screen depths.

PUMPING TEST: HOURS PUMPED, PUMPING RATE, METHOD USED TO MEASURE PUMPING RATE, WATER LEVEL, TYPE OF PUMP USED.

PUMP INSTALLED: DRILLER INSTALLED PUMP, TYPE OF PUMP INSTALLED, PLACE, CAPACITY, PUMP HORSE POWER, PUMP COLUMN LENGTH, CASING HEIGHT.

NUMBER OF UNSUCCESSFUL WELLS, WELL HYDROFRACTURED, CIRCLE APPROPRIATE LETTER (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.

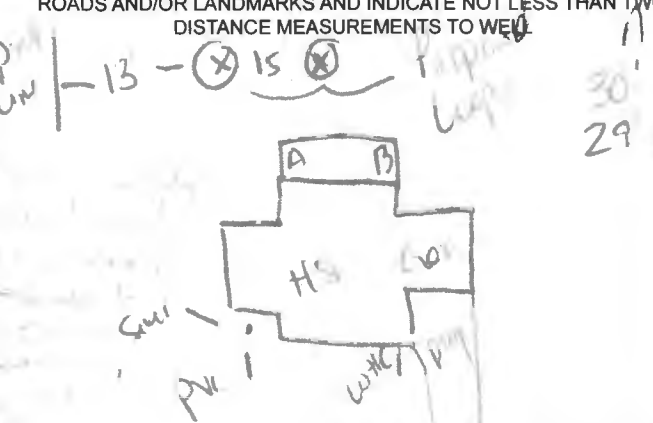
DRILLERS LIC. NO., DRILLERS SIGNATURE, LIC. NO.

MDE USE ONLY (NOT TO BE FILLED IN BY DRILLER): GRAVEL PACK, TELESCOPE CASING, LOG INDICATOR, OTHER DATA.

LATITUDE 39.249101, LONGITUDE 76.245574, 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.

02-300966

EMERGENCY/TEMP NO. IF ANY

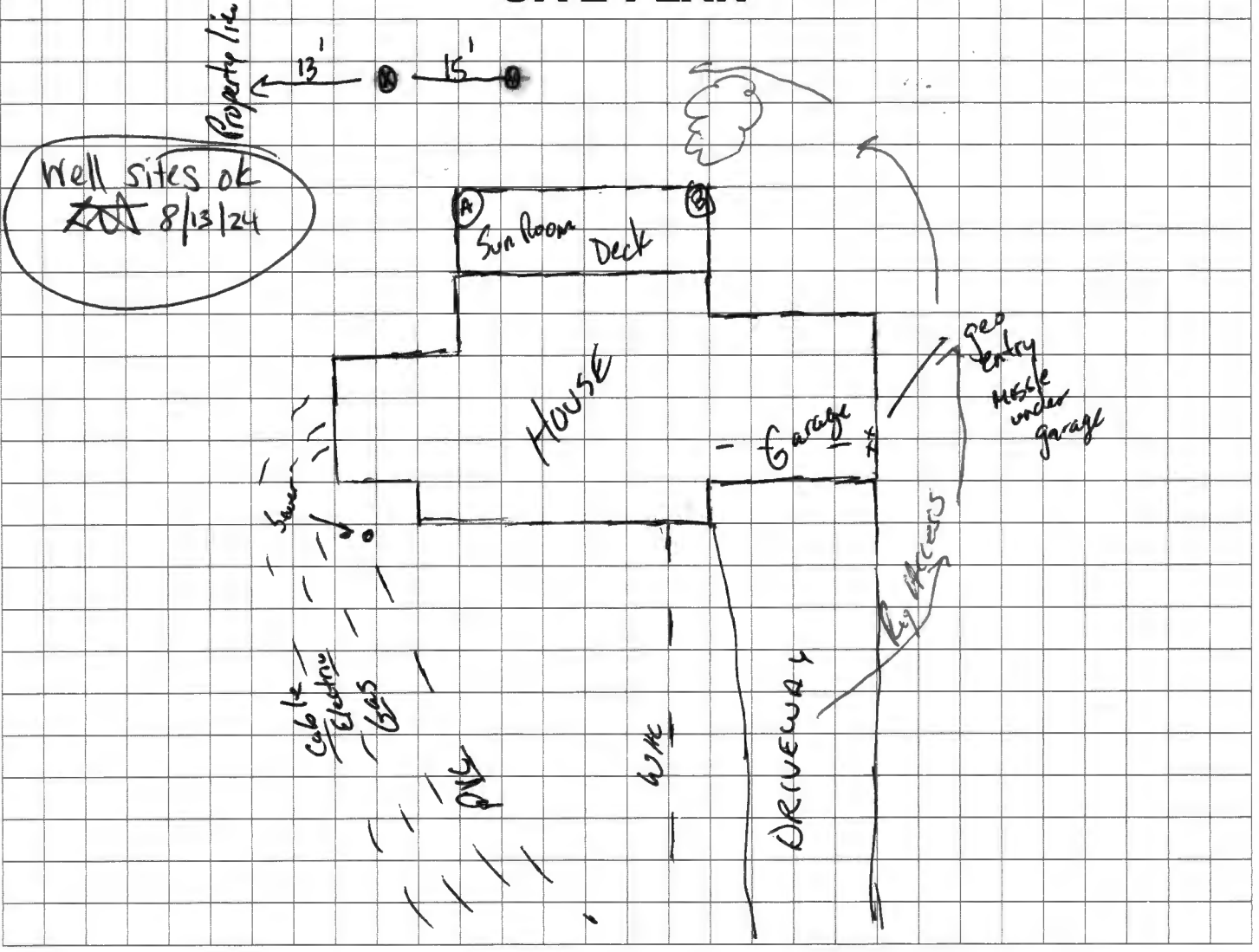
<b>B 1</b>	SEQUENCE NO. (MDE USE ONLY)	<b>STATE OF MARYLAND</b> <b>APPLICATION FOR PERMIT TO DRILL WELL</b> <small>please type</small>	STATE PERMIT NUMBER <b>H0 - 22 - 0145</b> <small>70 fill in this form completely 79</small>
1 2 3 6	<b>Date Received (APA)</b> <b>OWNER INFORMATION</b> 8 MM DD YY 13 15 Last Name Owner First Name 34 36 Street or RFD 55 57 Town 70 State 72 Zip 76 <i>Burnell David + Keeran Iron</i> <i>9862 Century Drive</i> <i>Ellicott City MD 21042</i>		<b>B 3 LOCATION OF WELL</b> 8 COUNTY 21 23 SUBDIVISION 42 SECTION 44 46 LOT 48 50 52 NEAREST TOWN 71 <i>Howard</i> <i>The Willows</i> <i>8</i> <i>Ellicott City</i>
<b>DRILLER INFORMATION</b> Driller's Name 76 License No. 81 Firm Name Address Signature Date <i>Wesley Wolfe</i> <i>M D 598</i> <i>Ellicott Well Drilling</i> <i>10 Box 129 Annapolis Junction MD 20701</i> <i>Wesley A Wolfe</i> <i>08/13/24</i>		<b>B 4 SOURCES OF DRILLING WATER</b> 1. PUBLIC 2. 3. 9862 Century Dr 11 STREET ADDRESS 30 ON WHICH SIDE OF ROAD (CIRCLE APPROPRIATE BOX) NORTH N WEST W EAST E SOUTH S 34 180' 37 DISTANCE FROM ROAD ENTER FT OR MI 38 39 TAX MAP: 0030 BLK: 102 PARCEL 0401	
<b>B 2 WELL INFORMATION</b> APPROX. PUMPING RATE (GAL. PER MIN.) 8 12 AVERAGE DAILY QUANTITY NEEDED (GAL. PER DAY) 14 20		<b>NOT TO BE FILLED IN BY DRILLER</b> <b>HEALTH DEPARTMENT APPROVAL</b> COUNTY NAME <i>Howard</i> COUNTY NO. <i>13</i> STATE SIGNATURE _____ INSERT S → DATE ISSUED <i>8/13/24</i> <i>DOG</i> <i>8/13/24</i> 43 MM DD YY 48 CO SIGNATURE EXP. DATE	
<b>USE FOR WATER (CIRCLE APPROPRIATE BOX)</b> <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 <i>2 loops</i>		<b>PROPOSED LOCATION OF WELL ON LOT</b> SHOW PERMANENT STRUCTURES SUCH AS BUILDINGS, SEPTIC SYSTEM, ROADS AND/OR LANDMARKS AND INDICATE NOT LESS THAN TWO DISTANCE MEASUREMENTS TO WELL <i>13 - (X) 15 (X)</i> <i>30' 5'</i> <i>29' 30'</i> 	
APPROXIMATE DEPTH OF WELL <i>320</i> FEET APPROXIMATE DIAMETER OF WELL <i>6</i> INCH NEAREST		<b>METHOD OF DRILLING (circle one)</b> BORED (or Augered) JETTED Jetted & DRIVEN <input checked="" type="checkbox"/> AIR-ROTary <input type="checkbox"/> AIR-PERCussion <input type="checkbox"/> ROTARY (Hydraulic Rotary) <input type="checkbox"/> CABLE <input type="checkbox"/> REVerse-ROTary <input type="checkbox"/> DRive-POINT other _____	
<b>REPLACEMENT OR DEEPEINED WELLS (CIRCLE APPROPRIATE BOX)</b> <input 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 checked="" 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 DEEPEIN AN EXISTING WELL PERMIT NUMBER OF WELL TO BE REPLACED OR DEEPEINED (IF AVAILABLE) 41 _____ 52		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>Not to be filled in by driller (MDE OR COUNTY USE ONLY)</b> APPROP. PERMIT NUMBER _____ <b>G</b> _____ PERMIT No. <i>H0-22-0145</i> 70 71 72 73 74 75 76 77 78 79		SPECIAL CONDITIONS NOTE APPROVING AUTHORITIES SHOULD USE SEPARATE SHEET IF NEEDED <i>that have from bottom to top</i>	

A B  
30 51  
29 38



9802 Century DR  
Ellicott City Md  
2 wells @ 32' each  
Closed loop geothermal

### SITE PLAN



Sediment Control Protocol:                     TAG# H0-22-0145 (issued 8/13/24)                    

Distance From House: 28' TO Deck  
From Septic: N/A  
From Sewer: 50'+ out front  
From Property Line: 13'  
From Street: 50'+

Trees Nearby: Yes BUT OK  
Utility Issues: NO  
Mats Needed: Yes  
Access For H/U: Yes  
Neighboring Tags: See Comp

Comments: Mat around right side of garage & around tree to back yard. Trench to front MISSE under garage for this  
Person Completing Form: Was Wolfe

GRADE

EACH BORE HOLE (TYP.)

MINIMUM  
HORIZONTAL BURY  
DEPTH 4 FT

FOR CONT.  
SEE PLANS

HORIZONTAL  
PIPING

GROUT ENTIRE ANNULAR  
SPACE AND VERTICAL  
U-TUBE WITH (BENTANITE)  
GROUT.

BORE DEPTH



DEPTH MARKINGS IN FEET TO  
INDICATE DEPTH OF INSERTION

TAPE

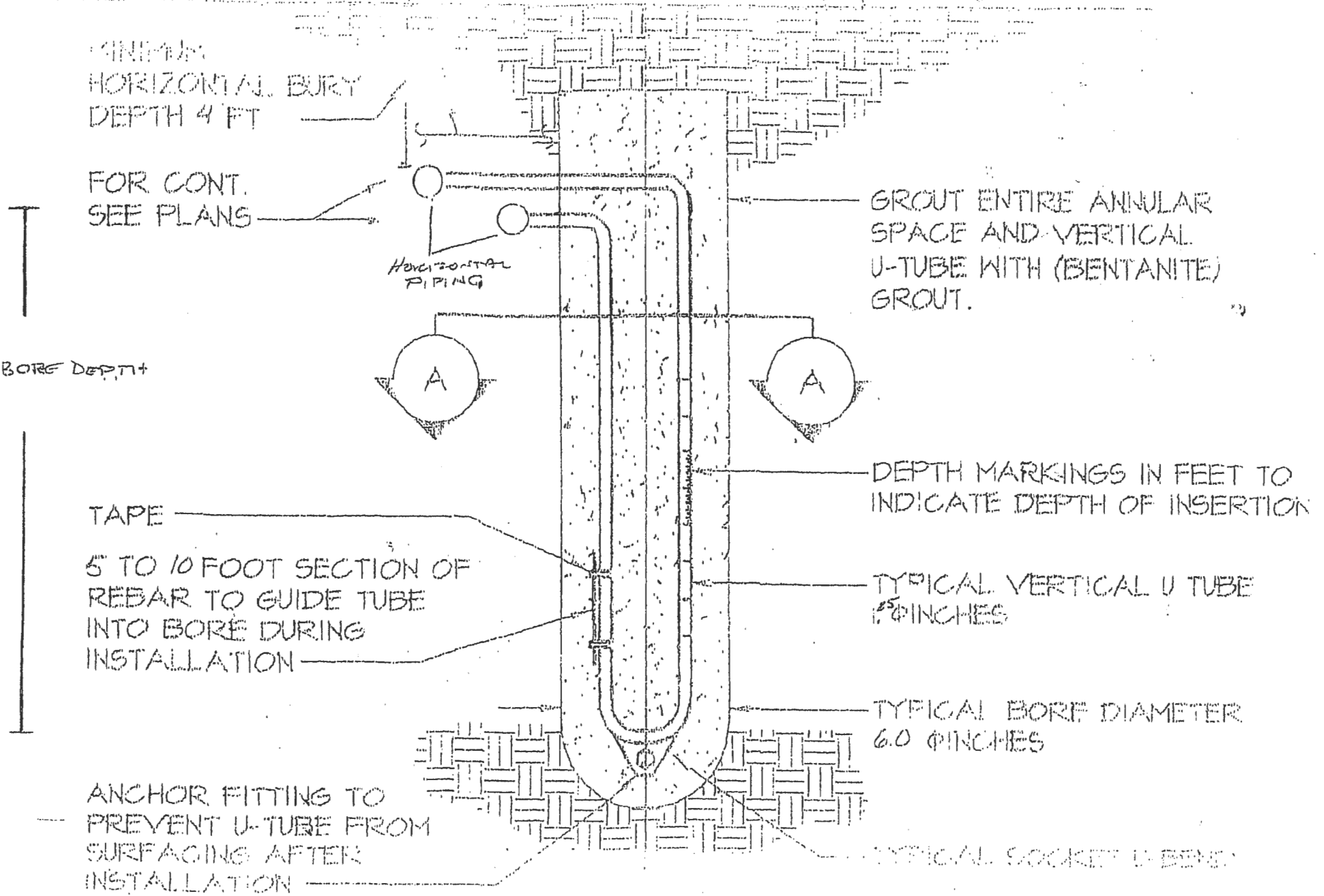
5 TO 10 FOOT SECTION OF  
REBAR TO GUIDE TUBE  
INTO BORE DURING  
INSTALLATION

TYPICAL VERTICAL U TUBE  
1.75 INCHES

TYPICAL BORE DIAMETER  
6.0 INCHES

ANCHOR FITTING TO  
PREVENT U-TUBE FROM  
SURFACING AFTER  
INSTALLATION

TYPICAL SOCKET U-BEND



## **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.

**RECEIPT**

Howard County, MD  
HOWARD COUNTY HEALTH DEPARTMENT  
ASCEND ONE BUILDING  
Columbia, MD 21045  
8930 STANFORD BLVD

**Application:** WS-WP-24-02370  
**Application Type:** EnvHealth/Well and Septic/Installation/Application  
**Address:** 9862 CENTURY DR, Ellicott City, 21042

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Receipt No.	Ref Number	Amount Paid	Payment Date	Cashier ID	Received	Comments
10423	33237	\$160.00	08/08/2024	SMARTIN		

**Owner Info.:** BURNELL DAVID M  
9862 CENTURY DR  
ELLICOTT CITY, MD 21042

**Work Description:** THE WILLOWS LOT 8 GEOTHERMAL WELL