

(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 DATE MM DD YY Depth of Well 22 (TO NEAREST FOOT) PERMIT NO. FROM "PERMIT TO DRILL WELL" 28 29 30 31 32 33 34 35 36 37

OWNER WELL SITE ADDRESS TOWN SUBDIVISION SECTION LOT

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	
Top soil	0	2	
Mudstone	2	22	
Shale	22	27	
White Rock	27	35	
Blue sandstone	35	40	
Grey shale	40	130	
Grey shale with lumps	130	133	
Grey shale	133	400	

GROUTING RECORD YES NO Y N WELL HAS BEEN GROUTED (Circle Appropriate Box) 44 44

TYPE OF GROUTING MATERIAL (Circle one) CEMENT CM BENTONITE CLAY BC NO. OF BAGS 45 46 NO. OF POUNDS 45 46 GALLONS OF WATER 1500 DEPTH OF GROUT SEAL (to nearest foot) from 48 TOP 52 ft. to 54 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 Nominal diameter top (main) casing (nearest inch) Total depth of main casing (nearest foot) 60 61 63 64 66 70

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

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

NUMBER OF UNSUCCESSFUL WELLS: 0

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. M D DRILLERS SIGNATURE (MUST MATCH SIGNATURE ON APPLICATION)

LIC. NO. D

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

C 2 DEPTH (nearest ft.)

8	9	11	15	17	21
23	24	26	30	32	36
38	39	41	45	47	51

SLOT SIZE 1 2 3 DIAMETER OF SCREEN (NEAREST INCH) 56 80 from to

GRAVEL PACK IF WELL DRILLED WAS FLOWING WELL INSERT F IN BOX 68 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) 8 9 PUMPING RATE (gal. per min.) 11 15 METHOD USED TO MEASURE PUMPING RATE WATER LEVEL (distance from land surface) BEFORE PUMPING 17 20 ft. WHEN PUMPING 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 YES NO (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 29

CAPACITY: GALLONS PER MINUTE (to nearest gallon) 31 36

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 (nearest foot) 49 50 51

LATITUDE 3 LONGITUDE 7 (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.

01-3019771

EMERGENCY/TEMP NO. IF ANY

OK 11/29/2024 SP

B 1	SEQUENCE NO. (MDE USE ONLY)	STATE OF MARYLAND APPLICATION FOR PERMIT TO DRILL WELL 574150 please type	STATE PERMIT NUMBER HO - 20 - 0286 70 fill in this form completely 79
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OWNER INFORMATION

Date Received (APA) 06/23

8 MM DD YY 13
 15 Last Name Owner First Name 34
 36 Street or RFD 55
 57 Town 70 State 72 Zip 76

Ambinder Emily + Alexander
 5036 Ellis Lane
 Ellicott City MD 21043

B 3 LOCATION OF WELL

8 COUNTY 21
 23 SUBDIVISION 42
 SECTION 14 46 LOT 48 50
 52 NEAREST TOWN 71

Howard
 1105
 Ellicott City

DRILLER INFORMATION

Driller's Name 76 License No. 81
 Firm Name
 Address
 Signature Date

Wesley Wolfe MWD 598
 Applied Well Drilling
 2020
 Wesley A Wolfe 06/08/23

B 4 SOURCES OF DRILLING WATER

1. Public
 2.
 3.

11 STREET ADDRESS 30
 ON WHICH SIDE OF ROAD (CIRCLE APPROPRIATE BOX)
 NORTH N
 WEST W EAST E
 SOUTH S
 34 100' 37
 DISTANCE FROM ROAD ENTER FT OR MI 36 39
 TAX MAP: 0031 BLK: 9999 PARCEL 0243

B 2 WELL INFORMATION

APPROX. PUMPING RATE (GAL. PER MIN.) 8 12
 AVERAGE DAILY QUANTITY NEEDED (GAL. PER DAY) 14 20

NOT TO BE FILLED IN BY DRILLER HEALTH DEPARTMENT APPROVAL

COUNTY NAME 13
 STATE SIGNATURE INSERT S → 41
 DATE ISSUED 6/26/2023 8:42 PM 6/26/2023
 43 MM DD YY 48 CO SIGNATURE EXP. DATE
 DON: 6/29/2023 006: 7/1/2023

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 3 loops

APPROXIMATE DEPTH OF WELL 24 28 FEET
 APPROXIMATE DIAMETER OF WELL NEAREST INCH

400

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

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 DEEPEAN AN EXISTING WELL

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

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

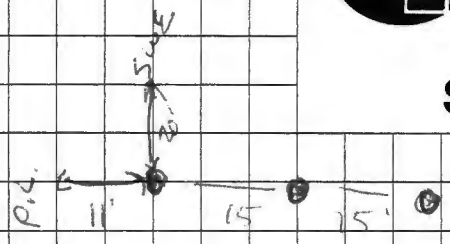
APPROP. PERMIT NUMBER - - - - - G - - - - -
 PERMIT No. HO - 20 - 0286
 70 71 72 73 74 75 76 77 78 79

SPECIAL CONDITIONS Call for Drilling & Grant. Permitting around well should be used at all times.

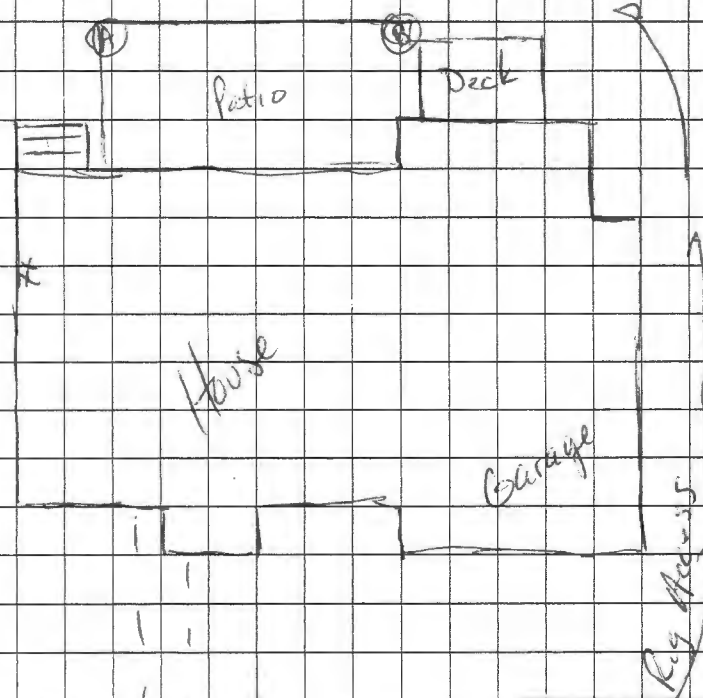


5036 Ellis Lane
Ellicott City Md

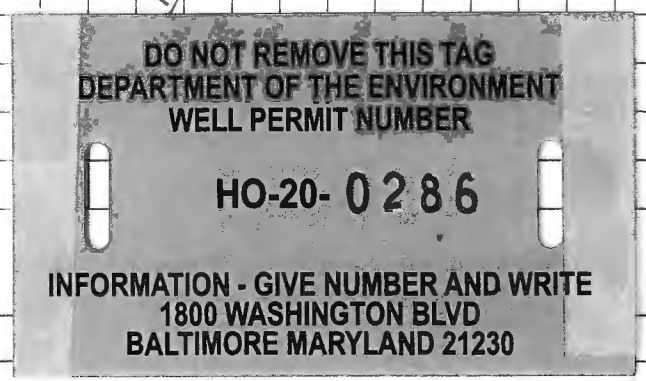
3 wells @ 400'
Closed loop geothermal



well site
Approved
(SP)
6/26/2023



A	B
27	46
24	32
31	22



Sediment Control Protocol: SILT Fence

Distance From House: 50'

From Septic: N/A

From Sewer: 50'

From Property Line: 11'

From Street: 100'

Trees Nearby: Yes will be trimmed

Utility Issues: NO

Mats Needed: Yes

Access For H/U: Yes

Neighboring Tags: See Camps

Comments: _____

Person Completing Form: Wes Wolff

GRADE

EACH BORE HOLE (TYP.)

GRADE
HORIZONTAL BORE
DEPTH 3 FT

FOR CONT
SEE PLANS

HORIZONTAL
P.I.P.I.N.G.

GROUT ENTIRE ANGULAR
SPACE AND VERTICAL
J-TUBE WITH (BENTONITE)
GROUT.

BORE DEPTH

TAPE

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

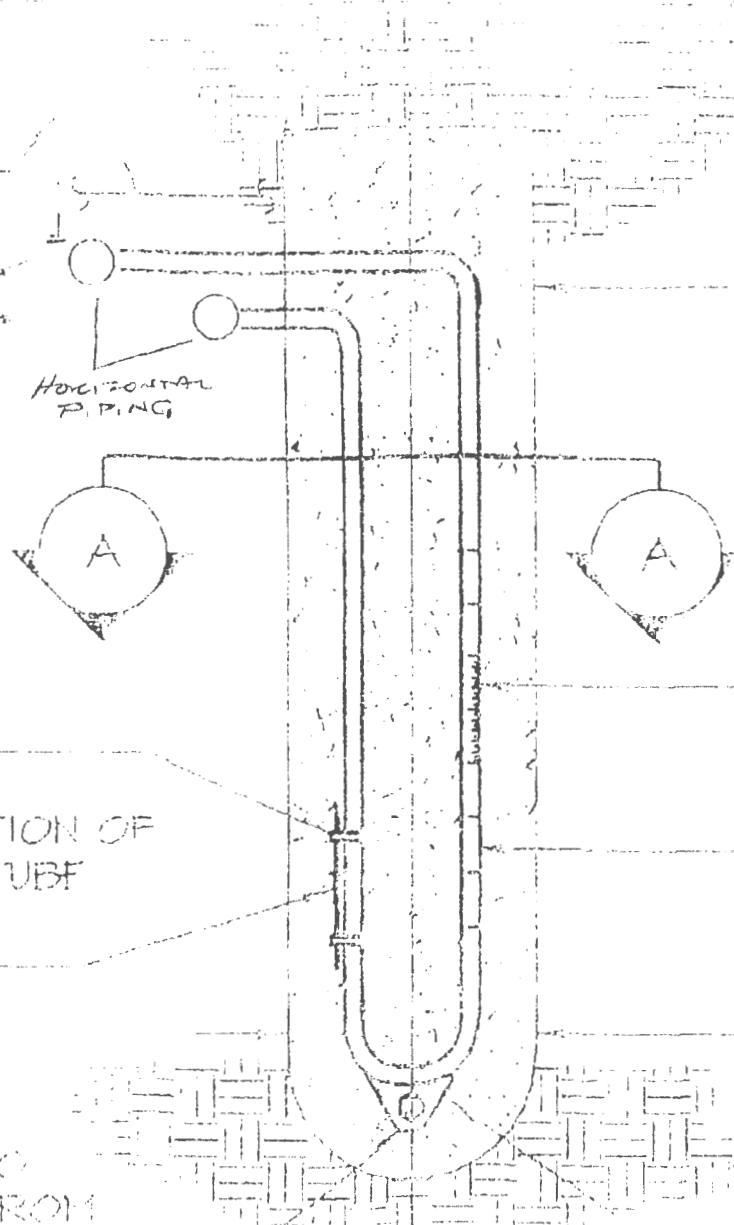
DEPTH MARKINGS IN FEET TO
INDICATE DEPTH OF INSERTION

TYPICAL VERTICAL U-TUBE
6 INCHES

TYPICAL BORE DIAMETER
6.0 INCHES

ANCHOR FITTING TO
PREVENT U-TUBE FROM
SURFACING AFTER
INSTALLATION

SEE PLAN FOR TYPICAL
INSTALLATION



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.