

SEQUENCE NO. (MDE USE ONLY) 10285

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 13

PERMIT NO. FROM "PERMIT TO DRILL WELL" 10115124

DATE RECEIVED MM 03 DD 31 YY 15

DATE WELL COMPLETED MM 03 DD 31 YY 15

Depth of Well 22 (TO NEAREST FOOT)

OWNER Jacob...

WELL SITE ADDRESS 13...

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	
<u>...</u>	<u>...</u>	<u>...</u>	<input checked="" type="checkbox"/>
<u>...</u>	<u>...</u>	<u>...</u>	<input checked="" type="checkbox"/>

GROUTING RECORD YES NO

WELL HAS BEEN GROUTED (Circle Appropriate Box) **Y** **N**

TYPE OF GROUTING MATERIAL (Circle one)
CEMENT **C** BENTONITE CLAY **B**

NO. OF BAGS 45 NO. OF POUNDS 45

GALLONS OF WATER ...

DEPTH OF GROUT SEAL (to nearest foot)
from 48 TOP ft. to 52 BOTTOM ft.

CASING RECORD

cases types insert appropriate code below

ST STEEL **CO** CONCRETE
PL PLASTIC **OT** OTHER

MAIN CASING TYPE

Nominal diameter top (main) casing (nearest inch): 60

Total depth of main casing (nearest foot): 66

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

NUMBER OF UNSUCCESSFUL WELLS: 0

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 7151

DRILLERS SIGNATURE: ...

LIC. NO.: D

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

DEPTH (nearest ft.)

E	8	9	11	15	17	21
C	23	24	26	30	32	36
H	38	39	41	46	47	51

SLOT SIZE 1 ... **2** ... **3** ...

DIAMETER OF SCREEN (NEAREST INCH)
from 56 to 60

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**

TELESCOPE CASING 70 72 74 75 76

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 (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.) ...

CASING HEIGHT (circle appropriate box and enter casing height)

+ above **-** below

LAND SURFACE (nearest foot) 50 51

LATITUDE 31.20

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.

05-346401

B-1 72737 SEQUENCE NO. (MDE USE ONLY) STATE OF MARYLAND APPLICATION FOR PERMIT TO DRILL WELL STATE PERMIT NUMBER HO-22-0130
 500048-A please type 70 fill in this form completely 79

OWNER INFORMATION
 Date Received (APA) 04/23/24
 8 mm DA YY 13
 Felber Kevin + Lisa
 15 Last Name Owner First Name 34
 13540 Brighton Dam Rd
 36 Street or RFD 55
 Clarksville MD 21029
 57 Town 70 State 72 Zip 76

LOCATION OF WELL
 Howard
 8 COUNTY 21
 Brighton Farm Estates
 23 SUBDIVISION 42
 SECTION 44 46 LOT 6 48 50
 Clarksville
 52 NEAREST TOWN 71

DRILLER INFORMATION
 Wesley Wolfe MWD 598
 76 License No. 81
 Allied Well Drilling
 Firm Name
 PO Box 129 Annapolis Junction MD
 Address
 Wesley Wolfe 04/05/24
 Signature Date

SOURCES OF DRILLING WATER
 1. Public
 2. 5/23/2024-
 3. Driller's drill rig not onsite. (SPMB)
 5/24/2024-
 Driller's drill rig not onsite.
 5/30/24- Driller's rig not onsite.
 13540 Brighton Dam Rd
 11 STREET ADDRESS 30
 ON WHICH SIDE OF ROAD (CIRCLE APPROPRIATE BOX)
 NORTH
 WEST EAST
 SOUTH
 34 500' 37
 DISTANCE FROM ROAD
 ENTER FT OR MI 38 39
 TAX MAP: 6034 BLK: PARCEL 0106

WELL INFORMATION
 1 2 APPROX. PUMPING RATE (GAL. PER MIN.) 8 12
 AVERAGE DAILY QUANTITY NEEDED (GAL. PER DAY) 14 20
 Driller's drill rig not onsite 5/30/24- Driller's rig not onsite.

NOT TO BE FILLED IN BY DRILLER HEALTH DEPARTMENT APPROVAL
 Howard
 COUNTY NAME 13 COUNTY NO.
 STATE SIGNATURE INSERT S → 41
 DATE ISSUED 4/30/2024 State 4/30/2024 5
 43 MM DO YY 48 CO SIGNATURE EXP. DATE
 DON 5/22/2024 x LMBDOG 6/14/2024 (M/S)

USE FOR WATER (CIRCLE APPROPRIATE BOX)
 [D] DOMESTIC POTABLE SUPPLY & RESIDENTIAL IRRIGATION
 [F] FARMING (LIVESTOCK WATERING & AGRICULTURAL IRRIGATION)
 22 [I] INDUSTRIAL, COMMERCIAL, DEWATERING
 [P] PUBLIC WATER SUPPLY WELL
 [T] TEST, OBSERVATION, MONITORING
 [O] OPEN LOOP GEOTHERMAL
 [C] CLOSED LOOP GEOTHERMAL
 1 Loop

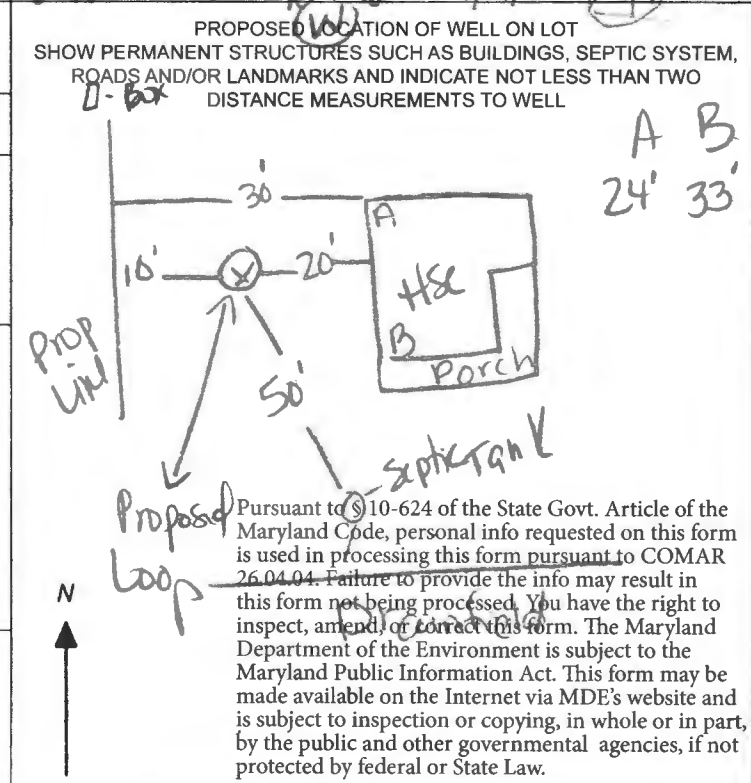
PROPOSED LOCATION OF WELL ON LOT
 SHOW PERMANENT STRUCTURES SUCH AS BUILDINGS, SEPTIC SYSTEM, ROADS AND/OR LANDMARKS AND INDICATE NOT LESS THAN TWO DISTANCE MEASUREMENTS TO WELL
 D-Box
 A B
 24' 33'

APPROXIMATE DEPTH OF WELL 400 FEET
 APPROXIMATE DIAMETER OF WELL 6 INCH NEAREST

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 DEEPEINED WELLS (CIRCLE APPROPRIATE BOX)
 [N] THIS WELL WILL NOT REPLACE AN EXISTING WELL
 [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)
 APPROP. PERMIT NUMBER - - - - - G - - - - -
 PERMIT No. HO-22-0130
 70 71 72 73 74 75 76 77 78 79



SPECIAL CONDITIONS Please Notify office of Drilling & Grout
 NOTE APPROVING AUTHORITIES SHOULD USE SEPARATE SHEET IF NEEDED

TWISTER™

SAVE TIME, MONEY & SPACE



TWISTER™ Geothermal Heat Exchanger Technology

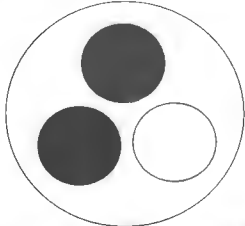
PROVEN TECHNOLOGY WITH A POWERFUL "TWIST"

- Highest efficiency heat exchange means less drilling and lower operating cost.
- Supplied on coils, manifolded and ready to connect.
- Installs like a standard Ubend.
- Centralized grouting conduit for the most reliable, easiest and quickest grouting process.

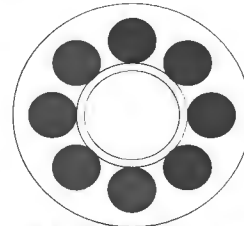
AGREENABILITY

Proven Technology with a "twist"

TWISTER Geothermal Heat Exchangers are patented heat exchanger systems which, because of their novel design, allow the simultaneous installation of four loops around a central Tremie conduit in a single vertical bore hole. *The images below tell the story...*



Conventional borehole with one loop and a Tremie Pipe.



Borehole with TWISTER's exclusive design (four loops and a central tremie conduit)

TWISTER heat exchangers use 4 standard 3/4" HDPE Geo pipe loops (Meeting IGSHA Specifications) spirally wound around a 2" central conduit used to guide the Tremie Pipe unobstructed to the bottom of the well. Supplied on coils or reels, with factory prepared u-fittings and manifolds, installation is quick and easy. **Average Performance Characteristics are shown in the table.**

	Formation Thermal Conductivity	Grout Conductivity	6" Borehole Thermal Resistance (BTR)	Bore Depth per Ton. (Mid-Atlantic Region)
Twisted Pipe	1.8	1.0	.080	100' (33% less)
Standard 1 1/4"	1.8	1.0	.217	150'

GLHEPro Ground Loop Design software has demonstrated that an average of 1/3rd reduction in loop length is possible.¹



O.D.	Center Pipe	Loop Pipe	Loops	ASTM	Cell Classification
4.50"	2" HDPE	3/4" HDPE Geo Pipe	4	D3035/D3350	445574C

For TWISTER ordering information, Please contact Agreenability at the address below..

Agreenability
 Phone 866.499.2220
www.agreenability.com
info@agreenability.com

¹Results will vary by installation. Follow IGSHA guidelines

US PAT# 8640765, 9109813, 9909783

Additional Pat. Pend.





TWISTER™ by Agreenability

Geothermal Heat Exchanger Technology

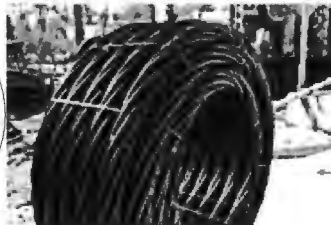
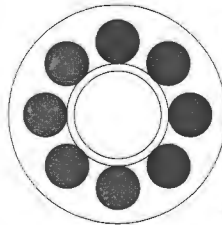
Proven Technology with a "twist"



Product Specification Sheet

TWISTER™ Dimensions	OD	ID
Overall OD	4.475"	NA
Corrugated Center Pipe	2.375"	1.900"
3/4" Flow Pipes 160 PSI	1.050"	0.894"
3/4" Flow Pipes 200 PSI	1.050"	0.860"
* Other lengths available upon request.		

Coil Dimensions				
Length*	OD	ID	Width	Weight
200'	63"	36"	28"	220 Lbs.
300'	72"	36"	28"	330 Lbs.
400'	81"	36"	28"	440 Lbs.
500'	90"	36"	28"	550 Lbs.



TWISTER™ is manufactured entirely from HDPE 4710 Cell Classification 445574C (ASTM D3350) and uses 8ea. 3/4" ASTM D3035 SDR 13.5.

Page, Shepsura

From: Page, Shepsura
Sent: Tuesday, July 23, 2024 10:53 AM
To: Wes Wolfe
Cc: Donna Perez; Andy Capelle; Wolf, Kevin
Subject: RE: 13540 Brighton Dam Road

Wes,
Can you send specs of the twister pipe installed. We have not seen this type of pipe installed in a geothermal well. Also the well was completed on 6/18, I have no record of receiving a Well Completion Report. Can you confirm if you've sent the report to our office?

Thanks,

Shepsura Page, EH Specialist
Well & Septic Program
Howard County Health Department
8930 Stanford Blvd.
Columbia, MD 21045
410-313-1789 (Office)
410-313-2648 (Fax)
www.hchealth.org
spage@howardcountymd.gov



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From: Wes Wolfe <weswolfe@alliedwells.com>
Sent: Friday, May 31, 2024 8:50 AM
To: Page, Shepsura <spage@howardcountymd.gov>

Cc: Donna Perez <dperez@alliedwells.com>; Andy Capelle <acapelle@alliedwells.com>

Subject: Re: 13540 Brighton Dam Road

[Note: This email originated from outside of the organization. Please only click on links or attachments if you know the sender.]

Yes, we will.

Wes Wolfe

Director of Residential Services



P.O. Box 129

Annapolis Junction, MD 20701

301-606-7169

301-776-8370 office

301-776-8374 fax

alliedwells.com

On Fri, May 31, 2024 at 8:48 AM Page, Shepsura <spage@howardcountymd.gov> wrote:

Morning,

Heard y'all are struggling to get the drill rig up the hill on 13540 Brighton Dam Road. Can you keep our office updated with when you begin drilling operations?

Thanks,

Shepsura Page, EH Specialist

Well & Septic Program

Howard County Health Department

8930 Stanford Blvd.

Columbia, MD 21045

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www.hchealth.org

spage@howardcountymd.gov



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From: Page, Shepsura
Sent: Monday, May 13, 2024 4:00 PM
To: Donna Perez <dperez@alliedwells.com>
Subject: RE: 13540 Brighton Dam Road

Good Afternoon,

Yes, the permit for 13540 Brighton Dam Road was approved 4/30/2024. Please make sure the drillers have the permit onsite if you are starting drilling operations.

Thanks,

Shepsura Page, EH Specialist

Well & Septic Program

Howard County Health Department

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From: Donna Perez <dperez@alliedwells.com>
Sent: Monday, May 13, 2024 2:49 PM
To: Page, Shepsura <spage@howardcountymd.gov>
Subject: 13540 Brighton Dam Road

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Good afternoon

Is the permit approved?

Wes is telling me that he handed it to me, but I do not have it.

--

Donna Perez

Allied Well Drilling

301-776-8370

dperez@alliedwells.com

www.alliedwells.com

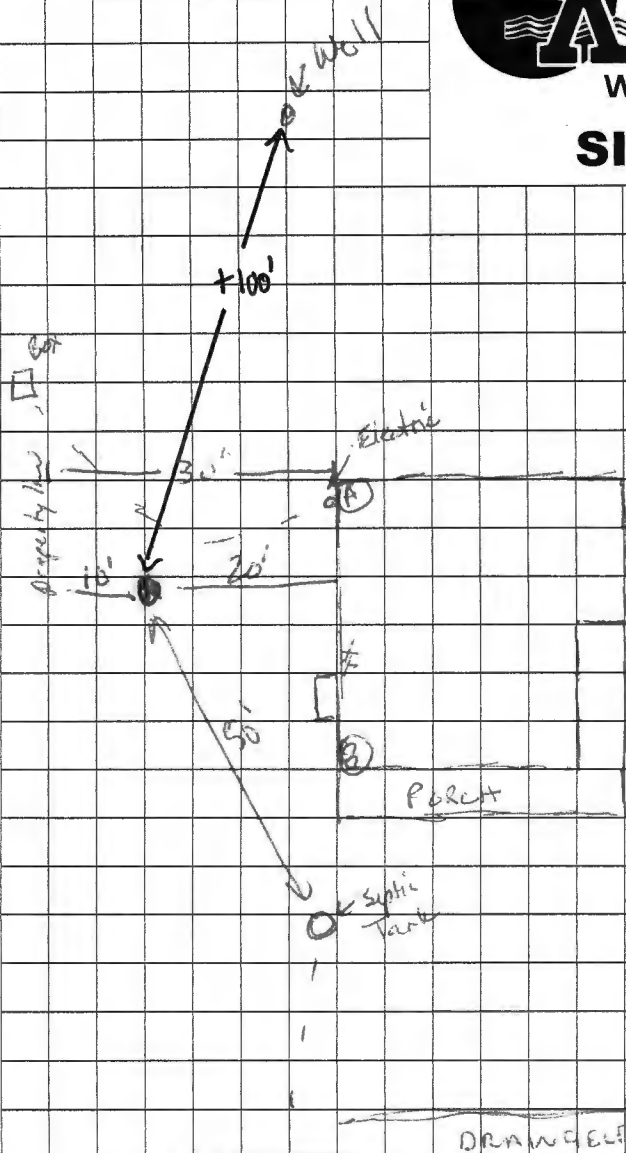


Look us up on Google and give us a review of your experience.

A 6
24' 33'



13540 Brighton Dam Rd
Clarksville Md
1 well @ 400'
closed loop geothermal



DO NOT REMOVE THIS TAG
DEPARTMENT OF THE ENVIRONMENT
WELL PERMIT NUMBER

HO-22-0130

INFORMATION - GIVE NUMBER AND WRITE
1800 WASHINGTON BLVD
BALTIMORE MARYLAND 21230

Well Site Approved

4/30/2024

Sediment Control Protocol: SILT Fence

Distance From House: 20'
From Septic: 50'
From Sewer: N/A
From Property Line: 10'
From Street: 300' +/-

Trees Nearby: Yes
Utility Issues: Yes Power
Mats Needed: Yes
Access For H/U: Yes
Neighboring Tags: HO-94-0749

Comments: Cut Road to well from yard. Buck Rig in on Mats

Person Completing Form: Wes Wolfe

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.

