

ST/CO USE ONLY DATE Received MM DD YY DATE WELL COMPLETED MM DD YY Depth of Well 22 320 (2) 26 1924/2014 PERMIT NO. FROM "PERMIT TO DRILL WELL" 10-14-0067

OWNER LEWIS, FRANKLIN first name last name WELL SITE ADDRESS 3542 BLACKBERRY LN TOWN WEST FRIENDSHIP 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	
DIRT	0	1	
brown clay	1	78	
hard tan rock	78	98	
med tan rock	98	99	
hard gray rock	99	105	
med brown rock	105	107	
hard gray rock	107	137	
med gray rock	137	138	
hard gray rock	138	165	
med hard tan/brown rock fractured	165	180	
hard gray rock	180	320	

GROUTING RECORD yes no
WELL HAS BEEN GROUTED (Circle Appropriate Box) 44 44
TYPE OF GROUTING MATERIAL (Circle one) CEMENT BENTONITE CLAY
CEMENT BENTONITE CLAY
NO. OF BAGS 26 NO. OF POUNDS 1300
GALLONS OF WATER 468
DEPTH OF GROUT SEAL (to nearest foot) from 0 ft. to 320 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
DEPTH (nearest ft.)

C2

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
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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

TELESCOPE CASING LOG INDICATOR OTHER DATA

C3

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
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.) 43 47
CASING HEIGHT (circle appropriate box and enter casing height) + above } LAND SURFACE (nearest foot) - below }

LATITUDE 39.274062
LONGITUDE 76.948492
(DEFAULT COORD. WGS 84)
NOTES: AS per plat


NUMBER OF UNSUCCESSFUL WELLS: 0

WELL HYDROFRACTURED yes no

CIRCLE APPROPRIATE LETTER
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. MWD 304
DRILLERS SIGNATURE (MUST MATCH SIGNATURE ON APPLICATION)
LIC. NO. AWD 910

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

B 1 20980
1 2 3 6

SEQUENCE NO.
(MDE USE ONLY)

STATE OF MARYLAND
APPLICATION FOR PERMIT TO DRILL WELL
554549 please type

STATE PERMIT NUMBER

40-14-0067
70 fill in this form completely 79

Date Received (APA)
07/22/14
8 MM DD YY 13

OWNER INFORMATION

15 Last Name Lewis Owner First Name Franklin 34
36 Street of RFD 3542 Blackberry Lane 55
57 Town Ellicott City MD 70 State MD 72 Zip 21042 76

B 3

LOCATION OF WELL

8 COUNTY Howard 21
23 SUBDIVISION Brian Hill 42
SECTION 44 46 LOT 13 48 50
52 NEAREST TOWN West Friendship 71

DRILLER INFORMATION

Driller's Name David KELLY MW D 304 76 License No. 81
Firm Name JONES WELL DRILLING
Address 3700 Rush Rd. Jarrettsville MD 21084
Signature David Kelly 7/2/14 Date

B 4

SOURCES OF DRILLING WATER

- 1. potable well
- 2.
- 3.

11 3542 Blackberry Lane 30
STREET ADDRESS

ON WHICH SIDE OF ROAD
(CIRCLE APPROPRIATE BOX)



34 214 37
DISTANCE FROM ROAD
ENTER FT OR MI 38 39

TAX MAP: 0022 BLK: _____ PARCEL 0516

B 2

WELL INFORMATION

APPROX. PUMPING RATE (GAL. PER MIN.) 0
8 12
AVERAGE DAILY QUANTITY NEEDED (GAL. PER DAY) 0
14 20

NOT TO BE FILLED IN BY DRILLER
HEALTH DEPARTMENT APPROVAL

COUNTY NAME Howard COUNTY NO. 13
STATE SIGNATURE _____ INSERT S → 41
DATE ISSUED 7/29/14 CO SIGNATURE H. Dewitt 7/29/15
43 MM DD YY 48 EXP. DATE

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 2 holes

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

APPROXIMATE DEPTH OF WELL 320' FEET
24 28

APPROXIMATE DIAMETER OF WELL 6 NEAREST INCH

METHOD OF DRILLING (circle one)

BORED (or Augered) JETTED Jetted & DRIVEN
AIR-ROTary AIR-PERCussion ROTARY (Hydraulic Rotary)
37 CABLE REVERSE-ROTary DRIVE-POINT
other _____

MAP
4813
J7

REPLACEMENT OR DEEPEMED WELLS
(CIRCLE APPROPRIATE BOX)

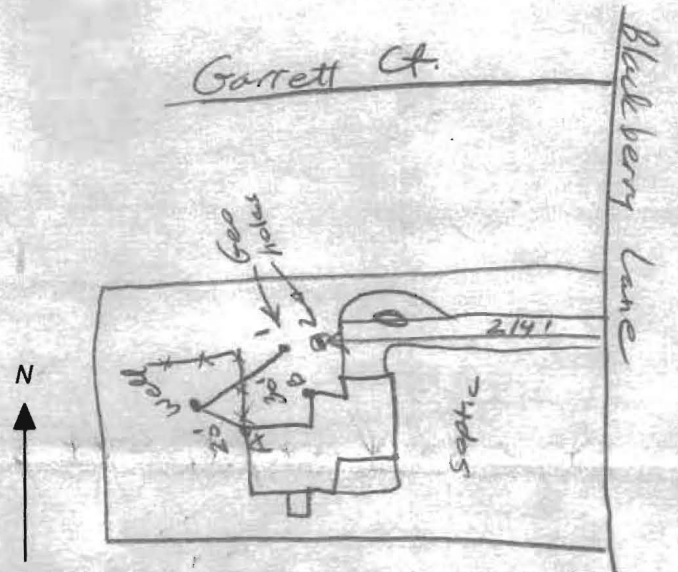
- THIS WELL WILL NOT REPLACE AN EXISTING WELL
- THIS WELL WILL REPLACE A WELL THAT WILL BE ABANDONED AND SEALED
- THIS WELL WILL REPLACE A WELL THAT WILL BE USED AS A STANDBY-CONTACT LOCAL APPROVING AUTHORITY FOR POLICY ON STANDBY WELLS
- THIS WELL WILL DEEPEM AN EXISTING WELL

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)

APPROX PERMIT NUMBER _____ G _____

PERMIT No. 40-14-0067
70 71 72 73 74 75 76 77 78 79



SPECIAL CONDITIONS

NOTE APPROVING AUTHORITIES SHOULD USE SEPARATE SHEET IF NEEDED



Bureau of Environmental Health

8970 Stanford Boulevard, Columbia, MD 21045

Main: 410-313-2640 | Fax: 410-313-2648

TDD 410-313-2323 | Toll Free 1-866-313-6300

www.hchealth.org

Facebook: www.facebook.com/hocohealth

Twitter: HowardCoHealthDep

Maura J. Rossman, M.D., Health Officer

July 29, 2014

Jones Well Drilling
3700 Jones Road
Jarrettsville, MD 21084
Attn: David Kelly

Sent via mail

**RE: Closed Loop Geothermal
3542 Blackberry Lane
Ellicott City, MD 21042
West Friendship, MD**

Mr. Kelly:

This letter is in response to the closed loop geothermal well application for the above referenced property. The well permit application has been approved at this time. However, all future geothermal well permits must include a scaled site plan drawing 1"=30' to 1"=100' depicting the following information:

- Topography at 2 foot intervals.
- Location of all wells and septic components (septic tank and trenches etc.) on the property and on neighboring properties if they are within 100' of the proposed geothermal location.
- Locations of the approved Sewage Disposal Area for the property and all neighboring properties if the area is within 100 feet of the proposed geothermal location.
- Locations of all storm water management devices on the property and neighboring properties if they are within 100' of the proposed geothermal location.
- Location of all structures and relevant landscape features such as swales, streams, lakes.
- All setback requirements for closed loop vertical geothermal wells are met. (A copy of the Geothermal Well Setbacks has been attached with this letter.)

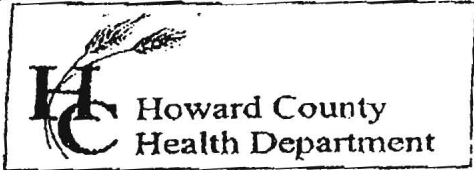
Please note that a copy of the septic permit detailing septic tank and trench locations for properties may be on record and available upon request by submitting a Public Information Act form.

I may be reached at (410) 313-1786 if you would like to discuss the project.

Respectfully,

Hank Oswald

Hank Oswald, L.E.H.S
Well & Septic Program



7178 Columbia Gateway Drive, Columbia MD 21046
 (410) 313-2640 Fax (410) 313-2648
 TDD (410) 313-2323 Toll Free 1-866-313-6300
 website: www.hchealth.org

Penny E. Borenstein, M.D., M.P.H., Health Officer

TO ALL INTERESTED PARTIES

When submitting a well permit application for a proposed well for new construction, please indicate one of the following:

Well Site Location:
 Briar Hill 13 3542 Blackberry Lane
 Subdivision/Property Name Lot# Road Name

The well site has been staked by _____,
 (professional land surveyor or company employing professional land surveyors)
 on _____ (date) and does not require a site inspection.

The well driller, builder or property owner will call the Health Department to schedule a time to meet in the field to verify the proposed well site location. *Flags are in on 7/7/14*

This sheet, along with two copies of an acceptable well site plan, must be attached to the green well permit application.

Revised 3/11/05