

1 2 3 6
 (THIS NUMBER IS TO BE PUNCHED IN COLS. 3-6 ON ALL CARDS)
 ST/CO USE ONLY DATE RECEIVED DATE WELL COMPLETED Depth of Well PERMIT NO. FROM "PERMIT TO DRILL WELL"
 MM DD YY MM DD YY 22 400 26 **OK** 12/17/15 SC **HO - 15 - 0177**
 8 12 13 15 20 (TO NEAREST FOOT) 28 29 30 31 32 33 34 35 36 37

OWNER Jim & Dawn Lisa
 WELL SITE ADDRESS 3008 Kodga Ave TOWN Ellicott City MD
 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	
Rock & Clay Mix	0	20	
Rock	20	25	
Gray Rock	25	400	

water @ 300'

2 closed logs

GROUTING RECORD yes no
 WELL HAS BEEN GROUTED (Circle Appropriate Box) **Y** **N**
 TYPE OF GROUTING MATERIAL (Circle one)
 CEMENT **CM** BENTONITE CLAY **BC**
 NO. OF BAGS 26 NO. OF POUNDS 1300
 GALLONS OF WATER 450
 DEPTH OF GROUT SEAL (to nearest foot)
 from 0 ft. to 400 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
 E A C H C A S I N G

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: _____
 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. 1 MWD 553
 DRILLERS SIGNATURE (MUST MATCH SIGNATURE ON APPLICATION)
 LIC. NO. 1 D

C 2 DEPTH (nearest ft.)

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	77	78	79	80
---	---	---	---	---	---	---	---	---	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----

DIAMETER OF SCREEN (NEAREST INCH) from to

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

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

B 1
45578

SEQUENCE NO.
(MDE USE ONLY)

STATE OF MARYLAND
APPLICATION FOR PERMIT TO DRILL WELL

STATE PERMIT NUMBER

Ho-15-0171
fill in this form completely

please type

Date Received (APA) 10/22/15

8 MM DD YY 13

15 Last Name Humphrey Day + Losito Lisa Owner First Name 34

36 Street or RFD 3508 Rogers Avenue 55

57 Town Ellicott City MD 70 State MD 72 Zip 21043 76

B 3 LOCATION OF WELL

8 COUNTY Howard 21

23 SUBDIVISION _____ 42

SECTION 44 46 LOT 48 50

52 NEAREST TOWN Ellicott City 71

DRILLER INFORMATION

Driller's Name C. John Hess MWD 553

76 License No. 81

Firm Name Allied Environmental Services

Address PO Box 199 Annapolis Junction MD 20701

Signature [Signature] Date 10/21/15

B 4 SOURCES OF DRILLING WATER

1. Public

2. _____

3. _____

11 STREET ADDRESS 3508 Rogers Ave 30

ON WHICH SIDE OF ROAD (CIRCLE APPROPRIATE BOX)

34 300 37

DISTANCE FROM ROAD ENTER FT OR MI 38 39

TAX MAP: 0024 BLK: 6 PARCEL 0447

B 2 WELL INFORMATION

1 2 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 2 loops

NOT TO BE FILLED IN BY DRILLER HEALTH DEPARTMENT APPROVAL

Howard COUNTY NAME COUNTY NO. (13)

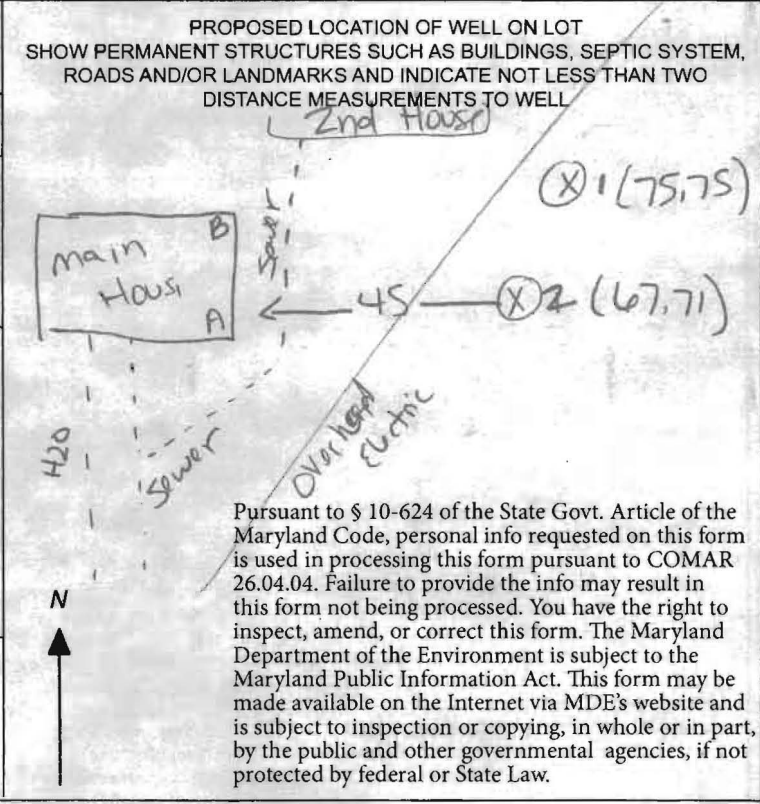
STATE SIGNATURE _____ INSERT S → 41

DATE ISSUED 10/30/15 Sub Call: 10/30/16

43 MM DD YY 48 CO SIGNATURE EXP. DATE

APPROXIMATE DEPTH OF WELL 400 FEET 24 28

APPROXIMATE DIAMETER OF WELL 6 NEAREST INCH



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

39 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 DEEPEEN 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. Ho-15-0171

70 71 72 73 74 75 76 77 78 79

SPECIAL CONDITIONS

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.

2ND HOUSE

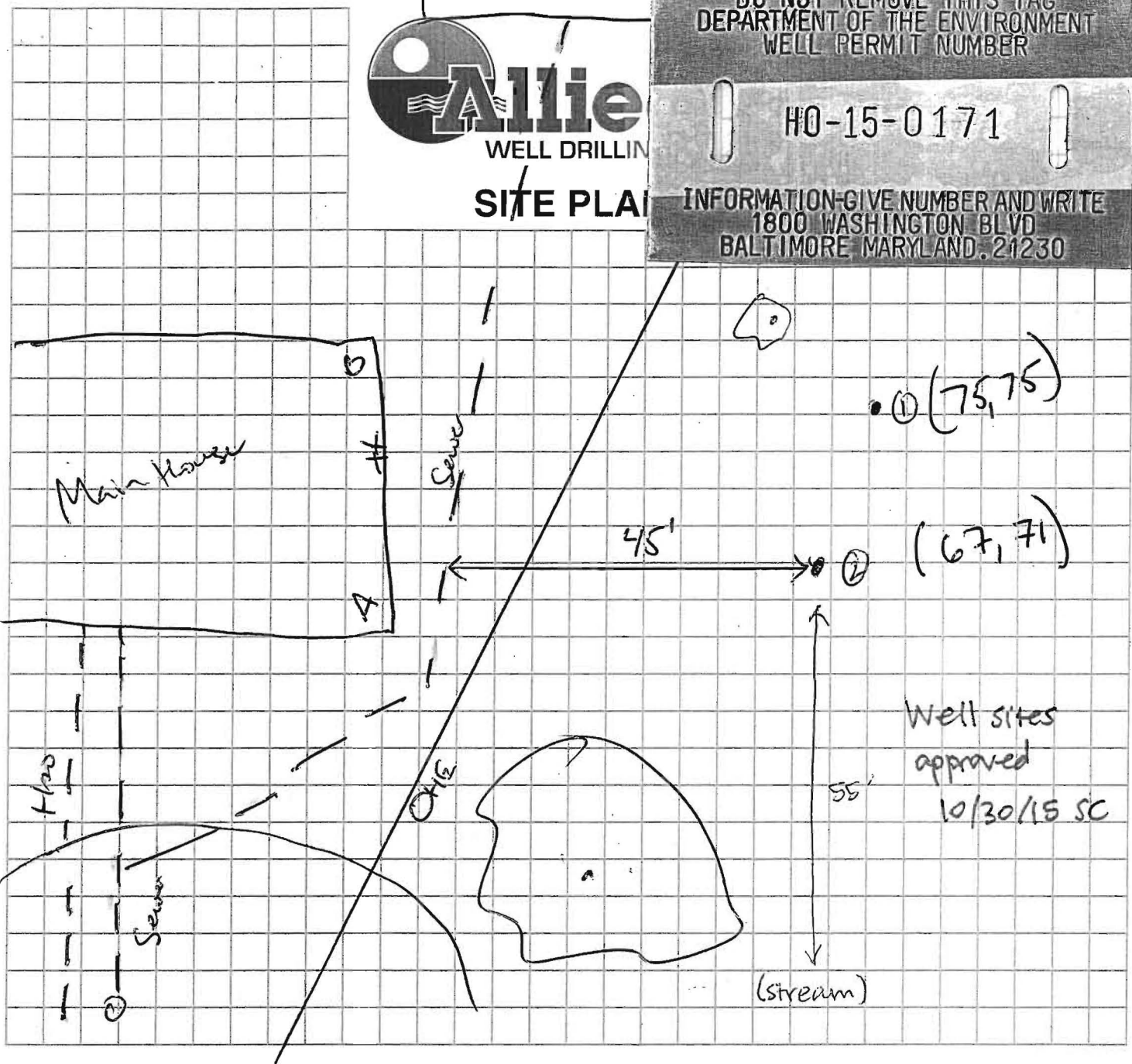


SITE PLAN

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

HO-15-0171

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



Sediment Control Protocol: silt bag

Distance From House: 67'

From Septic: N/A

From Sewer: 50'

From Property Line: 50'

From Street: 100'

Trees Nearby: yes - no OH

Utility Issues: NO

Mats Needed: yes

Access For H/U: yes

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.)

MINIMUM
HORIZONTAL BUREY
DEPTH 4 FT

FOR CONT.
SEE PLANS.

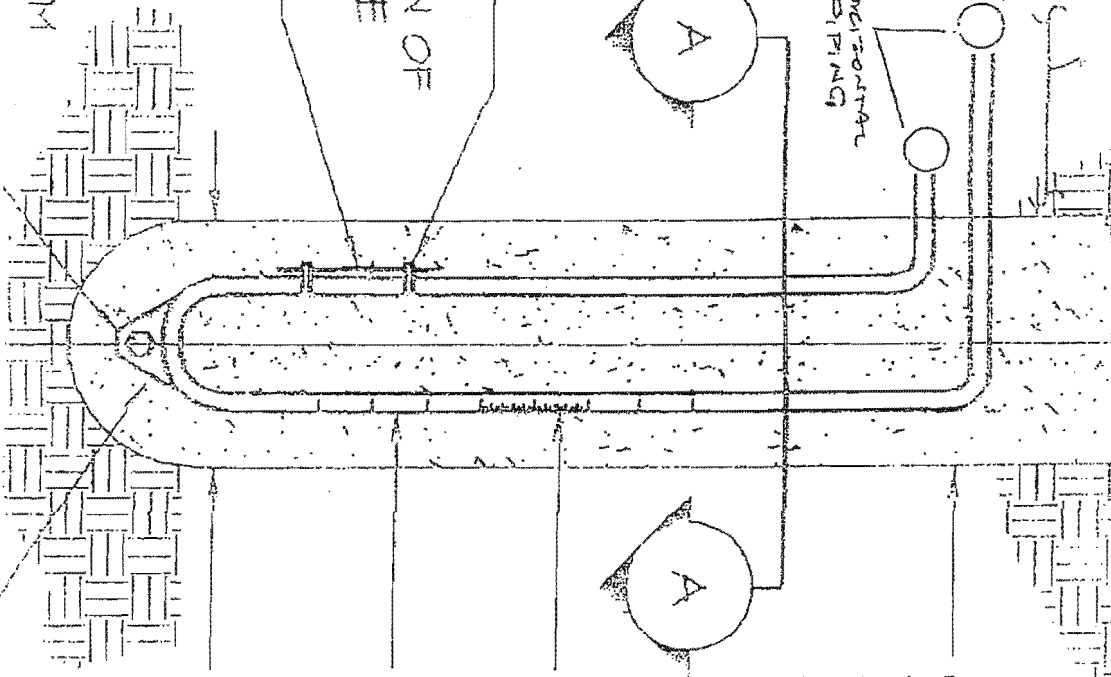
GROUT ENTIRE ANNULAR
SPACE AND VERTICAL
U-TUBE WITH (BENTONITE)
GROUT.

BORE DEPTH

TAPE

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

ANCHOR FITTING TO
PREVENT U-TUBE FROM
SURFACING AFTER
INSTALLATION



DEPTH MARKINGS IN FEET TO
INDICATE DEPTH OF INSERTION

TYPICAL VERTICAL U TUBE
1 1/2 INCHES

TYPICAL BORE DIAMETER
6.0 INCHES

TYPICAL SOCKETED REBAR