

C1 44921

SEQUENCE NO. (MDE USE ONLY)

STATE OF MARYLAND WELL COMPLETION REPORT

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/CD USE ONLY DATE RECEIVED

DATE WELL COMPLETED

Depth of Well 320

PERMIT NO. FROM "PERMIT TO DRILL WELL" 40-17-087

OWNER Subramanian Manimurugan & Karthikeyan, Sirkon WELL SITE ADDRESS 15841 Old Lockwood Rd TOWN Woodbine, 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

Table with columns: DESCRIPTION, FEET (FROM, TO), check if water bearing. Includes entries for Overburden and Grey Rock.

GRROUTING RECORD WELL HAS BEEN GROUTED (Y/N)

TYPE OF GROUTING MATERIAL (Cement, Bentonite Clay), NO. OF BAGS, NO. OF POUNDS, GALLONS OF WATER, DEPTH OF GROUT SEAL

CASING RECORD casing types insert appropriate code below (Steel, Concrete, Plastic, Other)

MAIN CASING TYPE Nominal diameter top (main) casing, Total depth of main casing

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

SCREEN RECORD screen type or open hole (Steel, Brass, Plastic, Open Hole, Other)

Table with columns: DEPTH (nearest ft.), E A C H S R E E N

GRAVEL PACK IF WELL DRILLED WAS FLOWING WELL INSERT F IN BOX 68

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

C 3

PUMPING TEST

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

PUMP INSTALLED DRILLER INSTALLED PUMP, IF DRILLER INSTALLS PUMP, THIS SECTION MUST BE COMPLETED FOR ALL WELLS

LATITUDE 39.34657, LONGITUDE 79.5000668 (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.

NUMBER OF UNSUCCESSFUL WELLS: WELL HYDROFRACTURED (Y/N)

CIRCLE APPROPRIATE LETTER A WELL WAS ABANDONED AND SEALED, 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"

DRILLERS LIC. NO. 1 M S D 1010 DRILLERS SIGNATURE

LIC. NO. 1 AW D 047

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

04-321209

EMERGENCY/TEMP NO. IF ANY

TAG = N/A Geo Well

B 1	SEQUENCE NO. (MDE USE ONLY) 54163	STATE OF MARYLAND APPLICATION FOR PERMIT TO DRILL WELL 562967 please type	STATE PERMIT NUMBER HO-17-0287 <small>70 fill in this form completely 79</small>
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OWNER INFORMATION

Date Received (APA) **04/20/18**
8 MM DD YY 13

Subramaniam Manimurugan + Ramalingam Sivam
15 Last Name Owner First Name 34

15845 Old Frederick Road
36 Street or RFD 55

Woodbine MD 21797
57 Town 70 State 72 Zip 76

LOCATION OF WELL

Howard
8 COUNTY 21

Woodbine
23 SUBDIVISION 42

SECTION 44 46 LOT 48 50
52 NEAREST TOWN 71

DRILLER INFORMATION

Marshal Arnette **M SD 106**
76 License No. 81

Allied Well Drilling
Firm Name

PO Box 129 Annapolis Junction MD 20701
Address

Marshall Arnette **04/20/18**
Signature Date

SOURCES OF DRILLING WATER

1. **Public**

15845 Old Frederick Rd
11 STREET ADDRESS 30

ON WHICH SIDE OF ROAD (CIRCLE APPROPRIATE BOX)

34 250 37
DISTANCE FROM ROAD FT 38 39

TAX MAP: 0007 BLK: 6 PARCEL 0393

WELL INFORMATION

APPROX. PUMPING RATE (GAL PER MIN.) **8** **12**
1 2 8 12

AVERAGE DAILY QUANTITY NEEDED (GAL PER DAY) **14** **20**
14 20

NOT TO BE FILLED IN BY DRILLER HEALTH DEPARTMENT APPROVAL

Howard **(13)**
COUNTY NAME COUNTY NO.

STATE SIGNATURE **INSERT S** **41**

DATE ISSUED **4/24/18** **4/24/19**
43 MM DD YY 48 CO SIGNATURE 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 loops**

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

4/24/18 SHD
1st Bone hole (A) 150' no H2O fracture

ERNESTO ANDOYF **(2)**

Patio **(4)**

HOUSE **(1)**

Septic

Drive

Geo Loop A
ASTM 3035 ENDOT ENDOTOPLY Geothermal water pipe.

GROUT - 1/20 BENT GROUT - 1/20 DF
Lot 010418170

4/26/18 **(2)**

2nd Bone (B) complete
Both Bones Grouted 4/26

A - 16 bags

(B) Proposed 15' (A) loops

1 2
A 16' 30"
B 30' 27"

APPROXIMATE DEPTH OF WELL **240** FEET
24 28

APPROXIMATE DIAMETER OF WELL **6** INCH
NEAREST INCH

METHOD OF DRILLING (circle one)

BORED (or Augered) **JETTED** **Jetted & DRIVEN**

AIR-ROTARY **AIR-PERCussion** **ROTARY (Hydraulic Rotary)**

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 DEEPEMED AN EXISTING WELL

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

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

APPROX. PERMIT NUMBER **G**

PERMIT No. **HO-17-0287**
70 71 72 73 74 75 76 77 78 79

SPECIAL CONDITIONS

NOTE: APPROVING AUTHORITIES SHOULD USE SEPARATE SHEET IF NEEDED.

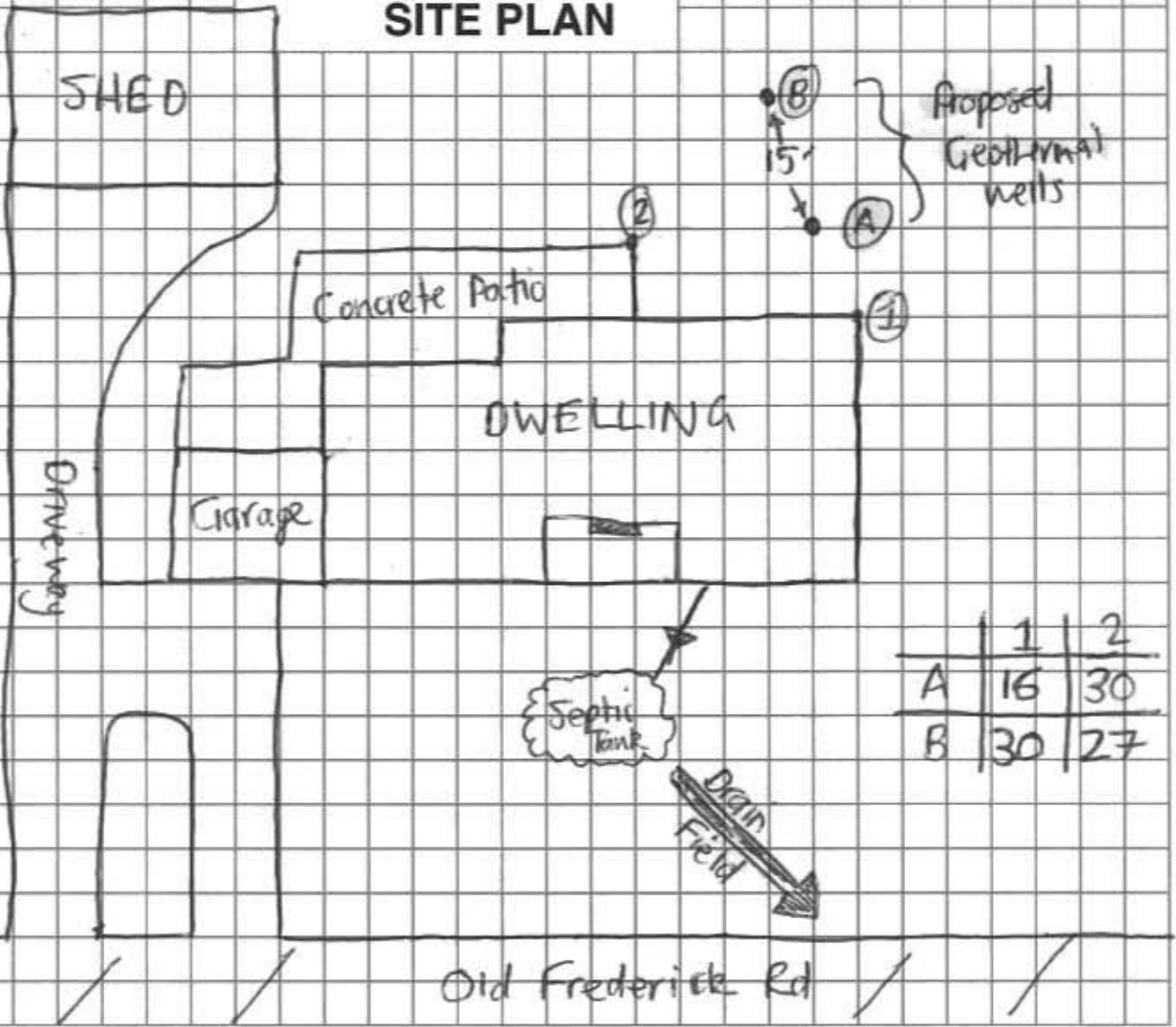
Pursuant to § 10-024 of the State Govt. Article of the Maryland Code, personal info requested on this form is used in processing this form pursuant to COMAR 26.04.04. Failure to provide the info may result in this form not being processed. You have the right to inspect, amend, or correct this form. The 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.

15845 Old Frederick Rd, Woodbine MD



SITE PLAN

Existing Water Well



Sediment Control Protocol: Silt fence & bag

Distance From House: 16'
 From Septic: > 80'
 From Sewer: N/A
 From Property Line: > 20'
 From Street: > 100'

Trees Nearby: Yes
 Utility Issues: Need marking
 Mats Needed: Yes
 Access For H/U: N/A
 Neighboring Tags: Water Well: HO-73-0749

Comments: _____

Person Completing Form: Callum

SITE INSPECTION SHEET

OWNER: _____ PHONE #: _____

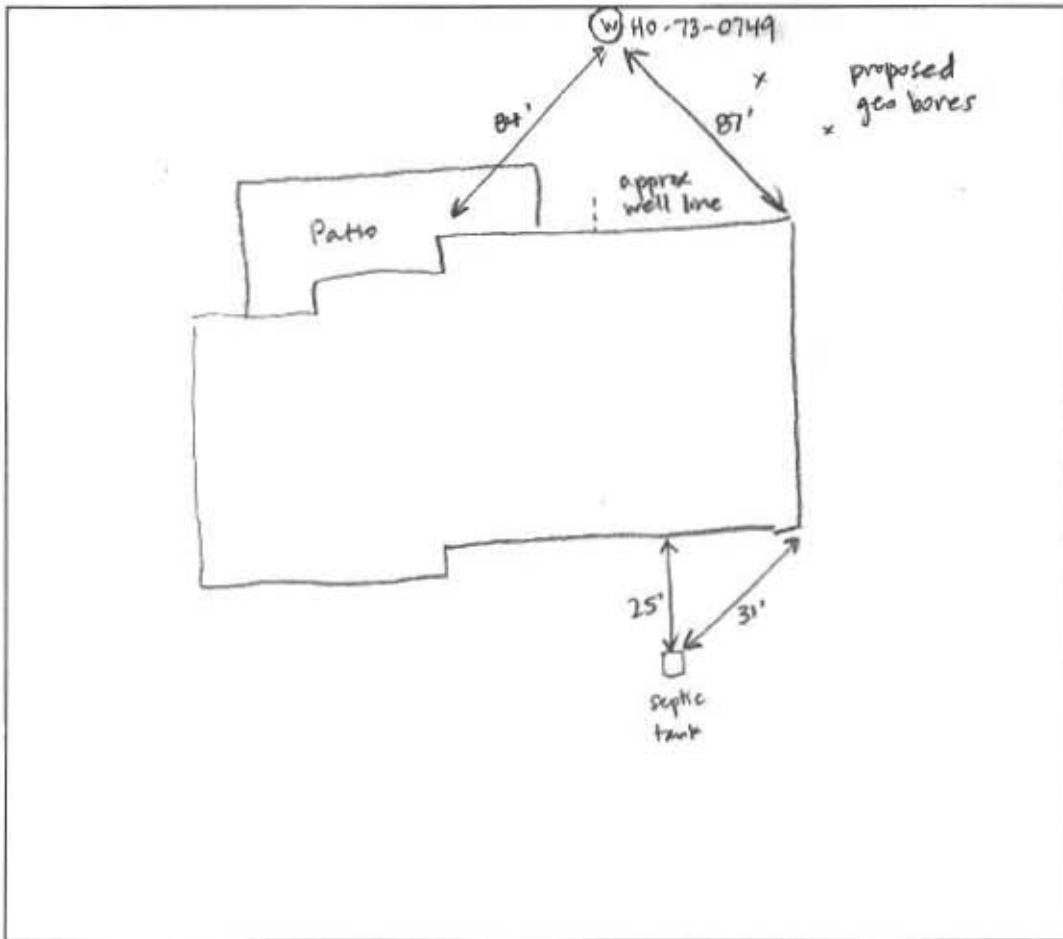
ADDRESS: 15845 Old Frederick Rd CONTRACTOR: _____

_____ WELL TAG #: _____

SUBDIVISION: _____ LOT: _____ COUNTY #: _____

PROPOSAL: Allied will drill 2 geothermal wells.

LOCATION DIAGRAM



COMMENTS: _____

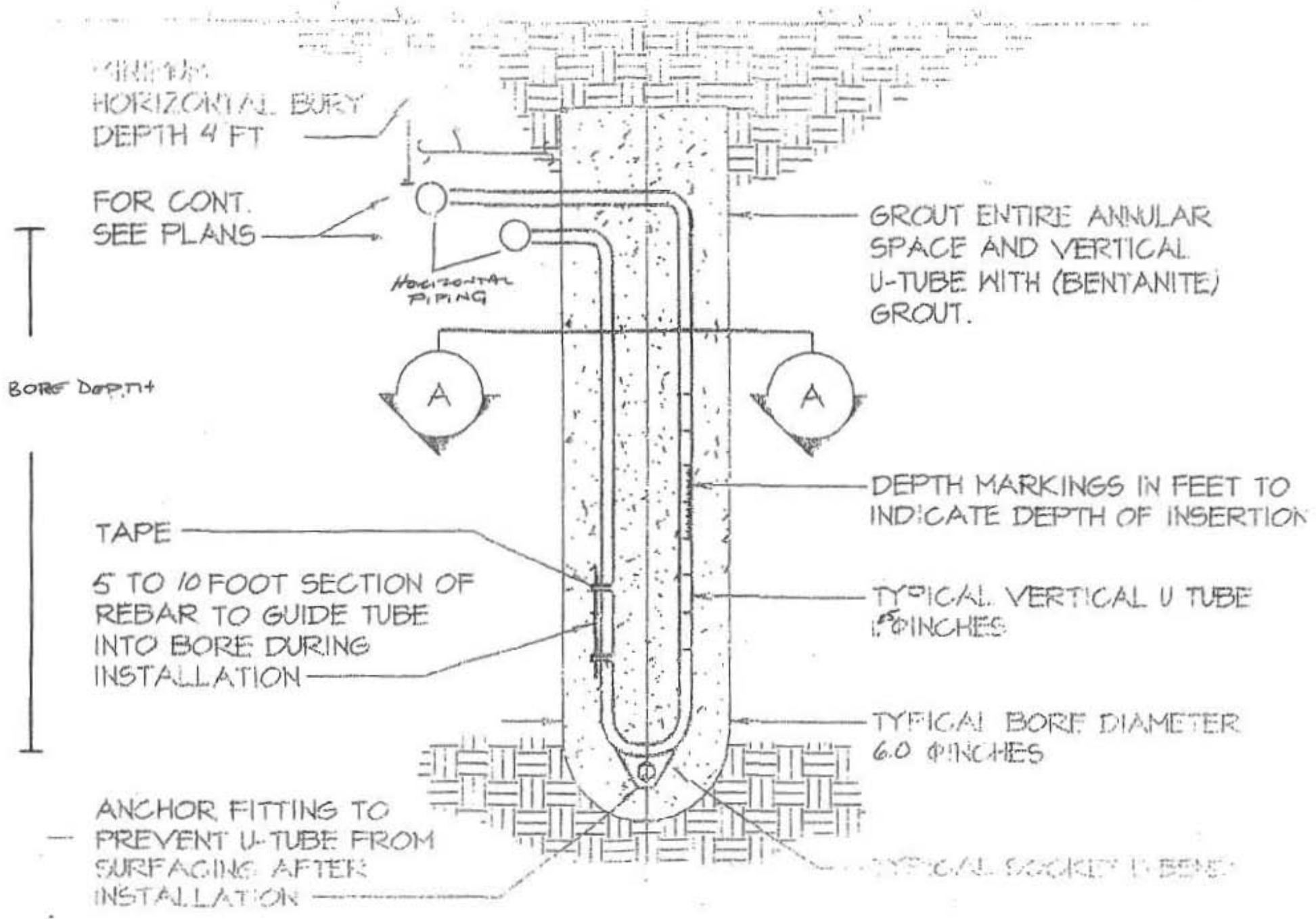
DATE: 4/24/10 INSPECTOR: Sarah Collins

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.)



HORIZONTAL BURY DEPTH 4 FT

FOR CONT. SEE PLANS

HORIZONTAL PIPING

GROUT ENTIRE ANNULAR SPACE AND VERTICAL U-TUBE WITH (BENTONITE) 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 1.5 INCHES

TYPICAL BORE DIAMETER 6.0 INCHES

ANCHOR FITTING TO PREVENT U-TUBE FROM SURFACING AFTER INSTALLATION

TYPICAL SOCKET U-BEND



HOWARD COUNTY HEALTH DEPARTMENT

62967

DATE
4/20/18

65

Received From Allied Environmental PHONE # 301-72-8370

For well permit/1584 old
Fredrick rd.

- CASH
- CHECK

NO.
13813

One hundred sixty Dollars

\$ 100 | 00

Received By J King