

C1 04832

SEQUENCE NO. (MDE USE ONLY)

STATE OF MARYLAND WELL COMPLETION REPORT

THIS REPORT MUST BE SUBMITTED AFTER WELL IS COMPLETED.

COUNTY NUMBER

ST/CO USE ONLY DATE Received

DATE WELL COMPLETED

Depth of Well

PERMIT NO. FROM "PERMIT TO DRILL WELL"

OWNER Spies Budget Joyce last name first name STREET OR RFD 6211 Woodleigh Dr TOWN Columbia, MD SUBDIVISION SECTION LOT

WELL LOG Table with columns: DESCRIPTION, FEET (FROM, TO), check if water bearing. Includes entries for Top Soil, Brown Soil, Tan weathered Rock, and Gray Rock.

GROUTING RECORD Form with fields for CEMENT (CM), BENTONITE CLAY (BC), NO. OF BAGS (33), NO. OF POUNDS (1650), GALLONS OF WATER (825), DEPTH OF GROUT SEAL.

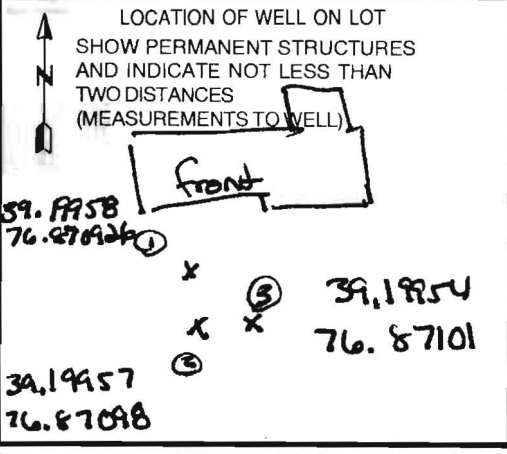
CASING RECORD Form with fields for MAIN CASING TYPE, Nominal diameter, Total depth, and OTHER CASING.

SCREEN RECORD Form with fields for screen type (ST, BR, HO, PL, OT) and DEPTH (nearest ft.).

DEPTH (nearest ft.) Form with columns for casing diameter and depth.

PUMPING TEST Form with fields for HOURS PUMPED, PUMPING RATE, METHOD USED TO MEASURE PUMPING RATE, WATER LEVEL, BEFORE PUMPING, WHEN PUMPING, TYPE OF PUMP USED.

PUMP INSTALLED Form with fields for DRILLER INSTALLED PUMP, TYPE OF PUMP INSTALLED, PLACE, CAPACITY, PUMP HORSE POWER, PUMP COLUMN LENGTH, CASING HEIGHT.



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

CIRCLE APPROPRIATE LETTER: A WELL WAS ABANDONED AND SEALED, ELECTRIC LOG OBTAINED, 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...

DRILLERS LIC. NO. 1 MWD 553 DRILLERS SIGNATURE (MUST MATCH SIGNATURE ON APPLICATION) LIC. NO. 350144

MDE USE ONLY (NOT TO BE FILLED IN BY DRILLER) T (E.R.O.S.) W Q 70 72 74 75 76

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

TELESCOPE CASING LOG INDICATOR OTHER DATA

05-349931

EMERGENCY/TEMP NO. IF ANY

B 1	25760	SEQUENCE NO. (MDE USE ONLY)	STATE OF MARYLAND APPLICATION FOR PERMIT TO DRILL WELL 555325 please type	STATE PERMIT NUMBER HO-14-0173 fill in this form completely
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Date Received (APA) 11/20/14

OWNER INFORMATION

8 MM DD YY 13  
Spiestk Rodney + Joyce  
15 Last Name Owner First Name 34  
6211 Woodleigh Drive  
36 Street or RFD 55  
Columbia MD 21044  
57 Town 70 State 72 Zip 76

LOCATION OF WELL

8 COUNTY Howard 21  
23 SUBDIVISION 42  
SECTION 44 46 LOT 48 50  
Columbia  
52 NEAREST TOWN 71

DRILLER INFORMATION

C John Hess M Wb 553  
Driller's Name 76 License No. 81  
Affiliated Environmental Services  
Firm Name  
P.O. Box 129 Annapolis Junction MD 20724  
Address  
John Hess  
Signature Date

SOURCES OF DRILLING WATER

1. Public  
2.  
3.

11 STREET ADDRESS 30  
6211 Woodleigh Dr

ON WHICH SIDE OF ROAD  
(CIRCLE APPROPRIATE BOX)

NORTH  
N  
WEST W 32 EAST E  
SOUTH S

34 37  
DISTANCE FROM ROAD  
ENTER FT OR MI 38 39

TAX MAP: 0036 BLK: 0013 PARCEL 0089

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 3 loops

NOT TO BE FILLED IN BY DRILLER HEALTH DEPARTMENT APPROVAL

Howard 13 P14673  
COUNTY NAME COUNTY NO.  
STATE SIGNATURE INSERT S → 41  
DATE ISSUED 12/5/14  
43 MM DO YY 48 CO SIGNATURE Kim Wolf EXP. DATE 12/5/15

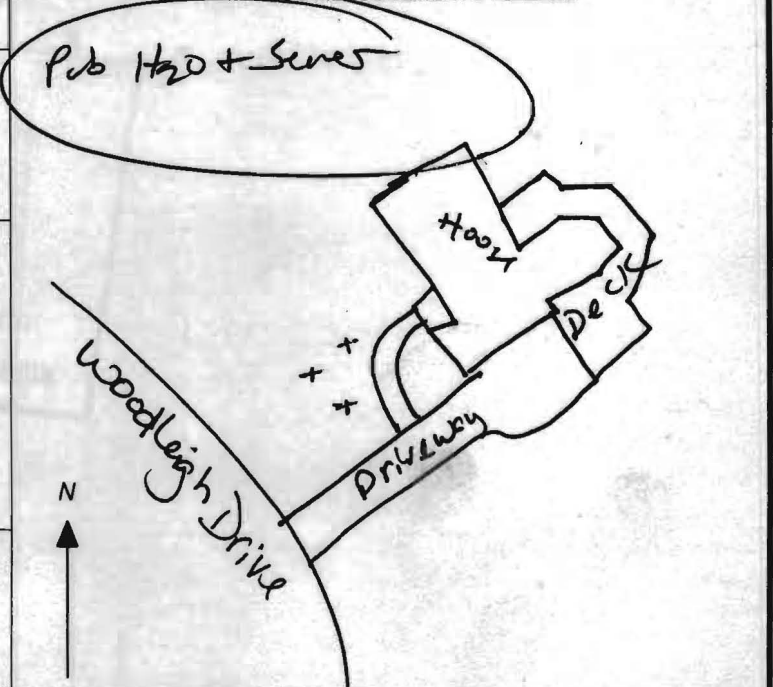
APPROXIMATE DEPTH OF WELL 320 FEET  
24 28

APPROXIMATE DIAMETER OF WELL 6 INCH  
NEAREST INCH

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  
36 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 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. HO-14-0173  
70 71 72 73 74 75 76 77 78 79

SPECIAL CONDITIONS Grants must be called in 24hrs. notice

ground loop

Data Environment from 01/01/2000 to 12/03/2014

Data Environment from 01/01/2000 to 12/03/2014

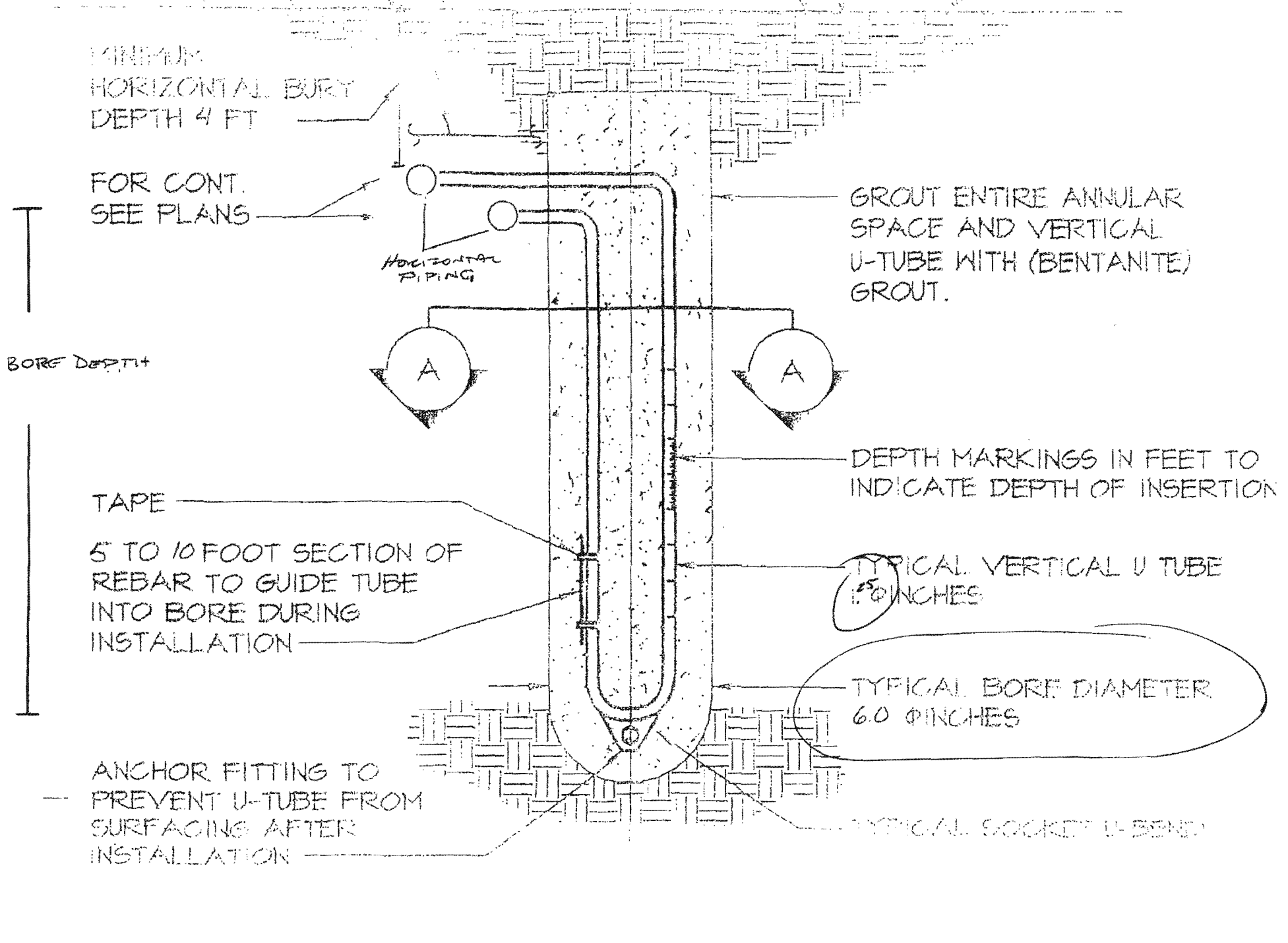
Connection Object 7101000903 COLUMBIA, WOODLEIGH DR 6211					
Premise	5336099800	WOODLEIGH DR 6211, COLUMBIA			
Utility Installation	4101073531	Sewer	9003609	3	
Utility contract	3101058587	05/02/2010	12/31/9999	02/02/2015	
Move-out document		00/00/0000			
Move-In Document	1000050587	05/02/2010	X		
UTIL ACCOUNT	211010399272				RESI
Business Partner	1101021264	JOYCE SPIES		4107303785	
Utility Installation	4101073541	Bay Fees	9003609	7	
Utility contract	3101058593	05/02/2010	12/31/9999	02/02/2015	
Move-out document		00/00/0000			
Move-In Document	1000050593	05/02/2010	X		
UTIL ACCOUNT	211010399272				RESI
Business Partner	1101021264	JOYCE SPIES		4107303785	

Spool request (number 0000017788) sent to SAP printer DEFA



GRADE

EACH BORE HOLE (TYP.)



MINIMUM HORIZONTAL BURY DEPTH 4 FT

FOR CONT. SEE PLANS

HORIZONTAL PIPING

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

DEPTH MARKINGS IN FEET TO INDICATE DEPTH OF INSERTION

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 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.

OK