

C1 **33089** SEQUENCE NO. (MDE USE ONLY)  
 1 2 3 6  
 (THIS NUMBER IS TO BE PUNCHED IN COLS. 3-6 ON ALL CARDS)

**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

ST/CO USE ONLY  
 DATE Received  
 MM DD YY  
 8 13

DATE WELL COMPLETED  
 MM DD YY  
 5 12 15

Depth of Well 22 250' 26  
 (TO NEAREST FOOT)  
 PERMIT NO. FROM "PERMIT TO DRILL WELL"  
 140-15-0051  
 28 29 30 31 32 33 34 35 36 37

OWNER Hart / Phillips Helen / James  
 WELL SITE ADDRESS 9557 Long Look Lane TOWN Columbia  
 SUBDIVISION \_\_\_\_\_ SECTION \_\_\_\_\_ LOT 162

**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>topsoil</u>	<u>0'</u>	<u>1'</u>	
<u>Silt, mica, brown, gray, moist</u>	<u>1'</u>	<u>50'</u>	<input checked="" type="checkbox"/>
<u>Weathered Rock, Schist</u>	<u>50'</u>	<u>60'</u>	<input checked="" type="checkbox"/>
<u>Bed Rock Schist</u>	<u>60'</u>	<u>250'</u>	<input checked="" type="checkbox"/>

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. MWD 572  
Samuel G. Connolly  
 DRILLERS SIGNATURE (MUST MATCH SIGNATURE ON APPLICATION)  
 LIC. NO. D

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

**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 13 NO. OF POUNDS 650  
 GALLONS OF WATER 247  
 DEPTH OF GROUT SEAL (to nearest foot)  
 from 0' ft. to 250' 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  
 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

**C 2** DEPTH (nearest ft.)  
 T 2  
 E 1 8 9 11 15 17 21  
 A C H 2 23 24 26 30 32 36  
 S C 3 38 39 41 45 47 51  
 R E E N  
 SLOT SIZE 1 2 3  
 DIAMETER OF SCREEN (NEAREST INCH)  
 56 60  
 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  
 70 72 74 75 76  
 TELESCOPE CASING LOG INDICATOR OTHER DATA

**C 3** PUMPING TEST

HOURS PUMPED (nearest hour) N/A  
 PUMPING RATE (gal. per min.) N/A  
 METHOD USED TO MEASURE PUMPING RATE N/A  
 WATER LEVEL (distance from land surface)  
 BEFORE PUMPING 60' ft.  
 WHEN PUMPING N/A 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  
 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  
 - below } -3 (nearest foot)  
 49 50 51

LATITUDE 39.215700  
 LONGITUDE 76.844201  
 (DEFAULT COORD. WGS 84)

NOTES:  
#1

C1 33090

SEQUENCE NO. (MDE USE ONLY)

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

(THIS NUMBER IS TO BE PUNCHED IN COLS. 3-6 ON ALL CARDS)

ST/CO USE ONLY DATE RECEIVED MM 05 DD 22 YY 15

DATE WELL COMPLETED MM 03 DD 13 YY 15

Depth of Well 22 250' 26 (TO NEAREST FOOT)

PERMIT NO. FROM "PERMIT TO DRILL WELL" OK 5/27/15 SC HO-15-0051

OWNER Hart / ph. Hips Helon / James WELL SITE ADDRESS 9337 Long look lane TOWN Columbia SUBDIVISION SECTION LOT 162

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 (Use additional sheets if needed), FEET (FROM, TO), check if water bearing. Rows include: top 50' silt, mica, brown, gray, moist; weathered rock, schist; bed rock schist.

GROUTING RECORD

WELL HAS BEEN GROUTED (Circle appropriate box) YES Y NO N TYPE OF GROUTING MATERIAL (Circle one) CEMENT CM BENTONITE CLAY BC NO. OF BAGS 13 NO. OF POUNDS 330 GALLONS OF WATER 247 DEPTH OF GROUT SEAL (to nearest foot) from 0' to 250'

CASING RECORD

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)

Table with columns: EACH CASING, diameter inch, depth (feet) from, to

SCREEN RECORD

screen type or open hole (insert appropriate code below) ST STEEL BR BRASS PL PLASTIC HO OPEN HOLE OT OTHER

Table with columns: A, C, H, S, R, E, N, SLOT SIZE 1, 2, 3, DIAMETER OF SCREEN (NEAREST INCH) 56, 60

C 3

PUMPING TEST

HOURS PUMPED (nearest hour) N/A PUMPING RATE (gal. per min.) N/A METHOD USED TO MEASURE PUMPING RATE N/A WATER LEVEL (distance from land surface) BEFORE PUMPING 60' WHEN PUMPING N/A TYPE OF PUMP USED (for test) A air P piston T turbine C centrifugal R rotary O other 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. 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) LAND SURFACE -3 (nearest foot)

NUMBER OF UNSUCCESSFUL WELLS: 0

WELL HYDROFRACTURED YES Y NO 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 MW D 572 DRILLERS SIGNATURE (MUST MATCH SIGNATURE ON APPLICATION) LIC. NO. 1 D

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

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

70 72 TELESCOPE CASING LOG INDICATOR OTHER DATA 74 75 76

LATITUDE 39.215697 LONGITUDE 76.844148 (DEFAULT COORD. WGS 84) NOTES: 13 bags 20 gal bag = 338 gal / 250' = 1.35 gal/ft

B 1 36528

SEQUENCE NO. (MDE USE ONLY)

STATE OF MARYLAND APPLICATION FOR PERMIT TO DRILL WELL

STATE PERMIT NUMBER

HO - 15 - 0051

555822-1 please type

Date Received (APA) 04 22 15

OWNER INFORMATION

Hart/Phillips + Helen/James 9557 Long Look Lane Columbia MD 21045

B 3

LOCATION OF WELL

Howard COUNTY 1162 LOT Columbia NEAREST TOWN

DRILLER INFORMATION

Samuel A. Connelly MWD 572 Connelly Associates Inc 421/15

B 4

SOURCES OF DRILLING WATER

1. Public

9557 Long Look Ln. ON WHICH SIDE OF ROAD DISTANCE FROM ROAD ENTER FT OR MI

B 2

WELL INFORMATION

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

NOT TO BE FILLED IN BY DRILLER HEALTH DEPARTMENT APPROVAL

Howard COUNTY NAME 13 COUNTY NO. STATE SIGNATURE DATE ISSUED 04/28/2015 CO SIGNATURE EXP. DATE 4/28/16

APPROXIMATE DEPTH OF WELL 250 FEET APPROXIMATE DIAMETER OF WELL 5 INCH NEAREST

METHOD OF DRILLING (circle one)

- BORED (or Augered) JETTED Jetted & DRIVEN AIR-ROTary AIR-PERCussion ROTARY (Hydraulic Rotary) CABLE REVerse-ROTary Drive-POINT

REPLACEMENT OR DEEPEMED WELLS (CIRCLE APPROPRIATE BOX)

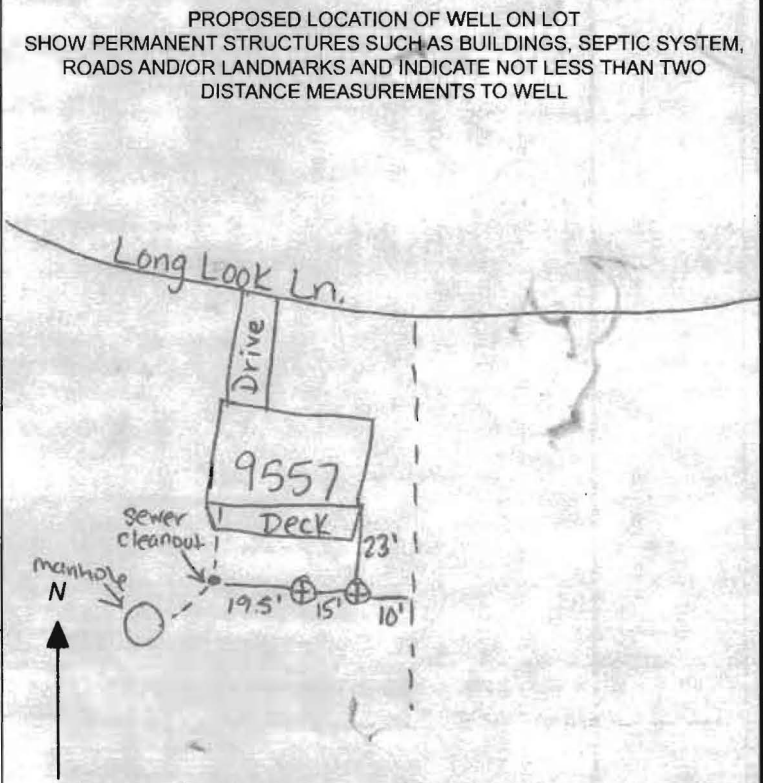
- THIS WELL WILL NOT REPLACE AN EXISTING WELL THIS WELL WILL REPLACE A WELL THAT WILL BE ABANDONED AND SEALED THIS WELL WILL REPLACE A WELL THAT WILL BE USED AS A STANDBY-CONTACT LOCAL APPROVING AUTHORITY FOR POLICY ON STANDBY WELLS THIS WELL WILL DEEPEMED AN EXISTING WELL

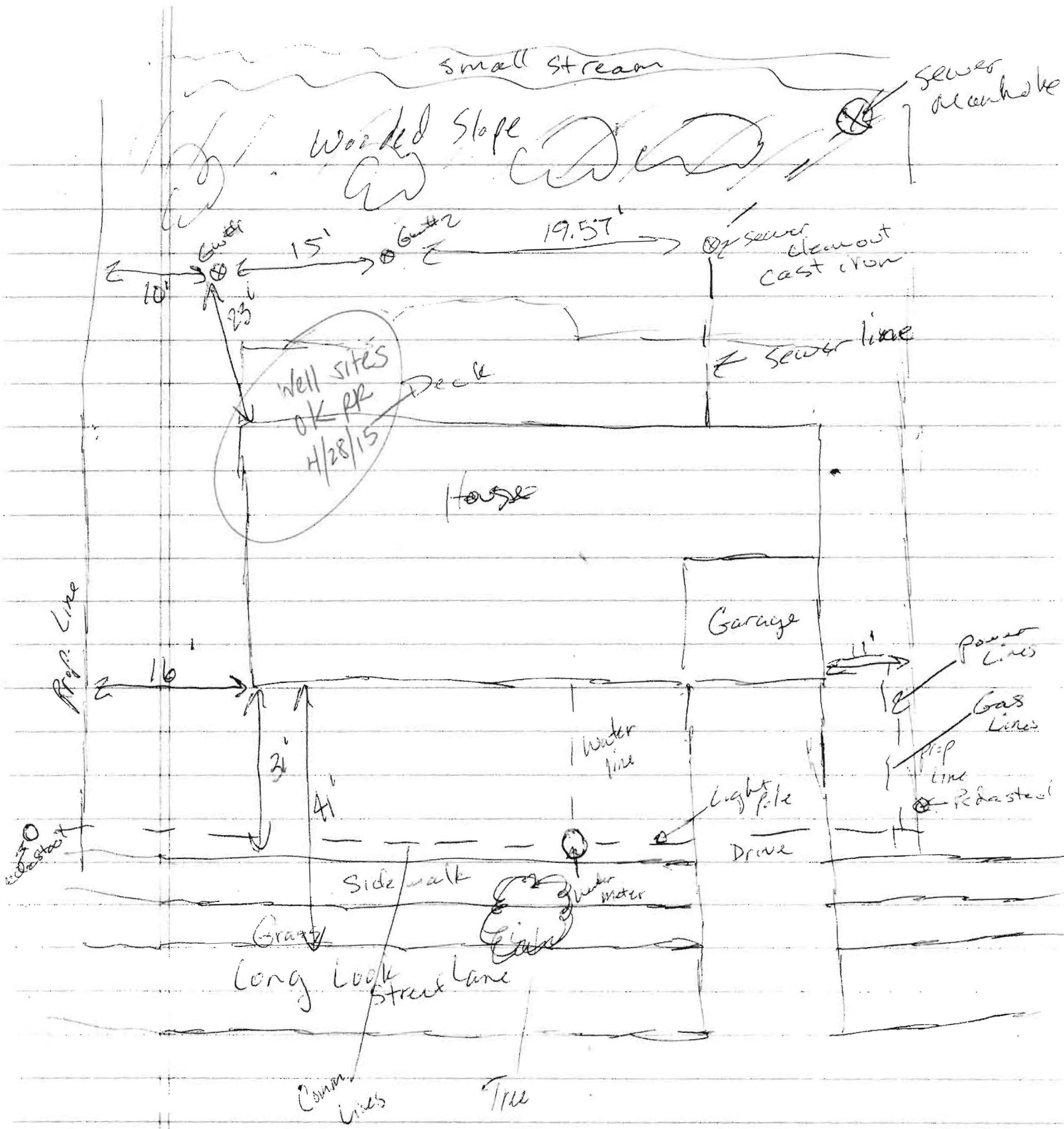
Not to be filled in by driller (MDE OR COUNTY USE ONLY)

APPROP. PERMIT NUMBER G PERMIT No. HO - 15 - 0051

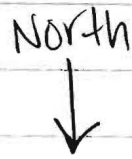
SPECIAL CONDITIONS

All wells must be grouted from bottom to top - Call into HD

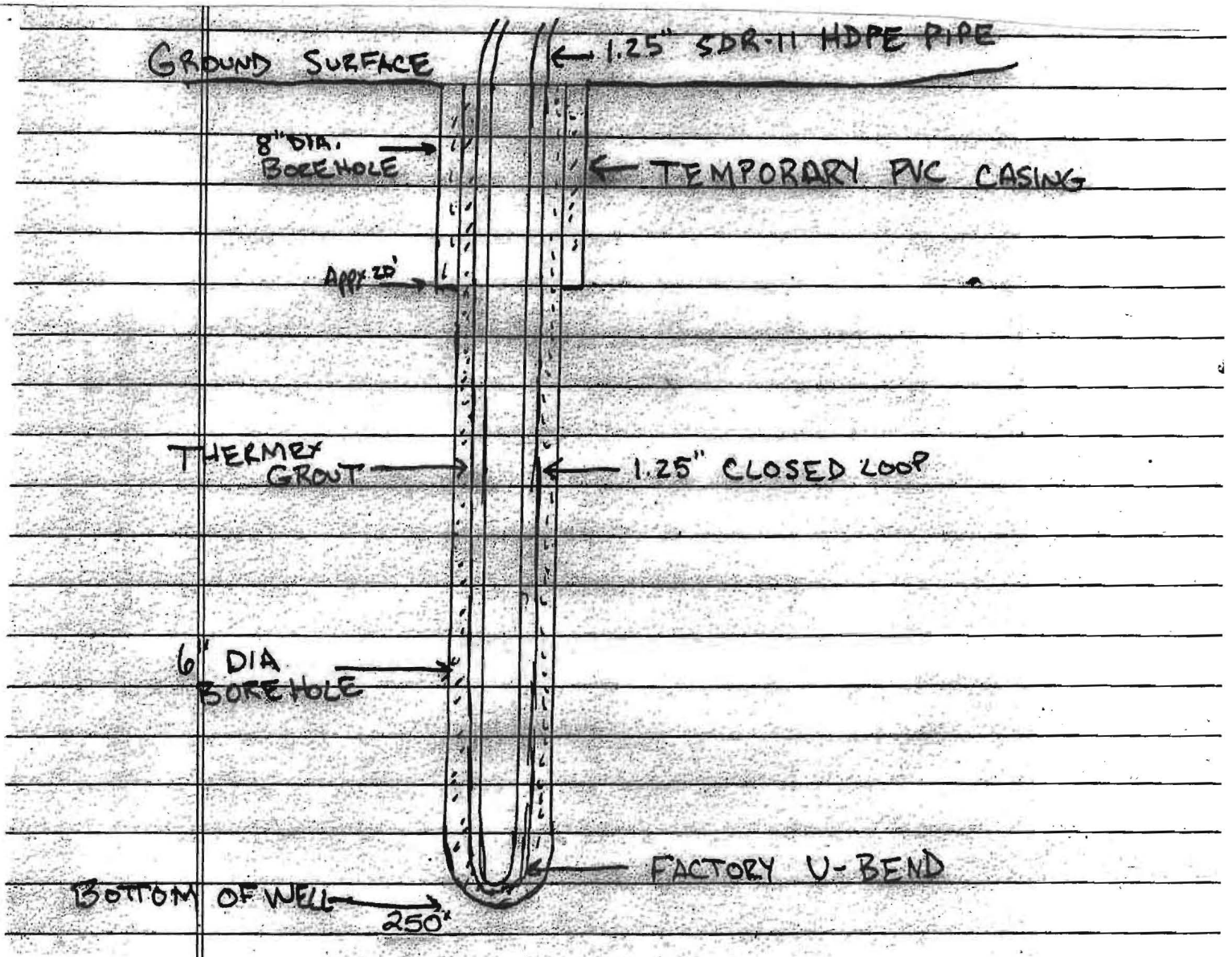




9557 Long Look Lane



Geothermal Closed Loop – 9557 Long Look Lane



Grout information for this property is as follows:

**Thermex grout mixture of 50 lb. grout to 17 gallons water, placed in the well using the tremie method, from bottom to top.**

## Emily Sottile

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**From:** Collins, Sarah <SCollins@howardcountymd.gov>  
**Sent:** Friday, March 27, 2015 9:13 AM  
**To:** Emily Sottile  
**Subject:** RE: 9557 Longlook lane

Hi Emily,

Plats can be obtained from Land Records with the County. Or a hand-drawn sketch can be submitted with a well permit (must show distances and setbacks).

Sarah

-----Original Message-----

**From:** Emily Sottile [mailto:emily@connellygeothermal.com]  
**Sent:** Thursday, March 19, 2015 11:09 AM  
**To:** Collins, Sarah  
**Subject:** RE: 9557 Longlook lane

Yes, the cleanout inside the home. So we would need to arrange for the homeowner to be home for your inspection. Also, do you know if I can get a copy of the plat from the County? The homeowner doesn't have one.  
Thank you,

Emily Sottile | Business Operations Manager | Connelly Geothermal | cell:  
301-305-0481  
emily@connellygeothermal.com | connellygeothermal.com |  
office: 301-696-8820 Ext. 19

-----Original Message-----

**From:** Collins, Sarah [mailto:SCollins@howardcountymd.gov]  
**Sent:** Thursday, March 19, 2015 9:29 AM  
**To:** Emily Sottile  
**Subject:** RE: 9557 Longlook lane

Hi Emily,

Is it the cleanouts that appear to be cast iron? If so, the whole pipe is probably cast iron. I spoke with Kevin and cast iron cleanouts would only be connected to a cast iron pipe. However, PVC can be connected to any material so that wouldn't be indicative of the material used.

You can submit the well permits for this property and we can investigate the pipe material on a site visit.

Thanks,  
Sarah

-----Original Message-----

**From:** Emily Sottile [mailto:emily@connellygeothermal.com]

Sent: Tuesday, March 17, 2015 4:12 PM

To: Collins, Sarah

Subject: RE: 9557 Longlook lane

Can someone meet our field rep on site to see where the connections are? He said he looked and they are cast iron on both ends.

Emily Sottile | Business Operations Manager | Connelly Geothermal | cell:

301-305-0481

emily@connellygeothermal.com | connellygeothermal.com |

office: 301-696-8820 Ext. 19

-----Original Message-----

From: Collins, Sarah [mailto:SCollins@howardcountymd.gov]

Sent: Tuesday, March 17, 2015 2:53 PM

To: Emily Sottile

Subject: RE: 9557 Longlook lane

In this case we'd have to maintain the 50-ft setback for a geothermal well b/c we have no evidence that the pipe is cast iron, PVC, or HDPE (which all have a 10-ft setback). The other option would be to dig up the pipe to determine material.

Is Rodney Bailey your connection to get utility records? The guy we were using hasn't been responding to emails so I'm looking for another contact.

Thanks,

Sarah

-----Original Message-----

From: Emily Sottile [mailto:emily@connellygeothermal.com]

Sent: Tuesday, March 17, 2015 12:07 PM

To: Collins, Sarah

Subject: FW: 9557 Longlook lane

Sarah,

What are your thoughts on this? This is what the county has on record, but the section describing the pipe is blank...

Emily Sottile | Business Operations Manager | Connelly Geothermal | cell:

301-305-0481

emily@connellygeothermal.com | connellygeothermal.com |

office: 301-696-8820 Ext. 19

-----Original Message-----

From: Bailey, Rodney [mailto:rbailey@howardcountymd.gov]

Sent: Friday, March 13, 2015 3:23 PM

To: Emily Sottile

Subject: RE: 9557 Longlook lane

Sorry Emily

-----Original Message-----

From: Emily Sottile [mailto:emily@connellygeothermal.com]  
Sent: Friday, March 13, 2015 3:20 PM  
To: Bailey, Rodney  
Subject: Re: 9557 Longlook lane

Hi Rodney,  
There was not an attachment?

On Mar 13, 2015, at 2:22 PM, Bailey, Rodney <rbailey@howardcountymd.gov>  
wrote:

Emily  
Here is the plot for sewer and water.

-----Original Message-----

From: savinscanner@howardcountymd.gov  
[mailto:savinscanner@howardcountymd.gov]  
Sent: Friday, March 13, 2015 2:11 PM  
To: Bailey, Rodney  
Subject: Message from "RNP0026738B4D7D"

This E-mail was sent from "RNP0026738B4D7D" (MP 3053).

Scan Date: 03.13.2015 14:10:58 (-0400)  
Queries to: savinscanner@howardcountymd.gov

COL 901-K

HOWARD COUNTY METROPOLITAN COMMISSION

61-761-785

Date June 10, 1970

Meter Setting	Inside	
	Outside	

RECORD OF WATER ACCOUNTS  
 10-29-70 MMV  
 DATE INITIAL  
 Installed by SCOTT

INSTALLATION OF WATER CONNECTION

Applicant <u>Amberly Bldg. Co., Inc.</u>	Plumber	Application Filed For <u>5/8" Meter-3/4" Tap</u>	Plumbing Permit No.
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DATA CONCERNING INSTALLATION

Single	On	Double with Lot	DATE CONSTRUCTED
			Started: Completed:

Date of Tap Installation

Diameter and Kind of Pipe

Length of Connection

Size of Corp. Cock

Meter size, Make and No. 5/8 TRIDENT  
16150661

Date of Meter Setting 10-27-70

Brief description of Meter Location 8' BACK  
OF CURB 15' RIGHT OF LEFT COR.

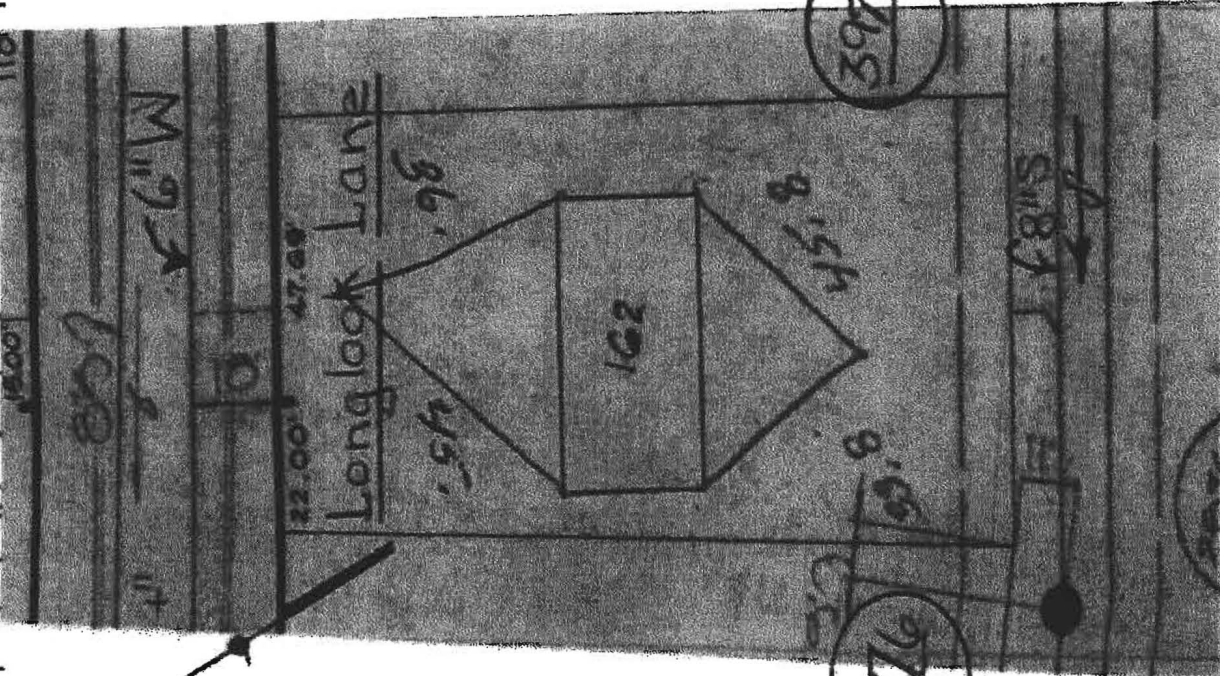
COMPLETION OF OFFICE RECORDS

Meter Card Record 10-28-70

Meter Sheet and Completion Record

Assessment Record

SKETCH



3977

3976

(See Other Side for Sewer Connection Data)

HOWARD COUNTY METROPOLITAN COMMISSION

Record Posted	W	S
H. C. Book		
295W&S		
50' Sheet No.	P7	

66-12-2140 Date COL'S 901-K ✓

SEWER ACCOUNT SET UP 10-29-70 MJS  
 DATE INITIALS  
 Installed by \_\_\_\_\_  
 Tap Insp. by \_\_\_\_\_ Date \_\_\_\_\_

Street	House No.	Lot No.	Block No.	Subdivision	Permit No.
Longlook Lane	9557	162	Area 1	Talbott Springs	

Type of Property	District	Town or Vicinity
Single family		Columbia

Applicant	Plumber	Application Filed for
Amberly Bldg. Co., Inc.		6" Sewer Connection

DATA CONCERNING INSTALLATION

First - Second	On	Double with Lot	DATE CONSTRUCTED
Single			Started: _____ Completed: _____

Depth of sewer invert at property line \_\_\_\_\_ Diameter and kind of pipe used \_\_\_\_\_

Length of connection \_\_\_\_\_

O-2  
92182

(See Other Side for Water Connection and Complete Sketch)