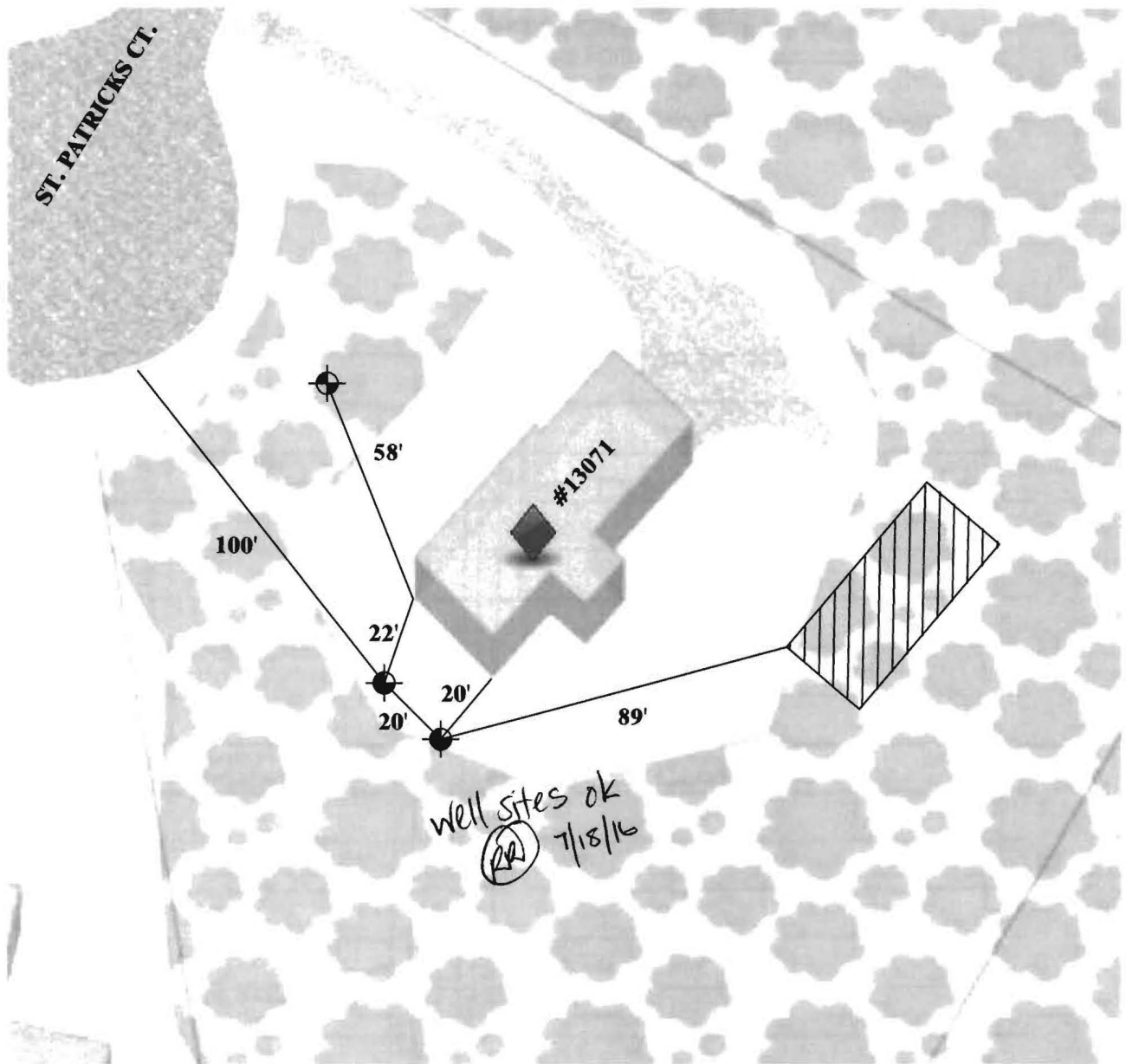





<b>C 1</b> <b>41943</b>		SEQUENCE NO. (MDE USE ONLY)		<b>STATE OF MARYLAND</b> <b>WELL COMPLETION REPORT</b> FILL IN THIS FORM COMPLETELY PLEASE TYPE		THIS REPORT MUST BE SUBMITTED WITHIN 45 DAYS AFTER WELL IS COMPLETED.	
1 2 3 6 (THIS NUMBER IS TO BE PUNCHED IN COLS. 3-6 ON ALL CARDS)						COUNTY NUMBER	
ST/CO USE ONLY DATE Received MM DD YY 08 10 16		DATE WELL COMPLETED MM DD YY 7 26 2016		Depth of Well 22 320' 26 (TO NEAREST FOOT)		PERMIT NO. FROM "PERMIT TO DRILL WELL" H0 - 15 - 0279 28 29 30 31 32 33 34 35 36 37	
OWNER <u>Grillen</u>		first name <u>Michael</u>		TOWN <u>Highland</u>		LOT <u>86</u>	
WELL SITE ADDRESS <u>13071 Saint Patricks Court</u>		SUBDIVISION <u>White Oak Estates</u>		SECTION		LOT <u>86</u>	
<b>WELL LOG</b> Not required for driven wells		<b>GROUTING RECORD</b> WELL HAS BEEN GROUTED (Circle Appropriate Box) yes <input checked="" type="checkbox"/> no <input type="checkbox"/> TYPE OF GROUTING MATERIAL (Circle one) CEMENT <input checked="" type="checkbox"/> BENTONITE CLAY <input type="checkbox"/> NO. OF BAGS <u>14</u> NO. OF POUNDS <u>700</u> GALLONS OF WATER <u>266</u> DEPTH OF GROUT SEAL (to nearest foot) from <u>0</u> ft. to <u>320</u> ft. (enter 0 if from surface)		<b>C 3</b> <b>PUMPING TEST</b> HOURS PUMPED (nearest hour) <u>N/A</u> PUMPING RATE (gal. per min.) <u>N/A</u> METHOD USED TO MEASURE PUMPING RATE <u>N/A</u> WATER LEVEL (distance from land surface) BEFORE PUMPING <u>70'</u> ft. WHEN PUMPING <u>N/A</u> ft. TYPE OF PUMP USED (for test) <input checked="" type="checkbox"/> air <input type="checkbox"/> piston <input type="checkbox"/> turbine <input checked="" type="checkbox"/> centrifugal <input type="checkbox"/> rotary <input type="checkbox"/> other (describe below) <input type="checkbox"/> jet <input type="checkbox"/> submersible			
STATE THE KIND OF FORMATIONS PENETRATED, THEIR COLOR, DEPTH, THICKNESS AND IF WATER BEARING		<b>CASING RECORD</b> casing types insert appropriate code below <input checked="" type="checkbox"/> ST STEEL <input type="checkbox"/> CO CONCRETE <input type="checkbox"/> PL PLASTIC <input type="checkbox"/> 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		<b>PUMP INSTALLED</b> DRILLER INSTALLED PUMP YES <input type="checkbox"/> NO <input checked="" type="checkbox"/> 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. <u>29</u> CAPACITY: GALLONS PER MINUTE (to nearest gallon) <u>31</u> <u>35</u> PUMP HORSE POWER <u>37</u> <u>41</u> PUMP COLUMN LENGTH (nearest ft.) <u>43</u> <u>47</u> CASING HEIGHT (circle appropriate box and enter casing height) <input checked="" type="checkbox"/> above <input type="checkbox"/> below <u>-3</u> (nearest foot) LAND SURFACE <u>50</u> <u>51</u>			
DESCRIPTION (Use additional sheets if needed)		FEET FROM TO check if water bearing		<b>C 2</b> <b>DEPTH (nearest ft.)</b> 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		<b>LATITUDE</b> <u>39.182024</u> <b>LONGITUDE</b> <u>76.969544</u> (DEFAULT COORD. WGS 84)	
Installed 1.25 x 320' closed loop HDPE - U-Bend		0		NUMBER OF UNSUCCESSFUL WELLS: <u>0</u>			
WELL HYDROFRACTURED <input checked="" type="checkbox"/> YES <input type="checkbox"/> 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.		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.	
DRILLERS LIC. NO. <u>MWD 572</u>		DRILLERS SIGNATURE <u>Samuel H. Connolly</u>		LIC. NO. <u>D</u>		SITING 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 74 75 76 TELESCOPE CASING LOG INDICATOR OTHER DATA					

<b>B 1</b> <div style="font-size: 2em; font-weight: bold; margin-top: 10px;">46373</div>	SEQUENCE NO. (MDE USE ONLY)  	<b>STATE OF MARYLAND</b> <b>APPLICATION FOR PERMIT TO DRILL WELL</b> please type	STATE PERMIT NUMBER <div style="font-size: 1.5em; font-weight: bold; margin-top: 10px;">Ho - 15 - 0279</div> <div style="font-size: 0.8em;">fill in this form completely</div>
<b>Date Received (APA)</b> <div style="font-size: 0.8em;">8 MM DD YY 13</div> <div style="font-size: 1.2em; margin-top: 5px;">8/15/13</div>		<b>B 3 LOCATION OF WELL</b> <div style="font-size: 1.2em; margin-top: 10px;">Howard</div> <div style="font-size: 0.8em;">8 COUNTY 21</div> <div style="font-size: 1.2em; margin-top: 5px;">White Oak Estates</div> <div style="font-size: 0.8em;">23 SUBDIVISION 42</div> <div style="font-size: 0.8em; margin-top: 10px;">SECTION 44 46 LOT 48 50</div> <div style="font-size: 1.2em; margin-top: 5px;">Highland</div> <div style="font-size: 0.8em;">52 NEAREST TOWN 71</div>	
<b>OWNER INFORMATION</b> <div style="font-size: 0.8em;">8 MM DD YY 13</div> <div style="font-size: 1.2em; margin-top: 5px;">Billen Michael</div> <div style="font-size: 0.8em;">15 Last Name 34 First Name</div> <div style="font-size: 1.2em; margin-top: 5px;">13071 Saint Patricks Court</div> <div style="font-size: 0.8em;">36 Street or RFD 55</div> <div style="font-size: 1.2em; margin-top: 5px;">Highland MD 20777</div> <div style="font-size: 0.8em;">57 Town 70 State 72 Zip 76</div>		<b>B 4 SOURCES OF DRILLING WATER</b> <div style="font-size: 1.2em; margin-top: 10px;">13071 St. Patricks Ct</div> <div style="font-size: 0.8em;">11 STREET ADDRESS 30</div> <div style="font-size: 1.2em; margin-top: 5px;">private</div> <div style="font-size: 0.8em;">ON WHICH SIDE OF ROAD (CIRCLE APPROPRIATE BOX)</div> <div style="text-align: center; margin-top: 10px;"> <div style="display: inline-block; text-align: center;"> <div style="border: 1px solid black; padding: 2px;">N</div>  <div style="border: 1px solid black; padding: 2px;">W</div> </div> <div style="display: inline-block; text-align: center;"> <div style="border: 1px solid black; padding: 2px;">E</div>  <div style="border: 1px solid black; padding: 2px;">S</div> </div> </div> <div style="font-size: 0.8em;">34 100 37</div> <div style="font-size: 0.8em;">DISTANCE FROM ROAD</div> <div style="font-size: 0.8em;">ENTER FT OR MI</div> <div style="font-size: 0.8em;">TAX MAP: 34 BLK: PARCEL 355</div>	
<b>DRILLER INFORMATION</b> <div style="font-size: 1.2em; margin-top: 10px;">Samuel A. Connolly M W D 572</div> <div style="font-size: 0.8em;">Driller's Name 76 License No. 81</div> <div style="font-size: 1.2em; margin-top: 5px;">Connolly + Associates, Inc.</div> <div style="font-size: 0.8em;">Firm Name</div> <div style="font-size: 1.2em; margin-top: 5px;">2104 Interstate Ct. Frederick MD 21704</div> <div style="font-size: 0.8em;">Address</div> <div style="font-size: 1.2em; margin-top: 5px;">Samuel A. Connolly 6-8-16</div> <div style="font-size: 0.8em;">Signature Date</div>		<b>B 2 WELL INFORMATION</b> <div style="font-size: 0.8em;">1 2</div> <div style="font-size: 0.8em;">APPROX. PUMPING RATE (GAL. PER MIN.) 8 12</div> <div style="font-size: 0.8em;">AVERAGE DAILY QUANTITY NEEDED (GAL. PER DAY) 14 20</div>	
<b>USE FOR WATER (CIRCLE APPROPRIATE BOX)</b> <div style="font-size: 0.8em;">22</div> <div style="font-size: 0.8em;"> <input type="checkbox"/> DOMESTIC POTABLE SUPPLY &amp; RESIDENTIAL IRRIGATION  <input type="checkbox"/> FARMING (LIVESTOCK WATERING &amp; AGRICULTURAL IRRIGATION)  <input type="checkbox"/> INDUSTRIAL, COMMERCIAL, DEWATERING  <input type="checkbox"/> PUBLIC WATER SUPPLY WELL  <input type="checkbox"/> TEST, OBSERVATION, MONITORING  <input type="checkbox"/> OPEN LOOP GEOTHERMAL  <input checked="" type="checkbox"/> CLOSED LOOP GEOTHERMAL         </div> <div style="font-size: 1.2em; margin-top: 10px;">2 geo bores</div>		<b>NOT TO BE FILLED IN BY DRILLER HEALTH DEPARTMENT APPROVAL</b> <div style="font-size: 1.2em; margin-top: 10px;">Howard</div> <div style="font-size: 0.8em;">COUNTY NAME 13</div> <div style="font-size: 0.8em;">COUNTY NO.</div> <div style="font-size: 0.8em;">STATE SIGNATURE</div> <div style="font-size: 0.8em;">DATE ISSUED 7/18/16</div> <div style="font-size: 0.8em;">43 MM DD YY 48</div> <div style="font-size: 0.8em;">CO SIGNATURE</div> <div style="font-size: 0.8em;">EXP. DATE 7/18/17</div> <div style="font-size: 0.8em;">41</div>	
<div style="font-size: 0.8em;">APPROXIMATE DEPTH OF WELL 320 FEET</div> <div style="font-size: 0.8em;">24 28</div> <div style="font-size: 0.8em;">APPROXIMATE DIAMETER OF WELL 6 INCH</div> <div style="font-size: 0.8em;">NEAREST INCH</div>		<b>PROPOSED LOCATION OF WELL ON LOT</b> SHOW PERMANENT STRUCTURES SUCH AS BUILDINGS, SEPTIC SYSTEM, ROADS AND/OR LANDMARKS AND INDICATE NOT LESS THAN TWO DISTANCE MEASUREMENTS TO WELL <div style="font-size: 1.2em; margin-top: 10px;">St Patricks Court</div> <div style="font-size: 1.2em; margin-top: 10px;">House</div> <div style="font-size: 1.2em; margin-top: 10px;">Water Well</div> <div style="font-size: 1.2em; margin-top: 10px;">Septic</div> <div style="font-size: 0.8em;">58'</div> <div style="font-size: 0.8em;">20'</div> <div style="font-size: 0.8em;">18.5'</div> <div style="font-size: 0.8em;">85'</div>	
<b>METHOD OF DRILLING (circle one)</b> <div style="font-size: 0.8em;">30 BORED (or Augered) JETTED Jetted &amp; DRIVEN</div> <div style="font-size: 0.8em;">AIR-ROTARY AIR-PERCussion ROTARY (Hydraulic Rotary)</div> <div style="font-size: 0.8em;">37 CABLE REVERSE-ROTARY DRIVE-POINT</div> <div style="font-size: 0.8em;">other</div>		<b>REPLACEMENT OR DEEPEENED WELLS (CIRCLE APPROPRIATE BOX)</b> <div style="font-size: 0.8em;">39</div> <div style="font-size: 0.8em;"> <input checked="" type="checkbox"/> THIS WELL WILL NOT REPLACE AN EXISTING WELL  <input type="checkbox"/> THIS WELL WILL REPLACE A WELL THAT WILL BE ABANDONED AND SEALED  <input type="checkbox"/> THIS WELL WILL REPLACE A WELL THAT WILL BE USED AS A STANDBY-CONTACT LOCAL APPROVING AUTHORITY FOR POLICY ON STANDBY WELLS  <input type="checkbox"/> THIS WELL WILL DEEPEEN AN EXISTING WELL         </div> <div style="font-size: 0.8em;">PERMIT NUMBER OF WELL TO BE REPLACED OR DEEPEENED (IF AVAILABLE) 41 52</div>	
<b>Not to be filled in by driller (MDE OR COUNTY USE ONLY)</b> <div style="font-size: 0.8em;">APPROX. PERMIT NUMBER</div> <div style="font-size: 1.2em; margin-top: 10px;">G</div> <div style="font-size: 0.8em;">PERMIT No. Ho - 15 - 0279</div> <div style="font-size: 0.8em;">70 71 72 73 74 75 76 77 78 79</div>			
<b>SPECIAL CONDITIONS</b> NOTE: APPROVING AUTHORITIES SHOULD USE SEPARATE SHEET IF NEEDED. <div style="font-size: 1.2em; margin-top: 10px;">Wells must be grouted from bottom to top.</div>			



# L E G E N D

-  PROPOSED GEOTHERMAL WELL LOCATION
-  APPROXIMATE DOMESTIC WELL LOCATION
-  APPROXIMATE DRAINAGE FIELD LOCATION

## GRAPHICAL SCALE



**ConnellyGeothermal**  
Partnering with Mother Earth

260 Interstate Court (301) 696-8820  
Frederick, Maryland 21704 (301) 696-0327 fax

GILLEN RESIDENCE  
13071 ST. PATRICKS CT., HIGHLAND, MARYLAND

PROPOSED GEOTHERMAL WELL  
LOCATION PLAN

Scale:  
AS SHOWN

Fig.

Date:  
JUNE 2016

Drawn By:  
J.A.

Checked By:  
E.S.

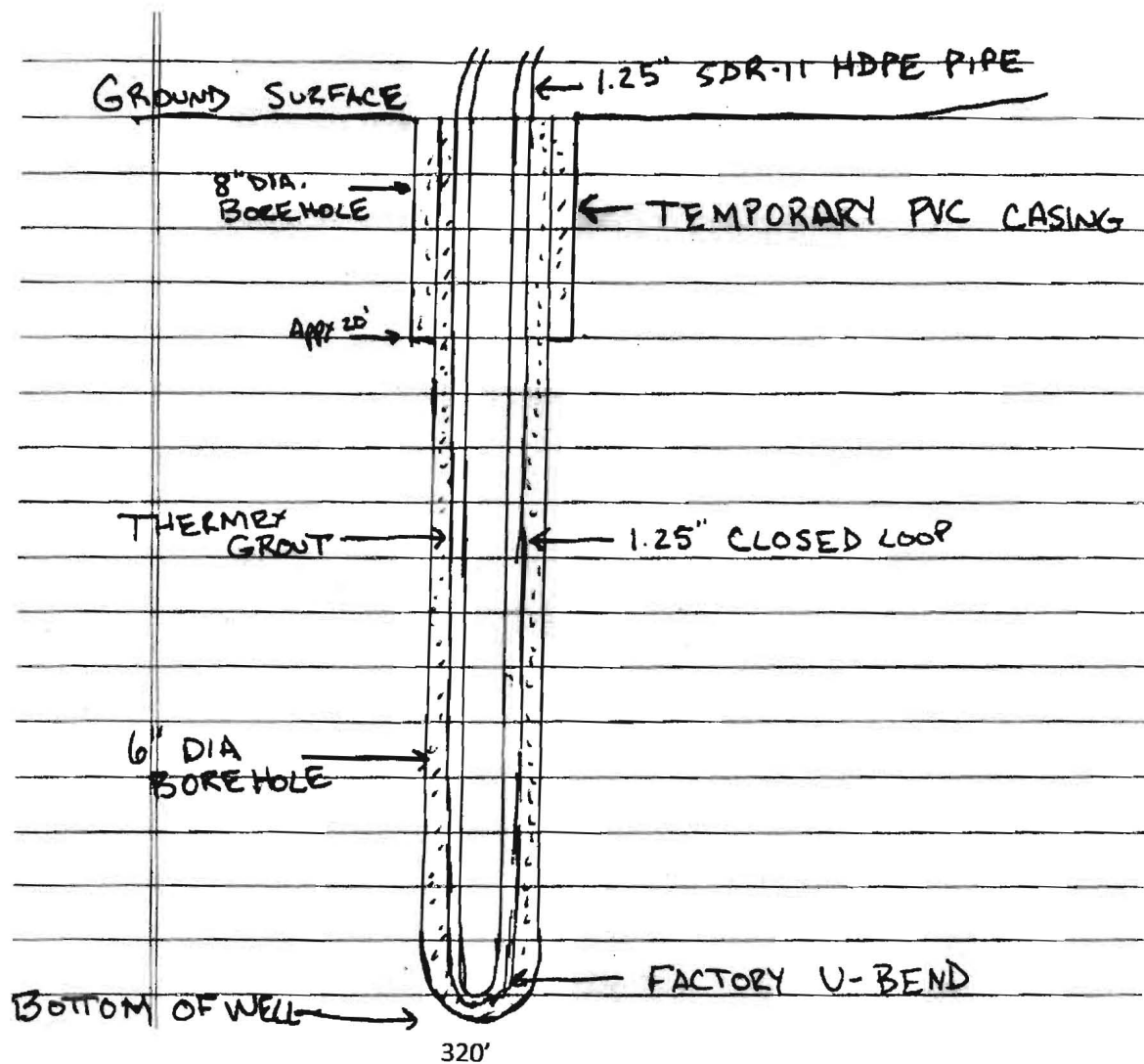
Project No.:  
00000

1

## FILE INQUIRY NOTES

[illegible]

Geothermal Closed Loop – 13071 St. Patricks Court, Highland, MD 20777



Grout information for this property is as follows:

Thermex grout mixture of 50 lb. grout to 19 gallons water, placed in the well using the tremie method, from bottom to top.

Residential  
Commercial  
Fueling Systems.

RCFS, Inc.

3228 Sudath Lane  
Jarrettsville, Md  
21084

410.692.9108

410.692.9117 fax

Mike Gillen  
13071 St. Patricks Ct.  
Highland, MD 20777  
301-741-0512.

Reference: Heating oil tank

July 15, 2016

Mr. Gillen:

RCFS, Inc. is pleased to inform you that the removal of one, UST has been completed (14 July 2016) by a MDE Certified Tank Technician (#0082). Complying with MDE / NFPA regs as applicable to the requirements. The UST was a 1000-gallon single wall storage tank, with slight visible signs of damage to tank surface. Adjacent soils at tank contact, showed NO evidence of spillage or seepage from the UST. Two soil samples were extracted, approx. 2 ft below tank bottom, soils showed NO visible signs and odors of fuel oil. The UST excavation was of normal excavations with an UST.

MDE Inspections were not conducted at time of tank removal, nor required.

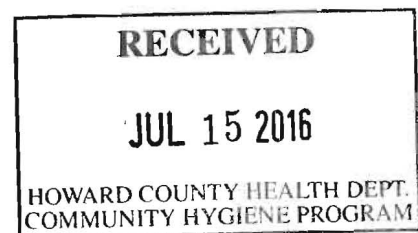
The excavation was backfilled, with native soils. Additional backfill is required to reach original grade, to be performed by others.

The UST (980 lbs) has been rendered useless and recycled through the local scrap yard, Harford County recyclers. See Scan of disposal receipt, attached.

**Further actions regarding the UST are not expected, and considered permanently closed, per MDE criteria, provided the soil sample analytical results???? indicate no reportable quantities of petroleum contaminates present.**

***Payment has been received***

Thomas W. Over  
MDE Tech. # 2015-0082T



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Commercial  
Fueling Systems.

RCFS, Inc.

3228 Sudath Lane  
Jarrettsville, Md  
21084

410.692.9108

410.692.9117 fax



**RECEIVED**

**JUL 15 2016**

HOWARD COUNTY HEALTH DEPT.  
COMMUNITY HYGIENE PROGRAM

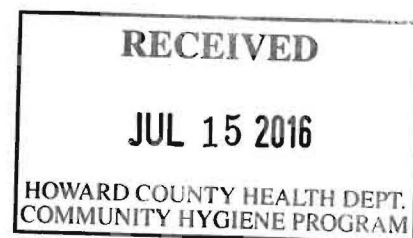
**Residential**  
**Commercial**  
**Fueling Systems.**

**RCFS, Inc.**

3228 Sudath Lane  
Jarrettsville, Md  
21084

410.692.9108

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Commercial  
Fueling Systems.

RCFS, Inc.

3228 Sudath Lane  
Jarrettsville, Md  
21084

410.692.9108

410.692.9117 fax

Howard County Auto Parts  
3610 Conowingo Road  
Conowingo, MD 21115  
410.457-5454

Tax Ref  
Auto  
State

RETAIL PURCHASE

4539  
THOMAS OVER JR  
3228 SUDATH LN  
JARRETTSVILLE, MD 21084

ITEMS

Item # 82 Steel 108  
Gross 11.72  
Tax 1.17  
Total 12.89  
Net 11.72  
UOM  
Price  
Ext Price 12.89

Payment Total \$ 12.89

SIGNATURE

\*Seller warrant: full title to or authority to sell  
listed materials, represents that listed materials  
are not, and are free from all hazardous wastes  
as defined in Federal or State regulations, and  
acknowledges receipt of stated funds

RECEIVED

JUL 15 2016

HOWARD COUNTY HEALTH DEPT.  
COMMUNITY HYGIENE PROGRAM

