

C1 36831 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 13 PERMIT NO. FROM "PERMIT TO DRILL WELL" 10/17/16 SC HO - 15 - 0300 ST/CO USE ONLY DATE RECEIVED 10/16/16 DATE WELL COMPLETED 09/23/16 Depth of Well 480 (TO NEAREST FOOT) OWNER Sanders Arthur WELL SITE ADDRESS 9509 Queens Guard Court TOWN Laurel, MD 20723-1476 SUBDIVISION SECTION LOT 291

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 FROM TO check if water bearing Brown/Black sandy clay cobbles wet 0 24 Rock v. Hard dark gray 24 480 Water at 180' 5gpm Installed 1.25" Closed Loop Geothermal

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 45 46 24 NO. OF POUNDS 45 46 1200 GALLONS OF WATER 600 DEPTH OF GROUT SEAL (to nearest foot) from 3 48 TOP 52 ft. to 480 54 BOTTOM 58 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) 60 61 63 64 66 70 Total depth of main casing (nearest foot) OTHER CASING (if used) diameter inch depth (feet) from to EACH CASING

C3 PUMPING TEST HOURS PUMPED (nearest hour) 8 9 N/A PUMPING RATE (gal. per min.) 11 15 N/A METHOD USED TO MEASURE PUMPING RATE N/A WATER LEVEL (distance from land surface) BEFORE PUMPING 17 20 80 ft. WHEN PUMPING 22 25 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

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 MWD 5167 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)

C2 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 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 100 SLOT SIZE 1 2 3 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

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 N/A PUMP HORSE POWER 37 41 N/A PUMP COLUMN LENGTH (nearest ft.) 43 47 N/A CASING HEIGHT (circle appropriate box and enter casing height) + above - below LAND SURFACE 3 (nearest foot) 50 51

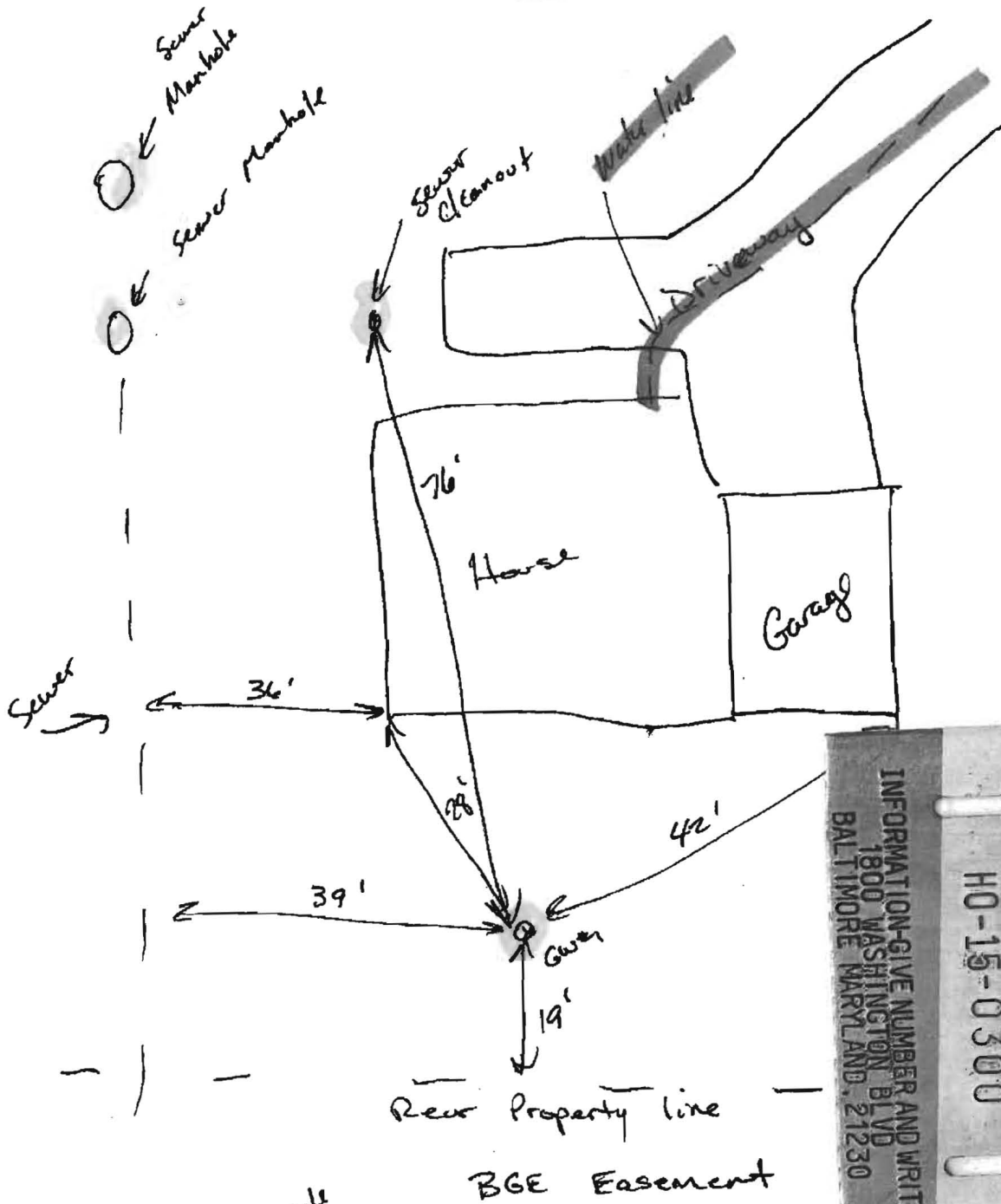
LATITUDE 39.128178 LONGITUDE -76.838401 (DEFAULT COORD. WGS 84) Pursuant to §10-624 of the State Govt. Article of the Maryland Code personal info. requested on this form is used in processing this form pursuant to COMAR 26.04.04. Failure to provide the info. may result in this form not being processed. 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 <div style="font-size: 2em; font-weight: bold; margin-top: 10px;">43393</div>	SEQUENCE NO. (MDE USE ONLY) <div style="font-size: 1.5em; font-weight: bold; margin-top: 10px;">558836</div>	STATE OF MARYLAND APPLICATION FOR PERMIT TO DRILL WELL please type	STATE PERMIT NUMBER <div style="font-size: 1.5em; font-weight: bold; margin-top: 10px;">40-15-0300</div>
OWNER INFORMATION Date Received (APA) <u>08/19/16</u> 8 MM DD YY 13 15 <u>Sanders</u> Last Name Owner First Name <u>Arthur</u> 34 36 <u>9509 Queens Guard Court</u> Street or RFD 55 57 <u>Laurel, Maryland 20723-1476</u> Town 70 State 72 Zip 76		B 3 LOCATION OF WELL 8 <u>Howard County</u> COUNTY 21 23 <u>0000</u> SUBDIVISION 42 SECTION 44 46 LOT <u>291</u> 48 50 52 <u>Laurel</u> NEAREST TOWN 71	
DRILLER INFORMATION Driller's Name <u>Jeff Corron</u> 76 License No. <u>M WD 567</u> 81 Firm Name <u>Chesapeake Geosystems, Inc.</u> Address <u>6720 Fort Smallwood Road Balt.</u> Signature <u>[Signature]</u> Date <u>08/05/16</u>		B 4 SOURCES OF DRILLING WATER 1. <u>municipal</u> 2. 3. <div style="margin-top: 10px;"> ON WHICH SIDE OF ROAD (CIRCLE APPROPRIATE BOX) <div style="display: flex; align-items: center;"> <div style="margin-right: 10px;"> 34 <u>250</u> 37 DISTANCE FROM ROAD ENTER FT OR MI 38 39 </div> <div style="text-align: center;"> NORTH WEST <input checked="" type="checkbox"/> EAST SOUTH </div> </div> </div> TAX MAP: <u>0047</u> BLK: <u>0015</u> PARCEL <u>0138</u>	
B 2 WELL INFORMATION 1 2 APPROX. PUMPING RATE (GAL. PER MIN.) <u>N/A</u> 8 12 AVERAGE DAILY QUANTITY NEEDED (GAL. PER DAY) <u>N/A</u> 14 20		NOT TO BE FILLED IN BY DRILLER HEALTH DEPARTMENT APPROVAL <div style="margin-top: 10px;"> <u>Howard</u> COUNTY NAME <u>13</u> COUNTY NO. STATE SIGNATURE _____ INSERT S → DATE ISSUED <u>8/31/16</u> 41 <u>[Signature]</u> CO SIGNATURE EXP. DATE </div>	
USE FOR WATER (CIRCLE APPROPRIATE BOX) 22 <input type="checkbox"/> DOMESTIC POTABLE SUPPLY & RESIDENTIAL IRRIGATION <input type="checkbox"/> FARMING (LIVESTOCK WATERING & 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		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 <div style="margin-top: 10px;"> </div>	
APPROXIMATE DEPTH OF WELL <u>480</u> FEET APPROXIMATE DIAMETER OF WELL <u>6</u> INCH NEAREST		METHOD OF DRILLING (circle one) 30 <u>BORED</u> (or Augered) JETTED Jetted & DRIVEN 37 <u>AIR-ROTARY</u> AIR-PERCussion ROTARY (Hydraulic Rotary) <u>CABLE</u> REVerse-ROTary Drive-POINT other _____	
REPLACEMENT OR DEEPEENED WELLS (CIRCLE APPROPRIATE BOX) 39 <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 PERMIT NUMBER OF WELL TO BE REPLACED OR DEEPEENED (IF AVAILABLE) 41 _____ 52		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.	
Not to be filled in by driller (MDE OR COUNTY USE ONLY) APPROP. PERMIT NUMBER _____ G _____ PERMIT No. <u>40-15-0300</u> 70 71 72 73 74 75 76 77 78 79		SPECIAL CONDITIONS <u>Grant top to bottom</u> NOTE APPROVING AUTHORITIES SHOULD USE SEPARATE SHEET IF NEEDED-	

#16054

8/31/16 Well Site
approved. (KWD)

N
↓



DO NOT REMOVE THIS TAG
DEPARTMENT OF THE ENVIRONMENT
WELL PERMIT NUMBER
H0-15-0300
INFORMATION-GIVE NUMBER AND WRITE
1800 WASHINGTON BLVD
BALTIMORE MARYLAND, 21230

OK Sewer manhole

9509 Queens Board Ct / well @ 480'
Laurel Md. 1.25" Factory V-Bent
Closed Loop

WELL SCHEMATIC FORM

<p>GROUND SURFACE</p> <p>PERMANENT OUTER CASING</p> <p>CONFINING UNIT</p>	<p>PERMANENT OUTER CASING (if area contaminated)</p> <p>MATERIAL _____</p> <p>DIAMETER _____</p> <p>LENGTH _____</p> <p>DEPTH INTO CONFINING UNIT _____</p> <p>TUBE CASING (if not regular, single loop)</p> <p>ATTACH HORIZONTAL SCHEMATIC</p> <p>NUMBER OF TUBES PER BOREHOLE <u>2</u></p> <p>DIAMETER OF TUBES <u>1.25"</u></p> <p>MATERIAL <u>HDPE</u></p> <p>SHAPE AND LENGTH _____</p> <p>TUBE CONNECTION METHOD <u>Fusion</u></p> <p>TUBE CONNECTION MATERIAL <u>HDPE</u></p> <p>LOOP PIPE CASING (regular, single loop)</p> <p>MATERIAL HDPE? YES <input checked="" type="checkbox"/> NO <input type="checkbox"/></p> <p>DIAMETER <u>1.25"</u></p> <p>LENGTH <u>480</u></p> <p>GROUT</p> <p>MATERIAL <u>Bentontite / Thermex</u></p> <p>PERMEABILITY _____</p> <p>WATER / GROUT RATIO <u>24 / 50</u></p> <p>PERCENT SOLIDS _____</p> <p>TREMIE GROUTED FROM BOTTOM OF BOREHOLE? YES <input checked="" type="checkbox"/> NO <input type="checkbox"/></p> <p>USING A POSITIVE DISPLACEMENT PUMP? YES <input checked="" type="checkbox"/> NO <input type="checkbox"/></p> <p>DEPTH TO THE BOTTOM OF HOLE <u>480</u></p> <p>DIAMETER OF BOREHOLE <u>6"</u></p>
---	--

WELL ADDRESS
9509 Queens Guard Court
Laurel, MD 20723-1476
 LOT NUMBER: 291
 SQUARE NUMBER: _____

WELL OWNER:
Arthur Sanders
 OWNER ADDRESS:
9509 Queens Guard Court
Laurel, MD 20723-
1476