

DRILLER: REMOVE COPY AND RETAIN FOR YOUR RECORDS. RETURN COUNTY COPY TO COUNTY ENVIRONMENTAL AGENCY. SUBMIT COPY TO OWNER. RETURN ALL OTHER PARTS TO DEPARTMENT OF ENVIRONMENT, 2500 BROENING HIGHWAY, BALTIMORE, MARYLAND 21224.

C1 4945		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.	
1 2 3 4 5 6 (THIS NUMBER IS TO BE PUNCHED IN COLS. 3-6 ON ALL CARDS)		DATE WELL COMPLETED MM DD YY 09 22 09		Depth of Well 22 385 26 (TO NEAREST FOOT)		COUNTY NUMBER 28 29 30 31 32 33 34 35 36 37
ST/CO USE ONLY DATE Received MM DD YY 8 13		DATE WELL COMPLETED MM DD YY 09 22 09		PERMIT NO. FROM "PERMIT TO DRILL WELL" HD-95-1799		
OWNER last name first name LUCIUS, KEN		STREET OR RFD 3340 S + Jct - 2 Lane		TOWN ELICOTT CITY		
SUBDIVISION		SECTION		LOT		
WELL LOG Not required for driven wells STATE THE KIND OF FORMATIONS PENETRATED, THEIR COLOR, DEPTH, THICKNESS AND IF WATER BEARING		GROUTING RECORD WELL HAS BEEN GROUTED (Circle Appropriate Box) yes no Y N 44 44 TYPE OF GROUTING MATERIAL (Circle one) CEMENT CM BENTONITE CLAY BC NO. OF BAGS 18 NO. OF POUNDS 450 GALLONS OF WATER 450 DEPTH OF GROUT SEAL (to nearest foot) from 48 TOP 52 ft. to 54 BOTTOM 58 ft. (enter 0 if from surface)		C3 1 2 PUMPING TEST HOURS PUMPED (nearest hour) 8 9 PUMPING RATE (gal. per min.) 11 15 METHOD USED TO MEASURE PUMPING RATE WATER LEVEL (distance from land surface) BEFORE PUMPING 17 20 ft. WHEN PUMPING 22 25 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		
DESCRIPTION (Use additional sheets if needed) Dirt Hard Clay Med Clay Hard Clay X 2		FEET FROM TO 0 30 30 280 280 285 285 385		CASING RECORD casing types insert appropriate code below 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 EACH CASING		
NUMBER OF UNSUCCESSFUL WELLS: 0		SCREEN RECORD screen type or open hole insert appropriate code below ST BR HO STEEL BRASS OPEN HOLE PL PLASTIC OT OTHER 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		PUMP INSTALLED DRILLER INSTALLED PUMP YES NO (CIRCLE) (YES or 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 (nearest foot) - below		
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.		LOCATION OF WELL ON LOT SHOW PERMANENT STRUCTURE SUCH AS BUILDING, SEPTIC TANKS, AND /OR LANDMARKS AND INDICATE NOT LESS THAN TWO DISTANCES (MEASUREMENTS TO WELL)		
DRILLERS LIC. NO.: MW D 355		DRILLERS SIGNATURE (MUST MATCH SIGNATURE ON APPLICATION) LIC. NO.: MW D 553		GRAVEL PACK IF WELL DRILLED WAS FLOWING WELL INSERT F IN BOX 68		
SITE SUPERVISOR (sign. of driller or journeyman)		MDE USE ONLY (NOT TO BE FILLED IN BY DRILLER) T (E.R.O.S.) W Q		70 72 74 76 78		

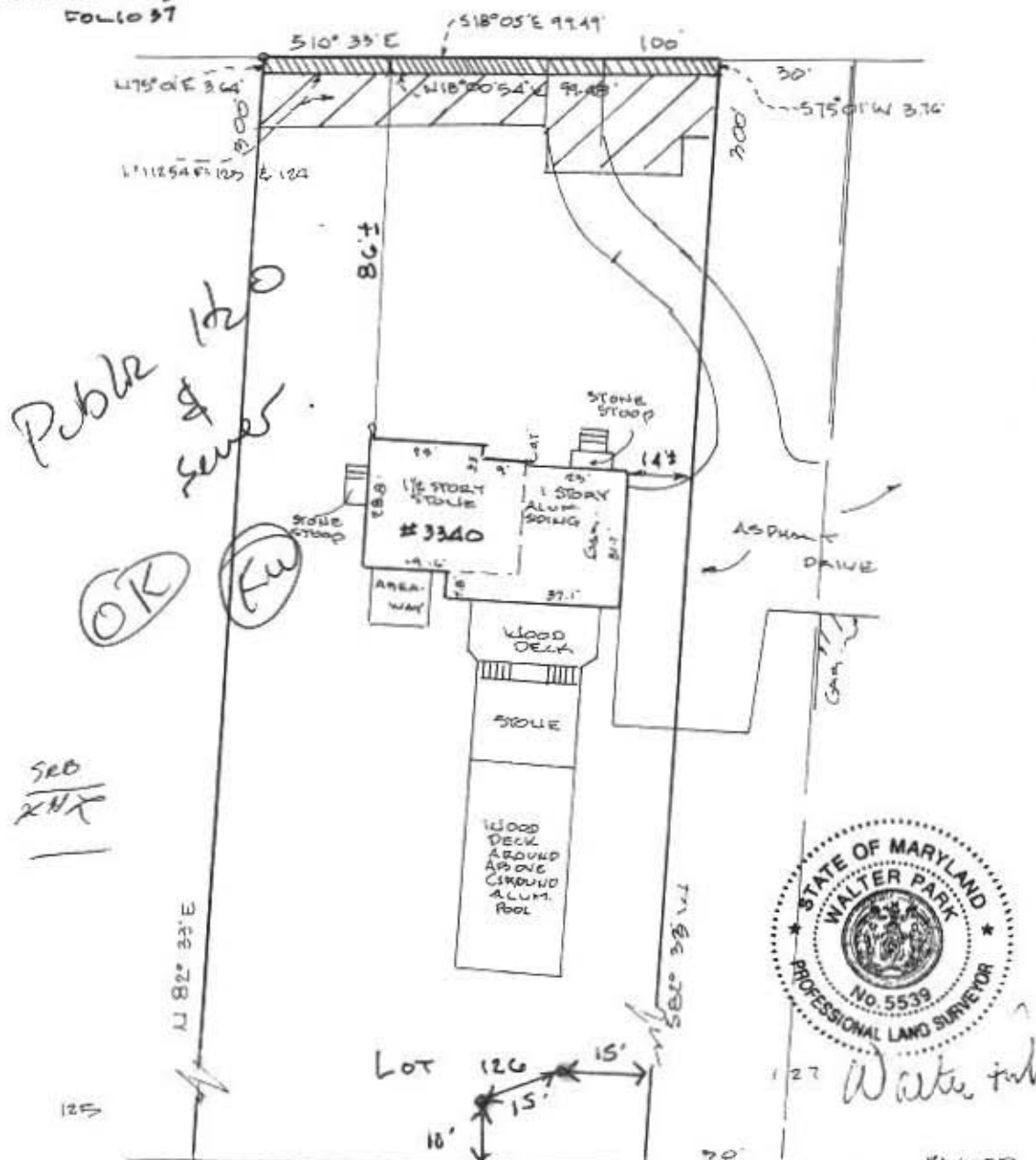
B 1 2108 1 2 3 6	SEQUENCE NO. (MDE USE ONLY)	STATE OF MARYLAND APPLICATION FOR PERMIT TO DRILL WELL 531881 please type	STATE PERMIT NUMBER 140-95-1799 70 fill in this form completely 79
Date Received (APA) 8 MM DD YY 13 Lucius Ken 15 Last Name Owner First Name 34 3340 St. Johns Lane 36 Street or RFD 55 Ellicott City MD 21043 57 Town 70 State 72 Zip 76		B 3 Howard LOCATION OF WELL 8 COUNTY 21 23 SUBDIVISION 42 SECTION 44 46 LOT 48 50 Ellicott City 52 NEAREST TOWN 71 MILES FROM TOWN (enter 0 if in town) <u>1</u> M I 73 76 77 78	
DRILLER INFORMATION Michael Barber MW D355 Driller's Name 76 License No. 81 Barber Well Drilling Firm Name 522 Underwood Lane 21044 Address 8/17/09 Signature Date		B 4 3340 St. Johns Lane 1 2 DIRECTION OF WELL FROM TOWN (CIRCLE BOX) 11 NEAR WHAT ROAD 30 ON WHICH SIDE OF ROAD (CIRCLE APPROPRIATE BOX) 34 200 37 DISTANCE FROM ROAD FT ENTER FT OR MI 38 39 TAX MAP: 24 BLK: 5 PARCEL 34	
B 2 WELL INFORMATION 1 2 APPROX. PUMPING RATE (GAL. PER MIN.) 8 12 AVERAGE DAILY QUANTITY NEEDED (GAL. PER DAY) 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 9/9/09 9/9/10 43 MM DD YY 48 CO SIGNATURE EXP. DATE NORTH GRID 525 000 EAST GRID 0849 000 50 55 57 63	
USE FOR WATER (CIRCLE APPROPRIATE BOX) <input type="checkbox"/> D DOMESTIC POTABLE SUPPLY & RESIDENTIAL IRRIGATION <input type="checkbox"/> F FARMING (LIVESTOCK WATERING & AGRICULTURAL IRRIGATION) 22 <input type="checkbox"/> I INDUSTRIAL, COMMERCIAL, DEWATERING <input type="checkbox"/> P PUBLIC WATER SUPPLY WELL <input checked="" type="checkbox"/> T TEST, OBSERVATION, MONITORING <input checked="" type="checkbox"/> G GEO-THERMAL 2x375'		SHOW MAJOR FEATURES OF BOX & LOCATE WELL WITH AN X SOURCES OF DRILLING WATER 1. 2. 3. WRITE THE BOX NUMBER FROM THE MAP HERE E 840 N 520 000 000	
APPROXIMATE DEPTH OF WELL <u>375</u> FEET 24 28 APPROXIMATE DIAMETER OF WELL <u>6</u> INCH NEAREST INCH		DRAW A SKETCH BELOW SHOWING LOCATION OF WELL IN RELATION TO NEARBY TOWNS AND ROADS AND GIVE DISTANCE FROM WELL TO NEAREST ROAD JUNCTION 	
METHOD OF DRILLING (circle one) BORED (or Augered) JETTED Jetted & DRIVEN 30 AIR-ROTary AIR-PERCussion ROTARY (Hydraulic Rotary) 37 CABLE REVERSE-ROTary DRIVE-POINT other			
REPLACEMENT OR DEEPEMED WELLS (CIRCLE APPROPRIATE BOX) <input checked="" type="checkbox"/> N THIS WELL WILL NOT REPLACE AN EXISTING WELL <input type="checkbox"/> Y THIS WELL WILL REPLACE A WELL THAT WILL BE ABANDONED AND SEALED 39 <input type="checkbox"/> S 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"/> D THIS WELL WILL DEEPM AN EXISTING WELL PERMIT NUMBER OF WELL TO BE REPLACED OR DEEPMED (IF AVAILABLE) 41 52			
Not to be filled in by driller (MDE OR COUNTY USE ONLY) APPROP. PERMIT NUMBER G PERMIT No. 140-95-1799 70 71 72 73 74 75 76 77 78 79			
SPECIAL CONDITIONS Grout bore holes Bottom to top NOTE - APPROVING AUTHORITIES SHOULD USE SEPARATE SHEET IF NEEDED			

PLAT BOOK 3
FOLIO 37

THIS PLAT CAN NOT BE USED TO ESTABLISH
PROPERTY LINES OR CORNERS.

DEED 11854 F-49-124


SAINT JOHN'S LANE



LOCATION DRAWING

2110°33'W 100

REVISED
11-24-08

CERTIFICATION	SEAL	SCALE 1:30	DATE 11-05-08
<p>This is to certify that I have surveyed the property known as: <u>9340 SAINT JOHNS LANE</u></p> <p>The information shown has been established by current acceptable survey procedures and from available record information. This drawing is to be used for Title Transfer Financing, or Refinancing Only and IS NOT to be used for the Establishment of Property Lines, Location for Fences, Garages, Buildings, or other Existing or Future Improvements.</p>		<p>LDE Inc. 9250 Rumsey Road Suite 106 Columbia, Maryland 21045</p> <p>(410) 715-1070 (Balt.) (301) 596-3424 (Wash) (410) 715-9540 (Fax)</p>	



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NGWA & IGSHPA Certified

August 17, 2009

Howard County Health Department
7178 Columbia Gateway Drive
Columbia, MD 21046
Fax: 410-313-2648

Re: 3340 St. Johns Lane

Dear Department of Environment:

Please note unless otherwise specified all geothermal bores installed by our company will be installed as follows:

Grout: Bentonite Grout 20% solids minimum
Manufacture(s): Baroid or Wyo-Ben
Will be grouted from the bottom to the top with grout material

Piping: Polyethylene SDR 11 160 PSI as recommended per IGSHPA
Manufacture: EnDot or Charter Plastics or equal, Size 1" or 1 1/4"
IGSHPA Certification Number 12687

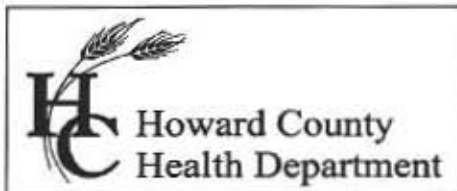
Also attached is a cross section diagram of the bore hole.

We would appreciate your help in getting this permit released as soon as possible so that we can expedite this project. If you have any questions, please do not hesitate to contact me.

Sincerely,

A handwritten signature in cursive script, appearing to read "Michael Barlow", is written over a horizontal line.

Michael Barlow



Bureau of Environmental Health
7178 Gateway Drive Columbia, MD 21046
(410) 313-2640 Fax (410) 313-2648
TDD (410) 313-2323 Toll Free 1-866-313-6300
website: www.hchealth.org


Peter L. Beilenson, M.D., M.P.H., Health Officer

Thursday, September 03, 2009

IMPORTANT

MEMORANDUM - Geothermal Wells

To: Michael Barlow.
FILE

From: Kevin Wolf, Environmental Sanitarian 
Well and Septic Program

Re: **Geothermal Wells**
3340 St. Johns Lane, *Ken Lucius Property*

The following information needs to accompany geothermal well application permits:

1) A **Site Plan** that is to scale or a plan that shows nominal distances from features on the property to the geobores. The plan that was submitted is to scale but does not show the existing well and Septic locations. If the homeowner is on public utilities, this needs to be verified by the homeowner (i.e. copy of utilities bill, etc.).

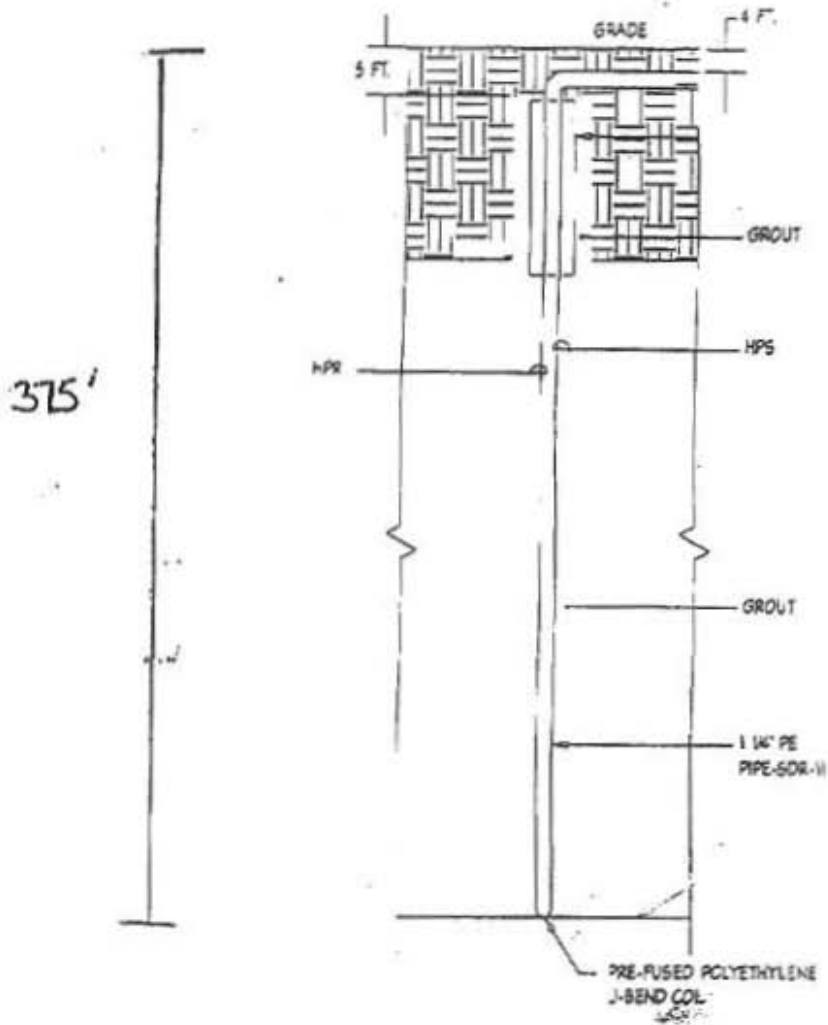
2) A **cross-sectional diagram** of the proposed geothermal well construction including a **statement of the intended grout mix.**

*Remember, bentonite alone should be mixed at a ratio of 2 lbs or greater per gallon of water. If *thermal-enhanced* grout is to be used, remember to follow manufactures specifications when mixing. Health Department officials can inspect this grout by requesting the well driller to collect a sample of the grout in a bucket. If it the sand settles out within 1 hour, the grout mix is improper. Thermal enhanced bentonite grouts are a mixture of bentonite and quartz sand. The sand stays suspended in the clay for the life of the well. Please refer to the NGWA published article "Guidelines for the Construction of Vertical Boreholes for Closed Loop Heat Pump Systems" (1997)

Any questions please feel free to call me. 410-313-2645

Kew LUCIUS
3340 St. Johns Lane

2 Bores x 375'



OK.
Kw

4 TYPICAL BORE HOLE DETAIL
NOT TO SCALE



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NGWA & IGSHPA Certified

FAX TRANSMITTAL FORM

DATE: 9/9/09

TO: Kevin Wolf

COMPANY NAME: _____

FAX NUMBER: _____

RE: 3340 St. Johns Lane

Number of Pages including cover: 3

Message: Here is the cross section of the geothermal bores and a copy of their most recent utility bill.

Mike Isom



HOWARD COUNTY HEALTH DEPARTMENT

31881

DATE
8/19/09

1115

Received From Michael Barlow Well Drilling PHONE # 410-838-10910

☐ CASH
☒ CHECK
NO.
9216

For 2 geo-thermal wells
-3340 St. Johns Lane
-14685 Carrs-mill Rd
three hundred twenty- Dollars

\$ 320.00

Received By W. Sims