

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.

<b>C1</b> 4909		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 4 5 6 (THIS NUMBER IS TO BE PUNCHED IN COLS. 3-6 ON ALL CARDS)		DATE WELL COMPLETED MM DD YY 07 00 09		Depth of Well 22 265 26 (TO NEAREST FOOT)		PERMIT NO. FROM "PERMIT TO DRILL WELL" MD-45-1774
ST/CO USE ONLY DATE Received MM DD YY 8 13		OWNER Larson, Alice		STREET OR RFD 3401 WOOD STREAM COURT		TOWN ELICOTT CITY
SUBDIVISION		SECTION		LOT		
<b>WELL LOG</b> Not required for driven wells STATE THE KIND OF FORMATIONS PENETRATED, THEIR COLOR, DEPTH, THICKNESS AND IF WATER BEARING			<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 45 46 13 NO. OF POUNDS 45 46 150 GALLONS OF WATER 325 DEPTH OF GROUT SEAL (to nearest foot) from 48 TOP 52 ft. to 54 BOTTOM 58 ft. (enter 0 if from surface)			
DESCRIPTION (Use additional sheets if needed)			<b>CASING RECORD</b> 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			
D.F. Soft Brown Hard Grey 0 3 3 42 42 265			OTHER CASING (if used) diameter depth (feet) inch from to EACH CASING			
NUMBER OF UNSUCCESSFUL WELLS: 0			<b>SCREEN RECORD</b> screen type or open hole (insert appropriate code below) ST STEEL BR BRASS PL PLASTIC HO OPEN 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			
WELL HYDROFRACTURED yes <input checked="" type="checkbox"/> no <input type="checkbox"/>			C 2			
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			SLOT SIZE 1 2 3 DIAMETER OF SCREEN (NEAREST INCH) from to			
DRILLER'S LIC. NO. 1 MND 355 DRILLER'S SIGNATURE (MUST MATCH SIGNATURE ON APPLICATION) LIC. NO. 1 MND 559			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			
SITE SUPERVISOR (sign. of driller or journeyman responsible for sitework if different from permittee)			<b>PUMPING TEST</b> HOURS PUMPED (nearest hour) PUMPING RATE (gal. per min.) 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 <b>PUMP INSTALLED</b> 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) PUMP HORSE POWER PUMP COLUMN LENGTH (nearest ft.) CASING HEIGHT (circle appropriate box and enter casing height) + above - below LAND SURFACE (nearest foot) 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) # 2401 30' x 15' Wood Stream Court			

B 1 **2093**SEQUENCE NO.  
(MDE USE ONLY)STATE OF MARYLAND  
APPLICATION FOR PERMIT TO DRILL WELL  
531034 please type

STATE PERMIT NUMBER

H0 - 95 - 1774  
fill in this form completely

Date Received (APA)

## OWNER INFORMATION

8 MM DD YY 13

**LARSON** **ALice**  
 15 Last Name Owner First Name 34  
**2401 Wood Stream Ct**  
 36 Street or RFD 55  
**Ellicott City MD 21042**  
 57 Town 70 State 72 Zip 76

## DRILLER INFORMATION

**Michael Barlow** **MWD 355**  
 Driller's Name 76 License No. 81  
**Barlow Well Drilling**  
 Firm Name  
**522 Underwood Lane 21014**  
 Address  
**6/2/09**  
 Signature Date

## B 2 WELL INFORMATION

1 2 APPROX. PUMPING RATE  
 (GAL. PER MIN.) 8 12  
**0**  
 AVERAGE DAILY QUANTITY NEEDED  
 (GAL. PER DAY) 14 20  
**0**

## 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  
☒ GEO-THERMAL **3 holes x 265'**

APPROXIMATE DEPTH OF WELL **265** FEETAPPROXIMATE DIAMETER OF WELL **6** INCH

## 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)

- ☒ THIS WELL WILL NOT REPLACE AN EXISTING WELL  
☐ THIS WELL WILL REPLACE A WELL THAT WILL BE ABANDONED AND SEALED  
 39 ☒ 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

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)

APPROP. PERMIT NUMBER

**G**  
 PERMIT No. **H0 - 95 - 1774**  
 70 71 72 73 74 75 76 77 78 79

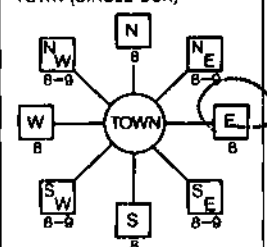
## SPECIAL CONDITIONS

NOTE: APPROVING AUTHORITY SHOULD USE SEPARATE SHEET IF NEEDED.

## B 3 LOCATION OF WELL

**Howard**  
 8 COUNTY 21  
**Sandy Hill Est**  
 23 SUBDIVISION 42  
 SECTION 44 46 LOT 48 50  
**West Friendship**  
 52 NEAREST TOWN 71  
 MILES FROM TOWN (enter 0 if in town) 73 76 77 78  
**1**

## B 4 DIRECTION OF WELL FROM TOWN (CIRCLE BOX)

**2401 Wood Stream Ct**

11: NEAR WHAT ROAD 30

ON WHICH SIDE OF ROAD  
(CIRCLE APPROPRIATE BOX)

**60**  
 34 37  
 DISTANCE FROM ROAD  
 ENTER FT OR MI 38 39  
**16** **7** **392**

TAX MAP: **16** BLK: **7** PARCEL **392**NOT TO BE FILLED IN BY DRILLER  
HEALTH DEPARTMENT APPROVAL

**Howard** **A28664**  
 COUNTY NAME COUNTY NO.  
 STATE  
 SIGNATURE INSERT S  
 DATE ISSUED **6/19/09** **6/19/10**  
 43 MM DD YY 48 CO SIGNATURE EXP. DATE  
 NORTH **536** 0 0 0 EAST **819** 0 0 0  
 GRID 50 55 GRID 57 63

SHOW MAJOR FEATURES OF BOX &amp; LOCATE WELL WITH AN X

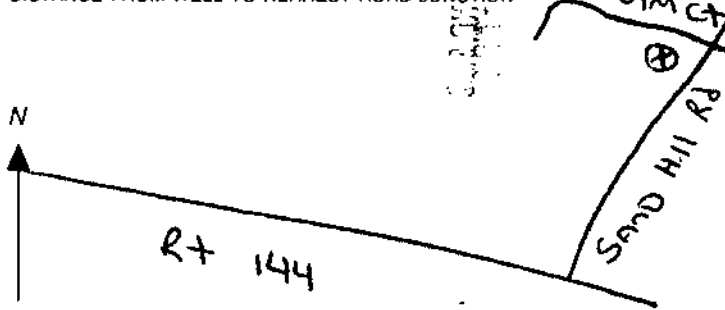
SOURCES OF DRILLING WATER

- 1.
- 2.
- 3.

WRITE THE BOX NUMBER  
FROM THE MAP HERE

**819**  
**536**

DRAW A SKETCH BELOW SHOWING LOCATION OF WELL IN RELATION TO NEARBY TOWNS AND ROADS AND GIVE DISTANCE FROM WELL TO NEAREST ROAD JUNCTION



DEPARTMENT OF INSPECTIONS, LICENSES AND PERMITS  
3430 COURT HOUSE DRIVE  
ELLICOTT CITY, MD 21043  
PERMITS (410)313-2455  
INSPECTIONS (410)313-1850

# HOWARD COUNTY RESIDENTIAL HEATING-VENTILATION-AIR CONDITIONING AND REFRIGERATION PERMIT APPLICATION

HVACR PERMIT #  
**M09000493**  
BUILDING PERMIT #

BUILDING ADDRESS:

SUITE/APT:

OWNERS NAME: **Alice Larson**

ADDRESS: **2401 Wood Stream Ct**

SUBDIVISION:

CENSUS TRACT:

LOT:

BLOCK:

SECTION:

TAX MAP:

ZONE:

AREA:

PARCEL:

CITY: **Ellicott City**

STATE: **MD**

ZIP CODE: **21042**

HOME PHONE:

WORK PHONE:

PROPERTY ID:

MAP COORDINATES:

TYPE OF IMPROVEMENT:

USE:

**443 535-9151**

CHECK ONE

HOW MANY

SINGLE FAMILY DWELLING

☒

1

ZONES

SINGLE FAMILY TOWNHOUSE

☐

ZONES

MULTI-FAMILY / HOTEL/MOTEL

☐

UNITS

COMPANY NAME: **Love's Heating & Air, Inc.**

LICENSEE NAME: **John Davidson**

ADDRESS: **P.O. Box 396**

CITY: **Severn**

STATE: **MD**

ZIP CODE: **21144**

PHONE: **410 551-1376**

HVACR LICENSE NO:  
**5013**

New

☐ Heating and Air Conditioning

☐ Heating System Only

☒ Other Work (Describe):

**Geothermal**

Replacement

☐ Heating

☐ Air Conditioning

☒ Heating and Air Conditioning

Additions and Alterations

☐ Heating

☐ Air Conditioning

☐ Heating and Air Conditioning

Zones

Permit Fee = # of Zones x \$40 =

40

Technology Fee (10% of Permit Fee) =

4

Plus Application Fee

\$50

Total Fees Due =

94

Units

Permit Fee = # of Units x \$80 =

Technology Fee (10% of Permit Fee) =

Plus Application Fee

\$50

Total Fees Due =

I HAVE CAREFULLY EXAMINED AND READ THIS APPLICATION AND KNOW IT IS TRUE AND CORRECT. THE WORK DESCRIBED HEREIN WILL BE PERFORMED BY A STATE HVACR LICENSED PERSON(S) INSURED TO CONTRACT WORK, AND ALL WORK WILL BE PERFORMED IN COMPLIANCE WITH APPLICABLE CODES AND STANDARDS OF HOWARD COUNTY AND THE STATE OF MARYLAND.

SIGNATURE OF LICENSED CONTRACTOR

DATE

PRINT NAME

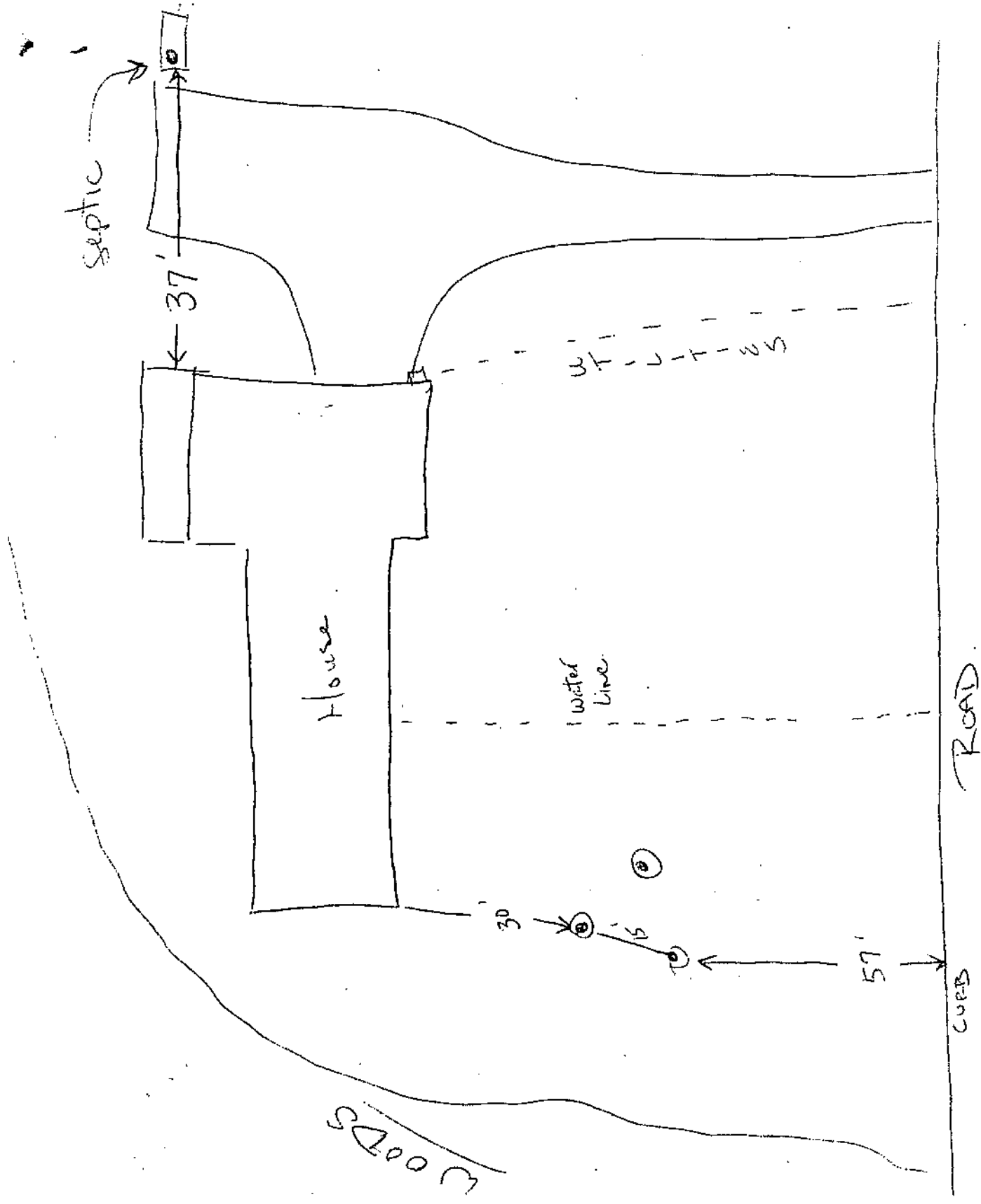
Validation

Check Number: **2595**

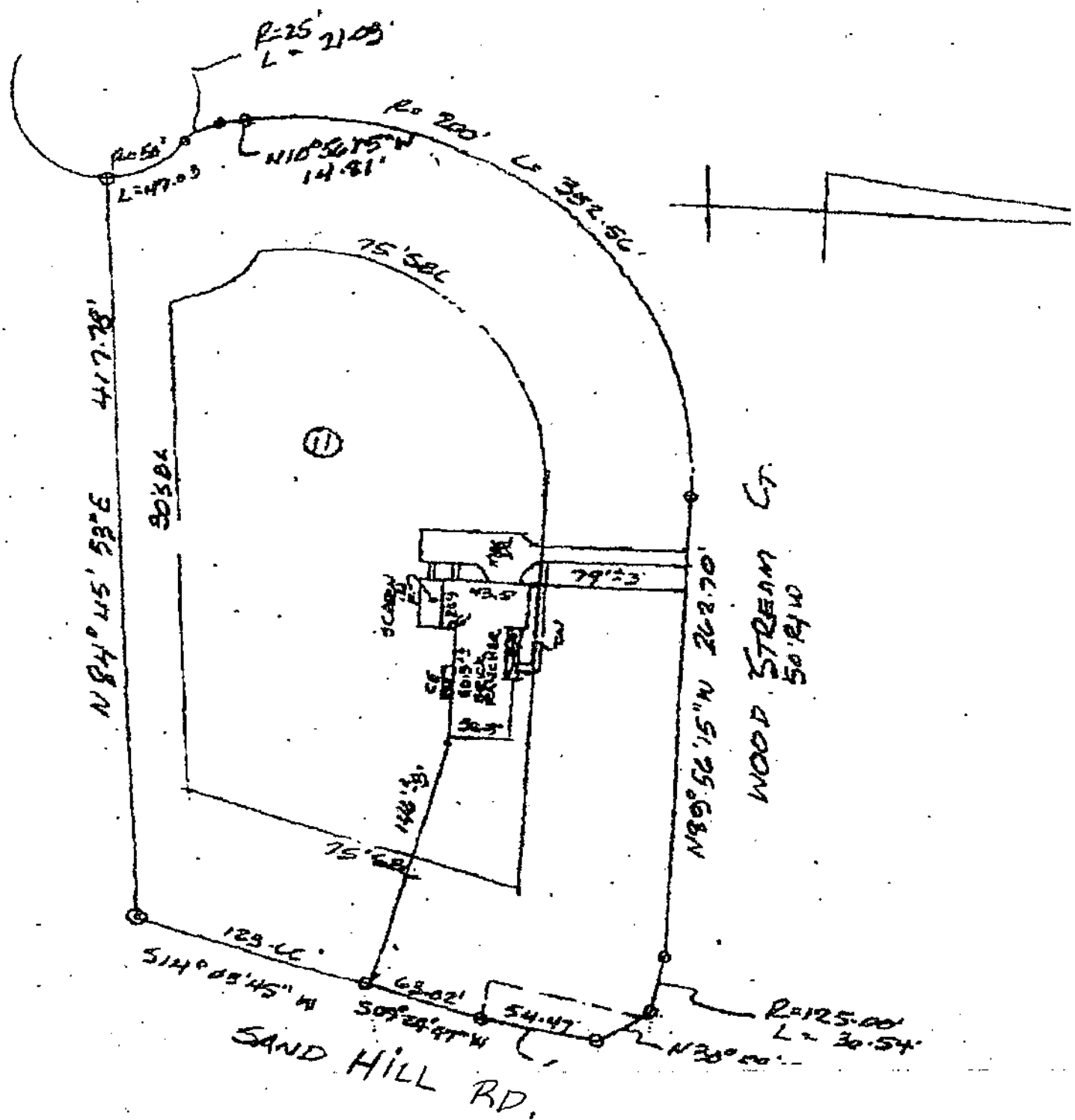
Cash:

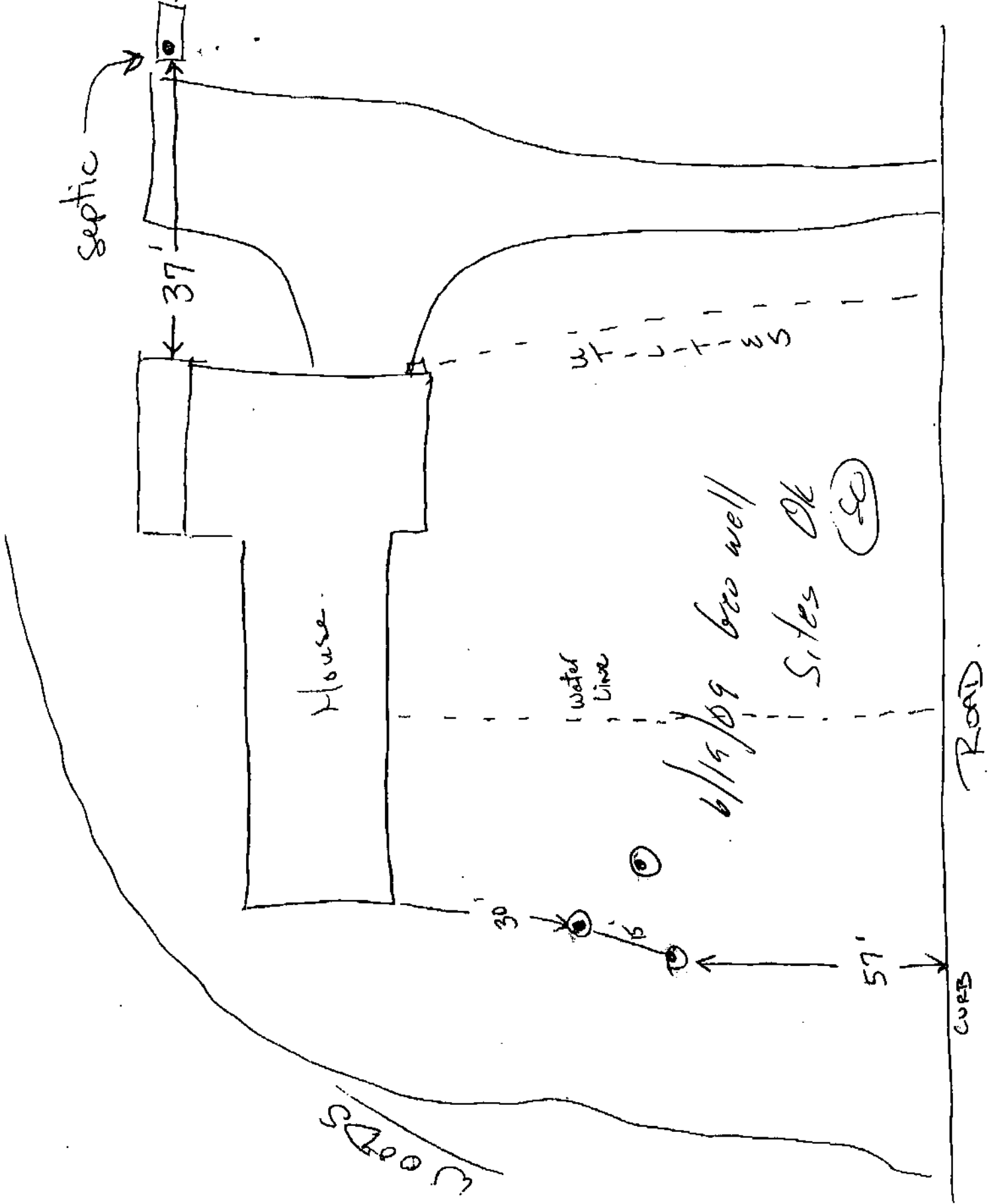
Receipt Number: **177864**

11102000493



MO4000493







Providing Quality Systems for Over 20 Years  
Commercial & Residential Water Well Drilling  
Test Borings & Consulting • Geothermal Drilling & Systems  
NGWA & IGSHPA Certified

June 2, 2009

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

Re: Mrs. Alice Larson  
2401 Wood Stream Court, West Friendship, Maryland

Dear Mr. Baker:

The following materials will be used in the process of installing the geothermal bores at the above site.

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

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 black ink, appearing to read "Michael Barlow", written over a horizontal line.

Michael Barlow