



HOWARD COUNTY HEALTH DEPARTMENT

32581

DATE
4 / 6 / 10

Received From

Bruce Watkins

PHONE #

For good-thrival well
701 River Rd

CASH

CHECK

NO.

1090

one hundred sixty ⁽⁶⁰⁾

Dollars

\$

160 00

Received By

LLSmsd

| | | |
|--|--|---|
| DEPARTMENT OF INSPECTIONS, LICENSES AND PERMITS 2438 COURT HOUSE DRIVE ELLICOTT CITY, MD 21043 PERMITS (410)813-2435 INSPECTIONS (410)813-1850 | HOWARD COUNTY RESIDENTIAL HEATING-VENTILATION-AIR CONDITIONING AND REFRIGERATION PERMIT APPLICATION | HVACR PERMIT # <i>M10000499</i> BUILDING PERMIT # |
|--|--|---|

| | |
|---|--|
| BUILDING ADDRESS: <i>701 River Road</i> SUITE/APT: SUBDIVISION: CENSUS TRACT: SECTION: AREA: LOT: TAX MAP: PARCEL: BLOCK: ZONE: PROPERTY ID: MAP COORDINATES: TYPE OF IMPROVEMENT: USE: | OWNERS NAME: <i>Bruce Wilkins</i> ADDRESS: <i>701 River Road</i> CITY: <i>Sykesville</i> STATE: <i>MD</i> ZIP CODE: <i>21784</i> HOME PHONE: WORK PHONE: <i>410-489-7504</i> |
|---|--|

| CHECK ONE | HOW MANY | COMPANY NAME: |
|---|----------|---|
| SINGLE FAMILY DWELLING <input checked="" type="checkbox"/> <u>1</u> ZONES | | <i>Total Comfort Htg & A/C, Inc</i> LICENSEE NAME: <i>James E. Aaron</i> ADDRESS: <i>P.O. Box 643</i> |
| SINGLE FAMILY TOWNHOUSE <input type="checkbox"/> _____ ZONES | | CITY: <i>Smithsburg</i> STATE: <i>MD</i> ZIP CODE: <i>21783</i> |
| MULTI-FAMILY / HOTEL/MOTEL <input type="checkbox"/> _____ UNITS | | PHONE: <i>301-824-3700</i> HVACR LICENSE NO: <i>5833-01</i> |

New

Heating and Air Conditioning
 Heating System Only
 Other Work (Describe):

Replacement

Heating
 Air Conditioning
 Heating and Air Conditioning

Additions and Alterations

Heating
 Air Conditioning
 Heating and Air Conditioning

5/19/2010 O.K.

**Removing old heat pump & replacing with geothermal system.*

| Zones | Units |
|--|--|
| Permit Fee = # of Zones x \$40 = <u>40.00</u> | Permit Fee = # of Units x \$80 = _____ |
| Technology Fee (10% of Permit Fee) = <u>4.00</u> | Technology Fee (10% of Permit Fee) = _____ |
| Plus Application Fee <u>\$50</u> | Plus Application Fee <u>\$50</u> |
| Total Fees Due = <u>94.00</u> | 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.

James E. Aaron
 SIGNATURE OF LICENSED CONTRACTOR 5/12/10 DATE
James E. Aaron
 PRINT NAME

| |
|---|
| Validation Check Number: <u>2675</u> Receipt Number: <u>205775</u> |
|---|

510000499

Project Information

For: WILKINS RESIDENCE

Design Information

| | Htg | Clg | Method | Infiltration |
|-----------------------------|-----|-----|----------------------|--------------|
| Outside db (°F) | 12 | 91 | | Simplified |
| Inside db (°F) | 70 | 75 | Construction quality | Average |
| Design TD (°F) | 58 | 16 | Fireplaces | 1 (Average) |
| Daily range | - | M | | |
| Inside humidity (%) | 30 | 50 | | |
| Moisture difference (gr/lb) | 25 | 36 | | |

HEATING EQUIPMENT

Make American Standard
Trade Heritage 15
Model 4A6H5048A1
ARI ref no. 1382179

Efficiency 9 HSPF

Heating input
Heating output 47500 Btuh @ 47°F
Temperature rise 28 °F
Actual air flow 1600 cfm
Air flow factor 0.034 cfm/Btuh
Static pressure 0.50 in H2O
Space thermostat

COOLING EQUIPMENT

Make American Standard
Trade Heritage 15
Cond 4A6H5048A1
Coil 4TEE3F65B1
ARI ref no. 1382179

Efficiency 15 EER

Sensible cooling 33600 Btuh
Latent cooling 14400 Btuh
Total cooling 48000 Btuh
Actual air flow 1600 cfm
Air flow factor 0.068 cfm/Btuh
Static pressure 0.50 in H2O
Load sensible heat ratio 0.83

| ROOM NAME | Area (ft²) | Htg load (Btuh) | Clg load (Btuh) | Htg AVF (cfm) | Clg AVF (cfm) |
|-------------------|-------------|-----------------|-----------------|---------------|---------------|
| 1ST FLOOR | 1346 | 15174 | 10941 | 510 | 748 |
| BASEMENT | 1216 | 16631 | 2208 | 559 | 151 |
| 2ND FLOOR | 1216 | 15800 | 10253 | 531 | 701 |
| Entire House | 3778 | 47604 | 23401 | 1600 | 1600 |
| Other equip loads | | 4243 | 1171 | | |
| Equip. @ 0.96 RSM | | | 23589 | | |
| Latent cooling | | | 4867 | | |
| TOTALS | 3778 | 51848 | 28456 | 1600 | 1600 |

Bold/italic values have been manually overridden

Printout certified by ACCA to meet all requirements of Manual J 8th Ed.

WELL COMPLETION PERMIT
 THIS NUMBER IS TO BE PUNCHED IN COLS. 9-6 ON ALL CARDS
 FILL IN THIS FORM COMPLETELY PLEASE TYPE
 COUNTY NUMBER
 STATE USE ONLY DATE RECEIVED
 DATE WELL COMPLETED 5-10-10
 Depth of Well 600
 TO NEAREST FOOT
 PERMIT NO. WT TO DRILL WELL
 HO-95-1888

OWNER WILKINS Bruce
 STREET OR RFD 701 RIVER RD TOWN WEST FRIENDSHIP
 SUBDIVISION SALOMA SECTION LOT 7

WELL LOG
 Not required for driven wells

STATE THE KIND OF FORMATIONS PENETRATED, THEIR COLOR, DEPTH, THICKNESS AND IF WATER BEARING

| DESCRIPTION (Use National or State Symbols) | FEET | | Check if water bearing |
|---|------|-----|------------------------|
| | FROM | TO | |
| Top Soil | 0 | 2 | |
| Brown Shale | 2 | 10 | |
| Brown Mica | 10 | 35 | |
| Gravel Bed | 35 | 38 | ✓ |
| Gray Mica | 38 | 50 | |
| Brown Mica | 50 | 51 | ✓ |
| Gray Mica | 51 | 600 | |

GROUTING RECORD
 WELL HAS BEEN GROUTED (Circle Appropriate Box)
 TYPE OF GROUTING MATERIAL (Circle one)
 CEMENT CM BENTONITE-CLAY BC
 NO. OF BAGS 40 NO. OF POUNDS 200
 GALLONS OF WATER 1040
 GALLONS OF GROUT SEAL (to nearest foot)
 from 0 ft. to 600 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 ST Nominal diameter top (main) casing (nearest inch) 6 Total depth of main casing (nearest foot) 40
 60 61 62 63 64 65 66 67 68 69 70

OTHER CASING (if used)
 diameter inch _____ depth (feet) from _____ to _____

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

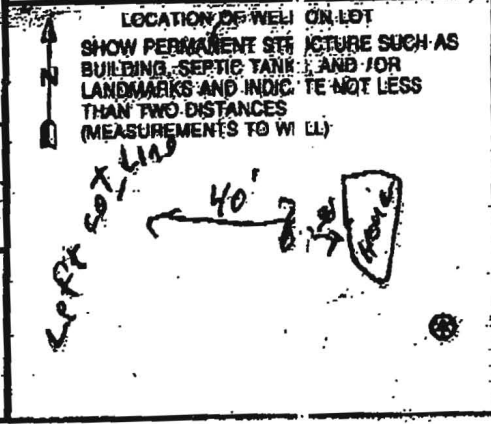
DEPTH (nearest ft.)
10 35 600
 E 0 2 11 15 17 21
 A C H 23 24 28 30 32 38
 B C R 38 39 41 45 47 51
 E E N
 SLOT SIZE 1 _____ 2 _____ 3 _____
 DIAMETER OF SCREEN _____ (NEAREST INCH)
 from _____ to _____

GRAVEL PACK IF WELL DRILLED WAS FLOWING WELL INSERT 'F' IN BOX 68
 68

TELESCOPE CASING
 LOG INDICATOR OTHER DATA
 70 72 74 75 78

PUMPING RECORD
 PUMPING TEST
 HOURS PUMPED (nearest hr.) _____
 PUMPING RATE (gal. per min.) _____
 METHOD USED TO MEASURE PUMPING RATE _____
 WATER LEVEL (distance from land surface)
 BEFORE PUMPING _____ ft.
 WHEN PUMPING _____ 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 INSTALLATION
 DRILLER INSTALLED PUMP (CIRCLE) (YES or NO) YES NO
 IF DRILLER INSTALLED PUMP, THIS SECTION MUST BE COMPLETED FOR ALL PUMPS
 TYPE OF PUMP INSTALLED PLACE (A,C,J,P,R,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)



NUMBER OF UNSUCCESSFUL WELLS: 0

WELL HYDROFRACTURED Y 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 26.04.01 "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. MW 040
 DRILLERS SIGNATURE George J. [Signature]
 (MUST MATCH SIGNATURE ON APPLICATION)
 LIC. NO. 030038
 SIGNATURE Bruce Wilkins

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

C1 1220

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.

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

COUNTY NUMBER

ST/CO USE ONLY DATE RECEIVED MM DD YY

DATE WELL COMPLETED

Depth of Well

PERMIT NO. FROM "PERMIT TO DRILL WELL"

OWNER WILKINS Bruce STREET OR RFD 701 RIVER RD TOWN WEST FRIENDSHIP SUBDIVISION SAL OPHA SECTION LOT 3

WELL LOG table with columns: DESCRIPTION, FEET (FROM, TO), check if water bearing. Includes entries for Top Soil, Brown Shale, Brown Mica, Gravel Bed, Gray Mica, and Brown Mica.

GROUTING RECORD section including YES/NO boxes, CEMENT (CM), BENTONITE CLAY (BC), NO. OF BAGS (40), NO. OF POUNDS (200), and DEPTH OF GROUT SEAL (600).

CASING RECORD section including casing types (ST, CO, PL, OT) and MAIN CASING TYPE (JT) with diameters and depths.

OTHER CASING (if used) section with diameter and depth fields.

SCREEN RECORD section including screen type (ST, BR, HO, PL, OT) and DEPTH (35, 600).

WELL HYDROFRACTURED section with YES/NO boxes.

- CIRCLE APPROPRIATE LETTER: A (Well abandoned), E (Electric log), P (Test well converted).

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...

DRILLERS LIC. NO. MW D 040 DRILLERS SIGNATURE (Must match signature on application) LIC. NO. JD 038

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

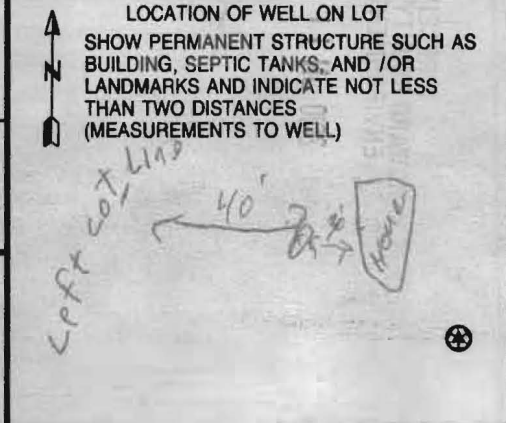
DEPTH (nearest ft.) section with a grid for recording casing depth measurements (1-36).

GRAVEL PACK IF WELL DRILLED WAS FLOWING WELL INSERT F IN BOX 68

MDE USE ONLY (NOT TO BE FILLED IN BY DRILLER) section with fields for T, W, Q, 70, 72, 74, 75, 76.

PUMPING TEST section including HOURS PUMPED, PUMPING RATE, METHOD USED TO MEASURE PUMPING RATE, WATER LEVEL, and TYPE OF PUMP USED.

PUMP INSTALLED section including DRILLER INSTALLED PUMP, TYPE OF PUMP INSTALLED PLACE, CAPACITY, PUMP HORSE POWER, and PUMP COLUMN LENGTH.



B 1 4602

SEQUENCE NO. (MDE USE ONLY)

STATE OF MARYLAND APPLICATION FOR PERMIT TO DRILL WELL

532581 please type

STATE PERMIT NUMBER

HO-95-1888 fill in this form completely

Date Received (APA) 11311

OWNER INFORMATION

WILKINS BRUCE 101 RIVER ROAD SYKESVILLE, MD 21784

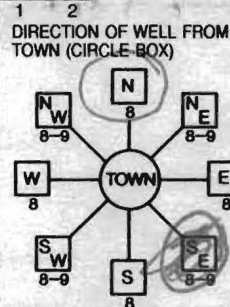
B 3 HOWARD LOCATION OF WELL

Salopha 23 SUBDIVISION SECTION 3 LOT 3 Sykesville West Friendship

DRILLER INFORMATION

George F. Easterday M W D 040 E. Franklin Easterday, Inc. 9265 Brown Church Rd., MT. Airy, Md. 21771

B 4 DIRECTION OF WELL FROM TOWN (CIRCLE BOX)



701 River Rd NEAR WHAT ROAD ON WHICH SIDE OF ROAD (CIRCLE APPROPRIATE BOX) DISTANCE FROM ROAD 900 FT TAX MAP: 4 BLK: 24 PARCEL 101

B 2 WELL INFORMATION

APPROX. PUMPING RATE 5 APPROX. PUMPING RATE (GAL. PER MIN.) 500 AVERAGE DAILY QUANTITY NEEDED 14 (GAL. PER DAY) 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 GEO-THERMAL

NOT TO BE FILLED IN BY DRILLER HEALTH DEPARTMENT APPROVAL

Howard (13) A37202 COUNTY NAME COUNTY NO. STATE SIGNATURE BRION BAKER DATE ISSUED 5/2/2010 CO SIGNATURE EXP. DATE 5/2/2011 NORTH GRID 554 000 EAST GRID 815 000

APPROXIMATE DEPTH OF WELL 300 FEET APPROXIMATE DIAMETER OF WELL 6 INCH NEAREST TOWN

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)

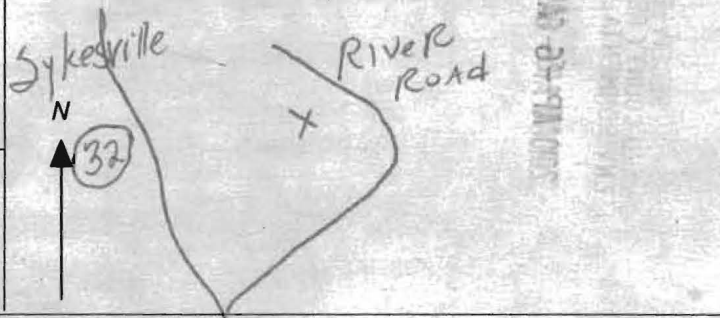
N THIS WELL WILL NOT REPLACE AN EXISTING WELL Y THIS WELL WILL REPLACE A WELL THAT WILL BE ABANDONED AND SEALED S THIS WELL WILL REPLACE A WELL THAT WILL BE USED AS A STANDBY-CONTACT LOCAL APPROVING AUTHORITY FOR POLICY ON STANDBY WELLS D THIS WELL WILL DEEPEMED AN EXISTING WELL PERMIT NUMBER OF WELL TO BE REPLACED OR DEEPEMED (IF AVAILABLE) 41 52

SHOW MAJOR FEATURES OF BOX & LOCATE WELL WITH AN X

SOURCES OF DRILLING WATER 1. wells 2. 3.

WRITE THE BOX NUMBER FROM THE MAP HERE E 815 5504 N

DRAW A SKETCH BELOW SHOWING LOCATION OF WELL IN RELATION TO NEARBY TOWNS AND ROADS AND GIVE DISTANCE FROM WELL TO NEAREST ROAD JUNCTION 506



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

APPROX. PERMIT NUMBER G PERMIT No. HO-95-1888

SPECIAL CONDITIONS Small Boreholes From Bottom Upward With Tremie Pipe



Account Identifier: District - 03 **Account Number -** 306402

Owner Information

Owner Name: WILKINS BRUCE H **Use:** RESIDENTIAL
 WILKINS LINDA V WF **Principal Residence:** YES
Mailing Address: 701 RIVER RD **Deed Reference:** 1) / 998/ 624
 SYKESVILLE MD 21784-5506 2)

Location & Structure Information

Premises Address **Legal Description**
 701 RIVER RD LOT 3 5.980 AR
 SYKESVILLE 21784 701 RIVER RD
 SALOPHA SUB

| Map | Grid | Parcel | Sub District | Subdivision | Section | Block | Lot | Assessment Area | Plat No: |
|-----|------|--------|--------------|-------------|---------|-------|-----|-----------------|-----------|
| 4 | 24 | 101 | | | | | 3 | 1 | Plat Ref: |

Special Tax Areas **Town**
Ad Valorem NO A/V, RURAL FIRE TAX
Tax Class

| Primary Structure Built | Enclosed Area | Property Land Area | County Use |
|-------------------------|---------------|--------------------|------------|
| 1988 | 2,562 SF | 5.98 AC | |

| Stories | Basement | Type | Exterior |
|---------|----------|---------------|----------|
| 2 | YES | STANDARD UNIT | FRAME |

Value Information

| | Base Value | Value Phase-in Assessments | | |
|--------------------|----------------|----------------------------|----------------|----------------|
| | | As Of | As Of | As Of |
| | | 01/01/2010 | 07/01/2009 | 07/01/2010 |
| Land | 339,850 | 252,300 | | |
| Improvements: | 381,630 | 374,300 | | |
| Total: | 721,480 | 626,600 | 721,480 | 626,600 |
| Preferential Land: | 0 | 0 | 0 | 0 |

Transfer Information

| Seller: | Date: | Price: |
|---------|--------|--------|
| Type: | Deed1: | Deed2: |
| Seller: | Date: | Price: |
| Type: | Deed1: | Deed2: |
| Seller: | Date: | Price: |
| Type: | Deed1: | Deed2: |

Exemption Information

| Partial Exempt Assessments | Class | 07/01/2009 | 07/01/2010 |
|----------------------------|-------|------------|------------|
| County | 000 | 0 | 0 |
| State | 000 | 0 | 0 |
| Municipal | 000 | 0 | 0 |

Tax Exempt: NO
Exempt Class:

Special Tax Recapture:
 * NONE *

-76°56'46"



39°21'12"

39°21'12"

-76°56'46"

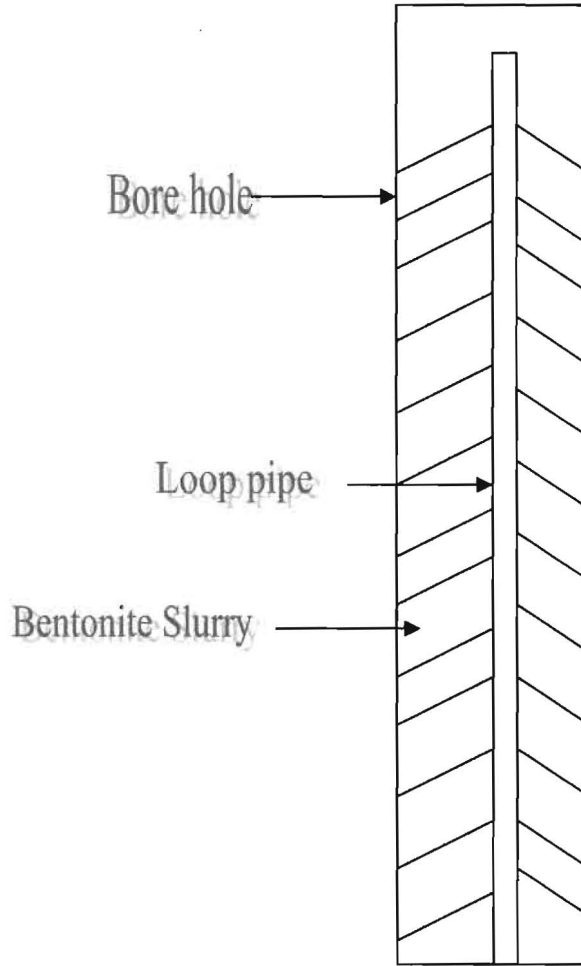


Disclaimer: Howard County, Maryland assumes no responsibility for the accuracy of this report or the information contained herein or derived therefrom. The user assumes all risks and liabilities whatsoever resulting from or arising out of the use of this information. There are no oral agreements or warranties relating to the use of this report.



By:
 Office:
 Map Width: 1,820.00 ft.
 Print Date: 4/22/2010
 Scale: 1 in. = 200 ft.

GEOHERMAL WELL DESIGN



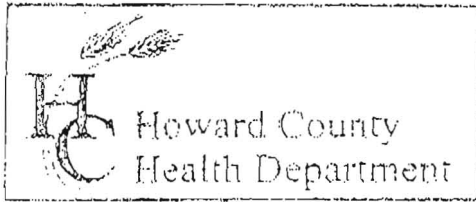
Owner Bruce Wilkins

Location 701 RIVER ROAD

Number of wells 1

Depth 600 Loop Size 1 1/4"

Grout Material-----Bentonite Slurry from bottom to G.L.



3525 H Ellicott Mills Drive, Ellicott City, MD 21043
 (410) 313-2640 Fax (410) 313-2648
 TDD (410) 313-2323 Toll Free 1-866-313-6300
 website: www.hchealth.org

Penny E. Borenstein, M.D., M.P.H., Health Officer

TO ALL INTERESTED PARTIES

When submitting a well permit application for a proposed well for new construction, please indicate one of the following:

- The well site has been staked by owner / well driller,
 (professional land surveyor or company employing professional land surveyors)
 on 3-10-10 (date) and does not require a site inspection.
- The well driller, builder or property owner will call the Health Department to schedule a time to meet in the field to verify the proposed well site location.

This sheet, along with two copies of an acceptable well site plan, must be attached to the green well permit application.

Revised 6/10/03

05:01:14 - 01/01/01

