

C1 6020

SEQUENCE NO. (MDE USE ONLY)

STATE OF MARYLAND WELL COMPLETION REPORT

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

DATE WELL COMPLETED 10 28 11

Depth of Well 300 (TO NEAREST FOOT)

PERMIT NO. FROM "PERMIT TO DRILL WELL" HO-95-2135

OWNER Christmas, Bernadette STREET OR RFD 12147 Patapsco Ridge Rd TOWN marriottsville SUBDIVISION SECTION LOT 3

WELL LOG

Not required for driven wells

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

Table with columns: DESCRIPTION, FEET (FROM, TO), check if water bearing. Rows: SOIL (0-7), Brown shale (7-17), Gray Rock (17-300). Includes handwritten note '3x300' Geo Boxes'.

GROUTING RECORD

WELL HAS BEEN GROUTED (Y/N) TYPE OF GROUTING MATERIAL (CEMENT/BENTONITE CLAY) NO. OF BAGS 65 NO. OF POUNDS 3250 GALLONS OF WATER 290 DEPTH OF GROUT SEAL 2 ft. to 300 ft.

CASING RECORD

MAIN CASING TYPE (ST/PL/GO/OT) Nominal diameter top (main) casing (nearest inch) Total depth of main casing (nearest foot)

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

SCREEN RECORD

screen type or open hole (ST/BR/PL/HO/OT) DEPTH (nearest ft.)

C 2

Table with columns: E A C H S R E E N, 1 2, 8 9 11 15 17 21, 23 24 26 30 32 36, 38 39 41 45 47 51. Includes SLOT SIZE and DIAMETER OF SCREEN.

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

C 3

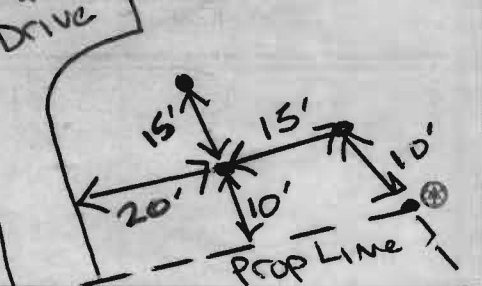
PUMPING TEST

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 J jet S submersible

PUMP INSTALLED

DRILLER INSTALLED PUMP (YES/NO) 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) 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)



NUMBER OF UNSUCCESSFUL WELLS: 0 WELL HYDROFRACTURED (Y/N)

CIRCLE APPROPRIATE LETTER 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...

DRILLERS LIC. NO. MW D 355 DRILLERS SIGNATURE (MUST MATCH SIGNATURE ON APPLICATION) LIC. NO. AN 07166 Daniel Hale

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

B 1	2189	SEQUENCE NO. (MDE USE ONLY)	STATE OF MARYLAND APPLICATION FOR PERMIT TO DRILL WELL 535205 please type	STATE PERMIT NUMBER HO-95-2135 fill in this form completely
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OWNER INFORMATION

Date Received (APA) 05/31/11
8 MM DD YY 13

15 Last Name Christmas Owner Bernadette First Name Bernadette 34

36 Street or RFD 12147 Patapsco Ridge Rd 55

57 Town Marriottsville 70 State MD 72 Zip 21104 76

LOCATION OF WELL

B 3 Howard COUNTY 21

23 SUBDIVISION Marriottsville 42

SECTION 44 46 LOT 3 50

52 NEAREST TOWN Sykesville 71

MILES FROM TOWN (enter 0 if in town) 2 M 73 76 77 78

DRILLER INFORMATION

Driller's Name Michael Barlow M WD 355 License No. 76 81

Firm Name Barlow Well Drilling

Address 522 Underwood Lane 21014

Signature [Signature] Date 5-12-11

WELL INFORMATION

1 2 APPROX. PUMPING RATE (GAL. PER MIN.) 0 8 12

AVERAGE DAILY QUANTITY NEEDED (GAL. PER DAY) 0 14 20

12147 Patapsco Ridge Rd
NEAR WHAT ROAD 11 30

ON WHICH SIDE OF ROAD (CIRCLE APPROPRIATE BOX)

34 30 37 DISTANCE FROM ROAD ENTER FT OR MI 38 39

TAX MAP: 10 BLK: 2 PARCEL 266

USE FOR WATER (CIRCLE APPROPRIATE BOX)

D DOMESTIC POTABLE SUPPLY & RESIDENTIAL IRRIGATION

F FARMING (LIVESTOCK WATERING & AGRICULTURAL IRRIGATION)

I INDUSTRIAL, COMMERCIAL, DEWATERING

P PUBLIC WATER SUPPLY WELL

T TEST, OBSERVATION, MONITORING

G GEO-THERMAL 3 bores x 300'

NOT TO BE FILLED IN BY DRILLER HEALTH DEPARTMENT APPROVAL

Howard COUNTY NAME COUNTY NO. 13

STATE SIGNATURE _____ INSERT S →

DATE ISSUED 6/9/2011 43 MM DD YY 48 CO SIGNATURE Bruce Baker EXP. DATE 6/9/2012

NORTH GRID 552 000 EAST GRID 821 000
50 55 57 63

APPROXIMATE DEPTH OF WELL 300 FEET 24 28

APPROXIMATE DIAMETER OF WELL 6 INCH NEAREST 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 _____

SHOW MAJOR FEATURES OF BOX & LOCATE WELL WITH AN X

SOURCES OF DRILLING WATER

- well
-
-

WRITE THE BOX NUMBER FROM THE MAP HERE

E 82φ1

N 55φ2

000
000

REPLACEMENT OR DEEPEMED WELLS (CIRCLE APPROPRIATE BOX)

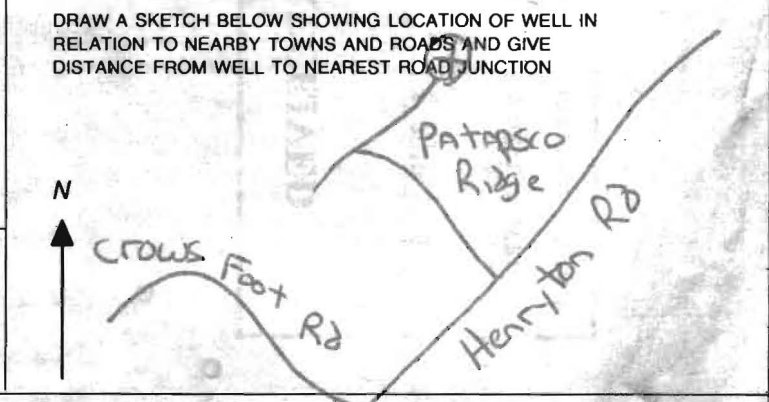
N THIS WELL WILL NOT REPLACE AN EXISTING WELL

Y THIS WELL WILL REPLACE A WELL THAT WILL BE ABANDONED AND SEALED

39 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 DEEPEN 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. HO-95-2135
70 71 72 73 74 75 76 77 78 79

B 1 2189
1 2 3 6

SEQUENCE NO.
(MDE USE ONLY)

STATE OF MARYLAND
APPLICATION FOR PERMIT TO DRILL WELL

STATE PERMIT NUMBER

HO-95-2135
70 fill in this form completely 79

535205 please type

Date Received (APA)

05/31/13
8 MM DD YY 13

OWNER INFORMATION

Christmas Bernadette
15 Last Name Owner First Name 34
12147 Patapsco Ridge Rd
36 Street or RFD 55
Marriottsville MD 21104
57 Town 70 State 72 Zip 76

B 3 Howard LOCATION OF WELL

8 COUNTY 21
Marriottsville 42
23 SUBDIVISION
SECTION 44 46 LOT 3 48 50
Sykesville
52 NEAREST TOWN 71

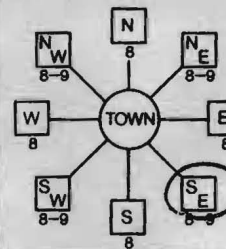
MILES FROM TOWN (enter 0 if in town) 2 M I
73 76 77 78

DRILLER INFORMATION

Michael Barlow MW D355
Driller's Name 76 License No. 81
Barlow Well Drilling
Firm Name
522 Underwood Lane 21014
Address
Signature Date 5-12-11

B 4

1 2
DIRECTION OF WELL FROM
TOWN (CIRCLE BOX)



12147 Patapsco Ridge Rd

11 NEAR WHAT ROAD 30

ON WHICH SIDE OF ROAD
(CIRCLE APPROPRIATE BOX)



34 30 37
DISTANCE FROM ROAD F4
ENTER FT OR MI 38 39

TAX MAP: 10 BLK: 2 PARCEL 266

B 2 WELL INFORMATION

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

USE FOR WATER (CIRCLE APPROPRIATE BOX)

- D DOMESTIC POTABLE SUPPLY & RESIDENTIAL IRRIGATION
- F FARMING (LIVESTOCK WATERING & AGRICULTURAL IRRIGATION)
- I INDUSTRIAL, COMMERCIAL, DEWATERING
- P PUBLIC WATER SUPPLY WELL
- T TEST, OBSERVATION, MONITORING
- G GEO-THERMAL 3 bores x 300'

NOT TO BE FILLED IN BY DRILLER
HEALTH DEPARTMENT APPROVAL

Howard (13)
COUNTY NAME COUNTY NO.
STATE SIGNATURE INSERT S →
DATE ISSUED 6/9/2012 Brian Baker 6/9/2012
43 MM DD YY 48 CO SIGNATURE EXP. DATE
NORTH GRID 552 000 EAST GRID 821 000
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APPROXIMATE DEPTH OF WELL 300 FEET
24 28

APPROXIMATE DIAMETER OF WELL 6 INCH NEAREST 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)

- N THIS WELL WILL NOT REPLACE AN EXISTING WELL
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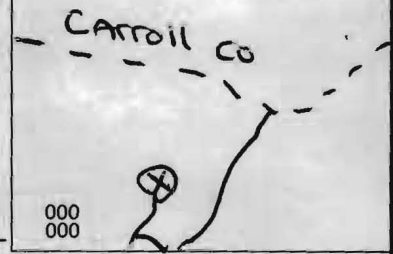
SHOW MAJOR FEATURES OF BOX & LOCATE WELL WITH AN X

SOURCES OF DRILLING WATER

- 1. well
- 2.
- 3.

WRITE THE BOX NUMBER FROM THE MAP HERE

E 8201
N 5502



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



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

APPROP. PERMIT NUMBER G
PERMIT No. HO-95-2135
70 71 72 73 74 75 76 77 78 79

SPECIAL CONDITIONS

NOTE - APPROVING AUTHORITIES SHOULD USE SEPARATE SHEET IF NEEDED

B 1 2189

SEQUENCE NO. (MDE USE ONLY)

STATE OF MARYLAND APPLICATION FOR PERMIT TO DRILL WELL

STATE PERMIT NUMBER

40-95-2135 fill in this form completely

535205 please type

Date Received (APA)

05/13/11

OWNER INFORMATION

Christmas Bernadette 12147 Patapsco Ridge Rd Marriottsville MD 21104

B 3 LOCATION OF WELL

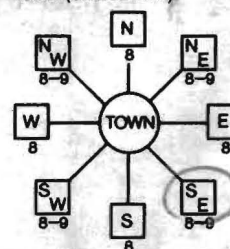
Howard COUNTY 21 Marriottsville 23 SUBDIVISION 42 SECTION 44 46 LOT 3 48 50 Sykesville 52 NEAREST TOWN 71 MILES FROM TOWN (enter 0 if in town) 2 MI 73 76 77 78

DRILLER INFORMATION

Michael Barlow MW D355 Driller's Name 76 License No. 81 Barlow Well Drilling Firm Name 522 Underwood Lane 21014 Address 5-12-11 Signature Date

B 4

1 2 DIRECTION OF WELL FROM TOWN (CIRCLE BOX)



12147 Patapsco Ridge Rd 11 NEAR WHAT ROAD 30 ON WHICH SIDE OF ROAD (CIRCLE APPROPRIATE BOX) NORTH 34 30 37 DISTANCE FROM ROAD ENTER FT OR MI 38 39 TAX MAP: 10 BLK: 2 PARCEL 266

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NOT TO BE FILLED IN BY DRILLER HEALTH DEPARTMENT APPROVAL

Howard 13 COUNTY NAME COUNTY NO. STATE SIGNATURE INSERT S DATE ISSUED 6/9/2011 Brian Baber 6/9/2012 CO SIGNATURE EXP. DATE NORTH GRID 552 000 EAST GRID 821 000

APPROXIMATE DEPTH OF WELL 300 FEET

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

APPROP. PERMIT NUMBER G PERMIT No. 40-95-2135

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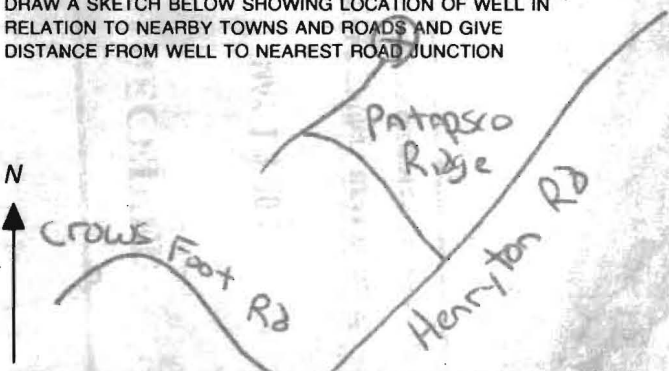
SOURCES OF DRILLING WATER

- 1. Well 2. 3.

WRITE THE BOX NUMBER FROM THE MAP HERE

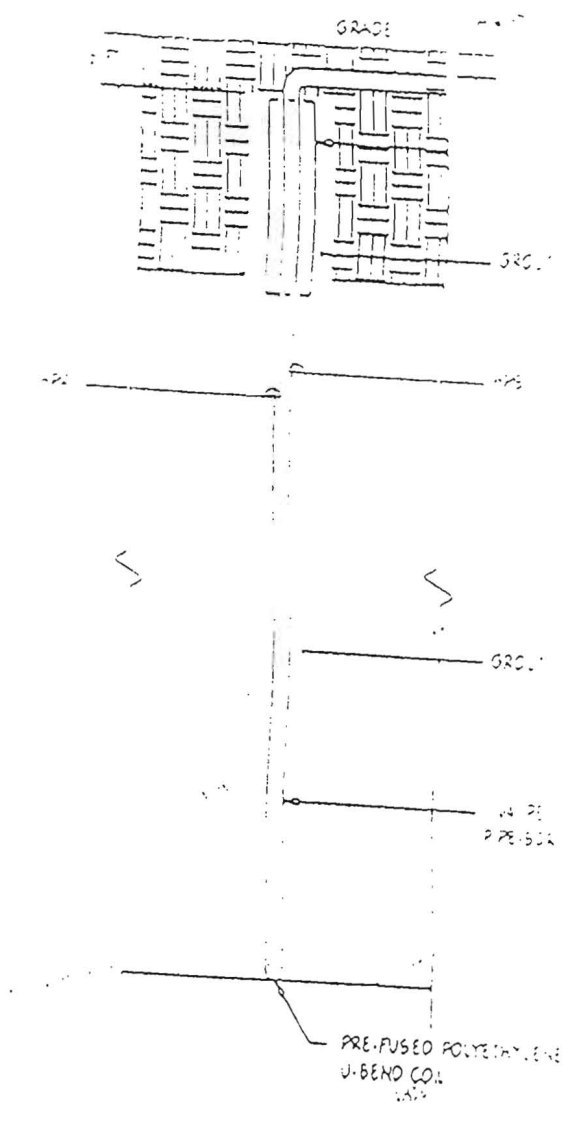
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SPECIAL CONDITIONS

NOTE - APPROVING AUTHORITIES SHOULD USE SEPARATE SHEET IF NEEDED



4
 TYPICAL BORE HOLE DETAIL
 M1.00 NOT TO SCALE



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

May 11, 2011

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

Re: 12147 Patapsco Ridge Rd, Marriottsville, Maryland

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,

Michael Barlow



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

May 11, 2011

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

Re: 16491 A E Mullinix Road, Woodbine, Maryland

Dear Department of Environment:

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

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Manufacture(s): Baroid or Wyo-Ben
Will be grouted from the bottom to the top with grout material

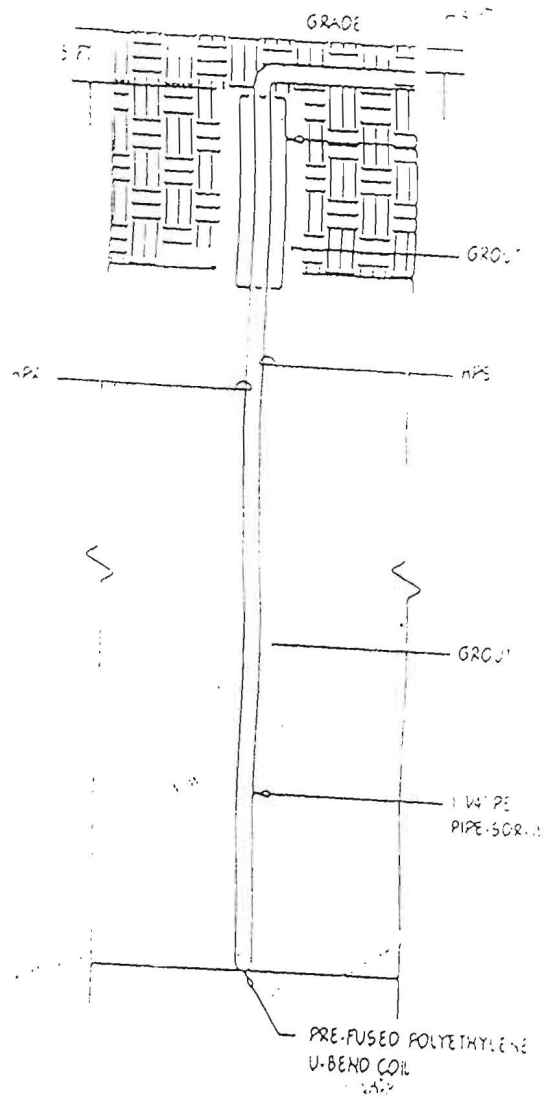
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Michael Barlow



4
 11.00
TYPICAL BORE HOLE DETAIL
 NOT TO SCALE