

C1 4013

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 03 06 12

DATE WELL COMPLETED MM DD YY 3/9/2012

Depth of Well 22 285 26 (TO NEAREST FOOT) 4 geo wells

PERMIT NO. FROM "PERMIT TO DRILL WELL" HO-95-2239

OWNER Barrett Warren & Terry WELL SITE ADDRESS 14295 Old Frederick Road TOWN Cocksville SUBDIVISION SECTION LOT

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 include Brownsand, Brokenrock, gray rock, Brokenrock.

NUMBER OF UNSUCCESSFUL WELLS: 0

WELL HYDROFRACTURED YES NO 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. 1 M SD 163 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)

GROUTING RECORD

WELL HAS BEEN GROUTED (Circle Appropriate Box) Y N

TYPE OF GROUTING MATERIAL (Circle one) CEMENT CM BENTONITE CLAY BC

NO. OF BAGS 15 NO. OF POUNDS 750

GALLONS OF WATER 375

DEPTH OF GROUT SEAL (to nearest foot) from 0 ft. to 285 ft. (enter 0 if from surface)

CASING RECORD

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)

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

SCREEN RECORD

ST STEEL BR BRASS PL PLASTIC HO OPEN HOLE OT OTHER

DEPTH (nearest ft.) A 8 9 11 15 17 21 C 2 H 23 24 26 30 32 36 S 3 R 38 39 41 45 47 51 E N SLOT SIZE 1 2 3 DIAMETER OF SCREEN (NEAREST INCH) 56 60 from to

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

C 3

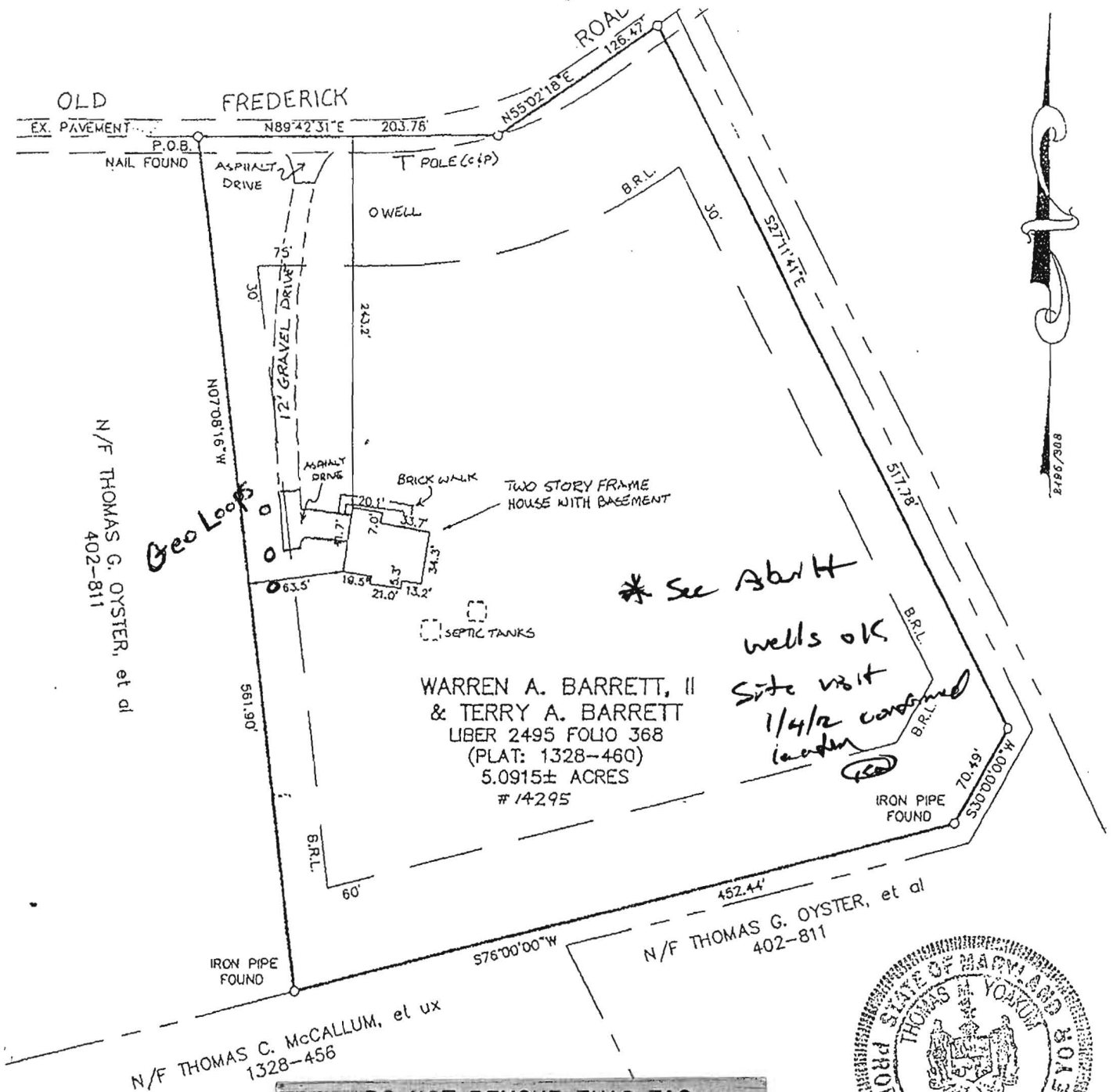
PUMPING TEST

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

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

LATITUDE 39.335470 LONGITUDE 77.008870 (DEFAULT COORD. WGS 84) NOTES:



- NOTES:
1. THIS PLAT WAS PREPARED FROM AND DOES NOT REPRESENT AN
  2. THIS PLAT WAS PREPARED WITH REPORT WHICH MAY DISCLOSE EASEMENTS, RIGHTS-OF-WAYS, LINES NOT SHOWN HEREON.

**DO NOT REMOVE THIS TAG**  
**DEPARTMENT OF THE ENVIRONMENT**  
**WELL PERMIT NUMBER**

PR BE L TO

**H0-95-2239**

HE NO

**INFORMATION-GIVE NUMBER AND WRITE**  
**1800 WASHINGTON BLVD.**  
**BALTIMORE, MARYLAND 21230**



I CERTIFY THAT, TO THE BEST OF MY PROFESSIONAL INFORMATION AND BELIEF, THE INFORMATION ON IS CORRECT.

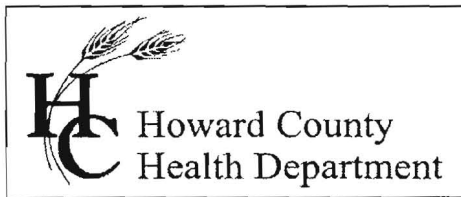
*M. Yorkum*  
 YOKUM  
 DATE: 5/03/94

FINAL LOCATION PLAT MD PROP. ES. 534

**WARREN A. & TERRY A. BARRETT PROPERTY**  
 ALL OF LIBER 2495 AT FOLIO 368  
 LOCATED ON OLD FREDERICK ROAD  
 FOURTH DISTRICT, HOWARD COUNTY, MARYLAND  
 FOR: WARREN & TERRY BARRETT

**BEAVIN COMPANY**  
 ENGINEERS-SURVEYORS  
 2300 N. CHARLES STREET  
 BALTIMORE, MD 21218  
 (410) 235-4570

DATE: 5/03/94  
 SCALE: 1" = 100'  
 DRAWN BY: TMY  
 PROJ. NO.: N/A



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](http://www.hchealth.org)


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

January 6<sup>th</sup>, 2012

**IMPORTANT**

MEMORANDUM - Geothermal Wells

TO: Patton Well Drilling  
Attn: Daniel Patton MSD163  
FILE

FROM: Kevin M Wolf, R.S., R.E.H.S.   
Well and Septic Program  
Groundwater Mgmt. Sec.

RE: **Geothermal Wells**  
*14295 Old Frederick Road*

The following comments apply the above aforementioned geothermal well application:

When submitting completion reports for geothermal wells, please indicate the type of grout used and the mixture ratios on each report. If you can not fit this information on the completion report(s), please use a separate sheet of paper. Also, all wells must have gps coordinates (lat, long) and these coordinates must be written on the completion reports for that particular well. Also, make sure you call in grouts for inspection.

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 Sanitarians can inspect this type of 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)

Geothermal Wells may be permitted by cluster. The size of the cluster shall be determined by the Delegated Approving Authority.

Any questions please feel free to call me. 410-313-1771