

C 1 3818 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.

COUNTY
NUMBER

1 2 3 6
(THIS NUMBER IS TO BE PUNCHED
IN COLS. 3-6 ON ALL CARDS)

ST/CO USE ONLY
DATE Received
MM DD YY
8 13

DATE WELL COMPLETED

MM DD YY
02 24 10

Depth of Well

22 350' 26 12/15/2010
(TO NEAREST FOOT) O.K. (signature)

PERMIT NO.
FROM "PERMIT TO DRILL WELL"
Ho - 95 - 1867
28 29 30 31 32 33 34 35 36 37

OWNER

STREET OR RFD

last name first name
2841 Montclair Dr.

TOWN

Ellicott City

SUBDIVISION

Chestnut Hill Estates

SECTION

LOT

WELL LOG

Not required for driven wells

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

DESCRIPTION (Use additional sheets if needed) FEET check if water bearing
FROM TO

Brown moist med dense fine Sandy micaceous silt

moist to wet Dark gray fine Sandy micaceous silt w/ small black frags

Weathered Rock

Rock

2 geothermal holes

NUMBER OF UNSUCCESSFUL WELLS:

WELL HYDROFRACTURED yes no
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 28.04.04 "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.

DRILLERS LIC. NO. 1 M W D 5666

DRILLERS SIGNATURE

(MUST MATCH SIGNATURE ON APPLICATION)

LIC. NO. 1 M G D 118

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

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 28 NO. OF POUNDS 1160

GALLONS OF WATER 700 1400?

DEPTH OF GROUT SEAL (to nearest foot)

from 0' TOP 52 ft. to 350' BOTTOM 58 ft.
(enter 0 if from surface)

CASING RECORD

casing types insert appropriate code below

ST CO
STEEL CONCRETE
PL OT
PLASTIC OTHER

MAIN CASING TYPE Nominal diameter top (main) casing (nearest inch) Total depth of main casing (nearest foot)

80 61 63 64 66 70

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

screen type or open hole insert appropriate code below

SCREEN RECORD

ST BR HO
STEEL BRASS OPEN HOLE
PL OT
PLASTIC OTHER

DEPTH (nearest ft.)

1 8 9 11 15 17 21
2 23 24 28 30 32 36
3 38 39 41 45 47 51
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 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 29

CAPACITY: GALLONS PER MINUTE (to nearest gallon) 31 35

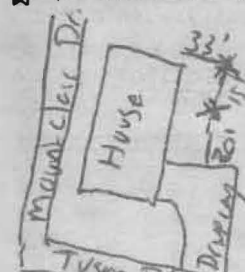
PUMP HORSE POWER 37 41

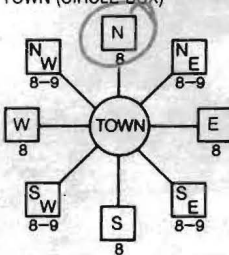
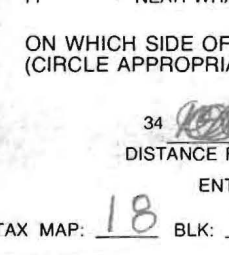
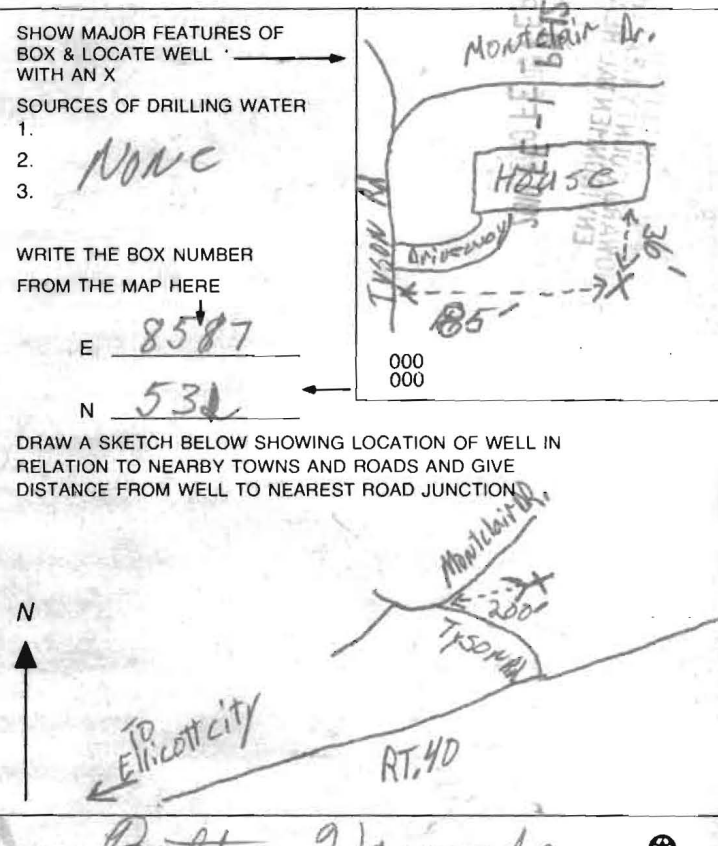
PUMP COLUMN LENGTH (nearest ft.) 43 47

CASING HEIGHT (circle appropriate box and enter casing height)
+ above LAND SURFACE (nearest foot)
- below 49 50 51

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)



B 1	0343	SEQUENCE NO. (MDE USE ONLY)	STATE OF MARYLAND APPLICATION FOR PERMIT TO DRILL WELL 532515 please type	STATE PERMIT NUMBER HO-95-1867 70 <u>fill in this form completely</u> 79
Date Received (APA) 8 MM DD YY 13 <u>Collison Phil</u>		OWNER INFORMATION 15 Last Name Owner First Name 34 <u>2841 Montclair Drive</u> 36 Street or RFD 55 <u>Ellicott City MD 21043</u> 57 Town 70 State 72 Zip 76		
DRILLER INFORMATION Driller's Name <u>Richard Sics</u> M W D <u>566</u> Firm Name <u>Long Green Energy</u> Address <u>11959 Hatfield Rd Glenmary, Md.</u> Signature <u>[Signature]</u> Date _____		LOCATION OF WELL B 3 <u>Howard</u> 8 COUNTY 21 <u>Chestnut Hill Estates</u> 23 SUBDIVISION 42 SECTION <u>0</u> LOT <u>17B</u> 44 46 48 50 <u>Ellicott City</u> 52 NEAREST TOWN 71 MILES FROM TOWN (enter 0 if in town) <u>1.6</u> (M) 1 73 76 77 78		
WELL INFORMATION APPROX. PUMPING RATE (GAL. PER MIN.) <u>None</u> AVERAGE DAILY QUANTITY NEEDED (GAL. PER DAY) <u>None</u> 14 20		DIRECTION OF WELL FROM TOWN (CIRCLE BOX)  ON WHICH SIDE OF ROAD (CIRCLE APPROPRIATE BOX)  NEAR WHAT ROAD <u>Tyson</u> 11 30 ON WHICH SIDE OF ROAD (CIRCLE APPROPRIATE BOX) 34 <u>95</u> DISTANCE FROM ROAD <u>FT.</u> ENTER FT OR MI 38 39 TAX MAP: <u>18</u> BLK: <u>14</u> PARCEL <u>182</u>		
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 <u>2 Boreholes</u>		NOT TO BE FILLED IN BY DRILLER HEALTH DEPARTMENT APPROVAL <u>Howard (Public) 13</u> COUNTY NAME COUNTY NO. STATE SIGNATURE INSERT S → DATE ISSUED <u>2/16/2010</u> <u>Brian Baker</u> <u>2/16/2011</u> 43 MM DD YY 48 CO SIGNATURE EXP. DATE NORTH GRID <u>531</u> 000 EAST GRID <u>857</u> 000 50 55 57 63		
APPROXIMATE DEPTH OF WELL <u>2 x 350</u> FEET APPROXIMATE DIAMETER OF WELL <u>5 1/2"</u> NEAREST INCH METHOD OF DRILLING (circle one) BORED (or Augered) JETTED Jetted & DRIVEN 30 <u>AIR-ROTary</u> 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 1. <u>None</u> 2. <u>None</u> 3. <u>None</u> WRITE THE BOX NUMBER FROM THE MAP HERE E <u>8587</u> N <u>531</u> 000 000		
REPLACEMENT OR DEEPEENED 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 DEEPEEN AN EXISTING WELL PERMIT NUMBER OF WELL TO BE REPLACED OR DEEPEENED (IF AVAILABLE) 41 _____ 52 _____ Not to be filled in by driller (MDE OR COUNTY USE ONLY) APPROP. PERMIT NUMBER _____ G _____ PERMIT No. <u>HO-95-1867</u> 70 71 72 73 74 75 76 77 78 79		DRAW A SKETCH BELOW SHOWING LOCATION OF WELL IN RELATION TO NEARBY TOWNS AND ROADS AND GIVE DISTANCE FROM WELL TO NEAREST ROAD JUNCTION 		
SPECIAL CONDITIONS NOTE - APPROVING AUTHORITIES SHOULD USE SEPARATE SHEET IF NEEDED <u>Mount Boreholes from Bottom Upwards</u> <u>With Tremie Pipe</u>				

MONTCLAIR DRIVE

LOT 17 A

LOCATION OF APPARENT ENCROACHMENT

LOT 17 B
26,335 sq. ft.

TYSON ROAD

LOT 17 B
CHESTNUT HILL ESTATES
SECTION 3

2/16/2010
Well or borehole
sites O.K.
BB

LEGEND

O/H = OVERHANG
H/P = HEAT PUMP/AIR COND.
G/M = GAS METER
E/M = ELECTRIC METER
F/P = FIREPLACE
B/W = BAY WINDOW
D/W = DRIVEWAY
CONC = CONCRETE

ADDRESS No.: 2841 MONTCLAIR DRIVE

PLAT BOOK 6, PAGE 61
ELECTION DISTRICT No. 02
HOWARD COUNTY, MARYLAND

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 OF FENCES, GARAGES, BUILDINGS, OR OTHER EXISTING OR FUTURE IMPROVEMENTS

MILDENBERG
BOENDER, & ASSOC., INC.





February 5, 2010

Mr. Brian Baker
Howard County Government

Reference: (Residential Geothermal Job) 2841 Montclair Drive.

Brian,

I have attached a revised site plan for the drilling at 2841 Montclair Dr. in Ellicott City, MD. I have also attached a cross section diagram of the bore structure. I was instructed from my field engineer that we always utilize Tremie grouting procedures. Tremie grouting is done from the bottom of the bore hole up utilizing a Bentonite grout in a continuous pour. Our bore hole for this job will be 5 1/4" in diameter with 1 1/4" geothermal pipe installed. If you have any questions at all please call me. Thank you.

Regards,

Thomas Ward
Operations Manager
Long Green Energy
(410) 935-7537 Cell

LONGGREENENERGY

11959 Harford Road Glen Arm, MD 21057 410.510.7216 phone 410.510.7122 fax www.LongGreenEnergy.com

- Pipe will be temporarily sealed until groundwarp trenching is completed.
(Trench will be minimum of 5' in depth)

1 1/4" Geothermal Pipe (Single-U Pipe)

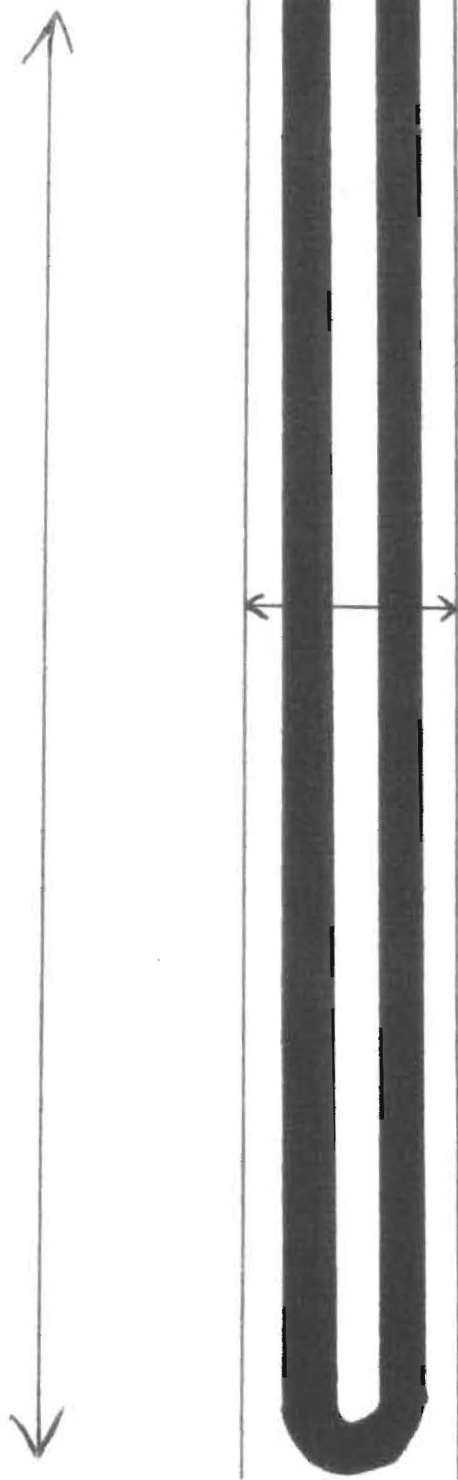
All Remaining Area Filled with Bentonite Grout to Ground level.

NOTE: CASING TO BE INSTALLED AS NEEDED TBD BY Geological conditions.

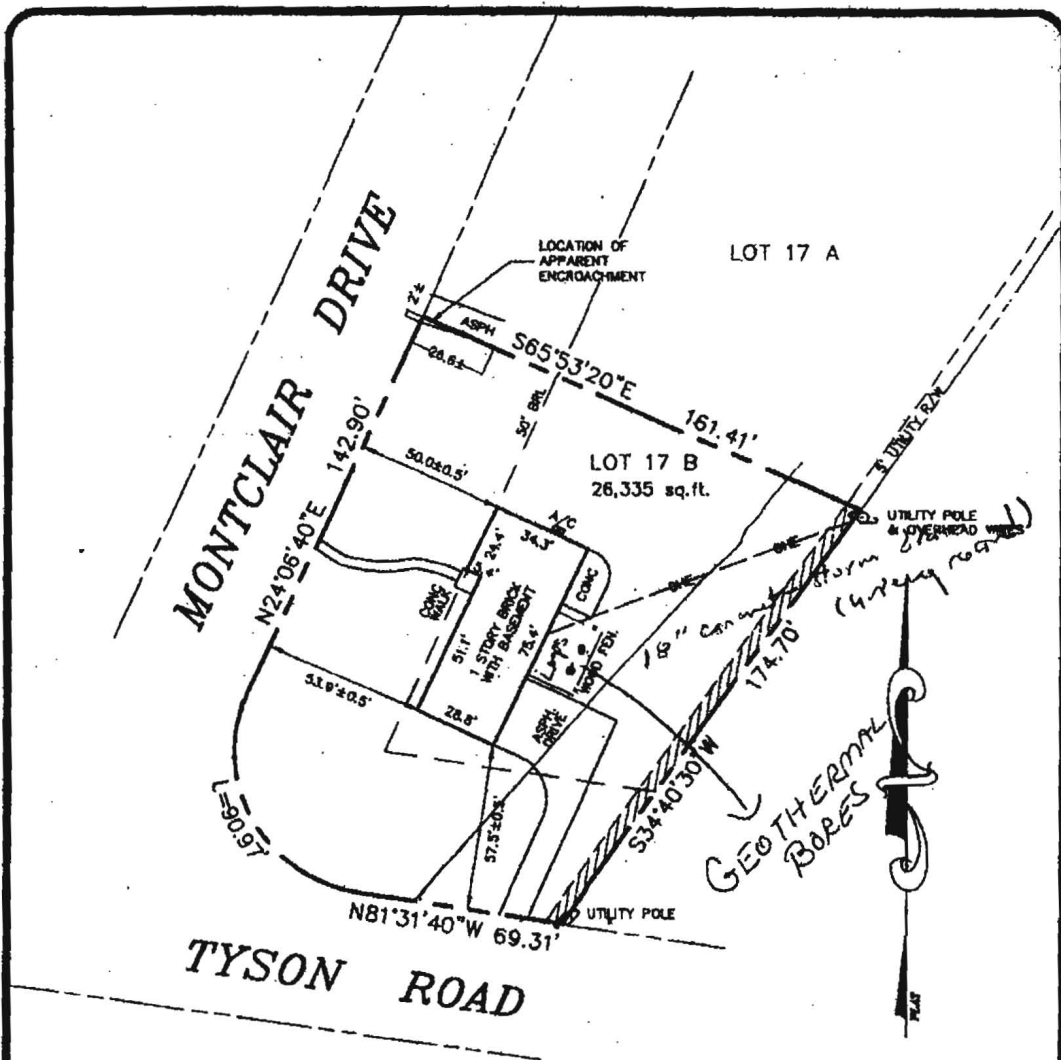
NOTE: AFTER Geothermal pipe is installed Bore Hole is Tremie Grouted with Bentonite Grout mixture Filling All Voids and Removing All AIR pockets.

350' Bore Hole Depth

5 1/2" BORE DIAMETER



PHIL COLLISON DRIVE
2841 MONTCLAIR
ELLICOTT CITY, MD 21043



LOT 17 B
CHESTNUT HILL ESTATES
SECTION 3

LEGEND

- O/H = OVERHANG
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**MILDENBERG
BOENDER, & ASSOC., INC.**

Engineers Planners Surveyors
5072 Dorsey Hall Drive, Suite 202, Ellicott City, Maryland 21043
(410) 997-0298 Balt. (301) 621-5521 Wash. (410) 997-0298 Fax.

FOUNDATION	DATE: N/A	FINAL	DATE: 11/12/97
DRAWN BY: T. HILL	SCALE: 1" = 50'		
PROJECT NO.: 97099	LOCATION DRAWING		



JOHN B. MILDEBERG
PROF. LAND SURVEYOR
MARYLAND No. 10718