

C1 6142

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

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

ST/CO USE ONLY

DATE WELL COMPLETED

Depth of Well

PERMIT NO. FROM "PERMIT TO DRILL WELL"

DATE RECEIVED MM DD YY

10/01/09

22 375 26 (TO NEAREST FOOT)

HO-95-1791

OWNER: LOWER SUSAN STREET OR RFD: 5809 OLD SEA PL TOWN: CLARKSVILLE 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 (Use additional sheets if needed), FEET (FROM, TO), check if water bearing. Includes handwritten entries: Top Soil (0-2), Brown mica (2-30), Grey mica (30-375).

Installed loop & backfilled with Bentonite from 375-0

GROUTING RECORD

WELL HAS BEEN GROUTED (Y/N) TYPE OF GROUTING MATERIAL (Cement, Bentonite Clay) NO. OF BAGS 19 NO. OF POUNDS 950 GALLONS OF WATER 437 DEPTH OF GROUT SEAL (to nearest foot) from 0 ft. to 375 ft.

CASING RECORD

MAIN CASING TYPE: PL Nominal diameter: 6 Total depth of main casing: 40

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

SCREEN RECORD

screen type or open hole (S, BR, HO) insert appropriate code below

DEPTH (nearest ft.)

Table with columns: A, C, H, S, R, E, N. Includes handwritten entries: 80, 38, 375

GRAVEL PACK IF WELL DRILLED WAS FLOWING WELL INSERT F IN BOX 88

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

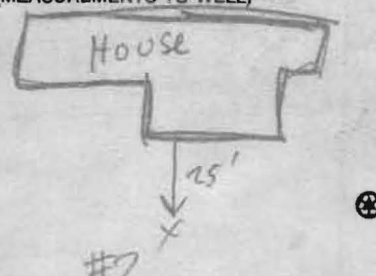
PUMPING TEST

HOURS PUMPED (nearest hour) 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 J jet S submersible

PUMP INSTALLED

DRILLER INSTALLED PUMP (CIRCLE) 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) 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 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, AND THAT THE INFORMATION PRESENTED HEREIN IS ACCURATE AND COMPLETE TO THE BEST OF MY KNOWLEDGE.

DRILLERS LIC. NO. MWD 040 DRILLERS SIGNATURE (MUST MATCH SIGNATURE ON APPLICATION) LIC. NO. AWD 788

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

#2 #2 Loop

B 1 2672
1 2 3 6

SEQUENCE NO. (MDE USE ONLY)

531036 STATE OF MARYLAND
APPLICATION FOR PERMIT TO DRILL WELL
05123850 please type

STATE PERMIT NUMBER

HO-95-1791
70 fill in this form completely 79

Date Received (APA) 11128

OWNER INFORMATION

8 MM DD YY 13
LOWER PHILIP E & SUSAN
15 Last Name Owner First Name 34
5809 OLD SEA PLACE
36 Street or RFD 55
CLARKSVILLE, MD 21029
57 Town 70 State 72 Zip 76

B 3 **LOCATION OF WELL**

Howard CC#
8 COUNTY 21
23 SUBDIVISION 42
SECTION 44 46 LOT 48 50
Clarksville
52 NEAREST TOWN 71
MILES FROM TOWN (enter 0 if in town) 9 M I 73 76 77 78

DRILLER INFORMATION

George F. Easterday M WVD 040
Driller's Name 76 License No. 81
L. Franklin Easterday, Inc.
Firm Name
9265 Brown Church Rd., MT. Airy, Md. 21771
Address
George F. Easterday 6/10/2009
Signature Date

B 4

1 2
DIRECTION OF WELL FROM TOWN (CIRCLE BOX)

5809 Old Sea Place
11 NEAR WHAT ROAD 30
ON WHICH SIDE OF ROAD (CIRCLE APPROPRIATE BOX)
NORTH
WEST EAST
SOUTH
34 50 37
DISTANCE FROM ROAD Ft.
ENTER FT OR MI 38 39
TAX MAP: 35 BLK: 7 PARCEL 457

B 2 **WELL INFORMATION**

APPROX. PUMPING RATE (GAL. PER MIN.) 5
8 12
AVERAGE DAILY QUANTITY NEEDED (GAL. PER DAY) 500
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

22

2 x 375

NOT TO BE FILLED IN BY DRILLER HEALTH DEPARTMENT APPROVAL

Howard 13
COUNTY NAME COUNTY NO.
STATE SIGNATURE INSERT S 41
DATE ISSUED 8/6/09
8/6/09
43 MM DD YY 48 CO SIGNATURE EXP. DATE
NORTH GRID 490 000 EAST GRID 0870 000
50 55 57 63

APPROXIMATE DEPTH OF WELL 300-375 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
 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 DEEPEM 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. 140-95-1791
70 71 72 73 74 75 76 77 78 79

SHOW MAJOR FEATURES OF BOX & LOCATE WELL WITH AN X

SOURCES OF DRILLING WATER
1.
2. wells
3.

WRITE THE BOX NUMBER FROM THE MAP HERE
E 820
N 490

DRAW A SKETCH BELOW SHOWING LOCATION OF WELL IN RELATION TO NEARBY TOWNS AND ROADS AND GIVE DISTANCE FROM WELL TO NEAREST ROAD JUNCTION 14 G 8

SPECIAL CONDITIONS Completion reports for each well

NOTE - APPROVING AUTHORITIES SHOULD USE SEPARATE SHEET IF NEEDED

DEPARTMENT OF INSPECTIONS, LICENSES AND PERMITS 8430 COUNTY HOUSE DRIVE ELLICOTT CITY, MD 21043 PERMITS (410)813-2443 INSPECTIONS (410)813-1050	<h2 style="margin: 0;">HOWARD COUNTY</h2> <h3 style="margin: 0;">RESIDENTIAL HEATING-VENTILATION-AIR CONDITIONING AND REFRIGERATION PERMIT APPLICATION</h3>	HVACR PERMIT # M09000686 BUILDING PERMIT #
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BUILDING ADDRESS: 5809 Old Sea Place	SUITE/APT:	OWNERS NAME: Susan Lower ADDRESS: 5809 Old Sea Place
SUBDIVISION: CENSUS TRACT: LOT: BLOCK:	SECTION: TAX MAP: ZONE:	AREA: PARCEL:
PROPERTY ID: TYPE OF IMPROVEMENT:	MAP COORDINATES: USE:	CITY: Clarksville STATE: MD HOME PHONE: 443-535-9662
		ZIP CODE: 21029 WORK PHONE:

<u>CHECK ONE</u>	<u>HOW MANY</u>	
<input checked="" type="checkbox"/> SINGLE FAMILY DWELLING	<input checked="" type="checkbox"/> <u>2</u>	ZONES
<input type="checkbox"/> SINGLE FAMILY TOWNHOUSE	<input type="checkbox"/> _____	ZONES
<input type="checkbox"/> MULTI-FAMILY / HOTEL/MOTEL	<input type="checkbox"/> _____	UNITS

COMPANY NAME: Total Comfort Htg & AC, Inc. LICENSEE NAME: James E. Aaron ADDRESS: P.O. Box 643 CITY: Smithsburg STATE: MD PHONE: 301-824-3700	ZIP CODE: 21742 HVACR LICENSE NO: 5833-01
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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

**Removing old gas furnace & heat pump systems & replacing with geothermal systems.*

Zones Permit Fee = # of Zones x \$40 = 30.00 Technology Fee (10% of Permit Fee) = 8.00 Plus Application Fee \$50 Total Fees Due = 138.00	Units Permit Fee = # of Units x \$80 = _____ Technology Fee (10% of Permit Fee) = _____ Plus Application Fee \$50 Total Fees Due = _____
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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: James E. Aaron
 Signature: James E. Aaron
 Date: 8/21/09

Validation

Check Number: 2121
 Receipt Number: 181919

PRINT NAME

Make check payable to: DIRECTOR OF FINANCE OF HOWARD COUNTY
 T:\Chieffp\HVACR\WPD REV 6/17/06

Approved!

HCHD & [Signature]

M09000Ces8e



**Load Short Form
1ST AH**

TOTAL COMFORT HEATING & A/C INC.

Job:
Date: JULY 11, 2009
By: BROWN.J

Project Information

For: LOWER RESIDENCE
5809 OLD SEA PLACE, CLARKSVILLE, MD 21029

Design Information

	Htg	Clg	Method	Infiltration
Outside db (°F)	12	91	Construction quality	Simplified Average
Inside db (°F)	70	75	Fireplaces	0
Design TD (°F)	58	16		
Daily range	-	M		
Inside humidity (%)	30	50		
Moisture difference (gr/lb)	25	36		

HEATING EQUIPMENT

Make American Standard
Trade Heritage 15
Model 4A6H5036A1
ARI ref no. 1382163

Efficiency 9 HSPF
Heating input
Heating output 34000 Btuh @ 47°F
Temperature rise 26 °F
Actual air flow 1200 cfm
Air flow factor 0.039 cfm/Btuh
Static pressure 0.00 in H2O
Space thermostat

COOLING EQUIPMENT

Make American Standard
Trade Heritage 15
Cond 4A6H5036A1
Coil 4TEE3F39A1
ARI ref no. 1382163

Efficiency 15 EER
Sensible cooling 25200 Btuh
Latent cooling 10800 Btuh
Total cooling 36000 Btuh
Actual air flow 1200 cfm
Air flow factor 0.091 cfm/Btuh
Static pressure 0.00 in H2O
Load sensible heat ratio 0.82

ROOM NAME	Area (ft²)	Htg load (Btuh)	Clg load (Btuh)	Htg AVF (cfm)	Clg AVF (cfm)
1ST FLOOR	1754	20615	12451	796	1135
BASEMENT	1754	10461	710	404	65
1ST AH	3508	31076	13160	1200	1200
Other equip loads		4325	1193		
Equip. @ 0.96 RSM			13779		
Latent cooling			3229		
TOTALS	3508	35401	17008	1200	1200

Bold/italic values have been manually overridden

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



Project Information

For: LOWER RESIDENCE
 5809 OLD SEA PLACE, CLARKSVILLE, MD 21029

Notes:

Design Information

Weather: Hagerstown, MD, US

Winter Design Conditions

Outside db	12 °F
Inside db	70 °F
Design TD	58 °F

Summer Design Conditions

Outside db	91 °F
Inside db	75 °F
Design TD	16 °F
Daily range	M
Relative humidity	50 %
Moisture difference	36 gr/lb

Heating Summary

Structure	31076 Btuh
Ducts	0 Btuh
Central vent (69 cfm)	4325 Btuh
Humidification	0 Btuh
Piping	0 Btuh
Equipment load	35401 Btuh

Sensible Cooling Equipment Load Sizing

Structure	13160 Btuh
Ducts	0 Btuh
Central vent (69 cfm)	1193 Btuh
Blower	0 Btuh
Use manufacturer's data	n
Rate/swing multiplier	0.96
Equipment sensible load	13779 Btuh

Infiltration

Method	Simplified	
Construction quality	Average	
Fireplaces	0	
	Heating	Cooling
Area (ft ²)	3508	3508
Volume (ft ³)	20171	20171
Air changes/hour	0.27	0.14
Equiv. AVF (cfm)	90	48

Latent Cooling Equipment Load Sizing

Structure	1560 Btuh
Ducts	0 Btuh
Central vent (69 cfm)	1669 Btuh
Equipment latent load	3229 Btuh
Equipment total load	17008 Btuh
Req. total capacity at 0.70 SHR	1.6 ton

Heating Equipment Summary

Make	American Standard
Trade	Heritage 15
Model	4A6H5036A1
ARI ref no.	1382163
Efficiency	9 HSPF
Heating input	
Heating output	34000 Btuh @ 47°F
Temperature rise	26 °F
Actual air flow	1200 cfm
Air flow factor	0.039 cfm/Btuh
Static pressure	0.00 in H2O
Space thermostat	

Cooling Equipment Summary

Make	American Standard
Trade	Heritage 15
Cond	4A6H5036A1
Coil	4TEE3F39A1
ARI ref no.	1382163
Efficiency	15 EER
Sensible cooling	25200 Btuh
Latent cooling	10800 Btuh
Total cooling	36000 Btuh
Actual air flow	1200 cfm
Air flow factor	0.091 cfm/Btuh
Static pressure	0.00 in H2O
Load sensible heat ratio	0.82

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Project Information

For: **LOWER RESIDENCE
5809 OLD SEA PLACE, CLARKSVILLE, MD 21029**

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	0
Daily range	-	M		
Inside humidity (%)	30	50		
Moisture difference (gr/lb)	25	36		

HEATING EQUIPMENT

Make American Standard
Trade Heritage 15
Model 4A6H5024A1
ARI ref no. 1383394

Efficiency **8.3 HSPF**
Heating input
Heating output **23800 Btuh @ 47°F**
Temperature rise **28 °F**
Actual air flow **800 cfm**
Air flow factor **0.030 cfm/Btuh**
Static pressure **0.00 in H2O**
Space thermostat

COOLING EQUIPMENT

Make American Standard
Trade Heritage 15
Cond 4A6H5024A1
Coil 4TEE3F37B1
ARI ref no. 1383394

Efficiency **15 EER**
Sensible cooling **17080 Btuh**
Latent cooling **7320 Btuh**
Total cooling **24400 Btuh**
Actual air flow **800 cfm**
Air flow factor **0.049 cfm/Btuh**
Static pressure **0.00 in H2O**
Load sensible heat ratio **0.82**

ROOM NAME	Area (ft²)	Htg load (Btuh)	Clg load (Btuh)	Htg AVF (cfm)	Clg AVF (cfm)
SIT	256	6476	4731	193	233
2ND FLOOR	1562	20395	11478	607	567
2ND AH	1818	26871	16209	800	800
Other equip loads		2883	795		
Equip. @ 0.96 RSM			16324		
Latent cooling			3710		
TOTALS	1818	29755	20034	800	800

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Project Information

For: LOWER RESIDENCE
 5809 OLD SEA PLACE, CLARKSVILLE, MD 21029

Notes:

Design Information

Weather: Hagerstown, MD, US

Winter Design Conditions

Outside db	12 °F
Inside db	70 °F
Design TD	58 °F

Summer Design Conditions

Outside db	91 °F
Inside db	75 °F
Design TD	16 °F
Daily range	M
Relative humidity	50 %
Moisture difference	36 gr/lb

Heating Summary

Structure	20751 Btuh
Ducts	6121 Btuh
Central vent (46 cfm)	2883 Btuh
Humidification	0 Btuh
Piping	0 Btuh
Equipment load	29755 Btuh

Sensible Cooling Equipment Load Sizing

Structure	10678 Btuh
Ducts	5531 Btuh
Central vent (46 cfm)	795 Btuh
Blower	0 Btuh
Use manufacturer's data	n
Rate/swing multiplier	0.96
Equipment sensible load	16324 Btuh

Infiltration

Method	Simplified
Construction quality	Average
Fireplaces	0
Heating	
Area (ft ²)	1818
Volume (ft ³)	14544
Air changes/hour	0.30
Equiv. AVF (cfm)	72
Cooling	
Area (ft ²)	1818
Volume (ft ³)	14544
Air changes/hour	0.16
Equiv. AVF (cfm)	39

Latent Cooling Equipment Load Sizing

Structure	1727 Btuh
Ducts	870 Btuh
Central vent (46 cfm)	1113 Btuh
Equipment latent load	3710 Btuh
Equipment total load	20034 Btuh
Req. total capacity at 0.70 SHR	1.9 ton

Heating Equipment Summary

Make	American Standard
Trade	Heritage 15
Model	4A6H5024A1
ARI ref no.	1383394
Efficiency	8.3 HSPF
Heating input	
Heating output	23800 Btuh @ 47°F
Temperature rise	28 °F
Actual air flow	800 cfm
Air flow factor	0.030 cfm/Btuh
Static pressure	0.00 in H2O
Space thermostat	

Cooling Equipment Summary

Make	American Standard
Trade	Heritage 15
Cond	4A6H5024A1
Coil	4TEE3F37B1
ARI ref no.	1383394
Efficiency	15 EER
Sensible cooling	17080 Btuh
Latent cooling	7320 Btuh
Total cooling	24400 Btuh
Actual air flow	800 cfm
Air flow factor	0.049 cfm/Btuh
Static pressure	0.00 in H2O
Load sensible heat ratio	0.82

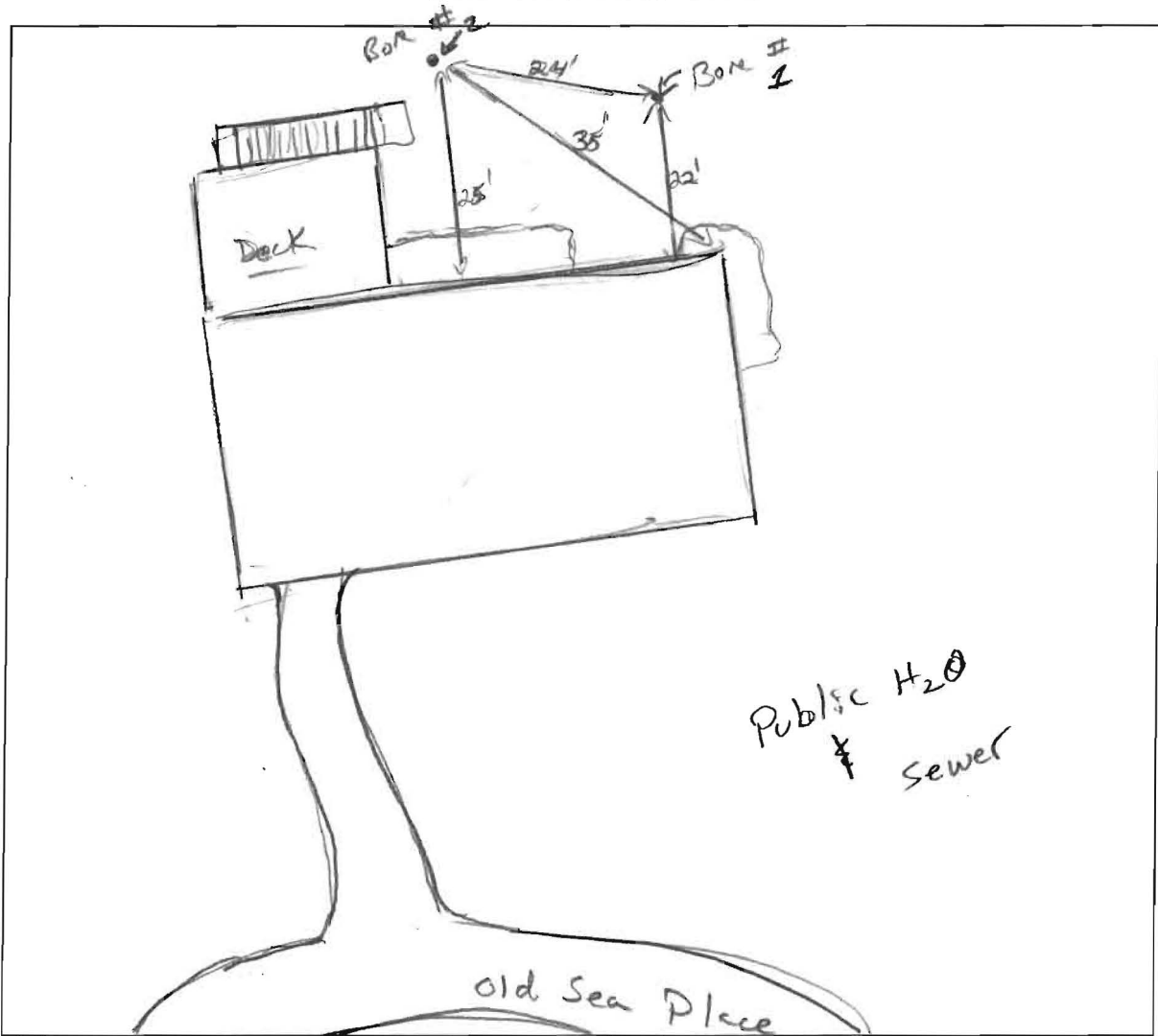
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SITE INSPECTION SHEET

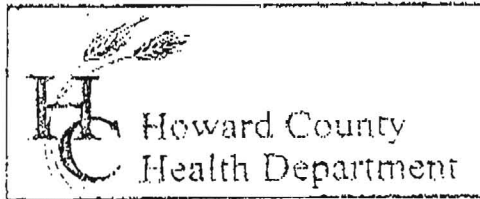
OWNER: _____ PHONE #: _____
ADDRESS: 5809 Old Sea Pl CONTRACTOR: Easterday
WELL TAG #: _____
SUBDIVISION: _____ LOT: _____ COUNTY #: (13)
PROPOSAL: Geothermal (water) site map

LOCATION DIAGRAM



COMMENTS: Bores too close to house? Bore #1 may be out of property line. (Kw)

DATE: 8-5-09 INSPECTOR: R. Kelly



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:

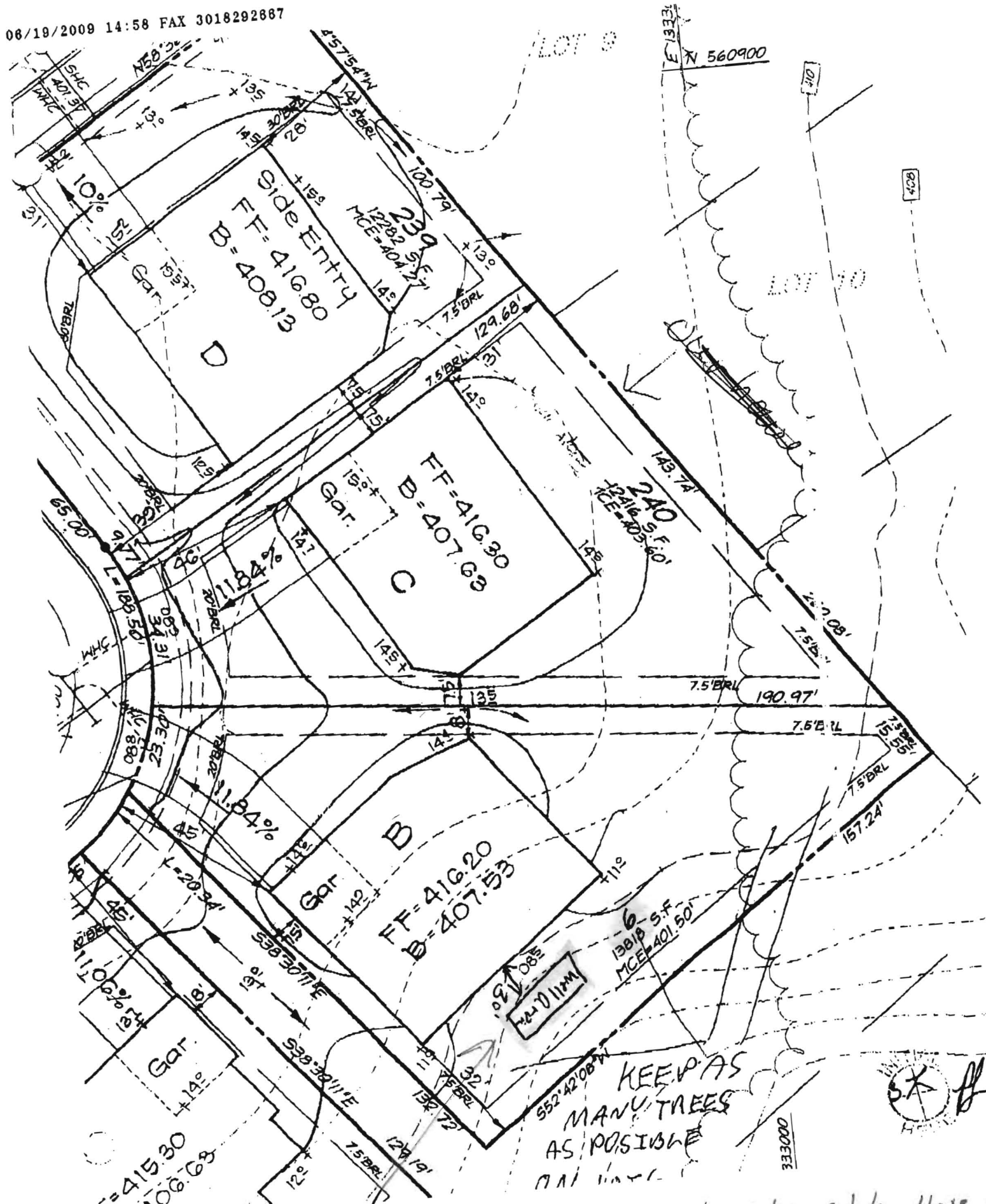
- The well site has been staked by owner,
(professional land surveyor or company employing professional land surveyors)
on 6-8-09 (date) and does not require a site inspection.
- The well driller, builder or property owner will call the Health Department to schedule a time to meet in the field to verify 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

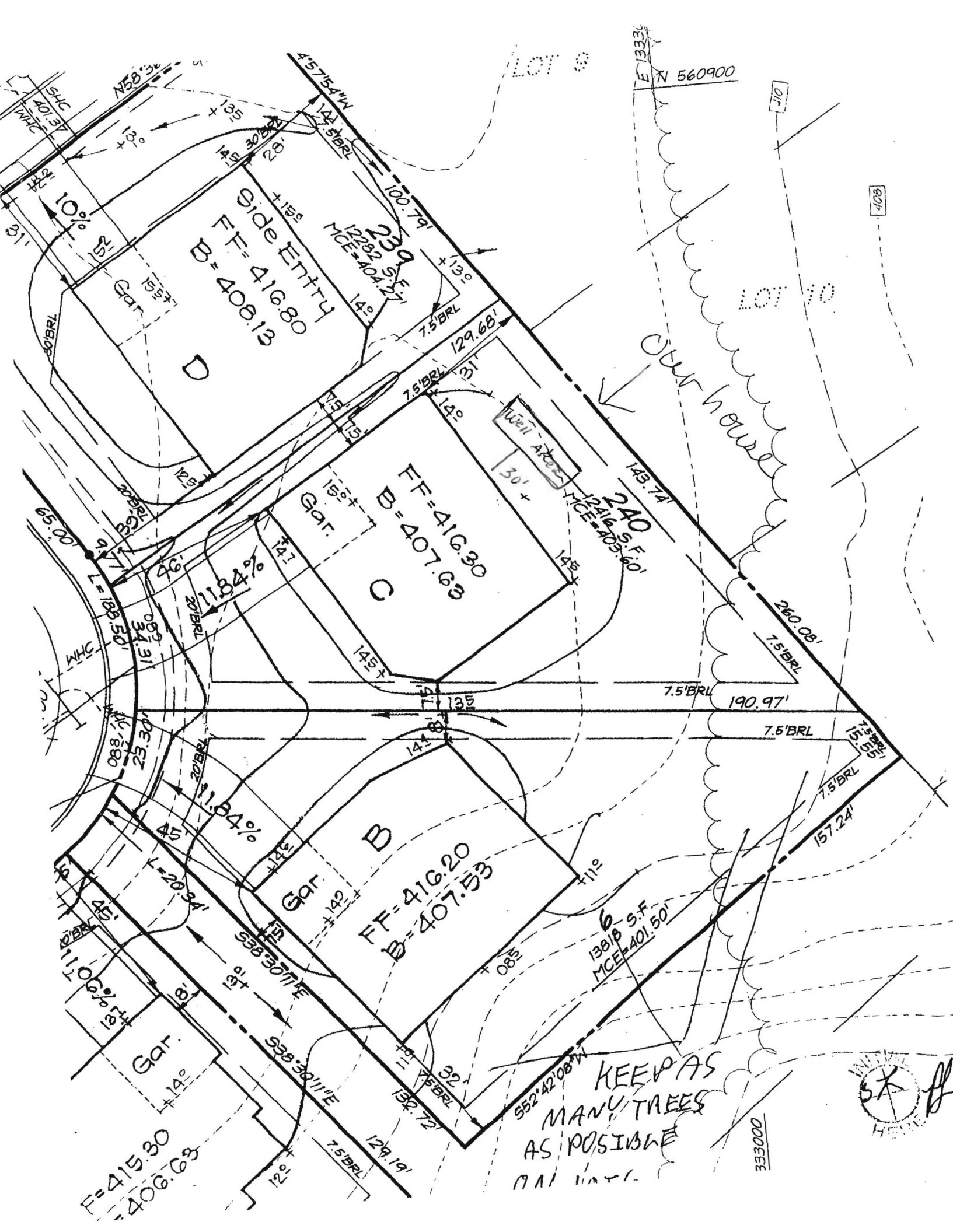
5809 OLD SEA PIACE

DRILLING 2-375 FT wells - INSTALLING
1 1/4" LOOP WITH U Bend & Backfilling from
375' TO 0 WITH TD16 - Bentonite Slurry



KEEP AS
 MANY TREES
 AS POSSIBLE

6/22/09 Side visit made to confirm go well loc. No stakes visible. House loc inaccurate on site plan to whats shown in field. made call to east day 500'



KEEP AS
 MANY TREES
 AS POSSIBLE

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