

C 1	26556	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.
1 2 3 4 5 6 (THIS NUMBER IS TO BE PUNCHED IN COLS. 3-6 ON ALL CARDS)				
ST/CO USE ONLY DATE RECEIVED MM <u>08</u> DD <u>01</u> YY <u>14</u>		DATE WELL COMPLETED MM <u>06</u> DD <u>26</u> YY <u>14</u>		Depth of Well - 22 - <u>305</u> 26 (TO NEAREST FOOT)
				PERMIT NO. FROM "PERMIT TO DRILL WELL" <u>HO-14-0033</u>
OWNER <u>BASSLER VENTURE LLC</u>		TOWN <u>CLARKSVILLE</u>		
WELL SITE ADDRESS <u>CATALPA CT</u>		SECTION <u>97</u>		
SUBDIVISION <u>WALNUT CREEK PHASE II</u>		LOT <u>97</u>		

WELL LOG Not required for driven wells STATE THE KIND OF FORMATIONS PENETRATED, THEIR COLOR, DEPTH, THICKNESS AND IF WATER BEARING <table border="1" style="width:100%; border-collapse: collapse;"> <thead> <tr> <th rowspan="2">DESCRIPTION (Use additional sheets if needed)</th> <th colspan="2">FEET</th> <th rowspan="2">check if water bearing</th> </tr> <tr> <th>FROM</th> <th>TO</th> </tr> </thead> <tbody> <tr> <td>Top Soil</td> <td>0</td> <td>2</td> <td></td> </tr> <tr> <td>Sandy</td> <td>2</td> <td>55</td> <td></td> </tr> <tr> <td>Sand Stone</td> <td>55</td> <td>60</td> <td>✓</td> </tr> <tr> <td>MICKA</td> <td>60</td> <td>270</td> <td></td> </tr> <tr> <td>Sand Stone</td> <td>270</td> <td>280</td> <td></td> </tr> <tr> <td>MICKA</td> <td>280</td> <td>305</td> <td></td> </tr> </tbody> </table>	DESCRIPTION (Use additional sheets if needed)	FEET		check if water bearing	FROM	TO	Top Soil	0	2		Sandy	2	55		Sand Stone	55	60	✓	MICKA	60	270		Sand Stone	270	280		MICKA	280	305		GROUTING RECORD WELL HAS BEEN GROUTED (Circle Appropriate Box) <input checked="" type="radio"/> YES <input type="radio"/> NO TYPE OF GROUTING MATERIAL (Circle one) CEMENT <input checked="" type="radio"/> BENTONITE CLAY <input type="radio"/> NO. OF BAGS <u>24</u> NO. OF POUNDS <u>240</u> GALLONS OF WATER <u>144</u> DEPTH OF GROUT SEAL (to nearest foot) from <u>0</u> TOP 52 54 BOTTOM 58 ft. (enter 0 if from surface) CASING RECORD casing types insert appropriate code below <table style="width:100%;"> <tr> <td><input checked="" type="radio"/> STEEL</td> <td><input type="radio"/> CONCRETE</td> </tr> <tr> <td><input type="radio"/> PLASTIC</td> <td><input type="radio"/> OTHER</td> </tr> </table> <table style="width:100%;"> <tr> <td>MAIN CASING TYPE <u>PC</u></td> <td>Nominal diameter top (main) casing (nearest inch) <u>6</u></td> <td>Total depth of main casing (nearest foot) <u>70</u></td> </tr> <tr> <td>60 61</td> <td>63 64</td> <td>66 67 70</td> </tr> </table> OTHER CASING (if used) diameter inch _____ depth (feet) from _____ to _____ E A C H C A S I N G	<input checked="" type="radio"/> STEEL	<input type="radio"/> CONCRETE	<input type="radio"/> PLASTIC	<input type="radio"/> OTHER	MAIN CASING TYPE <u>PC</u>	Nominal diameter top (main) casing (nearest inch) <u>6</u>	Total depth of main casing (nearest foot) <u>70</u>	60 61	63 64	66 67 70	C 3 PUMPING TEST HOURS PUMPED (nearest hour) <u>3</u> PUMPING RATE (gal. per min.) <u>10</u> METHOD USED TO MEASURE PUMPING RATE <u>Bucket</u> WATER LEVEL (distance from land surface) BEFORE PUMPING <u>55</u> ft. WHEN PUMPING <u>75</u> ft. TYPE OF PUMP USED (for test) <table style="width:100%;"> <tr> <td><input checked="" type="radio"/> air</td> <td><input type="radio"/> piston</td> <td><input type="radio"/> turbine</td> </tr> <tr> <td><input type="radio"/> centrifugal</td> <td><input type="radio"/> rotary</td> <td><input type="radio"/> other (describe below)</td> </tr> <tr> <td><input type="radio"/> jet</td> <td><input checked="" type="radio"/> submersible</td> <td></td> </tr> </table>	<input checked="" type="radio"/> air	<input type="radio"/> piston	<input type="radio"/> turbine	<input type="radio"/> centrifugal	<input type="radio"/> rotary	<input type="radio"/> other (describe below)	<input type="radio"/> jet	<input checked="" type="radio"/> submersible	
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NUMBER OF UNSUCCESSFUL WELLS: <u>0</u> WELL HYDROFRACTURED <input checked="" type="radio"/> YES <input type="radio"/> NO 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.	C 2 DEPTH (nearest ft.) <u>HO</u> <u>68</u> <u>305</u> E A C H C A S I N G 1 8 9 11 15 17 21 2 23 24 26 30 32 36 3 38 39 41 45 47 51 S L O T S I Z E 1 _____ 2 _____ 3 _____ DIAMETER OF SCREEN _____ (NEAREST INCH) from _____ to _____ GRAVEL PACK IF WELL DRILLED WAS FLOWING WELL INSERT F IN BOX 68 <u>68</u>	PUMP INSTALLED DRILLER INSTALLED PUMP (CIRCLE) (YES OR NO) YES <input type="radio"/> NO <input checked="" type="radio"/> 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 <u>29</u> 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) <input checked="" type="radio"/> above } LAND SURFACE <input type="radio"/> below } <u>2</u> (nearest foot) LATITUDE <u>39.23896</u> LONGITUDE <u>76.95260</u> (DEFAULT COORD. WGS 84) NOTES:
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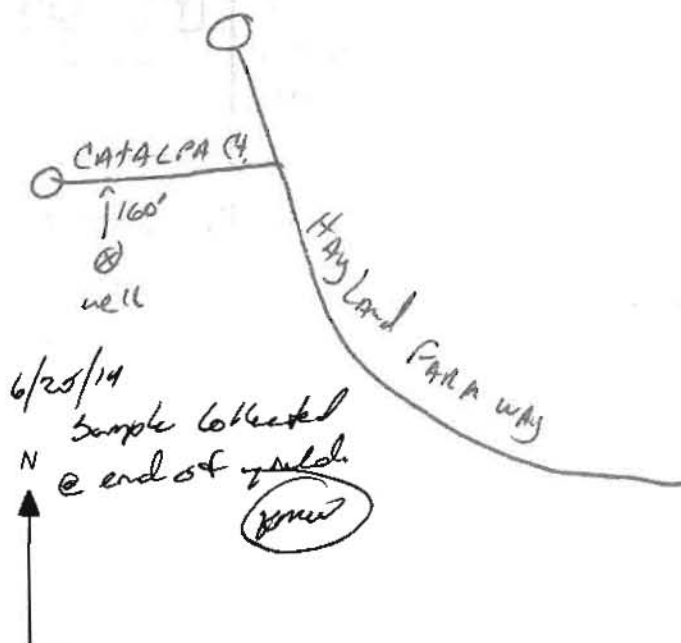
DRILLERS LIC. NO. <u>M 3D 117</u> DRILLERS SIGNATURE <u>[Signature]</u> (MUST MATCH SIGNATURE ON APPLICATION) LIC. NO. <u>D</u>	MDE USE ONLY (NOT TO BE FILLED IN BY DRILLER) T _____ (E.R.O.S.) W Q _____ 70 _____ 72 _____ TELESCOPE CASING LOG INDICATOR OTHER DATA
--	--

B 1	26821	SEQUENCE NO. (MDE USE ONLY)	STATE OF MARYLAND APPLICATION FOR PERMIT TO DRILL WELL 546303-E please type	STATE PERMIT NUMBER HO -14 -0033 70 fill in this form completely 79
Date Received (APA) 05/16/14 8 MM DD YY 13		OWNER INFORMATION		
15 Last Name Bassler		Owner Venture LLC		34 First Name
36 Street or RFD PO BOX 482		55		
57 Town Lis Bon		70 State MD	72 Zip 21765	76
DRILLER INFORMATION				
Driller's Name Ralph Mayne		MS D 118 76 License No. 81		
Firm Name Ralph Mayne Well Drilling				
Address 17024 Hardy Rd Mt. Airy MD 21281				
Signature [Signature] Date 5/15/14				
B 2 WELL INFORMATION *				
1 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)				
<input checked="" type="checkbox"/> DOMESTIC POTABLE SUPPLY & RESIDENTIAL IRRIGATION <input type="checkbox"/> FARMING (LIVESTOCK WATERING & AGRICULTURAL IRRIGATION) <input type="checkbox"/> INDUSTRIAL, COMMERCIAL, DEWATERING <input type="checkbox"/> PUBLIC WATER SUPPLY WELL <input type="checkbox"/> TEST, OBSERVATION, MONITORING <input type="checkbox"/> OPEN LOOP GEOTHERMAL <input type="checkbox"/> CLOSED LOOP GEOTHERMAL				
NOT TO BE FILLED IN BY DRILLER HEALTH DEPARTMENT APPROVAL				
COUNTY NAME Howard COUNTY NO. 13 STATE SIGNATURE [Signature] DATE ISSUED 06/11/2014 CO SIGNATURE [Signature] EXPIRATION DATE 6/11/15				
APPROXIMATE DEPTH OF WELL 150 24 28 FEET		NEAREST INCH		
APPROXIMATE DIAMETER OF WELL 6r		NEAREST INCH		
METHOD OF DRILLING (circle one)				
BORED (or Augered) JETTED Jetted & DRIVEN <input checked="" type="checkbox"/> AIR-ROTARY AIR-PERCussion ROTARY (Hydraulic Rotary) CABLE REVERSE-ROTARY DRIVE-POINT other				
REPLACEMENT OR DEEPEMED WELLS (CIRCLE APPROPRIATE BOX)				
<input checked="" type="checkbox"/> THIS WELL WILL NOT REPLACE AN EXISTING WELL <input type="checkbox"/> THIS WELL WILL REPLACE A WELL THAT WILL BE ABANDONED AND SEALED <input type="checkbox"/> THIS WELL WILL REPLACE A WELL THAT WILL BE USED AS A STANDBY-CONTACT LOCAL APPROVING AUTHORITY FOR POLICY ON STANDBY WELLS <input type="checkbox"/> THIS WELL WILL DEEPEMED AN EXISTING WELL				
PERMIT NUMBER OF WELL TO BE REPLACED OR DEEPEMED (IF AVAILABLE) 41				
Not to be filled in by driller (MDE OR COUNTY USE ONLY)				
APPROX. PERMIT NUMBER HO2006GD30				
PERMIT No. HO -14 -0033				
SPECIAL CONDITIONS: Radium sample required at yield test; all wells must be at least 100 feet apart				

B 3 LOCATION OF WELL	
8 COUNTY Howard	21
23 SUBDIVISION Walnut Creek Phase III	42
SECTION 44 46	LOT 97 48 50
52 NEAREST TOWN CLARKSVILLE	

B 4 SOURCES OF DRILLING WATER	
1 well	11 STREET ADDRESS Catalpa Ct
2	30
3	ON WHICH SIDE OF ROAD (CIRCLE APPROPRIATE BOX)
	NORTH WEST EAST SOUTH 34 160 37 DISTANCE FROM ROAD ENTER FT OR MI TAX MAP: 28 BLK: 11 PARCEL 42

PROPOSED LOCATION OF WELL ON LOT
SHOW PERMANENT STRUCTURES SUCH AS BUILDINGS, SEPTIC SYSTEM,
ROADS AND/OR LANDMARKS AND INDICATE NOT LESS THAN TWO
DISTANCE MEASUREMENTS TO WELL



[illegible]

**HOWARD COUNTY HEALTH DEPARTMENT
BUREAU OF ENVIRONMENTAL HEALTH
WELL & SEPTIC PROGRAM
TEL: (410)313-1771 FAX: (410)313-2648**

Information Form for the Installation of the Well Pump, Pitless Adapter, and Supply Piping

NOTE: The installer is responsible for requesting an inspection prior to 9 am on the day of the desired inspection. No work is to be covered until approved by the Health Department. All installations must comply with the National Standard Plumbing Code (NSPC, as amended locally) and COMAR 26.04.04 (MD Well Construction Regulations). Submission of a complete form is required prior to Use and Occupancy approval.

Company Name: Robert L. Feezer Co. Telephone #: 410-781-4856
Address: 8321 Barnett Avenue
Sykesville, MD 21784

(Must circle one) Licensed Plumber Licensed Well Driller Licensed Well Pump Installer
License # and name of individual responsible for the field installation:
Name (Print): Russell C. George License# PI0140

***A licensed individual must perform the actual installation. Apprentices must be under the supervision of a licensed journeyman or master plumber, pump installer or well driller. Licenses may be subjected to field verification. Unlicensed individuals may be reported to the appropriate licensing agency.**

Name of Property Owner: NV Homes Telephone #: 410-379-5856
Subdivision: Walnut Creek Lot #: 97 Well Tag #: HO - 14 - 0033 ✓
Site Address: 8311 Catalpa Court
Ellicott City, MD 21042

Submersible Pump Data

Make: Schaefer
Model #: 75R07S4-2W23B
Pump Capacity: 7 GPM
Well Yield: 10 GPM

Pitless Adapter

Make: Boston
Model#: P-100-88
Depth: 42" (36" min)
NSF/WSC approved: Yes

Well Cap and Electric Conduit

Two piece watertight cap: Yes
Screened, vented well cap: Yes
Cap secured to casing: Yes
Conduit min 18" B.G.: Yes

Depth of well encountered at time of pump installation: 305 (feet) Conduit secured to well cap: Yes

If pump capacity exceeds well yield, a low water cut off switch is required by NSPC 1990 Section 17.8.4

Torque arrestors, Cable guards, or other acceptable method used-- Must circle one

Safety rope, if used, attached to brass rope adapter or other acceptable method inside of well casing N/A

Piping to house

Type: Poly
PSI: 200 (160 psi min)
Depth of supply line: 42" (36" min)

House Connection

PVC sleeve to undisturbed soil at wall penetration: Yes
Length of sleeve (5' minimum from foundation): 10'
Sleeve sealed properly: Yes

The water supply line is required to be at least ten feet from the septic tank, pump chamber, sewage piping, distribution box, drainfields, and sewage reserve area. If this cannot be accomplished, contact this office for approval prior to installation.

Russell C. George November 13, 2017
Signature of company representative responsible for installation date

For Health Department Use Only – Not to be completed by Installer

Date Insp. Requested: 11/14/17 Date Insp. Approved: 11/14/17 Inspector: SC
Inspection Data: Pitless adapter watertight & water supply line at least 36" below grade ✓
Two piece cap installed and attached to casing securely ✓
Elec. conduit extends at least 18" below grade/attached to cap properly ✓
Safety rope not outside of well cap/casing ✓
Correct well tag attached properly and casing 8" above finished grade ✓
Water supply line sleeved adequately at house connection ✓
Adequate grout observed below pitless adapter ✓



Howard County
Health Department

7178 Columbia Gateway Dr., Columbia, MD 21046
(410) 313-2640 Fax (410) 313-2648
TDD (410) 313-2323 Toll Free 1-866-313-6300
website: www.hchealth.org

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

TO ALL INTERESTED PARTIES

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

Well Site Location:

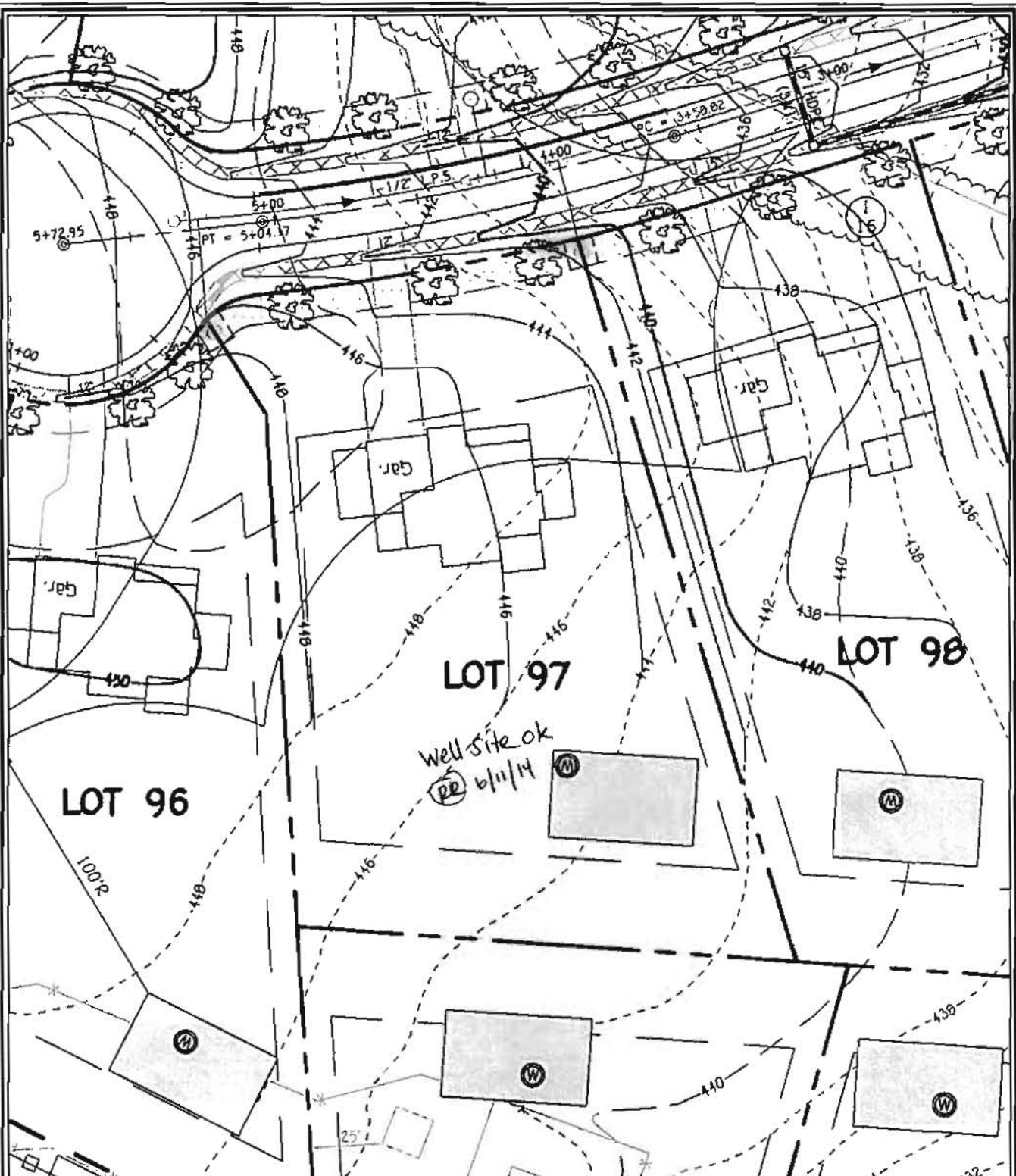
Walnut Creek Phase 3	97	Catalpa Ct.
Subdivision/Property Name	Lot #	Road Name

- ☒ The well site has been staked by Fisher, Collins and Carter, Inc.,
(professional land surveyor or company employing professional land surveyors)
on 05/07/14 (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 3/11/07

I:\2004\04001\dwg\PHASE THREE FINAL\04001 Phase Three WELL MAPS Lots 87-89, Lots 95-97, Lots 101-104 & Lots 107-114.dwg,
5/12/2014 5:33:33 PM USRV1\DS_Gene



WELL LOCATION INFORMATION:

NORTHING = 572,608.51 EASTING = 1,325,764.77
LATITUDE = N39°14'20" LONGITUDE = W76°57'09"

FISHER, COLLINS & CARTER, INC.
CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS

CENTENNIAL SQUARE OFFICE PARK - 10272 BALTIMORE NATIONAL PkE.
ELLSWORTH CITY, MARYLAND 21042
(410) 481 - 2895

**LOT 97 WELL MAP
WALNUT CREEK
PHASE THREE**

Lots 69 - 114, Non-Buildable Preservation Parcels
'O' Thru 'R' & 'V', Non-Buildable Parcel 'S', Buildable Preservation
Parcel 'T' and Buildable Bulk Parcel 'U'

ZONED: RC-DEO & RR-DEO

TAX MAP No. 28 GRID Nos. 4, 5, 10-12, 17, AND 18
FIFTH ELECTION DISTRICT HOWARD COUNTY, MARYLAND
DATE: MAY 1, 2014 SCALE: 1" = 50'



Bureau of Environmental Health

8930 Stanford Boulevard, Columbia, MD 21045

Main: 410-313-2640 | Fax: 410-313-2648

TDD 410-313-2323 | Toll Free 1-866-313-6300

www.hchealth.org

Facebook: www.facebook.com/hocohealth

Maura Rossman, M.D., Health Officer

April 28, 2015

Land Marketing Consultants, Inc.
Attn. Tim Feaga
15950 North Avenue, P.O. Box 482
Lisbon, Maryland 21765

RE: Walnut Creek Lot 97
Catalpa Court
Well Tag: HO - 14 -- 0033

Dear Mr. Feaga:

Follow-up sampling was collected at the well head on March 3rd and April 7th, 2015 and submitted to NTS Laboratory to verify/confirm the presence of **Gross Alpha**, **Gross Beta**, **Radium 226/228** and **Uranium** in the future well water supply. These naturally occurring radioactive nuclides have been demonstrated to be present in a certain type of geologic formation known as the Baltimore Gneiss and in some instances, detected during earlier sampling of this future supply.

Results from this follow-up short-term screening (sample collected April 7, 2015) revealed a **Gross Alpha** of 1.6 ± 1.0 picocuries/liter (pCi/L), while the **Gross Beta** level was 4.9 ± 1.4 pCi/L. The **Gross Alpha** result was below its **maximum contaminant level (MCL)** of 15 pCi/L, while the **Gross Beta** level was below its targeted value of 50 pCi/L (roughly equivalent to the **annual dose rate** of 4 millirems/year).

Long-term testing performed on March 3, 2015 revealed a **Gross Alpha** of $< 1.2 \pm 0.9$ pCi/L, while the **Gross Beta** level was 7.6 ± 1.6 pCi/L. Here the **Gross Alpha** result was below its **MCL** of 15 pCi/L, while the **Gross Beta** level was below its targeted value of 50 pCi/L.

Additionally, testing for **Radium 226/228** and **Uranium** was also performed on March 3, 2015. This testing revealed a **Radium 226** level of 0.6 ± 0.3 pCi/L; while the **Radium 228** level was $< 0.7 \pm 0.5$ pCi/L. These naturally occurring isotopes of radium are considered the most important due to their longer half-lives and health significance. Here the **combined Radium 226 / 228** was below the **MCL** of 5 pCi/L. With respect to **Uranium**, the finding of $< 0.5 \pm 0.4$ pCi/L was well below the **MCL** of 30 µg/L (approx. 20 pCi/L).

At the time of testing and with respect to these parameters, the future well water supply **currently** meets EPA regulatory standards. Additional testing **for these parameters** will not be required to secure the future Use & Occupancy. Please also note that other standard testing parameters (bacteria, nitrate, turbidity and sand) will still be required to help secure Use & Occupancy.

A copy of each test report is enclosed for your information. Please call this office at 410-313-1773 if you have any further questions.

Sincerely,

Bert Nixon, Director
Bureau of Environmental Health

✓ Enclosures
cc: Property file



Maryland State Certified Laboratory #318

NTS - BALTIMORE
Formerly Trace Laboratories, Inc.
5 North Park Drive
Hunt Valley, MD 21030 USA
Telephone: 410/584-9099 / Fax: 410/584-9117
www.nts.com

LETTER OF RESULTS

Requester:

Land Marketing Consultants, Inc.
P.O. Box 482
Lisbon, Maryland 21765

S/O Number: 98951-4A

Report Date: April 13, 2015

Listed below are results of drinking water analyses on a sample collected by client and delivered to National Technical Systems (NTS) for analysis:

Date/Time Collected in Field: April 7, 2015 8:30 am
Date/Time Received in Lab: April 7, 2015 2:15 pm

Information Provided By Client:

Property Location: Walnut Creek Lot 97
Sample Location: Wellhead
Well Tag #: HO-14-0033
Sampler ID #: Ralph Mayne

PARAMETER	METHOD	MCL	RESULT (pCi/L)	COMMENT
Gross Alpha (Short-Term)	EPA 900.0	15 pCi/L	1.6 ± 1.0	Pass
Gross Beta (Short-Term)	EPA 900.0	50 pCi/L	4.9 ± 1.4	Pass

MCL: Maximum Contamination Level, an enforceable level established by the EPA

Note: The primary sources of gross alpha activity in water are Radium-224, Radium-226, and/or Uranium. Gross alpha levels between 5 and 15 pCi/L are considered moderate, and levels greater than 15 pCi/L are considered high. When levels are moderate or high, treatment or further testing is recommended and in certain cases may be required by the health department. Gross beta activity in water may be due to Radium-228 or any combination of beta-emitting elements.

The results in this report relate only to those items tested. If any additional information or clarification of this report is required, please contact us. This test report shall not be reproduced except in full without the written approval of NTS.

Katherine C. Higgs
Manager - Drinking Water Testing

NOTE: NTS is not responsible for the collection or the transportation of the sample
Analyzed by Lab #278

Report 2 of 2

Page 4 of 5

NOTE: LAB 278 - FLORIDA RADIO CHEMISTRY



Maryland State Certified Laboratory #318

NTS - BALTIMORE
Formerly Trace Laboratories, Inc.
5 North Park Drive
Hunt Valley, MD 21030 USA
Telephone: 410/584-9099 / Fax: 410/584-9117
www.nts.com

LETTER OF RESULTS

Requester:

Land Marketing Consultants, Inc.
P.O. Box 482
Lisbon, Maryland 21765

S/O Number: 98951-4

Report Date: March 31, 2015

Listed below are results of drinking water analyses on a sample collected by client and delivered to National Technical Systems (NTS) for analysis:

Date/Time Collected in Field: March 3, 2015 9:30 am
Date/Time Received in Lab: March 4, 2015 10:22 am

Information Provided By Client:

Property Location: Walnut Creek Lot 97
Sample Location: Wellhead
Well Tag #: HO-14-0033
Sampler ID #: Ralph Mayne

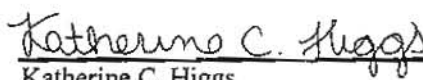
PARAMETER	METHOD	MCL	RESULT (pCi/L)	COMMENT
Gross Alpha (Long-Term)	EPA 900.0	15 pCi/L	$<1.2 \pm 0.9$	Pass
Gross Beta (Long-Term)	EPA 900.0	50 pCi/L	7.6 ± 1.6	Pass
Radium 226	EPA 903.1	5 pCi/L	0.6 ± 0.3	Pass
Radium 228	EPA Ra-05	Combined	$<0.7 \pm 0.5$	
Uranium	EPA 908.0	30 $\mu\text{g/L}$ [*]	$<0.5 \pm 0.4$	Pass

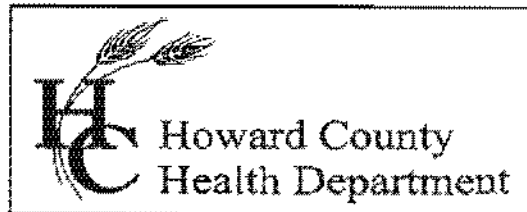
MCL: Maximum Contamination Level, an enforceable level established by the EPA

[*] According to EPA's Implementation Guidance for Radionuclides, 1 $\mu\text{g/L}$ uranium is equal to 0.67 pCi/L.

Note: The primary sources of gross alpha activity in water are Radium-224, Radium-226, and/or Uranium. Gross alpha levels between 5 and 15 pCi/L are considered moderate, and levels greater than 15 pCi/L are considered high. When levels are moderate or high, treatment or further testing is recommended and in certain cases may be required by the health department. Gross beta activity in water may be due to Radium-228 or any combination of beta-emitting elements.

The results in this report relate only to those items tested. If any additional information or clarification of this report is required, please contact us. This test report shall not be reproduced except in full without the written approval of NTS.


Katherine C. Higgs
Manager - Drinking Water Testing



Bureau of Environmental Health

8930 Stanford Blvd., Columbia, MD 21046-2147

Main: 410-313-1774 | Fax: 410-313-2648

TDD 410-313-2323 | Toll Free 1-866-313-6300

www.hchealth.org

Facebook: www.facebook.com/hocohealth

Twitter: [HowardCoHealthDep](https://twitter.com/HowardCoHealthDep)

Maura J. Rossman, M.D., Health Officer

INTERIM CERTIFICATE OF POTABILITY

Expiration Date – JUNE 28, 2018

December 28, 2017

Homeowner

5311 Catalapa Court

Ellicott City, MD 21042

**RE: Walnut Creek, Lot 97
5311 Catalapa Court
Building Permit: B17002907
Well Permit: HO-14-0033**

Dear Homeowner:

This is to advise you that the septic system installation and water well construction for the above referenced property have been inspected and approved. Final approval of the septic system was granted on 12/28/2017. Final approval of the well line connection to the dwelling was granted on 11/14/2017. The well construction was completed on 6/26/2014. Water samples were collected on 12/13/2017.

The water sample results indicate that the water samples submitted for testing were free of coliform and fecal coliform bacteria at the time of sampling and are bacteriologically safe for drinking.

Gross Alpha and Beta samples were also collected on 4/7/2015. Results showed a Gross Alpha level of 1.6 ± 1.0 pCi/L and Gross Beta level of 4.9 ± 1.4 pCi/L. The Gross Alpha was below the maximum contaminant level (MCL) of 15 pCi/L and the Gross Beta was below the target level of 50pCi/L (roughly equivalent to the annual dose rate of 4 millirems per year). At the time of testing and with respect to these parameters, the well water is safe for all uses.

This certifies that the initial sampling requirements of COMAR 26.04.04 "Well Regulations" have been met for the water supply system installed under well permit HO-14-0033. Although the submitted sample results are in compliance with COMAR standards, the Health Department does not guarantee water supplies.

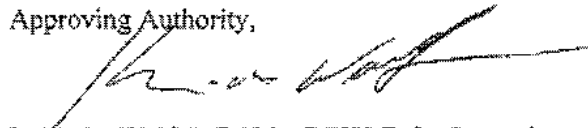
This Interim Certificate of Potability will expire six months from the date of issuance. Submission of a second bacteriological test indicating the water is free of coliform and fecal coliform bacteria is required prior to the expiration date, after which time a Final Certificate of Potability will be issued. Failure to submit an additional sample and obtain a Final Certificate of Potability will result in a Notice of Violation and is punishable as a misdemeanor under the *Annotated Code of Maryland, Environment Article, 9-1311*, subject to a fine of up to \$500 or imprisonment not to exceed three months.

Please contact (410) 313-1773 to schedule a final water sample appointment or contact a certified water quality laboratory to schedule a water sample. A list of laboratories certified by the state of Maryland may be found at the following website:

<http://www.mde.state.md.us/assets/document/WSP-Labs-2010apr16.pdf>

In closing, please refer to our "Homeowner Fact Sheet" for understanding your Best Available Technology (BAT) for your onsite sewage disposal. You will also find a link to Maryland Department of the Environments website which elaborates in further detail operation and maintenance of your BAT.

Approving Authority,



Kevin M Wolf, L.E.H.S., REHS/R.S., Supervisor
Groundwater Management Section
Well & Septic Program

cc: Howard County Dept. of Inspections, Licenses, and Permits
Community Hygiene Program
File

Maura Rossman, M.D., Health Officer

August 27, 2014

Bassler Venture LLC
Attn. Tim Feaga
15950 North Avenue, P.O. Box 482
Lisbou, Maryland 21765

RE: Walnut Creek Lot 97
Catalpa Court
Well Tag: HO - 14 - 0033

Dear Mr. Feaga:

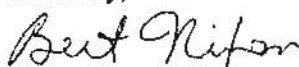
A sample was collected during a yield test on June 25, 2014 and submitted to the Department of Health & Mental Hygiene Laboratories to assess the possible presence of **Gross Alpha** and **Gross Beta** in the future well water supply. **Gross Alpha** and **Gross Beta** measure the total alpha and beta particle activity in a water supply. These naturally occurring radioactive nuclides have been demonstrated to be present in a certain type of geologic formation known as the Baltimore Gneiss which exists in your area of development within the County.

Results from this screening revealed a **Gross Alpha** of 13.0 ± 2.4 picocuries/liter (pCi/L), while the **Gross Beta** level was 8.3 ± 2.1 pCi/L. With the margin of error, the **Gross Alpha** result was above its **maximum contaminant level (MCL)** of 15 pCi/L, while the **Gross Beta** level was below its targeted value of 50 pCi/L (roughly equivalent to the **annual dose rate** of 4 millirems/year).

At the time of testing and with respect to these parameters, the future well water supply **may not meet** EPA regulatory standards. Given margin of error elevated reading for **Gross Alpha**, additional testing **for these parameters** will be required to secure the future Use & Occupancy. The installation of a water softener system and / or a reverse osmosis system may be necessary. If treatment is installed, **pre and post short and long term Gross Alpha and Beta, plus a post Radium 226 / 228** will be needed to properly evaluate the effectiveness of the installed treatment(s). Alternatively, you may collect raw water samples for **short and long term Gross Alpha and Beta, plus Radium 226 / 228** to see if all values are below existing standards. Given that it typically takes up to one month to perform and receive back the **Radium** analyses, plan accordingly. **Please note** that other standard testing parameters (bacteria, nitrate, turbidity and sand) will still be required to help secure Use & Occupancy.

A copy of the test results is enclosed for your information. Please call this office at 410-313-1773 if you have any further questions.

Sincerely,



Bert Nixon, Director
Bureau of Environmental Health

Enclosure
cc: Property file

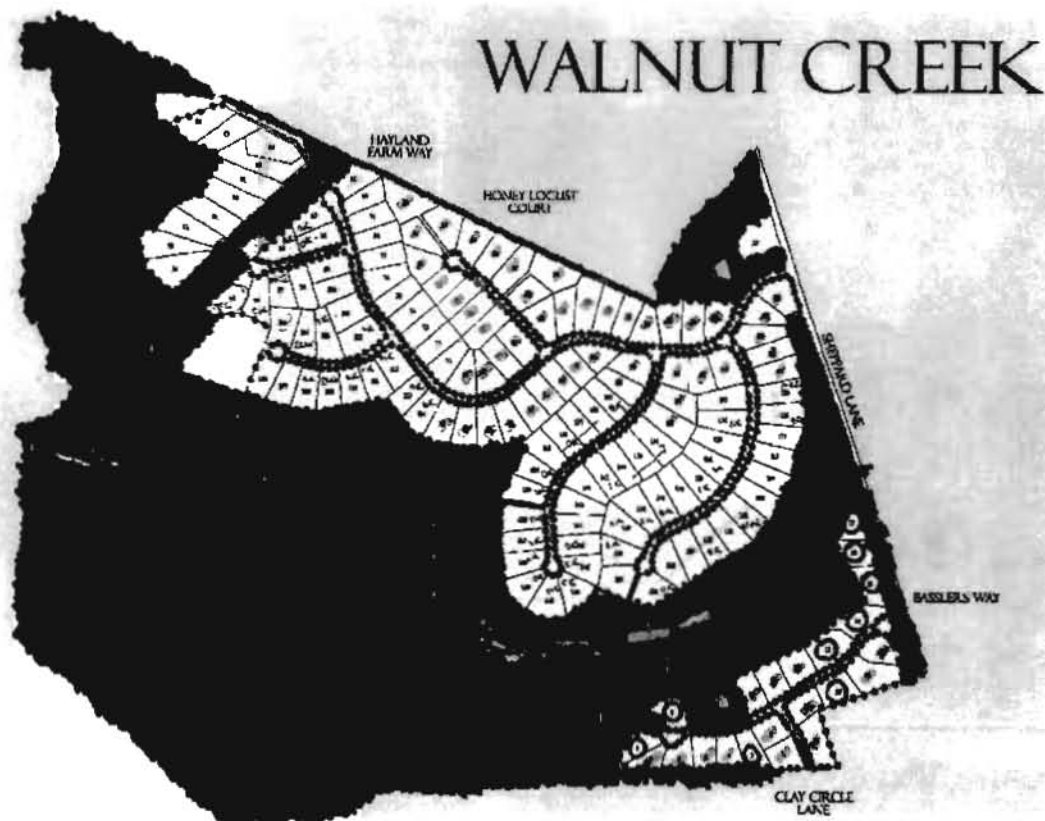
Williams, Jeffrey

From: Williams, Jeffrey
Sent: Friday, May 16, 2014 12:16 PM
To: Tim Feaga
Subject: Walnut Creek Radium testing
Attachments: Walnut Creek radium.pdf; Walnut Creek radium_2.pdf

Hi Tim. I met with Bert regarding possible easement of radium testing at all lots in Walnut Creek. I've attached a map showing the additional lots that we would like to still be tested to ensure that there is not an area of concern in the remaining lots. The lots in the green cloud have been tested and passed. The lots in the red cloud are lots that we would like to be tested. The lots at the top corner (82-86, 90-94) fall within the radium testing boundary. We want the lots near the river tested to prove whether the stream is in fact acting as a natural buffer from the positive tests on the other side and the passing lots above them. Furthermore, we'd like some representative lots tested in the other section near the upper testing boundary to prove that there are no hot spots. If these are also passing, then we would likely be comfortable waiving the remaining.

We'd be happy to meet with you to discuss if you prefer. Thanks.

Jeff Williams
Program Supervisor, Well & Septic Program
Bureau of Environmental Health
Howard County Health Dept.
410-313-4261
jewilliams@howardcountymd.gov



SEND REPORT TO:

DEPARTMENT OF HEALTH AND MENTAL HYGIENE

Laboratories Administration

201 W. Preston St., Baltimore, MD 21201

Robert A. Myers, Ph.D., Director

Lab No.

E002006 327

Howard County Health Department
Bureau of Environmental Health
8930 Stanford Blvd.
Columbia, Maryland 21045

RADIATION ANALYSIS REQUEST FORM

Plant/Site Name: Catalpa CourtCounty: HowardSample Source: Walnut Creek - lot (97)Location: HO-14-6033

(Well no., lab sink, sample tap, etc.)

Radon-222 Bottle A HOKW0033~~Radon-222~~ Field BlankBottle A F13KW02514

Bottle B

Bottle B

County 13

Plant No.

CHECK (one per Box)

Type	
Drinking Water	<input checked="" type="checkbox"/>
Landfill	<input type="checkbox"/>
Stream	<input type="checkbox"/>
Other	<input type="checkbox"/>

Service	
Community	<input type="checkbox"/>
Non-Community	<input type="checkbox"/>
Private	<input checked="" type="checkbox"/>
Other	<input type="checkbox"/>

Point of Collection	
Source (Raw)	<input checked="" type="checkbox"/>
Distribution (treated)	<input type="checkbox"/>
MCL	<input type="checkbox"/>

Testing	
Emergency	<input type="checkbox"/>
Routine	<input checked="" type="checkbox"/>
Recheck	<input type="checkbox"/>
Special	<input type="checkbox"/>

Submitters Code: —Federal Project: —Collector: K. WolffTelephone No.: 410 313 2645Date Collected: 6-25-14Time Collected: 11 a.m. — p.m.Field pH: —Field Chlorine: —Nitric Acid Preserved: Yes ☒ No ☐Iced: Yes ☐ No ☐Remarks: Sample passed pH 12.0 collected @ Yield

<input checked="" type="checkbox"/>	TEST	EPA Code	Lab No.	Method No.	Results (pCi/L)	Date Analyzed	Analyst	Date Reported
<input checked="" type="checkbox"/>	Gross Alpha	4000	2886	EPA 904.0	13.0 ± 2.4	7/1/14	MA	7/2/14
<input checked="" type="checkbox"/>	Gross Beta	4100	2886	"	8.3 ± 2.1	7/1/14	MA	7/2/14
<input type="checkbox"/>	Radium-226	4020						
<input type="checkbox"/>	Radium-228	4030						
<input type="checkbox"/>	Total Uranium	4006						
<input type="checkbox"/>	Radon-222 (Bottle A)	4004						
<input type="checkbox"/>	Radon-222 (Bottle B)	4004						
<input type="checkbox"/>	Radon Field Blank A	4004						
<input type="checkbox"/>	Radon Field Blank B	4004						
<input type="checkbox"/>	Tritium							
<input type="checkbox"/>								

Date Received: 06/27/14Received By: C. Watty BoydData Release Signature: Deborah Miller - JWRDate: 7/3/14

Lab Use Only	Yes	No	N/A
Sample Intact upon arrival?	<input checked="" type="checkbox"/>		
Sample pH < 2.0?	<input checked="" type="checkbox"/>		
Received within holding time?	<input checked="" type="checkbox"/>		

• Tel. No.: (410) 767-5537 • Fax No.: (410) 333-5373

Howard County Health Department
Bureau of Environmental Health
8930 Stanford Blvd.
Columbia, Maryland 21045

Laboratories Administration
201 W. Preston St., Baltimore, MD 21201
Robert A. Myers, Ph.D., Director

Lab No.

EE12807 327E

RADIATION ANALYSIS REQUEST FORM

Plant/Site Name: HCHD

County: Howard

Sample Source: Distilled H₂O

Location: Lab

(Well no., lab sink, sample tap, etc.)

Radon-222 Bottle A —

Radon-222 Field Blank

Bottle A EBKW62614

Bottle B —

Bottle B —

County 13

Plant No.

CHECK (one per Box)

Type	
Drinking Water	<input checked="" type="checkbox"/>
Landfill	<input type="checkbox"/>
Stream	<input type="checkbox"/>
Other	<input type="checkbox"/>

Service	
Community	<input type="checkbox"/>
Non-Community	<input type="checkbox"/>
Private	<input checked="" type="checkbox"/>
Other	<input type="checkbox"/>

Point of Collection	
Source (Raw)	<input checked="" type="checkbox"/>
Distribution (treated)	<input type="checkbox"/>
MCL	<input type="checkbox"/>

Testing	
Emergency	<input type="checkbox"/>
Routine	<input checked="" type="checkbox"/>
Recheck	<input type="checkbox"/>
Special	<input type="checkbox"/>

Submitters Code: —

Federal Project: —

Collector: K. Wolf

Telephone No.: 410 313 7645

Date Collected: 6-26-14

Time Collected: a.m. 4 p.m.

Field pH: —

Field Chlorine: —

Nitric Acid Preserved: Yes ☒ No ☐

Iced: Yes ☒ No ☐

Remarks: Field Blank for Count of A

<input checked="" type="checkbox"/>	TEST	EPA Code	Lab No.	Method No.	Results (pCi/L)	Date Analyzed	Analyst	Date Reported
<input type="checkbox"/>	Gross Alpha	4000	2887	EPA 910.0	<2.0	7/1/14	MA	7/2/14
<input type="checkbox"/>	Gross Beta	4100	2887	.1	<4.0	1	1	7/2/14
<input type="checkbox"/>	Radium-226	4020						
<input type="checkbox"/>	Radium-228	4030						
<input type="checkbox"/>	Total Uranium	4006						
<input type="checkbox"/>	Radon-222 (Bottle A)	4004						
<input type="checkbox"/>	Radon-222 (Bottle B)	4004						
<input type="checkbox"/>	Radon Field Blank A	4004						
<input type="checkbox"/>	Radon Field Blank B	4004						
<input type="checkbox"/>	Tritium							
<input checked="" type="checkbox"/>	Radon Field Blank							

Date Received: 06/27/14

Received By: C. W. Boyd

Data Release Signature: Deborah Miller-John

Date: 7/3/14

Lab Use Only	Yes	No	N/A
Sample Intact upon arrival?	<input checked="" type="checkbox"/>		
Sample pH <2.0?	<input checked="" type="checkbox"/>		
Received within holding time?	<input checked="" type="checkbox"/>		

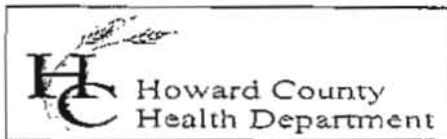
•Tel. No.: (410) 767-5537 •Fax No.: (410) 333-5373

FORM REVISED 01/13
DHMH 4540 01/13

CUSTOMER COPY !

ORIG 1781230 7/24/12

Invoice



Bureau of Environmental Health
Attn: Bert Nixon, Director

DATE: JULY 24, 2014
DATES OF SERVICE: JUNE 25, 26, & JULY 1, 3 2014
INVOICE #: 2014-014

8930 Stanford Boulevard, Columbia, MD 21045
Phone 410-313-2640 Fax 410-313-2648
www.hchealth.org

BILL TO Heritage Reality and Land Development
Attn: Tim Feaga
15950 North Ave P.O. Box 482
Lisbon, MD 21765

COMMENTS Payment due upon receipt. Letter and results will be released upon receipt of payment.

DATE	DESCRIPTION	BALANCE	AMOUNT
06/25/14	Gross alpha/beta testing performed for Walnut Creek, Lots # 76 And 97 HO - 95 - 2667 HO - 14 - 0033		\$90.00
06/26/14	Gross alpha/beta testing performed for Walnut Creek Lot # 104 HO - 14 - 0037		\$45.00
07/01/14	Gross alpha/beta testing performed for Walnut Creek Lots # 108 And 109 HO - 14 - 0039 HO - 14 - 0040		\$90.00
07/03/14	Gross alpha/beta testing performed for Walnut Creek Lot # 96 HO - 14 - 0032		\$45.00
			AMOUNT DUE
			\$270.00

Please detach and return with payment.

REMITTANCE	
Invoice #	2014-014
Site Information	Walnut Creek Lots 76, 96, 97, 104, 108, 109
Amount Due	\$270.00

Receipt 54598
8/26/14

Make Checks Payable to: **Director of Finance** Mail Payments to: **Bureau of Env. Health**

FOUNTAIN VALLEY ANALYTICAL LABORATORY, INC.

1413 Old Taneytown Rd. Westminster, MD (410) 848-1014 (410) 876-4554 FAX (410) 848-0298

REPORT OF ANALYSIS

Laboratory ID #: 118860 Account #: 1920
Reference: Walnut Creek Lot 97 Company: Robert L Feezer Co- New Homes
Location: 5311 Catalpa Court Requested By: Rick Cross
Ellicott City, MD 21042 Source: Well Water
Date/ Time Collected: 12/13/2017 1330 Site: Pressure Tank
Date/Time Rec'd: 12/13/2017 1500 Treatment: None
Chlorine ppm: Free: ND Total: ND pH: 7.7
Collected By: C. Mooshian 7268CM Well #: HO-14-0033

PARAMETERS	RESULTS	UNITS	REFERENCE	METHOD	DATE/TIME/ANALYST
Bacteria, Coliform, Total, MPN	✓ <1.0	MPN/ 100 ml	<1.0	SM20 9223	12/14/2017 / 1000 / CRS
Bacteria, E. coli, MPN	✓ <1.0	MPN/ 100 ml	<1.0	SM20 9223	12/14/2017 / 1000 / CRS
Nitrate	✓ <1.0	mg/L	10	601	12/14/2017 / 0900 / CRS
Turbidity	✓ 0.51	NTU	<10	SM20 2130B	12/14/2017 / 0915 / CRS
Sand	✓ NS	mg/L	5	Visual/Gravimetric	12/14/2017 / 0915 / CRS

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NOTES

- 1 mg/L = milligrams per liter (also, parts per million)
- 2 MPN/ 100 ml = Most Probable Number [of viable bacteria] per 100 ml of sample.
- 3 NS = None Seen (NS indicates less than 5 mg/L)
- 4 NTU = Nephelometric Turbidity Units
- 5 Results less than or within the reference range are considered satisfactory and within potable water limits at the time of sampling.
- 6 ND:None Detected
- 7 Visual well check: Sealed, vented cap
- 8 pH & Chlorine level tested on site

Reason for Test : Use & Occupancy
Building Permit # : B17002907

Date Reported: 12/14/2017