

C1 3754

SEQUENCE NO. (MDE USE ONLY)

STATE OF MARYLAND WELL COMPLETION REPORT FILL IN THIS FORM COMPLETELY PLEASE TYPE

THIS REPORT MUST BE SUBMITTED 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

DATE WELL COMPLETED MM DD YY

Depth of Well

PERMIT NO. FROM "PERMIT TO DRILL WELL" HO-95-0320

OWNER J T S CORPORATION last name first name STREET OR RFD Clarksville Pike (Md 108) TOWN Clarksville SUBDIVISION Macheth Farm SECTION LOT 14

WELL LOG Table with columns: DESCRIPTION, FEET (FROM, TO), check if water bearing. Includes handwritten entries: Top Soil, Brown mica, Grey mica w/ quartz, Sandstone, Grey mica w/ quartz.

GROUTING RECORD Form with checkboxes for YES/NO, CEMENT (CM), BENTONITE CLAY (BC), NO. OF BAGS (36), NO. OF POUNDS (3600), GALLONS OF WATER (216), DEPTH OF GROUT SEAL (65 ft).

CASING RECORD Form with checkboxes for STEEL (ST), CONCRETE (CO), PLASTIC (PL), OTHER (OT). Includes MAIN CASING TYPE (ST), Nominal diameter (6 inch), Total depth (80 feet).

OTHER CASING (if used) Form with columns for diameter (inch) and depth (feet).

SCREEN RECORD Form with checkboxes for STEEL (ST), BRASS (BR), OPEN HOLE (HO), PLASTIC (PL), OTHER (OT). Includes screen type (HO) and depth (79).

NUMBER OF UNSUCCESSFUL WELLS: 0. WELL HYDROFRACTURED: YES (Y).

CIRCLE APPROPRIATE LETTER: A (A WELL WAS ABANDONED AND SEALED WHEN THIS WELL WAS COMPLETED).

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 MWD 040. DRILLERS SIGNATURE: George F. Shubert. LIC. NO. 1 AWD 788.

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

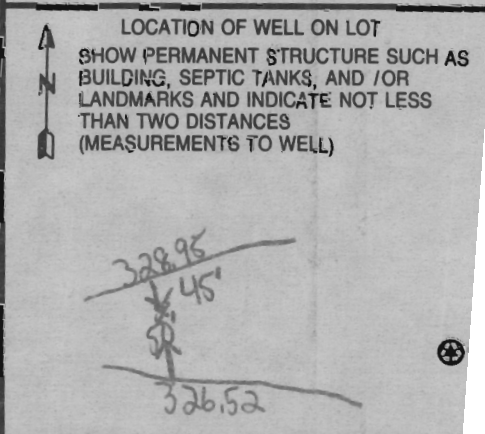
DEPTH (nearest ft.) Form with columns 1-21. Includes handwritten entries: 1 HO, 2 79, 3 600.

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.

PUMPING TEST Form with handwritten entries: HOURS PUMPED (3), PUMPING RATE (4 gal. per min.), METHOD USED TO MEASURE PUMPING RATE (Bucket), WATER LEVEL (38 ft. before, 191 ft. when pumping), TYPE OF PUMP USED (S submersible).

PUMP INSTALLED Form with handwritten entries: DRILLER INSTALLED PUMP (NO), TYPE OF PUMP INSTALLED (29), CAPACITY: GALLONS PER MINUTE (31-35), PUMP HORSE POWER (37-41), PUMP COLUMN LENGTH (43-47), CASING HEIGHT (49 above, 2 below).



**OWNER INFORMATION 10169**

Date Received (APA) **02 24 06**

8 MM DD YY 13

**J T S Corporation**

15 Last Name Owner First Name 34

**8808 Centre Park Drive S209**

36 Street or RFD 55

**Columbia, Md 21045**

57 Town 70 State 72 Zip 76

**LOCATION OF WELL**

**Howard** COUNTY **21**

**Macbeth Farm**

23 SUBDIVISION 42

SECTION **44** LOT **14**

44 46 48 50

**Clarksville**

52 NEAREST TOWN 71

MILES FROM TOWN (enter 0 if in town) **1** M I

73 76 77 78

**DRILLER INFORMATION**

**George F. Easterday**

Driller's Name **M W D 040**

76 License No. 81

**L. Franklin Easterday, Inc.**

Firm Name

**9265 Brown Church Rd., MT. Airy, Md. 21771**

Address

**George F. Easterday** **2/23/2006**

Signature Date

**Clarksville Pike (Md 108)**

11 NEAR WHAT ROAD 30

ON WHICH SIDE OF ROAD (CIRCLE APPROPRIATE BOX)

34 **500+** 37

DISTANCE FROM ROAD Ft. ENTER FT OR MI 38 39

TAX MAP: **34** BLK: **24** PARCEL **90**

**Clarksville Pike**

**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)**

DOMESTIC POTABLE SUPPLY & RESIDENTIAL IRRIGATION

FARMING (LIVESTOCK WATERING & AGRICULTURAL IRRIGATION)

INDUSTRIAL, COMMERCIAL, DEWATERING

PUBLIC WATER SUPPLY WELL

TEST, OBSERVATION, MONITORING

GEO-THERMAL

**NOT TO BE FILLED IN BY DRILLER HEALTH DEPARTMENT APPROVAL**

**Howard** COUNTY NAME **AS18543** COUNTY NO.

STATE SIGNATURE **3/23/06** INSERT S → 41

DATE ISSUED **3/23/06** CO SIGNATURE **3/23/06** EXP. DATE

43 MM DD YY 48

NORTH GRID **494 0 0 0** EAST GRID **817 0 0 0**

50 55 57 63

APPROXIMATE DEPTH OF WELL **300** FEET

24 28

APPROXIMATE DIAMETER OF WELL **6** INCH

NEAREST TOWN

SHOW MAJOR FEATURES OF BOX & LOCATE WELL WITH AN X

SOURCES OF DRILLING WATER

- wells**
- 
- 

WRITE THE BOX NUMBER FROM THE MAP HERE

**810** ↓

E **490** 4 ←

N

000  
000

**4/12/06**  
**Radium Sample Taken During Yield Test**  
**(BB)**

**METHOD OF DRILLING (circle one)**

BORED (or Augered) JETTED Jetted & DRIVEN

**AIR-ROTary** AIR-PERCussion ROTARY (Hydraulic Rotary)

37 CABLE REVerse-ROTary DRive-POINT

other

REPLACEMENT OR DEEPEINED WELLS (CIRCLE APPROPRIATE BOX)

THIS WELL WILL NOT REPLACE AN EXISTING WELL

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

THIS WELL WILL REPLACE A WELL THAT WILL BE USED AS A STANDBY-CONTACT LOCAL APPROVING AUTHORITY FOR POLICY ON STANDBY WELLS

THIS WELL WILL DEEPEIN AN EXISTING WELL

PERMIT NUMBER OF WELL TO BE REPLACED OR DEEPEINED (IF AVAILABLE) 41 \_\_\_\_\_ 52

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

APPROP. PERMIT NUMBER **HO 2004 G 008**

PERMIT No. **HO-95-0326**

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 **14 E 10**

**Clarksville**

**Prestwick**

**Clarksville Pike**

**(X)**

**SPECIAL CONDITIONS**

NOTE - APPROVING AUTHORITIES SHOULD USE SEPARATE SHEET IF NEEDED

8:30

**FIELD DATA SHEET**  
**HOWARD COUNTY WELL YIELD TEST**

Well Permit No. HO - 95-0320  
 Location of property (road) CLARKSVILLE PIKE Route 108  
 Subdivision MACBETH FARM Lot 14 Block \_\_\_\_\_ Plat \_\_\_\_\_ Sec. \_\_\_\_\_  
 Well Driller EASTERDAY Owner JTS CWP

Depth of well 600 3±  
 Distance of measuring point (M.P.) above ground 2 Ft  
 Static water level (S.W.L.) below M.P. 38 Ft

**I. High rate pumping -- reservoir drawdown**

Time pump started 10:00 Pumping rate 15 gpm  
 Total time 30 min to reach pumping water level 191 ft. below M.P.

**II. Recovery pump test data - observations to be recorded every 15 minutes**

TIME (in 15 minute intervals)	WATER LEVEL below M.P.	PUMPING RATE time to fill <u>3</u> gallon bucket	FLOW METER READING (if used) Pump set <u>380'</u>	CALCULATED FLOW (gallons per minute)
10:30	191	15 sec	Pump set 380'	4 gpm
10:45	191	15 sec		4 gpm
11:00	191	15 sec		4 gpm
11:15	191	15 sec		4 gpm
11:30	191	15 sec		4 gpm
11:45	191	15 sec		4 gpm
12:00	191	15 sec		4 gpm
12:15	191	15 sec		4 gpm
12:30	191	15 sec		4 gpm
12:45	191	15 sec		4 gpm
1:00	191	15 sec		4 gpm
1:15	191	15 sec		4 gpm
1:30	191	15 sec		4 gpm

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. Inc Telephone #: 410-781-4655  
Address: 6301 Barnhart Ave,  
Sykesville, MD

(Must circle one) Licensed Plumber Licensed Well Driller Licensed Well Pump Installer  
License # and name of individual responsible for the field installation:  
Name (Print): Robert L. Feezer License # 2122

\*A licensed individual must perform the actual installation. Apprentices must be under the direct supervision of a licensed journeyman or master plumber, pump installer or well driller. Licenses may be subjected to field verification.

Name of Property Owner: MV Homes Telephone #: 410-379-5956  
Subdivision: CLARKSVILLE OVERLOOK Lot #: 14 Well Tag #: HO-95-0320  
Site Address: CLARKSVILLE, MD 21029

<u>Submersible Pump Data</u>	<u>Pitless Adapter</u>	<u>Well Cap and Electric Conduit</u>
Make: <u>STA-RITE</u>	Make: <u>Campbell</u>	Two piece watertight cap: <input checked="" type="checkbox"/>
Model #: <u>55P4H515 221</u>	Model #: <u>PT 800</u>	Screened, vented well cap: <input checked="" type="checkbox"/>
Pump Capacity: <u>5</u> GPM	Depth: <u>42"</u> (36" min)	Cap secured to casing: <input checked="" type="checkbox"/>
Well Yield: <u>4</u> GPM	NSF approved: <input checked="" type="checkbox"/>	Conduit min 18" B.G.: <input checked="" type="checkbox"/>
Depth of well encountered at time of pump installation: _____ (feet)		Conduit secured to well cap: <input checked="" type="checkbox"/>

If pump capacity exceeds well yield, a low water cut off switch is required by NSPC 1990 Section 17.8.4  
Torque arrestors or Cable guards are required - Must circle one  
Safety rope, if used, attached to inside of well casing with eye bolt

<u>Piping to house</u>	<u>House Connection</u>
Type: <u>Poly</u>	PVC sleeved to undisturbed soil at wall penetration: <input checked="" type="checkbox"/>
PSI: <u>200</u> (160 psi min)	Approximate length of sleeve: <u>10'</u>
Depth of supply line: <u>42</u> (36" min)	Sleeve caulked and sealed properly: <input checked="" type="checkbox"/>

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.

Signature of company representative responsible for installation: Robert L. Feezer date: 7/31/08

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

Date Insp. Requested: \_\_\_\_\_ Date Insp. Approved: 7/28/08 RB  
Inspection Data: Pitless adapter and 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 installed inside of well 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

3/23/06 well site OK

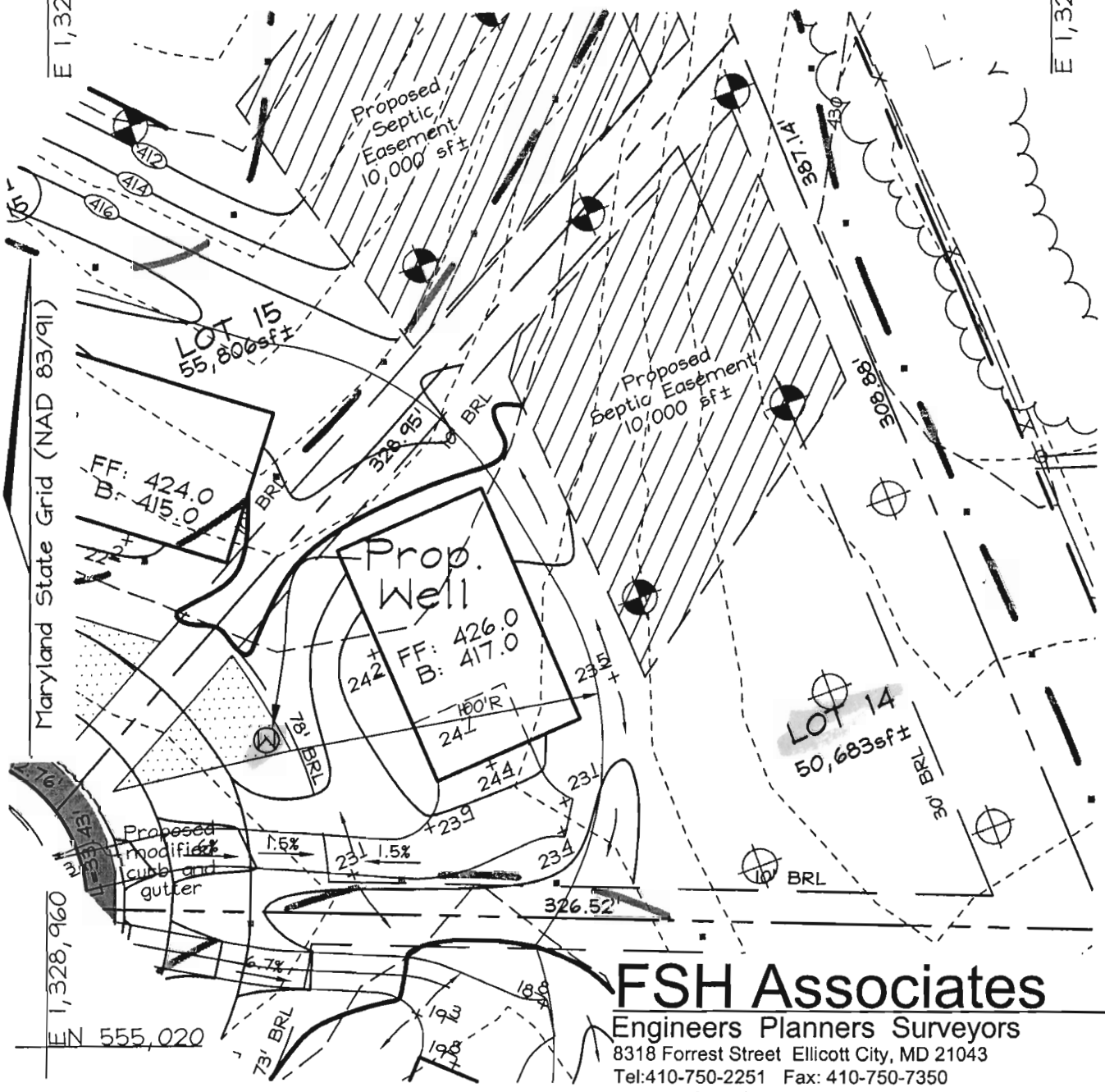
N 555,380

N 555,380

E 1,328,960

E 1,329,280

Note:  
The proposed well shown on this plan will be staked out in the field by FSH Associates, Professional Surveyor prior to well drilling.



# FSH Associates

Engineers Planners Surveyors  
8318 Forrest Street Ellicott City, MD 21043  
Tel: 410-750-2251 Fax: 410-750-7350  
E-mail: info@fsha.biz

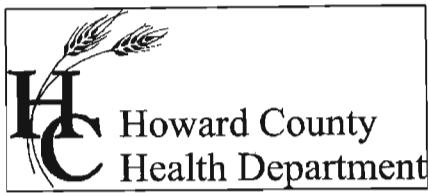
DESIGN BY: PS  
 DRAWN BY: CD  
 CHECKED BY: ZYF  
 SCALE: 1"=50'  
 DATE: Feb. 9, 2006  
 W.O. No.: 3165  
 SHEET No.: 14 OF 35

## WELL PERMIT PLAN MACBETH FARM

LOT 14

TAX MAP 34 GRID 18 & 24  
4TH ELECTION DISTRICT

PARCEL 90  
HOWARD COUNTY, MARYLAND



Bureau of Environmental Health  
7178 Columbia Gateway Drive Columbia, Maryland 21046-2132  
(410) 313-2640 Fax (410) 313-2648  
TDD (410) 313-2323 Toll Free 1-866-313-6300  
website: www.hchealth.org

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

August 28, 2008

NV Homes  
6085 Marshalee Drive, #130  
Elkridge, MD 21075

FAX SENT VIA FACSIMILE 410-997-4358

RE: Clarksville Overlook, Lot 14  
12865 Macbeth Farm Lane  
Clarksville, MD 21029  
BP# B07004719  
Well Tag #: HO-95-0320

Dear Sir:

This is to advise you that the septic system for the above referenced property has been installed and inspected. **Final approval of the septic system was granted on 8/27/2008. Final approval of the well line connection to the dwelling was approved on 7/28/2008.**

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. The water sample results were found to be in compliance with COMAR water quality standards.

Gross Alpha and Beta samples were also collected on 7/29/2008. Both findings were below the maximum limit suggested by the EPA. At the time of the testing and with respect to these parameters, the future well water supply appears safe for all uses. No addition testing **for these parameters** will be required to secure the future Use and Occupancy.

#### **INTERIM CERTIFICATE OF POTABILITY**

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-95-0320. Although the submitted sample results are in compliance with COMAR standards, the Health Department does not guarantee water supplies. Based upon satisfactory investigation and evaluation, the Howard County Health Department as authorized by the Maryland Department of the Environment accepts this well system as required by COMAR 26.04.04.

This certificate may become final upon completion of the second bacteriological test, which is to be taken by the county health department within six months of receipt of this letter. **Please contact (410) 313-1773 to schedule a final water sample appointment. Currently, there is no charge for this final sampling.**

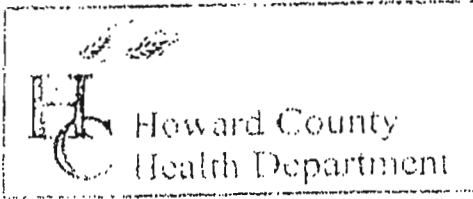
Date of Water Samples: 8/8/2008 and 8/20/2008  
Date of Samples for Gross Alpha & Gross Beta: 7/29/2008  
Date of Well Completion: 4/10/2006

Approving Authority,



Brian Baker, R. S.  
Well & Septic Program

cc: Building Inspector's Office  
Community Health Services  
File



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 F.S.H. ASSOCIATES,  
(professional land surveyor or company employing professional land surveyors)  
on 2-20-06 (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

JTS CORPORATION

LOTS 1-35 MACBETH FARM



TRACE LABORATORIES, INC  
 A Methode Electronics, Inc. Company  
 5 North Park Drive  
 Hunt Valley, MD 21030 USA  
 Telephone: 410/584-9099 / Fax: 410/584-9117  
 Website: www.tracelabs.com / Email: info@tracelabs.com

Maryland State Certified Laboratory # 318

### CERTIFICATE OF ANALYSIS

**Requester:**

NV Homes, Inc  
 Attn: Buddy  
 6085 Marshalee Drive Suite 130  
 Elkridge, Maryland 21075

**S/O Number:** 69343

**Report Date:** August 11, 2008

**Property Sampled:** 12865 Macbeth Farm Lane, 21029

**County:** Howard  
**Subdivision:** Clarksville Overlook  
**Lot #:** 14  
**Building Permit #:** Not Provided

**Tax Map #:** 34

**Parcel #:** 90

**Date/Time Collected:** August 8, 2008 at 8:45 am

**Date/Time Received:** August 8, 2008 at 2:30 pm

**Sample Location:** Pressure Tank Tap  
**Sampler ID:** 9406NW

**Samples Iced:** Yes

**Residual Cl<sub>2</sub> <0.1 mg/L:** Yes

**Well Tag Number:** HO-95-0320

**Well Condition:** 2-Piece Cap  
 Satisfactory

**Water Conditioning/Treatment:** Neutralizer, Softener

PARAMETER	RESULT	METHOD	MCL/*SMCL	
Nitrate	1.9 mg/L as N	SM 4500D	10 mg/L as N	Pass
Turbidity	9.6 NTU	EPA 180.1	10 NTU	Pass
pH	7.7 Units	EPA 150.1	*6.5-8.5 Units	***
Sand	Negative		Negative	
Total Coliform	PRESENT	SM 9223B	Absent	FAIL
E.coli	Absent	SM 9223B	Absent	

Allison R. Milburn  
 Manager-Drinking Water Testing

MCL=Maximum Contamination Level

\*SMCL=Secondary Maximum Contamination Level

\*\*\*A non-enforceable parameter that may cause cosmetic effects or aesthetic effects (such as taste, color or odor) in drinking water.



TRACE LABORATORIES, INC  
A Methode Electronics, Inc. Company  
5 North Park Drive  
Hunt Valley, MD 21030 USA  
Telephone: 410/584-9099 / Fax: 410/584-9117  
Website: www.tracelabs.com / Email: info@tracelabs.com

Maryland State Certified Laboratory # 318

CERTIFICATE OF ANALYSIS

Requester: NV Homes, Inc  
Attn: Buddy  
6085 Marshalee Drive Suite 130  
Elkridge, Maryland 21075

*Brian*  
*443 309*  
*7779*

S/O Number: 69231  
Report Date: August 18, 2008

Property Sampled: 12865 Macbeth Farm Lane, 21029

County: Howard  
Subdivision: Clarksville Overlook Tax Map #: 34  
Lot #: 14 Parcel #: 90

Date/Time Collected: July 29, 2008 at 11:10 am  
Date/Time Received: July 29, 2008 at 3:15 pm

Sample Location: Pressure Tank Tap Samples Iced: Yes  
Sampler ID: 9406NW Residual Cl<sub>2</sub> <0.1 mg/L: Yes

Well Tag Number: HO-9<sup>5</sup>-0320  
Well Condition: 2-Piece Cap  
Satisfactory

Water Conditioning/Treatment: Not Observed

PARAMETER	RESULT	METHOD	DETECTION LIMIT
Gross Alpha+	16.6 +/- 2.3 pCi/L	EPA 900.0	1.0 pCi/L
Gross Beta+	21.2 +/- 1.9 pCi/L	EPA 900.0	1.8 pCi/L
Radium 226++	0.7 +/- 0.2 pCi/L	EPA 903.1	0.2 pCi/L
Radium 228++	2.6 +/- 0.7 pCi/L	EPA Ra-05	0.8 pCi/L
Uranium++	5.5 +/- 1.4 pCi/L	EPA 908.0	0.7 pCi/L

*Allison R. Milburn*  
Allison R. Milburn  
Manager-Drinking Water Testing

Samples analyzed by Laboratory #278+  
Samples analyzed by Laboratory #E83033++



**CERTIFICATE OF ANALYSIS**

**Requester:**  
 NV Homes, Inc  
 Attn: Buddy  
 6085 Marshalee Drive Suite 130  
 Elkridge, Maryland 21075

**S/O Number:** 69231  
**Report Date:** August 18, 2008

**Property Sampled:** 12865 Macbeth Farm Lane, 21029

**County:** Howard  
**Subdivision:** Clarksville Overlook **Tax Map #:** 34  
**Lot #:** 14 **Parcel #:** 90

**Date/Time Collected:** July 29, 2008 at 11:10 am  
**Date/Time Received:** July 29, 2008 at 3:15 pm

**Sample Location:** Pressure Tank Tap **Samples Iced:** Yes  
**Sampler ID:** 9406NW **Residual Cl<sub>2</sub> <0.1 mg/L:** Yes

**Well Tag Number:** HO-96-0320  
**Well Condition:** 2-Piece Cap  
 Satisfactory

**Water Conditioning/Treatment:** Not Observed

PARAMETER	RESULT	METHOD	DETECTION LIMIT
Gross Alpha+	16.6 +/- 2.3 pCi/L	EPA 900.0	1.0 pCi/L
Gross Beta+	21.2 +/- 1.9 pCi/L	EPA 900.0	1.8 pCi/L
Radium 226++	0.7 +/- 0.2 pCi/L	EPA 903.1	0.2 pCi/L
Radium 228++	2.6 +/- 0.7 pCi/L	EPA Ra-05	0.8 pCi/L
Uranium++	5.5 +/- 1.4 pCi/L	EPA 908.0	0.7 pCi/L

*Allison R. Milburn*  
 Allison R. Milburn  
 Manager-Drinking Water Testing

Samples analyzed by Laboratory #278+  
 Samples analyzed by Laboratory #E83033++

*Page 1 scanned  
 Page 2 + 3 were NOT scanned*



**Florida Radiochemistry Services, Inc.**

**Sample Login**

<b>Client:</b>	<b>Trace Labs</b>	<b>Date / Time Received</b>	<b>Work order #</b>
		<b>07/30/08 09:41</b>	<b>0807185</b>
<b>Client Contact:</b>	<b>Allison Milburn</b>		
<b>Client P.O.</b>	<b>5510</b>		
<b>Project I.D.</b>	<b>69231</b>		
<b>Lab Sample I.D.</b>	<b>Client Sample I.D.</b>	<b>Sample Date/Time</b>	<b>Analysis Requested</b>
<b>0807185-03</b>	<b>69231</b>	<b>07/29/08 16:00</b>	<b>Ra226, Ra228, U</b>

**Analysis Results**

<b>Radium 226</b>	<b>0.7</b>	<b>Radium 228</b>	<b>2.6</b>
<b>Error +/-</b>	<b>0.2</b>	<b>Error +/-</b>	<b>0.7</b>
<b>MDL</b>	<b>0.2</b>	<b>MDL</b>	<b>0.8</b>
<b>EPA Method</b>	<b>903.1</b>	<b>EPA Method</b>	<b>Ra-05</b>
<b>Prep Date</b>	<b>7/31/2008</b>	<b>Prep Date</b>	<b>7/31/2008</b>
<b>Prep Time</b>	<b>10:10</b>	<b>Prep Time</b>	<b>10:10</b>
<b>Analysis Date</b>	<b>08/05/08</b>	<b>Analysis Date</b>	<b>08/05/08</b>
<b>Analysis Time</b>	<b>10:40</b>	<b>Analysis Time</b>	<b>10:59</b>
<b>Analyst</b>	<b>MJN</b>	<b>Analyst</b>	<b>PJ</b>
<b>Uranium</b>	<b>5.5</b>		
<b>Error +/-</b>	<b>1.4</b>		
<b>MDL</b>	<b>0.7</b>		
<b>EPA Method</b>	<b>908.0</b>		
<b>Prep Date</b>	<b>07/31/08</b>		
<b>Prep Time</b>	<b>12:51</b>		
<b>Analysis Date</b>	<b>08/01/08</b>		
<b>Analysis Time</b>	<b>16:03</b>		
<b>Analyst</b>	<b>MJN</b>		
<b>Units</b>	<b>pCi/l</b>	<b>Units</b>	<b>pCi/l</b>



# Florida Radiochemistry Services, Inc.

Contact: Michael J. Naumann

5456 Hoffner Ave., Suite 201 Orlando, FL 32812

Phone: (407) 382-7733 Fax: (407)382-7744

Certification I. D. # 278

Lab Sample I.D.: 0807185-03

Client Sample I.D. 69231 (12865 Macbeth Farm Ln)

Sample Date / Time: 07/29/08 16:00

## Results:

Gross Alpha:	16.6	Gross Beta:	21.2
Error +/-:	2.3	Error +/-:	1.9
MDL:	1.0	MDL:	1.8
EPA Method:	900.0	EPA Method:	900.0
Prep Date:	07/30/08	Prep Date:	07/30/08
Analysis Date:	07/31/08	Analysis Date:	07/31/08
Analyst:	MJN	Analyst:	MJN
Units	pCi/l	Units	pCi/l



TRACE LABORATORIES, INC  
 A Methode Electronics, Inc. Company  
 5 North Park Drive  
 Hunt Valley, MD 21030 USA  
 Telephone: 410/584-9099 / Fax: 410/584-9117  
 Website: www.tracelabs.com / Email: info@tracelabs.com

Maryland State Certified Laboratory # 318

### CERTIFICATE OF ANALYSIS

**Requester:** NV Homes, Inc  
 Attn: Buddy  
 6085 Marshalee Drive Suite 130  
 Elkridge, Maryland 21075

**S/O Number:** 69466  
**Report Date:** August 21, 2008

**Property Sampled:** 12865 Macbeth Farm Lane, 21029, Retest #1

**County:** Howard  
**Subdivision:** Clarksville Overlook  
**Lot #:** 14  
**Building Permit #:** Not Provided

**Tax Map #:** 34  
**Parcel #:** 90

**Date/Time Collected:** August 20, 2008 at 8:30 am  
**Date/Time Received:** August 20, 2008 at 3:30 pm

**Sample Location:** Powder Room Tap  
**Sampler ID:** 9406NW

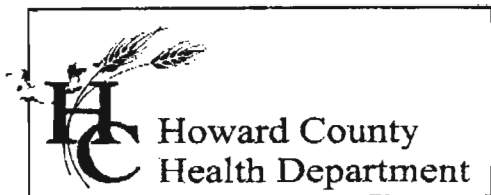
**Samples Iced:** Yes  
**Residual Cl<sub>2</sub> <0.1 mg/L:** Yes

**Well Tag Number:** HO-95-0320  
**Well Condition:** 2-Piece Cap  
 Satisfactory

**Water Conditioning/Treatment:** Neutralizer, Softener

PARAMETER	RESULT	METHOD	MCL	
Total Coliform	Absent	SM 9223B	Absent	Pass
E.coli	Absent	SM 9223B	Absent	Pass

*Allison R. Milburn*  
 Allison R. Milburn  
 Manager-Drinking Water Testing



Bureau of Environmental Health  
7178 Columbia 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

Penny E. Borenstein, M.D., M.P.H., Health Officer

May 23, 2006

JTS Corporation  
5300 Dorsey hall Drive  
Suite 200  
Ellicott City, Maryland 21042

RE: MacBeth Farm Lot 14  
Well Tag: HO-95-0320

To Whom It May Concern:

A sample was collected from a yield test on April 12, 2006 and submitted to GPL 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  $16.7 \pm 1.5$  picocuries/liter (pCi/L); while the **Gross Beta** level was  $3.6 \pm 0.7$  pCi/L. The **Gross Alpha** result exceeded its maximum contaminant level (MCL) of 15 pCi/L, while the **Gross Beta** level was below its MCL of 50 pCi/L.

Since the **Gross Alpha** finding exceeded its MCL, additional testing for **Radium** will be necessary prior to occupancy to verify existing levels. Alternatively, you may install treatment designed to reduce **Gross Alpha**, **Gross Beta** and **Radium**, plus provide post treated results confirming that levels are in conformance with existing standards. These tests are in addition to the standard parameters required for 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 or to discuss additional testing requirements.

Sincerely,

Bert Nixon, Deputy Director  
Bureau of Environmental Health

cc: Eric Dougherty, MDE Water Mgmt., Groundwater  
Well & Septic property file



Send Report To:  
Howard County  
Environmental  
Health

State of  
 DHMH - Laborat  
 Division of Envir  
 MacBeth Farm  
 JTS Corporation Suite 209  
 8808 Centre Park Dr. Columbia, MD 21045

**RADIATION LABORATORY**

201 W. Preston Street, Baltimore, Maryland 21201  
 John M. DeBoy, Dr. P.H., Director

**LABORATORY ANALYSIS REQUEST**

MF14BB950320

Sample Bottle No. A: 7 No. B: \_\_\_\_\_ Field Blank Bottle No. A: \_\_\_\_\_ No. B: \_\_\_\_\_

Site Name: Macbeth Farm - Lot 14 County: Howard

Sample Source: Rt. 108 Location: Well # Ho-95-0320  
 (well no., lab sink, sample tap, etc.)

County:  3 Plant No.

CHECK (one per box)

Drinking Water   
 Landfill   
 Stream   
 Other  Well

Community   
 Non-community   
 Private   
 Other

Source (raw water)   
 Distribution (treated)   
 MCL

Emergency   
 Routine   
 Recheck   
 Special

Collector: Brian Baker

Telephone No: (410) 313-2643

Date Collected: 4/12/2006

Time Collected: \_\_\_\_\_ a.m. 12:30 p.m.

Nitric Acid Preserved: Yes  No

Iced: Yes  No

Submitters Code:   Federal Project:  Field Data: \_\_\_\_\_ Chlorine

Remarks: Sample Taken During Initial Yield Test

✓	Test	EPA Code	Laboratory No.	Results (pCi/L)	Date Reported
✓	Gross Alpha	4000	<u>604093-003</u>	<u>16.7 ± 1.5</u>	<u>4/19/06</u>
✓	Gross Beta	4100		<u>3.6 ± 0.7</u>	
	Radon-222 Bottle A	4004			
	Radon-222 Bottle B	4004			
	Field Blank A	4004			
	Field Blank B	4004			
	Tritium				
	Ra - 226	4020			
	Ra - 228	4030			
	Total Uranium	4006			

Date Received: \_\_\_\_\_ / \_\_\_\_\_ / \_\_\_\_\_

Supervisor: \_\_\_\_\_

Analytical Summary Report

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Client Name:	Howard County Health Department	Client Sample ID:	MF14BB950320
Sample Date/Time:	4/12/2006	Lab Sample ID:	604093-003-003-1/1
Receipt Date/Time:	4/13/2006	Sample Matrix:	WATER
Prepared Date/Time:		Analytical Method:	ALPHA/BETA BY METHOD 900.0

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Isotope	Result	Uncertainty $1\sigma$	MDA	Q
Gross Alpha	16.6825 pCi/L	$\pm 1.464$ pCi/L	2.1983 pCi/L	
Gross Beta	3.6243 pCi/L	$\pm 0.6944$ pCi/L	2.1683 pCi/L	

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

August 21, 2008

NV Homes, Inc.  
6085 Marshalee Drive  
Elkridge, Maryland 21075

RE: Clarksville Overlook/MacBeth Farms  
12865 MacBeth Farm Lane  
Well Tag: HO - 96 - 0320  
5

To Whom It May Concern:

A follow-up sample collected on July 29, 2008 was submitted to Trace Laboratories to further assess levels of **Gross Alpha**, **Gross Beta**, as well as **radium** and **uranium** in the future well water supply. Prior yield test results revealed an elevated level for **Gross Alpha** particle activity in the water supply.

Non-treated results from this screening revealed a **Gross Alpha** of  $16.6 \pm 2.3$  **picocuries/liter (pCi/L)**; while the **Gross Beta** level was  $21.2 \pm 1.9$  **pCi/L**. The **Gross Alpha** result was again 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**).

Additionally, a non-treated **Radium** sample was taken to assess the presence of **Radium 226** and **Radium 228**. These naturally occurring isotopes of radium are considered the most important due to their longer half-lives and health significance.

Results revealed a **Radium 226** level of  $0.7 \pm 0.2$  **pCi/L**, while the **Radium 228** level was  $2.6 \pm 0.7$  **pCi/L**. Here the **combined Radium 226 / 228** was below the MCL of **5 pCi/L**.

Finally, a non-treated **Uranium** sample was collected to evaluate the possible presence of **Uranium** in the well water supply. Results revealed a **Uranium** level of  $5.5 \pm 1.4$  **pCi/L**, below the current standard of **20 pCi/L**.

At the time of this testing and with respect to these **Radium and Uranium** parameter findings, the future well water supply appears safe for all uses. Though a direct comparison between short and long term **Gross Alpha** and **Gross Beta** is not available, it appears that the elevated **Gross Alpha** seen in this and the 2006 sample, are from **Gross Alpha 224** (a non-regulated short term contaminant). Therefore, no additional testing for these parameters will be required to secure the future Use & Occupancy. However, other standard testing will still be necessary.

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

cc: Barry Glotfelty, MDE Water Mgmt.  
Well & Septic property file