

C1 1121

SEQUENCE NO. (MDE USE ONLY)

STATE OF MARYLAND WELL COMPLETION REPORT

THIS REPORT MUST BE SUBMITTED WITHIN 45 DAYS AFTER WELL IS COMPLETED.

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

COUNTY NUMBER A 38446

ST/CO USE ONLY DATE RECEIVED

DATE WELL COMPLETED 8 19 05

Depth of Well 540' (TO NEAREST FOOT) 9/1/05

PERMIT NO. FROM "PERMIT TO DRILL WELL" Ho 95-0087

OWNER Knudson Builders STREET OR RFD Marriottsville Rd TOWN Marriottsville SUBDIVISION Swift Sub SECTION 10-18-25-5 LOT 3

WELL LOG

Not required for driven wells

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

Table with columns: DESCRIPTION, FEET (FROM, TO), check if water bearing. Entries: Brown Shale 0-47, gray granite 47-540.

GROUTING RECORD

WELL HAS BEEN GROUTED (Y) NO (N) TYPE OF GROUTING MATERIAL (C) M BENTONITE CLAY (B) C NO. OF BAGS 15 NO. OF POUNDS 1410 GALLONS OF WATER 90 DEPTH OF GROUT SEAL 0 to 48 ft.

CASING RECORD

MAIN CASING TYPE P.H. Nominal diameter 6 inch Total depth 51 feet

OTHER CASING (if used)

Table for other casing with columns for diameter and depth.

SCREEN RECORD

screen type or open hole (S) T (B) R (H) O (P) L (O) T

Table for screen depth and slot size with columns for depth (ft.) and slot size.

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

C 3

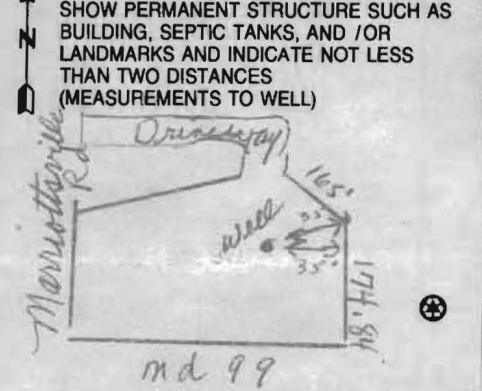
PUMPING TEST

HOURS PUMPED 6 PUMPING RATE 2.2 gal. per min. METHOD USED TO MEASURE PUMPING RATE Bucket WATER LEVEL 58 ft. BEFORE PUMPING 374 ft. WHEN PUMPING TYPE OF PUMP USED (S) submersible

PUMP INSTALLED

DRILLER INSTALLED PUMP YES (NO) TYPE OF PUMP INSTALLED PLACE (A,C,J,P,R,S,T,O) IN BOX 29 CAPACITY: GALLONS PER MINUTE 31-35 PUMP HORSE POWER 37-41 PUMP COLUMN LENGTH 43-47 CASING HEIGHT 49 above LAND SURFACE 2 (nearest) foot below

LOCATION OF WELL ON LOT



NUMBER OF UNSUCCESSFUL WELLS: 0 WELL HYDROFRACTURED (Y) (N)

CIRCLE APPROPRIATE LETTER A WELL WAS ABANDONED AND SEALED WHEN THIS WELL WAS COMPLETED E ELECTRIC LOG OBTAINED P TEST WELL CONVERTED TO PRODUCTION WELL

I HEREBY CERTIFY THAT THIS WELL HAS BEEN CONSTRUCTED IN ACCORDANCE WITH COMAR 26.04.04 "WELL CONSTRUCTION" AND IN CONFORMANCE WITH ALL CONDITIONS STATED IN THE ABOVE CAPTIONED PERMIT...

DRILLERS LIC. NO. 1 MSD 024 DRILLERS SIGNATURE (MUST MATCH SIGNATURE ON APPLICATION)

LIC. NO. 1 D

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

B 1 8128

SEQUENCE NO. (MDE USE ONLY)

STATE OF MARYLAND APPLICATION FOR PERMIT TO DRILL WELL

STATE PERMIT NUMBER 110-95-0087

523004 please type

fill in this form completely

OWNER INFORMATION: Date Received (APA) 01/28/05, C. Knudsen Builders, 8455 Baltimore National Pike, Ellicott City Md 21043

LOCATION OF WELL: Howard County, Swift Property Sub, Woodstock, NEAREST TOWN

DRILLER INFORMATION: Joseph L. Mayne, M S D 024, Joseph L. Mayne Well Drilling, 5512 Ridge Rd Mt. Airy Md 21771, Signature: Joseph L. Mayne, Date: 7-22-05

MILES FROM TOWN: 3 MI, Direction of Well from Town (Circle Box) diagram, ON WHICH SIDE OF ROAD: 250 FT, DISTANCE FROM ROAD, TAX MAP: 10 BLK: 18 PARCEL: 255

WELL INFORMATION: APPROX. PUMPING RATE (GAL. PER MIN.) 5, AVERAGE DAILY QUANTITY NEEDED (GAL. PER DAY) 500

USE FOR WATER (CIRCLE APPROPRIATE BOX): [D] DOMESTIC POTABLE SUPPLY & RESIDENTIAL IRRIGATION

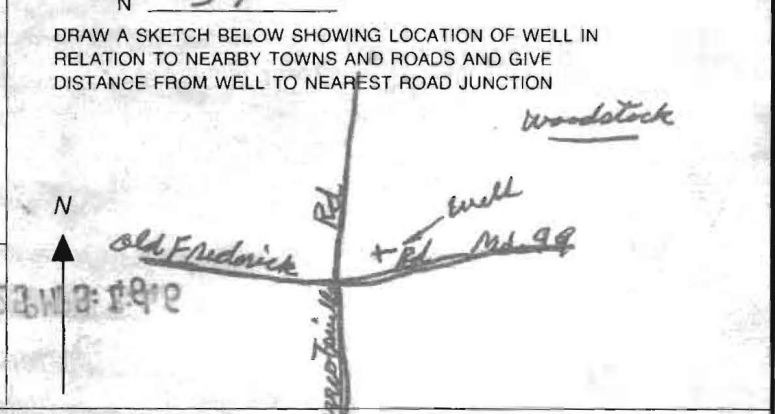
NOT TO BE FILLED IN BY DRILLER HEALTH DEPARTMENT APPROVAL: County Name: Howard, County No.: A38446, State Signature, Date Issued: 8/18/05, CO Signature, EXP. DATE: 8/18/06, NORTH GRID: 540, EAST GRID: 829

APPROXIMATE DEPTH OF WELL: 260 FEET, APPROXIMATE DIAMETER OF WELL: 6 INCH

SHOW MAJOR FEATURES OF BOX & LOCATE WELL WITH AN X, SOURCES OF DRILLING WATER: 1. well, Yield + GROUT Starting 7AM, WRITE THE BOX NUMBER FROM THE MAP HERE: E 829, N 540

METHOD OF DRILLING (circle one): BORED (or Augered) AIR-ROTary, JETTED AIR-PERcussion, Jetted & DRIVEN ROTARY (Hydraulic Rotary), DRIVE-POINT

REPLACEMENT OR DEEPEMED WELLS (CIRCLE APPROPRIATE BOX): [N] THIS WELL WILL NOT REPLACE AN EXISTING WELL



Not to be filled in by driller (MDE OR COUNTY USE ONLY): APPROP. PERMIT NUMBER G, PERMIT No. 110-95-0087

SPECIAL CONDITIONS: NOTE: APPROVING AUTHORITIES SHOULD USE SEPARATE SHEET IF NEEDED

FIELD DATA SHEET  
HOWARD COUNTY WELL YIELD TEST

Well Permit No. HO - 95-0087  
 Location of property (road) Morrisville Rd  
 Subdivision Sw. 1/4 Sec 6 Lot 3 Block 18 Plat 10 Sec. 255  
 Well Driller Joe Meyer Owner C. Knudson Builders

Depth of well 540'  
 Distance of measuring point (M.P.) above ground 2'  
 Static water level (S.W.L.) below M.P. 58'

I. High rate pumping -- reservoir drawdown  
 Time pump started 6:45 Pumping rate 15 gpm.  
 Total time 45 min to reach pumping water level 374 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 5/1 gallon bucket	FLOW METER READING (if used)	CALCULATED FLOW (gallons per minute)
7:00	196'	4 sec.	N/A	15 gpm.
7:15	298	4		15
7:30	374	5		12
7:45	369	34		1.7
8:00	362	31		1.9
8:15	362	31		1.9
8:30	360	31		1.9
8:45	358	27		2.2
9:00	357	27		2.2
9:15	357	27		2.2
9:30	356	27		2.2
9:45	356	27		2.2
10:00	356	27		2.2
10:15	356	27		2.2
10:30	355	27		2.2
10:45	354	27		2.2
11:00	354	27		2.2
11:15	354	27		2.2
11:30	354	27		2.2
11:45	354	27		2.2
12:00	354	27		2.2
12:15	354	27		2.2
12:30	354	27		2.2
12:45	354	27		2.2
HD-224 1:00	354	27		2.2
1:15	354	27		2.2
1:30	354	2.7		2.2



LOT 3  
3.37 A.C.

30' BRL  
571.99  
368.18  
N 131.31° W

301.69  
385.45  
S 85.00° W

GIC3  
GIC2

SEPTIC TANK  
FOR ETR 535.0  
INV./M. 532.5  
INV./O.D. 532.2

EXISTING PAVING  
VEHICULAR INGRESS  
AND EGRESS RESTRICTED

78' BRL  
GIC3  
BTR2

GIC2  
BTR2

FP=547.1  
BF=534.67

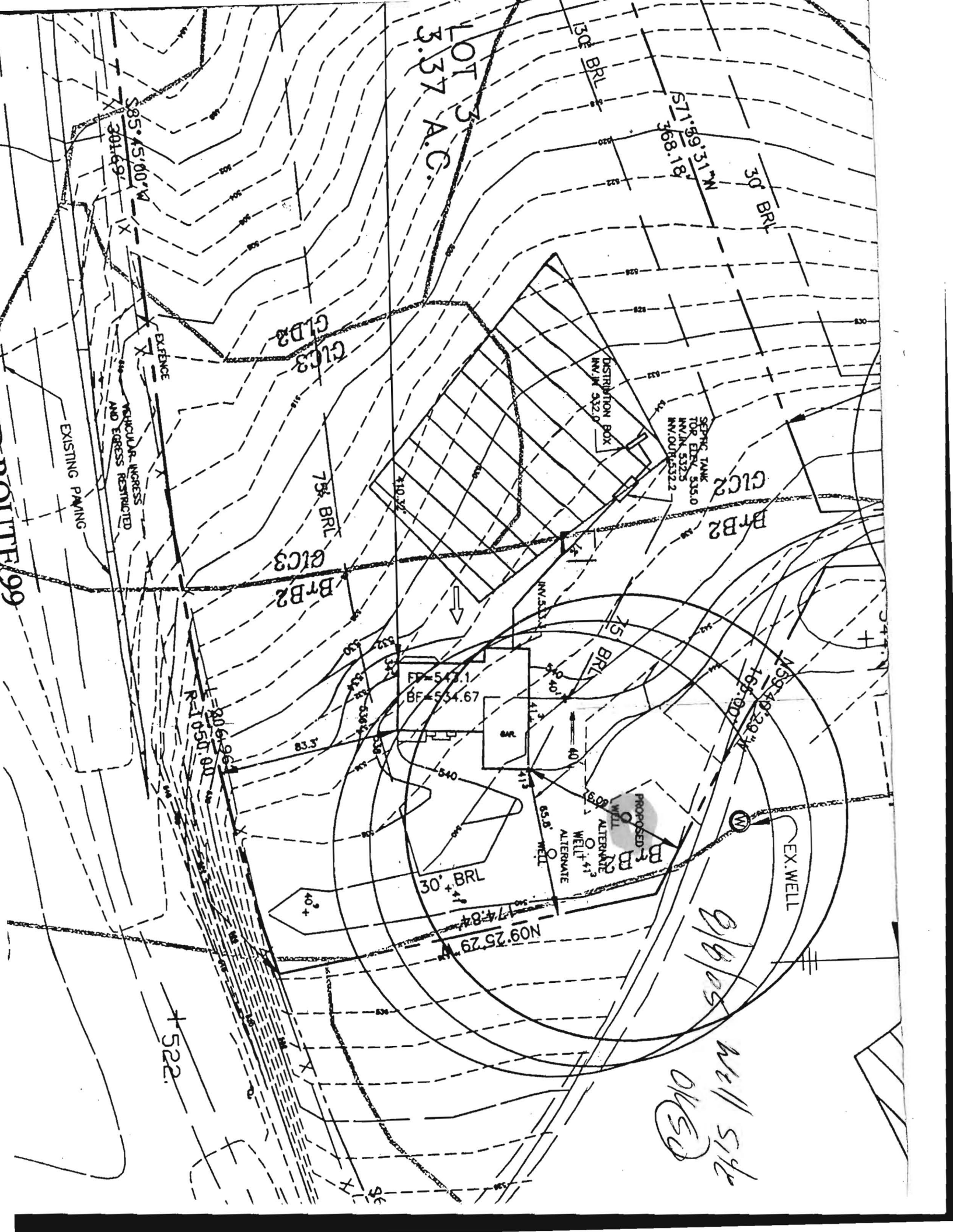
PROPOSED WELL  
ALTERNATE WELL  
ALTERNATE WELL  
55.5' WELL

EX. WELL

522

9/8/05  
Well site  
OKSD

ROUTE 99





Jul 19 04 11:23a

HO CO ENV HEALTH

14103132648

P. 1

**HOWARD COUNTY HEALTH DEPARTMENT  
BUREAU OF ENVIRONMENTAL HEALTH  
WATER AND SEWERAGE PROGRAM  
TEL: (410)313-2640 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 and Well Construction Regulations. Submission of a complete form is required prior to Use and Occupancy approval.

Company Name: **SHELTON PLUMBING & HEATING** Telephone #: 410 775-2127  
Address: 11713 GREEN VALLEY ROAD  
UNION BRIDGE, MD 21791  
(410) 775-2127

(Must circle one) Licensed Plumber Licensed Well Driller Licensed Well Pump Installer  
License # and name of individual responsible for the field installation:  
Name (Print): George Shelton, Jr. License # 16906

\*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: C. Knudsen Builders Telephone #: 410 405-2222  
Subdivision: 1985 Marcellusville Rd. Lot #: 3 Well Tag #: HO-95-0087  
Site Address: Marcellusville, MD

<b>Submersible Pump Data</b>	<b>Pitless Adapter</b>	<b>Well Cap and Electric Conduit</b>
Make: <u>Coultas</u>	Make: <u>Campbell</u>	Two piece watertight cap: <input checked="" type="checkbox"/>
Model #: _____	Model #: _____	Screened, vented well cap: <input checked="" type="checkbox"/>
Pump Capacity: <u>10</u> GPM	Depth: <u>36'</u> (36" min)	Cap secured to casing: <input checked="" type="checkbox"/>
Well Yield: <u>15</u> GPM	NSF approved: <input checked="" type="checkbox"/>	Conduit min 18" E.G.: <input checked="" type="checkbox"/>
Depth of well encountered at time of pump installation: <u>540</u> 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 117.8.4  
Torque arrestor or Cable guards are required - Must circle one  
Safety rope, if used, attached to inside of well casing with eye bolt:

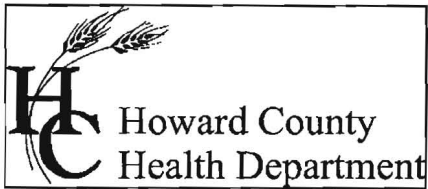
<b>Piping to house</b>	<b>House Connection</b>
Type: <u>polyethylene</u>	PVC sleeved to undisturbed soil at wall penetration: <input checked="" type="checkbox"/>
PSI: <u>160</u> (160 psi min)	Approximate length of sleeve: _____
Depth of supply line: <u>36'</u> (36" min)	Sleeve caulked and sealed properly: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

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

Signature of company representative responsible for installation: George Shelton, Jr. date: 9-29-06

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

Date Insp. Requested: 9/29/06 Date Insp. Approved: 9/29/06 **(KW)**  
 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



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

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

December 8, 2006

C. Knudsen Development, LLC  
8455 Baltimore National Pike  
Ellicott City, MD 21043

*SENT VIA FACSIMILE 410-465-2231*

*B00157408*  
RE: Swift Property Lot 3  
1935 Marriottsville Rd.  
Marriottsville, MD 21104

Dear Sir/Madam:

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 9/21/2006. Final approval of the well line connection to the dwelling was approved on 9/29/2006.**

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.

#### **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-95-0087. 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: 11/27/2006, 12/04/2006, 12/08/2006  
Date of Well Completion: 08/19/2005

Approving Authority,

  
Gabriel A. Creighton, R.S.  
Well & Septic Program

cc: Building Inspector's Office  
Community Health Services  
File

## 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 #:	61554	Account #:	2647
Reference:	Knudsen & Sons	Company:	Knudsen & Sons
Location:	1935 Marriottsville Road Marriottsville, MD 21104	Requested By:	Dianne Zell
Date/ Time Collected:	12/8/2006 0900	Source:	Well Water
Date/Time Rec'd:	12/8/2006 1310	Site:	Laundry Room Utility Tap
Chlorine ppm:	Free: ND Total: ND	Treatment:	None
Collected By:	J. Yeager 6176JY	pH:	7.2
		Well #:	HO-95-0087

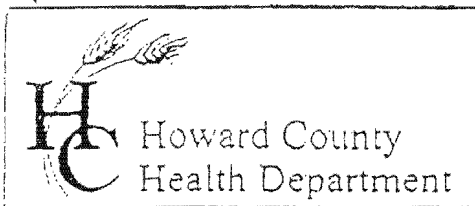
PARAMETERS	RESULTS	UNITS	REFERENCE	METHOD	DATE/TIME/ANALYS
Bacteria, Coliform, Total, MPN	<1.0	MPN/ 100 ml	<1.0	SM18 9223 B.	12/9/2006 / 1000 / AD/BD
Bacteria, E. coli, MPN	<1.0	MPN/ 100 ml	<1.0	SM18 9223 B.	12/9/2006 / 1000 / AD/BD

#### NOTES

- 1 MPN/ 100 ml = Most Probable Number [of viable bacteria] per 100 ml of sample.
- 2 Results less than or within the reference range are considered satisfactory and within potable water limits at the time of sampling.
- 3 ND:None Detected
- 4 Visual well check: Sealed, vented cap
- 5 pH tested on-site

Reason for Test : Use & Occupancy retest 61404  
 Building Permit # : B00157408

Date Reported: 12/11/2006



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:

- Lot 1 and 3*
- The well site has been staked by *Benchmark Engineering*,  
(professional land surveyor or company employing professional land surveyors)  
on *7-05* (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

**FOUNTAIN VALLEY ANALYTICAL LABORATORY, INC.**

1415 Old Toneytown Rd, Westminster, MD (410) 848-1014 (410) 876-4554 FAX (410) 848-0298

**REPORT OF ANALYSIS**

Laboratory ID #:	61468	Account #:	2647
Reference:	Knudsen & Sons	Company:	Knudsen & Sons
Location:	1935 Marriottsville Road Marriottsville, MD 21104	Requested By:	Dianne Zell
Date/ Time Collected:	12/4/2006 1130	Source:	Well Water
Date/Time Rec'd:	12/4/2006 1326	Site:	Laundry Room Utility Tap
Chlorine ppm:	Free: ND Total: ND	Treatment:	None
Collected By:	J.Yeager 6176JY	pH:	6.1
		Well #:	HO-95-0087

PARAMETERS	RESULTS	UNITS	REFERENCE	METHOD	DATE/TIME/ANALYST
Bacteria, Coliform, Total, MPN	1.0	MPN/ 100 ml	<1.0	SM18 9223 B.	12/5/2006 / 0825 / AD/BD
Bacteria, E. coli, MPN	<1.0	MPN/ 100 ml	<1.0	SM18 9223 B.	12/5/2006 / 0825 / AD/BD

**NOTES:**

- 1 MPN/ 100 ml = Most Probable Number [of viable bacteria] per 100 ml of sample.
- 2 Results less than or within the reference range are considered satisfactory and within potable water limits at the time of sampling.
- 3 ND:None Detected
- 4 Visual well check: Sealed, vented cap
- 5 pH tested on-site

Reason for Test : Use & Occupancy retest 61404  
 Building Permit # : B00157408

Date Reported: 12/5/2006

**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 #:	61404	Account #:	2647
Reference:	Knudsen & Sons	Company:	Knudsen & Sons
Location:	1935 Marriottsville Road Marriottsville, MD 21104	Requested By:	Dianne Zell
Date/ Time Collected:	11/27/2006 1148	Source:	Well Water
Date/Time Rec'd:	11/27/2006 1315	Site:	Laundry Room Utility Tap
Chlorine ppm:	Free: ND Total: ND	Treatment:	None
Collected By:	J. Yeager 6176JY	pH:	6.0
		Well #:	HO-95-0087

PARAMETERS	RESULTS	UNITS	REFERENCE	METHOD	DATE/TIME/ANALYS
Bacteria, Coliform, Total, MPN	1.0	MPN/ 100 ml	<1.0	SM18 9223 B.	11/28/2006 / 0805 / AD/BD
Bacteria, E. coli, MPN	<1.0	MPN/ 100 ml	<1.0	SM18 9223 B.	11/28/2006 / 0805 / AD/BD
Nitrate	3.20	mg/L	10	601	11/28/2006 / 1130 / BCD
Turbidity	0.41	NTU	<10	SM18 2130B	11/27/2006 / 1340 / AD/BD
Sand	NS	mg/L	5	Visual/Gravimetric	11/27/2006 / 1340 / AD/BD

**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 tested on-site

Reason for Test : Use & Occupancy  
 Building Permit # : B00157408

Date Reported: 11/28/2006