C 1 31543 — SEQUENCE NO. (MDE USE ONLY)

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

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 A537324

ST/CO USE ONLY
DATE Received MM 03 DD 11 YY 15

DATE WELL COMPLETED MM 2 DD 26 YY 15

Depth of Well 400' (TO NEAREST FOOT)

OK 3/27/15 SC

PERMIT NO. FROM "PERMIT TO DRILL WELL" HO - 14 - 0148

OWNER Mildenberg Brender & Assoc. (last name / first name)

WELL SITE ADDRESS Linden Church Rd TOWN Charlsville

SUBDIVISION Greenberry SECTION LOT 2

WELL LOG
Not required for driven wells

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

DESCRIPTION (Use additional sheets if needed)	FEET FROM	FEET TO	check if water bearing
red clay	0	4	
red	4	31	✓
Brown ~~schist~~	31	70	
Grey White	70	100	✓
Grey Schist White	100	220	
	~~220~~ 210	221	✓
Grey	221	400	

NUMBER OF UNSUCCESSFUL WELLS: 0

WELL HYDROFRACTURED yes [ ] no [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.: MS D009

DRILLERS SIGNATURE (MUST MATCH SIGNATURE ON APPLICATION)

LIC. NO.: MS D324

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

GROUTING RECORD
WELL HAS BEEN GROUTED (Circle Appropriate Box) yes [Y] no [N]

TYPE OF GROUTING MATERIAL (Circle one)

CEMENT [CM] BENTONITE CLAY [BC]

NO. OF BAGS 50 NO. OF POUNDS ~~4700~~ 4200

GALLONS OF WATER 300

DEPTH OF GROUT SEAL (to nearest foot)

from 0 (TOP) ft. to 78 (BOTTOM) ft.

(enter 0 if from surface)

CASING RECORD
casing types insert appropriate code below

[ST] STEEL [CO] CONCRETE [PL] PLASTIC [OT] OTHER

MAIN CASING TYPE	Nominal diameter top (main) casing (nearest inch)!	Total depth of main casing (nearest foot)
ST	08	80

OTHER CASING (if used)

EACH CASING	diameter inch	depth (feet) from	depth (feet) to

SCREEN RECORD
screen type or open hole — insert appropriate code below

[ST] STEEL [BR] BRASS BRONZE [PL] PLASTIC [HO] OPEN HOLE [OT] OTHER

DEPTH (nearest ft.)

EACH SCREEN			
1	40	80	400
2			
3			

SLOT SIZE 1 ____ 2 ____ 3 ____

DIAMETER OF SCREEN ____ (NEAREST INCH)

from	to

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 ____

C 3 — PUMPING TEST

HOURS PUMPED (nearest hour) 6

PUMPING RATE (gal. per min.) 2

METHOD USED TO MEASURE PUMPING RATE 1900

WATER LEVEL (distance from land surface)

BEFORE PUMPING 36 ft.

WHEN PUMPING 223 ft.

TYPE OF PUMP USED (for test)

[A] air [P] piston [T] turbine

[C] centrifugal [R] rotary [O] other (describe below)

[J] jet [S] submersible

PUMP INSTALLED

DRILLER INSTALLED PUMP (CIRCLE) (YES or NO) 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) ____

PUMP HORSE POWER ____

PUMP COLUMN LENGTH (nearest ft.) ____

CASING HEIGHT (circle appropriate box and enter casing height)

[+] above [−] below LAND SURFACE

02 (nearest foot)

LATITUDE 39.230133

LONGITUDE 76.971069

(DEFAULT COORD. WGS 84)

NOTES:

50 bags / 7.8 = 6.4 bags/10' ✓

Storage:

390' − 36' = 354' × 2.6 gal/ft = 924 gal ✓

MDE/WMA/PER.071

COUNTY

EMERGENCY/TEMP NO. IF ANY

B 1 | 33890 (1 2 3 6) SEQUENCE NO. (MDE USE ONLY)

STATE OF MARYLAND
APPLICATION FOR PERMIT TO DRILL WELL

556320-A please type

STATE PERMIT NUMBER: HO-14-0148 (70 79)

fill in this form completely

Date Received (APA): 11/18/14 (8 MM DD YY 13)

OWNER INFORMATION

Miltenberg, Boender & Assoc. Inc (15 Last Name, Owner, First Name 34)

7350-B Grace Drive (36 Street or RFD 55)

Columbia Md 21044 (57 Town 70 State 72 Zip 76)

DRILLER INFORMATION

Allen Compton MSD009 (Driller's Name 76 License No. 81)

Foggles Well Drilling, LLC (Firm Name)

P.O. Box 202 Woodbine Md 21797 (Address)

Allen Compton 11-18-14 (Signature, Date)

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
- [O] OPEN LOOP GEOTHERMAL
- [C] CLOSED LOOP GEOTHERMAL

22

APPROXIMATE DEPTH OF WELL: 400 FEET (24 28)

APPROXIMATE DIAMETER OF WELL: 8 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 DEEPENED 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 DEEPEN AN EXISTING WELL

PERMIT NUMBER OF WELL TO BE REPLACED OR DEEPENED (IF AVAILABLE) 41 ____-____-____ 52

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

APPROP. PERMIT NUMBER: HO 2014 G 003

PERMIT No. HO-14-0148 (70 71 72 73 74 75 76 77 78 79)

B 3 LOCATION OF WELL

Howard (8 COUNTY 21)

Greenberry (23 SUBDIVISION 42)

SECTION (44 46) LOT 2 (48 50)

Clarksville (52 NEAREST TOWN 71)

B 4

SOURCES OF DRILLING WATER
1.
2.
3.

Linden Church Rd (11 STREET ADDRESS 30)

ON WHICH SIDE OF ROAD (CIRCLE APPROPRIATE BOX): NORTH (N) WEST (W) EAST (E) SOUTH (S)

34 700 37 DISTANCE FROM ROAD: FT (ENTER FT OR MI 38 39)

TAX MAP: ____ BLK: ____ PARCEL ____

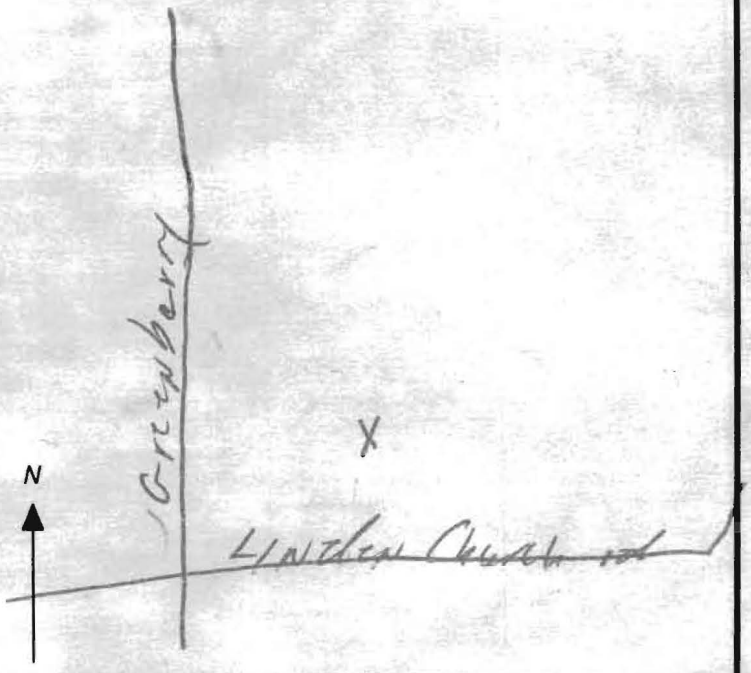
NOT TO BE FILLED IN BY DRILLER
HEALTH DEPARTMENT APPROVAL

Howard (13) A 537374 (COUNTY NAME, COUNTY NO.)

STATE SIGNATURE ____ INSERT S → 41

DATE ISSUED: 12/10/14 (43 MM DD YY 48) Sol Gill (CO SIGNATURE) EXP. DATE: 12/10/15

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



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

MDE/WMA/PER.071

② COUNTY

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

C 1 31543 — SEQUENCE NO. (MDE USE ONLY)
1 2 3 6
(THIS NUMBER IS TO BE PUNCHED IN COLS. 3-6 ON ALL CARDS)

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

COUNTY NUMBER A 53[illegible]

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

DATE WELL COMPLETED MM DD YY: 3/26/15 (15–20)
3/13/15 Approved H.O.

Depth of Well: 400' (22–26) (TO NEAREST FOOT)

PERMIT NO. FROM "PERMIT TO DRILL WELL": HO-14-0148 (28 29 30 31 32 33 34 35 36 37)

OWNER: [illegible] (last name / first name)
WELL SITE ADDRESS: [illegible] Church Rd — TOWN: [illegible]
SUBDIVISION: [illegible] — SECTION: ____ — LOT: [illegible]

WELL LOG
Not required for driven wells

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

DESCRIPTION (Use additional sheets if needed)	FEET FROM	FEET TO	check if water bearing
[illegible]	0	[illegible]	
[illegible]	[illegible]	31	✓
Gravel	31	70	
[illegible]	70	140	✓
[illegible]	140	220	
[illegible]	220	261	✓
[illegible]	261	[illegible]	

NUMBER OF UNSUCCESSFUL WELLS: 0

WELL HYDROFRACTURED — yes Y / no N (N circled)

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. MSD009

DRILLERS SIGNATURE [signature]
(MUST MATCH SIGNATURE ON APPLICATION)

LIC. NO. MSD ___ [signature]

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

GROUTING RECORD
WELL HAS BEEN GROUTED (Circle Appropriate Box) — yes Y / no N (44)
TYPE OF GROUTING MATERIAL (Circle one)
CEMENT CM (45 46) — BENTONITE CLAY BC (45 46)
NO. OF BAGS: 50 — NO. OF POUNDS: [illegible]
GALLONS OF WATER: 300
DEPTH OF GROUT SEAL (to nearest foot) from 0 ft. (48 TOP 52) to 78 ft. (54 BOTTOM 58)
(enter 0 if from surface)

CASING RECORD
casing types insert appropriate code below
ST STEEL — CO CONCRETE — PL PLASTIC — OT OTHER

MAIN CASING TYPE (60 61)	Nominal diameter top (main) casing (nearest inch) (63 64)	Total depth of main casing (nearest foot) (68 70)
ST	08	80

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

SCREEN RECORD
screen type or open hole — insert appropriate code below
ST STEEL — BR BRASS BRONZE — HO OPEN HOLE — PL PLASTIC — OT OTHER

C 2 — DEPTH (nearest ft.)
EACH SCREEN
1: HO (8 9) 80 (11 15) 400 (17 21)
2: (23 24) (26 30) (32 36)
3: (38 39) (41 45) (47 51)

SLOT SIZE 1 ____ 2 ____ 3 ____
DIAMETER OF SCREEN ____ (56 60) (NEAREST INCH)

GRAVEL PACK from ____ to ____
IF WELL DRILLED WAS FLOWING WELL INSERT F IN BOX 68

MDE USE ONLY (NOT TO BE FILLED IN BY DRILLER)
T (70) TELESCOPE CASING — (E.R.O.S.) (72) LOG INDICATOR — W Q (74 75 76) OTHER DATA

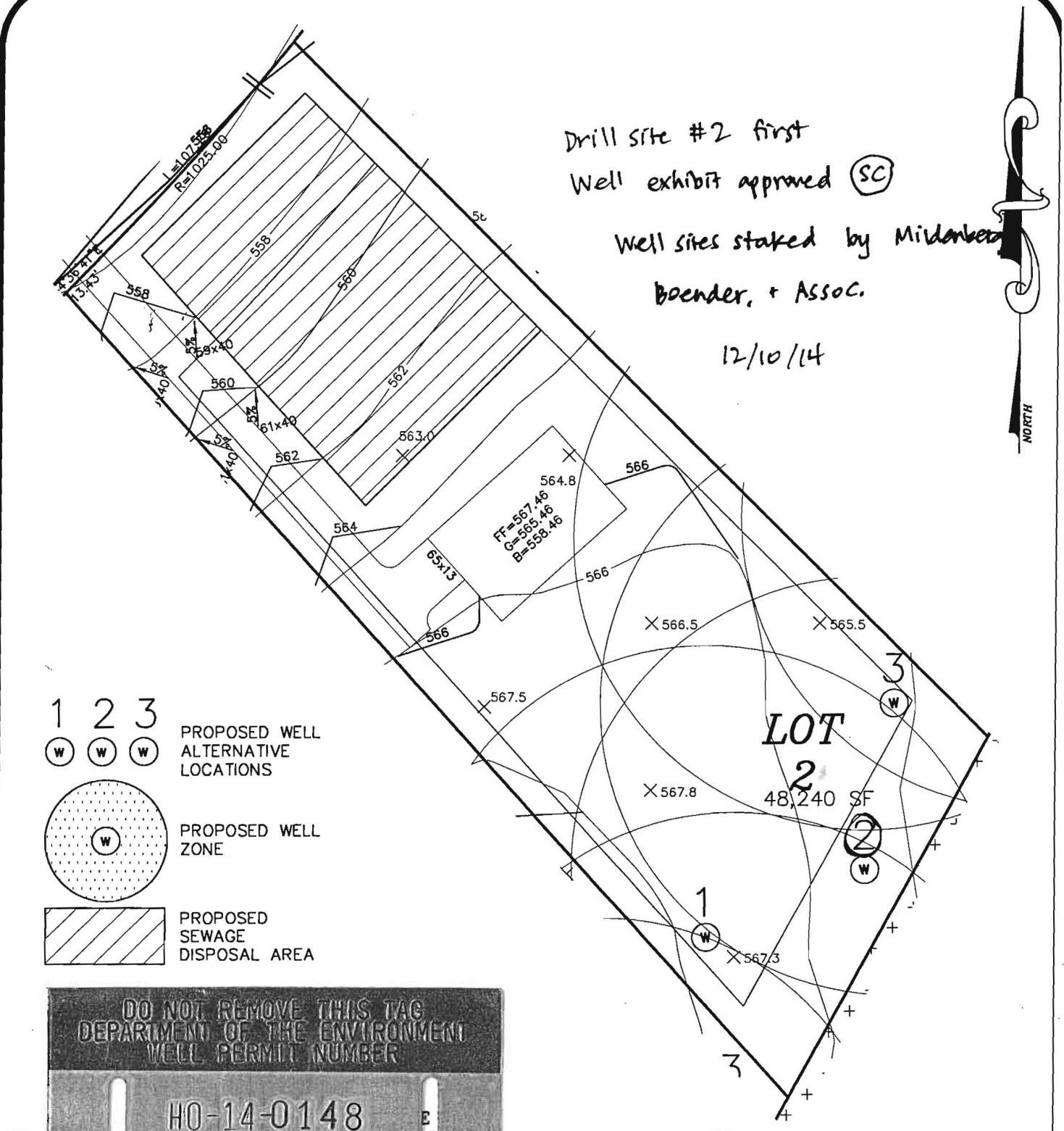
C 3 PUMPING TEST
HOURS PUMPED (nearest hour): 6 (8 9)
PUMPING RATE (gal. per min.): 2. (11 15)
METHOD USED TO MEASURE PUMPING RATE: [illegible]
WATER LEVEL (distance from land surface)
BEFORE PUMPING: 36 ft. (17 20)
WHEN PUMPING: [illegible] ft. (22 25)
TYPE OF PUMP USED (for test)
- A air — P piston — T turbine
- C centrifugal — R rotary — O other (describe below)
- J jet — S submersible

PUMP INSTALLED
DRILLER INSTALLED PUMP (CIRCLE) (YES or NO): YES / NO (NO circled)
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)
+ above / – below LAND SURFACE: 02 (nearest foot) (50 51)

LATITUDE 3[illegible]
LONGITUDE 7[illegible]
(DEFAULT COORD. WGS 84)
NOTES:

OWNER

MDE/WMA/PER.071



P:\2004\12-022 Greenberry\DWG\FINAL\F-14-095_Well Exhibits

GREENBERRY

WELL EXHIBIT – LOT 2

5TH ELECTION DISTRICT — HOWARD COUNTY, MARYLAND

SCALE: 1"=50'	DRAWN BY: JLS	DATE: NOV 2014	PN: 12-022

MILDENBERG BOENDER, & ASSOC., INC.
Engineers Planners Surveyors
7350-B Grace Drive, Columbia, Maryland 21044
(410) 997-0296 Balt. (410) 997-0298 Fax.

Page 1 of 2 Review _____
Date 2/26/15

FIELD DATA SHEET
HOWARD COUNTY WELL YIELD TEST

Well Permit No. HO - 14-0148
Location of property (road) _____
Subdivision Greenberry Lot 2 Block _____ Plat _____ Sec. _____
Well Driller _____ Owner Jacob Hikmat

Depth of well 400'
Distance of measuring point (M.P.) above ground 2
Static water level (S.W.L.) below M.P. 36

I. High rate pumping -- reservoir drawdown

Time pump started 8:30 Pumping rate 12
Total time 1 hr. to reach pumping water level 223 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 gallon bucket	FLOW METER READING (if used)	CALCULATED FLOW (gallons per minute)
8:30	36	5		12
8:45	62	5		12
9:00	139	5		12
9:15	186	5		12
9:30	223	5		12
9:45	223	30		2
10:00	223	30		2
10:15	223	30		2
10:30	222	30		2
10:45	222	30		2
11:00	222	30		2
11:15	222	30		2
11:30	221	30		2
11:45	221	30		2
12:00	221	30		2
12:15	221	30		2
12:30	220	30		2
12:45	220	30		2
1:00	220	30		2
1:15	220	30		2
1:30	219	30		2
1:45	219	30		2
2:00	219	30		2
2:15	219	30		2

HD-224

Page 2 of 2
Date 2-2415

Review _____

FIELD DATA SHEET
HOWARD COUNTY WELL YIELD TEST

Well Permit No. HO - 14-0148
Location of property (road) Greenberry Rd
Subdivision Greenberry Lot 2 Block ____ Plat ____ Sec. ____
Well Driller Foltz Owner Jacob Hikmat

Depth of well 400'
Distance of measuring point (M.P.) above ground 2
Static water level (S.W.L.) below M.P. 36

I. High rate pumping -- reservoir drawdown

Time pump started 8:30 Pumping rate 12
Total time 1 hr to reach pumping water level 223 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 # gallon bucket	FLOW METER READING (if used)	CALCULATED FLOW (gallons per minute)
2:30	218	30		2
2:45	218	30		2
3:00	218	30		2
3:15	218	30		2
3:30	217	30		2
3:45	217	30		2

HD-224

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 #: 410-781-4655
Address: 6321 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): Joshua Henricks License# PI0173
***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 #: 410-379-5956
Subdivision: Greenberry Lot #: 2 Well Tag #: **HO** - 14 - 0148
Site Address: Linden Church Road
Clarksville, MD 21029

Submersible Pump Data		**Pitless Adapter**		**Well Cap and Electric Conduit**	
Make: Berkeley		Make: Boshart		Two piece watertight cap:	Yes
Model #: B7P4MS07221		Model#: P-100-SS		Screened, vented well cap:	Yes
Pump Capacity 7	GPM	Depth: 42" (36" min)		Cap secured to casing:	Yes
Well Yield: 2.0	GPM	NSF/WSC approved: Yes		Conduit min 18" B.G.:	Yes

Depth of well encountered at time of pump installation: 400 (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		**House Connection**	
Type: Poly		PVC sleeve to undisturbed soil at wall penetration:	Yes
PSI: 200 (160 psi min)		Length of sleeve(5' minimum from foundation):	10'
Depth of supply line: 42" (36" min)		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.

Joshua Henricks June, 25, 2015
Signature of company representative responsible for installation date

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

Date Insp. Requested: 8/6/15 Date Insp. Approved: 8/6/15 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

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
Twitter: HowardCoHealthDep

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

INTERIM CERTIFICATE OF POTABILITY

Expiration Date – March 9, 2016

September 9, 2015

Homeowner
13112 Greenberry Lane
Clarksville, MD 21029

RE: Greenberry, Lot 2
13112 Greenberry Lane
Building Permit: B14004173
Well Permit: HO-14-0148

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 **9/2/2015.** Final approval of the well line connection to the dwelling was granted on **9/6/2015.** The well construction was completed on **2/26/2015.** Water samples were collected on **8/31/2015.**

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. 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-14-0148. 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 Maryland certified water 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

Approving Authority,

Jeff Williams
Program Supervisor
Well & Septic Program

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

Water Testing Laboratories
of Maryland, Inc.

P.O. Box 712
Stevensville, MD 21666
410-643-7711

Nv Homes
6321 Barnett Avenue
Sykesville Md 21784

Reporting Date: 9/3/15
Report #: M3215

Submitted Sample Address: 13112 Greenberry Lane, Clarksville
Submitted Sample Source: Holding tank
Date / Time Collected: 8/31/2015 9:32AM
Sample Type: Drinking Water
Sampler/Company: K. Lee 4827KL, WTL of MD
Field Record: Chlorine residual: Absent Clear when drawn
Well Tag #: HO-14-0148

Analytical Results

Parameter	Result	Units	Report Limit	Standard	Standard Type
Total Coliform Bacteria	Absent	Coliforms/100 ml	Present/Absent	Absent	EPA Primary MCL
E. Coli Bacteria	Absent	Coliforms/100 ml	Present/Absent	Absent	EPA Primary MCL
Nitrate as N	0.5	mg/L	0.5	10	EPA Primary MCL
Sand	Absent	mg/L or Absent	mg/L or Absent	< 5 mg/L*	MD Well Reg.
Turbidity	ND	NTU	0.5	< 10 NTU*	MD Well Reg.
pH	7.3	SU	0.1	6.5-8.5	EPA Secondary MCL

Notes:

1. Bacteriological analysis of this sample indicates this water is [safe] for human consumption.
2. Results in **BOLD** exceed the MCL or MD well regulation.
3. Samples received and examined within EPA's recommended holding times.
4. MCL – Maximum Contaminant Level
5. ND – Not Detected.
6. * Sand and turbidity standard for new wells - See Code of Maryland Regulations (COMAR) 26.04.04.16E(5). If sand is present, it is analyzed to determine amount of sand in mg/L.
7. MCL Type –
   EPA Primary: The maximum contaminant level which is the highest level of contaminant that is allowed in drinking water. Primary MCLs are enforceable standards.
   EPA Secondary: Non enforceable guidelines regulating contaminants that cause cosmetic effects (such as skin or tooth discoloration) or aesthetic effects (such as taste or odor) in drinking water.
   Action Level: Defined in treatment techniques which are required processes intended to reduce the level of a contaminant in drinking water.
8. We certify that the analyses performed for this report are accurate, and that the laboratory tests were conducted by methods approved by the US Environmental Protection Agency and the Maryland Department of the Environment.

Reported by,
T Davis

T. Davis, Customer Service Representative

Reviewed by: _____

MARYLAND DEPARTMENT OF THE ENVIRONMENT, WATER MANAGEMENT ADMINISTRATION
1800 Washington Blvd., Baltimore, Maryland 21230 (410) 537-3784

****

WATER WELL ABANDONMENT-SEALING REPORT FORM

****

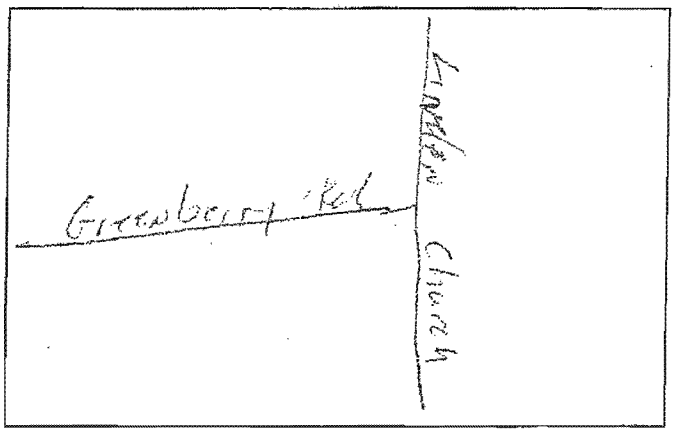
SUBMIT COPIES OF COMPLETED FORM TO:
* COUNTY ENVIRONMENTAL AGENCY (contact MDE, WMA if address needed)
* WELL OWNER
* MDE, WATER MANAGEMENT ADMINISTRATION, WELL PROGRAM

DATE WELL ABANDONED: 2-5-15 (month/day/year)

* PERMIT NUMBER OF ABANDONED WELL (if any) HO — 95 — 0178
* PERMIT NUMBER OF REPLACEMENT WELL: — —
* PERSON ABANDONING WELL: Dillard Tomlin WELL DRILLER'S LICENSE NUMBER: 609
CIRCLE: MWD / MSD / MGD
* OWNER'S NAME: Jacob Hikmat
* WELL LOCATION:
COUNTY: Howard
NEAREST TOWN: Clarksville
TAX MAP 28 BLOCK ____ PARCEL 48
SUBDIVISION: ____
SECTION: ____ LOT: Test 2
STREET ADDRESS: Greenberry Rd.

LATITUDE 39.232681
LONGITUDE 76.971269

SITE LOCATION MAP



* TYPE OF WELL BEING ABANDONED:
____DRILLED ____JETTED
____BORED ____HAND DUG
____OTHER (specify) ____

* USE CODE:
____DOMESTIC ____MUNICIPAL/PUBLIC
____IRRIGATION ____INDUSTRIAL
____TEST/OBSERVATION ____GEOTHERMAL

* TYPE OF CASING:
____STEEL ____PLASTIC
____CONCRETE ____OTHER (specify)
____

SIZE OF CASING: 8 INCHES IN DIAMETER

DEPTH OF WELL: 300 FEET DEEP

WAS ANY CASING REMOVED? ____YES ____NO
If yes, length removed, in feet: 2

WAS CASING RIPPED OR PERFORATED? ____YES ____NO

LOG OF SEALING MATERIAL

MATERIAL	FEET FROM	FEET TO
cement	0	70
stone	70	300

VOLUME OF MATERIAL USED: 2 yards

[signature] 609 MWD / MSD / MGS 2-15-15
SIGNATURE-MASTER WELL DRILLER OR SUPERVISING SANITARIAN LICENSE# CIRCLE ONE DATE

OWNER

Howard County
Health Department

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 Mildenberg Boender + Assoc.
(professional land surveyor or company employing professional land surveyors)
on 12-6-14 (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 6/10/03

ALS Environmental

34 Dogwood Lane ▪ Middletown, PA 17057 ▪ Phone: 717-944-5541 ▪ Fax: 717-944-1430 ▪ www.alsglobal.com

NELAP Certifications: NJ PA010 , NY 11759 , PA 22-293 DoD ELAP: A2LA 0818.01
State Certifications: DE ID 11 , MA PA0102 , MD 128 , VA 460157 , WV 343

March 5, 2015

Ms. Amy Parrish
Advanced Land and Water, Inc.
1912 Liberty Road, Suite 26
Sykesville, MD 21784

Certificate of Analysis

Project Name:	**Residential well testing**	Workorder:	**2056921**
Purchase Order:		Workorder ID:	**Lot 2 HO-14-0148**

Dear Ms. Parrish:

Enclosed are the analytical results for samples received by the laboratory on Friday, February 27, 2015.

The ALS Environmental laboratory in Middletown, Pennsylvania is a National Environmental Laboratory Accreditation Program (NELAP) accredited laboratory and as such, certifies that all applicable test results meet the requirements of NELAP.

If you have any questions regarding this certificate of analysis, please contact Mr. Brad W Kintzer (Project Coordinator) at (717) 944-5541.

Analyses were performed according to our laboratory's NELAP-approved quality assurance program and any applicable state requirements. The test results meet requirements of the current NELAP standards or state requirements, where applicable. For a specific list of accredited analytes, refer to the certifications section of the ALS website at www.alsglobal.com/en/Our-Services/Life-Sciences/Environmental/Downloads.

ALS Spring City: 10 Riverside Drive, Spring City, PA 19475 610-948-4903

Brad W. Kintzer

Mr. Brad W Kintzer
Project Coordinator

This page is included as part of the Analytical Report and must be retained as a permanent record thereof.

ALS Environmental

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SAMPLE SUMMARY

Workorder: 2056921 Lot 2 HO-14-0148

Lab ID	Sample ID	Matrix	Date Collected	Date Received	Collected By
2056921001	Lot 2 HO-14-0148	Drinking Water	2/27/2015 13:20	2/27/2015 19:43	Collected by Client

Notes

-- Samples collected by ALS personnel are done so in accordance with the procedures set forth in the ALS Field Sampling Plan (20 - Field Services Sampling Plan).
-- All Waste Water analyses comply with methodology requirements of 40 CFR Part 136.
-- All Drinking Water analyses comply with methodology requirements of 40 CFR Part 141.
-- Unless otherwise noted, all quantitative results for soils are reported on a dry weight basis.
-- The Chain of Custody document is included as part of this report.
-- All Library Search analytes should be regarded as tentative identifications based on the presumptive evidence of the mass spectra. Concentrations reported are estimated values.
-- Parameters identified as "analyze immediately" require analysis within 15 minutes of collection. Any "analyze immediately" parameters not listed under the header "Field Parameters" are preformed in the laboratory and are therefore analyzed out of hold time.
-- Method references listed on this report beginning with the prefix "S" followed by a method number (such as S2310B-97) refer to methods from "Standard Methods for the Examination of Water and Wastewater".

Standard Acronyms/Flags

J	Indicates an estimated value between the Method Detection Limit (MDL) and the Practical Quantitation Limit (PQL) for the analyte
U	Indicates that the analyte was Not Detected (ND)
N	Indicates presumptive evidence of the presence of a compound
MDL	Method Detection Limit
PQL	Practical Quantitation Limit
RDL	Reporting Detection Limit
ND	Not Detected - indicates that the analyte was Not Detected at the RDL
Cntr	Analysis was performed using this container
RegLmt	Regulatory Limit
LCS	Laboratory Control Sample
MS	Matrix Spike
MSD	Matrix Spike Duplicate
DUP	Sample Duplicate
%Rec	Percent Recovery
RPD	Relative Percent Difference
LOD	DoD Limit of Detection
LOQ	DoD Limit of Quantitation
DL	DoD Detection Limit
I	Indicates reported value is greater than or equal to the Method Detection Limit (MDL) but less than the Report Detection Limit (RDL)

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ANALYTICAL RESULTS

Workorder: 2056921 Lot 2 HO-14-0148

Lab ID: **2056921001** Date Collected: 2/27/2015 13:20 Matrix: Drinking Water

Sample ID: **Lot 2 HO-14-0148** Date Received: 2/27/2015 19:43

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
SEMIVOLATILES										
Acenaphthene	ND		ug/L	0.10	EPA 525.2	3/4/15	KMR	3/4/15 12:07	CGS	A1
Acenaphthylene	ND		ug/L	0.10	EPA 525.2	3/4/15	KMR	3/4/15 12:07	CGS	A1
Acetochlor	ND	3	ug/L	0.21	EPA 525.2	3/4/15	KMR	3/4/15 12:07	CGS	A1
Alachlor	ND		ug/L	0.21	EPA 525.2	3/4/15	KMR	3/4/15 12:07	CGS	A1
Aldrin	ND		ug/L	0.21	EPA 525.2	3/4/15	KMR	3/4/15 12:07	CGS	A1
Anthracene	ND	2	ug/L	0.10	EPA 525.2	3/4/15	KMR	3/4/15 12:07	CGS	A1
Atrazine	ND		ug/L	0.21	EPA 525.2	3/4/15	KMR	3/4/15 12:07	CGS	A1
gamma-BHC	ND		ug/L	0.10	EPA 525.2	3/4/15	KMR	3/4/15 12:07	CGS	A1
Benzo(a)anthracene	ND		ug/L	0.10	EPA 525.2	3/4/15	KMR	3/4/15 12:07	CGS	A1
Benzo(a)pyrene	ND		ug/L	0.10	EPA 525.2	3/4/15	KMR	3/4/15 12:07	CGS	A1
Benzo(b)fluoranthene	ND		ug/L	0.10	EPA 525.2	3/4/15	KMR	3/4/15 12:07	CGS	A1
Benzo(g,h,i)perylene	ND		ug/L	0.10	EPA 525.2	3/4/15	KMR	3/4/15 12:07	CGS	A1
Benzo(k)fluoranthene	ND		ug/L	0.10	EPA 525.2	3/4/15	KMR	3/4/15 12:07	CGS	A1
Butachlor	ND		ug/L	0.21	EPA 525.2	3/4/15	KMR	3/4/15 12:07	CGS	A1
Butylbenzylphthalate	ND	1	ug/L	0.52	EPA 525.2	3/4/15	KMR	3/4/15 12:07	CGS	A1
Chrysene	ND		ug/L	0.10	EPA 525.2	3/4/15	KMR	3/4/15 12:07	CGS	A1
4,4'-DDE	ND		ug/L	0.21	EPA 525.2	3/4/15	KMR	3/4/15 12:07	CGS	A1
Di-n-Butylphthalate	ND		ug/L	0.52	EPA 525.2	3/4/15	KMR	3/4/15 12:07	CGS	A1
Dibenzo(a,h)anthracene	ND		ug/L	0.10	EPA 525.2	3/4/15	KMR	3/4/15 12:07	CGS	A1
Dibenzofuran	ND		ug/L	0.10	EPA 525.2	3/4/15	KMR	3/4/15 12:07	CGS	A1
Dieldrin	ND		ug/L	0.21	EPA 525.2	3/4/15	KMR	3/4/15 12:07	CGS	A1
Diethylphthalate	ND		ug/L	1.0	EPA 525.2	3/4/15	KMR	3/4/15 12:07	CGS	A1
Dimethylphthalate	ND		ug/L	0.52	EPA 525.2	3/4/15	KMR	3/4/15 12:07	CGS	A1
2,4-Dinitrotoluene	ND		ug/L	0.52	EPA 525.2	3/4/15	KMR	3/4/15 12:07	CGS	A1
2,6-Dinitrotoluene	ND		ug/L	0.52	EPA 525.2	3/4/15	KMR	3/4/15 12:07	CGS	A1
EPTC	ND		ug/L	0.21	EPA 525.2	3/4/15	KMR	3/4/15 12:07	CGS	A1
Endrin	ND		ug/L	0.21	EPA 525.2	3/4/15	KMR	3/4/15 12:07	CGS	A1
Di(2-Ethylhexyl)adipate	ND		ug/L	0.52	EPA 525.2	3/4/15	KMR	3/4/15 12:07	CGS	A1
bis(2-Ethylhexyl)phthalate	ND		ug/L	1.0	EPA 525.2	3/4/15	KMR	3/4/15 12:07	CGS	A1
Fluoranthene	ND		ug/L	0.10	EPA 525.2	3/4/15	KMR	3/4/15 12:07	CGS	A1
Fluorene	ND		ug/L	0.10	EPA 525.2	3/4/15	KMR	3/4/15 12:07	CGS	A1
Heptachlor	ND		ug/L	0.10	EPA 525.2	3/4/15	KMR	3/4/15 12:07	CGS	A1
Heptachlor Epoxide	ND		ug/L	0.10	EPA 525.2	3/4/15	KMR	3/4/15 12:07	CGS	A1
Hexachlorobenzene	ND		ug/L	0.10	EPA 525.2	3/4/15	KMR	3/4/15 12:07	CGS	A1
Hexachlorocyclopentadiene	ND		ug/L	0.21	EPA 525.2	3/4/15	KMR	3/4/15 12:07	CGS	A1
Indeno(1,2,3-cd)pyrene	ND		ug/L	0.10	EPA 525.2	3/4/15	KMR	3/4/15 12:07	CGS	A1
Methoxychlor	ND		ug/L	0.21	EPA 525.2	3/4/15	KMR	3/4/15 12:07	CGS	A1

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ANALYTICAL RESULTS

Workorder: 2056921 Lot 2 HO-14-0148

Lab ID: **2056921001** Date Collected: 2/27/2015 13:20 Matrix: Drinking Water

Sample ID: **Lot 2 HO-14-0148** Date Received: 2/27/2015 19:43

Reporting Detection Limit

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
2-Methylnaphthalene	ND		ug/L	0.21	EPA 525.2	3/4/15	KMR	3/4/15 12:07	CGS	A1
Metolachlor	ND		ug/L	0.21	EPA 525.2	3/4/15	KMR	3/4/15 12:07	CGS	A1
Metribuzin	ND		ug/L	0.21	EPA 525.2	3/4/15	KMR	3/4/15 12:07	CGS	A1
Molinate	ND		ug/L	0.21	EPA 525.2	3/4/15	KMR	3/4/15 12:07	CGS	A1
Naphthalene	ND		ug/L	0.21	EPA 525.2	3/4/15	KMR	3/4/15 12:07	CGS	A1
Phenanthrene	ND		ug/L	0.10	EPA 525.2	3/4/15	KMR	3/4/15 12:07	CGS	A1
Propachlor	ND		ug/L	0.21	EPA 525.2	3/4/15	KMR	3/4/15 12:07	CGS	A1
Pyrene	ND		ug/L	0.10	EPA 525.2	3/4/15	KMR	3/4/15 12:07	CGS	A1
Simazine	ND		ug/L	0.21	EPA 525.2	3/4/15	KMR	3/4/15 12:07	CGS	A1
Terbacil	ND		ug/L	0.52	EPA 525.2	3/4/15	KMR	3/4/15 12:07	CGS	A1
2,4,5-Trichlorobiphenyl	ND		ug/L	0.10	EPA 525.2	3/4/15	KMR	3/4/15 12:07	CGS	A1
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*	*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
IS_1,3-Dimethyl-2-Nitrobenzene (S)	97.3		%	70 - 130	EPA 525.2	3/4/15	KMR	3/4/15 12:07	CGS	A1
IS_Perylene-d12 (S)	99.5		%	70 - 130	EPA 525.2	3/4/15	KMR	3/4/15 12:07	CGS	A1
IS_Triphenylphosphate (S)	101		%	70 - 130	EPA 525.2	3/4/15	KMR	3/4/15 12:07	CGS	A1
Pyrene-d10 (S)	102		%	70 - 130	EPA 525.2	3/4/15	KMR	3/4/15 12:07	CGS	A1
HERBICIDES										
Acifluorfen	ND		ug/L	1.0	EPA 515.3	3/3/15	JEK	3/4/15 10:25	EGO	C
Bentazon	ND		ug/L	2.0	EPA 515.3	3/3/15	JEK	3/4/15 10:25	EGO	C
Chloramben	ND		ug/L	1.0	EPA 515.3	3/3/15	JEK	3/4/15 10:25	EGO	C
2,4-D	ND		ug/L	1.0	EPA 515.3	3/3/15	JEK	3/4/15 10:25	EGO	C
2,4-DB	ND		ug/L	2.0	EPA 515.3	3/3/15	JEK	3/4/15 10:25	EGO	C
Dacthal Acid Metabolites	ND		ug/L	1.0	EPA 515.3	3/3/15	JEK	3/4/15 10:25	EGO	C
Dalapon	ND		ug/L	4.0	EPA 515.3	3/3/15	JEK	3/4/15 10:25	EGO	C
Dicamba	ND		ug/L	1.0	EPA 515.3	3/3/15	JEK	3/4/15 10:25	EGO	C
Dichloroprop	ND		ug/L	2.0	EPA 515.3	3/3/15	JEK	3/4/15 10:25	EGO	C
Dinoseb	ND		ug/L	1.0	EPA 515.3	3/3/15	JEK	3/4/15 10:25	EGO	C
Pentachlorophenol	ND		ug/L	0.19	EPA 515.3	3/3/15	JEK	3/4/15 10:25	EGO	C
Picloram	ND		ug/L	2.0	EPA 515.3	3/3/15	JEK	3/4/15 10:25	EGO	C
2,4,5-T	ND		ug/L	0.50	EPA 515.3	3/3/15	JEK	3/4/15 10:25	EGO	C
2,4,5-TP	ND		ug/L	0.50	EPA 515.3	3/3/15	JEK	3/4/15 10:25	EGO	C
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*	*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
2,4-Dichlorophenylacetic acid (S)	127		%	70 - 130	EPA 515.3	3/3/15	JEK	3/4/15 10:25	EGO	C
CARBAMATES										
Aldicarb	ND		ug/L	1.0	EPA 531.1			3/2/15 14:12	CGS	E

ALS Environmental

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ANALYTICAL RESULTS

Workorder: 2056921 Lot 2 HO-14-0148

Lab ID: **2056921001** Date Collected: 2/27/2015 13:20 Matrix: Drinking Water

Sample ID: **Lot 2 HO-14-0148** Date Received: 2/27/2015 19:43

Parameters	Results	Flag	Units	RDL	Method	Prepared By	Analyzed	By	Cntr
Aldicarb Sulfone	ND		ug/L	1.0	EPA 531.1		3/2/15 14:12	CGS	E
Aldicarb Sulfoxide	ND		ug/L	1.0	EPA 531.1		3/2/15 14:12	CGS	E
Carbaryl	ND		ug/L	1.0	EPA 531.1		3/2/15 14:12	CGS	E
Carbofuran	ND		ug/L	1.0	EPA 531.1		3/2/15 14:12	CGS	E
3-Hydroxycarbofuran	ND		ug/L	1.0	EPA 531.1		3/2/15 14:12	CGS	E
Methiocarb	ND		ug/L	1.0	EPA 531.1		3/2/15 14:12	CGS	E
Methomyl	ND		ug/L	1.0	EPA 531.1		3/2/15 14:12	CGS	E
Oxamyl	ND		ug/L	1.0	EPA 531.1		3/2/15 14:12	CGS	E
Propoxur	ND		ug/L	1.0	EPA 531.1		3/2/15 14:12	CGS	E

Brad W. Kintzer

Mr. Brad W Kintzer
Project Coordinator

PARAMETER QUALIFIERS

Lab ID	#	Sample ID	Analytical Method	Analyte
2056921001	1	Lot 2 HO-14-0148	EPA 525.2	Butylbenzylphthalate

The QC sample type MS for method EPA 525.2 was outside the control limits for the analyte Butylbenzylphthalate. The % Recovery was reported as 138 and the control limits were 70 to 130.

2056921001	2	Lot 2 HO-14-0148	EPA 525.2	Anthracene

The QC sample type MS for method EPA 525.2 was outside the control limits for the analyte Anthracene. The % Recovery was reported as 45.4 and the control limits were 70 to 130.

2056921001	3	Lot 2 HO-14-0148	EPA 525.2	Acetochlor

The QC sample type MS for method EPA 525.2 was outside the control limits for the analyte Acetochlor. The % Recovery was reported as 133 and the control limits were 70 to 130.

ALS Environmental
34 Dogwood Lane
Middletown, PA 17057
P. 717-944-5541
F. 717-944-1430

CHAIN OF CUSTODY/ REQUEST FOR ANALYSIS

ALL SHADED AREAS MUST BE COMPLETED BY THE CLIENT / SAMPLER. INSTRUCTIONS ON THE BACK.

B

Page ___ of ___

Courier:

Tracking #:

2056921

Co. Name: Advanced Land and Water, Inc. (ALWI)

Contact (Report to): Amy Parrish

Phone: (410) 795-4626

Address: 1912 Liberty Rd Suite 2C
Eldersburg, MD 21784

Bill to (if different than Report to):

PO#:

Project Name/#:

ALS Quote #:

TAT: ☐ Normal-Standard TAT is 10-12 business days. ☑ Rush-Subject to ALS approval and surcharges.

Date Required: March 3, 2015

Approved By: Zachary Neal

Email? Y

Fax? Y No:

	pH	Temperature	conductivity	EPA 525.2	EPA 515.3	EPA 531.1					
***Container Type				AN	AN	CG		SPS			
***Container Size				1L	250ml	40ml		2/27/15			
***Preservative				Na_2SO_3	S4	MAB					

ANALYSES/METHOD REQUESTED

Enter Number of Containers Per Analysis

	Sample Description/Location (as it will appear on the lab report)	COC Comments	Sample Date	Military Time	*G or C	**Matrix	pH	Temperature	conductivity	EPA 525.2	EPA 515.3	EPA 531.1					
1	LOT2 HC-14-0148		2/27	13:20			7.6	14.6	360								
2			2/27														
3																	
4																	
5																	
6																	
7																	
8																	

Receipt Information (completed by Sample Receiving)

Performed by: SPS

Cooler Temp: 1

Therm. ID: 291

No. of Coolers: 1

Notes:

Circle appropriate Y or N.

Correct containers?	Correct sample volume?	Correct preservation?	Headspace/Volatiles?
Y	Y	Y	

Custody seals Present?	(if present) Seals intact?	Received on ice?	COC/Labels complete/accurate?	Container in good condition?
Y		Y	Y	Y

SAMPLED BY (Please Print):

Project Comments: [illegible] 2/28 303

	Relinquished By / Company Name	Date	Time		Received By / Company Name	Date	Time
1	Zachary Neal / ALWI	2/27/15	2040pm	2	[illegible] ALS	2/27	1540
3	[illegible]	2/27	1943	4	SPS	2/27	1943
5				6			
7				8			
9				10			

Data Deliverables: ☑ Standard ☐ CLP-like ☐ NJ-Reduced ☐ NJ-Full ☐ other

EDDs Required? ☐ If yes, format type:

SDWA Forms? yes ☐ yes ☐ yes ☐ yes ☐ Other

State Samples Collected In? MD ☐ NJ ☐ NY ☐ PA ☐

DOD Criteria Required?

ALS FIELD SERVICES
☐ Pickup
☐ Labor
☐ Composite Sampling
☐ Rental Equipment
☐ Other:

* G=Grab; C=Composite **Matrix: AI=Air; DW=Drinking Water; GW=Groundwater; OI=Oil; OL=Other Liquid; SL=Sludge; SO=Soil; WP=Wipe; WW=Wastewater

Copies: WHITE - ORIGINAL CANARY - CUSTOMER COPY ***Container Type: AG-Amber Glass; CG-Clear Glass, PL-Plastic. Container Size: 250ml, 500ml, 1L, 8oz., etc. Preservative: HCl, HNO3, NaOH, etc.

Rev 01-2013

Torrent LABORATORY, INC.

Q: What is Quality Assurance?

A: Quality Assurance is the program by which the laboratory ensures that all standards and procedures are adhered to and that all data delivered to the client meets performance requirements. Because environmental testing laboratories are regulated by both the State and Federal Government, an active Quality Assurance program is an integral part of a laboratory's operations.

Q: What is the difference between Quality Assurance and Quality Control?

A: Quality Control is the statistical measurement of the laboratory's ability to meet analytical specifications for precision and accuracy. These specifications may be pre-determined by method requirements, or developed within the laboratory as a function to monitor trends and deviations from norms.

Q: What tools are used in the monitoring of Quality Control?

A: Torrent's primary Quality Control tool involves control charts that set acceptance criteria for each method performed at the laboratory. Some limits are mandated by specific methods but most are a function of collecting and managing data points to determine accuracy and precision criteria. Quality control charts are updated quarterly.

Q: What tools are used in the Quality Assurance Program?

A: Tools include Standard Operating Procedure documents for each method performed, maintenance logs for instrument performance, a wide variety of bench sheets, log books and forms used to track all functions occurring within the laboratory, quarterly internal audits of adherence to standards and procedures, on-going training records for all analysts, and participation in yearly double-blind performance evaluation studies.

Q: What Quality Control is included in my Report?

A: There are several levels of QC packages available. A standard or Level II QC package includes results QC samples associated with your specific samples: Method Blank, a laboratory Control Sample (LCS), a laboratory control sample duplicate (LCSD) and, if applicable to your samples, the results for a matrix spike (MS) and matrix spike duplicate (MSD). An extended or Level III package would include all of the above as well as any QC that is associated with the instrumentation used during the analysis of your samples including calibration data and on-going instrument verification data. With both QC levels, any volatile or semi-volatile analysis performed also includes surrogate data for each sample analyzed .

Q: What is the purpose of a Method Blank? And why is it important to me?

A: A method blank (MB) is an analyte-free matrix such as DI Water for liquids or cleaned sand for solids and/or soils that is processed in exactly the same manner as the samples. The main function of the MB is to document contamination resulting from the analytical process. For an MB to be acceptable it must be no higher than the highest of the following:

The method detection limit (MDL)
5% of the regulatory limit of the analyte being tested
5% of the measured concentration in the sample

The importance of the method blank is the confidence it provides in assuring the reported values found in your samples are "real" and not the result of laboratory contamination.

Q: What are Laboratory Control Samples and why are they important to me?

A: Laboratory Control Samples and Sample Duplicates (LCS/LCSD) are samples prepared in the laboratory that contain analytes that are representative of the analytes of interest in client submitted samples. Known concentrations of analytes are added to either DI Water or Sand and are processed in

the same manner as the client samples. The results of the LCS are used to demonstrate that the laboratory is in control of the processes involved in the preparation and analysis of specific tests. Control charts are maintained with acceptance criteria for each of the LCS analytes. These acceptance criteria must be met before results for client samples can be reported. The criteria include both accuracy or bias (% recovery) and precision (% RPD – or reproducibility) measurements. It is critical that the laboratory be able to not only accurately recover what is present but to be able to reproduce that action as well. A laboratory control sample duplicate (LCSD) is used to demonstrate reproducibility.

The importance of the LCS/LCSD is to provide confidence to you that what the laboratory claims it can recover and reproduce is actual and not hypothetical.

Q: What are Matrix Spike and Matrix Spike Duplicates? Why are the significant to me?

A: A Matrix Spike and Spike Duplicate (MS/MSD) are representative but randomly chosen client samples that have known concentrations of analytes of interest added to the samples prior to sample preparation and analysis. They are processed along with the same un-spiked sample. The purpose of the MS/MSD is to document the accuracy and precision of the method for that specific sample. Control charts are maintained that are indicative of typical MS/MSD recoveries of 'real' samples rather than laboratory controlled samples.

The importance of the MS/MSD is specific in nature. The MS/MSD is only significant to the client whose sample was chosen for spiking. The MS/MSD data serves as an indication of the problems that may be associated with a specific sample or sample site. For example, if a known concentration of Lead is added to a sample but only 20% is recovered, it may be an indication of matrix interference resulting in suppressed recovery of Lead. This is important when evaluating all of the lead results that may be associated with a group of samples taken from the same general location. The MS/MSD is not useful to a client whose sample was not chosen and thus, is not reported to that client unless specifically requested.

Q: What is a surrogate?

A: A surrogate is an organic compound similar to the analytes of interest in both chemical composition and behavior in the analytical process, but not normally found in environmental samples.

Q: Why are surrogates used and what do they mean to me?

A: Surrogates are used in most organic analysis to demonstrate matrix compatibility with the chosen method of analysis. Each sample is spiked with a known concentration of surrogate compound(s) prior to the preparation and analysis of the sample. Control charts are maintained that are indicative of typical surrogate recoveries of 'real' samples rather than laboratory controlled samples. Samples that fail surrogate recovery criteria are re-spiked and re-analyzed to determine if poor recovery is due to laboratory spiking error or matrix interference.

Reported surrogate recoveries are important because low recoveries indicate matrix interference in the sample resulting in suppressed recovery of analytes of interest. This becomes important when evaluating the data. For example, if TCE is an analyte of interest but the associated surrogate is only recovered at 28%, the reported value for TCE may be biased low as well and the client may want to consider the possibility that more TCE is present than is being reported.

Q: What are Method Detection Limits?

A: Method Detection Limits (MDLs) are the minimum concentrations of substances that can be measured with 99% confidence that the analyte concentrations are greater than zero. MDL studies are performed for all analytes of interest for each method at a minimum of once a year. MDLs are matrix specific as well and have very specific analytical procedures and acceptance criteria.

Q: What is the difference between an MDL and an RL/PQL?

A: MDLs are the starting point within a laboratory of defining normal Reporting Limits (RLs), also called Practical Quantitation Limits (PQLs). An MDL is a value that is statistically determined and represents what can be identified above the "noise" level of an instrument as being present but not necessarily accurate. The RL/PQL is a laboratory determined value at 2 to 5 times above the MDL and can be reproduced in a manner that results in a 99% confidence level that the result is both accurate and precise.

Q: Does Torrent report results below the RL/PQL?

A: Although Torrent would prefer to report data to the laboratory determined RLs, Torrent will report results between the MDL and the RL/PQL under very specific circumstances or upon client request. Whenever results are reported to the MDL, the sample will have a specific comment associated with it indicating the reason MDLs are reported. Additionally, any detected values between the MDL and RL

will be qualified as 'estimated' rather than 'quantitative' concentrations and will be flagged with a'J' qualifier in the case of organic analysis or a 'tr' in the case of inorganic analysis.

Q: Does Torrent report data that is out of control limits?

A: Torrent makes every effort to report only qualified data to the client. Occasionally, there will be QC failures that can not be corrected prior to the release of data. An example of this would be a MB or LCS failure for an extractable analysis that requires a minimum volume of sample. Normal corrective action requires the re-extraction and re-analysis of all samples associated with the failing QC. However, sometimes the client is not able to collect the extra volume of sample originally requested due to low flow wells or high level of sediment, and there is no possibility of performing the re-extraction. In such cases, the data is reported and a case narrative is included with the report describing the nature of the QC failure and why corrective action was not possible.

A second circumstance where data is reported despite QC failure is when the QC limits are exceeded on the high side of the acceptable range but the samples are Non Detect (ND) for any associated compounds. Both situations are rare but do occur.

Q: What do the terms 'RL' and 'MRL' on your report stand for?

A: RL refers to the initial "Reporting Limit". This is the lowest quantifiable reporting limit that can be achieved when an analysis is performed under ordinary conditions.

MRL refers to "Modified Reporting Limit" and is the final reporting limit that applies to the sample once all sample preparation factors and/or dilution factor have be applied. For example, if Chromium in soil was reported at a dilution factor of 10 the RL column would read '5' but the MRL column would read '50'. Or, for example, if an oil and grease sample was analyzed with only 500 mL rather than 1000 mL , a preparation factor of 2 would be necessary and the RL column would read '5' while the MRL column would read '10'.

Q: Are the values reported in the Results column final or do I need to correct for dilution?

A: All data in the results column is final. Any preparation factors and/or dilution factors have already been applied.

Q: What is a "Case Narrative"?

A: A Case Narrative is included with final reported data whenever there are any issues regarding sample receipt, preparation, analysis, and/or reporting that are outside of the normal policies and procedures of Torrent Laboratory. Items included in the case narrative can be as benign as a client request to amend sample IDs, deviations to methods due to limited sample mass or volume, or more serious issues regarding Matrix Spike recoveries or explanations of why data is reported despite failing QC. Within the case narrative, information regarding specific samples may be present, such as matrix interference problems, instances where the sample required special preparation procedures, and/or information regarding requests made by the client as to how the sample should be treated. The case narrative is also where Torrent indicates whether any analyses required sub-contracting to another certified laboratory and which laboratory the samples were subcontracted to. And, finally, if a report is revised or re-issued for any reason, the incident leading to the revision/re-issue would be described and the date of the revision/re-issue noted in the case narrative.

Q: I was checking my data and some of the values do not seem correct. What can Torrent do to help me?

A: Please feel free to contact the QA department at Torrent anytime you have questions or concerns about the presentation of the data or the data itself. Torrent can open a 'Data Validation' request to re-validate the reported data. While instances are rare, mistakes in data can be made and Torrent will check each step of the analytical process in order to re-assure you that the data presented is correct. If an error is found, we will re-issue the report to you immediately with a case narrative describing the genesis of the error and the corrective action that has been taken to ensure that the same error is not repeated.

Q: How do you ensure that your error rate is low?

A: Torrent operates with a 6 sigma approach to the reporting and presentation of data. All of our analysts are empowered to make QA decisions within the scope of their expertise and each department manager is encouraged to think of project management as their final client. In this way, data coming into project management has already passed rigorous analyst review, peer review and department manager review. Conversely, Project Management is encouraged to think of each department as their vendor which means any special requirements or protocols outside of the normal scope of work must be communicated to the departments prior to the release of samples for analysis. This ensures that the departments have the information they need to qualify their work to client specifications before submitting final data to Project Management.

Q: What if I need to change or add tests to samples that have already been submitted to Torrent?

A: If the samples are in process, a simple request from the client (in writing) will initiate a 'Change Order' form and the changes will be communicated to the affected department. Every effort is made to adhere to the client's original turn around time request (TAT). Due to capacity limitations, changes may delay the final report by a day or two.

If the report has already been signed and released, any requests for additional analyses will be logged in under a new CoC that will be filled out and forwarded to the client for signatory approval. A new work order ID and TAT will be assigned to the additional requests and the new CoC will refer to the CoC under which the original samples were received.

Q: What if I need a report re-issued ore revised?

A: Contact the Project Management or QA department and explain what you need. Torrent's QA procedures include the electronic storage of all generated reports. A revised report will be issued with a unique name and number identifier and will not replace the original report but be stored alongside it. This procedure allows for the re-creation of any action that may have taken place during the issuing of an original and/or revised report.

Q: Does Torrent supply chromatograms to clients?

A: Yes, chromatograms are available upon client request. Torrent does not release quant sheets unless a Level IV data package is requested.

Q: Will Torrent release preliminary data?

A: Yes and no. Yes, if multiple analyses are requested and some of the data is completed but other data is still not ready, a preliminary report can be issued for the completed data upon client request. The report is still considered preliminary, and is identified as such, but the results reported are final.

Torrent does not report any data that has not been qualified by the appropriate passing QC samples. This is to protect the client as well as the laboratory from any liability issues resulting in decisions made with data that may change due to QC failure.

Q: Does Torrent release data verbally?

A: For analyses requested on a TAT of less than 8 hours, Torrent will release data verbally if all associated QC has passed acceptable criteria. Under no circumstances are verbal results given without passing QC. Verbal results may be given over the phone but a follow up email will be sent containing information shared during the phone conversation and that email is considered as the official delivery of verbal results.

483 Sinclair Frontage Road Milpitas, California 95035 Phone: 408.263.5258

EMERGENCY/TEMP NO. IF ANY

B 1 | 33890 | SEQUENCE NO. (MDE USE ONLY)

STATE OF MARYLAND
APPLICATION FOR PERMIT TO DRILL WELL

555320-A please type

STATE PERMIT NUMBER — —

fill in this form completely

Date Received (APP.) 11 18 14

OWNER INFORMATION

Mittenberg Boarders Assoc. Inc
Last Name | Owner | First Name

9350-B Grace Drive
Street or RFD

Columbia Md 21044
Town | State | Zip

DRILLER INFORMATION

Allen Compton MSD009
Driller's Name | License No.

Fogles Well Drilling, LLC
Firm Name

P.O. Box 202 Woodbine Md 21797
Address

Allen Compton 11-18-14
Signature | Date

B 2 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
- [F] FARMING (LIVESTOCK WATERING & AGRICULTURAL IRRIGATION)
- [I] INDUSTRIAL, COMMERCIAL, DEWATERING
- [P] PUBLIC WATER SUPPLY WELL
- [T] TEST, OBSERVATION, MONITORING
- [O] OPEN LOOP GEOTHERMAL
- [C] CLOSED LOOP GEOTHERMAL

APPROXIMATE DEPTH OF WELL 400 FEET

APPROXIMATE DIAMETER OF WELL 8 NEAREST INCH

METHOD OF DRILLING (circle one)

BORED (or Augered) | JETTED | Jetted & DRIVEN
(AIR-ROTary) | AIR-PERcussion | ROTARY (Hydraulic Rotary)
CABLE | REVerse-ROTary | DRive-POINT
other

REPLACEMENT OR DEEPENED 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
- [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 DEEPEN AN EXISTING WELL

PERMIT NUMBER OF WELL TO BE REPLACED OR DEEPENED (IF AVAILABLE) — — — — — — — — —

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

APPROP. PERMIT NUMBER — — — — — G — — —

PERMIT No. — —

B 3 LOCATION OF WELL

Howard
COUNTY

Greenberry
SUBDIVISION

SECTION — LOT 2

Clarksville
NEAREST TOWN

B 4

SOURCES OF DRILLING WATER
1.
2.
3.

Linden Church Rd
STREET ADDRESS

ON WHICH SIDE OF ROAD (CIRCLE APPROPRIATE BOX) (NORTH / WEST / EAST / SOUTH)

DISTANCE FROM ROAD 700 FT

ENTER FT OR MI

TAX MAP: ____ BLK: ____ PARCEL ____

NOT TO BE FILLED IN BY DRILLER HEALTH DEPARTMENT APPROVAL

COUNTY NAME COUNTY NO.

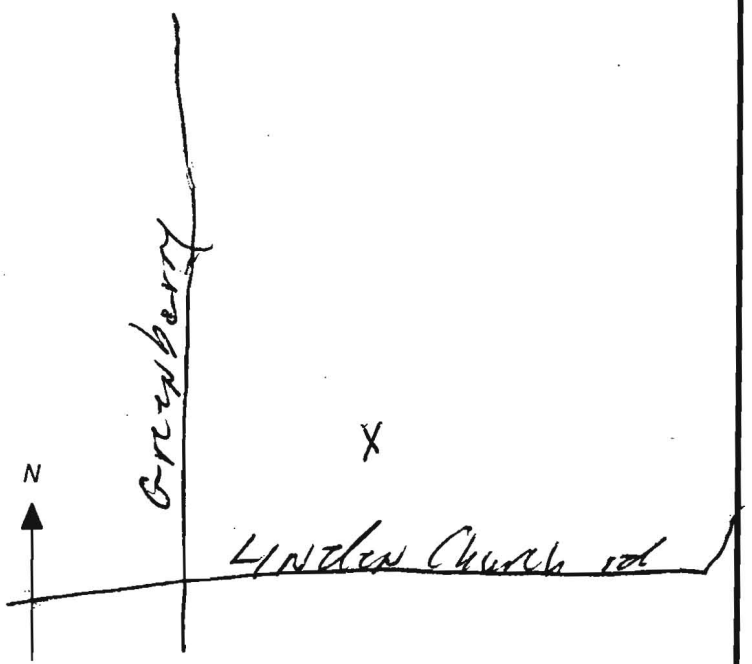
STATE SIGNATURE ____ INSERT S

DATE ISSUED

MM DD YY CO SIGNATURE EXP. DATE

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



SPECIAL CONDITIONS

NOTE APPROVING AUTHORITIES SHOULD USE SEPARATE SHEET IF NEEDED

MDE/WMA/PER.071

① ORIGINAL