



# HOWARD COUNTY HEALTH DEPARTMENT

56461

DATE  
5/18/15

65

Received From

Coltied Environmental

PHONE # 301 776-8370

For

well permit / 4531 Old Columbia Rd.

CASH

CHECK

NO.

11684

One hundred sixty x Dollars

\$

100.00

Received By

J Kemp

DEPARTMENT OF INSPECTIONS,  
 LICENSES & PERMITS  
 3430 COURT HOUSE DRIVE  
 ELLICOTT CITY, MD 21043  
 PERMITS (410) 313-2455  
 INSPECTIONS (410) 313-1850

**HOWARD COUNTY  
 RESIDENTIAL  
 HEATING-VENTILATION-AIR  
 CONDITIONING AND  
 REFRIGERATION PERMIT  
 APPLICATION**

HVACR PERMIT # M15000485

BUILDING PERMIT #

BB

BUILDING ADDRESS: SUITE/APT:  
 SUBDIVISION:  
 CENSUS TRACT: SECTION: AREA:  
 LOT: TAX MAP: PARCEL:  
 BLOCK: ZONE:  
 PROPERTY ID: MAP COORDINATES:  
 TYPE OF IMPROVEMENTS: USE:

OWNERS NAME: Aaron Nelson  
 ADDRESS: 7531 Old Columbia Road  
 CITY: Laurel ZIP CODE: 20723  
 STATE: MD  
 HOME PHONE: WORK PHONE:

	<u>CHECK ONE</u>	<u>HOW MANY</u>	
SINGLE FAMILY DWELLING	<input checked="" type="checkbox"/>	<u>1</u>	ZONES
SINGLE FAMILY TOWNHOUSE	<input type="checkbox"/>	___	ZONES
MULTI-FAMILY / HOTEL/MOTEL	<input type="checkbox"/>	___	ROOMS
ASSISTED LIVING HOMES (16 OR FEWER RESIDENTS)	<input type="checkbox"/>	___	ROOMS

COMPANY NAME: Ground Loop Heating & Air Cond., Inc.  
 LICENSEE NAME: Michael E. Cullum  
 ADDRESS: 1701 Whiteford Road  
 CITY: Darlington  
 STATE: MD ZIP CODE: 21034  
 PHONE: 410-836-1706 HVACR LICENSE NO: 6539

- New**
- Heating and Air Conditioning
  - Geo Thermal System**
  - Heating System Only
  - Ductless Mini Splits
  - Other Work (Describe):
  - Thru The Wall Systems
- Replacement**
- Heating
  - Air Conditioning
  - Heating and Air Conditioning
- Additions and Alterations**
- Heating
  - Air Conditioning
  - Heating and Air Conditioning
- Water Furnace  
3 ton  
NVV036*

\*\*\*\*Replacement Geo Thermal Systems are not required; However, if a tax credit is being sought a permit is required\*\*\*\*

**Zones**

Permit Fee = # of Zones x \$40 = 40.00  
 Technology Fee (10% of Permit Fee) = 4.00  
 Plus Application Fee \$50.00  
 Total Fees Due = 94.00

**Rooms**

Permit Fee = # of Rooms x \$80 = \_\_\_\_\_  
 Technology Fee (10% of Permit Fee) = \_\_\_\_\_  
 Plus Application Fee \$50 \$50.00  
 Total Fees Due = \_\_\_\_\_

I HAVE CAREFULLY EXAMINED AND READ THIS APPLICATION AND KNOW IT IS TRUE AND CORRECT. THE WORK DESCRIBED HEREIN WILL BE PERFORMED BY A STATE HVACR LICENSED PERSON(S), AND ALL WORK WILL BE PERFORMED IN COMPLIANCE WITH APPLICABLE CODES AND STANDARDS OF HOWARD COUNTY THE STATE OF MARYLAND.

Michael Cullum  
 SIGNATURE OF LICENSEE DATE \_\_\_\_\_  
MICHAEL CULLUM  
 PRINT NAME OF LICENSEE  
linda @ ground loop . com  
 Email Address

**Validation**  
 Check Number: 22818  
 Cash: \_\_\_\_\_  
 Receipt Number: 401576  
**RECEIVED**

MAY 18 2015

Make check payable to: DIRECTOR OF FINANCE OF HOWARD COUNTY

*well + septic*  
 LICENSES & PERMITS



**Old Columbia Road**

Bearing and distance typo fixed 11-7-14.

Easement for Private Access  
(Undefined Width) across  
P.295 to Old Columbia Road  
Liber:627 Follo:417  
Driveway

Parcel #295

Easement #2  
Easement for Permanent  
Access Right of Way  
30' Wide as per  
Liber:973 Follo:592  
Driveway

Parcel #245

Easement #1  
Easement for Permanent  
Access Right of Way  
50' Wide as per  
Liber:973 Follo:592

Public 50' Right of Way

Lot 2  
Plat #19337

S 09°38'30" W  
264'

Driveway  
IPF

S 74°41'20" E  
165'

Gravel  
36'±

HO-73-3048  
Landing

1 Story  
Brick + Frame  
#7531

Wood  
Deck

Frame  
Shed  
Rough



Site plan  
approved  
5/29/15

N 74°41'20" W  
165'

Parcel #313

N 09°38'30" E  
264'

Parcel #401

Private access easement also described in L:8817 F:155

DO NOT REMOVE THIS TAG  
DEPARTMENT OF THE ENVIRONMENT  
WELL PERMIT NUMBER

HO-15-0080

INFORMATION-GIVE NUMBER AND WRITE  
1800 WASHINGTON BLVD  
BALTIMORE MARYLAND. 21230

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not valid



James Carl Hudgins  
Property Line Surveyor #96  
Expiration Date: 3/11/16

**LOCATION DRAWING**  
7531 Old Columbia Road  
6th ELECTION DISTRICT  
HOWARD COUNTY, MARYLAND

**NTT Associates, Inc.**  
16205 Old Frederick Rd.  
Mt. Airy, Maryland 21771  
Phone: (410) 442-2031  
Fax: (410) 442-1315  
www.nttsurveyors.com

Scale:	1" = 50'
Date:	4-11-14
Field By:	DR
Drawn By:	DR
File No.:	110798HIRS
Page No.:	1 of 2

## HOWARD COUNTY GROUTING PROCEDURE

Boreholes will be grouted from the bottom to the top via a tremie pipe and positive displacement pump. Bentonite grout, known as Quik-Grout will be used according to the manufacturer's specifications to achieve a consistency of at least 20% solids (24 gallons potable water/50 lb. sack of grout) and a permeability no more than  $2.5 \text{ E}(-08) \text{ cm/sec}$ . Grouting will be completed immediately after installing the geothermal loop and no later than twenty-four (24) hours after installing the geothermal loop. Open boreholes/annular space will be protected as necessary to prevent the entry of surface water or pollutants.

GRADE

EACH BORE HOLE (TYP.)

MINIMUM  
HORIZONTAL BURY  
DEPTH 4 FT

FOR CONT.  
SEE PLANS

HORIZONTAL  
PIPING

GROUT ENTIRE ANNULAR  
SPACE AND VERTICAL  
U-TUBE WITH (BENTANITE)  
GROUT.

BORE DEPTH



DEPTH MARKINGS IN FEET TO  
INDICATE DEPTH OF INSERTION

TAPE

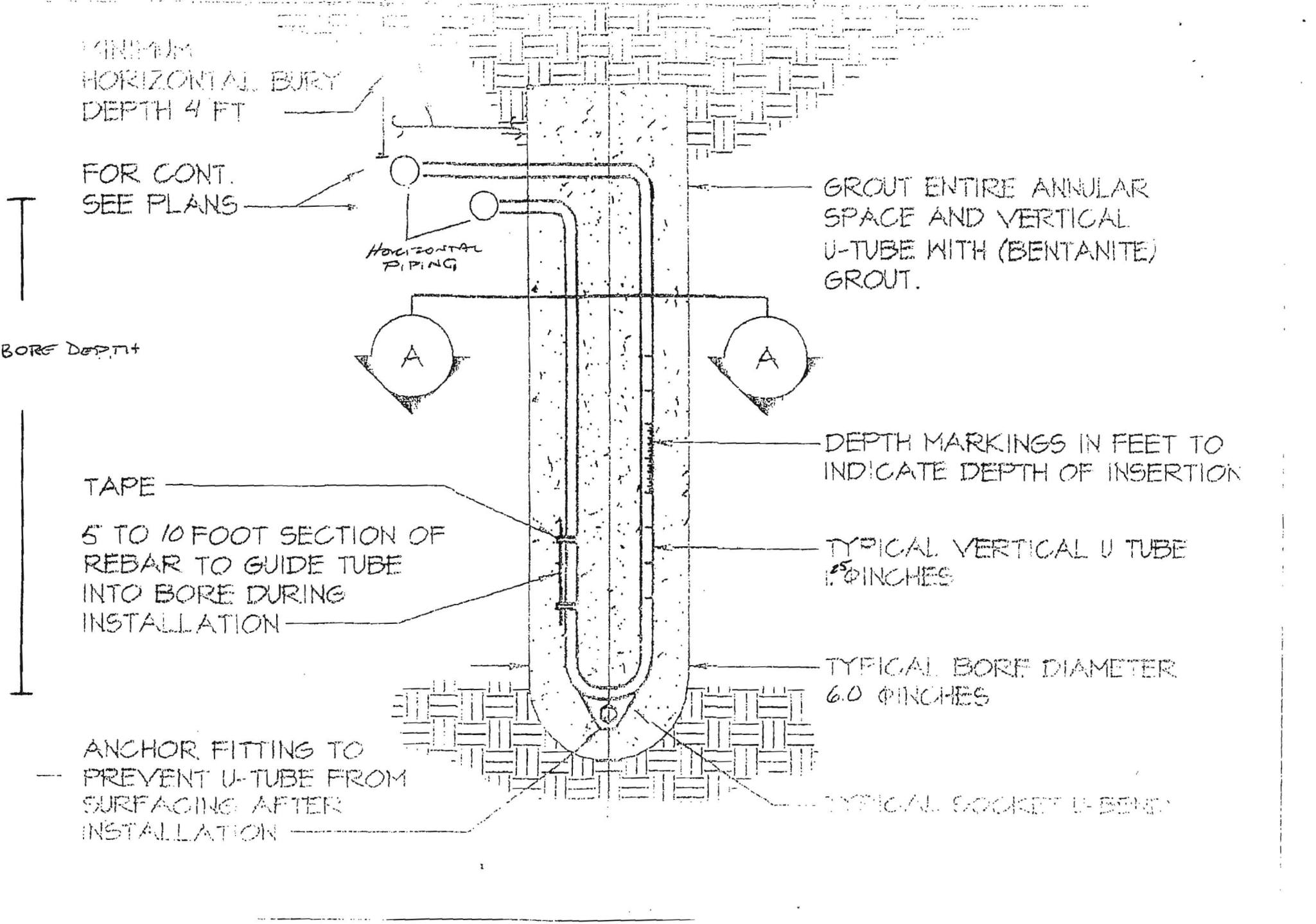
5 TO 10 FOOT SECTION OF  
REBAR TO GUIDE TUBE  
INTO BORE DURING  
INSTALLATION

TYPICAL VERTICAL U TUBE  
1.5 INCHES

TYPICAL BORE DIAMETER  
6.0 INCHES

ANCHOR FITTING TO  
PREVENT U-TUBE FROM  
SURFACING AFTER  
INSTALLATION

TYPICAL SOCKET U-BEND



B 1 36711

SEQUENCE NO. (MDE USE ONLY)

STATE OF MARYLAND APPLICATION FOR PERMIT TO DRILL WELL

STATE PERMIT NUMBER

HO-15-0080 fill in this form completely

Date Received (APA) 05/18/15

OWNER INFORMATION

Nelson Aaron + Christina 7531 Old Columbia Road Laurel MD 20723

B 3

LOCATION OF WELL

Howard 8 COUNTY 21 23 SUBDIVISION 42 SECTION 44 46 LOT 48 50 52 NEAREST TOWN 71

DRILLER INFORMATION

C John Hess M W D 553 76 License No. 81 Allied Environmental Services PO Box 129 Annapolis Junction MD 20701 C John Hess 05/14/15

B 4

SOURCES OF DRILLING WATER

1. Public 2. 3.

7531 Old Columbia Rd 11 STREET ADDRESS 30

ON WHICH SIDE OF ROAD (CIRCLE APPROPRIATE BOX)



DISTANCE FROM ROAD

ENTER FT OR MI 38 39

TAX MAP: BLK: PARCEL

B 2

WELL INFORMATION

APPROX. PUMPING RATE (GAL. PER MIN.) 8 12 AVERAGE DAILY QUANTITY NEEDED (GAL. PER DAY) 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 2 loops

NOT TO BE FILLED IN BY DRILLER HEALTH DEPARTMENT APPROVAL

Howard 13 COUNTY NAME COUNTY NO. STATE SIGNATURE INSERT S DATE ISSUED 5/29/15 CO SIGNATURE S.L. CH. EXP. DATE 5/29/16

APPROXIMATE DEPTH OF WELL 320 FEET

APPROXIMATE DIAMETER OF WELL 6 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

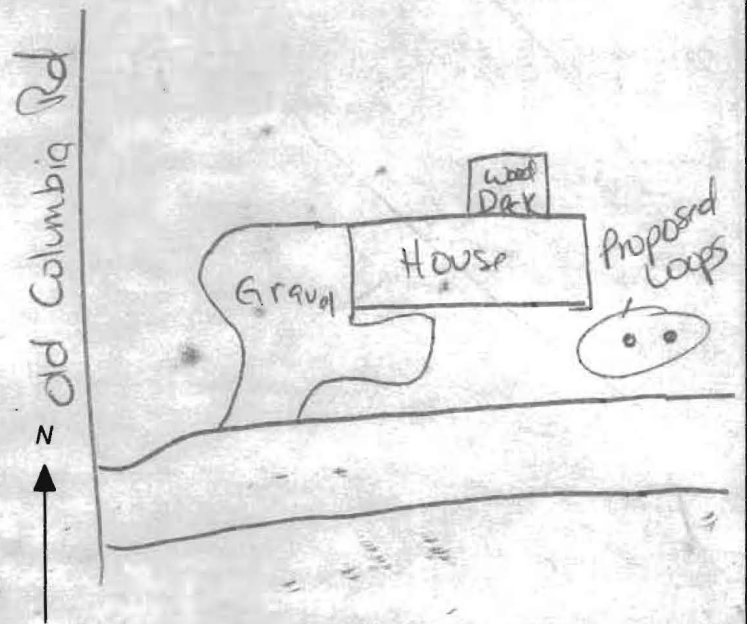
REPLACEMENT OR DEEPEMED WELLS (CIRCLE APPROPRIATE BOX)

- N THIS WELL WILL NOT REPLACE AN EXISTING WELL Y THIS WELL WILL REPLACE A WELL THAT WILL BE ABANDONED AND SEALED S THIS WELL WILL REPLACE A WELL THAT WILL BE USED AS A STANDBY-CONTACT LOCAL APPROVING AUTHORITY FOR POLICY ON STANDBY WELLS D THIS WELL WILL DEEPEM AN EXISTING WELL PERMIT NUMBER OF WELL TO BE REPLACED OR DEEPEMED (IF AVAILABLE) 41 52

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

APPROP. PERMIT NUMBER G PERMIT No. HO-15-0080

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

C1 34423

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

ST/CO USE ONLY DATE RECEIVED

DATE WELL COMPLETED 10-10-15

Depth of Well 320 (TO NEAREST FOOT)

PERMIT NO. FROM "PERMIT TO DRILL WELL" HO-15-0080

OWNER Nelson Arone Christina WELL SITE ADDRESS 7531 Old Columbia TOWN Laurel MD

WELL LOG Not required for driven wells

Table with columns: DESCRIPTION (Use additional sheets if needed), FEET (FROM, TO), check if water bearing. Includes handwritten entries: Top Soil, Brn Soil + mica, Soft Gray Rock mica.

Ground loop

NUMBER OF UNSUCCESSFUL WELLS:

WELL HYDROFRACTURED YES NO Y N

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

I HEREBY CERTIFY THAT THIS WELL HAS BEEN CONSTRUCTED IN ACCORDANCE WITH COMAR 26.04.04 "WELL CONSTRUCTION" AND IN CONFORMANCE WITH ALL CONDITIONS STATED IN THE ABOVE CAPTIONED PERMIT AND THAT THE INFORMATION PRESENTED HEREIN IS ACCURATE AND COMPLETE TO THE BEST OF MY KNOWLEDGE.

DRILLER'S LIC. NO. MW D553

DRILLER'S SIGNATURE (MUST MATCH SIGNATURE ON APPLICATION)

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

2 loops GROUTING RECORD

WELL HAS BEEN GROUTED (Circle Appropriate Box) YES NO V N 44 44 TYPE OF GROUTING MATERIAL (Circle one) CEMENT CM BENTONITE CLAY BC NO. OF BAGS 20 NO. OF POUNDS 1000 GALLONS OF WATER 500 DEPTH OF GROUT SEAL (to nearest foot) from 0 ft. to 320 ft.

CASING RECORD casing types insert appropriate code below MAIN CASING TYPE Nominal diameter top (main) casing (nearest inch) Total depth of main casing (nearest foot)

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

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

DEPTH (nearest ft.) 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51

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) PUMPING RATE (gal. per min.) METHOD USED TO MEASURE PUMPING RATE WATER LEVEL (distance from land surface) BEFORE PUMPING WHEN PUMPING 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) LAND SURFACE (nearest foot)

LATITUDE 39.16482 LONGITUDE 76.88324 (DEFAULT COORD. WGS 84)

NOTES: Front 39.16479 76.88323