

ST/CO USE ONLY DATE Received MM 04 DD 18 YR 10 DATE WELL COMPLETED MM 03 DD 22 YR 15 PERMIT NO. FROM "PERMIT TO DRILL WELL" 140-15-0025

Depth of Well 22 1375 26 (TO NEAREST FOOT)

OWNER Wells, Daniel & Lembe last name first name TOWN Highland, MD

WELL SITE ADDRESS 6735 Emerald Hollow first name SECTION LOT

SUBDIVISION SECTION LOT

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		check if water bearing
	FROM	TO	
Topsoil	0	6	
Bin Rock	6	26	
Broken Rock	26	40	
Grey Rock	40	380	

2 closed loops

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

TYPE OF GROUTING MATERIAL (Circle one)
CEMENT CM BENTONITE CLAY BC

NO. OF BAGS 45 46 26 NO. OF POUNDS 45 46 7300

GALLONS OF WATER 650

DEPTH OF GROUT SEAL (to nearest foot)
from 0 ft. to 375 ft.
48 TOP 52 54 BOTTOM 58

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)

60 61 63 64 66 70

OTHER CASING (if used)

diameter depth (feet)
inch from to

E A C H I N G

SCREEN RECORD

screen type or open hole (insert appropriate code below)

ST STEEL BR BRASS HO OPEN HOLE
 PL PLASTIC OT OTHER

C 2 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	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100
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SLOT SIZE 1 2 3

DIAMETER OF SCREEN (NEAREST INCH)
56 60

from to

C 3

PUMPING TEST

HOURS PUMPED (nearest hour) 8 9

PUMPING RATE (gal. per min.) 11 15

METHOD USED TO MEASURE PUMPING RATE

WATER LEVEL (distance from land surface)

BEFORE PUMPING 17 20 ft.

WHEN PUMPING 22 25 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. 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 } LAND SURFACE (nearest foot)
 - below }

NUMBER OF UNSUCCESSFUL WELLS:

WELL HYDROFRACTURED 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.

DRILLERS LIC. NO. MW D 533

DRILLERS SIGNATURE (MUST MATCH SIGNATURE ON APPLICATION)

LIC. NO. DW 942

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

GRAVEL PACK IF WELL DRILLED WAS FLOWING WELL INSERT F IN BOX 88 68

MDE USE ONLY (NOT TO BE FILLED IN BY DRILLER)

T (E.R.O.S.) W Q

70 72 74 75 76

TELESCOPE CASING LOG INDICATOR OTHER DATA

LATITUDE 39.13878

LONGITUDE 76.98018

(DEFAULT COORD. WGS 84)

NOTES: ① x

Front 39.18380 76.98013

05-433623

B 1	SEQUENCE NO. (MDE USE ONLY) 43878	STATE OF MARYLAND APPLICATION FOR PERMIT TO DRILL WELL 558034 please type	STATE PERMIT NUMBER HO-15-0225 fill in this form completely
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OWNER INFORMATION

Date Received (APA) 05/16/16

8 MM DD YY 13

15 Last Name Wells Owner Daniel + Jamie T/E First Name 34

36 Street or RFD 6735 Mink Hollow Rd 55

57 Town Highland 70 State MD 72 Zip 20717 76

LOCATION OF WELL

B 3

8 COUNTY Howard 21

23 SUBDIVISION The Guiel Prop Sub 42

SECTION 44 46 LOT 1 48 50

52 NEAREST TOWN Highland 71

DRILLER INFORMATION

Driller's Name C. John Hess MW D SS3 76 License No. 81

Firm Name Allied Environmental Svcs

Address PO Box 99 Annapolis Junction MD 20701

Signature [Signature] Date 03/16/16

SOURCES OF DRILLING WATER

B 4

1. Public

11 STREET ADDRESS 6735 E Mink Hollow Rd 30

ON WHICH SIDE OF ROAD (CIRCLE APPROPRIATE BOX)

34 37 DISTANCE FROM ROAD

ENTER FT OR MI 38 39

TAX MAP: 046 BLK: 0000 PARCEL 0317

WELL INFORMATION

B 2

APPROX. PUMPING RATE (GAL. PER MIN.) 8 12

AVERAGE DAILY QUANTITY NEEDED (GAL. PER DAY) 14 20

USE FOR WATER (CIRCLE APPROPRIATE BOX)

DOMESTIC POTABLE SUPPLY & RESIDENTIAL IRRIGATION

FARMING (LIVESTOCK WATERING & AGRICULTURAL IRRIGATION)

22 INDUSTRIAL, COMMERCIAL, DEWATERING

PUBLIC WATER SUPPLY WELL

TEST, OBSERVATION, MONITORING

OPEN LOOP GEOTHERMAL

CLOSED LOOP GEOTHERMAL 2 loops

NOT TO BE FILLED IN BY DRILLER HEALTH DEPARTMENT APPROVAL

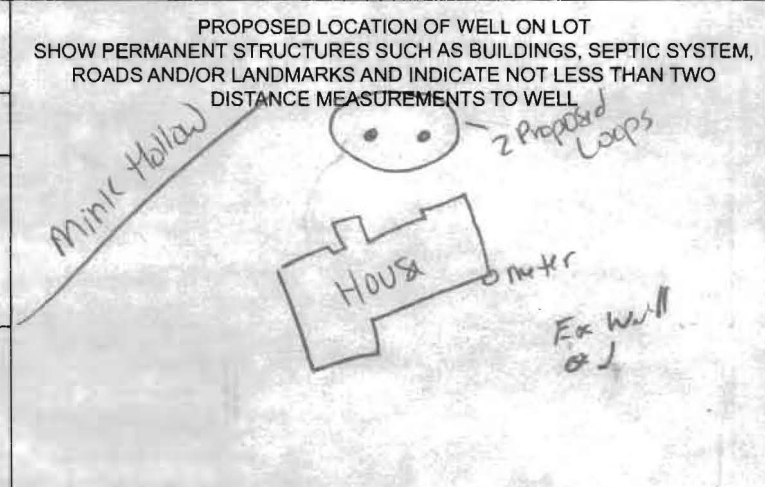
County Name Howard COUNTY NO. 13

STATE SIGNATURE _____ INSERT S → 41

DATE ISSUED 3/18/16 43 MM DD YY 48 CO SIGNATURE [Signature] EXP. DATE 3/18/17

APPROXIMATE DEPTH OF WELL 375 FEET 24 28

APPROXIMATE DIAMETER OF WELL 6 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 DEEPEMED WELLS (CIRCLE APPROPRIATE BOX)

THIS WELL WILL NOT REPLACE AN EXISTING WELL

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

39 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 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-15-0225 70 71 72 73 74 75 76 77 78 79

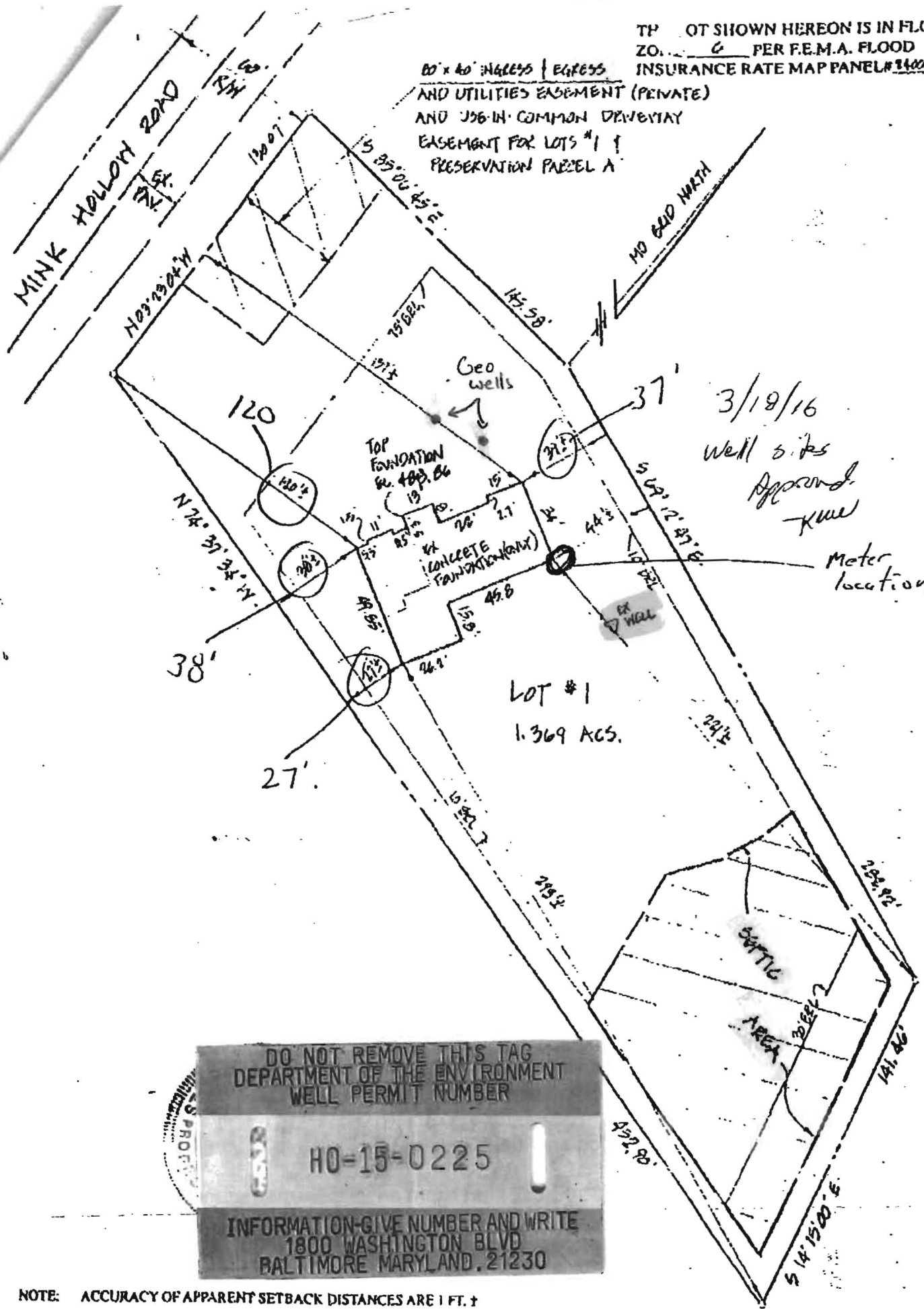
SPECIAL CONDITIONS Govt bottom to top.

NOTE: APPROVING AUTHORITIES SHOULD USE SEPARATE SHEET IF NEEDED.

Pursuant to § 10-624 of the State Govt. Article of the Maryland Code, personal info requested on this form is used in processing this form pursuant to COMAR 26.04.04. Failure to provide the info may result in this form not being processed. You have the right to inspect, amend, or correct this form. The Maryland Department of the Environment is subject to the Maryland Public Information Act. This form may be made available on the Internet via MDE's website and is subject to inspection or copying, in whole or in part, by the public and other governmental agencies, if not protected by federal or State Law.

THE LOT SHOWN HEREON IS IN FLOOD ZONE C PER F.E.M.A. FLOOD INSURANCE RATE MAP PANEL # 140044 0037B

60' x 40' ACCESS | EGRESS AND UTILITIES EASEMENT (PRIVATE) AND 36" IN. COMMON DRIVEWAY EASEMENT FOR LOTS #1 & PRESERVATION PARCEL A



3/19/16
Well sites
Approved
KML

Meter location

LOT #1
1.369 ACS.

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

HO-15-0225

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

NOTE: ACCURACY OF APPARENT SETBACK DISTANCES ARE 1 FT. ±

NOTE: (A) THIS PLAT IS NOT INTENDED FOR USE IN ESTABLISHING

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

TAPE

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

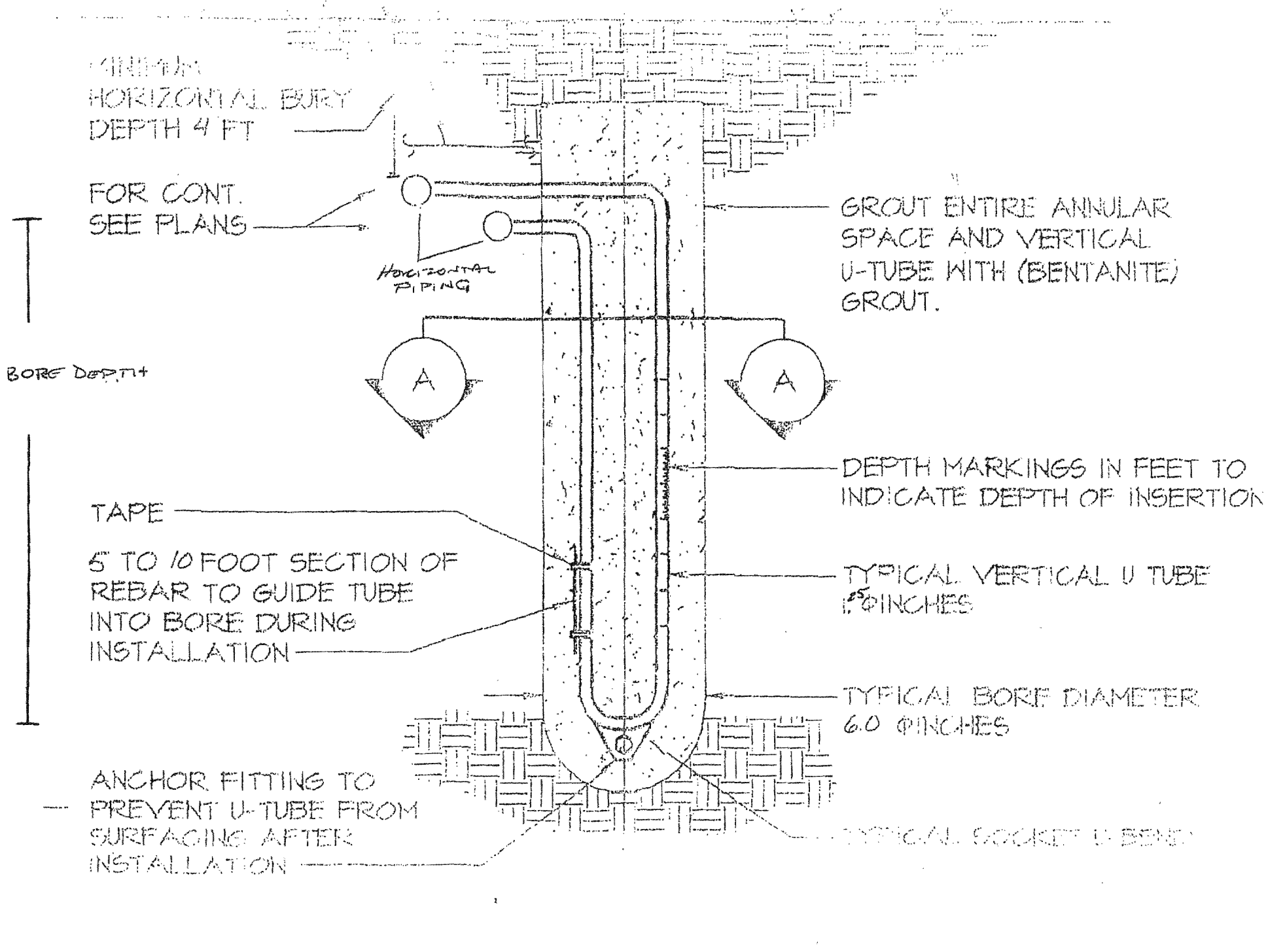
DEPTH MARKINGS IN FEET TO
INDICATE DEPTH OF INSERTION

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-BOND





HOWARD COUNTY HEALTH DEPARTMENT

58034

DATE
3/16/16

WS

Received From

Allied Environmental

PHONE #

301-776-8370

For

Well Permit - 6735 E. Mink Hollow Road

CASH

CHECK

NO.

12339

One hundred sixty ^{00/100} Dollars

\$

160 | 00

Received By

[Signature]