

C 1 **42525**
 SEQUENCE NO. (MDE USE ONLY)
 1 2 3 6
 (THIS NUMBER IS TO BE PUNCHED IN CIRCLES 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

ST/CO USE ONLY
 DATE RECEIVED
 MM 12 DD 19 YY 16
 8 13

DATE WELL COMPLETED
 MM 11 DD 09 YY 16
 15 20

Depth of Well
 22 320 26
 (TO NEAREST FOOT)

PERMIT NO. FROM "PERMIT TO DRILL WELL"
OK
12/19/16 SC
H0-15-0330
 28 29 30 31 32 33 34 35 36 37

OWNER Morris, William & Trine
 WELL SITE ADDRESS 7573 Lilac Lane TOWN Chesapeake MD
 SUBDIVISION Village Kings Confluence SECTION LOT 919

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	
<u>Bps soil</u>	<u>0</u>	<u>1</u>	
<u>Bin soil</u>	<u>1</u>	<u>15</u>	
<u>Weathered Rock</u>	<u>15</u>	<u>20</u>	
<u>Grp Rock</u>	<u>20</u>	<u>325</u>	

NUMBER OF UNSUCCESSFUL WELLS: _____
 WELL HYDROFRACTURED YES NO

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. MWD 557
 DRILLERS SIGNATURE _____
 (MUST MATCH SIGNATURE ON APPLICATION)
 LIC. NO. WBD 097

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

GROUTING RECORD yes no

 WELL HAS BEEN GROUTED (Circle Appropriate Box)

TYPE OF GROUTING MATERIAL (Circle one)
 CEMENT BENTONITE CLAY
 NO. OF BAGS 38 NO. OF POUNDS 457
 GALLONS OF WATER 450
 DEPTH OF GROUT SEAL (to nearest foot)
 from 0 ft. to 320 ft.
 (enter 0 if from surface)

CASING RECORD
 casing types insert appropriate code below

 STEEL CONCRETE
 PLASTIC 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

SCREEN RECORD
 screen type or open hole
 insert appropriate code below

 STEEL BRASS OPEN HOLE
 BRONZE HOLE
 PLASTIC 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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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
 70 72 74 75 76
 TELESCOPE CASING LOG INDICATOR OTHER DATA

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)
 air piston turbine
 centrifugal rotary other (describe below)
 jet submersible

PUMP INSTALLED

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

LATITUDE 39.16562
 LONGITUDE 76.86431
 (DEFAULT COORD. WGS 84)

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.

16-169390

B 1	SEQUENCE NO. (MDE USE ONLY) 41881	STATE OF MARYLAND APPLICATION FOR PERMIT TO DRILL WELL 559792-A please type	STATE PERMIT NUMBER HO-15-0330
	1 2 3 6		70 79 fill in this form completely

OWNER INFORMATION

Date Received (APA) 10/16/16

8 MM DD YY 13

15 Last Name Morris Owner William + Irene First Name William 34

36 7513 Lilac Sea Lane Street or RFD 55

57 Columbia MD 21046 Town 70 State 72 Zip 76

LOCATION OF WELL

B 3

8 COUNTY Howard 21

23 SUBDIVISION Vill Kings Continuance 42

SECTION 44 46 LOT 419 48 50

52 NEAREST TOWN Columbia 71

DRILLER INFORMATION

Driller's Name C John Hess MWD 553 76 License No. 81

Firm Name Allied Environmental Svc

Address PO Box 129 Annapolis Junction MD 20701

Signature John Hess Date 10/11/16

SOURCES OF DRILLING WATER

B 4

1. Public 11 STREET ADDRESS 30

2. _____

3. _____

ON WHICH SIDE OF ROAD (CIRCLE APPROPRIATE BOX)

34 40 37 DISTANCE FROM ROAD FT 38 39 ENTER FT OR MI

TAX MAP: 42 BLK: 14 PARCEL 62

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)

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 COUNTY NAME (13) COUNTY NO.

STATE SIGNATURE _____ INSERT S → 41

DATE ISSUED 10/19/16 CO SIGNATURE S.L.M. EXP. DATE 10/19/17

43 MM DD YY 48

APPROXIMATE DEPTH OF WELL 320 FEET 24 28

APPROXIMATE DIAMETER OF WELL 6 INCH NEAREST

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)

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 DEEPEM AN EXISTING WELL

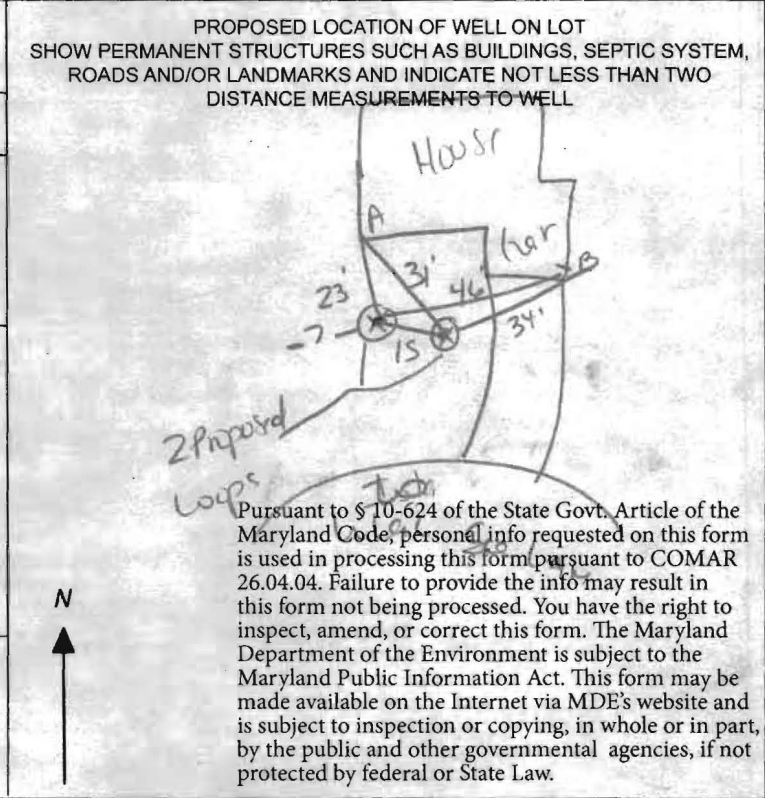
PERMIT NUMBER OF WELL TO BE REPLACED OR DEEPEMED (IF AVAILABLE) 41 _____ 52

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

APPROP. PERMIT NUMBER _____ G _____

PERMIT No. HO-15-0330

70 71 72 73 74 75 76 77 78 79



SPECIAL CONDITIONS

NOTE: APPROVING AUTHORITIES SHOULD USE SEPARATE SHEET IF NEEDED.

Drill cuttings + water must be contained on site - stream behind property down hill.

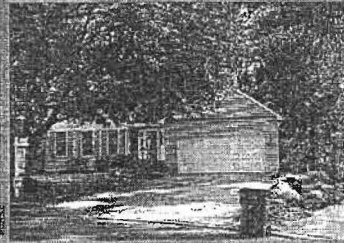
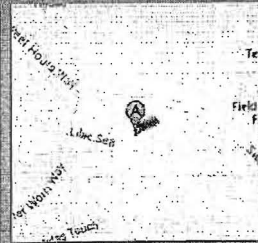
MDE/WMA/PER.071

PREPARED BY:

EXACTA

MARYLAND SURVEYORS

www.exactaMD.com
Toll Free: 866-735-1916 Fax: 866-744-2882



PROPERTY ADDRESS: 7513 LILAC SEA LANE COLUMBIA, MARYLAND 21046

SURVEY NUMBER: 1309.2037

FIELD WORK DATE: 9/25/2013

REVISION HISTORY: (REV.1 9/25/2013)

1309.2037
LOCATION DRAWING
LOT 417
COLUMBIA, VILLAGE OF KING'S CONTRIVANCE,
SECTION 2, AREA 3, PHASE 3
HOWARD COUNTY, MARYLAND
09-25-2013 SCALE 1"=30'

*Well sites approved
10/19/16 SC*

LOT 424

LOT 417
11,823 S.F.

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

HO-15-0330

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

1ST FLOOR DECK
WALK OUT ESMT
BELONG TO

2 STORY
FRAME RES.
7513

WALK
OUT ESMT

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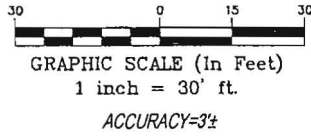
WALK
OUT ESMT

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LILAC SEA LANE
(50' R/W)

sewer

*water to be privately
marked*

POINTS OF INTEREST:
NONE VISIBLE

CLIENT NUMBER: 56735

DATE: 9/25/2013

BUYER: WILLIAM MORRIS AND IRINA MORRIS

SELLER: MARCUS B. SIMPSON

CERTIFIED TO:
WILLIAM MORRIS AND IRINA MORRIS; MID-ATLANTIC SETTLEMENT
SERVICES; COLDWELL BANKER HOME LOANS

A LICENSEE EITHER PERSONALLY PREPARED THIS DRAWING OR WAS IN RESPONSIBLE
CHARGE OVER ITS PREPARATION AND THE SURVEYING WORK REFLECTED IN IT, ALL IN
COMPLIANCE WITH REQUIREMENTS SET FORTH IN REGULATION .12 OF CHAPTER
09.13.06 OF THE CODE OF MARYLAND ANNOTATED REGULATIONS.

SURVEY COORDINATED BY:



P 866-772-8813 F 215-359-1733
www.truelinetech.com

EXACTA

Maryland Surveyors, Inc.

LB#21535
www.exactaMD.com
P (443)692-6523 • F (443)692-6524
10480 Little Patuxent Parkway • Suite 400 • Columbia, MD 21044

THIS IS A TWO PAGE DOCUMENT. THE ADVICE FOUND ON THE AFFIXED PAGE (PAGE 2 OF 2) IS AN INTEGRAL PART OF THE PLAT.

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 2.5×10^{-8} 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.)

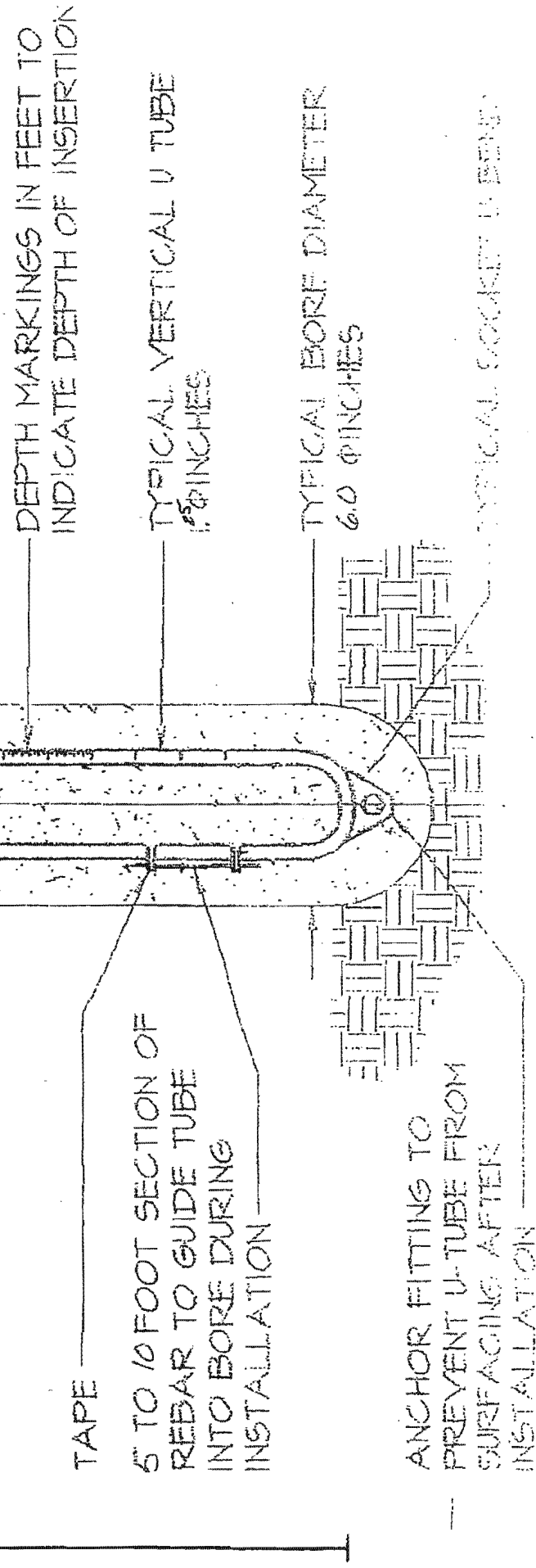
MINIMUM

HORIZONTAL BURY
DEPTH 4 FT

FOR CONT.
SEE PLANS

Horizontal
PIPING

BORE DEPTH



TAP

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

ANCHOR FITTING TO
PREVENT U-TUBE FROM
SURFACING AFTER
INSTALLATION

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

DEPTH MARKINGS IN FEET TO
INDICATE DEPTH OF INSERTION

TYPICAL VERTICAL U TUBE
1.5" PINCHES

TYPICAL BORE DIAMETER
6.0" PINCHES

TYPICAL SOCKET U-BEND

