

C 1 31706 SEQUENCE NO. (MDE USE ONLY)

STATE OF MARYLAND WELL COMPLETION REPORT

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

1 2 3 6 (THIS NUMBER IS TO BE PUNCHED IN COLS. 3-6 ON ALL CARDS)

FILL IN THIS FORM COMPLETELY PLEASE TYPE

COUNTY NUMBER

ST/CO USE ONLY DATE RECEIVED

DATE WELL COMPLETED

Depth of Well 22 320 26 (TO NEAREST FOOT)

PERMIT NO. FROM "PERMIT TO DRILL WELL" H0-14-0057

OWNER Chapman David / Sarah WELL SITE ADDRESS 12164 Flowing Water Trail TOWN Clarksville SUBDIVISION Village of River Hill SECTION 54 ARA LOT 157

WELL LOG Not required for driven wells

GROUTING RECORD WELL HAS BEEN GROUTED (Circle Appropriate Box) Y N

C 3 PUMPING TEST

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

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

HOURS PUMPED (nearest hour) N/A

Table with columns: DESCRIPTION, FEET FROM, FEET TO, check if water bearing. Rows include Silt, f. tr., Sand, f. tr., Mica, Gravel @ 15' (Quartz), Weathered Rock, Rock, Hard Gray Gneiss, Installed 1.25" Closed Loop Geothermal.

NO. OF BAGS 16 NO. OF POUNDS 800 GALLONS OF WATER 272 DEPTH OF GROUT SEAL (to nearest foot) from 3 ft. to 320 ft.

PUMPING RATE (gal. per min.) N/A

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

METHOD USED TO MEASURE PUMPING RATE N/A

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

WATER LEVEL (distance from land surface) BEFORE PUMPING 10 ft.

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

WHEN PUMPING N/A ft.

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

TYPE OF PUMP USED (for test) A air P piston T turbine C centrifugal R rotary O other (describe below) J jet S submersible

NUMBER OF UNSUCCESSFUL WELLS: 0

C 2 DEPTH (nearest ft.)

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

WELL HYDROFRACTURED Y N

E A C H S R E E N

TYPE OF PUMP INSTALLED PLACE (A,C,J,P,R,S,T,O) IN BOX 29

- 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

SLOT SIZE 1 2 3 DIAMETER OF SCREEN (NEAREST INCH) from to

CAPACITY: GALLONS PER MINUTE (to nearest gallon) 31 35

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.

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

PUMP HORSE POWER 37 41

DRILLERS LIC. NO. 1 MWD 5721 DRILLERS SIGNATURE Samuel A. Connelly

MDE USE ONLY (NOT TO BE FILLED IN BY DRILLER) T (E.R.O.S.) W Q

PUMP COLUMN LENGTH (nearest ft.) 43 47

LIC. NO. 1 JWB 3911 SITE SUPERVISOR (sign. of driller or journeypman responsible for sitework if different from permittee) Wesley A. W...

TELESCOPE CASING LOG INDICATOR OTHER DATA

CASING HEIGHT (circle appropriate box and enter casing height) + above LAND SURFACE - below 3 (nearest foot)

LATITUDE 39.122850 LONGITUDE 76.554910 (DEFAULT COORD. WGS 84)

NOTES: Rear of home

DRILLERS SIGNATURE (MUST MATCH SIGNATURE ON APPLICATION)

70 72 74 75 76

16 bags * 26 gal = 416 gal / 320' = 1.3 gal/ft.

C1 31705

SEQUENCE NO. (MDE USE ONLY)

STATE OF MARYLAND WELL COMPLETION REPORT

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

1 2 3 6 (THIS NUMBER IS TO BE PUNCHED IN COLS. 3 6 ON ALL CARDS)

COUNTY NUMBER

ST/CO USE ONLY DATE RECEIVED MM DD YY

DATE WELL COMPLETED MM DD YY 07 23 14

Depth of Well 22 320 26 (TO NEAREST FOOT)

PERMIT NO. FROM "PERMIT TO DRILL WELL" OK 8A/15 SC HO-14-0057

OWNER Chapman David / Sarah WELL SITE ADDRESS 12164 Flowing Water Trail TOWN Clarksville SUBDIVISION Village of River Hill SECTION 54 AR4 LOT 157

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 TO check if water bearing. Silt, f. tr. Sand, f. tr. Mica Gravel @ 15' (Quartz) Weathered Rock Rock Hard Gray, Gneiss Installed 1.25" closed loop Geothermal

GROUTING RECORD yes no WELLS HAS BEEN GROUTED (Circle Appropriate Box) Y N TYPE OF GROUTING MATERIAL (Circle one) CEMENT CM BENTONITE CLAY BC NO. OF BAGS 45 46 16 NO. OF POUNDS 45 46 320 GALLONS OF WATER 272 DEPTH OF GROUT SEAL (to nearest foot) from 3 48 TOP 52 54 BOTTOM 58 ft. to 320 ft. (enter 0 if from surface)

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) 60 61 63 64 66 70

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 BRONZE OTHER

PUMPING TEST HOURS PUMPED (nearest hour) N/A 8 9 PUMPING RATE (gal. per min.) N/A 11 15 METHOD USED TO MEASURE PUMPING RATE N/A WATER LEVEL (distance from land surface) BEFORE PUMPING 10 17 20 ft. WHEN PUMPING N/A 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 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 3 (nearest foot)

NUMBER OF UNSUCCESSFUL WELLS: 0 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

DEPTH (nearest ft.) 1 2 8 9 11 15 17 21 23 24 26 30 32 36 38 39 41 45 47 51 SLOT SIZE 1 2 3 DIAMETER OF SCREEN (NEAREST INCH) 56 60 from to

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. 1 M WD 572 DRILLERS SIGNATURE Samuel A. Connelly LIC. NO. 1 JW D 391 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 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 39.122869 LONGITUDE 76.554919 (DEFAULT COORD. WGS 84) NOTES: Rear of home 16 bags x 26 gal / bag = 416 gal / 320' = 1.3 gal/ft

B 1 26357 SEQUENCE NO. (MDE USE ONLY) STATE OF MARYLAND STATE PERMIT NUMBER
 1 2 3 6 APPLICATION FOR PERMIT TO DRILL WELL HO -14 -0057
 554533 please type 70 fill in this form completely 79

Date Received (APA) 07/08/14
 8 MM DD YY 13
 15 Last Name Chapman Owner Donald/Sarah First Name 34
 36 Street or RFD 12164 Flowing Water Trail 55
 57 Town Clarksville 70 State MD 72 Zip 21029 76

B 3 LOCATION OF WELL
 8 COUNTY Howard 21
 23 SUBDIVISION Vil of Riv Hill SA AR4 42
 SECTION 44 46 LOT 157 48 50
 52 NEAREST TOWN Clarksville 71

DRILLER INFORMATION
 76 Driller's Name Samuel A. Connelly MWD 572 License No. 81
 Firm Name Connelly + Associates, Inc.
 Address 260 Interstate Ct. Frederick, MD 21704
 Signature Samuel A. Connelly Date 7/2/14

B 4 SOURCES OF DRILLING WATER
 1 Public
 2.
 3. 12164 Flowing Water
 11 STREET ADDRESS 30
 ON WHICH SIDE OF ROAD (CIRCLE APPROPRIATE BOX)
 NORTH N
 WEST W EAST E
 SOUTH S
 34 90 37 DISTANCE FROM ROAD FT
 ENTER FT OR MI 38 39
 TAX MAP: 35 BLK: _____ PARCEL 457

B 2 WELL INFORMATION
 1 2 APPROX. PUMPING RATE (GAL. PER MIN.) N/A 8 12
 AVERAGE DAILY QUANTITY NEEDED (GAL. PER DAY) N/A 14 20

USE FOR WATER (CIRCLE APPROPRIATE BOX)
 DOMESTIC POTABLE SUPPLY & RESIDENTIAL IRRIGATION
 FARMING (LIVESTOCK WATERING & AGRICULTURAL IRRIGATION)
 INDUSTRIAL, COMMERCIAL, DEWATERING
 PUBLIC WATER SUPPLY WELL
 TEST, OBSERVATION, MONITORING
 OPEN LOOP GEOTHERMAL
 CLOSED LOOP GEOTHERMAL (2 geo bores)

NOT TO BE FILLED IN BY DRILLER HEALTH DEPARTMENT APPROVAL
 COUNTY NAME Howard COUNTY NO. 13
 STATE SIGNATURE _____ INSERT S →
 DATE ISSUED 07/17/2014 CO SIGNATURE AA EXP. DATE 7/17/15
 43 MM DD YY 48

APPROXIMATE DEPTH OF WELL 320 FEET
 24 28

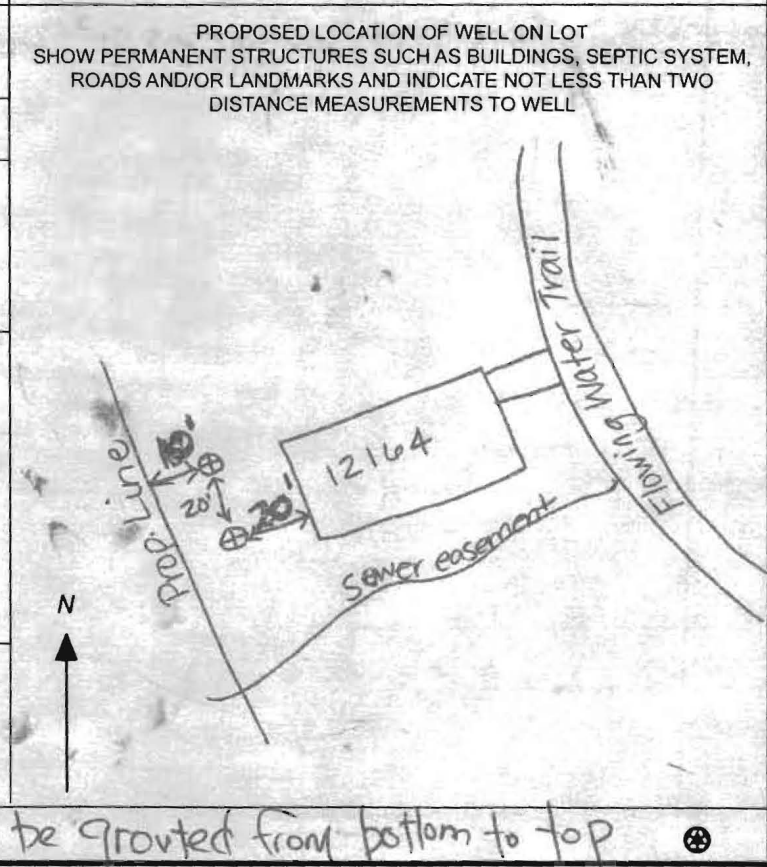
APPROXIMATE DIAMETER OF WELL 6 INCH NEAREST

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)
 THIS WELL WILL NOT REPLACE AN EXISTING WELL
 THIS WELL WILL REPLACE A WELL THAT WILL BE ABANDONED AND SEALED
 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 -14 -0057
 70 71 72 73 74 75 76 77 78 79

SPECIAL CONDITIONS
 NOTE APPROVING AUTHORITIES SHOULD USE SEPARATE SHEET IF NEEDED
Wells must be grouted from bottom to top



NOTE: This lot appears to lie in an area classified as Zone-C, area of minimal flooding, as shown on FIRM MAP of Howard County, Maryland, Community-Panel Number 2400440033B, Panel 33 of 4, dated December 4, 1986.

BOUNDARY SURVEY
12164 FLOWING WATER TRAIL
LOT 157
COLUMBIA

VILLAGE OF RIVER HILL
SECTION 4 AREA 4
LOTS 1 THRU 216
5TH ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

NOTES:

- 1. The ± setback distance accuracy = 1'.
- 2. ⊕ = Rebar & Cap

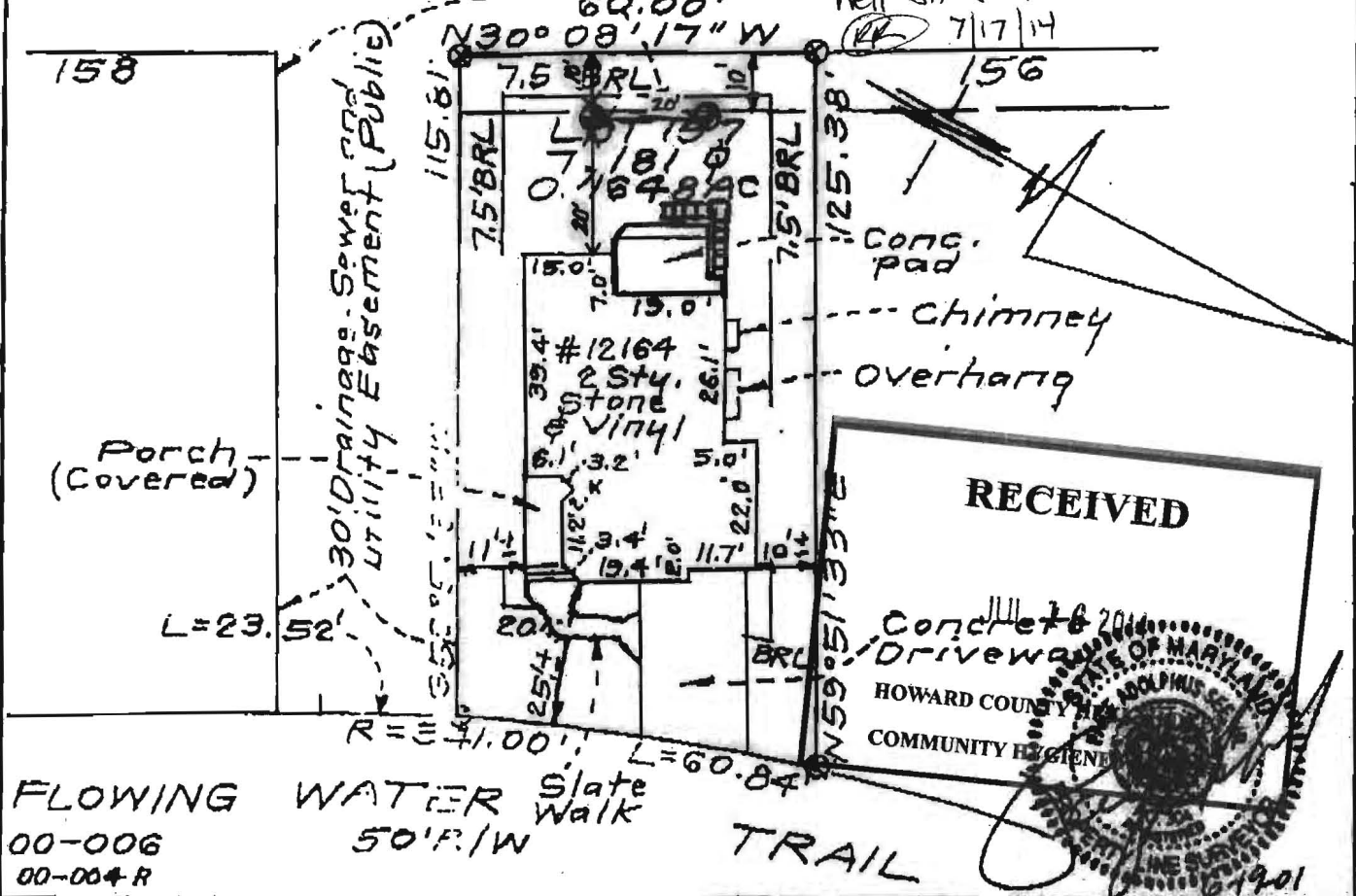
RECEIVED

JUL 16 2014

HOWARD COUNTY HEALTH DEPT.
COMMUNITY HYGIENE PROGRAM

Wall Check: 2-26-01
Ent. Elev.: 422.7
Boundary Survey: 8-18-01

OPEN SPACE LOT 280
P. No. 13286



RECEIVED

JUL 16 2014

STATE OF MARYLAND
HOWARD COUNTY HEALTH DEPT.
COMMUNITY HYGIENE PROGRAM

FLOWING WATER TRAIL
00-006
00-004 R
Slate Walk
50' R/W

SURVEYOR'S CERTIFICATE

I hereby certify that a field survey of this property has been made under my supervision, for the purpose of locating improvements shown hereon, and that they are located as shown.

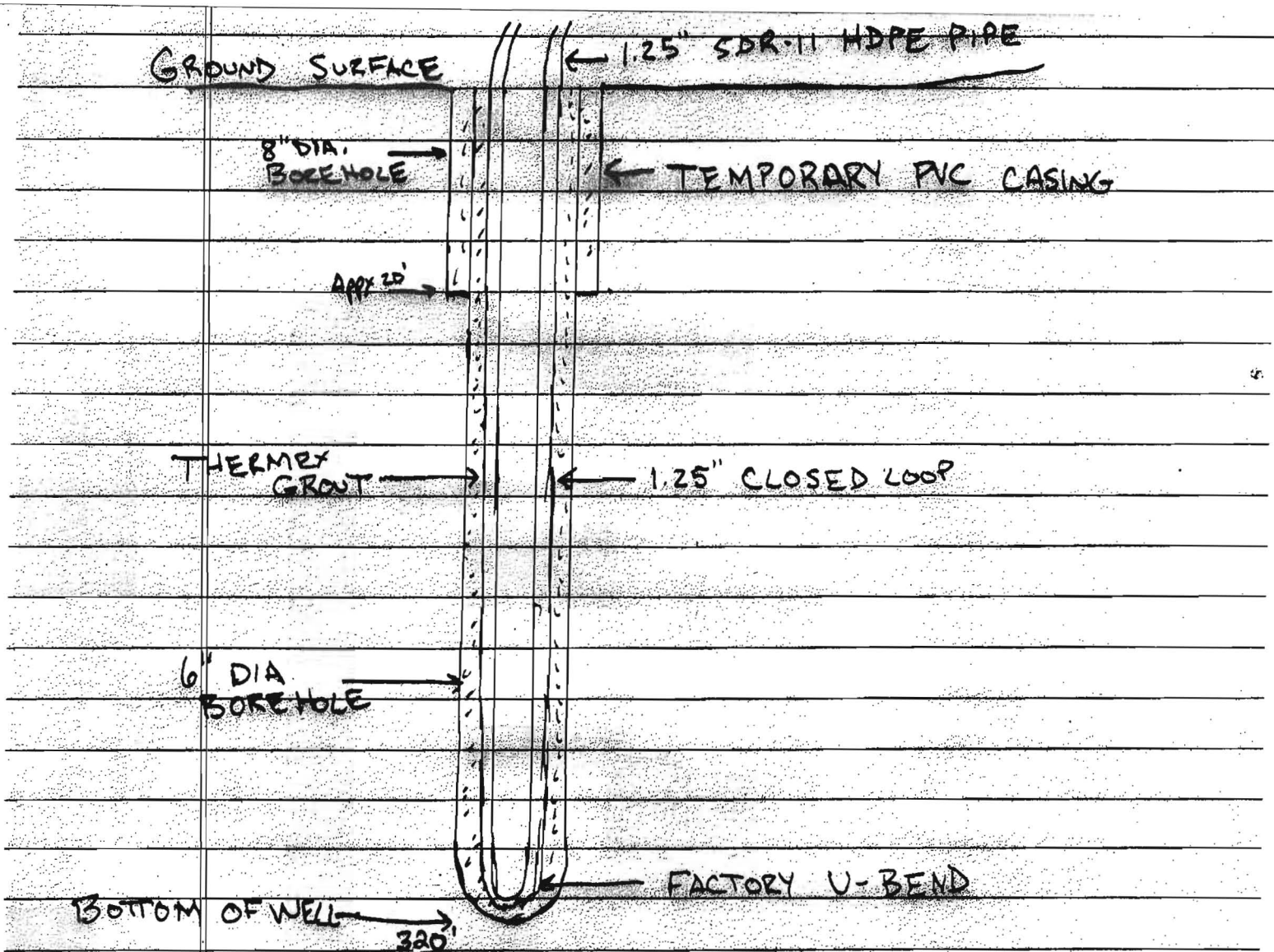
CLARK, FINEFROCK & SACKETT, INC.
ENGINEERS • PLANNERS • SURVEYORS
7135 WINSTON WAY COLUMBIA, MARYLAND 21045
PHONE: BALT. (410) 381-7500 • WASH. (301) 631-8100

REFERENCE:	DRAWN BY: KWC	CHECKED BY: PAS
MAP NO.: 12924	DATE: 8-18-01	INC. NO.:
	SCALE: 1" = 30'	10771-W

Connelly Geothermal

Partnering with Mother Earth

RE: Geothermal Closed Loop – 12164 Flowing Water Trail



Grout information for this property is as follows:

Thermex grout mixture of 50 lb. grout to 17 gallons water, placed in the well using the tremmie method, from bottom to top.



HOWARD COUNTY HEALTH DEPARTMENT

54533

DATE 7 / 18 / 14

65

Received From

Conndly and Associates

PHONE #

301 696 8820

For

Wellbarnet / 12164 Flowering Center

CASH

CHECK

NO.

013046

One hundred sixty //

Dollars

\$

1600 | 00

Received By

J Kemp