

SEQUENCE NO. (MDE USE ONLY)
C1 46019
 1 2 3 6
 (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 XIII
 PERMIT NO. FROM "PERMIT TO DRILL WELL"
HO-15-0313

ST/CO USE ONLY
 DATE RECEIVED
 MM 12 DD 29 YR 14
 DATE WELL COMPLETED
 MM 12 DD 12 YR 14
 DEPTH OF WELL
600 (TO NEAREST FOOT)

OWNER ESTATE OF PATRICIA SHEPPARD
 WELL SITE ADDRESS TEN OAKS RD TOWN DAYTON
 SUBDIVISION TEN OAKS FARM SECTION _____ LOT 3

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	
Top Soil	0	2	
Brown Shale	2	10	
Brown Mica	10	70	✓
Gray Mica	70	104	
Brown Mica	104	106	
Gray Mica	106	600	

GROUTING RECORD
 WELL HAS BEEN GROUTED (Circle Appropriate Box) Y N
 TYPE OF GROUTING MATERIAL (Circle one)
 CEMENT CM BENTONITE CLAY BC
 NO. OF BAGS 8 NO. OF POUNDS 400
 GALLONS OF WATER 184
 DEPTH OF GROUT SEAL (to nearest foot)
 from 0 ft. to 30 ft. jetted
 (enter 0 if from surface)

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

MAIN CASING TYPE ST
 Nominal diameter top (main) casing (nearest inch) 6
 Total depth of main casing (nearest foot) 80

OTHER CASING (if used)

E A C H C A S I N G	diameter		depth (feet)	
	inch		from	to

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

NUMBER OF UNSUCCESSFUL WELLS: 0
 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. MW040
Gerry F. Eberling
 DRILLERS SIGNATURE (MUST MATCH SIGNATURE ON APPLICATION)
 LIC. NO. JS0038
Bruce Thompson

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

C2 DEPTH (nearest ft.)
 1 HO 78 600
 2 _____
 3 _____
 4 _____
 5 _____
 6 _____
 7 _____
 8 _____
 9 _____
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 76 _____

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

C3 PUMPING TEST
 HOURS PUMPED (nearest hour) 6
 PUMPING RATE (gal. per min.) 2.4
 METHOD USED TO MEASURE PUMPING RATE Bucket
 WATER LEVEL (distance from land surface)
 BEFORE PUMPING 14 ft.
 WHEN PUMPING 201 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 } LAND SURFACE
 - below } 2 (nearest foot)

LATITUDE 39.229995
 LONGITUDE 76.980134
 (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.

B 1 38346

SEQUENCE NO. (MDE USE ONLY)

STATE OF MARYLAND APPLICATION FOR PERMIT TO DRILL WELL

STATE PERMIT NUMBER

HO-15-0313 fill in this form completely

558-769-B please type

Date Received (APA) 06/28/16

OWNER INFORMATION

13249

B 3

LOCATION OF WELL

CC#

ESTATE OF PATRICIA L. SHEPPARD 5020 TEN OAKS ROAD CLARKSVILLE, MD 21029

Howard 8 COUNTY Ten Oaks Farm 23 SUBDIVISION SECTION 44 46 LOT 3 48 50 Dayton 52 NEAREST TOWN

DRILLER INFORMATION

George F. Easterday M WD 040 L. Franklin Easterday, Inc. 9265 Brown Church Rd. Mt. Airy, Md. 21771

B 4

SOURCES OF DRILLING WATER

1. wells

Ten Oaks Road 11 STREET ADDRESS 30 ON WHICH SIDE OF ROAD (CIRCLE APPROPRIATE BOX) DISTANCE FROM ROAD ENTER FT OR MI TAX MAP: 28 BLK: 14 PARCEL 140

WELL INFORMATION

APPROX. PUMPING RATE 5 (GAL. PER MIN.) AVERAGE DAILY QUANTITY NEEDED 500 (GAL. PER DAY)

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

NOT TO BE FILLED IN BY DRILLER HEALTH DEPARTMENT APPROVAL

Howard 13 COUNTY NAME COUNTY NO. STATE SIGNATURE DATE ISSUED 9/14/16 CO SIGNATURE EXP. DATE 9/14/17

APPROXIMATE DEPTH OF WELL 300 FEET

APPROXIMATE DIAMETER OF WELL 6 INCH

METHOD OF DRILLING (circle one)

BORED (or Augered) JETTED Jetted & DRIVEN AIR-ROTARY AIR-PERCussion ROTARY (Hydraulic Rotary) CABLE REVERSE-ROTARY Drive-POINT

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

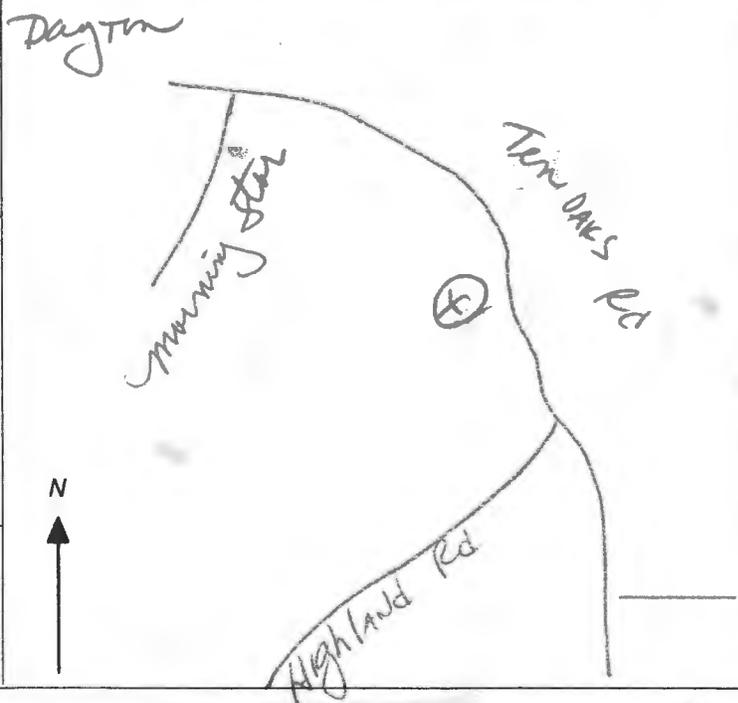
PERMIT NUMBER OF WELL TO BE REPLACED OR DEEPEMED (IF AVAILABLE)

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

APPROP. PERMIT NUMBER G

PERMIT No. HO-15-0313

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

FIELD DATA SHEET
HYDROGEOLOGIC AREA (3) WELL YIELD TEST

Maryland Well Permit No. HO-15-0313 Election District _____

Location of Property (road) Ten Oaks Road

Subdivision Ten Oaks Farms lot 3 Block _____ Plat _____ Sec. _____

Well Driller G. Astor Day Owner Sheppard Estate

Depth of Well 600 R/L

Distance of Measuring Point (M.P.) above ground _____

Static Water Level (S.W.L.) Below M.P. 14'

2'

Lat: 39.229995

Long: 76.980134

I. High Rate Pumping -- reservoir drawdown

Time pump started 7:45 Pumping rate 15
Total time _____ to reach pumping water level 200' ft. below M.P.

II. Recovery pump test data - observations to be recorded every 15 minutes.

TIME	WATER LEVEL Below M.P.	PUMPING RATE Time to fill gal bucket	Pump set 350'	200' M.
			FLOW METER READING (if used)	CALCULATED FLOW (gallons per min.)
8:00	82'	4 sec.		15
8:15	131'	4 sec.		15
8:30	200'	25 sec.		2.4
8:45	200'	25 sec.		2.4
9:00	200'	25 sec.		2.4
9:15	200'	25 sec.		2.4
9:30	200'	25 sec.		2.4
9:45	200'	25 sec.		2.4
10:00	200'	25 sec.		2.4
10:15	200'	25 sec.		2.4
10:30	200'	25 sec.		2.4
10:45	200'	25 sec.		2.4
11:00	200'	25 sec.		2.4
11:15	201'	25 sec.		2.4
11:30	201'	25 sec.		2.4
11:45	201'	25 sec.		2.4
12:00	201'	25 sec.		2.4
12:15	201'	25 sec.		2.4
12:30	201'	25 sec.		2.4
12:45	201'	25 sec.		2.4
1:00	201'	25 sec.		2.4
1:15	201'	25 sec.		2.4
1:30	201'	25 sec.		2.4
1:45	201'	25 sec.		2.4
2:00	201'	25 sec.		2.4
2:15	201'	25 sec.		2.4
2:30	201'	25 sec.		2.4



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 Fisher Collins & Carter
(professional land surveyor or company employing professional land surveyors)
on JUNE 22 110 (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

LET 3
- TAN LAKE FARM

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

HO-15-0313

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



7/14/16 Well Box Approved.
staked by FCC.

-Kraw

WELL EXHIBIT LOT 3 TEN OAKS FARM

LOTS 1 - 6

ZONED: RR-DEO

FISHER, COLLINS & CARTER, INC.
CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
CENTENNIAL SQUARE OFFICE PARK - 10272 BALTIMORE NATIONAL PIKE
ELLCOTT CITY, MARYLAND 21042
(410) 461 - 2855

TAX MAP #2B

5TH ELECTION DISTRICT

SCALE: 1"=100'

PARCEL: 140

HOWARD COUNTY, MARYLAND

DATE: JUNE 28, 2016

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

WATER WELL HYDROFRACTURE REPORT

WELL TAG NUMBER HO-15-0313 DATE WORK PERFORMED (mm/dd/yyyy) 12/02/2014

WELL SITE ADDRESS
TEN OAKS ROAD LOT 3 TEN OAKS FARMS

TAX MAP 23 BLK 14 PARCEL 140 LATITUDE 39-229945 LONGITUDE 76-980134

CASING DEPTH 80 FT CASING TYPE (circle) STOR PVC DIAMETER 6

WELL DEPTH 600 FT WATER LEVEL BEFORE FRAC 100 FT YIELD BEFORE FRAC 0 GPM

PACKER SETTINGS (circle) SINGLE of MULTIPLE SET DEPTH OF SHALLOWEST PACKER 120 FT

SOURCE OF WATER WSSC

OBSERVATIONS

SET NUMBER	TOP ZONE (FT)	BOTTOM ZONE (FT)	MAX PRESSURE (PSI)	WATER VOLUME USED (GALLONS)
1	120	600	1500	2000
2	180	600	1800	600
3				
4				
5				

WATER LEVEL AFTER FRAC 14 FT * 4/25/2015 Water from hydrofrac process was removed after completion
YIELD AFTER FRAC 2.4 GPM

NOTE: YIELD TEST PROCEDURES CAN BE FOUND UNDER COMAR 26.04.04.26.G.

REGULATIONS FOR HYDROFRACTURING OF WATER WELLS CAN BE FOUND IN COMAR 26.04.04.28. FAILURE TO FOLLOW REGULATORY PROCEDURES WILL CONSTITUTE RECEIVING A WRITTEN VIOLATION WHICH MAY RESULT IN PENALTIES DESCRIBED IN COMAR 26.04.04.38.

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George F. Easterday MWD 046
DRILLER SIGNATURE LIC #



WELL EXHIBIT LOT 1 TEN OAKS FARM

LOTS 1 - 6

ZONED: RR-DEO

FISHER, COLLINS & CARTER, INC.
 CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
 CENTENNIAL SQUARE OFFICE PARK - 10272 BALTIMORE NATIONAL PIKE
 ELLICOTT CITY, MARYLAND 21042
 (410) 461 - 2855

TAX MAP #28

5TH ELECTION DISTRICT

SCALE: 1"=100'

PARCEL: 140

HOWARD COUNTY, MARYLAND

DATE: JUNE 28, 2016



WELL EXHIBIT LOT 2 TEN OAKS FARM

LOTS 1 - 6
ZONED: RR-DEO

FISHER, COLLINS & CARTER, INC.
 CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
 CENTENNIAL SQUARE OFFICE PARK - 10272 BALTIMORE NATIONAL PIKE
 ELLICOTT CITY, MARYLAND 21042
 (410) 461 - 2855

TAX MAP #28 PARCEL: 140
 5TH ELECTION DISTRICT HOWARD COUNTY, MARYLAND
 SCALE: 1"=100' DATE: JUNE 28, 2016



WELL EXHIBIT LOT 3
TEN OAKS FARM

LOTS 1 - 6

ZONED: RR-DEO

FISHER, COLLINS & CARTER, INC.
 CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS

CENTENNIAL SQUARE OFFICE PARK - 10272 BALTIMORE NATIONAL PIKE
 ELLICOTT CITY, MARYLAND 21042
 (410) 461 - 2855

TAX MAP #28

PARCEL: 140

5TH ELECTION DISTRICT

HOWARD COUNTY, MARYLAND

SCALE: 1"=100'

DATE: JUNE 28, 2016

I:\2015\15007\Engineering\Dwgs\15007 Revised Perc Plan.dwg, 6/28/2016 9:35:22 AM, 1:1



WELL EXHIBIT LOT 4 TEN OAKS FARM

LOTS 1 - 6

ZONED: RR-DEO

FISHER, COLLINS & CARTER, INC.
 CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
 CENTENNIAL SQUARE OFFICE PARK - 10272 BALTIMORE NATIONAL PIKE
 ELLICOTT CITY, MARYLAND 21042
 (410) 461 - 2855

TAX MAP #28

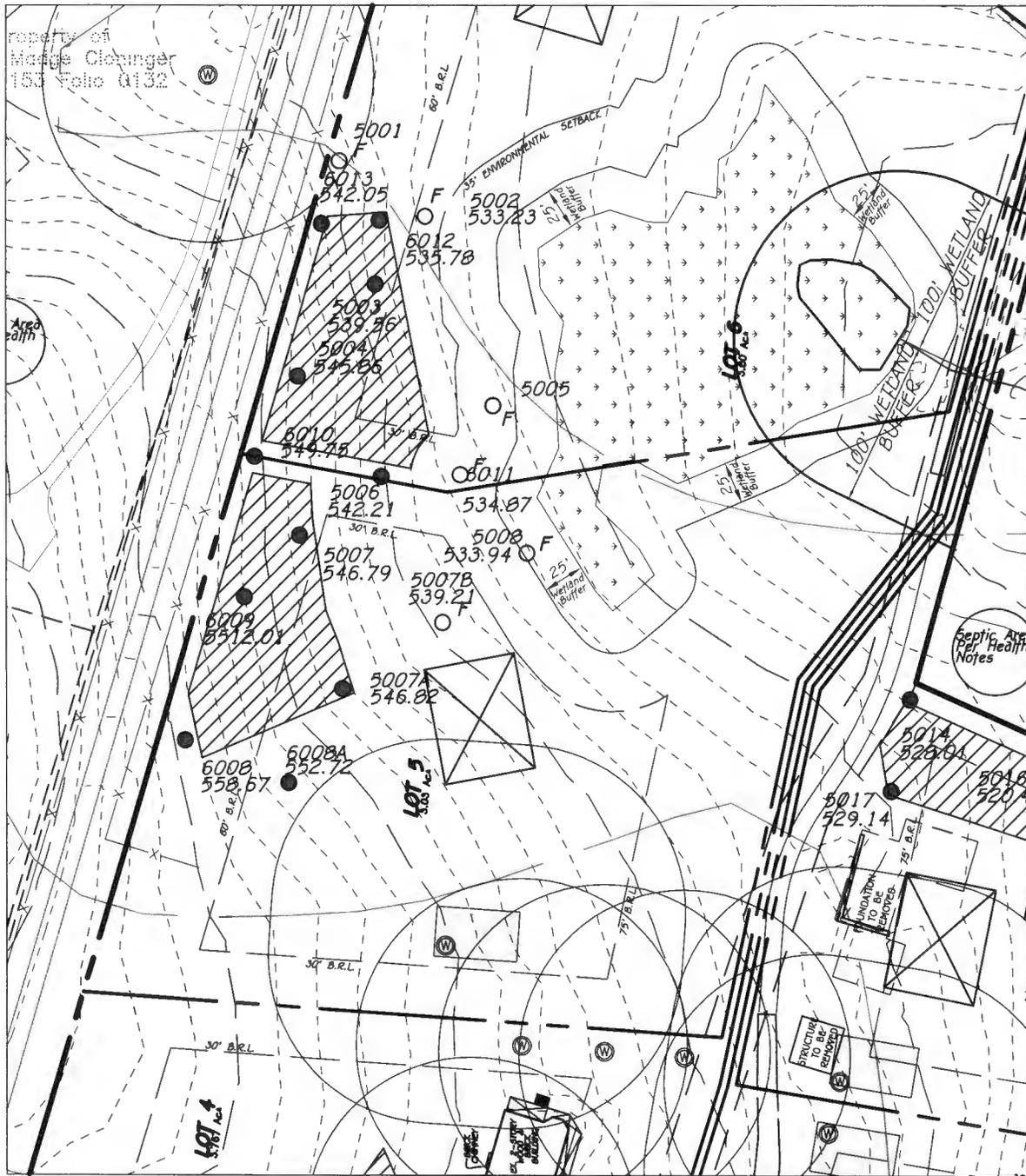
5TH ELECTION DISTRICT

SCALE: 1"=100'

PARCEL: 140

HOWARD COUNTY, MARYLAND

DATE: JUNE 28, 2016



WELL EXHIBIT LOT 5 TEN OAKS FARM

LOTS 1 - 6
ZONED: RR-DEO

FISHER, COLLINS & CARTER, INC.
CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
CENTENNIAL SQUARE OFFICE PARK - 10272 BALTIMORE NATIONAL PIKE
ELLCOTT CITY, MARYLAND 21042
(410) 461 - 2055

TAX MAP #28
5TH ELECTION DISTRICT
SCALE: 1"=100'

PARCEL: 140
HOWARD COUNTY, MARYLAND
DATE: JUNE 28, 2016

