

west virginia department of environmental protection

Office of Oil and Gas 601 57th Street, S.E. Charleston, WV 25304 (304) 926-0450 fax: (304) 926-0452

Austin Caperton, Cabinet Secretary www.dep.wv.gov

Friday, June 7, 2019 WELL WORK PERMIT Horizontal 6A / Re-Work

EQT PRODUCTION COMPANY 625 LIBERTY AVE., SUITE 1700 PITTSBURGH, PA 15222

Re: Permit approval for 516238 47-017-06746-00-00

This well work permit is evidence of permission granted to perform the specified well work at the location described on the attached pages and located on the attached plat, subject to the provisions of Chapter 22 of the West Virginia Code of 1931, as amended, and all rules and regulations promulgated thereunder, and to any additional specific conditions and provisions outlined in the pages attached hereto. Notification shall be given by the operator to the Oil and Gas Inspector at least 24 hours prior to the construction of roads, locations, and/or pits for any permitted work. In addition, the well operator shall notify the same inspector 24 hours before any actual well work is commenced and prior to running and cementing casing. Spills or emergency discharges must be promptly reported by the operator to 1-800-642-3074 and to the Oil and Gas Inspector.

Please be advised that form WR-35, Well Operators Report of Well Work is to be submitted to this office within 90 days of completion of permitted well work, as should form WR-34 Discharge Monitoring Report within 30 days of discharge of pits, if applicable. Failure to abide by all statutory and regulatory provisions governing all duties and operations hereunder may result in suspension or revocation of this permit and, in addition, may result in civil and/or criminal penalties being imposed upon the operators.

Per 35 CSR 4-5.2.g this permit will expire in two (2) years from the issue date unless permitted well work is commenced. If there are any questions, please feel free to contact me at (304) 926-0450.

Operator's Well Number: 516238

Farm Name: WETZEL, CATHY

Chief

U.S. WELL NUMBER: 47-017-06746-00-00

Horizontal 6A Re-Work Date Issued: 6/7/2019

06/07/2019	06/	07	7/2	01	9
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API Number:	

PERMIT CONDITIONS

West Virginia Code § 22-6A-8(d) allows the Office of Oil and Gas to place specific conditions upon this permit. Permit conditions have the same effect as law. Failure to adhere to the specified permit conditions may result in enforcement action.

CONDITIONS

- 1. Operator shall install signage per § 22-6A-8g (6) (B) at all source water locations included in their approved water management plan within 24 hours of water management plan activation.
- 2. Oil and gas water supply wells will be registered with the Office of Oil and Gas and all such wells will be constructed and plugged in accordance with the standards of the Bureau for Public Health set forth in its Legislative rule entitled *Water Well Regulations*, 64 C.S.R. 19. Operator is to contact the Bureau of Public Health regarding permit requirements. In lieu of plugging, the operator may transfer the well to the surface owner upon agreement of the parties. All drinking water wells within fifteen hundred feet of the water supply well shall be flow tested by the operator upon request of the drinking well owner prior to operating the water supply well.
- 3. 24 hours prior to the initiation of the completion process the operator shall notify the Chief or his designee.
- 4. During the completion process the operator shall monitor annular pressures and report any anomaly noticed to the chief or his designee immediately.
- 5. If any explosion or other accident causing loss of life or serious personal injury occurs in or about a well or well work on a well, the well operator or its contractor shall give notice, stating the particulars of the explosion or accident, to the oil and gas inspector and the Chief, within 24 hours of said accident.
- 6. The operator shall provide to the Office of Oil and Gas the dates of each of the following within 30 days of their occurrence: completion of construction of the well pad, commencement of drilling, cessation of drilling, completion of any other permitted well work, and completion of the well. Such notice shall be provided by sending an email to DEPOOGNotify@wv.gov.

EQT Production

Hydraulic Fracturing Monitoring Plan

Pad ID: OXF43

County: Doddridge

January 24, 2019

PECEIVED
Office of Oil and Gas
MAR 1 1 2019
WV Department of
Environmental Protection

Purpose

The purpose of this pad-specific Hydraulic Fracturing Monitoring Plan is to identify and notify conventional well operators near EQT hydraulic fracturing in Doddridge County, WV prior to hydraulic fracturing at the following EQT wells on 516238 (OXF43H30), 516240 (OXF43H31), OXF43H34 and OXF43H35.

Due to the requirements under 35CSR8 5.11, the permittee is required to review the area surrounding the proposed well pad so as to identify and evaluate potential conduits for unintended fracture propagation.

A report is required to be submitted along with a well work permit application.

The plan is being implemented as an additional safety measure to be utilized in conjunction with existing best management practices and emergency action plans for the site. These additional measures include coordination with well operators of the timing and location of the hydraulic fracturing, establishment of measures well operators should implement, and assurance that the OOG is notified of the timeline, as well as any issues that may arise during fracturing.

1. Communications with Well Operators

EQT, using available data (WV Geological Survey, WVDEP website, and IHS data service), has identified all known wells and well operators within 500 feet of this pad and the lateral sections that are known or could reasonably be expected to be within range of the fracture propagation. A map showing these wells along with a list of the wells and operators is included in **Attachment A**.

EQT will notify these operators of the hydraulic fracturing schedule for these wells, and coordinate with them throughout the fracturing process.

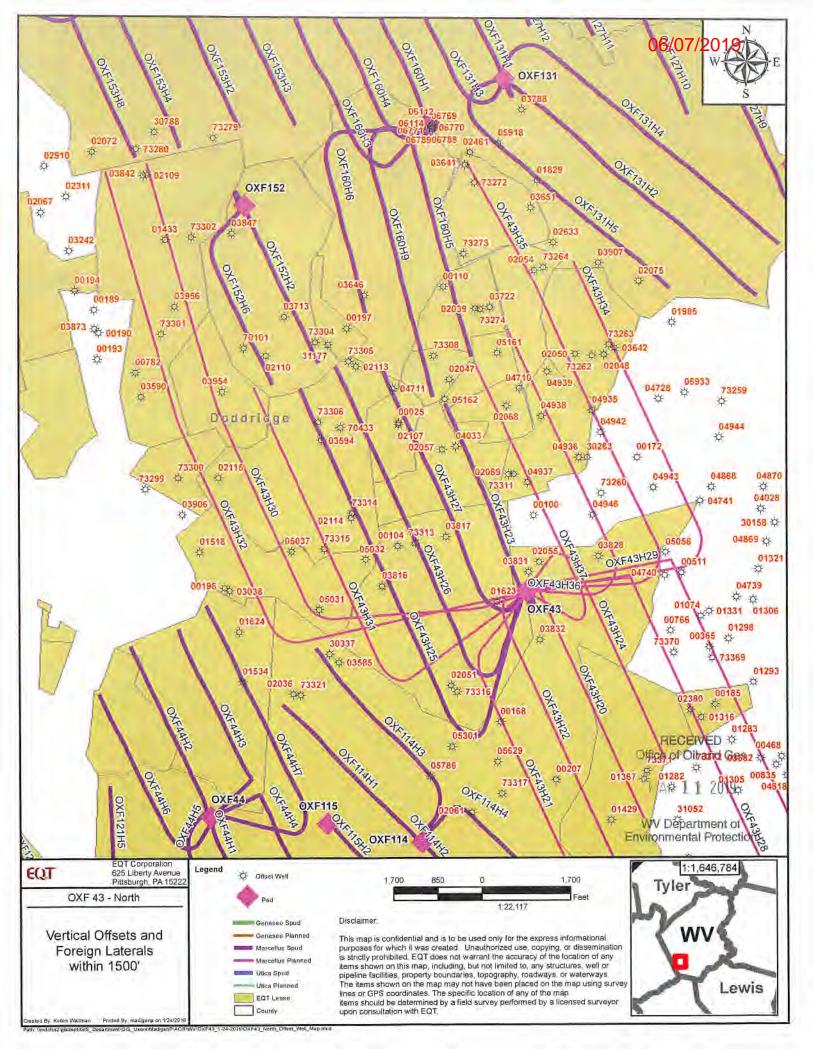
EQT will recommend to these operators at a minimum to:

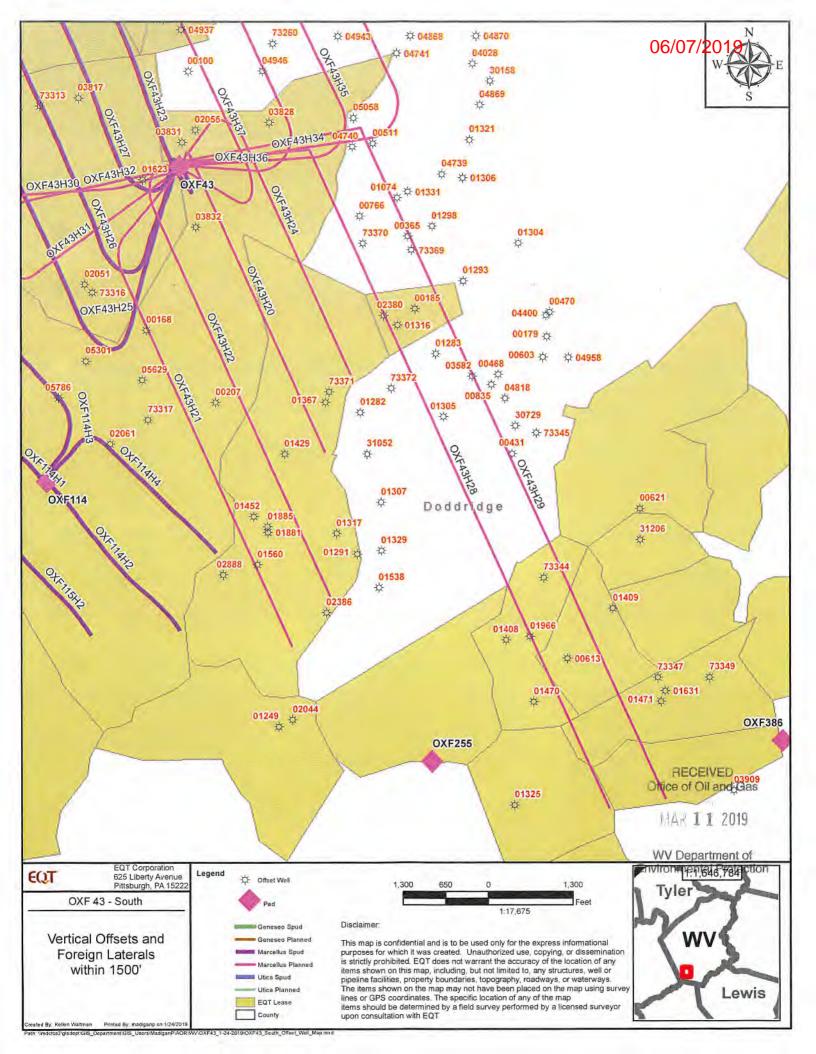
- 1. Inspect their surface equipment prior to fracturing to establish integrity and establish prefrac well conditions
- 2. Observe wells closely during and after fracturing and monitor for abnormal increases in water, gas or pressure
- 3. Inspect or install master valves or other necessary equipment for wellhead integrity capable of a pressure recommended by EQT
- 4. Notify the OOG and EQT if any changes in water, gas production, pressure, or other anomalies are identified

2. Reporting

EQT will provide information relating to the hydraulic fracturing schedule, communications of the work upon request of OOG or immediately of the work of any noted abnormalities.

WV Department of Environmental Protection





ell ID A 017014080000	Abandoned Date	Completion Date Co		Current Operator JAY-BEE OIL & GAS INC	Elevation Datum 1241 GR	10&1G	39.1371	ongitude Well Name -80.7753 1 C A VANHORN	Permit Date Projected Formation 8/17/1966	9/1/1966 WEST VIRGINIA	Total Dep
017001790000	9/9/1947			HOPE NATURAL GAS	973 GR	D&A-OG	39.1498	-80.7731 5283 DECO VAN HORN	6/17/1918	7/2/1918 WEST VIRGINIA	1
17048680000	5,5,20			SPENCER ENTERPRISES	1214 GR	GAS	39.1625	-80.7804 2 HICKMAN	8/31/2004 BIG INJUN	2300 9/9/2004 WEST VIRGINIA	2
7301580000	1/1/1936			HOPE NATURAL GAS	1177 GR	A8D-GW	39.1606	-80.7761 5282 H C & EDWARD CHAPMAN		WEST VIRGINIA	1
7012980000				MEADOWS S L JR PRODUCTION COMPANY	1282 GR	10&1G	39.1545	-80,7793 2 S L CHAPMAN	7/18/1965	8/2/1965 WEST VIRGINIA	
7019660000		Do	DDDRIDGE	CONSOL GAS COMPANY	940 GR	GAS	39.1372	-80.7740 5295 J ADAMS		WEST VIRGINIA	:
17733700000				PHILADELPHIA OIL	GR	UNKWN	39.1537	-80.7830 4245 JESSE WILLIAMS		WEST VIRGINIA	
17015380001		11/7/1972 D	DDDRIDGE	MEADOWS 5 L JR PRODUCTION COMPANY	1035 GR	OIL-WO	39.1393	-80.7822 1 JOSHUA ADAM5	10/25/1972	11/4/1972 WEST VIRGINIA	
17732600000		D	ODDRIDGE	HOPE NATURAL GAS	GR	UNKWN	39.1622	-80.7878 7055 S W STDUT ET AL		WEST VIRGINIA	
17036420000		6/27/1988 O	ODDRIDGE	TERM ENERGY	1238 KB	GAS	39.1698	-80.7869 1(88-3) PRUNTY MYRTLE M	6/2/1988 ALEXANDER	5320 6/12/1988 WEST VIRGINIA	
17013290000		10/1/1965 D	ODDRIDGE	MEADOWS 5 L JR PRODUCTION COMPANY	1170 GR	10&1G	39.1408	-80.7821 7 THURMAN SPURGEON	8/17/1965	9/1/1965 WEST VIRGINIA	
17001720000		12/1/1946 D	ODDRIDGE	DIVERSIFIED RESOURCES INCORPORATED	955 GR	GAS	39.1641	-80.7854 2 JESSE WILLIAMS	10/17/1946	11/1/1946 WEST VIRGINIA	
17020550000	6/27/1988	11/6/1918 00	ODDRIDGE	EQUITABLE GAS COMPANY	1097 GR	ABD-GW	39.1585	-80.7920 4672 JACKSON LEESDN	9/25/1918	10/10/1918 WEST VIRGINIA	
17012820000		8/1/1965 00	DDDRIDGE	MEADOWS 5 L JR PRODUCTION COMPANY	1061 GR	10&1G	39.1466	-80.7832 4 THURMAN SPURGEDN	6/17/1965	7/2/1965 WEST VIRGINIA	
17026330000		6/25/1980 DO	DODRIDGE	LUCAS WELL SERVICE INCORPORATED	1320 GR	GAS	39.1754	-80.7910 2-B MAXWELL W BRENT	5/20/1980 GORDON/SD/	2700 5/30/1980 WEST VIRGINIA	
17036510000		7/28/1988 DO	DDDRIDGE	TERM ENERGY	1195 KB	GAS	39.1772	-80.7925 2 FARR CAROLYN	7/6/1988 ALEXANDER	5250 7/16/1988 WEST VIRGINIA	
17013070000		9/1/1965 DO	DDDRIDGE	MEADOWS 5 L JR PRODUCTION COMPANY	917 GR	OIL	39.1429	-80.7821 5 THURMAN SPURGEON	7/18/1965	8/2/1965 WEST VIRGINIA	
17047110000		1/20/2003 DO	ODDRIDGE	KEY OIL COMPANY	1215 GR	GAS	39.1677	-80.8019 1 RYMER	12/22/2002 ALEXANDER	5600 1/2/2003 WEST VIRGINIA	
17001100000		10/21/1940 DO	ODDRIDGE	EMPIRE OIL & GAS INCORPORATED	1168 GR	GAS	39.1731	-80,7984 1 LEESON CHARLES	9/6/1940 GORDON	9/21/1940 WEST VIRGINIA	
17021070000				EQT PRODUCTION COMPANY	1012 GR	GAS	39.1658	-80.8015 4983 ROSA B RYMER	5/19/1930	6/3/1930 WEST VIRGINIA	
17051620000				KEY OIL COMPANY	1201 GR	GAS	39.1671	-80.7984 7 ADAMS A	2/21/2006 GDRDON	3000 6/12/2006 WEST VIRGINIA	
17040330000				TERM ENERGY	970 GR	GAS	39.1646	-80,7976 1 MATHENY BARRY L ETALS	8/16/1993 ALEXANDER	5200 8/26/1993 WEST VIRGINIA	
17030380000				ENERGY CORPORATION OF AMERICA INC	855 KB	GAS	39.1571	-80.8130 J-466 GRIMM DONALD	11/7/1981 ALEXANDER	5400 11/17/1981 WEST VIRGINIA	
17016240000				R & R OIL & GAS LLC	967 GR	2GAS	39.1549	-80.8124 3 /1/ SNIDER W T	7/2/1971 UNKNOWN	7/12/1971 WEST VIRGINIA	:
17733020000				HDPE NATURAL GAS	GR.	UNKWN	39.1757	-80.8155 5812 W B MAXWELL HRS		WEST VIRGINIA	
17040280000				KEY DIL COMPANY	1295 GR	GAS	39.1613	-80.7770 1 SUMMERS PAULINE ETAL	7/31/1993 ALEXANDER	5500 8/10/1993 WEST VIRGINIA	
17012930000				MEADOWS 5 L JR PRODUCTION COMPANY	1117 GR	10&1G	39.1522	-80.7776 1 S L CHAPMAN	7/18/1965	8/2/1965 WEST VIRGINIA	
17037220000				TERM ENERGY	1031 KB	GAS	39.1720	-80,7953 1 SHIVE GLENN	6/3/1989 ALEXANDER	5300 6/13/1989 WEST VIRGINIA	
17020500000	5/24/2006			EQT PRODUCTION COMPANY	1066 GR	ABD-GW	39.1695	-80.7895 4653 GASTON MARY V	3/23/1918 BIG INJUN	4/23/1918 WEST VIRGINIA	
17001720001	-/24/2000			OIVERSIFIED RESOURCES INCORPORATED	955 GR	GAS	39.1641	-80.7854 2 JESSE WILLIAM5	10/17/1946	11/1/1946 WEST VIRGINIA	
17001720001				EQT PRODUCTION COMPANY	863 GR	OIL	39.1418	-80.7882 6232 F L LODGE	3/17/1978	4/1/1978 WEST VIRGINIA	
017047410000				KEY OIL COMPANY	1202 GR	GAS	39.1617	-80.7811 1 HICKMAN	6/17/2003 ALEXANDER	5600 9/29/2003 WEST VIRGINIA	
17019850000				CONSOL GAS COMPANY	1210 GR	GAS	39.1712	-80.7830 7057 S STOUT	5/31/1921	6/15/1921 WEST VIPGINIA	
				KEY DIL COMPANY	1206 GR	GAS	39.1677	-80.7933 1 ADAMS	12/22/2002 ALEXANDER	5600 1/13/2003 WEST VIRGINIA	
17047100000				MID PINE DEVELOPMENT	1009 GR	10&1G	39.1580	-80,7824 1 H C CHAPMAN HEIRS	9/17/1961	10/2/1961 WEST VIRGINIA	
017005110000 017733060000				UNKNOWN	GR GR	UNKWN	39.1659	-80,8069 1 SAM GASTON	3/11/1301	WEST VIRGINIA	
				EQT PRODUCTION COMPANY	1220 GR	GAS	39.1814	-80.7992 WV 513702 HART RONALD & JEFFERY	6/15/2016 MARCELLUS /SH/	11191 2/19/2017 WEST VIRGINIA	1:
017067710000				ENERGY CORPORATION OF AMERICA INC	1075 K8	GAS GAS	39.1573	-80.8027 1 MERT/MAXWELL F	8/22/1990 ALEXANDER	5225 9/1/1990 WEST VIRGINIA	
17038160000					1230 GR	GA5	39.1802	-80.7966 11 MAXWELL BRENT W	8/6/1979 BEREA	2600 8/16/1979 WEST VIRGINIA	
17024610000				MURVIN & MEIER OIL COMPANY EQT PRODUCTION COMPANY		GAS	39.1815	-80.7992 WV 514101 HART RONALD & JEFFERY	6/15/2016 MARCELLUS /SH/	12080 10/28/2016 WEST VIRGINIA	1
017067700000					1243 KB	GAS	39.1488	-80.7980 WV 510808 LEESON J	10/16/2006 ALEXANDER	5300 11/15/2006 WEST VIRGINIA	
				EQT PRODUCTION COMPANY	978 GR	PERMIT			3/20/2017 MARCELLUS /SH/		
017067890000				EQT PRODUCTION COMPANY	1220 GR GR	UNKWN	39.1814 39.1691	-80.7992 WV 514102 OXF160 -80.8049 7034 SAM GASTON	3/20/2017 MARCELLOS/3H/	11134 WEST VIRGINIA WEST VIRGINIA	
017733050000				HOPE NATURAL GAS							
017733010000	- 4- 4			HOPE NATURAL GAS	GR	UNKWN	39.1706	-80.8176 6491 W 8 MAXWELL HRS	40/20/4000 015 1011111	WEST VIRGINIA	
017021150000	6/26/2006			EQUITABLE PRODUCTION COMPANY	1063 GR	ABD-GW	39.1630	-80.8137 WV 606112 GASTON	10/29/1980 BIG INJUN	11/29/1980 WEST VIRGINIA	
017038420000				TERM ENERGY	1140 KB	GAS	39.1789	-80.8187 2 CASSIDY JOAN	7/13/1990 ALEXANDER	5350 7/23/1990 WEST VIRGINIA 1940 9/23/2002 WEST VIRGINIA	
017039540001				TERM ENERGY	905 KB	GAS-WO	39.1676	-80.8135 5 GASTON SAMUEL D	8/6/2002 WEIR /50/		
017733470000				UNKNOWN	GR	UNKWN	39.1355	-80.7671 MELVILLE CONLEY	40/20/4007 410/41000	WEST VIRGINIA	
017044000000				KEY OIL COMPANY	920 GR	GAS	39.1507	-80.7731 1 OECO VANHORN HRS ETAL	10/30/1997 ALEXANDER	5600 11/9/1997 WEST VIRGINIA	
017013050000				PENNZOIL COMPANY	893 GR	D&A-O	39.1464	-80.7787 6 SPURGEON THURMAN	8/17/1965 PRICE	9/1/1965 WEST VIRGINIA	:
017013310000				PENNZOIL COMPANY	GR	PSEUDO	39.1559	-80.7806 2 THOMAS HICKMAN		WEST VIRGINIA	
017013040000	11/18/1965			PENNZOIL COMPANY	994 GR	D&A	39.1537	-80.7746 3 5 L CHAPMAN	8/17/1965	9/1/1965 WEST VIRGINIA	
017733710000				HOPE NATURAL GAS	GR	UNKWN	39.1475	-80.7848 1 F L LODGE		WEST VIRGINIA	
017020540000	6/12/2006	6/1/1996 D			1247 GR	ABD-GW	39.1739	-80,7923 4666 GASTON	3/24/1996 WEIR /SD/	4/24/1996 WEST VIRGINIA	
017310520000	3/14/1956			HOPE NATURAL GAS	875 GR	ABD-GW	39.1449	-80.7828 5434 THURMAN SPURGEON	12/8/1918	12/23/1918 WEST VIRGINIA	
017733720000				UNKNOWN	GR	UNKWN	39.1477	-80.7815 C-142 THOMAS SPURGEON		WEST VIRGINIA	
017002070001				DIVERSIFIED RESOURCES INCORPORATEO	883 GR	GA5	39,1471	-80,7910 7 JESSIE WILLIAMS 3	7/18/1962	8/2/1962 WEST VIRGINIA	
017049460000				CONSOL GAS COMPANY	1123 GR	GAS	39.1610	-80.7884 14082 MORRIS I L	2/8/2005 GORDON	2695 11/11/2005 WEST VIRGINIA	
017051610000				KEY OIL COMPANY	1100 GR	GA5	39.1696	-80.7948 6 ADAMS A	2/21/2006 GORDON	3000 6/15/2006 WEST VIRGINIA	
017023800000				EQT PRODUCTION COMPANY	1068 GR	GA5	39.1507	-80.7819 4703 W J HICKMAN	3/27/1919	4/11/1919 WEST VIRGINIA	
017038280000				ENERGY CORPORATION OF AMERICA INC	930 KB	GAS	39.1588	-80.7880 6 WILLIAMS JESSIE	9/1/1990 ALEXANDER	5100 9/11/1990 WEST VIRGINIA	
17036410000				TERM ENERGY	1220 KB	GAS	39.1795	-80.7970 88-2 FARR CAROLYN	5/27/1988 ALEXANDER	5320 6/6/1988 WEST VIRGINIA	
17067690000				EQT PRODUCTION COMPANY	1243 KB	GAS	39.1815	-80.7992 WV 513775 HART RONALD & JEFFERY	6/15/2016 MARCELLUS/SH/	11381 10/21/2016 WEST VIRGINIA	1
17057860000				EQT PRODUCTION COMPANY	1150 GR	GAS	39.1473	-80.7995 WV 511530 RYAN BETTY M	2/10/2009 MARCELLU5/5H/	7/5/2009 WEST VIRGINIA	1
17035940000		10/17/1987 D	DODRIDGE	TERM ENERGY	968 KB	GA5	39.1650	-80.8068 87-3-25 MCNEE5E	9/23/1987 WEIR /SD/	2200 10/3/1987 WEST VIRGINIA	
17733130000				UNKNOWN	GR	UNKWN	39.1596	-80.8004 4658 F MAXWELL		WEST VIRGINIA	
17050320000				SPENCER ENTERPRISES	1184 GR	GAS	39.1587	-80.8038 2-A GRIMM	6/8/2005 BIG INJUN	2300 6/18/2005 WEST VIRGINIA	
17038170000		6/21/1990 D	DODRIDGE	ENERGY CORPORATION OF AMERICA INC	1220 KB	GAS	39.1599	-80.7984 2 MERT/MAXWELL F	5/26/1990 ALEXANDER	5325 6/5/1990 WEST VIRGINIA	
17036460001		12/5/2002 D	ODDRIDGE	TERM ENERGY	1000 KB	GAS-WO	39.1726	-80.8038 2 GASTON	11/2/2002 GORDON	2500 11/12/2002 WEST VIRGINIA	
17036410001		10/3/2002 D	ODORIDGE	TERM ENERGY	1220 KB	GAS-WO	39.1795	-80.7970 1 FARR	8/6/2002 BRADFORD	4450 8/15/2002 WEST VIRGINIA	
17038420001				TERM ENERGY	1140 KB	GA5-WO	39.1789	-80.8187 2 CASSIDY	11/13/2002 BIG INJUN	2100 11/13/2002 WEST VIRGINIA	
170[9]00000		8/17/1981 D	ODDRIDGE	BRAXTON OIL & GAS CORPORATION	1130 KB	GAS	39.1794	-80.8255 J-214 MUTSCHELKNAUS N G	7/26/1981 ALEXANDER	5400 8/5/1981 WEST VIRGINIA	
1702330000	3/22/1967			FRIESTAD FRANCIS	913 GR	D&A-G	39.1755	-80.8173 1 M L HAUGHT	12/18/1966	1/2/1967 WEST VIRGINIA	
17073540000	,,			TERM ENERGY	90S KB	GAS	39.1676	-80.8135 GASTONS GASTON SAMMUEL ETAL	6/7/1992 ALEXANDER	5300 6/17/1992 WEST VIRGINIA	
17042690300				KEY OIL COMPANY	1282 GR	GAS	39.1596	-80.7767 2 SUMMERS	9/8/2004 GORDON	3000 8/21/2005 WEST VIRGINIA	
17009664111				CONSOL GAS COMPANY	940 GR	GAS	39.1372	-80.7740 5295 JOSHUA ADAMS	1/29/1957	2/13/1957 WEST VIRGINIA	
17049446000				CONSOL GAS COMPANY	1077 GR	GAS	39.1651	-80.7798 14085 MORRIS I L	2/8/2005 GORDON	2685 12/1/2005 WEST VIRGINIA	
170 5 5 7 10				BEECHLICK OIL INCORPORATED	1152 GR	10&1G	39.1540	-80.7806 1 JESSIE WILLIAMS ET VIR	7/18/1960	8/2/1960 WEST VIRGINIA	
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D d Gas											

	47017047390000		10/22/2003 DODDRIDGE		1144 GR	GAS	39.1567	-80.7787 3 HICKMAN	6/17/2003 ALEXANDER	5600	10/9/2003 WEST VIRGINIA	5313 04739
	47017004310000		11/1/1960 DODDRIDGE		937 GR 984 GR	10&1G GAS	39.1449 39.1625	-80.7750 1 DORSEY E HUFF -80.7843 14084 MORRIS I L	9/17/1960 2/8/2005 GORDON 、	3555	10/2/1960 WEST VIRGINIA 11/16/2005 WEST VIRGINIA	1904 00431 2512 04943
	47017049430000 47017007660000		12/10/2005 DODDRIDGE 8/1/1962 DODDRIDGE	BEECHLICK OIL INCORPORATED	935 GR	10&1G	39.1549	-BO.7832 2 JESSIE WILLIAMS ET VIR	6/17/1962	2333	7/2/1962 WEST VIRGINIA	1847 00766
	47017049420000		10/14/2005 DODDRIDGE		1171 GR	GAS	39.1654	-80.7878 14083 MORRIS I L	2/8/2005 GORDON	2580	9/29/2005 WEST VIRGINIA	2762 04942
	47017010740000			BEECHUCK OIL INCORPORATED	949 GR	GAS	39.1557	-BO.7811 3 JESSIE WILLIAMS ET AL	12/18/1963		1/2/1964 WEST VIRGINIA	2459 01074
	47017302630000	1/1/1938	10/24/1918 DODDRIDGE		1159 GR	ABD-GW	39.1641	-80.7888 4665 ALEXANDER ADAMS	9/1/1918		9/16/1918 WEST VIRGINIA	2054 30263
	47017049370000		5/26/2006 DODDRIDGE		1224 GR	GAS	39.1628	-80.7928 3 ADAMS A -80.7950 WV 510840 LEESON J	2/8/2005 GORDON		5/17/2005 WEST VIRGINIA	2774 04937
	47017056290000 47017001000001			EQT PRODUCTION COMPANY CONSOL GAS COMPANY	866 KB 1163 GR	GAS GAS	39.1480 39.1610	-80.7924 7056 S W STOUT	4/15/2008 ALEXANDER 6/4/1939	6400	6/10/2008 WEST VIRGINIA 6/19/1939 WEST VIRGINIA	6332 05629 2045 00100
	47017001000001			EQT PRODUCTION COMPANY	1081 GR	OIL	39.1423	-80.7889 6214 F L LOOGE	4/17/1967		5/2/1967 WEST VIRGINIA	2027 01452
	47017733040000		DODDRIDGE	HOPE NATURAL GAS	GR	UNKWN	39.1702	-80.8071 7032 SAMUEL HILEMAN			WEST VIRGINIA	0 73304
	47017020390001	5/5/2006		EQUITABLE PRODUCTION COMPANY	1037 GR	ABD-GW	39.1719	-80,7963 4532 GASTON	8/1/1926 GORDON		9/1/1926 WEST VIRGINIA	2453 02039
	47017061130000		4/25/2013 DODDRIDGE 11/12/2004 DODDRIDGE	EQT PRODUCTION COMPANY	1220 GR 977 KB	GAS GAS-WO	39.1816 39.1715	-80.7992 WV 513173 GASTON S E -80.8092 1 SCHWARTZMAN	8/10/2012 MARCELLUS /SH/ 9/24/2004 BIG INJUN		8/30/2012 WEST VIRGINIA 10/6/2004 WEST VIRGINIA	13269 06113 5065 03713
	47017037130001 47017036460000		7/6/1988 DODDRIDGE		1000 KB	GAS	39.1726	-80.8038 2 GASTON	6/13/1988 ALEXANDER	5065	6/23/1988 WEST VIRGINIA	5068 03646
	47017733140000			HOPE NATURAL GAS	GR	UNKWN	39.1612	-80.8047 7035 SAM GASTON			WEST VIRGINIA	0 73314
	47017732990000		CODDRIDGE		GR	UNKWN	39.1625	-BO.8187 1 J E TRAINER			WEST VIRGINIA	0 73299
	47017038470000		10/2/1990 DODDRIDGE		1181 KB	GAS GAS	39.1759 39.1721	-80.8128 2 SCHWARTZMAN -80.8166 CASSIDY3 HAUGHT MABEL G ETAL	9/9/1990 ALEXANDER		9/19/1990 WEST VIRGINIA 6/24/1992 WEST VIRGINIA	5271 03847 5017 03956
	47017039560000 47017001960001	12/18/1950	8/1/1992 DODDRIDGE 8/8/1950 DODDRIDGE		945 KB 831 GR	D&A-G	39.1721	-80,8134 4593 M S GASTON 1	6/14/1992 ALEXANDER 6/6/1950	5300	6/21/1950 WEST VIRGINIA	2288 00196
	47017048180000	12/16/1930	3/1/2005 DODDRIDGE		959 GR	GAS	39.1472	-80.7753 2 CHAPMAN H C	4/19/2004 GORDON	3000	2/16/2005 WEST VIRGINIA	2681 04818
	47017307290000	3/23/1949	5/17/1919 CODDRIDGE		979 GR	ABD-GW	39.1461	-80,7748 5468 H C CHAPMAN	3/24/1919		4/8/1919 WEST VIRGINIA	2526 30729
	47017048700000		8/28/2005 DODDRIDGE		1271 GR	GAS	39.1625	-B0,7768 3 SUMMERS	9/8/2004 GORDON	3000	8/24/2005 WEST VIRGINIA	2881 04870
	47017006210000	12/6/1962	5/1/1962 DODDRIDGE		1178 GR	D&A-G	39.1426	-80.7681 1 J H SPURGEON ET AL	3/17/1962		4/1/1962 WEST VIRGINIA	2270 00621
	47017006030000 47017006130000	1/1/1981	9/1/1961 DODDRIDGE 10/1/1961 DODDRIDGE		1042 GR 944 GR	D&A ABD-GW	39.1490 39.1363	-80.7733 1 ROY RUPERT HRS -80.7720 3 ANDREW HURST	7/18/1961 8/17/1961		8/2/1961 WEST VIRGINIA 9/1/1961 WEST VIRGINIA	1955 00603 2094 00613
	47017014700000	-1-4 -202	7/11/1968 DODDRIDGE		1234 GR	GAS	39.1344	-80.7739 2 C A VANHORN	5/27/1968		6/11/1968 WEST VIRGINIA	2879 01470
	47017012830000		8/1/1965 DODDRIDGE	MEADOWS S L JR PRODUCTION COMPANY	1041 GR	10&1G	39.1491	-BO.7791 3 THURMAN SPURGEON	6/17/1965		7/2/1965 WEST VIRGINIA	2018 01283
	47017059180000			EQT PRODUCTION COMPANY	1252 GR	GAS	39.1806	-80.7947 WV 512444 EAE/MAXWELL	12/29/2009 MARCELLUS /SH/		4/20/2010 WEST VIRGINIA	12244 05918
	47017732740000 47017015600000			EQUITABLE RESOURCES EXPLORATION INC EQT PRODUCTION COMPANY	GR 1011 GR	UNKWN 10&1G	39.1719 39.1403	-80.7960 2632 C GASTON -80.7888 6217 F L LODGE	8/17/1969		WEST VIRGINIA 9/1/1969 WEST VIRGINIA	0 73274 1943 01560
	47017013603000			EQT PRODUCTION COMPANY	1188 GR	GAS	39.1632	-80.7941 4749 GASTON C	10/24/1980 KEENER /SD/		11/24/1980 WEST VIRGINIA	5053 02069
	47017047280000			CONSOL GAS COMPANY	1135 GR	GAS	39.1671	-80.7839 6294 MORRIS IKE L	4/29/2003 WEIR/SD/		4/24/2004 WEST VIRGINIA	2720 04728
	47017020750000		DODDRIDGE		GR	P5EUDO	39.1734	-80.7852 4787 MAXWELL			WEST VIRGINIA	0 02075
	47017001000000			CONSOL GAS COMPANY	1163 GR	UNKWN	39.1610	-80.7924 7056 S W STOUT	1/2/1930	5400	1/17/1930 WEST VIRGINIA	0 00100 5422 03831
	47017038310000 47017013170001			ENERGY CORPORATION OF AMERICA INC EQT PRODUCTION COMPANY	1260 KB 1057 GR	GAS OIL	39.1580 39.1416	-80.7928 4 MERT/WILLIAMS -80.7845 4709 F L LODGE	8/18/1990 ALEXANDER 9/9/1965	5400	8/28/1990 WEST VIRGINIA 9/24/1965 WEST VIRGINIA	2001 01317
	47017050580000		10/1/2005 DOODRIDGE		1206 GR	GAS	39.1590	-80.7835 3 HICKMAN	8/22/2005 BIG INJUN	2300	8/17/2005 WEST VIRGINIA	2285 05058
	47017020440000	4/9/1991	12/6/1917 DODDRIDGE	EQUITABLE GAS COMPANY	1162 GR	ABD-GW	39.1337	-80.7869 4599 JENCY KEMPER 1	10/17/1917		11/1/1917 WEST VIRGINIA	2700 02044
	47017050370000			SPENCER ENTERPRISES	940 GR	GAS	39.1591	-80.8088 3-A GRIMM	6/14/2005 BIG INJUN	2300	6/24/2005 WEST VIRGINIA	1950 05037
	47017001040000 47017067880000			EQT PRODUCTION COMPANY EQT PRODUCTION COMPANY	1095 GR 1220 GR	gas Permit	39.1594 39.1814	-80.8016 4658 W B MAXWELL 2 -80.7992 WV 513172 OXF160	7/18/1939 3/20/2017 MARCELLUS/SH/	11269	8/2/1939 WEST VIRGINIA WEST VIRGINIA	2492 00104 0 06788
	470173311770000	4/16/1964		EQUITABLE GAS COMPANY	1064 GR	ABD-GW	39.1700	-80.8063 6107 E M GASTON	3/23/1919	11203	4/7/1919 WEST VIRGINIA	1997 31177
	47017039560001	•	11/21/2004 DODDRIDGE	TERM ENERGY	945 KB	GAS-WO	39.1721	-80.8166 3 CASSIDY	9/24/2004 BIG INJUN		10/6/2004 WEST VIRGINIA	5017 03956
	47017015180000		8/29/1968 DODDRIDGE		906 GR	GAS	39.1591	-80.8150 1 DONALD LEE GRIMM	7/15/1968		7/30/1968 WEST VIRGINIA	2007 01518
	47017015340000		12/1/1968 DODDRIDGE	HOPE NATURAL GAS	1248 GR GR	GAS UNKWN	39.1523 39.1630	-80.8122 3 EU 8 LEESON HEIRS -80.8165 7036 SAM GASTON	10/17/1968		11/1/1968 WEST VIRGINIA WEST VIRGINIA	2142 01534 0 73300
	47017733000000 47017020720000		7/16/1920 DDDDRIDGE		1017 GR	GAS	39.1802	-80.8222 4768 MAXWELL	6/9/1920		6/24/1920 WEST VIRGINIA	1850 02072
	47017733450000			ASH & CHAPMAN	GR	UNKWN	39.1458	-80,7737 M S VAN HORN			WEST VIRGINIA	0 73345
	47017312060000	1/1/1967		CONSOLIDATED GAS SUPPLY CORPORATION	1193 GR	ABD-GW	39.1413	-80.7681 5288 G W SMITH	5/26/1918		6/10/1918 WEST VIRGINIA	2808 31206
	47017733170000		DODDRIDGE		GR GR	UNKWN	39.1463 39.1632	-80.7946 JESSE WILLIAMS -80.7937 4749 C GASTON			WEST VIRGINIA WEST VIRGINIA	0 73317 0 73311
	47017733110000 47017037880000		DODDRIDGE 4/17/1990 DODDRIDGE	ENERGY CORPORATION OF AMERICA INC	1349 KB	GAS	39.1824	-80.7931 23 BLAUSER W B MAXWELL	3/11/1990 ALEXANDER	5412	3/21/1990 WEST VIRGINIA	5417 03788
	47017049380000		6/5/2005 DOODRIDGE		1028 GR	GAS	39.1662	-80.7919 4 ADAMS A	2/28/2005 GORDON		5/23/2005 WEST VIRGINIA	2581 04938
	47017049360000		5/20/2005 DODDRIDGE		1247 GR	GAS	39.1641	-80.7893 2 ADAMS A	1/24/2005 GORDON	3000	-,,	2807 04936
	47017002070000			DIVERSIFIED RESOURCES INCORPORATED	883 GR	GAS	39.1471	-80.7910 7 JESSIE WILUAMS 3	8/17/1954		9/1/1954 WEST VIRGINIA	1331 00207
	47017013170000 47017012910000			EQT PRODUCTION COMPANY MEADOWS 5 L JR PRODUCTION COMPANY	1057 GR 1017 GR	GAS 10&1G	39.1416 39.1407	-80.7845 PO-4709 F L LODGE -80.7834 2-RE THURMAN SPURGEON	1/22/1919 7/18/1965		2/6/1919 WEST VIRGINIA 8/2/1965 WEST VIRGINIA	1929 01317 2021 01291
	47017012490000			ANIA RESOURCES	GR	PSEUDO	39.1334	-80.7876 6 LEWIS MAXWELL HEIRS	1,24,2303		WEST VIRGINIA	0 01249
	47017023860000			EQT PRODUCTION COMPANY	990 GR	GAS	39.1382	-80.7850 4244 F L LODGE	12/11/1913		12/26/1913 WEST VIRGINIA	2604 02386
	47017732630000	1/10/2005		EQUITABLE RESOURCES EXPLORATION INC	GR	UNKWN	39.1700	-80.7873 4663 M & F GASTON	9/4/1976 BIG INJUN /SD/	3000	WEST VIRGINIA	0 73263
	47017018290000 47017047400000	1/10/1985	12/1/1976 DODORIDGE 10/15/2003 DODORIDGE		1022 GR 1215 GR	ABD-GW GAS	39,1787 39,1578	-80.7921 4 W BRENT MAXWELL HRS -80.7835 2 HICKMAN	9/4/1976 BIG INJUN /SD/ 6/17/2003 ALEXANDER		9/14/1976 WEST VIRGINIA 10/4/2003 WEST VIRGINIA	1955 01829 5347 04740
	47017050310000		7/5/2005 DODDRIDGE		965 GR	GAS	39.1561	-80.8070 1-A GRIMM	6/10/2005 BIG INJUN		6/20/2005 WEST VIRGINIA	2070 05031
	47017020610000		4/18/1919 DOODRIDGE	P & M OIL COMPANY	905 GR	GAS	39.1453	-80.7967 4696 LEESON	3/14/1919		3/29/1919 WEST VIRGINIA	1424 02061
	47017037130000		5/12/1989 DODDRIDGE		977 KB	GAS	39.1715	-80.8092 1 SCHWARTZMAN	4/21/1989 ALEXANDER	5200	5/1/1989 WEST VIRGINIA	5065 03713
	47017303370000	10/10/1940		PITTSBURGH & W VA GAS EQT PRODUCTION COMPANY	1084 GR 972 GR	ABD-GW ABD-GW	39.1537 39.1609	-80.8063 4572 W BRENT MAXWELL -80.8048 6111 GASTON R J	5/9/1917 6/12/1920 GORDON		5/24/1917 WEST VIRGINIA 7/12/1920 WEST VIRGINIA	1958 30337 2400 02114
	47017021140000 47017733080000	9/24/2015	DODDRIDGE		972 GR GR	UNKWN	39.1694	-80.7991 4652 C GASTON	0/12/1520 GONDON		WEST VIRGINIA	0 73308
	47017704330000			CARTER OIL & GAS	GR	PSEUDO	39.1657	-80.8055 15 M GASTON			WEST VIRGINIA	0 70433
	47017732800000			HOPE NATURAL GAS	GR	UNKWN	39.1803	-80.8192 5885 MABEL HAUGHT ET AL			WEST VIRGINIA	0 73280
(7017035900000		10/1/1987 DODDRIDGE	TERM ENERGY ENERGY CORPORATION OF AMERICA INC	871 KB	GAS	39.1673	-80.8190 87-3-15 GASKINS SAM	9/8/1987 WEIR /SD/		9/18/1987 WEST VIRGINIA	4951 03590 5255 03906
	29017039060000 2017701010000			CARTER OIL COMPANY	1108 KB GR	GAS PSEUDO	39.1611 39.1699	-80.8162 B&M/HICKMAN1 HICKMAN LAURA ETAL -80.8120 1 GASTON E M	9/22/1991 ALEXANDER	2779	10/2/1991 WEST VIRGINIA WEST VIRGINIA	0 70101
. 1	4100.7010130000			ENERGY CORPORATION OF AMERICA INC	885 KB	GAS	39.1709	-80.8221 1 HAUGHT FOREST ETAL	5/3/1991 ALEXANDER		5/13/1991 WEST VIRGINIA	5050 03873
	47007033030000			ENERVEST OPERATING LLC	981 GR	GAS	39.1307	-80.7630 1 LOWTHER MARIE	12/8/1992 ALEXANDER	5500	12/18/1992 WEST VIRGINIA	5299 03909
Z %	47017033630000 47017033630000 47017233340000 4701723363000		DODDRIDGE		GR GR	UNKWN	39.1355	-80.7643 4404 H G SPURGEON			WEST VIRGINIA WEST VIRGINIA	0 73349
Q 🖊	4/019-040-50000		DODDRIDGE	UNKNUWN	GR	UNKWN	39.1535	-80.7804 365 JESSE WILLIAMS			WEST VIRGINIA	0 73369
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API NO. 47-017 - 0606/07/2019

OPERATOR WELL NO. 516238 (OXF43H30)

Well Pad Name: OXF43

STATE OF WEST VIRGINIA DEPARTMENT OF ENVIRONMENTAL PROTECTION, OFFICE OF OIL AND GAS WELL WORK PERMIT APPLICATION

1) Well Operator:	EQT Prod	duction C	ompany	306686	Doddridge	South West/Cove	Oxford
				Operator ID	County	District	Quadrangle
2) Operator's We	ll Number: 💆	516238 (C	DXF43H3	0) Well Pad	Name: OXF4	3	
3) Farm Name/Su	ırface Owner	: Cathy Je	ean Wetzel,	et. al. Public Roa	d Access: Rt. 2	20	
4) Elevation, curr	ent ground:	1,229	El	evation, proposed j	post-construction	on: 1,229'	(Site built)
5) Well Type (a	a) Gas X		Oil	Unde	rground Storag	ge	
C	ther						
(l	o)If Gas S	hallow	X	Deep			Gas 10
	H	orizontal	X				il and
6) Existing Pad: Y	es or No Y	es					A SHECK
				pated Thickness at ness - 56': Anticipated Ta			Office of Oil and Gas
8) Proposed Total	Vertical De	pth: 6,66	66'			_	
9) Formation at T	otal Vertical	Depth:	Marcellus				
10) Proposed Tota	al Measured	Depth:	18,391'		.,,,,,,		
11) Proposed Hor	izontal Leg I	Length:	8,902'				
12) Approximate	Fresh Water	Strata De	pths:	70', 221', 307', 3	82'		
13) Method to De	termine Fres	h Water D	Depths: E	y offset wells			
14) Approximate	Saltwater De	pths: No	ne preser	nt in offset wells			-
15) Approximate	Coal Seam D	epths: 3	22'				
16) Approximate	Depth to Pos	sible Voi	d (coal mi	ne, karst, other): 👲	lone reported		
17) Does Propose directly overlying				ns Yes	No		
(a) If Yes, provi	de Mine Info	: Name:	: <u> </u>				
		Depth	•				
		Seam:		· · · · · · · · · · · · · · · · · · ·			
		Owner	r:				

4700177281948

WW-6B (04/15) API NO. 47- 017 - 06746

OPERATOR WELL NO. 516238 (OXF43H30)

Well Pad Name: OXF43

18)

CASING AND TUBING PROGRAM

TYPE	Size (in)	New or Used	Grade	Weight per ft. (lb/ft)	FOOTAGE: For Drilling (ft)	INTERVALS: Left in Well (ft)	CEMENT: Fill-up (Cu. Ft.)/CTS
Conductor	26	New	A-500	85.6	40	40	49 ft^3 / CTS
Fresh Water	13 3/8	New	J-55	54.5	553	553	564ft^3 / CTS
Coal							
Intermediate	9 5/8	New	P-110	40	5528	5528	2188 ft^3 / CTS
Production	5 1/2	New	P-110	20	18391	18391	500' above top producing zone
Tubing	2 3/8		J-55	4.7		May not be run, if run set 40' above top perf or 80° inclination.	S S
Liners							

TYPE	Size (in)	Wellbore Diameter (in)	<u>Wall</u> <u>Thickness</u> <u>(in)</u>	Burst Pressure (psi)	Anticipated Max. Internal Pressure (psi)	Cement Type	Cement Yield (cu. ft./k)
Conductor	26	30	.312	1378	18	Class A	1.18
Fresh Water	13 3/8	17 1/2	.38	2700	2160	See Variance	1.19
Coal							
Intermediate	9 5/8	12 3/8	.395	7900	3160	See Variance	1.19
Production	5 1/2	8 1/2	.361	12640	10112	Class A/H	1.123/2.098
Tubing	2 3/8	NA	.19	7700			
Liners							

PACKERS

Kind:			
Sizes:			
Depths Set:	**		

DAG Blacket

	- 06746	API NO. 47- 017
516238 (OXF43H30)	ELL NO.	OPERATOR \
3	ne: OXF4	Well Pad Na

19)	Describe	proposed well	work.	including	the drilling	and plugging	back of an	v pilot hole:
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Drill and complete a new horizontal well in the Marcellus Formation. Drill the vertical to an approximate depth of 3658'. Kick off and drill curve. Drill the lateral in the Marcellus. Cement casing.

20) Describe fracturing/stimulating methods in detail, including anticipated max pressure and max rate:

Hydraulic fracturing is completed in accordance with state regulations using water recycled from previously fractured wells and obtained from freshwater sources. This water is mixed with sand and a small percentage (less than 0.1%) of chemicals (including 15% Hydrochloric acid, friction reducer, biocide, and scale inhibitor), referred to in the industry as a "slickwater" completion. Maximum anticipated internal casing pressure is expected to be approximately 10000 psi, maximum anticipated treating rates are expected to average approximately 100 bpm. Stage lengths vary from 150 to 300 feet. Average approximately 350,000 gallons of water per stage. Sand sizes vary from 100 mesh to 20/40 mesh. Average approximately 400,000 pounds of proppant per stage.

21) 7	Total Area	a to be	disturbed.	including	roads.	stockpile area	pits.	etc	(acres)
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22) Area to be disturbed for well pad only, less access road (acres):

23) Describe centralizer placement for each casing string:

- Surface: Bow spring centralizers One centralizer at the shoe and one spaced every 500'.
- Intermediate: Bow spring centralizers One centralizer at the shoe and one spaced every 500'.
- Production: One solid body centralizer spaced every joint from production casing shoe to KOP

24) Describe all cement additives associated with each cement type:

Conductor: Class A no additives

Surface (Type 1 Cement): 0-3% Calcium Chloride. Used to speed the setting of cement slurries Intermediate (Type 1 Cement): 0-3% Calcium Chloride. Used to speed the setting of cement slurries.

Production

Lead (Class A Cement): 0.2% CD-20 (dispersant makes cement easier to mix). .15% SuperFL-300 (fluid loss/lengthens thickening time) .15% SEC-10 (fluid loss) 50:50 POZ (extender) Tail (Class H Cement): 0.2% Super CR-1 (Retarder). Lengthens thickening time. .3% Super FL-200 (fluid loss) .2% SEC-10 (Fluid loss). .2% SuperFL-350 (fluid loss) Reduces amount of water lost to formation. 60 % Calculm Carbonate. Acid solubility.

25) Proposed borehole conditioning procedures:

Surface: Circulate hole clean while rotating & reciprocating the drill string until cuttings diminish at surface. Intermediate: Circulate hole clean while rotating & reciprocating the drill string until cuttings diminish at surface.

Production: Pump marker sweep with nut plug to determine actual hole washout. Calculate a gauge holes bottoms up volume. Perform a cleanup cycle by pumping 3-5 bottoms up or until the shakers are clean. Check volume of cuttings coming across the shakers every 15 minutes.

*Note: Attach additional sheets as needed.

3 (11/18



March 6, 2019

Mr. Taylor Brewer West Virginia Department of Environmental Protection Office of Oil and Gas 601 57th Street SE Charleston, WV 25304

Re: Casing on 516238 (OXF43H30)

Dear Mr. Brewer,

EQT has set the 13-3/8" surface casing at 553' KB, 171' below the deepest fresh water. We will set the 9-5/8" intermediate string at 5,291' KB, 50' below the base of the Alexander formation.

If you have any questions, please do not hesitate to contact me at 724-746-9073.

Sincerely,

John Zavatchan Landman - Permitting

Enc.



west virginia department of environmental protection

Office of Oil and Gas 601 57th Street, SE Charleston, WV 25304 (304) 926-0450 (304) 926-0452 fax Earl Ray Tomblin, Governor Randy C. Huffman, Cabinet Secretary dep.wv.gov

March 18, 2014

Nabors Completion & Production Services Company 1380 Route 286 Hwy E #121 Indiana PA 15701

Re: Cement Variance Request

Dear Sir or Madam,

This agency is approving a variance request for the cement blend listed below to be used on surface and coal protection strings for the drilling of oil and gas wells in the state of West Virginia. The variance cannot be used without requesting its use on a permit application and approval by this agency:

Type 1 (2% Calcium Chloride-Accelerator, 0.25% Super Flake-Lost Circulation, 5.2% Water, 94% Type "1" Cement)

If you have any questions regarding this matter feel free to contact me at 304-926-0499, ext. 1653.

Sincerely

James Peterson

Environmental Resources Specialist / Permitting

Office of Oil and Gas
MAR 1 5 2019

WW Department of

Well

516238(OXF43H30)

EQT Production

Oxford Quad Doddridge County, WV

Vertical Section

10982 Enertia# 516238

Note: Diagram is not to scale

F	Top Base			Casing and Cementing			Deepest Fresh Water	er: 382'
Formations	TVD TVD	1777		Туре	Conductor	Surface	Intermediate	Production
Conductor	40	4111		Hole Size, In.	30	17 1/2	12 3/8	8 1/2
D C I 191	444			Casing Size, OD In.	26	13 3/8	9 5/8	5 1/2
Base Fresh Water	382	111	111	Casing Wall Thickness, In.	0.312	0.380	0.395	0.361
	222	- 111	111	Depth, MD	40'	553'	5,528'	18,391
Surface Casing	553	4		Weight	85.6#	54.5#	40#	20#
Dans Bad Bask	222			Grade	A-500	J-55	P-110	P-110
Base Red Rock	829	- 11	11	New or Used	New	New	New	New
Maxton	1103 - 1143	- 11	11	Burst (psi)	1378	2,700	7,900	12,640
Big Lime	1979 - 2047	2101	11	Cement Class	A	A/Type 1	A / Type 1	A/H
Big Injun	2091 - 2123	11		Cement Yield	1.18	1.19	1.19	1,123 / 2,098
Weir Gantz	2265 - 2391 2465 - 2547	- 11		Top of Cement (Planned)	Surface	Surface	Surface	500' above top Producing Zone
Fifty foot	2547 - 2604	- 11		Method	Displacement	Displacement	Displacement	Displacement
Thirty foot	2645 - 2681	- 11	11	Est. Volume (cu ft)	49	564	2,188	4,130
Gordon	2687 - 2736	1.1					2,100	Calcium Carbonate, Fluid Loss
Forth Sand	2787 - 2854	- 11	100	and the same of th	j. A	Coloton		Extender, Dispersent, Viscosific
Bayard	2967 - 3038	11	1 1	Possible Additives	N/A	Calcium	Calcium Chloride	Defoamer, POZ, Bonding Agen
Warren	3301 - 3367	11	1 1	Same Parties		Chloride	120200000000000000000000000000000000000	Retarder, Anti-Settling/Suspension
Speechley	3367 - 3872	1.1	11					Agent
Balltown A	3872 - 4230	11						
Riley	4470 - 4846	1.1						
Benson	4846 - 4940	11	College Control					
Alexander	5148 - 5241	- 11	KOP @ 3,658					
Intermediate Casing	5291	4						
Sonyea	6324 - 6474							
Middlesex	6474 - 6464	1						
Genesee	6464 - 6573	- 1						
Geneseo	6573 - 6615	1	1					
Tully	6615 - 6628							
Hamilton	6628 - 6646							
Marcellus	6646 - 6702	NA THE STATE OF TH						4
Production Casing	18391 MD	CONTRACTOR OF THE	The state of the s				A CONTRACTOR OF THE PARTY OF TH	
Onondaga	6702				XI WATER OF THE PARTY		Constitution of the second	
		Land cu				Est. TD @	6,666	TVD
			9,489' MD				18,391	
								3

Proposed Well Work:

Drill and complete a new horizontal well in the Marcellus formation.

Drill the vertical to an approximate depth of 3658'.

Kick off and drill curve. Drill lateral in the Marcellus. Cement casing.

8,902' Lateral



west virginia department of environmental protection

Office of Oil and Gas 601 57th Street, SE Charleston, WV 25304 (304) 926-0450 (304) 926-0452 fax

Earl Ray Tomblin, Governor Randy C. Huffman, Cabinet Secretary dep.wv.gov

BEFORE THE OFFICE OF OIL AND GAS DEPARTMENT OF ENVIRONMENTAL PROTECTION STATE OF WEST VIRGINIA

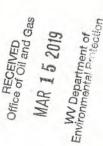
IN THE MATTER OF A VARIANCE FROM)	ORDER NO.	2014 - 17
REGULATION 35 CSR § 4-11.4/11.5/14.1)		
AND 35 CSR § 8-9.2.h. 4/5/6/8 OF THE)		
THE OPERATIONAL)		
REGULATIONS OF CEMENTING OIL)		
AND GAS WELLS)		

REPORT OF THE OFFICE

Nabors Completion & Production Services Co. requests approval of a different cement blend for use in cementing surface and coal protection casing of oil and gas wells.

FINDINGS OF FACT

- 1.) Nabors Completion & Production Services Co. proposes the following cement blend:
 - 2% Calcium Chloride (Accelerator)
 - 0.25 % Super Flake (Lost Circulation)
 - 94% Type "1" Cement
 - 5.20 % Water
- Laboratory testing results indicate that the blend listed in Fact No.1 will achieve a 500
 psi compressive strength within 6 hours and a 2,435 psi compressive strength within 24
 hours.



CONCLUSIONS OF LAW

Pursuant to Articles 6 and 6A, Chapter 22 of the Code of West Virginia, the Office of Oil and Gas has jurisdiction over the subject matter embraced in said notice, and the persons interested therein, and jurisdiction to promulgate the hereinafter prescribed Order.

Pursuant to 35 CSR § 4-11.5 and 35 CSR § 8-9.2.h.8 the Chief of the Office of Oil and Gas may approve different cement blends upon the well operator providing satisfactory proof that different cement types are adequate.

ORDER

It is ordered that Nabors Completion & Production Services Co. may use the cement blend listed in Findings of Fact No.1 for the cementing of surface and coal protection casing of oil and gas wells in the State as may be requested by oil and gas operators. The waiting time on the cement blend shall be 8 hours. The cement blend shall be mixed in strict accordance with the specifications for each blend and weight measurements made on-site to assure the cement slurries meet the minimum weight specifications. A sample shall be collected and, if after 8 hours the cement is not set up, additional time will be required. Nabors Completion & Production Services Co. shall keep a record of cement blend jobs in which the cement blend approved under this order is to be used and made available to the Office of Oil and Gas upon request.

Dated this, the 18th day of March, 2014.

IN THE NAME OF THE STATE OF WEST VIRGINIA

OFFICE OF OIL AND GAS DEPARTMENT OF ENVIRONMENTAL PROTECTION OF THE STATE OF WEST VIRGINIA

James Martin, Chief Office of Oil and Gas

Office of Oil and Gas
MAR I 5 2019
WW Department of
Environmental Protection

Well Operator's Report of Well Work



Well Number:	516238	
API:	47 - 017	- 06746
Submission:	/ Initial	Amended

Notes: EQT has set 13-3/8" casing to 553' and cemented to surface with 520 sks of Class A cement. In the future, EQT plans to return to drill the remaining sections of the wellbore then complete stimulation operations and start production.

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Office of Oil and Gas

MAR 26 2019

WV Department of Environmental Protection WR-35 Rev. 8/23/13

Page		of	
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State of West Virginia Department of Environmental Protection - Office of Oil and Gas Well Operator's Report of Well Work

API	<u>47</u> - 017	_ 06746	County DODI	DRIDGE	District SOUTH V	VEST / COVE	<u> </u>
Quad _	OXFORD		Pad Name OX	F43	Field/Pool Name 1	N/A	
	ame Cathy Je						
Operate	or (as registered	with the OO	G) EQT Production	Company			20
Addres	is TID FIDIESS	iunai Flace,	City D	ridgeport	State VVV	Zip <u>263</u> 3	3U
As Dril	lled location l	Top hole	Attach an as-dri Northing 4,334,220.84 Northing N/A		d deviation survey ting 517,916.81		
	_	tom Hole	Northing N/A		ing N/A		
Elevation	on (ft) 1229	GL	Type of Wel	■New □ Existing	Type of Report	i #Interim □Fi	nal
Permit	Type a Det	viated 🖘 🛚	Horizontal B Horiz	ontal 6A 🛛 Vertical	Depth Type	□ Deep ■	Shallow
Type of	f Operation 🗆 (Convert 🖽	Deepen 🛮 Drill	🗆 Plug Back 🗆 Redri	lling □ Rework	□ Stimulate	
Well T	ype 🗆 Brine Di	sposal CB	M & Gas □ Oil □ S	econdary Recovery 🗆 Se	olution Mining 🗆 St	orage 🗆 Other	
	f Completion □ with □ Cable		ultiple Fluids Pro	duced 🗆 Brine 🗆 🗆 Gas	□ NGL □ Oil	□ Other	
Product		n 🗅 Mud	ir □ Mud □Fresh V □ Fresh Water □ Bri		oole □Air □Mud	i □ Fresh Water	: D Brine
	rmit issued			nmenced 08/05/2017 Date completion acti	_		5/2017
			Date permission grant		***************************************	····	_
				cation within 5 days of vo			RECEIVED Office of Oil and Gas
Freshwa	iter depth(s) ft	70,2	21,307,382	Open mine(s) (Y/N) de	epths	N	MAR 2.6 2019
Salt wat	er depth(s) ft _		N/A	Void(s) encountered (//N) depths	N	THE THE STATE OF T
•	pth(s) ft		21	Cavern(s) encountered	(Y/N) depths	N	WV Department of Environmental Protection
s coal b	eing mined in a	rea (Y/N)	N	·		Dord	

WR-35 Page of Rev. 8/23/13 _Well number_516238 API 47-017 Farm name Cathy Jean Wetzel, et. al. 06746 CASING Hole Casing New or Grade Basket Did cement circulate (Y/N) **STRINGS** Size 5ize Depth Used wt/ft Depth(s) * Provide details below* Conductor 30" 26" 40' NEW A-500 85.6# N/A Y Surface 17-1/2" 13-3/8 553' NEW J-55 54.5# 200' Y Coal Intermediate 1 Intermediate 2 Intermediate 3 Production Tubing Packer type and depth set Comment Details No issues during cement job. CEMENT Class/Type Number Sturry Yield Volume Cement WOC DATA of Cement of Sacks ft 3/sks) wt (ppg) (Ω^2) Top (MD) (hrs) Conductor CLASS A 49 15.6 1.18 57.82 0 8 Surface CLASS A 520 15,6 1.20 D 624 8 Coal Intermediate 1 Intermediate 2 Intermediate 3 Production Tubing Drillers TD (ft) 603 MD Loggers TD (ft) N/A Deepest formation penetrated WAYNESBURG A Plug back to (ft) NA Plug back procedure N/A Kick off depth (ft) NA Check all wireline logs run □ caliper density ■ deviated/directional □ induction a neutron □ resistivity 🗆 gamma ray l temperature ⇔sonic Well cored 'Yes No □ Conventional Were cuttings collected □ Yes ■ No □ Sidewall DESCRIBE THE CENTRALIZER PLACEMENT USED FOR EACH CASING STRING CONDUCTOR NONE BURFACE. ON SHOE TRACK AND EVERY 100' FEET TO SURFACE WAS WELL COMPLETED AS SHOT HOLE DETAILS D Yes D No WAS WELL COMPLETED OPEN HOLE? C Yes D No DETAILS RECEIVED. Office of Oil and Gas WERE TRACERS USED □ Yes □ No TYPE OF TRACER(S) USED ____

WR-35 Rev. 8/23/13

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Page	 01	

A DI	47- 017		06746	
WLI	4/-	•		

Farm name Cathy Jean Wetzel, et. al.

Well number 516238

PERFORATION RECORD

Stage No	Perforation date	Perforated from MD ft.	Perforated to MD ft.	Number of Perforations	Formation(s)
			!		

Please insert additional pages as applicable.

STIMULATION INFORMATION PER STAGE

Complete a separate record for each stimulation stage.

Stage No	Stimulations Date	Ave Pump Rote (BPM)	Ave Treatment Pressure (PSI)	Max Breakdown Pressure (PSI)	ISIP (PSI)	Amount of Proppant (lbs)	Amount of Water (bbls)	Amount of Nitrogen/other (units)

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Please insert additional pages as applicable.

WR-35 Page ___ of ___ Rev. 8/23/13 API 47- 017 . 06746 Farm name FRANKLIN MAXWELL HEIRS L.P. Well number 516238 **PRODUCING FORMATION(S) DEPTHS** TVD Please insert additional pages as applicable. **GAS TEST** D Build up Drawdown □ Open Flow OIL TEST - Flow - Pump SHUT-IN PRESSURE Surface psi Bottom Hole psi DURATION OF TEST hrs **OPEN FLOW** Oil Gas NGL Water GAS MEASURED BY mcfpd bpd bpd bpd □ Estimated □ Orifice □ Pilot LITHOLOGY/ TOP **BOTTOM** ROTTOM TOP **FORMATION** DEPTH IN FT DEPTH IN FT DEPTH IN FT DEPTH IN FT DESCRIBE ROCK TYPE AND RECORD QUANTITY AND NAME TVD TVD TYPE OF FLUID (FRESHWATER, BRINE, OIL, GAS, H2S, ETC) 0 0 Please insert additional pages as applicable. Drilling Contractor Decker Drilling Address 11565 State Route 676 Zip 45784 Vincent State OH City Logging Company Gyrodata Inc. Address 601 Mayer St. Bridgeville Zip 15017 State PA City Cementing Company BJ Services, LLC Address 4000 Town Center Blvd, Suite 210 State PA City Cannonsburg Zip 15317 Stimulating Company City Address State ____ Zip Please insert additional pages as applicable. Completed by Daniel Donbereiner Telephone (412) 395-3205 RECEIVED Title Director of Drilling Date 03/20/2019 Signature _ Office of Oil and Gas Submittal of Hydraulic Fracturing Chemical Disclosure Information Attach copy of FRACFOCUS Registry MAR 26 2019

WR-35 Rev. 8/23/13				Page of
API 47- 017 - 06746	Farm name_Cathy Jean Wetzel, et. al.	Well num	_{ber_} 516238	
Drilling Contractor				
Address	City	State	Zip	
Logging Company				
Address	City	State	Zip	
Logging Company				
Address	City	State	Zip	
Cementing Company				
Address	City	State	Zip	

Office of CEIVED (1/4) & 26 CE

Well# 516238 Final Formations API# 47-017-06746-00-00 Formation Name Drill Top MD (ftKB) Drill Top (TVD) (ftKB) Drill Btm MD (ftKB) Drill Btm (TVD) (ftKB)										
Formation Name	Drill Top MD (ftKB)	Drill Top (TVD) (ftKB)	Drill Btm MD (ftKB)	Drill Btm (TVD) (ftKB)						
SAND / SHALE	1	1	321	321						
WAYNESBURG A	321	321	322	322						
SAND / SHALE	322	322	603	603						
	_									
				_						
		-								
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HAR 2,6 2019



EQT PRODUCTION

Doddridge County, WV OXF43 OXF43H30 (516238) - Slot 516238

Main

Design: 516238 As Drilled

Standard Survey Report

19 March, 2019

Office of Oil and Gas 2019



Geo Datum: Map Zone: NAD 1927 (NADCON CONUS)

West Virginia North 4701

EQT Survey Report



Site Position: Northing: 241.913 000 ush Latitude: 39 16 From: 1,633,421,760 usft Enating: Longitude: -80.79 Position Uncertainty: 0.000 usft Stot Radius: 13-3/16 " Grid Convergence: -0.8245 *

Well Well Position 0.000 usft +N/-5 Northing: 241,902 39D usft Latitude: 39.1569220 +E/-W 0.000 usft Easting: 1,633,402.144 usft Langitude: 80,7928035°W Position Uncertainty 0.000 usft Wellhead Elevation: 0.000 usft Ground Level: 1,229.000 usft

 Mognitics
 Model Name
 Sample Date
 Declination
 Dip Angle
 Field Strength

 I/)
 (*)
 (*)
 (vii)

 IGRF2015
 10/31/2015
 -8.4415
 66 6108
 \$2,050,36084478

Design Audit Notes: Version: 1.0 Phase: ACTUAL Tie On Depth: 0 000 Vertical Section: Depth From (TVD) Direction (neft) 0.000 0.000 0.000 319.471

Survey Program Date 2/15/10/15

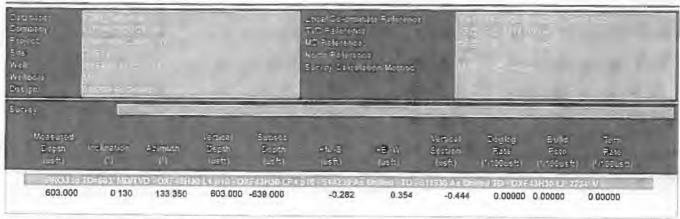
From To
(built) Survey (Wellbore) Tool Name Description

0.00 603.000 Gyrodata Gyro (Main) GYD_DP_MS Updated 06/27 Gyrodata Continuous Tool Including GyroCompass adj

Measured Subsea Vertical Depth (usft) Depth (usft) Inclination +N/-S Rate Rate (usft) (°/100ustt) (*/100:ish) (°/100usft) 0.000 0.000 0.000 0.000 -1,242,000 0.000 0.000 0.000 0.00000 0.00000 0.00000 0.060 100 000 -1,142 000 100.000 121.730 -0.028 0 045 -0.050 0.06000 0.06000 0.00000 200.000 0 050 157.570 200.000 -1,042.000 -0.095 0.106 -0.141 0.03516 -0.01000 35.B4000 300.000 0.050 202.630 300,000 -942 000 -0.176 0.108 -0 202 0.03832 0.00000 45.06000 400.000 0.040 82.660 400,000 -642,000 -0.212 0.123 -0.241 0 07809 -0.01000 -119.9700 0 500,000 0.080 69.640 500.000 -742.000 -0,189 0 207 -0.278 0.02288 0.02000 -13 02000 RECEIVED 570.000 0.130 570 000 -672 000 133,350 0 299 -0.231-0.370 0 16654 0.10000 91.0 Office of Oil and Gas



EQT Survey Report

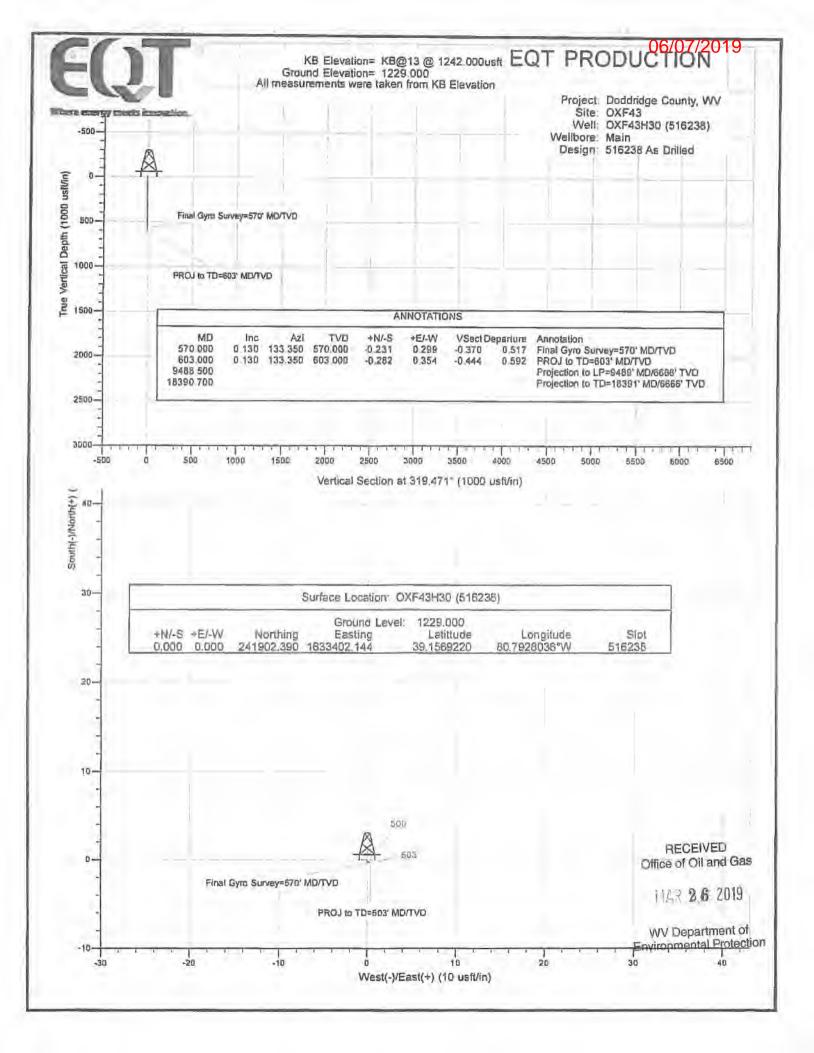


Design Targets									
Target Name - h timiss target - Shape	Bip Angle (")	D p D s.	TVD (usf:)	*8/48 (604.260)	-BI-W (-161.EEE)	Northing (usft)	Easting (usfr)	Latitude	Longtud≠
4701703831 PROJ TD	0.000	360.000	5,414.00	504.253	-161.888	242,406,643	1,633,240.256	39 1583000	80.7834000°W
 actual wellpath mis Circle (radius 203. 	ises larget cen	ter by 4840	0 104usft at 6	03 000usft Mi	O (603 000 TV)	D, -0.282 N, 0.354	E)		
4701705629 PROJ TD	0.000	360 000	6,708.00	-3,240.247	-669,632	238,662 142	1,632,732 513	39.1480000	80 7950000°VV
 actual wellpath mis Circle (radius 246) 	ses target cen	ier by 5943.	B67usft at 6	03.000usft ME	000 E03) O	D, -0.282 N, 0.354	E)		

Design Annot	ations					
	Measured	Vertica!	Local Coordinates			
	Depth (usit)	Depth (usft)	+N/-S (usit)	+E AV (usft)	Comment	
	570.000	570,000	-0.231	0.299	Final Gyro Survey=570' MD/TVD	
	603.000	603 000	-0.282	0 354	PROJ to TD=603' MD/TVD	

- Land 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1			
Checked By:	Approved Dur	the state of the s	
	Approved By:	Date	





API Number 47 - 017 - 06746

Operator's Well No. 516238 (OXF43H30)

STATE OF WEST VIRGINIA DEPARTMENT OF ENVIRONMENTAL PROTECTION OFFICE OF OIL AND GAS

FLUIDS/ CUTTINGS DISPOSAL & RECLAMATION PLAN

Operator Name EQT Production Company		OP C	Code 306686	
Watershed (HUC 10) Middle Fork Hughes	River	Quadrangle Oxford		
Do you anticipate using more than 5,000 bl	bls of water to complete th	e proposed well wor	rk? Yes V No	
Will a pit be used? Yes No	/			
If so, please describe anticipated p				
Will a synthetic liner be used in th	ne pit? Yes No	✓ If so, wha	t ml.?_N/A	
Proposed Disposal Method For Tr	eated Pit Wastes:			
Land Applicatio		The rate line		
	jection (UIC Permit Num	ber_ 0014, 8462, 4037		
Reuse (at API N Off Site Disposa	I (Supply form WW-9 for	r disposal location))
Other (Explain	(Supply form WW-5 for	disposar focution)		
Will closed loop system be used? If so, de	Yes, The closed loop sy scribe: then prepared for transp	stem will remove drill cutti cortation to an off-site disp	ngs from the drilling fluid. The osal facility,	drill cuttings are
Drilling medium anticipated for this well (v	vertical and horizontal)? A	Air, freshwater, oil b	ased, etc. See Attached	
-If oil based, what type? Synthetic	c, petroleum, etcSynthetic	Mud		
Additives to be used in drilling medium?_	See Attached			
Drill cuttings disposal method? Leave in p	it, landfill, removed offsite	e, etc. Landfill		
-If left in pit and plan to solidify w	what medium will be used?	(cement, lime, saw	dust) N/A	
-Landfill or offsite name/permit no				
Permittee shall provide written notice to the West Virginia solid waste facility. The noti where it was properly disposed.	e Office of Oil and Gas of ce shall be provided within	any load of drill cut n 24 hours of rejection	tings or associated was on and the permittee sh	te rejected at any all also disclose
I certify that I understand and agree on August 1, 2005, by the Office of Oil and provisions of the permit are enforceable by law or regulation can lead to enforcement at I certify under penalty of law the application form and all attachments the obtaining the information, I believe that the penalties for submitting false information, it	I Gas of the West Virginia y law. Violations of any taction. at I have personally examineto and that, based on the information is true, as	Department of Enviterm or condition of nined and am famil my inquiry of thos ccurate, and complete	ronmental Protection. If the general permit an item is the information in the information in the individuals immediate. I am aware that	I understand that the d/or other applicable on submitted on this ately responsible for there are significant
Company Official Signature				
Company Official (Typed Name) John Za				ZO ZO
Company Official Title Landman - Permitti	ng			A STATE
Subscribed and sworn before me this	34h day of M	arch	, 20 19 Notary Public	Office of Oil and Gas
Mu commission avairs 8/2.1	2022		C STEET	OFFICIAL SEAL NOTABY PUBLIC
My commission expires $8/21/$			The state of the s	STATE OF WEST VIRGINIA
	211119			EQT PRODUCTION COMPAN 115 PROFESSIONAL PLACE BRIDGEPORT, WV 26330
	31		Contract of the state of the st	BRIDGEPORT, WV 26330 My Commission Expires August 21.

WW-9 Attachment

- · Drilling medium anticipated for this well (vertical and horizontal)? Air, freshwater, oil based, etc.
 - Air is used to drill the top-hole sections of the wellbore (surface, intermediate, and pilot). Water based mud may be necessary depending on hole conditions to stabilize and drill the intermediate section. The pilot hole, curve, and lateral sections will be drilled with either air, water based mud, or oil based mud.

Additives to be used in drilling medium?

Air - biodegradable oil lubricant, detergent, defoaming, water. Water based mud – Barite, viscosifer, alkalinity control, lime, filtration control, deflocculates, biodegradable oil lubricant, defoaming, walnut shell, salt, x-cide, carbonates. Oil based mud – synthetic base oil, emulsifier, salt, lime, viscosifer, alkalinity control, filtration control, deflocculates, biodegradable oil lubricant, defoaming, carbonates.

Office of Oil and Gas
MAR I 5 2019
WW Department of
Environmental Protection

roposed Revegeration Ties	atment: Acres Disturbed n	o additional Prevegetation ph	I		
Lime 3	Tons/acre or to corre	oct to pH 6.5			
Fertilizer type Gra	anular 10-20-20				
Fertilizer amount_	1/3	lbs/acre			
Mulch 2		_Tons/acre			
		Seed Mixtures			
Т	emporary	Perma	nent		
Seed Type	lbs/acre	Seed Type	lbs/acre		
KY-31	40	Orchard Grass	15		
Alsike Clover	5	Alsike Clover	.5		
Annual Rye	15				
Attach: Maps(s) of road, location, p provided). If water from the acreage, of the land applicat	pit will be land applied, ind tion area	d application (unless engineered plans included application (L x W x D) of the pit, and	ling this info have been dimensions (L x W), an		
Maps(s) of road, location, p provided). If water from the acreage, of the land applicat Photocopied section of invo	e pit will be land applied, indition area slved 7.5' topographic sheet.	clude dimensions (L x W x D) of the pit, and	dimensions (L x W), an		
Maps(s) of road, location, p provided). If water from the acreage, of the land applicat Photocopied section of invo	pit will be land applied, incition area	clude dimensions (L x W x D) of the pit, and	dimensions (L x W), an		
Maps(s) of road, location, p provided). If water from the acreage, of the land applicat Photocopied section of invo	pit will be land applied, incition area	clude dimensions (L x W x D) of the pit, and	dimensions (L x W), an		
Maps(s) of road, location, p provided). If water from the acreage, of the land applicat Photocopied section of invo	pit will be land applied, incition area	clude dimensions (L x W x D) of the pit, and	dimensions (L x W), an		
Maps(s) of road, location, p provided). If water from the acreage, of the land applicat Photocopied section of invo	pit will be land applied, incition area	clude dimensions (L x W x D) of the pit, and	dimensions (L x W), an		
Maps(s) of road, location, p provided). If water from the acreage, of the land applicat Photocopied section of invo	pit will be land applied, incition area	clude dimensions (L x W x D) of the pit, and	dimensions (L x W), an		
Maps(s) of road, location, p provided). If water from the acreage, of the land applicat Photocopied section of invo	pit will be land applied, incition area	clude dimensions (L x W x D) of the pit, and	dimensions (L x W), an		
Maps(s) of road, location, p provided). If water from the acreage, of the land applicat Photocopied section of invo	pit will be land applied, incition area	clude dimensions (L x W x D) of the pit, and	dimensions (L x W), an		
Maps(s) of road, location, p provided). If water from the acreage, of the land applicat Photocopied section of invo	pit will be land applied, incition area	clude dimensions (L x W x D) of the pit, and	dimensions (L x W), an		
Maps(s) of road, location, p provided). If water from the acreage, of the land applicat Photocopied section of invo	pit will be land applied, incition area	clude dimensions (L x W x D) of the pit, and	dimensions (L x W), an		



Site Specific Safety and Environmental Plan

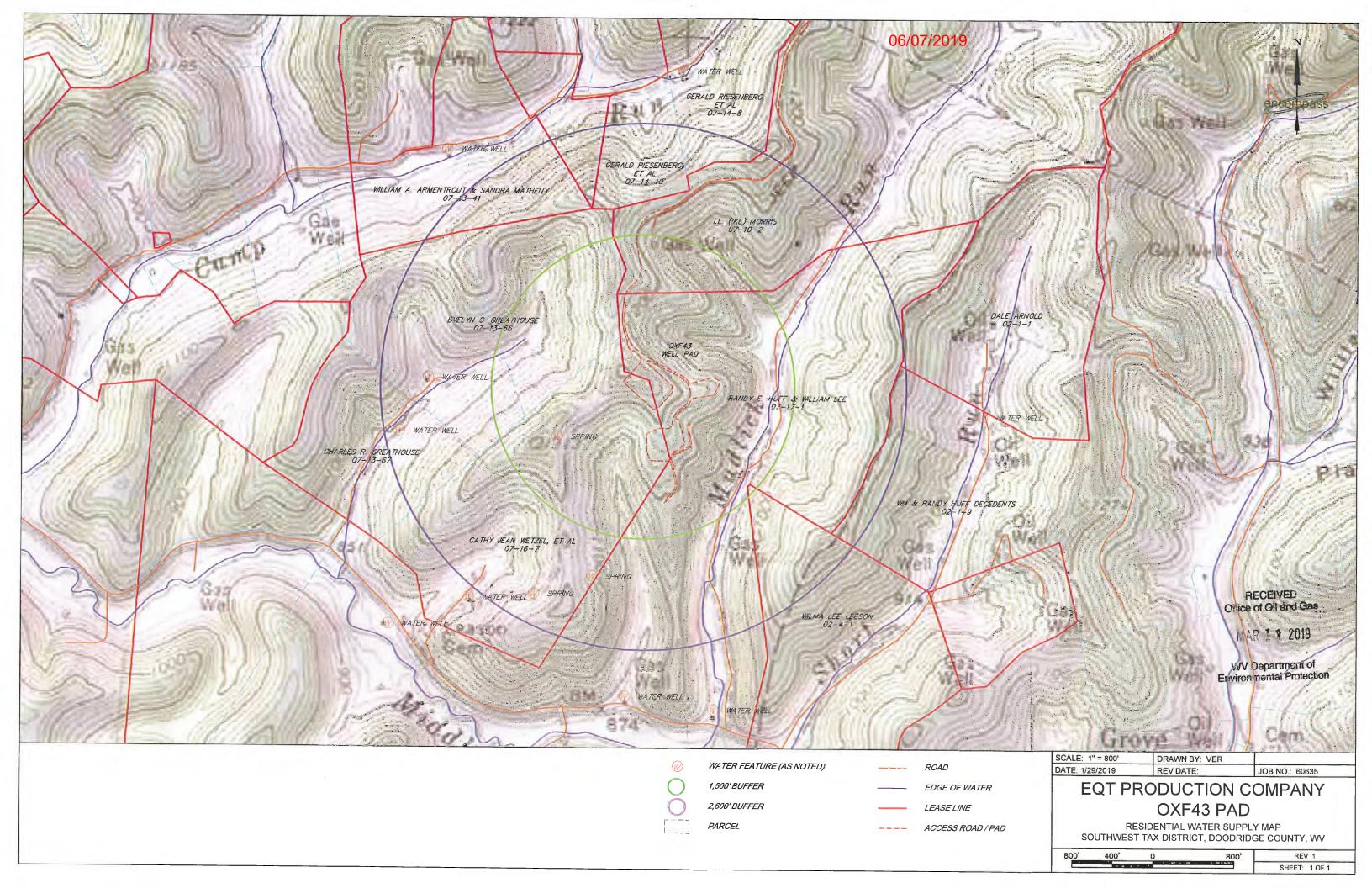
EQT
OXF43 Pad
West Union
Doddridge County, WV

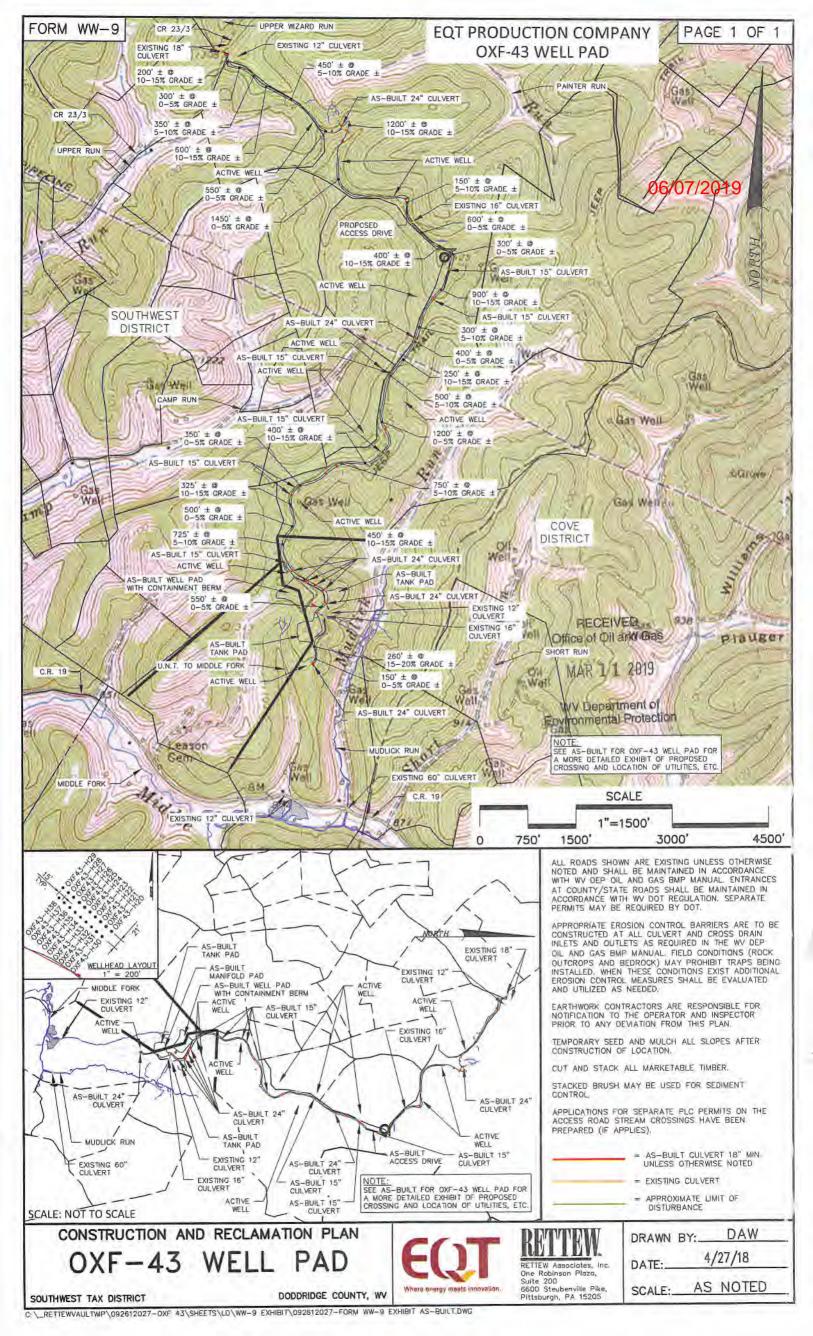
516238 516240 OXF43H34 CONF43H30) (OXF43H31)	For Wells: OxF43H35	
Date Prepared: February 21, 2018 EQT Production Lawman Femilian Title	WV Oil and Gas Inspector 5: 1 + Gas Inspector Title	Office of Oil and Gas MAR 1 5 2019 WW Department of Environmental Protection
<u>3/6/19</u> Date	Date	

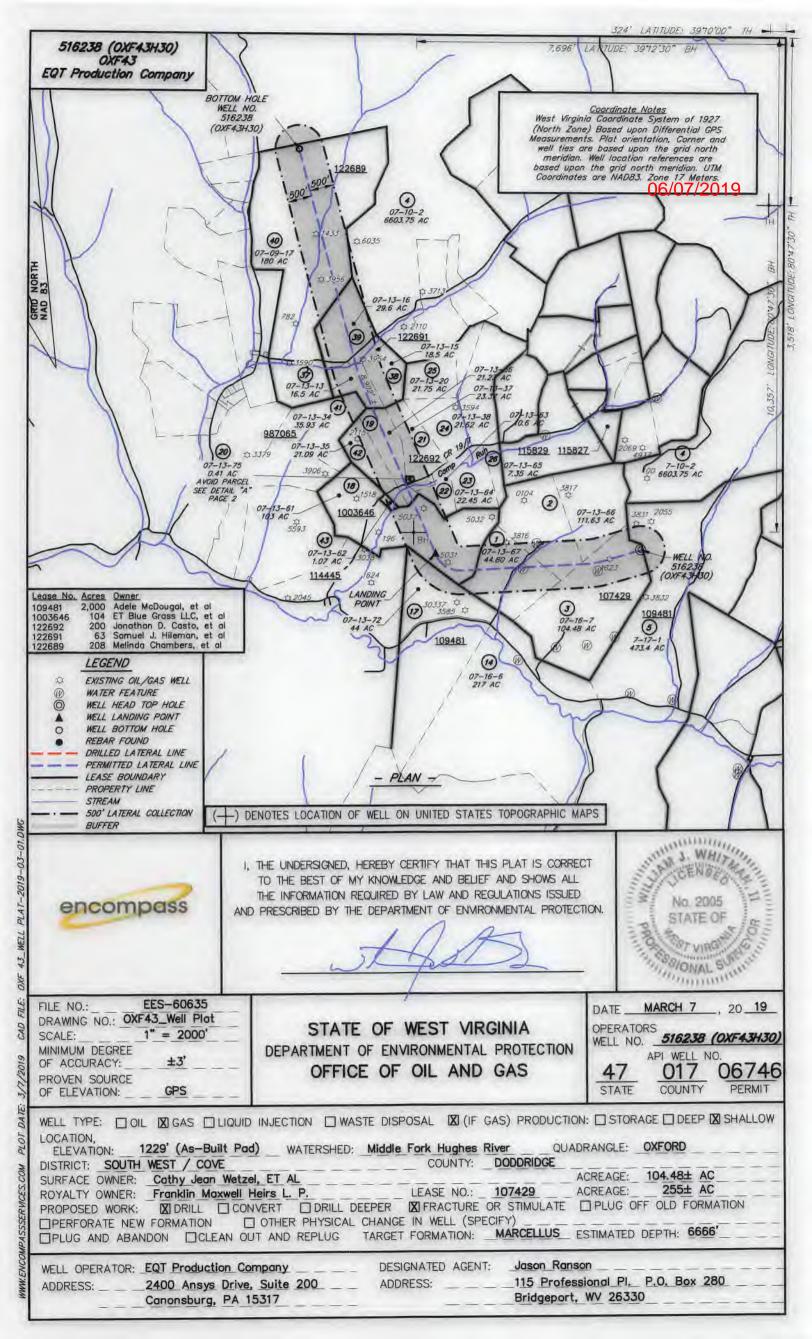
		EQT P	roduction Water Pla	n					
-		Offsite Dispo	sals for Unconvention	nal Wells					
acility Name	Address	Address 2	City	State	Zip	Phone	County	State	Permit Number
WS Trucking Inc.	P.O. Box 391		Williamstown	wv	26187	740-516-3586	Noble	ОН	3390
road Street Energy LLC	37 West Broad Street	Suite 1100	Columbus	ОН	43215	740-516-5381	Washingotn	ОН	8462
noud Street Energy CCC	3. West 5.000 5.000				1,4222			1	
AD Liquid Assets Disposal Inc.	226 Rankin Road		Washington	PA	15301	724-350-2760	Ohio	lwv	USEPA WV 0014
AD Elquid ASSES DISPOSAI IIIC.	220 1011111111000		- Committee	- 	1			 	
riad Energy	PO Box 430		Reno	ОН	45773	740-516-6021	Noble	ОН	4037
nad Litergy	10 862 436	 -	Titello	 	137.13	740-374-2940	1100.0	1	
					 	7 10 57 1 25 10			
ri County Waste Water Management, Inc.	1487 Toms Run Road		Holbrook	PA	15341	724-627-7178	Greene	PA	TC-1009
it county waste water wanagement, mc.	1487 TOMS NUM NOOU		HOIGICOK	 ^	13371	724-499-5647	Greene	 	10 2003
					+	724 455 5047			
ling Excavating Co. Advance Waste Services	101 River Park Drive		New Castle	PA	16101		Lawrence	PA	PAR000029132
mig excavating Co. Advance waste pervices	TOT MACI LAIN DUIAG		NEW Castle		10101		COMICING	<u> </u>	1 A1000023132
Varta Managament - Monday-fill Landfill	Rt. 2, Box 68 Dawson Drive	+	Bridgenort	- wv	16330	304-326-6027	Harrison	wv	SWF-1032-98
Vaste Management - Meadowfill Landfill	ING 2, BUX GO DAWSOII Drive		Bridgeport	1444	10330	304-320-0027	TIATTISUIT	1000	Approval #100785WV
						-		_	Approvar#100785WV
1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	5135 0 0 1		01	407	20104	204 420 0002	144	wv	CIME 1035 MR 0100400
Vaste Management - Northwestern Landfill	512 E. Dry Road		Parkersburg	wv	26104	304-428-0602	W000	1000	SWF-1025 WV-0109400
	 				42002	740 742 4200	1.66	 	00.00438
PEX Landfill	11 County Road 78	PO Box 57	Amsterdam	ОН	43903	740-543-4389	Jeπerson	ОН	06-08438
	1		20 01 11 11		1		<u> </u>	-	100440
Advanced Disposal - Chestnut Valley Landfill	1184 McClellandtown Road		McClellandtown	PA	15458	724-437-7336	Fayette	PA	100419
								I	
Westmoreland Sanitary Landfill	901 Tyrol Boulevard		Belle Vernon	PA	15012	724-929-7694	Westmoreland	PA	100277
								ļ	
Austin Master Services	801 North 1st Street		Martins Ferry	ОН	43935	740-609-3800	Belmont	ОН	2014-541
					ļ			ļ.,	
Belmont Solids Control	77505 Cadiz-New Athers Road		Cadiz	ОН	43907	740-942-1739	Harrison	ОН	2015-511
					ļ			ļ	
Diversified Resources	3111 Braun Rd.		Belpre	ОН	45714	740-401-0413	Washington	ОН	
					1	740-610-1512			34-031-27177
			Coshocton	ОН	43812	724-591-4393		ОН	34-031-27178
Buckeye Brine	23986 Airport Road					724-331-4333	Coshocton	<u> </u>	34-031-27241
Central Environmental Services	28333 West Belpre Pike		Coolville	ОН	45723	304-488-0701	Athens	ОН	
luverra - Nichols	10555 Veto Road		Belpre	ОН	45714	330-232-5041	Washington	ОН	34-119-2-8776
luverra - Goff	9350 East Pike Road		Norwich	ОН	43767	330-232-5041	Muskingum	он	34-167-2-3862
Nuverra - Wolf	5480 State Route 5		Newton Falls	ОН	44444	330-232-5041	Trumbull	ОН	34-155-2-1893
	uo	to tnemtraded toerore istnem							
Nuverra - Pander	5310 State Route 5	יייים ואוייים און	New Falls	ОН	44444	330-232-5041	Trumbull	ОН	34-155-2-3795
		Department D	W.					1	
Nuverra - AnnaRock D-1	3549 Warner Road	- 	Fowler	ОН	44418	330-232-5041	Trumbull	ОН	34-155-2-2403
		Ada			+	+		+	

FQ Helen	199 Bowersock Road	Reno	он	45773	740-374-2940 412-443-4397 740-236-2135	Washington	ОН	34-167-2-9577
FQ Dexter	38505 Marietta Rd.	Dexter City	ОН	45727	740-374-2940 412-443-4397 740-236-2135	Noble	ОН	34-121-24037 34-121-24086
FQ Ritchie	122 Lonesome Pine Rd	Ellenboro	wv	26346	740-374-2940 412-443-4397 740-236-2135	Ritchie	wv	47-085-09721
FQ Mills	53610 TS Rd 706	Portland	ОН	45770	740-374-2940 412-443-4397 740-236-2135	Meigs	ОН	34-105-2-3619 34-105-2-3652 34-105-2-3637 34-105-2-3651
Petta Enterprises - OH	745 North 3rd Street	Cambridge	ОН	43725	614-477-1368		ОН	Ohio Chiefs Order 25-019
Petta Enterprises - WV	38 Technology Dr.	Tridelphia	wv	26059	740-255-5727		wv	
Deep Rock Disposal	2341 OH-821	Marietta	ОН	45750	304-629-0176	Washington	ОН	34-167-2-9766

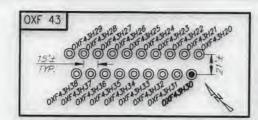
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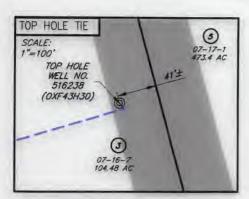


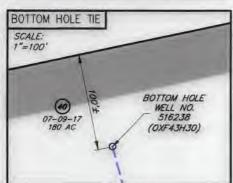




516238 (OXF43H30) OXF43 **EQT Production Company**







NO.	SURFACE OWNER
1	CHARLES R. GREATHOUSE
2	EVELYN G. GREATHOUSE
3	CATHY JEAN WETZEL, ET AL
18	EDRA LOUISE GRIMM
19	RANDALL L. GRIMM
37	CAROLYN S. GASTON, ET AL
39	CAROLYN S. GASTON, ET AL
40	JOAN H. CASSIDY TRUST

NO.	ADJACENT OWNER
4	I.L. (IKE) MORRIS
5	RANDY E. & WILLIAM LEE HUFF
17	DARLENE K. PRUNTY
20	ERNEST JONES, ET AL
21	RANDALL L. & KELLY GRIMM
22	RANDALL L. & KELLY GRIMM
38	SAMUEL D. GASTON
41	KATHRYN GOODWIN, ET AL
42	JERRI KATHRYN FOWLER
43	JERRI KATHRYN FOWLER

516238 (OXF43H30) Well Point Coordinates

Top Hole Coordinates

N: 241,902,39 LAT: 39.156922 NAD 27 S.P.C. (Ft.) E: 1,633,402.15 LONG: 80.792804 E: 517.916.8 E: 1,601.961.3 NAD 27 GEO NAD 83 UTM 17N (M) N 4,334,220.6 N 241,937.7 NAD 83 S.P.C. (Ft.)

Landing Point Coordinates

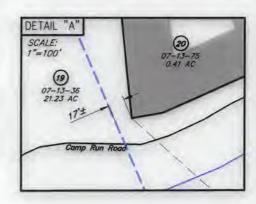
NAD 27 S.P.C. (Ft.) NAD 27 GEO NAD 83 UTM 17N (M) NAD 83 S.P.C. (Ft.) N: 241,833.79 LAT: 39.156564 E: 1,629,125.40 N 208/07/20193

Bottom Hole Coordinate

AD 27 S.P.C. (Ft.) NAD 27 GEO NAD 83 UTM 17N (M) NAD 83 S.P.C. (Ft.)

N: 250,233.96 LAT: 39.179509 N 4,336,722.4 N 250,269.1

E: 1,626,248.09 LONG: 80.818460 E: 515,695.0 E: 1,594,807.2

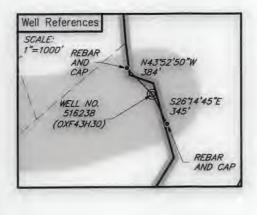


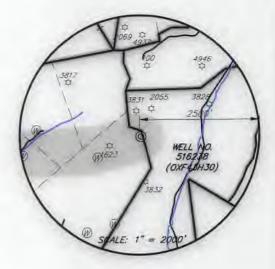


EXISTING OIL/GAS WELL WATER FEATURE WELL HEAD TOP HOLE WELL LANDING POINT WELL BOTTOM HOLE REBAR FOUND

DRILLED LATERAL LINE PERMITTED LATERAL LINE LEASE BOUNDARY PROPERTY LINE

STREAM 500' LATERAL COLLECTION BUFFER







I, THE UNDERSIGNED, HEREBY CERTIFY THAT THIS PLAT IS CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF AND SHOWS ALL THE INFORMATION REQUIRED BY LAW AND REGULATIONS ISSUED AND PRESCRIBED BY THE DEPARTMENT OF ENVIRONMENTAL PROTECTION.



EES-60635 FILE NO .: DRAWING NO .: OXF43_Well Plat 1" = 2000 SCALE: MINIMUM DEGREE OF ACCURACY: ±3' PROVEN SOURCE

OF ELEVATION:

STATE OF WEST VIRGINIA DEPARTMENT OF ENVIRONMENTAL PROTECTION OFFICE OF OIL AND GAS

MARCH 7 , 20 19 DATE _ **OPERATORS** 516238 (OXF43H30) API WELL NO.

STATE

017 06746 COUNTY PERMIT

WELL TYPE: OIL IS GAS LIQUID INJECTION WASTE DISPOSAL IN (IF GAS) PRODUCTION: STORAGE DEEP IN SHALLOW LOCATION. 1229' (As-Built Pad) WATERSHED: Middle Fork Hughes River QUADRANGLE: OXFORD ELEVATION:

DISTRICT: SOUTH WEST / COVE SURFACE OWNER: Cathy Jean Wetzel, ET AL
ROYALTY OWNER: Franklin Maxwell Heirs L. P.

GPS

ACREAGE: 104.48± AC

COUNTY: DODDRIDGE

ROYALTY DWNER: Franklin Maxwell Heirs L. P. LEASE NO.: 107429 ACREAGE: 255± AC

PROPOSED WORK: DRILL CONVERT DRILL DEEPER FRACTURE OR STIMULATE PLUG OFF OLD FORMATION

DPERFORATE NEW FORMATION DOTHER PHYSICAL CHANGE IN WELL (SPECIFY) □PLUG AND ABANDON □CLEAN OUT AND REPLUG TARGET FORMATION: MARCELLUS ESTIMATED DEPTH: 6666

WELL OPERATOR: EQT Production Company 2400 Ansys Drive, Suite 200

Canonsburg, PA 15317

DESIGNATED AGENT: ADDRESS:

Jason Ranson 115 Professional Pl. P.O. Box 280 Bridgeport, WV 26330

PLAT-2019-03-01.DWC

OXF

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Operator's Well No. 516238 (OXF43)

WW-6A1 (5/13)

WV Department of Environmental Protection

INFORMATION SUPPLIED UNDER WEST VIRGINIA CODE Chapter 22, Article 6A, Section 5(a)(5) IN LIEU OF FILING LEASE(S) AND OTHER CONTINUING CONTRACT(S)

Under the oath required to make the verification on page 1 of this Notice and Application, I depose and say that I am the person who signed the Notice and Application for the Applicant, and that –

- (1) the tract of land is the same tract described in this Application, partly or wholly depicted in the accompanying plat, and described in the Construction and Reclamation Plan;
- (2) the parties and recordation data (if recorded) for lease(s) or other continuing contract(s) by which the Applicant claims the right to extract, produce or market the oil or gas are as follows:

Lease Name or				
Number	Grantor, Lessor, etc.	Grantee, Lessee, etc.	Royalty	Book/Page

See Attached

Acknowledgement of Possible Permitting/Approval In Addition to the Office of Oil and Gas

The permit applicant for the proposed well work addressed in this application hereby acknowledges the possibility of the need for permits and/or approvals from local, state, or federal entities in addition to the DEP, Office of Oil and Gas, including but not limited to the following:

- WV Division of Water and Waste Management
- WV Division of Natural Resources WV Division of Highways
- U.S. Army Corps of Engineers
- U.S. Fish and Wildlife Service
- County Floodplain Coordinator

The applicant further acknowledges that any Office of Oil and Gas permit in no way overrides, replaces, or nullifies the need for other permits/approvals that may be necessary and further affirms that all needed permits/approvals should be acquired from the appropriate authority before the affected activity is initiated.

Well Operator:	EQT Production Company	
By:	John Zavatchan	
Its:	Landman - Permitting	

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Lease No.	Grantor, Lessor, etc.	Grantee, Lessee, etc.	-		Royalty	Book/Page
107429	Franklin Maxwell Heirs L.P. (current royalty owner)				**	
	W. Brent Maxwell, et al (original lessor)	Fisher Oil Co.				LB23/337
	Fisher Oil Co.	The Philadelphia Company of We	st Virginia			LB32/120
	The Philadelphia Company of West Virginia	Pittsburgh & West Virginia Gas Co	-			DB87/90
	Pittsburgh & West Virginia Gas Co.	Equitable Gas Company				DB121/303
	Equitable Gas Company	Equitrans, Inc.				LB154/475
	Equitrans, Inc.	Equitrans, L.P.				DB329/645
	Equitrans, L.P.	Equitable Production-Eastern Sta	tes, Inc.			LB 192/19
	Equitable Production-Eastern States, Inc.	Equitable Production Company				CB281/346
	Equitable Production Company	EQT Production Company				CB281/346
109481	Adele McDougal et al (currenty royalty owner)				**	
	Jackson Leeson, et al (original lessor)	The Philadelphia Co. of West Virg	jinia			LB21/76
	The Philadelphia Co. of West Virginia	Pittsburgh & West Virginia Gas C	0.			DB87/90
	Pittsburgh & West Virginia Gas Co.	Equitable Gas Company				DB121/303
	Equitable Gas Company	Equitrans, Inc.				LB154/475
	Equitrans, Inc.	Equitrans, L.P.				DB329/645
	Equitrans, L.P.	Equitable Production-Eastern Sta	tes, Inc.			LB 192/19
	Equitable Production-Eastern States, Inc.	Equitable Production Company				CB281/346
	Equitable Production Company	EQT Production Company				CB281/346
<u>1003646</u>	ET Blue Grass LLC, et al (current royalty owner)				**	
	Cyril Scott, et ux, et al (original lessor)	Hugh Spencer	Ē		0	LB91/637
	Hugh Spencer	J & J Enterprises	<u>≨</u> .≶	≾	Ħ _	LB111/390
	J & J Enterprises	Eastern American Energy Corp.	nme De	MAR 1	RECEIVED	LB211/137
	Eastern American Energy Corp.	Energy Corporation of America	pan	اسط السط	5点	LB240/498
	Energy Corporation of America	Antero Resources Corp.	i Pr	~	And	LB272/339
	Antero Resources Corp.	EQT Production Company	WV Department of Environmental Protecti	2019	Gas	DB371/448

122692	Jonathan D. Casto, et al (current royalty owner)		**	
	R. J. Gaston, et al (original lessor)	Carter Oil Co.		LB36/362
	Carter Oil Co.	Hope Natural Gas Co.		LB42/410
	Hope Natural Gas Co.	Pittsburgh & WV Gas Co.		LB53/82
	Pittsburgh & WV Gas Co.	Equitable Gas Co.		DB121/303
	Equitable Gas Co.	Equitrans, Inc.		LB154/475
	Equitrans, Inc.	Equitable Production-Eastern States, Inc.		LB192/19
	Equitable Production-Eastern States, Inc.	Equitable Production Company		CB281/346
	Equitable Production Company	EQT Production Company		CB281/346
122691	Samuel J. Hileman, et al (current royalty owner)		**	
	John M. Gaston. et ux (original lessor)	J. C. Trainer		LB31/311
	J. C. Trainer	Carter Oil Co.		LB37/389
	Carter Oil Co.	Hope Natural Gas Co.		LB42/410
	Hope Natural Gas Co.	Equitable Gas Company		LB157/389
	Equitable Gas Company	Equitrans, Inc.		LB154/475
	Equitrans, Inc.	EQT Production Company		LB486/87
122689	Melinda Chambers, et al (current royalty owner)		**	
	M.L. Haught, et ux (original lessor)	Hope Natural Gas Company		LB35/10
	Hope Natural Gas Company	Equitable Gas Company		LB157/349
	Equitable Gas Company	Equitrans, Inc.		DB154/475
	Equitrans, Inc.	Equitable Production-Eastern States, Inc.		LB192/19
	Equitable Production-Eastern States, Inc.	Equitable Production Company		CB281/346
	Equitable Production Company	EQT Production Company		CB281/346

JUN 0 5 2019

WV Department of Environmental Protection

^{**} Per West Virginia Code Section 22-6-8.

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Gas



January 30, 2019

Equitrans Midstream Corporation C/O Equitrans, L.P. 2200 Energy Drive Canonsburg, PA 15317

Permission to Permit Wells Through Tax Map Parcels 07-13-13; 07-13-15; 07-13-16 known as lease number 122691 Oxford Quad, Doddridge County, West Virginia

EQT Production Company ("EQT") hereby requests Equitrans, L.P.'s ("Equitrans") permission to proceed with its plans to permit the horizontal wells known as the OXF43 in Oxford Ouad, Doddridge County, West Virginia, EOT will not drill said horizontal wells through Equitrans' leasehold until EOT and Equitrans enter into an Agreement which will grant EQT the necessary rights to drill the wells through the subject Leasehold.

The "Leasehold" insofar as this letter is concerned is collectively defined as:

(1) The property covered by that certain oil and gas lease, recorded in the Office of the Recorder of Deeds in Doddridge County, West Virginia, in Book 329 at Page 645.

Nothing in this letter agreement will diminish any current or future rights of EQT in the Leasehold or other properties. Nothing in this filing should be construed as a waiver of any of Equitrans' rights, remedies, arguments or defenses and, in fact, Equitrans hereby reserves all of its rights, remedies, arguments, and defenses regarding this matter.

If the above meets with your agreement, please execute in the space provided below and return the signed letter to EOT Production, Attention Eric Mejia, 2400 Ansys Drive, Suite 200, Canonsburg, PA 15317. Should you have any questions, please contact Eric Mejia at 724-746-9367 or by email at emejia@eqt.com.

Sincerely,

EQT Production Company

Name: Eric Mejia, Regional Land Manager

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MAR 1 1 2019

Agreed to and accepted this 30th day of January, 2019.

Equitrans, L.P.

By:

Name: R. Cordell Pierce

Title: Attorney in Fact

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Office of Oil and Gas

MAR 1 1 2019



06/07/2019

EQT Production Company 2400 Ansys Drive, Suite 200 Canonsburg, PA 15317 www.eqt.com

John Zavatchan Landman - Permitting 0:724-746-9073 izavatchan@eqt.com

March 6, 2019

Mr. Taylor Brewer West Virginia Department of Environmental Protection Office of Oil and Gas 601 57th Street SE Charleston, WV 25304

Re: 516238 (OXF43H30) Gas Well Southwest District, Doddridge County

Dear Mr. Brewer,

EQT Production Company is applying for a new well work permit for the well referenced above. Upon information and belief, the Operator's lease and/ or other real property rights permit it to conduct drilling operations for the subject well in the location shown on the plat, including under any public roads that the well lateral crosses.

Sincerely,

John Zavatchan

Landman - Permitting

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Office of Oil and Gas

MAR 1 1 2019

STATE OF WEST VIRGINIA DEPARTMENT OF ENVIRONMENTAL PROTECTION, OFFICE OF OIL AND GAS NOTICE CERTIFICATION

Date of Notic	ce Certification: 03/08/2019		API No. 47	7_ 017 _06	746
		•	Operator's	Well No. 5162	38 (OXF43H30)
				Name: OXF43	
Notice has l	oeen given:				
Pursuant to th	e provisions in West Virginia Code	§ 22-6A, the Operator has prov	ided the rec	uired parties v	with the Notice Forms listed
delow for the	tract of land as follows:			•	
State:	West Virginia		Easting:	517,916.8	
County:	Doddridge	<u> </u>	Northing:	4,334,220.6	
District:	South West/Cove	Public Road Acce		Rt. 20	
Quadrangle:	Oxford	Generally used far	rm name:	Cathy Jean Wetz	ei, et. ai.
Watershed:	Middle Fork Hughes River				
of giving the requirements Virginia Code of this article	equired by subsections (b) and (c), se surface owner notice of entry to su of subsection (b), section sixteen of § 22-6A-11(b), the applicant shall thave been completed by the applican	rvey pursuant to subsection (a f this article were waived in vender proof of and certify to that.	a), section to writing by e secretary	en of this arti the surface ov that the notice	cle six-a; or (iii) the notice vner; and Pursuant to West
that the Open	West Virginia Code § 22-6A, the Oprator has properly served the required	erator has attached proof to the distance of t	is Notice C	ertification	
*PLEASE CHE	CK ALL THAT APPLY				OOG OFFICE USE ONLY
☐ 1. NOT	TICE OF SEISMIC ACTIVITY or	■ NOTICE NOT REQUIRE SEISMIC ACTIVITY WAS			RECEIVED/ NOT REQUIRED
☐ 2. NOT	TICE OF ENTRY FOR PLAT SURV	EY or 🔳 NO PLAT SURVE	Y WAS CO	ONDUCTED	RECEIVED
■ 3. NOT	TICE OF INTENT TO DRILL or	NOTICE NOT REQUIRED NOTICE OF ENTRY FOR PARTY OF			REGEIVED/ NOT REQUIRED
		☐ WRITTEN WAIVER B (PLEASE ATTACH)	Y SURFAC	CE OWNER	
4. NOT	TICE OF PLANNED OPERATION				E RECEIVED.
■ 5. PUB	LIC NOTICE				RECEIVED

Required Attachments:

■ 6. NOTICE OF APPLICATION

The Operator shall attach to this Notice Certification Form all Notice Forms and Certifications of Notice that have been provided to the required parties and/or any associated written waivers. For the Public Notice, the operator shall attach a copy of the Class II Legal Advertisement with publication date verification or the associated Affidavit of Publication. The attached Notice Forms and Certifications of Notice shall serve as proof that the required parties have been noticed as required under West Virginia Code § 22-6A. Pursuant to West Virginia Code § 22-6A-11(b), the Certification of Notice to the person may be made by affidavit of person Gas the return receipt card or other postal receipt for certified mailing.

MAR 1 1 2019

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Certification of Notice is hereby given:

THEREFORE, I John Zavatchan , have read and understand the notice requirements within West Virginia Code § 22-6A. I certify that as required under West Virginia Code § 22-6A, I have served the attached copies of the Notice Forms, identified above, to the required parties through personal service, by registered mail or by any method of delivery that requires a receipt or signature confirmation. I certify under penalty of law that I have personally examined and am familiar with the information submitted in this Notice Certification and all attachments, and that based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

Well Operator: EQT Production Company

NOTARY PUBLIC

AMY L TODD

By: John Zavatchan

Its: Landman - Permitting

Telephone: 724-746-9073

Address: 2400 Ansys Drive, Suite 200

Canonsburg, PA 15317

Facsimile: 724-745-2418

Email: jzavatchan@eqt.com

Subscribed and sworn before me this

day of March, 2019.

Notary Public

My Commission Expires 8/21/2022

Oil and Gas Privacy Notice:

The Office of Oil and Gas processes your personal information, such as name, address and telephone number, as part of our regulatory duties. Your personal information may be disclosed to other State agencies or third parties in the normal course of business or as needed to comply with statutory or regulatory requirements, including Freedom of Information Act requests. Our office will appropriately secure your personal information. If you have any questions about our use or your personal information, please contact DEP's Chief Privacy Officer at deepprivacyofficer@wv.gov.

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MAR 1 1 2019

WW-6A (9-13)

API NO. 47-017 - 06746

OPERATOR WELL NO. 06/6287 (05/405) 9

Well Pad Name: 0XF43

STATE OF WEST VIRGINIA DEPARTMENT OF ENVIRONMENTAL PROTECTION, OFFICE OF OIL AND GAS NOTICE OF APPLICATION

Notice Time Requirement: notice shall be provided no later that	n the filing date of permit application.
Date of Notice: 03/08/2019 Date Permit Application Filed: 03/08 Notice of:	3/2019
PERMIT FOR ANY WELL WORK CONSTRUCTION OF A	ROVAL FOR THE AN IMPOUNDMENT OR PIT
Delivery method pursuant to West Virginia Code § 22-6A-10	(b)
	OD OF DELIVERY THAT REQUIRES A PT OR SIGNATURE CONFIRMATION
ediment control plan required by section seven of this article, and the surface of the tract on which the well is or is proposed to be located and gas leasehold being developed by the proposed well work, it described in the erosion and sediment control plan submitted pursual perator or lessee, in the event the tract of land on which the well proposed seams; (4) The owners of record of the surface tract or travell work, if the surface tract is to be used for the placement, constructed work, if the surface tract is to be used for the placement, constructed a water well, spring or water supply source located within one provide water for consumption by humans or domestic animals; and proposed well work activity is to take place. (c)(1) If more than three subsection (b) of this section hold interests in the lands, the applicant ecords of the sheriff required to be maintained pursuant to section of this article to the contrary, notice to a lien holder is not Code R. § 35-8-5.7.a requires, in part, that the operator shall also powater purveyor or surface owner subject to notice and water testing	or signature confirmation, copies of the application, the erosion and the well plat to each of the following persons: (1) The owners of record of ated; (2) The owners of record of the surface tract or tracts overlying the of the surface tract is to be used for roads or other land disturbance as and to subsection (c), section seven of this article; (3) The coal owner, roposed to be drilled is located [sic] is known to be underlain by one or acts overlying the oil and gas leasehold being developed by the proposed function, enlargement, alteration, repair, removal or abandonment of any any surface owner or water purveyor who is known to the applicant to thousand five hundred feet of the center of the well pad which is used to defend the operator of any natural gas storage field within which the etenants in common or other co-owners of interests described in the neight, article one, chapter eleven-a of this code. (2) Notwithstanding any notice to a landowner, unless the lien holder is the landowner. W. Va. rovide the Well Site Safety Plan ("WSSP") to the surface owner and any as provided in section 15 of this rule.
☑ Application Notice ☑ WSSP Notice ☑ E&S Plan Notice	☑ Well Plat Notice is hereby provided to: ☑ COAL OWNER OR LESSEE
] SURFACE OWNER(s) Name: See Attached	Name: See Attached
Address:	Address:
Name:Address:	COAL OPERATOR Name: Address:
SURFACE OWNER(s) (Road and/or Other Disturbance)	
Name: See Attached	SURFACE OWNER OF WATER WELL
Address:	AND/OR WATER PURVEYOR(s)
	Name: See Attached
Name:	Address:
Address:	OPERATOR OF ANY NATURAL GAS STORAGE FIELD
SURFACE OWNER(s) (Impoundments or Pits)	Name:
Name: See Attached	Address: RECEIVED Office of Oil and Gas
Address:	*Please attach additional forms if necessary
	MAR 1 1 2019

WW-6A (8-13)

RECEIVED Office of Oil and Gas

MAR 1 1 2019

API NO. 47- 017 OPERATOR WELL N Well Pad Name: OXF43

Notice is hereby given:

Notice is hereby given:

WV Department of
Pursuant to West Virginia Code § 22-6A-10(b), notice is hereby given that the undersigned well operator has applied for a permit for well work or for a certificate of approval for the construction of an impoundment or pit.

This Notice Shall Include:

Pursuant to W. Va. Code § 22-6A-10(b), this notice shall include: (1) copies of the application; (2) the erosion and sediment control plan required by section seven of this article; and (3) the well plat.

Pursuant to W. Va. Code § 22-6A-10(f), this notice shall include: (1) a statement of the time limits for filing written comments; (2) who may file written comments; (3) the name and address of the secretary for the purpose of filing the comments and obtaining additional information; and (4) a statement that the persons may request, at the time of submitting written comments, notice of the permit decision and a list of persons qualified to test water.

Pursuant to W. Va. Code R. § 35-8-5.7.a, the operator shall provide the Well Site Safety Plan to the surface owner and any water purveyor or surface owner subject to notice and water testing as provided in section 15 of this rule.

Pursuant to W. Va. Code R. § 35-8-15.2.c, this notice shall: (1) contain a statement of the surface owner's and water purveyor's right to request sampling and analysis; (2) advise the surface owner and water purveyor of the rebuttable presumption for contamination or deprivation of a fresh water source or supply; advise the surface owner and water purveyor that refusal to allow the operator to conduct a pre-drilling water well test constitutes a method to rebut the presumption of liability; (3) advise the surface owner and water purveyor of his or her independent right to sample and analyze any water supply at his or her own expense; advise the surface owner and water purveyor whether or not the operator will utilize an independent laboratory to analyze any sample; and (4) advise the surface owner and or water purveyor that he or she can obtain from the Chief a list of water testing laboratories in the subject area capable of and qualified to test water supplies in accordance with standard acceptable methods.

Additional information related to horizontal drilling may be obtained from the Secretary, at the WV Department of Environmental Protection headquarters, located at 601 57th Street, SE, Charleston, WV 25304 (304-926-0450) or by visiting www.dep.wv.gov/oiland-gas/pages/default.aspx.

Well Location Restrictions

Pursuant to W. Va. Code § 22-6A-12, Wells may not be drilled within two hundred fifty feet measured horizontally from any existing water well or developed spring used for human or domestic animal consumption. The center of well pads may not be located within six hundred twenty-five feet of an occupied dwelling structure, or a building two thousand five hundred square feet or larger used to house or shelter dairy cattle or poultry husbandry. This limitation is applicable to those wells, developed springs, dwellings or agricultural buildings that existed on the date a notice to the surface owner of planned entry for surveying or staking as provided in section ten of this article or a notice of intent to drill a horizontal well as provided in subsection (b), section sixteen of this article was provided, whichever occurs first, and to any dwelling under construction prior to that date. This limitation may be waived by written consent of the surface owner transmitted to the department and recorded in the real property records maintained by the clerk of the county commission for the county in which such property is located. Furthermore, the well operator may be granted a variance by the secretary from these distance restrictions upon submission of a plan which identifies the sufficient measures, facilities or practices to be employed during well site construction, drilling and operations. The variance, if granted, shall include terms and conditions the department requires to ensure the safety and protection of affected persons and property. The terms and conditions may include insurance, bonding and indemnification, as well as technical requirements. (b) No well pad may be prepared or well drilled within one hundred feet measured horizontally from any perennial stream, natural or artificial lake, pond or reservoir, or a wetland, or within three hundred feet of a naturally reproducing trout stream. No well pad may be located within one thousand feet of a surface or ground water intake of a public water supply. The distance from the public water supply as identified by the department shall be measured as follows: (1) For a surface water intake on a lake or reservoir, the distance shall be measured from the boundary of the lake or reservoir. (2) For a surface water intake on a flowing stream, the distance shall be measured from a semicircular radius extending upstream of the surface water intake. (3) For a groundwater source, the distance shall be measured from the wellhead or spring. The department may, in its discretion, waive these distance restrictions upon submission of a plan identifying sufficient measures, facilities or practices to be employed during well site construction, drilling and operations to protect the waters of the state. A waiver, if granted, shall impose any permit conditions as the secretary considers necessary. (c) Notwithstanding the foregoing provisions of this section, nothing contained in this section prevents an operator from conducting the activities permitted or authorized by a Clean Water Act Section 404 permit or other approval from the United States Army Corps of Engineers within any waters of the state or within the restricted areas referenced in this section. (d) The well location restrictions set forth in this section shall not apply to any well on a multiple well pad if at least one of the wells was permitted prior to the effective date of this article. (e) The secretary shall, by December 31, 2012, report to the Legislature on the noise, light, dust and volatile organic compounds generated by the drilling of horizontal wells as they relate to the well location restrictions regarding occupied dwelling structures pursuant to this section. Upon a finding, if any, by the secretary that the well location restrictions regarding occupied dwelling structures are inadequate or otherwise require alteration to address the items

API NO. 47-017 -06746 OPERATOR WELL NO. 610236 (5X-43) 9

Well Pad Name: OXF43

examined in the study required by this subsection, the secretary shall have the authority to propose for promulgation legislative rules establishing guidelines and procedures regarding reasonable levels of noise, light, dust and volatile organic compounds relating to drilling horizontal wells, including reasonable means of mitigating such factors, if necessary.

Water Well Testing:

Pursuant to West Virginia Code § 22-6A-10(d), notification shall be made, with respect to surface landowners identified in subsection (b) or water purveyors identified in subdivision (5), subsection (b) of this section, of the opportunity for testing their water well. The operator shall provide an analysis to such surface landowner or water purveyor at their request.

Water Testing Laboratories:

Pursuant to West Virginia Code § 22-6A-10(i), persons entitled to notice pursuant to subsection (b) of this section may contact the department to ascertain the names and locations of water testing laboratories in the subject area capable and qualified to test water supplies in accordance with standard accepted methods. In compiling that list of names the department shall consult with the state Bureau for Public Health and local health departments. A surface owner and water purveyor has an independent right to sample and analyze any water supply at his or her own expense. The laboratory utilized by the operator shall be approved by the agency as being certified and capable of performing sample analyses in accordance with this section.

Rebuttable Presumption for Contamination or Deprivation of a Fresh Water Source or Supply:

W. Va. Code § 22-6A-18 requires that (b) unless rebutted by one of the defenses established in subsection (c) of this section, in any action for contamination or deprivation of a fresh water source or supply within one thousand five hundred feet of the center of the well pad for horizontal well, there is a rebuttable presumption that the drilling and the oil or gas well or either was the proximate cause of the contamination or deprivation of the fresh water source or supply. (c) In order to rebut the presumption of liability established in subsection (b) of this section, the operator must prove by a preponderance of the evidence one of the following defenses: (1) The pollution existed prior to the drilling or alteration activity as determined by a predrilling or prealteration water well test. (2) The landowner or water purveyor refused to allow the operator access to the property to conduct a predrilling or prealteration water well test. (3) The water supply is not within one thousand five hundred feet of the well. (4) The pollution occurred more than six months after completion of drilling or alteration activities. (5) The pollution occurred as the result of some cause other than the drilling or alteration activity. (d) Any operator electing to preserve its defenses under subdivision (1), subsection (c) of this section shall retain the services of an independent certified laboratory to conduct the predrilling or prealteration water well test. A copy of the results of the test shall be submitted to the department and the surface owner or water purveyor in a manner prescribed by the secretary. (e) Any operator shall replace the water supply of an owner of interest in real property who obtains all or part of that owner's supply of water for domestic, agricultural, industrial or other legitimate use from an underground or surface source with a comparable water supply where the secretary determines that the water supply has been affected by contamination, diminution or interruption proximately caused by the oil or gas operation, unless waived in writing by that owner. (f) The secretary may order the operator conducting the oil or gas operation to: (1) Provide an emergency drinking water supply within twenty-four hours; (2) Provide temporary water supply within seventy-two hours; (3) Within thirty days begin activities to establish a permanent water supply or submit a proposal to the secretary outlining the measures and timetables to be used in establishing a permanent supply. The total time in providing a permanent water supply may not exceed two years. If the operator demonstrates that providing a permanent replacement water supply cannot be completed within two years, the secretary may extend the time frame on case-by-case basis; and (4) Pay all reasonable costs incurred by the real property owner in securing a water supply. (g) A person as described in subsection (b) of this section aggrieved under the provisions of subsections (b), (e) or (f) of this section may seek relief in court... (i) Notwithstanding the denial of the operator of responsibility for the damage to the real property owner's water supply or the status of any appeal on determination of liability for the damage to the real property owner's water supply, the operator may not discontinue providing the required water service until authorized to do so by the secretary or a court of competent jurisdiction.

Written Comment:

Pursuant to West Virginia Code § 22-6A-11(a), all persons described in subsection (b), section ten of this article may file written comments with the secretary as to the location or construction of the applicant's proposed well work within thirty days after the application is filed with the secretary. All persons described in West Virginia Code § 22-6A-10(b) may file writter as to the location or construction of the applicant's proposed well work to the Secretary at:

Chief, Office of Oil and Gas
Department of Environmental Protection
601 57th St. SE
Charleston, WV 25304
(304) 926-0450

MAR 1 1 2019

WV Department of Environmental Protection

Such persons may request, at the time of submitting written comments, notice of the permit decision and a list of persons qualified to test water. NOTE: YOU ARE NOT REQUIRED TO FILE ANY COMMENT.

Time Limits and Methods for Filing Comments.

The law requires these materials to be served on or before the date the operator files its Application. You have THIRTY (30) DAYS after the filing date to file your comments. Comments must be filed in person or received in the mail by the Chief's office by the time stated above. You may call the Chief's office to be sure of the date. Check with your postmaster to ensure adequate delivery time or to arrange special expedited handling. If you have been contacted by the well operator and you have signed a "voluntary statement of no objection" to the planned work described in these materials, then the permit may be issued at any time.

Pursuant to West Virginia Code § 22-6A-11(c)(2), Any objections of the affected coal operators and coal seam owners and lessees shall be addressed through the processes and procedures that exist under sections fifteen, seventeen and forty, article six of this chapter, as applicable and as incorporated into this article by section five of this article. The written comments filed by the parties entitled to notice under subdivisions (1), (2), (4), (5) and (6), subsection (b), section ten of this article shall be considered by the secretary in the permit issuance process, but the parties are not entitled to participate in the processes and proceedings that exist under sections fifteen, seventeen or forty, article six of this chapter, as applicable and as incorporated into this article by section five of this article.

Comment Requirements

Your comments must be in writing and include your name, address and telephone number, the well operator's name and well number and the approximate location of the proposed well site including district and county from the application. You may add other documents, such as sketches, maps or photographs to support your comments.

Disclaimer: All comments received will be placed on our web site http://www.dep.wv.gov/oil-and-gas/Horizontal-Permits/Pages/default.aspx and the applicant will automatically be forwarded an email notice that such comments have been submitted. The applicant will be expected to provide a response to comments submitted by any surface owner, water purveyor or natural gas storage operator noticed within the application.

Permit Denial or Condition

The Chief has the power to deny or condition a well work permit. Pursuant to West Virginia Code § 22-6A-8(d), the permit may not be issued or be conditioned, including conditions with respect to the location of the well and access roads prior to issuance if the director determines that:

- (1) The proposed well work will constitute a hazard to the safety of persons;
- (2) The plan for soil erosion and sediment control is not adequate or effective;
- (3) Damage would occur to publicly owned lands or resources; or
- (4) The proposed well work fails to protect fresh water sources or supplies.

A permit may also be denied under West Virginia Code § 22-6A-7(k), the secretary shall deny the issuance of a permit if the secretary determines that the applicant has committed a substantial violation of a previously issued permit for a horizontal well, including the applicable erosion and sediment control plan associated with the previously issued permit, or a substantial violation of one or more of the rules promulgated under this article, and in each instance has failed to abate or seek review of the violation within the time prescribed by the secretary pursuant to the provisions of subdivisions (1) and (2), subsection (a), section five of this article and the rules promulgated hereunder, which time may not be unreasonable.

Pursuant to West Virginia Code § 22-6A-10(g), any person entitled to submit written comments to the secretary pursuant to subsection (a), section eleven of this article, shall also be entitled to receive from the secretary a copy of the permit as issued or a copy of the order modifying or denying the permit if the person requests receipt of them as a part of the written comments submitted concerning the permit application. Such persons may request, at the time of submitting written comments, notice of the permit decision and a list of persons qualified to test water.

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MAR I 1 2019

API NO. 47-017 - 06746 - 07/2019
OPERATOR WELL NO. 047-0238 (247-13)
Well Pad Name: 0XF43

Notice is hereby given by:

Well Operator: EQT Production Company

Telephone: 724-746-9073 Email: jzavatchan@eqt.com Address: 2400 Ansys Drive, Suite 200

Canonsburg, PA 15317

Facsimile: 724-745-2418

Oil and Gas Privacy Notice:

The Office of Oil and Gas processes your personal information, such as name, address and telephone number, as part of our regulatory duties. Your personal information may be disclosed to other State agencies or third parties in the normal course of business or as needed to comply with statutory or regulatory requirements, including Freedom of Information Act requests. Our office will appropriately secure your personal information. If you have any questions about our use or your personal information, please contact DEP's Chief Privacy Officer at depprivacyofficer@wv.gov.

OFFICIAL SEAL
NOTARY PUBLIC
STATE OF WEST VIRGINIA
AMY L TODD
EQT PRODUCTION COMPANY
115 PROFESSIONAL PLACE
BRIDGEPORT, WY 26330
My Commission Expires August 21, 2022

Subscribed and sworn before me this 8 day of March 2019

Notary Public

My Commission Expires

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Surface Owners:

CATHY JEAN WETZEL, ET AL 322 ZACKS RUN ROAD MOUNT CLARE ,WV 26408

RANDY E. HUFF DECEDENT'S TRUST B 826 ORANGE AVENUE CORONADO , CA 92118

WILLIAM LEE HUFF 826 ORANGE AVENUE CORONADO, CA 92118

Surface Owners (road, AST, or other disturbance):

CATHY JEAN WETZEL, ET AL 322 ZACKS RUN ROAD MOUNT CLARE ,WV 26408

RANDY E. HUFF DECEDENT'S TRUST B 826 ORANGE AVENUE CORONADO , CA 92118

WILLIAM LEE HUFF 826 ORANGE AVENUE CORONADO, CA 92118

I.L. MORRIS PO BOX 397 GLENVILLE, WV

MATHEW H. COPELAND 1500 HAYSTACK LANE WEST UNION,WV 26456

SANDRA MATHENY ARMENTROUT AND WILLIAM A. ARMENTROUT 851 MACE ST. ELKVIEW, WV 25071

Janice S. McCormack 1903 CAMP RUN ROAD WEST UNION, WV 26456

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Coal Owner

Adele McDougal 213 W. High Street Harrisville WV 26362

William Lee Huff c/o Joye E Huff 826 Orange Ave. Coronado CA 92118

Master Mineral Holdings II LP P.O.Box 10886 Midland TX 79702

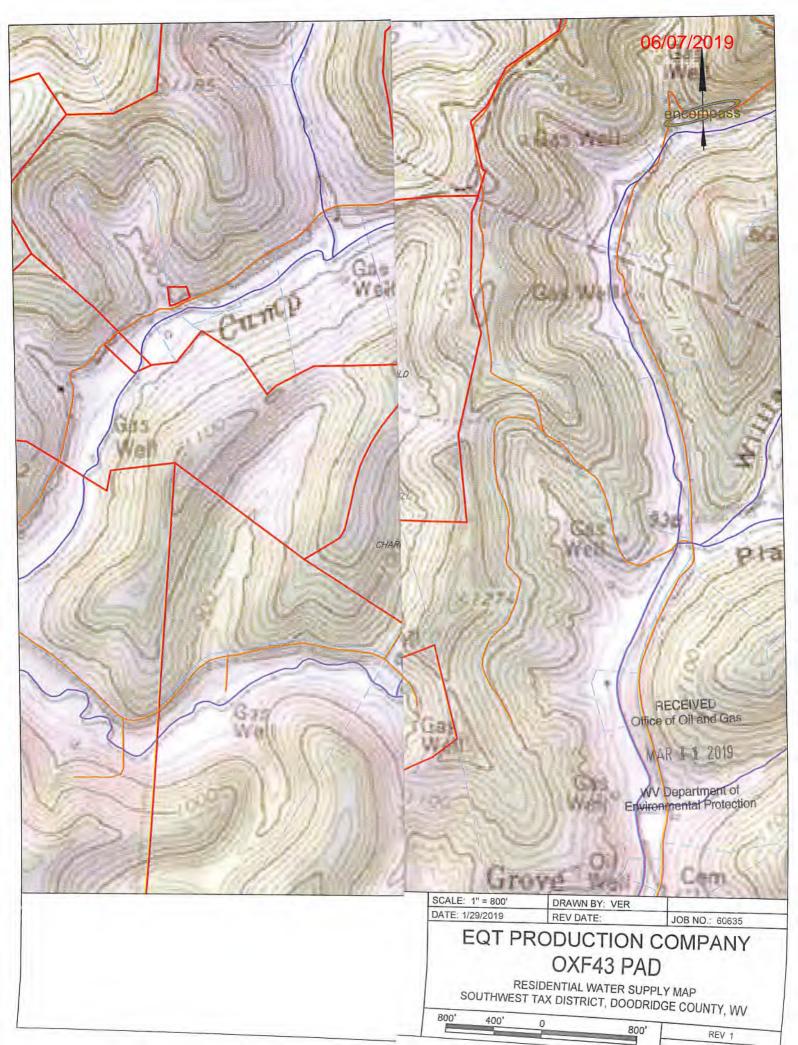
Lois L McKain 4141 S. Braeswood Blvd. Apt 224 Houston TX 77009

Katherine Foster Leggett 1625 Stonehenge Rd Charleston WV 25314

Franklin Maxwell Heirs Ltd Partnership #1 P.O.Box 2395 Buchannon WV 26201

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EQT Well Pad Name: OXF 43	Submittal Date:	
EQT Well Number:		
Survey / Engineering Company: _ RETTEW	Associates, Inc.	
Site Number: 07-16-7 Distance from Gas	Well (feet): 1583'	
Surface Owner / Occupant: Cathy Jean We	tzel,ET AL	☐ Landowner Requested
322 Zacks Run Road, RT 2 Box 317	Phone #:	
Field Located Date: 4/20/17 O	wner home during survey (yes/no):	Sampling Unable to Contact (Further contact attempts to be
Coordinates: 39.155761, 80.79576216	(decimal degrees – NAD 83)	made by EQT's third party pre-drill sampling lab)
Contact Attempts (Date): 1st:2nd	:Date Door Hanger Left:	_
Comments: Spring, no update from October	2018 visit	_
322 Zacks Run Road, RT 2 Box 3 Address:Mount Claire, WV 26408 Field Located Date:4/20/17Owner Coordinates: _39.15199707, 80.79445984 Contact Attempts (Date): 1st: 2nd	Phone #:er home during survey (yes/no): (decimal degrees – NAD 83)	Sampling Unable to Contact (Further contact attempts to be made by EQT's third party pre-drill sampling lab)
Comments: Spring,no update from Octobe	r 2018 visit	
Site Number: 07-16-7 Distance from Gas	s Well (feet): 2567'	
Surface Owner / Occupant: Cathy Jean Wet	tzel, ET AL	☐ Landowner Requested
322 Zacks Run Road, RT 2 Box 317 Address: Mount Claire, WV 26408	, Phone #:	
Field Located Date: 4/20/17 Owner ho	ome during survey (Yes/No):	Sampling Unable to Contact
Coordinates: 39.15149523, 80.7964674	(decimal degrees - NAD 83)	(Further contact attempts to be made by EQT's third party pre-drill sampling lab)
Contact Attempts (Date): 1st:2nd	: Date Door Hanger Left:	RECEIVED
Comments: Spring, no update from October 2	018 visit	Office of Oil and Gas

MAR 1 1 2019



Comments: Well

Table 1 - Water Source Identification

	ttal Date:
EQT Well Number:	
Survey / Engineering Company: RETTEW	
Site Number: 07-16-7 Distance from Gas Well (feet): 2872	
Surface Owner / Occupant: Cathy Jean Wetzel, ET AL 322 Zacks Run Road, RT 2 Box 317, Address: Mount Claire, WV 26408 Phone #:	
Field Located Date: 4/20/17 Owner home during survey (ye	
Coordinates: 39.15136349, 80.79874149 (decimal degrees – NA	(Further contact attempts to be made by EQT's third party pre-drill sampling lab)
Contact Attempts (Date): 1st: 2nd: Date Door Hange	r Left:
Comments: Well, no update from October 2018 visit	
Site Number: 07-13-67 Distance from Gas Well (feet):2616	
Surface Owner / Occupant: Charles R. Greathouse	☐ Landowner Requested
Address: 71 Alum Fork Road, Camden, WV 26338 Phone #:	
Field Located Date: 10/23/18 Owner home during survey (yes/no	
Coordinates: 39.15583001, 80.8012587 (decimal degrees – NA	(Further contact attempts to be made by EQT's third party pre-drill sampling lab)
Contact Attempts (Date): 1st:2nd; Door Hanger Lef	t
Comments: Well	
Site Number: 07-13-66 Distance from Gas Well (feet): 2321'	
Surface Owner / Occupant: Evelyn G. Greathouse	☐ Landowner Requested
Address: 147 Torrey Dr, Buckhannon, WV 26201 Phone #:	Sampling ☐ Landowner Decline Sampling
Field Located Date: 10/23/18 Owner home during survey (Yes/No):	Unable to Contact
Coordinates: 39.15729159, 80.80024123 (decimal degrees – N/	pre-trin sample (ab)
Contact Attempts (Date): 1st: 2nd: Date Door Hange	er Left:

MAR 1 1 2019



EQT Well Pad Name: OXF43	Submittal Date:
EQT Well Number:	
Survey / Engineering Company: RETTEW	
Site Number: 07-13-41 Distance from Gas Well (1	ieet): 3179'
Surface Owner / Occupant: William A. Armentrout &	Sandra Matheny
Address: 815 Mace St, Elk View, WV 25071	Sampling Phone #:
Field Located Date: 04/21/17 Owner h	
Coordinates: 39.16348426, 80.79976642	(Further contact attempts to be made by EQT's third party pre-drill sampling lab)
Contact Attempts (Date): 1st:2nd:	Date Door Hanger Left:
Comments: Well, no update from October 2018 visit	recommendation and the second and th
Surface Owner / Occupant: Gerald Riesenberg, ET / Address: 290 Ogden Road, OH 45177 Field Located Date: 04/21/17 Owner home Coordinates: 39.16572147, 80.79158604 Contact Attempts (Date): 1st: 2nd: 2nd: Well, update - October 2018 - landowner	Phone #: Sampling Landowner Decline Sampling Unable to Contact (Further contact attempts to be made by EQT's third party pre-drill sampling lab) Door Hanger Left:
Site Number: 02-1-9 Distance from Gas Well (
Surface Owner / Occupant: Wm & Randy Huff Dece	Sampling
Address: 826 Orange Ave, Coronado, CA 92118	Phone #:
Field Located Date: 10/23/18 Owner home du Coordinates: 39.15651686, 80.78094585	ring survey (Yes/No): Unable to Contact (Further contact attempts to be
Contact Attempts (Date): 1st:2nd:	

Office of Oil and Gas

MAR 1 1 2019



EQT Well Pad Name: OXF43 Submittal Date:	
EQT Well Number:	
Survey / Engineering Company:RETTEW	
Site Number: 07-17-1 Distance from Gas Well (feet); 3371'	
Surface Owner / Occupant: Randy E. Huff & William Lee	Landowner Requested
Address: 826 Orange Ave., Coronado, CA 92118 Phone #:	Sampling Sampling Landowner Decline
Field Located Date: 10/23/18 Owner home during survey (yes/no):	Sampling Unable to Contact
Coordinates: 39.14843745, 80.79014573 (decimal degrees - NAD 83)	(Further contact attempts to be made by EQT's third party pre-drill sampling lab)
Contact Attempts (Date): 1st; 2nd; Date Door Hanger Left:	The same of the sa
Comments: Well	
Surface Owner / Occupant: Randy E. Huff & William Lee Address: 826 Orange Ave., Coronado, CA 92118 Phone #: Field Located Date: 10/23/18 Owner home during survey (yes/no): Coordinates: 39.14876464, 80.79325539 (decimal degrees – NAD 83) Contact Attempts (Date): 1st: 2nd; Door Hanger Left: Comments: Well	Sampling Unable to Contact (Further contact attempts to be made by EQT's third party pre-drill sampling lab)
Site Number: 07-16-6 Distance from Gas Well (feet): 3538	
Surface Owner / Occupant: Betty M. Ryan	☐ Landowner Requested
Address: 4153 Grove Summers Rd, New Milton, WV 26411 Phone #:	Sampling Landowner Decline
Field Located Date: 10/23/18 Owner home during survey (Yes/No):	Sampling Unable to Contact (Further contact attempts to be
Coordinates: 39.15060189, 80.80151208 (decimal degrees - NAD 83)	made by EQT's third party pre-drill sampling lab)
Contact Attempts (Date): 1 st : Date Door Hanger Left:	_
Comments: Well	HECEIVED

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MAR 11 2019



EQT Well Pad Name: OXF43 EQT Well Number:	Submittal Date:	
Survey / Engineering Company:RETTE	EW	
Site Number: 07-14-10 Distance from Gas	s Well (feet):	
Surface Owner / Occupant: Gerald Riesenb	erg, ET AL	☐ Landowner Requested
Address: 290 Ogden Road, OH 45177	Phone #:	Sampling
Field Located Date:	Owner home during survey (yes/no):	
Coordinates: Unconfirmed	(decimal degrees – NAD 83)	(Further contact attempts to be made by EQT's third party pre-drill sampling lab)
Contact Attempts (Date): 1st;2nd	:Date Door Hanger Left:	
Comments: No features within 2600' buffe	r	
Surface Owner / Occupant: I L (Ike) Morris Address: Glenville, WV 26351 Field Located Date:Owner Coordinates: Unconfirmed Contact Attempts (Date): 1st:2nd Comments: No features within 2600' buffer	Phone #: er home during survey (yes/no): (decimal degrees – NAD 83) d: Door Hanger Left:	Sampling Unable to Contact (Further contact attempts to be made by EQT's third party pre-drill sampling lab)
Site Number: 02-1-1 Distance from Ga	s Well (feet):	
Surface Owner / Occupant: Dale Arnold, ET	Γ AL	☐ Landowner Requested
Address: 4825 Roop Rd, Mount Airy, MD 21	771 Phone #:	
Field Located Date: Owner h	ome during survey (Yes/No):	Sampling Unable to Contact (Further contact attempts to be
Coordinates: Unconfirmed	(decimal degrees – NAD 83)	made by EQT's third party pre-drill sampling lab)
Contact Attempts (Date): 1st: 2n		
Comments: No features within 2600' buffer		RECEIVED

MAR 1 1 2019



EQT Well Pad Name: OXF43	Submittal Date:	
EQT Well Number:		
Survey / Engineering Company: _ RE	ETTEW	
Site Number: 02-4-1 Distance from	n Gas Well (feet):	
Surface Owner / Occupant: Wilma Lee	e Leeson	☐ Landowner Requested
Address: 2687 Millview Dr, Columbus, C	DH 43207 Phone #:	Sampling M Landowner Decline
	Owner home during survey (yes/no):	Sampling Unable to Contact
Coordinates: Unconfirmed	(decimal degrees – NAD 83)	(Further contact attempts to be made by EQT's third party pre-drill sampling lab)
Contact Attempts (Date): 1st:	2 nd :Date Door Hanger Left:	_
Comments: No features within 2600' b	uffer	
Site Number: Distance from	Too Well (foot):	
	C CYT WILL I PRIME CONT.	
Surface Owner / Occupant:		☐ Landowner Requested Sampling
	Phone #:	Sampling
	Owner home during survey (yes/no):	(Further contact attempts to be
Coordinates:	(decimal degrees – NAD 83)	made by EQT's third party pre-drill sampling lab)
Contact Attempts (Date): 1st:	2 nd : Door Hanger Left:	
Comments:		_
Site Number: Distance from	m Gas Well (feet):	
Surface Owner / Occupant:		☐ Landowner Requested
Address:	Phone #:	Sampling Landowner Decline
	ner home during survey (Yes/No):	Sampling Unable to Contact
Coordinates:	(decimal degrees – NAD 83)	(Further contact attempts to be made by EQT's third party pre-drill sampling lab)
Contact Attempts (Date): 1st:	2 nd : Date Door Hanger Left:	The second secon
Comments:		RECEIVED

Office of Oil and Gas

MAR 1 1 2019

STATE OF WEST VIRGINIA DEPARTMENT OF ENVIRONMENTAL PROTECTION, OFFICE OF OIL AND GAS NOTICE OF INTENT TO DRILL

Pursuant to W. Va. Code § 22-6A-16(b), the Notice of Intent to Drill is only required if the notice requirements of W. Va. Code § 22-6A-10(a) have NOT been met or if the Notice of Intent to Drill requirement has NOT been waived in writing by the surface owner.

Date of Notice	Requirement:		led at least TEN (10) days prior to filing a a Permit Application Filed: 3/8//9	
Delivery met	hod pursuant t	to West Virginia Cod	le § 22-6A-16(b)	
☐ HAND DELIVE		CERTIFIED MAIL RETURN RECEIPT	REQUESTED	
receipt request drilling a hore of this subsect subsection ma	ted or hand del zontal well: Pr tion as of the da ny be waived in	2-6A-16(b), at least te ivery, give the surface rovided, That notice gate the notice was proveniting by the surface	en days prior to filing a permit application, a owner notice of its intent to enter upon the given pursuant to subsection (a), section to wided to the surface owner: <i>Provided, how</i> to owner. The notice, if required, shall included address of the operator and the operator	ne surface owner's land for the purpose of n of this article satisfies the requirements never, That the notice requirements of this add the name, address, telephone number,
		to the SURFACE		
Name: See Atta Address:	cned List		Name: Address:	
Li Call area	rehv given:			
Pursuant to V	Vest Virginia Co	ode § 22-6A-16(b), no	otice is hereby given that the undersigned	well operator has an intent to enter upon
Pursuant to V the surface or	Vest Virginia Co	ode § 22-6A-16(b), no the purpose of drilling	a horizontal well on the tract of land as fo	well operator has an intent to enter upon llows: 517,916.8
Pursuant to V the surface of State:	Vest Virginia Co vner's land for t	ode § 22-6A-16(b), no the purpose of drilling	a horizontal well on the tract of land as fo	llows:
Pursuant to V the surface of State: County:	Vest Virginia Co vner's land for t West Virginia	the purpose of drilling	a horizontal well on the tract of land as fo Easting:	llows: 517,916.8
Pursuant to V the surface of State: County: District:	Vest Virginia Co vner's land for t West Virginia Doddridge	the purpose of drilling	a horizontal well on the tract of land as fo UTM NAD 83 Easting: Northing:	Ilows: 517,916.8 4,334,220.6
Notice is he Pursuant to V the surface of State: County: District: Quadrangle: Watershed:	Vest Virginia Covner's land for the West Virginia Doddridge Southwest / Cove	the purpose of drilling	a horizontal well on the tract of land as fo UTM NAD 83 Easting: Northing: Public Road Access:	Ilows: 517,916.8 4,334,220.6 Rt. 20
Pursuant to V the surface of State: County: District: Quadrangle: Watershed: This Notice Pursuant to facsimile nur related to ho	Vest Virginia Covner's land for the West Virginia Covner's land for the West Virginia Covner's Southwest / Covner's Covn	es River 2: Code § 22-6A-16(b), onic mail address of may be obtained from	a horizontal well on the tract of land as fo UTM NAD 83 Easting: Northing: Public Road Access:	llows: 517,916.8 4,334,220.6 Rt. 20 Cathy Jean Wetzel, et. al. ress, telephone number, and if available, ed representative. Additional information f Environmental Protection headquarters,
Pursuant to V the surface of State: County: District: Quadrangle: Watershed: This Notice Pursuant to facsimile nur related to ho located at 60	Vest Virginia Covner's land for the West Virginia Covner's land for the West Virginia Covner's Southwest / Covner's Covn	es River Code § 22-6A-16(b), onic mail address of may be obtained from Charleston, WV 253	a horizontal well on the tract of land as fo UTM NAD 83 Easting: Northing: Public Road Access: Generally used farm name: this notice shall include the name, addr the operator and the operator's authorize the secretary, at the WV Department of	llows: 517,916.8 4,334,220.6 Rt. 20 Cathy Jean Wetzel, et. al. ress, telephone number, and if available, ed representative. Additional information f Environmental Protection headquarters,
Pursuant to V the surface of State: County: District: Quadrangle: Watershed: This Notice Pursuant to facsimile nur related to ho located at 60 Notice is he	Vest Virginia Covner's land for the West Virginia Doddridge Southwest / Cove Oxford Middle Fork Hugher Shall Include West Virginia Comber and electrizontal drilling 157th Street, SE	es River e: Code § 22-6A-16(b), onic mail address of may be obtained from , Charleston, WV 253	a horizontal well on the tract of land as fo UTM NAD 83 Easting: Northing: Public Road Access: Generally used farm name: this notice shall include the name, addr the operator and the operator's authorize the secretary, at the WV Department of	llows: 517,916.8 4,334,220.6 Rt. 20 Cathy Jean Wetzel, et. al. ess., telephone number, and if available, ed representative. Additional information f Environmental Protection headquarters, ep.wv.gov/oil-and-gas/pages/default.aspx.
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Pursuant to V the surface of State: County: District: Quadrangle: Watershed: This Notice Pursuant to facsimile nur related to ho located at 60 Notice is he Well Operato	Vest Virginia Covner's land for the West Virginia Covner's land for the West Virginia Covner's Covered Middle Fork Hugher Shall Include West Virginia Covered Middle Fork Hugher Shall Include West Virginia Covered Middle Fork Hugher and electrizontal drilling 157th Street, SE reby given by T: EQT Production 2400 Ansys Dr. Canonsburg, P.	the purpose of drilling as River Code § 22-6A-16(b), onic mail address of may be obtained from Charleston, WV 253 Charleston, WV 253 Charleston, WV 253 Charleston, WV 253	this notice shall include the name, addrthe operator and the operator's authorized method of the Secretary, at the WV Department of 304 (304-926-0450) or by visiting www.de Authorized Representative: Address:	Illows: 517,916.8 4,334,220.6 Rt. 20 Cathy Jean Wetzel, et. al. ess., telephone number, and if available, ed representative. Additional information f Environmental Protection headquarters, ep.wv.gov/oil-and-gas/pages/default.aspx. John Zavatchan 2400 Ansys Drive, Suite 200 Canonsburg, PA 15317

Oil and Gas Privacy Notice:

The Office of Oil and Gas processes your personal information, such as name, address and telephone number, as part of our regulatory duties. Your personal information may be disclosed to other State agencies or third parties in the normal course of business or as needed to comply with statutory or regulatory requirements, including Freedom of Information Act requests. Our office will appropriately secure your personal information. If you have any questions about our use or your personal information, pleased to that the DEP's Chief Privacy Officer at depprivacyofficer@wv.gov.

MAR 1 1 2019

Surface Owners:

CATHY JEAN WETZEL, ET AL 322 ZACKS RUN ROAD MOUNT CLARE ,WV 26408

RANDY E. HUFF DECEDENT'S TRUST B 826 ORANGE AVENUE CORONADO , CA 92118

Surface Owners (road, AST, or other disturbance):

CATHY JEAN WETZEL, ET AL 322 ZACKS RUN ROAD MOUNT CLARE ,WV 26408

RANDY E. HUFF DECEDENT'S TRUST BY 826 ORANGE AVENUE CORONADO , CA 92118

WILLIAM LEE HUFF 826 ORANGE AVENUE CORONADO, CA 92118

I.L. MORRIS PO BOX 397 GLENVILLE, WV

MATHEW H. COPELAND/ 1500 HAYSTACK LANE/ WEST UNION,WV 26456

SANDRA MATHENY ARMENTROUT AND WILLMAM A. ARMENTROUT 851 MACE ST. ELKVIEW, WV 25071

Janice S. McCormack 1903 CAMP RUN ROAD WEST UNION, WV 26456

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WW-6A5 (1/12)

Operator Well No. 516238 (OXF43H30) 06/07/2019

STATE OF WEST VIRGINIA DEPARTMENT OF ENVIRONMENTAL PROTECTION, OFFICE OF OIL AND GAS NOTICE OF PLANNED OPERATION

Notice Time Date of Notice	Requirement: notice shall be provided note: 03/08/2019 Date Permit A	o later than the filing date of permit pplication Filed: 03/08/2019	application.
Delivery met	thod pursuant to West Virginia Code §	22-6A-16(c)	
■ CERTI	FIED MAIL	HAND	
	RN RECEIPT REQUESTED	DELIVERY	
return receipt the planned of required to be drilling of a damages to th (d) The notic of notice. Notice is her (at the addres	requested or hand delivery, give the surfa- operation. The notice required by this s e provided by subsection (b), section ten of horizontal well; and (3) A proposed surface affected by oil and gas operation	ace owner whose land will be used for ubsection shall include: (1) A copy of this article to a surface owner who ace use and compensation agreements to the extent the damages are composed to the surface owner at the address like. R(s) Name: See Attached List	ication, an operator shall, by certified mail for the drilling of a horizontal well notice of of this code section; (2) The information se land will be used in conjunction with the nt containing an offer of compensation for spensable under article six-b of this chapter, sted in the records of the sheriff at the time
		Address:	
Address:	Vest Virginia Code § 22-6A-16(c), notice the surface owner's land for the purpose West Virginia	is hereby given that the undersigned of drilling a horizontal well on the transfer Easting:	act of land as follows: 517,916.8
Address:	Vest Virginia Code § 22-6A-16(c), notice the surface owner's land for the purpose of	is hereby given that the undersigned of drilling a horizontal well on the tra	act of land as follows:
Notice is her Pursuant to V operation on State: County: District: Quadrangle:	Vest Virginia Code § 22-6A-16(c), notice the surface owner's land for the purpose west Virginia Doddridge Southwest / Cove Oxford	is hereby given that the undersigned of drilling a horizontal well on the tra UTM NAD 83 Northing:	act of land as follows: 517,916.8 4,334,220.6
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Notice is her Pursuant to V operation on State: County: District: Quadrangle: Watershed: This Notice S Pursuant to V to be provide horizontal we surface affec information of headquarters,	Vest Virginia Code § 22-6A-16(c), notice the surface owner's land for the purpose of West Virginia Doddridge Southwest / Cove Oxford Middle Fork Hughes River Shall Include: Vest Virginia Code § 22-6A-16(c), this noted by W. Va. Code § 22-6A-10(b) to a cell; and (3) A proposed surface use and cotted by oil and gas operations to the extended to horizontal drilling may be obtain, located at 601 57th Street, SE, Charfault.aspx.	is hereby given that the undersigned of drilling a horizontal well on the transport of the UTM NAD 83 Easting: Northing: Public Road Access: Generally used farm name: otice shall include: (1)A copy of this surface owner whose land will be ompensation agreement containing a not the damages are compensable unained from the Secretary, at the Wyleston, WV 25304 (304-926-0450)	act of land as follows: 517,916.8 4.334,220.6 Rt. 20 Cathy Jean Wetzel, et. al. code section; (2) The information required used in conjunction with the drilling of a n offer of compensation for damages to the der article six-b of this chapter. Additional / Department of Environmental Protection) or by visiting www.dep.wv.gov/oil-and-

Oil and Gas Privacy Notice:

The Office of Oil and Gas processes your personal information, such as name, address and telephone number, as part of our regulatory duties. Your personal information may be disclosed to other State agencies or third parties in the normal course of business or as needed to comply with statutory or regulatory requirements, including Freedom of Information Act requests. Our office will appropriately secure your personal information. If you have any questions about our use or your personal information, please contact DEP's Chief Privacy Officer at depprivacyofficer@wv.gov.

MAR 1 1 2019

CATHY JEAN WETZEL, ET AL 322 ZACKS RUN ROAD MOUNT CLARE ,WV 26408 \checkmark

RANDY E. HUFF DECEDENT'S TRUST'S 826 ORANGE AVENUE CORONADO, CA 92118

WILLIAM LEE HUFF 826 ORANGE AVENUE CORONADO, CA 92118



Surface Owners (road, AST, or other disturbance):

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Janice S. McCormack 1903 CAMP RUN ROAD WEST UNION, WV 26456

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WEST VIRGINIA DEPARTMENT OF TRANSPORTATION

Division of Highways

1900 Kanawha Boulevard East • Building Five • Room 110 Charleston, West Virginia 25305-0430 • (304) 558-3505

November 13, 2018

Thomas J. Smith, P. E. Secretary of Transportation/ Commissioner of Highways

> Jill M. Newman Deputy Commissioner

James A. Martin, Chief Office of Oil and Gas Department of Environmental Protection 601 57th Street, SE Charleston, WV 25304

Subject: DOH Permit for the OXF43 Well Site, Doddridge County

OXE43H21	OXF43H22
	7000,100000
OXF43H28	OXF43H29
OXF43H34	OXF43H35
OXF43H37	

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Dear Mr. Martin,

WV Department of

This well site will be accessed from Permit # 04-2015-0394 has been issued to EQT Production Company for access to the State Road for a well pad located affect C Doddridge County.

The operator has signed a STATEWIDE OIL AND GAS ROAD MAINTENANCE BONDING AGREEMENT and provided the required Bond. This operator is currently in compliance with the DOH OIL AND GAS POLICY dated January 3, 2012.

Very Truly Yours,

Gary K. Clayton, P.E.

Regional Maintenance Engineer Central Office O&G Coordinator

Dary K. Clayton

Nick Bumgardner Cc:

EQT Production Company

CH, OM, D-4

File

Anticipated Frac Additives Chemical Names and CAS numbers

<u>Material</u>	<u>Ingredient</u>	CAS Number
Water		
Sand	Hydrotreated light petroleum distillate Tributyl tetradecyl phosphonium	14808-60-7
Friction Reducer	chloride	64742-47-8
Biocide	Ammonium chloride	81741-28-8
Scale Inhibitor	Hydrochloric Acid	12125-02-9
15% Hydrochloric Acid	Propargyl Alcohol	7647-01-0
Corrosion Inhibitor	Methanol	107-19-7
Corrosion Inhibitor	Guar Gum	67-56-1
Gelling Agent	Sodium Persulfate	9000-30-0
Oxidizing Breaker	Potassium Carbonate	7775-27-1
Buffering Agent		584-08-7

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MAR 1 1 2019

