



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

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

Wednesday, December 14, 2016
WELL WORK PERMIT
Horizontal 6A / New Drill

EQT PRODUCTION COMPANY
120 PROFESSIONAL PLACE
BUILDING II
BRIDGEPORT, WV 26330

Re: Permit approval for 516819
47-017-06784-00-00

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.

James A. Martin
Chief

Operator's Well Number: 516819
Farm Name: CHARLES D. LOCKE & DONALD & BARBARA OSBOURNE
U.S. WELL NUMBER: 47-017-06784-00-00
Horizontal 6A / New Drill
Date Issued: 12/14/2016

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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. This proposed activity may require permit coverage from the United States Army Corps of Engineers (USACE). Through this permit, you are hereby being advised to consult with USACE regarding this proposed activity.
2. If the operator encounters an unanticipated void, or an anticipated void at an unanticipated depth, the operator shall notify the inspector within 24 hours. Modifications to the casing program may be necessary to comply with W. Va. Code § 22-6A-5a (12), which requires drilling to a minimum depth of thirty feet below the bottom of the void, and installing a minimum of twenty (20) feet of casing. Under no circumstance should the operator drill more than one hundred (100) feet below the bottom of the void or install less than twenty (20) feet of casing below the bottom of the void.
3. When compacting fills, each lift before compaction shall not be more than 12 inches in height, and the moisture content of the fill material shall be within limits as determined by the Standard Proctor Density test of the actual soils used in specific engineered fill, ASTM D698, Standard Test Method for Laboratory Compaction Characteristics of Soil Using Standard Effort, to achieve 95 % compaction of the optimum density. Each lift shall be tested for compaction, with a minimum of two tests per lift per acre of fill. All test results shall be maintained on site and available for review.
4. 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.
5. 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.
6. Pursuant to the requirements pertaining to the sampling of domestic water supply wells/springs the operator shall, no later than thirty (30) days after receipt of analytical data provide a written copy to the Chief and any of the users who may have requested such analyses.
7. 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.
8. During the casing and cementing process, in the event cement does not return to the surface, the oil and gas inspector shall be notified within 24 hours.
9. 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.

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

1) Well Operator: EQT Production Company 306686 Doddridge Southwest Oxford
Operator ID County District Quadrangle

2) Operator's Well Number: 516819 Well Pad Name: OXF164

3) Farm Name/Surface Owner: Charles D. Locke and Donald & Barbara Osburn Public Road Access: RT 50

4) Elevation, current ground: 1196 Elevation, proposed post-construction: 1170.5

5) Well Type (a) Gas Oil Underground Storage
Other
(b) If Gas Shallow Deep
Horizontal

6) Existing Pad: Yes or No No

7) Proposed Target Formation(s), Depth(s), Anticipated Thickness and Expected Pressure(s):
Marcellus, 6549', 58', 2951 PSI, Top of Marcellus 6521

8) Proposed Total Vertical Depth: 6549

9) Formation at Total Vertical Depth: Marcellus

10) Proposed Total Measured Depth: 11621

11) Proposed Horizontal Leg Length: 4637

12) Approximate Fresh Water Strata Depths: 101, 277, 323, 403

13) Method to Determine Fresh Water Depths: From offset wells

14) Approximate Saltwater Depths: 1817

15) Approximate Coal Seam Depths: 39, 910

16) Approximate Depth to Possible Void (coal mine, karst, other): None Reported

17) Does Proposed well location contain coal seams directly overlying or adjacent to an active mine? Yes No

(a) If Yes, provide Mine Info: Name: _____
Depth: _____
Seam: _____
Owner: _____

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WV Department of Environmental Protection

18)

CASING AND TUBING PROGRAM

<u>TYPE</u>	<u>Size (in)</u>	<u>New or Used</u>	<u>Grade</u>	<u>Weight per ft. (lb/ft)</u>	<u>FOOTAGE: For Drilling (ft)</u>	<u>INTERVALS: Left in Well (ft)</u>	<u>CEMENT: Fill-up (Cu. Ft.)/CTS</u>
Conductor	20	New	A-500	78.6	70	70	105 ft ³ / CTS
Fresh Water	13 3/8	New	J-55	54.5	986	986	871 ft ³ / CTS
Coal							
Intermediate	9 5/8	New	P-110	40	5250	5250	2063 ft ³ / CTS
Production	5 1/2	New	P-110	20	11621	11621	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.	
Liners							

<u>TYPE</u>	<u>Size (in)</u>	<u>Wellbore Diameter (in)</u>	<u>Wall Thickness (in)</u>	<u>Burst Pressure (psi)</u>	<u>Anticipated Max. Internal Pressure (psi)</u>	<u>Cement Type</u>	<u>Cement Yield (cu. ft./k)</u>
Conductor	20	26	.375	1378	1102	Class A	1.18
Fresh Water	13 3/8	17 1/2	.38	2700	2160	See Variance 2014-17	1.19
Coal							
Intermediate	9 5/8	12 3/8	.395	7900	6320	See Variance 2016-20	1.19
Production	5 1/2	8 1/2	.361	12640	10112	Class H	1.07/1.86
Tubing	2 3/8	NA	.19	7700			
Liners							

PACKERS

Kind:				
Sizes:				
Depths Set:				

19) Describe proposed well work, including the drilling and plugging back of any pilot hole:

Drill and complete a new horizontal well in the Marcellus Formation. Drill the vertical to an approximate depth of 4600'. 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 0.3%) of chemicals (including 15% Hydrochloric acid, gelling agent, gel breaker, 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 200,000 barrels of water per stage. Sand sizes vary from 100 mesh to 20/40 mesh. Average approximately 200,000 pounds of sand per stage.

21) Total Area to be disturbed, including roads, stockpile area, pits, etc., (acres): 24.73

22) Area to be disturbed for well pad only, less access road (acres): 11.34

23) Describe centralizer placement for each casing string:

- Surface: Bow spring centralizers – One at the shoe and one spaced every 500'.
- Intermediate: Bow spring centralizers– One cent at the shoe and one spaced every 500'.
- Production: One solid body cent 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. .25% Flake Loss Circulation Material (LCM) is used to combat the loss of the cement slurry to a thief zone.
 Intermediate (Type 1 Cement): 0-3% Calcium Chloride. Salt is used in shallow, low temperature formations to speed the setting of cement slurries. 0.25% flake. Loss Circulation Material (LCM) is used to combat the loss of whole drilling fluid or cement slurry (not filtrate) to a thief zone.
 Production:
 Lead (Type H 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 (Type 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 % Calcium 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 hole 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.

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*Note: Attach additional sheets as needed.

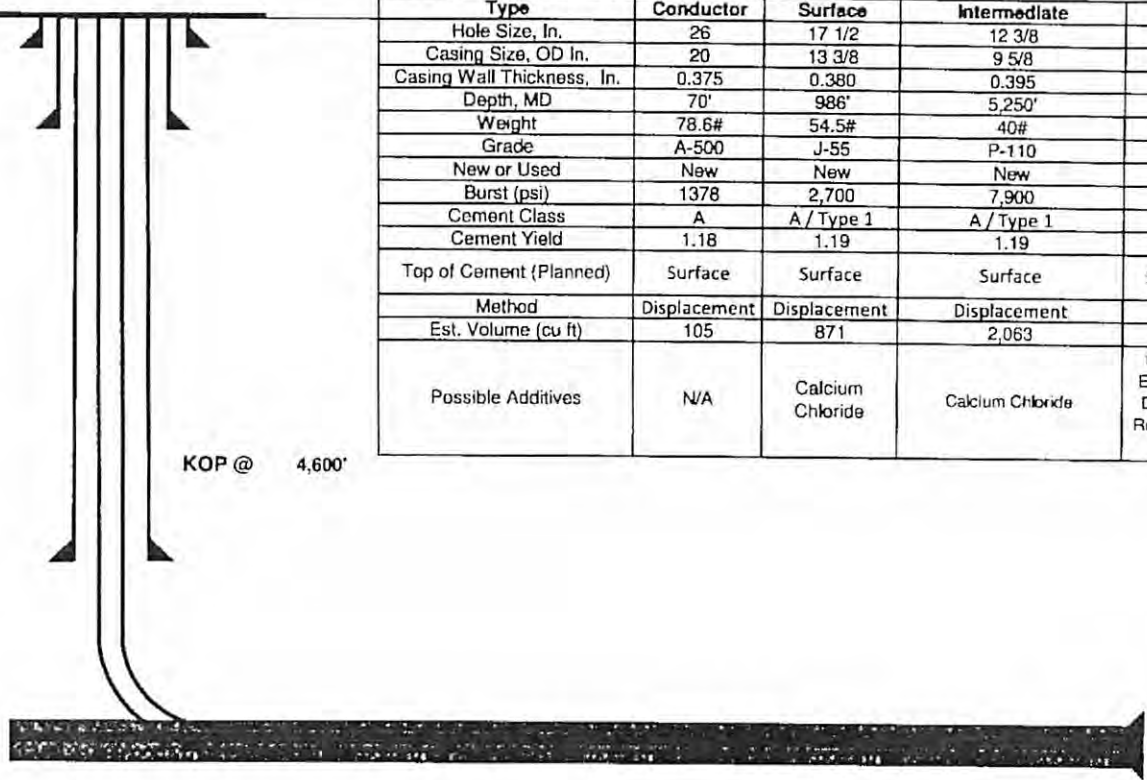
Well 516819(OXF164H13)
 EQT Production
 Oxford Quad
 Doddridge County, WV

Azimuth 165
 Vertical Section 4762

Note: Diagram is not to scale

Formations	Top TVD	Base TVD
Conductor	70	
Base Fresh Water	403	
Base Red Rock	946	
Surface Casing	986	
Maxton	1685 - 1722	
Big Lime	1852 - 1913	
Big Injun	1974 - 1988	
Weir	2081 - 2270	
Gantz	2335 - 2408	
Fifty foot	2442 - 2504	
Thirty foot	2546 - 2587	
Gordon	2607 - 2624	
Forth Sand	2705 - 2732	
Bayard	2903 - 2927	
Warren	3204 - 3265	
Speachley	3277 - 3370	
Balltown A	3810 - 3904	
Riley	4726 - 4756	
Benson	4809 - 4841	
Alexander	5067 - 5153	
Intermediate Casing	5203	
Sonyea	6179 - 6328	
Middlesex	6328 - 6383	
Genesee	6383 - 6453	
Genesee	6453 - 6493	
Tully	6493 - 6512	
Hamilton	6512 - 6521	
Marcellus	6521 - 6579	
Production Casing	11621	MD
Onondaga	6579	

Casing and Cementing				Deepest Fresh Water: 403'
Type	Conductor	Surface	Intermediate	Production
Hole Size, In.	26	17 1/2	12 3/8	8 1/2
Casing Size, OD In.	20	13 3/8	9 5/8	5 1/2
Casing Wall Thickness, In.	0.375	0.380	0.395	0.361
Depth, MD	70'	986'	5,250'	11,621'
Weight	78.6#	54.5#	40#	20#
Grade	A-500	J-55	P-110	P-110
New or Used	New	New	New	New
Burst (psi)	1378	2,700	7,900	12,640
Cement Class	A	A / Type 1	A / Type 1	H
Cement Yield	1.18	1.19	1.19	1.07/1.86
Top of Cement (Planned)	Surface	Surface	Surface	500' above top Producing Zone
Method	Displacement	Displacement	Displacement	Displacement
Est. Volume (cu ft)	105	871	2,063	1,379
Possible Additives	N/A	Calcium Chloride	Calcium Chloride	Calcium Carbonate, Fluid Loss, Extender, Dispersent, Viscosifier, Defoamer, POZ, Bonding Agent, Retarder, Anti-Setting/Suspension Agent



Land curve @ 6,549' TVD
 6,984' MD

Est. TD @ 6,549' TVD
 11,621' MD

4,637' Lateral

Proposed Well Work:
 Drill and complete a new horizontal well in the Marcellus formation.
 Drill the vertical to an approximate depth of 4600'.
 Kick off and drill curve. Drill lateral in the Marcellus. Cement casing.



west virginia department of environmental protection

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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

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Earl Ray Tomblin, Governor
Randy C. Huffman, Cabinet Secretary
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**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
- 2.) 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.

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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

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August 11, 2016

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

Re: Revision to 516819

Dear Mr. Smith,

Enclosed is a copy of the variance 2016-20. Would you please add this to the permit that was just sent to you?

If you have any questions, please do not hesitate to contact me at (304) 848-0076.

Sincerely,

A handwritten signature in blue ink, appearing to read 'Vicki Roark'.

Vicki Roark
Permitting Supervisor-WV

Enc.

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

Earl Ray Tomblin, Governor
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**BEFORE THE OFFICE OF OIL AND GAS
DEPARTMENT OF ENVIRONMENTAL PROTECTION
STATE OF WEST VIRGINIA**

**IN THE MATTER OF A VARIANCE FROM)
LEGISLATIVE RULE 35CSR8,) ORDER NO. 2016-20
SECTION 9.2.H.2.)
RELATING TO THE CEMENTING)
OF OIL AND GAS WELLS)**

REPORT OF THE OFFICE

In response to industry requests, the West Virginia Department of Environmental Protection, Office of Oil and Gas, has reviewed the proposed use of the Lafarge OneCem cement blend (OneCem) on the coal, intermediate and production casing strings.

FINDINGS OF FACT

1. On July 24, 2015, EQT Production Company (EQT) submitted a variance request for the use of OneCem, from Legislative Rule 35CSR8, Section 9.2.h.2.
2. Laboratory analysis submitted by EQT on July 24, 2015, indicate OneCem meets or exceeds all other specific requirements found in Legislative Rule 35CSR8, Section 9.2.h.
3. On May 13, 2016, the Office of Oil and Gas provided public notice of acceptance of public comments on the variance request. During the 30-day public comment period, no comments were received.

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CONCLUSIONS OF LAW

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

Pursuant to Legislative Rule 35CSR8, Section 14, the Chief of the Office of Oil and Gas may grant a variance from any requirement of this rule.


ORDER

It is ordered that the Lafarge OneCem cement blend, referenced in MSDS Version 1.0 issued on April 21, 2014, is approved for use on the coal, intermediate and production casing strings for well drilling subject to the provisions of Legislative Rule 35CSR8. This approval does not apply to cementing of freshwater casing strings.

Dated this, the 20th day of July, 2016.

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

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EQT Production
Hydraulic Fracturing Monitoring Plan
Pad ID: OXF164
Doddridge County, WV

8/10/16

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Page 1 of 2
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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 the OXF164 pad: 516819.

Due to the apparent presence of unique geological conditions, the potential for communication between deep geologic zones exists in this area. This potential communication, via natural gas, water, or both, may occur between hydraulically fractured wells in the Marcellus formation (approximately 6,500' TVD) and existing conventional natural gas wells in the partially-depleted, relatively high permeability Alexander formation (approximately 5,100' TVD).

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 pre-notification of conventional well operators of the timing and location of the hydraulic fracturing, establishment of measures conventional 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 Conventional Well Operators

EQT, using available data (WV Geological Survey, WVDEP website, and IHS data service), has identified all known conventional wells and well operators within 500 feet of this pad and the lateral sections. A map showing these wells along with a list of the wells and operators is included in **Attachment A**.

Upon approval of this plan, EQT will notify these operators, via letter, of the hydraulic fracturing schedule for these wells. A copy of this letter is included in **Attachment B**.

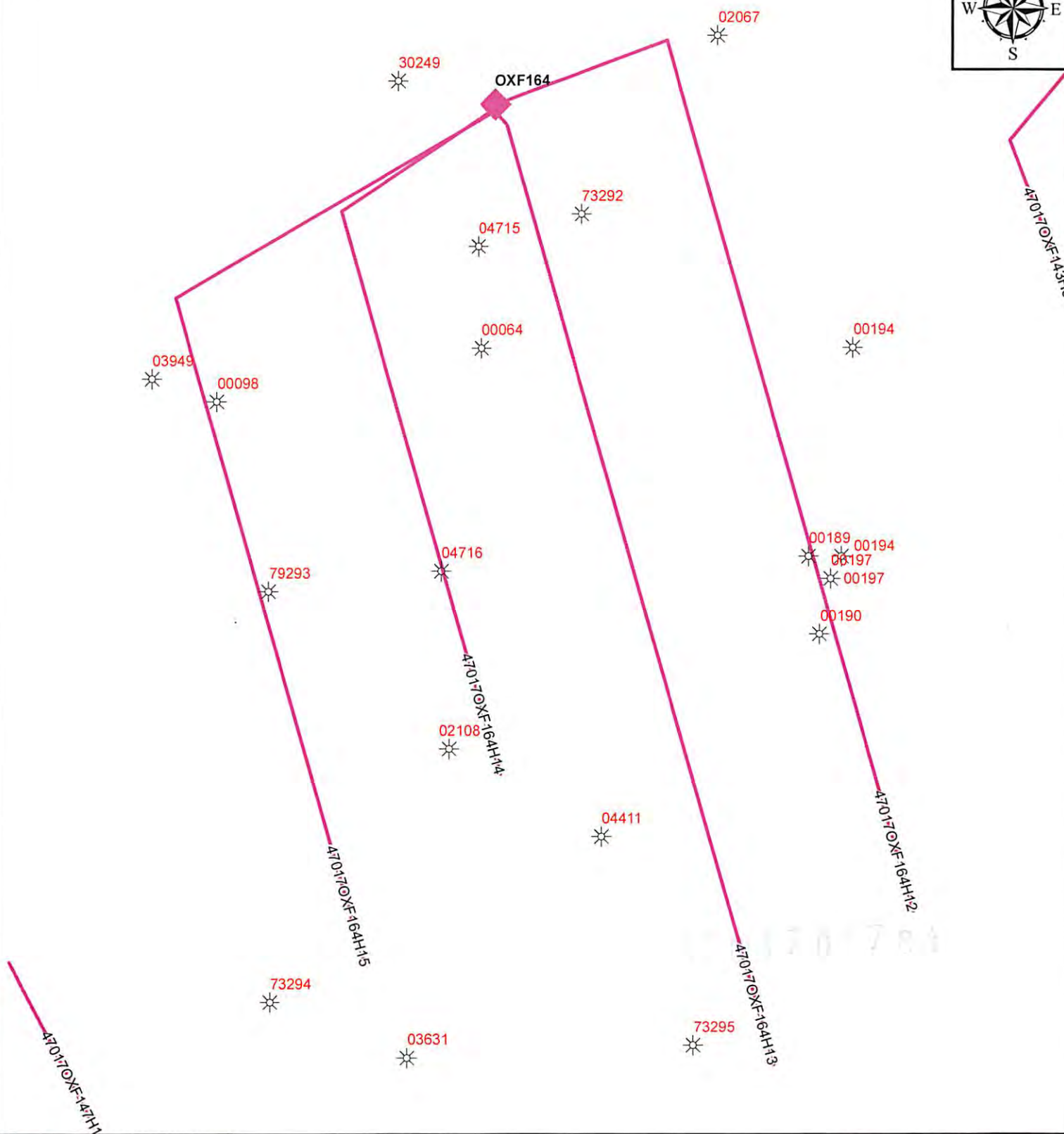
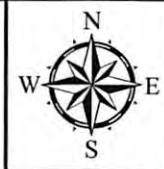
The letter provides recommendations to these conventional operators to 1) increase their monitoring of their wells during that time period, 2) ensure that their well head equipment is sound, and 3) provide immediate notification to EQT and the OOG in the event of any changes in their well conditions.

Specifically, the letter recommends that conventional well operators conduct the following activities during and after fracturing operations:

1. Inspect their surface equipment prior to fracturing to establish integrity and establish pre-frac 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 rated to 3,000 psi or other necessary equipment for wellhead integrity
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, communication with conventional operators, and ongoing monitoring of the work upon request of OOG or immediately in the event of any noted abnormalities.

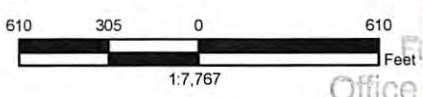


EQT
EQT Corporation
625 Liberty Avenue
Pittsburgh, PA 15222

OXF164 Offset Wells

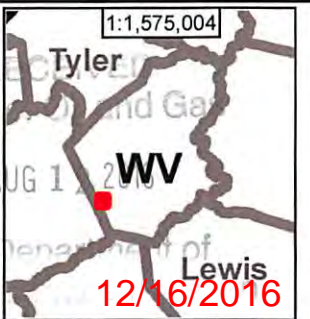
Vertical Offsets and Foreign Laterals within 500'

- Legend
- OXF164_Vertical_Offsets_GGX
 - Genesee Spud
 - Marcellus Spud
 - Middlesex Spud
 - Utica Spud
 - GENESEO
 - MARCELLUS
 - MIDDLESEX
 - POINT PLEASANT
 - UTICA



Disclaimer:

This map is confidential and is to be used only for the express informational purposes for which it was created. Unauthorized use, copying, or dissemination is strictly prohibited. EQT does not warrant the accuracy of the location of any items shown on this map, including, but not limited to, any structures, well or pipeline facilities, property boundaries, topography, roadways, or waterways. The items shown on the map may not have been placed on the map using survey lines or GPS coordinates. The specific location of any of the map items should be determined by a field survey performed by a licensed surveyor upon consultation with EQT.



Attachment A (i)

WellID	WellStatus	Comp Date	Permit	Operator	Longitude	Latitude	TargetFm	DatumEleva	SS Depth	Total Depth
4701700064	GAS	10/22/1936	00064	PGH & WV GAS	-80.8297	39.1729		1155.0000	-907.0000	2062.0000
4701700098	GAS	7/28/1939	00098	EPC	-80.8342	39.1722		991.0000	-894.0000	1885.0000
4701700194	GAS	1/17/1950	00194	P & M OIL	-80.8234	39.1729		885.0000	-865.0000	1750.0000
4701702067	GAS	11/22/1919	02067	EPC	-80.8257	39.1770		0.0000	-1957.0000	1957.0000
4701702108	GAS	10/17/1930	02108	EPC	-80.8303	39.1677		0.0000	-1923.0000	1923.0000
4701703631	O&G	3/29/1988	03631	SHELDON & ASSOCIATES	-80.8310	39.1636		898.0000	-2372.0000	3270.0000
4701703949	GAS	9/14/1993	03949	TERM ENERGY	-80.8353	39.1725		910.0000	-4121.0000	5031.0000
4701704411	GAS	11/17/1997	04411	E A E	-80.8277	39.1665		1015.0000	-4160.0000	5175.0000
4701704715	GAS	6/11/2003	04715	KEY OIL	-80.8298	39.1742		1160.0000	-4170.0000	5330.0000
4701704716	GAS	6/3/2003	04716	KEY OIL	-80.8304	39.1700		1110.0000	-4170.0000	5280.0000
4701730249	OIL		30249	HOPE CONST & RFNG	-80.8311	39.1764		1159.0000	-1615.0000	2774.0000
4701700197	ABD-GW	3/14/1918	00197	UNKNOWN	-80.8238	39.1699	PENNSYLVANIAN	1065.0000		1660.0000
4701700197	D&A-G	2/21/1951	00197	PITTSBURGH & WV GAS	-80.8238	39.1699	CHEMUNG	1065.0000		2483.0000
4701400189	OIL	1/10/1949	00189	P&M OIL COMPANY	-80.8242	39.1702	BUFFALO SAND	842.0000		795.0000
4701773292	UNK	1/1/1801	73292	UNKNOWN	-80.8280	39.1747		0.0000	0.0000	0.0000
4701773295	UNK	1/1/1801	73295	UNKNOWN	-80.8261	39.1638		0.0000	0.0000	0.0000
4701773294	UNK	1/1/1801	73294	UNKNOWN	-80.8333	39.1643		0.0000	0.0000	0.0000
4701773293	UNK	1/1/1801	79293	UNKNOWN	-80.8333	39.1697		0.0000	0.0000	0.0000
4701700190	OIL	7/1/1954	00190	P&M OIL COMPANY	-80.8240	39.1692	BIG INJUN	836.0000		1736.0000
4701700194	GAS	1/1/1950	00194	P&M OIL COMPANY	-80.8236	39.1702	SALT SAND 2	882.0000		1394.0000
4701700194	1O&1G	9/1/1967	00194	PENNZOIL COMPANY	-80.8236	39.1702	BIG INJUN	882.0000		1750.0000
4701700193	D&A	2/16/1949	00193	P&M OIL COMPANY	-80.8236	39.1702	BIG INJUN	835.0000		1750.0000
4701700189	GAS	7/17/1956		P&M OIL COMPANY	-80.8242	39.1702	BIG LIME	842.0000		1759.0000

Attachment A (2)

Well ID	Formation
47017044110000	LITTLE LIME
47017044110000	BIG LIME
47017044110000	BIG INJUN /SD/
47017044110000	SQUAW /SD/
47017044110000	WEIR /SD/
47017044110000	GORDON /SD/
47017044110000	WARREN /SD/
47017044110000	SPEECHLEY
47017044110000	BALLTOWN /SD/
47017044110000	RILEY /SD/
47017044110000	RILEY 3
47017044110000	BENSON /SD/
47017044110000	ALEXANDER
47017021080000	DUNKARD /SD/ PENN/
47017021080000	DUNKARD BIG/SD/
47017021080000	GAS SAND
47017021080000	SALT SD 1
47017021080000	SALT SD 2
47017021080000	SALT SD 3
47017021080000	MAXTON/SD/
47017021080000	BLUE MONDAY /SD/
47017021080000	BIG LIME
47017021080000	BIG INJUN
47017039490000	BIG LIME
47017039490000	BIG INJUN /SD/
47017039490000	WEIR /SD/
47017039490000	GORDON /SD/
47017039490000	WARREN /SD/
47017039490000	SPEECHLEY
47017039490000	BALLTOWN /SD/
47017039490000	BRADFORD /SD/
47017039490000	BENSON /SD/
47017039490000	LEOPOLD
47017039490000	ALEXANDER
47017047160000	LITTLE LIME
47017047160000	BIG LIME
47017047160000	BIG INJUN
47017047160000	WEIR /SD/
47017047160000	GORDON
47017047160000	WARREN /SD/
47017047160000	SPEECHLEY
47017047160000	BALLTOWN
47017047160000	RILEY /SD/
47017047160000	RILEY 3
47017047160000	BENSON /SD/
47017047160000	ELK /SD/

Perforated

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WV Department of

Attachment A (2)

12/16/2016

47017047160000 ALEXANDER
47017036310000 BIG LIME
47017036310000 BIG INJUN /SD/
47017036310000 WEIR /SD/
47017036310000 SPEECHLEY
47017036310000 BALLTOWN /SD/
47017047150000 LITTLE LIME
47017047150000 BIG LIME
47017047150000 BIG INJUN
47017047150000 WEIR /SD/
47017047150000 WARREN /SD/
47017047150000 SPEECHLEY
47017047150000 BALLTOWN
47017047150000 RILEY /SD/
47017047150000 RILEY 3
47017047150000 BENSON /SD/
47017047150000 ALEXANDER



625 Liberty Ave, Suite 1700
Pittsburgh PA 15222
www.eqt.com

TEL: (412) 395-3305
FAX: (412) 395-2156

John Centofanti
Corporate Director,
Environmental Affairs

(date)

[Conventional Well Operator]
[address]
[state]

RE: Doddridge County Hydraulic Fracturing Notice

Dear Sir/Madam,

EQT has developed a Marcellus pad (Oxford 164 pad) located in Doddridge County, WV. As an owner or operator of conventional natural gas wells in this area, we are requesting your assistance in this matter.

Due to the apparent presence of unique geological conditions, the potential for communication between deep geologic zones exists in this area. This potential communication, via natural gas, water, or both, may occur between hydraulically fractured wells in the Marcellus formation (approximately 6,500' TVD) and existing conventional natural gas wells in the partially-depleted, relatively high permeability, Alexander formation (approximately 5,100' TVD).

EQT anticipates conducting hydraulic fracturing at the Oxford 164 pad during the [first,second, third, fourth] quarter of [year]. We have identified conventional natural gas wells operated by your company within 500' (lateral distance) of our new/planned laterals. Plats for each well on this pad are attached.

We recommend that conventional well operators conduct the following activities before, during, and after fracturing operations:

1. Inspect surface equipment, prior to fracturing, to establish integrity and establish 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 rated to 3,000 psi or other necessary equipment for wellhead integrity.
4. Notify the OOG and EQT if any changes in water, gas production, pressure, or other anomalies are identified.

Please feel free to contact me at 412-395-3305 with any questions or comments. You may also contact the West Virginia Office of Oil and Gas at 304-926-0440.

Sincerely,
EQT Production

John Centofanti
Corporate Director, Environmental Affairs

cc: James Martin, WV Office of Oil and Gas

12/16/2016
Attachment B



4701706784

July 12, 2016

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

Re: Casing on OXF164

Dear Mr. Smith,

EQT is requesting the 13-3/8" surface casing be set at 986' KB, 75' below the deepest coal seam.

For the 9 5/8" casing string, EQT is requesting that the first well set the 9 5/8" casing at 5203' KB, 50' below the base of the Alexander formation. Prior to cementing the 9 5/8" casing, a test will be performed to determine if a deep 9 5/8" casing string is needed. If the test is successful, the remaining wells on the pad will have 9 5/8" casing set at a shallower depth of 2637' KB, 50' below the 30 Foot Sand formation. If the test is unsuccessful, the remaining wells on the pad will have 9 5/8" casing set at the original set depth of 5203' KB. Upon completion of the test, the WV DEP inspector will be notified of the test results and the casing depth for the remaining wells on the pad will be discussed.

If you have any questions, please do not hesitate to contact me at (304) 848-0076

Sincerely,

Vicki Roark
Permitting Supervisor - WV

Enc.

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WV Department of
Environmental Protection

EQT Production Company

Proposed Revegetation Treatment: Acres Disturbed 24.73 Prevegetation pH 5.9

Lime 3 Tons/acre or to correct to pH 6.5

Fertilizer type Granular 10-20-20

Fertilizer amount 1/3 lbs/acre

Mulch 2 Tons/acre

Seed Mixtures

Temporary		Permanent	
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, pit and proposed area for land application (unless engineered plans including this info have been provided). If water from the pit will be land applied, include dimensions (L x W x D) of the pit, and dimensions (L x W), and area in acreage, of the land application area

Photocopied section of involved 7.5' topographic sheet.

Plan Approved by: Denial Fluke

Comments: Presseed and mulch any disturbed areas per WVDEP regulations before bringing rig on location. Maintain and upgrade E+S as necessary.

Title: [Signature]

Date: 8/23/16

Field Reviewed? Yes No

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AUG 31 2016

WV Department of
Environmental Protection

12/16/2016

WW-9
(4/16)

API Number 47 - 017 - _____
Operator's Well No. 516819 _____

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

FLUIDS/ CUTTINGS DISPOSAL & RECLAMATION PLAN

Operator Name EQT Production Company OP Code 306686

Watershed (HUC 10) Lower Run of Middle Fork and Jims Run of Upper Run Quadrangle Oxford

Do you anticipate using more than 5,000 bbls of water to complete the proposed well work? Yes No

Will a pit be used? Yes No

If so, please describe anticipated pit waste: Flowback water and residue

Will a synthetic liner be used in the pit? Yes No

Proposed Disposal Method For Treated Pit Wastes:

- Land Application
- Underground Injection (UIC Permit Number 0014, 8462, 4037)
- Reuse (at API Number Various)
- Off Site Disposal (Supply form WW-9 for disposal location)
- Other (Explain _____)

Will closed loop system be used? If so, describe: Yes, The closed loop system will remove drill cuttings from the drilling fluid. The drill cuttings are then prepared for transportation to an off-site disposal facility.

Drilling medium anticipated for this well (vertical and horizontal)? Air, freshwater, oil based, etc. See Attached

-If oil based, what type? Synthetic, petroleum, etc. Synthetic Mud

Additives to be used in drilling medium? See Attached

Drill cuttings disposal method? Leave in pit, landfill, removed offsite, etc. Landfill

-If left in pit and plan to solidify what medium will be used? (cement, lime, sawdust) N/A

-Landfill or offsite name/permit number? See Attached List

Permittee shall provide written notice to the Office of Oil and Gas of any load of drill cuttings or associated waste rejected at any West Virginia solid waste facility. The notice shall be provided within 24 hours of rejection and the permittee shall also disclose where it was properly disposed.

I certify that I understand and agree to the terms and conditions of the GENERAL WATER POLLUTION PERMIT issued on August 1, 2005, by the Office of Oil and Gas of the West Virginia Department of Environmental Protection. I understand that the provisions of the permit are enforceable by law. Violations of any term or condition of the general permit and/or other applicable law or regulation can lead to enforcement action.

I certify under penalty of law that I have personally examined and am familiar with the information submitted on this application form and all attachments thereto 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 or imprisonment.

Company Official Signature *Victoria J. Roark*
Company Official (Typed Name) Victoria J. Roark
Company Official Title Permitting Supervisor

Subscribed and sworn before me this 9 day of August, 2016
Debecca L. Wanstreet Notary Public

My commission expires 4-7-2020



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.

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WV Department of
Environmental Protection

12/16/2016

EQT Production Water plan

Offsite disposals for Marcellus wells

4701706784

CWS TRUCKING INC.

P.O. Box 391
Williamstown, WV 26187
740-516-3586
Noble County/Noble Township
Permit # 3390

BROAD STREET ENERGY LLC

37 West Broad Street
Suite 1100
Columbus, Ohio 43215
740-516-5381
Washington County/Belpre Twp.
Permit # 8462

LAD LIQUID ASSETS DISPOSAL INC.

226 Rankin Road
Washington, PA 15301
724-350-2760
724-222-6080
724-229-7034 fax
Ohio County/Wheeling
Permit # USEPA WV 0014

TRIAD ENERGY

P.O. Box 430
Reno, OH 45773
740-516-6021 Well
740-374-2940 Reno Office Jennifer
Nobel County/Jackson Township
Permit # 4037

TRI COUNTY WASTE WATER MANAGEMENT, INC.

1487 Toms Run Road
Holbrook, PA 15341
724-627-7178 Plant
724-499-5647 Office
Greene County/Waynesburg
Permit # TC-1009

KING EXCAVATING CO.

Advanced Waste Services
101 River Park Drive
New Castle, Pa. 16101
Facility Permit# PAR000029132

Waste Management - Meadowfill Landfill

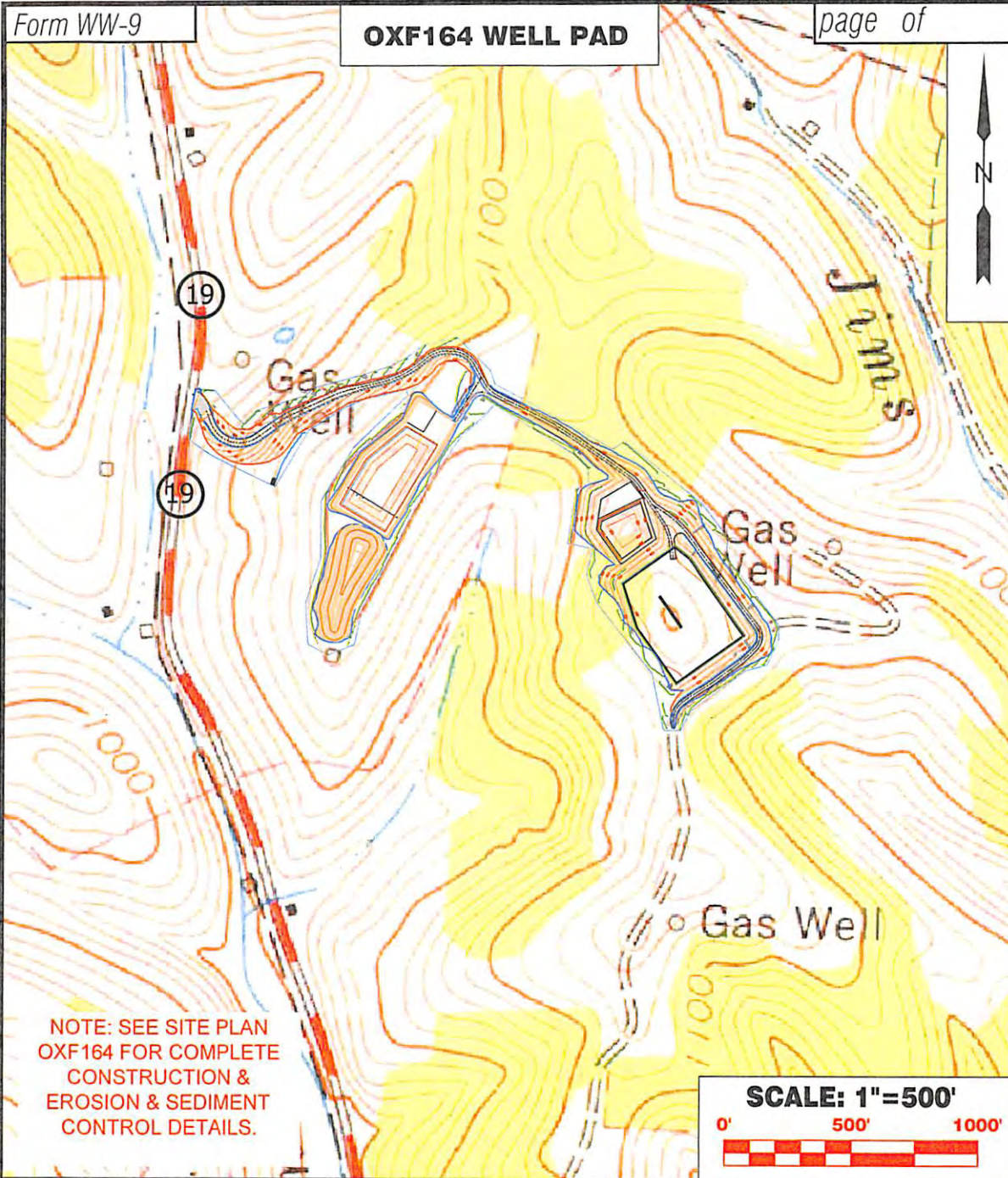
Rt. 2, Box 68 Dawson Drive
Bridgeport, WV 26330
304-326-6027
Permit #SWF-1032-98
Approval #100785WV

Waste Management - Northwestern Landfill

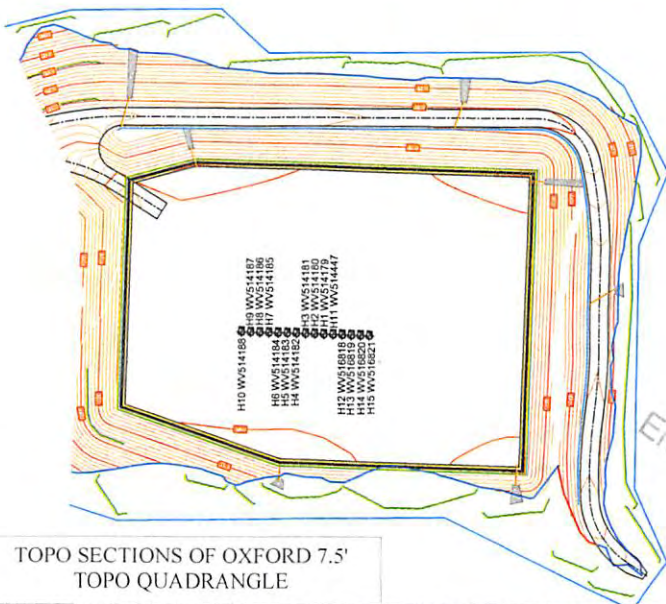
512 E. Dry Road
Parkersburg, WV 26104
304-428-0602
Permit #SWF-1025 WV-0109400
Approval #100833WV

12/16/2016

4701706784



Detail Sketch for Proposed OXF164 Wells



TOPO SECTIONS OF OXFORD 7.5' TOPO QUADRANGLE



DRAWN BY K.D.W.	FILE NO. 7699	DATE 07/29/16	CADD FILE: 7699OXF164REC.dwg
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WV Department of Environmental Protection
12/16/2016



Where energy meets innovation.™

Site Specific Safety Plan

EQT OXF 164 Pad

Oxford Quadrant

West Union

Doddridge County, WV

For Wells:

Date Prepared:

June 16, 2016

[Signature]
EQT Production

[Signature]
WV Oil and Gas Inspector

Title

Title

Date

Date

8-8-16

6/23/16

OXF164
WV 516819
EQT PRODUCTION COMPANY

BOTTOM HOLE LATITUDE 39°10'00"

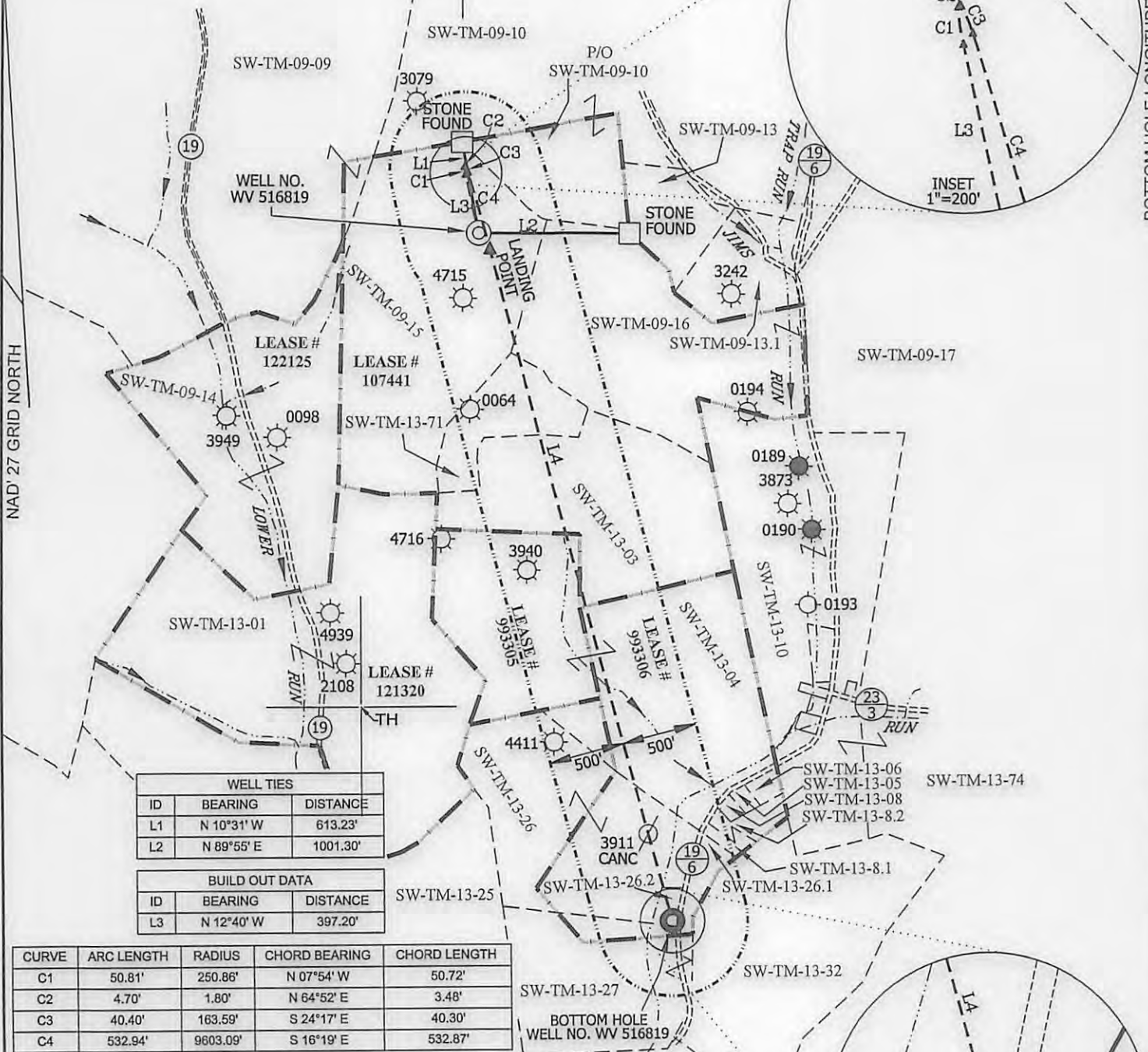
BH

BOTTOM HOLE LONGITUDE 80°47'30"

11,763

TOP HOLE LONGITUDE 80°47'30"

NAD 27 GRID NORTH

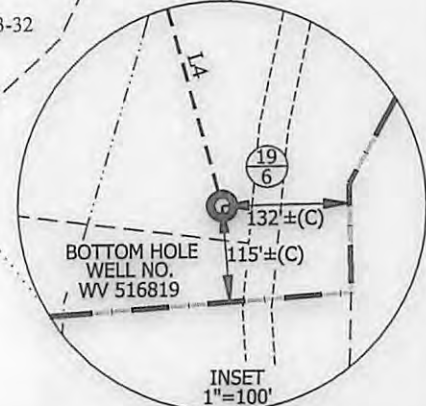
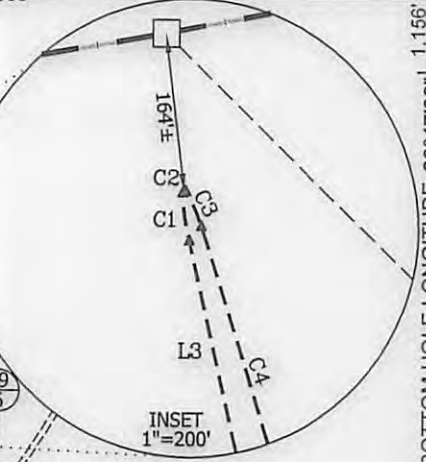


WELL TIES		
ID	BEARING	DISTANCE
L1	N 10°31' W	613.23'
L2	N 89°55' E	1001.30'

BUILD OUT DATA		
ID	BEARING	DISTANCE
L3	N 12°40' W	397.20'

CURVE	ARC LENGTH	RADIUS	CHORD BEARING	CHORD LENGTH
C1	50.81'	250.86'	N 07°54' W	50.72'
C2	4.70'	1.80'	N 64°52' E	3.48'
C3	40.40'	163.59'	S 24°17' E	40.30'
C4	532.94'	9603.09'	S 16°19' E	532.87'

LATERAL		
ID	BEARING	DISTANCE
L4	S 15°00' E	4636.93'



SLS
Land & Energy Development
Solutions from the ground up.
 P.O. Box 150 • 12 Vanhorn Drive • Glenville, WV 26351 • (304) 462-5634
 www.slsurveys.com

VICTOR MOYERS
 LICENSED
 No. 849
 STATE OF
 WEST VIRGINIA
 PROFESSIONAL SURVEYOR

(+) DENOTES LOCATION OF WELL ON UNITED STATES TOPOGRAPHIC MAPS.

LEGEND

- LEASE LINE
- SURFACE LINE
- WELL LATERAL
- OFFSET LINE
- TIE LINE
- CREEK
- FENCE
- ROAD
- COUNTY ROUTE
- PROPOSED WELL
- EXISTING WELL
- PERMITTED WELL
- SOUTHWEST DISTRICT TAX MAP-PARCEL

SW-00-00

12/16/2016

SCALE 1" = 1000' FILE NO. 7699P516819

DATE JULY 29, 2016

REVISED _____, 20____

OPERATORS WELL NO. WV 516819

API WELL NO. 47 — 017 — 06784

NO. STATE COUNTY PERMIT

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

WELL OPERATOR EQT PRODUCTION COMPANY DESIGNATED AGENT REX C. RAY

ADDRESS 115 PROFESSIONAL PLACE P.O. BOX 280 BRIDGEPORT, WV 26330 ADDRESS 115 PROFESSIONAL PLACE P.O. BOX 280 BRIDGEPORT, WV 26330

OXF164
WV 516819
EQT PRODUCTION COMPANY

BOTTOM HOLE LATITUDE 39°10'00"

BH

SW-TM-09-09	DONALD & BARBARA OSBURN ET AL	59.74 ACRES±
SW-TM-09-10	DELBERT & BARBARA OSBORNE	78 ACRES±
SW-TM-09-13	ANTHONY RAMEY	9.21 ACRES±
SW-TM-09-13.1	GARY SANCHEZ	8.79 ACRES±
SW-TM-09-14	KERRY & PATTY JUNKINS	47 ACRES±
SW-TM-09-15	DONALD & BARBARA OSBURN ET AL	60 ACRES±
SW-TM-09-16	WILLIAM JENKINS	39 ACRES±
SW-TM-09-17	JOAN CASSIDY TRUST	180 ACRES±
SW-TM-13-01	MANSFIELD & DEBRA LEESON	67.5 ACRES±
SW-TM-13-03	WILLIAM JENKINS	33.5 ACRES±
SW-TM-13-04	JACQUELINE PAYNE	61.70 ACRES±
SW-TM-13-05	ROY LOWTHER	0.50 ACRES±
SW-TM-13-06	CHARLES GREATHOUSE ET UX	0.81 ACRES±
SW-TM-13-08	ROY LOWTHER	0.60 ACRES±
SW-TM-13-8.1	ROY LOWTHER	1.33 ACRES±
SW-TM-13-8.2	RUSTY & WILMA LOWTHER	1.32 ACRES±
SW-TM-13-10	HAROLD & BONNY HINZMAN	29.67 ACRES±
SW-TM-13-25	MARY LONG ET AL	14 ACRES±
SW-TM-13-26.1	JOSEPH BARTLETT JR	4 ACRES±
SW-TM-13-26.2	GARY COX	1.32 ACRES±
SW-TM-13-27	JOHN & DEBRA CORDINE	23.50 ACRES±
SW-TM-13-32	RANDALL HUSK	41 ACRES±
SW-TM-13-71	DONALD & BARBARA OSBURN ET AL	12.50 ACRES±
SW-TM-13-74	BRADLEY COPELAND	35.13 ACRES±



ROYALTY OWNERS		
DELORES ANN FORD ET AL	22.2 AC±	LEASE NO. 993305
DELORES ANN FORD ET AL	59.5 AC±	LEASE NO. 993306

(S.P.C. NORTH ZONE) (UTM(M) ZONE 17 NORTH)

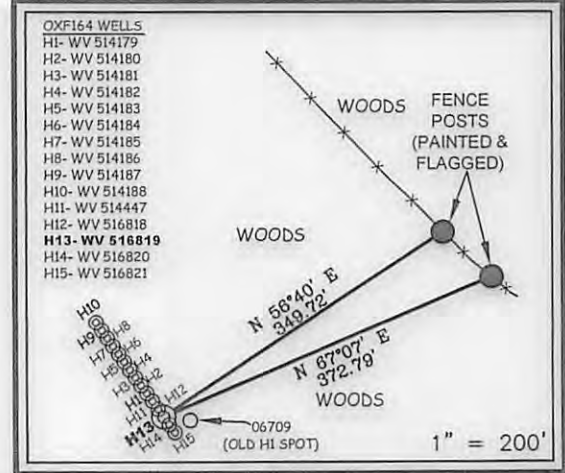
NAD'27 S.P.C.(FT)	N. 249,015.52	E. 1,623,095.80
NAD'27 GEO.	LAT-(N) 39.176037	LONG-(W) 80.829515
NAD'83 UTM (M)	N. 4,336,335.17	E. 514,740.87
LANDING POINT		
NAD'27 S.P.C.(FT)	N. 248,906.62	E. 1,623,171.10
NAD'27 GEO.	LAT-(N) 39.175741	LONG-(W) 80.829244
NAD'83 UTM (M)	N. 4,336,302.38	E. 514,764.36
BOTTOM HOLE		
NAD'27 S.P.C.(FT)	N. 244,427.77	E. 1,624,371.50
NAD'27 GEO.	LAT-(N) 39.163494	LONG-(W) 80.824777
NAD'83 UTM (M)	N. 4,334,944.03	E. 515,152.83

NOTES ON SURVEY

- NO WATER WELLS WERE FOUND WITHIN 250' OF PROPOSED GAS WELL. NO AGRICULTURAL BUILDINGS ≥ 2500 SQ. FT. OR DWELLINGS WERE FOUND WITHIN 625' OF THE CENTER OF PROPOSED WELL PAD.
- WELL SPOT CIRCLE & TOPO MARK SCALE 1"=2000'.



REFERENCES



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 THE REGULATIONS ISSUED AND PRESCRIBED BY THE DIVISION OF ENVIRONMENTAL PROTECTION.

P.S. C. Victor Moyers
 849



(+) DENOTES LOCATION OF WELL ON UNITED STATES TOPOGRAPHIC MAPS.
 DATE JULY 29, 20 16
 REVISED _____, 20 ____
 OPERATORS WELL NO. WV 516819
 API WELL NO. 47-017-06784
 STATE COUNTY PERMIT

MINIMUM DEGREE OF ACCURACY 1 / 2500 FILE NO. 7699P516819
 HORIZONTAL & VERTICAL CONTROL DETERMINED BY DGPS (SURVEY GRADE TIE TO CORS NETWORK) SCALE SEE NOTE 2

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

WELL TYPE: OIL ___ GAS X LIQUID INJECTION ___ WASTE DISPOSAL ___ IF "GAS" PRODUCTION X STORAGE ___ DEEP ___ SHALLOW X

LOCATION: (EXISTING) (PROPOSED)
 ELEVATION 1,196' 1,170.5' WATERSHED LOWER RUN OF MIDDLE FORK & JIMS RUN OF UPPER RUN

DISTRICT SOUTHWEST COUNTY DODDRIDGE QUADRANGLE OXFORD 7.5'

SURFACE OWNER (1/2) CHARLES D. LOCKE & (1/2) DONALD & BARBARA OSBURN ACREAGE 60.5±

ROYALTY OWNER (1/2) CHARLES D. LOCKE & (1/2) DONALD OSBURN ET AL ACREAGE 150±

PROPOSED WORK :
 DRILL X CONVERT ___ DRILL DEEPER ___ REDRILL ___ FRACTURE OR STIMULATE X PLUG OFF OLD FORMATION ___ PERFORATE NEW FORMATION ___ PLUG AND ABANDON ___ CLEAN OUT AND REPLUG ___ OTHER ___

PHYSICAL CHANGE IN WELL (SPECIFY) _____ TARGET FORMATION MARCELLUS
 ESTIMATED DEPTH 6,549'

WELL OPERATOR EQT PRODUCTION COMPANY DESIGNATED AGENT REX C. RAY
 ADDRESS 115 PROFESSIONAL PLACE P.O. BOX 280 BRIDGEPORT, WV 26330 ADDRESS 115 PROFESSIONAL PLACE P.O. BOX 280 BRIDGEPORT, WV 26330

TOP HOLE LONGITUDE 80°47'30" 11,763'

12/16/2016

**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:

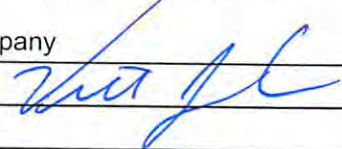
Lease Name or Number	Grantor, Lessor, etc.	Grantee, Lessee, etc.	Royalty	Book/Page
See Attached				

**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: Victoria J Roark 
 Its: Permitting Supervisor

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Office of Oil and Gas

AUG 12 2016

WV Department of
Environmental Protection

Lease No.	Grantor, Lessor, etc.	Grantee, Lessee, etc.	Royalty	Book/Page
107441	Charles D. Locke and Donald E. Osburn (current royalty owner)			
	J. S. Britton, et ux (original lessor)	U. G. Summers		LB22/438
	U. G. Summers	The Fisher Oil Co.		LB22/443
	The Fisher Oil Co.	The Philadelphia Oil Co.		LB24/64
	The Philadelphia Oil Co.	Pittsburgh & West Virginia Gas Co.		LB32/253
	Pittsburgh & West Virginia Gas Co.	Equitable Gas Co.		DB121/257
	Equitable Gas Co.	Equitrans, Inc.		LB154/475
	Equitrans, Inc.	Equitrans, L.P.		LB329/645
	Equitrans, L.P.	Equitable Production-Eastern States, Inc.		LB192/19
	Equitable Production-Eastern States, Inc./Equitable Production Company	Equitable Production Company		CB281/346
993305	Delores Ann Ford, et al (current royalty owner)			
	Daniel Lee Husk (original lessor)	EQT Production Company	***	LB301/444
993306	Delores Ann Ford, et al (current royalty owner)			
	Daniel Lee Husk (original lessor)	EQT Production Company	***	LB301/472

*** We will pay one-eighth of the total amount paid to or received by or allowed to the owner of the working interest at the wellhead for the oil or gas so extracted, produced, or marketed before deducting the amount to be paid to or set aside for the owner of the oil or gas in place, on all such oil or gas to be extracted, produced, or marketed from the well

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July 11, 2016

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

Re: OXF164 well pad, well number 516819
Southwest District, Doddridge County

Dear Mr. Martin,

EQT Production Company is submitting an application for a new well work permit for the above well number. Upon information and belief, 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,

A handwritten signature in blue ink, appearing to read 'Vicki Roark'.

Vicki Roark
Permitting Supervisor-WV

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

Date of Notice Certification: _____

API No. 47- 017 - _____
Operator's Well No. 516819 _____
Well Pad Name: OXF164 _____

Notice has been given:

Pursuant to the provisions in West Virginia Code § 22-6A, the Operator has provided the required parties with the Notice Forms listed below for the tract of land as follows:

State:	<u>WV</u>	UTM NAD 83	Eastings:	<u>514740.867</u>
County:	<u>Doddridge</u>		Northing:	<u>4336335.169</u>
District:	<u>Southwest</u>	Public Road Access:		<u>RT 50</u>
Quadrangle:	<u>Oxford</u>	Generally used farm name:		<u>Charles D. Locke and Donald & Barbara Osbum</u>
Watershed:	<u>Lower Run of Middle Fork and Jims Run of Upper Run</u>			

Pursuant to West Virginia Code § 22-6A-7(b), every permit application filed under this section shall be on a form as may be prescribed by the secretary, shall be verified and shall contain the following information: (14) A certification from the operator that (i) it has provided the owners of the surface described in subdivisions (1), (2) and (4), subsection (b), section ten of this article, the information required by subsections (b) and (c), section sixteen of this article; (ii) that the requirement was deemed satisfied as a result of giving the surface owner notice of entry to survey pursuant to subsection (a), section ten of this article six-a; or (iii) the notice requirements of subsection (b), section sixteen of this article were waived in writing by the surface owner; and Pursuant to West Virginia Code § 22-6A-11(b), the applicant shall tender proof of and certify to the secretary that the notice requirements of section ten of this article have been completed by the applicant.

<p>Pursuant to West Virginia Code § 22-6A, the Operator has attached proof to this Notice Certification that the Operator has properly served the required parties with the following:</p> <p>*PLEASE CHECK ALL THAT APPLY</p> <p><input type="checkbox"/> 1. NOTICE OF SEISMIC ACTIVITY or <input checked="" type="checkbox"/> NOTICE NOT REQUIRED BECAUSE NO SEISMIC ACTIVITY WAS CONDUCTED</p> <p><input type="checkbox"/> 2. NOTICE OF ENTRY FOR PLAT SURVEY or <input checked="" type="checkbox"/> NO PLAT SURVEY WAS CONDUCTED</p> <p><input checked="" type="checkbox"/> 3. NOTICE OF INTENT TO DRILL or <input type="checkbox"/> NOTICE NOT REQUIRED BECAUSE NOTICE OF ENTRY FOR PLAT SURVEY WAS CONDUCTED or</p> <p><input type="checkbox"/> WRITTEN WAIVER BY SURFACE OWNER (PLEASE ATTACH)</p> <p><input checked="" type="checkbox"/> 4. NOTICE OF PLANNED OPERATION</p> <p><input checked="" type="checkbox"/> 5. PUBLIC NOTICE</p> <p><input checked="" type="checkbox"/> 6. NOTICE OF APPLICATION</p>		<p>OOG OFFICE USE ONLY</p> <p><input type="checkbox"/> RECEIVED/ NOT REQUIRED</p> <p><input type="checkbox"/> RECEIVED</p> <p><input type="checkbox"/> RECEIVED/ NOT REQUIRED</p> <p><input type="checkbox"/> RECEIVED</p> <p><input type="checkbox"/> RECEIVED</p> <p><input type="checkbox"/> RECEIVED</p>
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Required Attachments:

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 personal service, the return receipt card or other postal receipt for certified mailing.

WV Department of
Environmental Protection

12/16/2016

Certification of Notice is hereby given.

THEREFORE, I *Victoria J Roark*, 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
By: Victoria J Roark
Its: Permitting Supervisor
Telephone: 304-848-0076

Address: 115 Professional Place PO Box 280
Bridgeport WV 26330
Facsimile: 304-848-0041
Email: vroark@eqt.com



Subscribed and sworn before me this 9 day of August 2016.
Rebecca L Wanstreet Notary Public
My Commission Expires 4-7-2020

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.

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Environmental Protection

12/16/2016

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 than the filing date of permit application.

Date of Notice: 8/9/16 Date Permit Application Filed: 8/9/16

Notice of:

- PERMIT FOR ANY WELL WORK
- CERTIFICATE OF APPROVAL FOR THE CONSTRUCTION OF AN IMPOUNDMENT OR PIT

Delivery method pursuant to West Virginia Code § 22-6A-10(b)

- PERSONAL SERVICE
- REGISTERED MAIL
- METHOD OF DELIVERY THAT REQUIRES A RECEIPT OR SIGNATURE CONFIRMATION

Pursuant to W. Va. Code § 22-6A-10(b) no later than the filing date of the application, the applicant for a permit for any well work or for a certificate of approval for the construction of an impoundment or pit as required by this article shall deliver, by personal service or by registered mail or by any method of delivery that requires a receipt or signature confirmation, copies of the application, the erosion and sediment control plan required by section seven of this article, and the well plat to each of the following persons: (1) The owners of record of the surface of the tract on which the well is or is proposed to be located; (2) The owners of record of the surface tract or tracts overlying the oil and gas leasehold being developed by the proposed well work, if the surface tract is to be used for roads or other land disturbance as described in the erosion and sediment control plan submitted pursuant to subsection (c), section seven of this article; (3) The coal owner, operator or lessee, in the event the tract of land on which the well proposed to be drilled is located [sic] is known to be underlain by one or more coal seams; (4) The owners of record of the surface tract or tracts overlying the oil and gas leasehold being developed by the proposed well work, if the surface tract is to be used for the placement, construction, enlargement, alteration, repair, removal or abandonment of any impoundment or pit as described in section nine of this article; (5) Any surface owner or water purveyor who is known to the applicant to have a water well, spring or water supply source located within one thousand five hundred feet of the center of the well pad which is used to provide water for consumption by humans or domestic animals; and (6) The operator of any natural gas storage field within which the proposed well work activity is to take place. (c)(1) If more than three tenants in common or other co-owners of interests described in subsection (b) of this section hold interests in the lands, the applicant may serve the documents required upon the person described in the records of the sheriff required to be maintained pursuant to section eight, article one, chapter eleven-a of this code. (2) Notwithstanding any provision of this article to the contrary, notice to a lien holder is not notice to a landowner, unless the lien holder is the landowner. W. Va. Code R. § 35-8-5.7.a requires, in part, that the operator shall also provide the Well Site Safety Plan ("WSSP") 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.

Application Notice WSSP Notice E&S Plan Notice Well Plat Notice is hereby provided to:

SURFACE OWNER(s)

Name: See Attached

Address: _____

Name: _____

Address: _____

SURFACE OWNER(s) (Road and/or Other Disturbance)

Name: See Attached

Address: _____

Name: _____

Address: _____

SURFACE OWNER(s) (Impoundments or Pits)

Name: See Attached

Address: _____

COAL OWNER OR LESSEE

Name: See Attached

Address: _____

COAL OPERATOR

Name: _____

Address: _____

SURFACE OWNER OF WATER WELL AND/OR WATER PURVEYOR(s)

Name: See Attached

Address: _____

OPERATOR OF ANY NATURAL GAS STORAGE FIELD

Name: _____

Address: _____

*Please attach additional forms if necessary AUG 12 2016

WV Department of
Environmental Protection

12/16/2016

Surface Owners:

Charles David Locke ✓
669 West View Ave.
Morgantown WV 26505

Donald E and Barbara H Osburn ✓
29773 Chilcutt Road
Easton MD 21601

7015 0640 0005 9572 4049

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OFFICIAL USE

Certified Mail Fee	\$
Extra Services & Fees (check box, add fee as appropriate)	
<input type="checkbox"/> Return Receipt (hardcopy)	\$
<input type="checkbox"/> Return Receipt (electronic)	\$
<input type="checkbox"/> Certified Mail Restricted Delivery	\$
<input type="checkbox"/> Adult Signature Required	\$
<input type="checkbox"/> Adult Signature Restricted Delivery	\$
Postage	\$
Total Postage	\$
Sent To	
Street and	
City, State	
PS Form 3800, April 2010	See Reverse for Instructions

Postmark Here

AUG 09 2016

Charles David Locke ✓
669 West View Ave.
Morgantown WV 26505
OXF164 Permit App and Planned Op

RW

7015 0640 0005 9572 4032

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Certified Mail Fee	\$
Extra Services & Fees (check box, add fee as appropriate)	
<input type="checkbox"/> Return Receipt (hardcopy)	\$
<input type="checkbox"/> Return Receipt (electronic)	\$
<input type="checkbox"/> Certified Mail Restricted Delivery	\$
<input type="checkbox"/> Adult Signature Required	\$
<input type="checkbox"/> Adult Signature Restricted Delivery	\$
Postage	\$
Total Postage	\$
Sent To	
Street and	
City, State	
PS Form 3800, April 2010	See Reverse for Instructions

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Donald E and Barbara H Osburn ✓
29773 Chilcutt Road
Easton MD 21601
OXF164 Permit App and Planned Op

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12/16/2016

Surface Owners (road or other disturbance):

Charles David Locke
669 West View Ave.
Morgantown WV 26505

Donald E and Barbara H Osburn
29773 Chilcutt Road
Easton MD 21601



Barbara Osbourne
1371 Harmony Road
West Union WV 26456

7015 0640 0005 9572 4049

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Extra Services & Fees (check box, add fee as appropriate)	
<input type="checkbox"/> Return Receipt (hardcopy)	\$
<input type="checkbox"/> Return Receipt (electronic)	\$
<input type="checkbox"/> Certified Mail Restricted Delivery	\$
<input type="checkbox"/> Adult Signature Required	\$
<input type="checkbox"/> Adult Signature Restricted Delivery	\$
Postage	\$
Total Postage	\$
Sent To	
Street and	
City, State	

Postmark Here

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Charles David Locke
669 West View Ave.
Morgantown WV 26505
OXF164 Permit App and Planned Op

PS Form 3800, October 2011 See Reverse for Instructions

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OFFICIAL USE

Certified Mail Fee	\$
Extra Services & Fees (check box, add fee as appropriate)	
<input type="checkbox"/> Return Receipt (hardcopy)	\$
<input type="checkbox"/> Return Receipt (electronic)	\$
<input type="checkbox"/> Certified Mail Restricted Delivery	\$
<input type="checkbox"/> Adult Signature Required	\$
<input type="checkbox"/> Adult Signature Restricted Delivery	\$
Postage	\$
Total Postage	\$
Sent To	
Street and	
City, State	

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Donald E and Barbara H Osburn
29773 Chilcutt Road
Easton MD 21601
OXF164 Permit App and Planned Op

PS Form 3800, October 2011 See Reverse for Instructions

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Certified Mail Fee	\$
Extra Services & Fees (check box, add fee as appropriate)	
<input type="checkbox"/> Return Receipt (hardcopy)	\$
<input type="checkbox"/> Return Receipt (electronic)	\$
<input type="checkbox"/> Certified Mail Restricted Delivery	\$
<input type="checkbox"/> Adult Signature Required	\$
<input type="checkbox"/> Adult Signature Restricted Delivery	\$
Postage	\$
Total Postage	\$
Sent To	
Street and	
City, State	

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Barbara Osbourne
1371 Harmony Rd.
West Union WV 26456
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Surface Owners (Pits or impoundments):

Charles David Locke
669 West View Ave.
Morgantown WV 26505

3 ✓

Donald E and Barbara H Osburn
29773 Chilcutt Road
Easton MD 21601

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Certified Mail Fee		Postmark Here
\$		
Extra Services & Fees (check box, add fee as appropriate)		
<input type="checkbox"/>	Return Receipt (hardcopy)	\$
<input type="checkbox"/>	Return Receipt (electronic)	\$
<input type="checkbox"/>	Certified Mail Restricted Delivery	\$
<input type="checkbox"/>	Adult Signature Required	\$
<input type="checkbox"/>	Adult Signature Restricted Delivery	\$
Postage		
\$	Total Paid	
\$	Sent To	
Street and	City, State	

Charles David Locke
669 West View Ave.
Morgantown WV 26505
OXF164 Permit App and Planned Op

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PS Form 3800, April 2012 See Reverse for Instructions

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Certified Mail Fee		Postmark Here
\$		
Extra Services & Fees (check box, add fee as appropriate)		
<input type="checkbox"/>	Return Receipt (hardcopy)	\$
<input type="checkbox"/>	Return Receipt (electronic)	\$
<input type="checkbox"/>	Certified Mail Restricted Delivery	\$
<input type="checkbox"/>	Adult Signature Required	\$
<input type="checkbox"/>	Adult Signature Restricted Delivery	\$
Postage		
\$	Total Paid	
\$	Sent To	
Street and	City, State	

Donald E and Barbara H Osburn
29773 Chilcutt Road
Easton MD 21601
OXF164 Permit App and Planned Op

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12/16/2016

Coal Owner

AMP Fund III
225 Ross St Suite 301
Pittsburgh PA 15219



7075 7640 0005 9572 4018

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Certified Mail Fee	\$
Extra Services & Fees (check box, add fee as appropriate)	
<input type="checkbox"/> Return Receipt (hardcopy)	\$
<input type="checkbox"/> Return Receipt (electronic)	\$
<input type="checkbox"/> Certified Mail Restricted Delivery	\$
<input type="checkbox"/> Adult Signature Required	\$
<input type="checkbox"/> Adult Signature Restricted Delivery	\$
Postage	\$

Postmark Here

AUG 09 2016

AMP Fund III
225 Ross St Suite 301
Pittsburgh PA 15219
OXF164 Permit App

Use for Instructions



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WV Department of
Environmental Protection

12/16/2016

Owners of Water Wells

Barbara Osbourne
1371 Harmony Road
West Union WV 26456

3 ✓

William Jenkins
207 Edmond Street
West Union WV 26456

7015 0640 0005 9572 4025

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Certified Mail Fee	\$
Extra Services & Fees (check box, add fee as appropriate)	
<input type="checkbox"/> Return Receipt (hardcopy)	\$
<input type="checkbox"/> Return Receipt (electronic)	\$
<input type="checkbox"/> Certified Mail Restricted Delivery	\$
<input type="checkbox"/> Adult Signature Required	\$
<input type="checkbox"/> Adult Signature Restricted Delivery	\$
Postage	\$
Total Postage and Fees	\$

To: Barbara Osbourne
1371 Harmony Rd.
West Union WV 26456
OXF164 Permit App and Planned Op

Postmark Here
AUG 09 2016

Instructions

7015 0640 0005 9572 4001

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Certified Mail Fee	\$
Extra Services & Fees (check box, add fee as appropriate)	
<input type="checkbox"/> Return Receipt (hardcopy)	\$
<input type="checkbox"/> Return Receipt (electronic)	\$
<input type="checkbox"/> Certified Mail Restricted Delivery	\$
<input type="checkbox"/> Adult Signature Required	\$
<input type="checkbox"/> Adult Signature Restricted Delivery	\$
Postage	\$
Total Postage and Fees	\$

To: William Jenkins
207 Edmond Street
West Union WV 26456
OXF164 Permit App

Postmark Here
AUG 09 2016

Instructions

Notice is hereby given:

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/oil-and-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. If 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

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-11(b) may file written comments 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

Office of Oil and Gas

AUG 12 2016

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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Office of Oil and Gas

AUG 12 2016

WV Department of
Environmental Protection

WW-6A
(8-13)

API NO. 47-017 -
OPERATOR WELL NO. 516819
Well Pad Name: OXF164

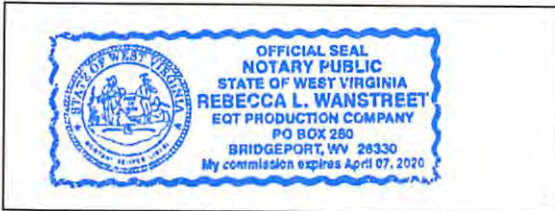
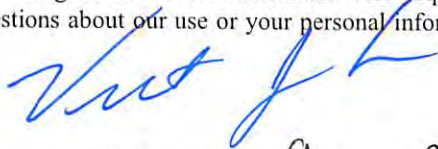
Notice is hereby given by:

Well Operator: EQT Production Company
Telephone: 304-848-0076
Email: vroark@eqt.com

Address: 115 Professional Place PO Box 280
Bridgeport WV 26330
Facsimile: 304-848-0041

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.



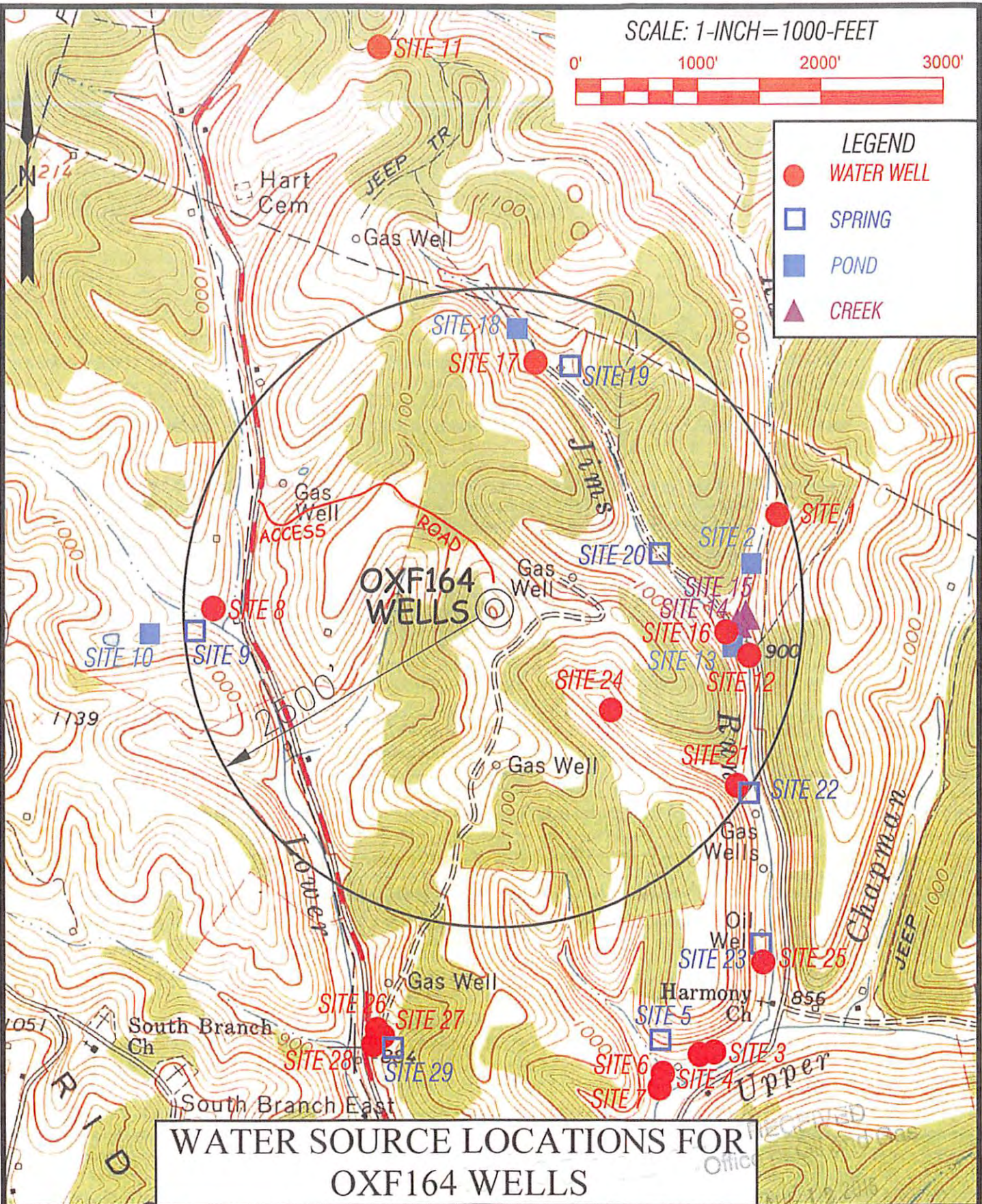
Subscribed and sworn before me this 9 day of August 2016.
Rebecca L Wanstreet Notary Public
My Commission Expires 4-7-2020

SCALE: 1-INCH=1000-FEET



LEGEND

- WATER WELL
- SPRING
- POND
- ▲ CREEK



WATER SOURCE LOCATIONS FOR OXF164 WELLS

<p>Professional Energy Consultants A DIVISION OF SMITH LAND SURVEYING, INC.</p> <p>SLS SURVEYORS ENGINEERS ENVIRONMENTAL PROJECT MGMT.</p>	TOPO SECTION OF: OXFORD, WV 7.5' QUAD		OPERATOR: EQT PRODUCTION COMPANY 115 PROFESSIONAL PLACE P.O. BOX 280 BRIDGEPORT, WV 26330
	DISTRICT SOUTHWEST	COUNTY DODDRIDGE	TAX MAP-PARCEL NO. 06-15
DRAWN BY K.D.W.	FILE NO. 7699	DATE 05/25/16	CADD FILE: 76999502164-R.dwg

12/16/2016

**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.

Notice Time Requirement: Notice shall be provided at least **TEN (10)** days prior to filing a permit application.

Date of Notice: 05/26/2016 **Date Permit Application Filed:** 06/05/2016

Delivery method pursuant to West Virginia Code § 22-6A-16(b)

HAND DELIVERY CERTIFIED MAIL RETURN RECEIPT REQUESTED

Pursuant to W. Va. Code § 22-6A-16(b), at least ten days prior to filing a permit application, an operator shall, by certified mail return receipt requested or hand delivery, give the surface owner notice of its intent to enter upon the surface owner's land for the purpose of drilling a horizontal well: *Provided*, That notice given pursuant to subsection (a), section ten of this article satisfies the requirements of this subsection as of the date the notice was provided to the surface owner: *Provided, however*, That the notice requirements of this subsection may be waived in writing by the surface owner. The notice, if required, shall include the name, address, telephone number, and if available, facsimile number and electronic mail address of the operator and the operator's authorized representative.

Notice is hereby provided to the SURFACE OWNER(s):

Name: See Attached
Address: _____

Name: See Attached
Address: _____

Notice is hereby given:

Pursuant to West Virginia Code § 22-6A-16(b), notice is hereby given that the undersigned well operator has an intent to enter upon the surface owner's land for the purpose of drilling a horizontal well on the tract of land as follows:

State:	<u>WV</u>	UTM NAD 83 Easting:	<u>514740.867</u>
County:	<u>Doddridge</u>	Northing:	<u>4336335.169</u>
District:	<u>Southwest</u>	Public Road Access:	<u>RT 50</u>
Quadrangle:	<u>Oxford</u>	Generally used farm name:	<u>Charles D. Locke and Donald & Barbara Osburn</u>
Watershed:	<u>Lower Run of Middle Fork and Jims Run of Upper Run</u>		

This Notice Shall Include:

Pursuant to West Virginia Code § 22-6A-16(b), this notice shall include the name, address, telephone number, and if available, facsimile number and electronic mail address of the operator and the operator's authorized representative. 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/oil-and-gas/pages/default.aspx.

Notice is hereby given by:

Well Operator: EQT Production Company
Address: 115 Professional Place PO Box 280
Bridgeport WV 26330
Telephone: 304-848-0076
Email: vroark@eqt.com
Facsimile: 304-848-0041

Authorized Representative: Victoria Roark
Address: 115 Professional Place PO Box 280
Bridgeport WV 26330
Telephone: 304-848-0076
Email: vroark@eqt.com
Facsimile: 304-848-0041

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.

RECEIVED
Office of Oil and Gas
June 16, 2016
WV Department of
Environmental Protection

Surface Owners:

Charles David Locke
669 West View Ave.
Morgantown WV 26505



Donald E and Barbara H Osburn
29773 Chilcutt Road
Easton MD 21601

7016 0340 0000 8668 4076

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<input type="checkbox"/> Return Receipt (hardcopy)	\$
<input type="checkbox"/> Return Receipt (electronic)	\$
<input type="checkbox"/> Certified Mail Restricted Delivery	\$
<input type="checkbox"/> Adult Signature Required	\$
<input type="checkbox"/> Adult Signature Restricted Delivery	\$

Postage \$

Total Postage and Fees \$

Sent To
Street and
City, State

PS Form 3849, October 2015

Charles David Locke
669 West View Ave.
Morgantown WV 26505
OXF164 NOTICE OF INTENT

MAY 25 2016 Postmark Here

[Signature]

7016 0340 0000 8668 4306

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<input type="checkbox"/> Return Receipt (electronic)	\$
<input type="checkbox"/> Certified Mail Restricted Delivery	\$
<input type="checkbox"/> Adult Signature Required	\$
<input type="checkbox"/> Adult Signature Restricted Delivery	\$

Postage \$

Total \$

Sent To
Street
City,

PS Form 3849, October 2015

Donald E and Barbara H Osburn
29773 Chilcutt Road
Easton MD 21601
OXF164 NOTICE OF INTENT

MAY 25 2016 Postmark Here

[Signature]



Surface Owners (road or other disturbance):

Charles David Locke
669 West View Ave.
Morgantown WV 26505

Donald E and Barbara H Osburn
29773 Chilcutt Road
Easton MD 21601

Barbara Osbourne
RT1 Box 180
West Union WV 26456



Sent to Corrected Address

Barbara Osbourne
1371 Harmony Road
West Union WV 26456

7016 0340 0000 8668 4076

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 Return Receipt (hardcopy) \$
 Return Receipt (electronic) \$
 Certified Mail Restricted Delivery \$
 Adult Signature Required \$
 Adult Signature Restricted Delivery \$
 Postage \$
 Total Postage and Fees \$

Postmark Here: MAY 25 2016

Sent To
Street and
City, State

Charles David Locke
669 West View Ave.
Morgantown WV 26505
OXF164 NOTICE OF INTENT

PS Form 3800, April 2015 PSN 7530-02-000-9047 See Reverse for Instructions

7016 0340 0000 8668 4106

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 Return Receipt (electronic) \$
 Certified Mail Restricted Delivery \$
 Adult Signature Required \$
 Adult Signature Restricted Delivery \$
 Postage \$
 Total Postage and Fees \$

Postmark Here: MAY 25 2016

Sent To
Street and
City, State

Donald E and Barbara H Osburn
29773 Chilcutt Road
Easton MD 21601
OXF164 NOTICE OF INTENT

PS Form 3800, April 2015 PSN 7530-02-000-9047 See Reverse for Instructions

7016 0340 0000 8668 4090

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 Return Receipt (hardcopy) \$
 Return Receipt (electronic) \$
 Certified Mail Restricted Delivery \$
 Adult Signature Required \$
 Adult Signature Restricted Delivery \$
 Postage \$
 Total Postage and Fees \$

Postmark Here: MAY 25 2016

Sent To
Street and
City, State

Barbara Osbourne
RT 1 Box 180
West Union WV 26456
OXF164 NOTICE OF INTENT

PS Form 3800, April 2015 PSN 7530-02-000-9047 See Reverse for Instructions

7016 0340 0000 8668 3734

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 Return Receipt (hardcopy) \$
 Return Receipt (electronic) \$
 Certified Mail Restricted Delivery \$
 Adult Signature Required \$
 Adult Signature Restricted Delivery \$
 Postage \$
 Total Postage and Fees \$

Postmark Here: AUG 12 2016

Sent To
Street and Apt. No., or PO Box No.
City, State, ZIP+4®

Barbara Osbourne
1371 Harmony Rd.
West Union WV 26456
OXF164 Notice of Intent

12/16/2016

PS Form 3800, April 2015 PSN 7530-02-000-9047 See Reverse for Instructions

Surface Owners (Pits or impoundments):

Charles David Locke
 669 West View Ave.
 Morgantown WV 26505

Donald E and Barbara H Osburn
 29773 Chilcutt Road
 Easton MD 21601

3 ✓

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<input type="checkbox"/> Return Receipt (hardcopy)	\$
<input type="checkbox"/> Return Receipt (electronic)	\$
<input type="checkbox"/> Certified Mail Restricted Delivery	\$
<input type="checkbox"/> Adult Signature Required	\$
<input type="checkbox"/> Adult Signature Restricted Delivery	\$

Postage
 \$

Total Postage and Fees
 \$

Sent To
 Street an
 City, State

PS Form

Charles David Locke
 669 West View Ave.
 Morgantown WV 26505
 OXF164 NOTICE OF INTENT

MAY 25 2016 Postmark Here

7016 0340 0000 8668 4076

7016 0340 0000 8668 4106

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Extra Services & Fees (check box, add fee as appropriate)

<input type="checkbox"/> Return Receipt (hardcopy)	\$
<input type="checkbox"/> Return Receipt (electronic)	\$
<input type="checkbox"/> Certified Mail Restricted Delivery	\$
<input type="checkbox"/> Adult Signature Required	\$
<input type="checkbox"/> Adult Signature Restricted Delivery	\$

Postage
 \$

Total
 \$

Sent
 Street
 City,

PS Form

Donald E and Barbara H Osburn
 29773 Chilcutt Road
 Easton MD 21601
 OXF164 NOTICE OF INTENT

MAY 25 2016 Postmark Here

7016 0340 0000 8668 4106

✓

RECEIVED
 Office of Oil and Gas
 AUG 12 2016
 WV Department of
 Environmental Protection

12/16/2016

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

Notice Time Requirement: notice shall be provided no later than the filing date of permit application.

Date of Notice: 8/9/16 Date Permit Application Filed: 8/9/16

Delivery method pursuant to West Virginia Code § 22-6A-16(c)

- CERTIFIED MAIL
RETURN RECEIPT REQUESTED
- HAND
DELIVERY

Pursuant to W. Va. Code § 22-6A-16(c), no later than the date for filing the permit application, an operator shall, by certified mail return receipt requested or hand delivery, give the surface owner whose land will be used for the drilling of a horizontal well notice of the planned operation. The notice required by this subsection shall include: (1) A copy of this code section; (2) The information required to be provided by subsection (b), section ten of this article to a surface owner whose land will be used in conjunction with the drilling of a horizontal well; and (3) A proposed surface use and compensation agreement containing an offer of compensation for damages to the surface affected by oil and gas operations to the extent the damages are compensable under article six-b of this chapter. (d) The notices required by this section shall be given to the surface owner at the address listed in the records of the sheriff at the time of notice.

Notice is hereby provided to the SURFACE OWNER(s)
(at the address listed in the records of the sheriff at the time of notice):

Name: See Attached
Address: _____

Name: See Attached
Address: _____

Notice is hereby given:

Pursuant to West Virginia Code § 22-6A-16(c), notice is hereby given that the undersigned well operator has developed a planned operation on the surface owner's land for the purpose of drilling a horizontal well on the tract of land as follows:

State:	<u>WV</u>	UTM NAD 83	Easting:	<u>514740.867</u>
County:	<u>Doddridge</u>		Northing:	<u>4336335.169</u>
District:	<u>Southwest</u>	Public Road Access:		<u>RT 50</u>
Quadrangle:	<u>Oxford</u>	Generally used farm name:		<u>Charles D. Locke and Donald & Barbara Osburn</u>
Watershed:	<u>Lower Run of Middle Fork and Jims Run of Upper Run</u>			

This Notice Shall Include:

Pursuant to West Virginia Code § 22-6A-16(c), this notice shall include: (1) A copy of this code section; (2) The information required to be provided by W. Va. Code § 22-6A-10(b) to a surface owner whose land will be used in conjunction with the drilling of a horizontal well; and (3) A proposed surface use and compensation agreement containing an offer of compensation for damages to the surface affected by oil and gas operations to the extent the damages are compensable under article six-b of this chapter. 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/oil-and-gas/pages/default.aspx.

Well Operator: EQT Production Company
Telephone: 304-848-0076
Email: wroark@eqt.com

Address: 115 Professional Place PO Box 280
Bridgeport WV 26330
Facsimile: 304-848-0041

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.

RECEIVED
Office of Oil and Gas

AUG 12 2016

WV Department of
Environmental Protection **12/16/2016**

Surface Owners:

Charles David Locke
669 West View Ave.
Morgantown WV 26505

3 ✓

Donald E and Barbara H Osburn
29773 Chilcutt Road
Easton MD 21601

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Extra Services & Fees (check box, add fee as appropriate)	
<input type="checkbox"/> Return Receipt (hardcopy)	\$
<input type="checkbox"/> Return Receipt (electronic)	\$
<input type="checkbox"/> Certified Mail Restricted Delivery	\$
<input type="checkbox"/> Adult Signature Required	\$
<input type="checkbox"/> Adult Signature Restricted Delivery	\$
Postage	\$
Total Postage	\$
Sent To	
Street and	
City, State	

Postmark Here

AUG 09 2016

Charles David Locke
669 West View Ave.
Morgantown WV 26505
OXF164 Permit App and Planned Op

RW

PS Form 3849, October 2010 See Reverse for Instructions

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<input type="checkbox"/> Return Receipt (hardcopy)	\$
<input type="checkbox"/> Return Receipt (electronic)	\$
<input type="checkbox"/> Certified Mail Restricted Delivery	\$
<input type="checkbox"/> Adult Signature Required	\$
<input type="checkbox"/> Adult Signature Restricted Delivery	\$
Postage	\$
Total Postage	\$
Sent To	
Street and	
City, State	

Postmark Here

AUG 09 2016

Donald E and Barbara H Osburn
29773 Chilcutt Road
Easton MD 21601
OXF164 Permit App and Planned Op

RW

PS Form 3849, October 2010 See Reverse for Instructions

✓

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Office of Oil and Gas
AUG 12 2016
WV Department of
Environmental Protection
12/16/2016

Surface Owners (road or other disturbance):

Charles David Locke ✓
 669 West View Ave.
 Morgantown WV 26505

Donald E and Barbara H Osburn ✓
 29773 Chilcutt Road
 Easton MD 21601

Barbara Osbourne ✓
 1371 Harmony Road
 West Union WV 26456

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Extra Services & Fees (check box, add fee as appropriate)	
<input type="checkbox"/> Return Receipt (hardcopy)	\$
<input type="checkbox"/> Return Receipt (electronic)	\$
<input type="checkbox"/> Certified Mail Restricted Delivery	\$
<input type="checkbox"/> Adult Signature Required	\$
<input type="checkbox"/> Adult Signature Restricted Delivery	\$
Postage	\$
Total Postage	\$

Sent To: Charles David Locke
 Street and City, State: Morgantown WV 26505
 PS Form 3800, See Reverse for Instructions

Postmark Here: AUG 09 2016

RW

7015 0640 0005 9572 4032

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OFFICIAL USE

Certified Mail Fee	\$
Extra Services & Fees (check box, add fee as appropriate)	
<input type="checkbox"/> Return Receipt (hardcopy)	\$
<input type="checkbox"/> Return Receipt (electronic)	\$
<input type="checkbox"/> Certified Mail Restricted Delivery	\$
<input type="checkbox"/> Adult Signature Required	\$
<input type="checkbox"/> Adult Signature Restricted Delivery	\$
Postage	\$
Total Postage	\$

Sent To: Donald E and Barbara H Osburn
 Street and City, State: Easton MD 21601
 PS Form 3800, See Reverse for Instructions

Postmark Here: AUG 09 2016

RW

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 Street and City, State: West Union WV 26456
 PS Form 3800, See Reverse for Instructions

Postmark Here: AUG 09 2016

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 WV Department of
 Environmental Protection

12/16/2016

Surface Owners (Pits or impoundments):

Charles David Locke
 669 West View Ave.
 Morgantown WV 26505



Donald E and Barbara H Osburn
 29773 Chilcutt Road
 Easton MD 21601

7015 0640 0005 9572 4049

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Sent To Street and City, State	Charles David Locke 669 West View Ave. Morgantown WV 26505 OXF164 Permit App and Planned Op
PS Form 3849, October 2015	See reverse for instructions

RW

7015 0640 0005 9572 4032

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Sent To Street and City, State	Donald E and Barbara H Osburn 29773 Chilcutt Road Easton MD 21601 OXF164 Permit App and Planned Op
PS Form 3849, October 2015	See reverse for instructions

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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

Earl Ray Tomblin
 Governor

Paul A. Mattox, Jr., P. E.
 Secretary of Transportation/
 Commissioner of Highways

Reissued July 12, 2016

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 OXF164 Well Site, Doddridge County

514179 OXF164H1	514180 OXF164H2	514181 OXF164H3
514182 OXF164H4	514183 OXF164H5	514184 OXF164H6
514185 OXF164H7	514186 OXF164H8	514187 OXF164H9
514188 OXF164H10	514447 OXF164H11	516818 OXF164H12
516819 OXF164H13	516820 OXF164H14	516821 OXF164H15

Dear Mr. Martin,

This well site will be accessed from Permit # 04-2015-0154 which has been applied for by EQT Production Company for access to the State Road for a well pad located off of County Rt. 19 SLS in 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

Cc: Nick Bumgardner
 EQT Production Company
 CH, OM, D-4
 File

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Anticipated Frac Additives
Chemical Names and CAS numbers

<u>Material</u>	<u>Ingredient</u>	<u>CAS Number</u>
Water		
Sand	Hydrotreated light petroleum distillate	14808-60-7
Friction Reducer	Tributyl tetradecyl phosphonium 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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PROJECT INFORMATION

PROJECT NAME: EQT OXF 164
 TAX PARCEL:
 SOUTH WEST DISTRICT, DODDRIDGE COUNTY, WV
 MAP 09 PARCELS 09 10 AND 15
 MAP 13 PARCELS 03 AND 71
 SURFACE OWNER:
 CHARLES D. LOCKE (1/2)
 DONALD E. AND BARBARA OSBURN (1/2)
 MAP 09, PARCEL 09
 SOUTH WEST DISTRICT, DODDRIDGE COUNTY, WV
 TOTAL PROPERTY AREA: 59.74 +/- ACRES
 TOTAL DISTURBANCE AREA: 12.4 +/- ACRES
 DELBERT & BARBARA OSBURN
 MAP 09, PARCEL 10
 SOUTH WEST DISTRICT, DODDRIDGE COUNTY, WV
 TOTAL PROPERTY AREA: 78.00 +/- ACRES
 TOTAL DISTURBANCE AREA: 1.51 +/- ACRES
 CHARLES D. LOCKE (1/2)
 DONALD E. AND BARBARA OSBURN (1/2)
 MAP 09, PARCEL 15
 SOUTH WEST DISTRICT, DODDRIDGE COUNTY, WV
 TOTAL PROPERTY AREA: 60.5 +/- ACRES
 TOTAL DISTURBANCE AREA: 10.7 +/- ACRES



OIL AND GAS ROYALTY OWNER:
 CHARLES D. LOCKE (1/2) AND OSBURN ETAL (1/2)
 SOUTH WEST DISTRICT, DODDRIDGE COUNTY, WV
 TOTAL PROPERTY AREA: 60.5 +/- ACRES
 SITE LOCATION:
 THE EQT OXF 164 ACCESS ROAD ENTRANCE IS LOCATED
 14.074 +/- (2.7 MILES) SOUTHEAST OF THE JUNCTION OF CO. RT. 19/11
 AND CO. RT. 19. THE WELL PAD IS LOCATED 16.474 +/- (3.1 MILES)
 SOUTHEAST OF THE JUNCTION OF CO. RT. 19/11 AND CO. RT. 19

LOCATION COORDINATES
 JUNCTION OF EQT OXF 164 ACCESS ROAD AND CO. RT. 19
 LATITUDE: 39.17942 LONGITUDE: 80.83331 (NAD 83)
 EQT OXF 164 FLOW BACK PIT CENTER
 LATITUDE: 39.17702 LONGITUDE: 80.83024 (NAD 83)
 EQT OXF 164 WELL PAD CENTER
 LATITUDE: 39.17813 LONGITUDE: 80.82949 (NAD 83)
 EQT OXF 164 COMPLETION PIT CENTER
 LATITUDE: 39.17765 LONGITUDE: 80.83349 (NAD 83)

GENERAL DESCRIPTION
 THE WELL PAD, ACCESS ROAD, COMPLETION PIT, AND FLOW BACK
 PIT IS BEING CONSTRUCTED TO AID IN THE TRANSMISSION OF
 NATURAL GAS FROM MARCELLUS SHALE GAS WELLS.
SITE DISTURBANCE COMPUTATIONS
 FLOW BACK PIT AND WELL PAD AREA = 11.34 +/- ACRES
 COMPLETION PIT AREA = 6.83 +/- ACRES
 ACCESS ROAD AREA = 6.56 +/- ACRES
 TOTAL SITE DISTURBANCE = 24.73 +/- ACRES

ENTRANCE PERMIT
 EQT PRODUCTION COMPANY WILL OBTAIN AN ENCROACHMENT PERMIT (FORM MM-109)
 FROM THE WEST VIRGINIA DEPARTMENT OF TRANSPORTATION DIVISION OF HIGHWAYS,
 PRIOR TO COMMENCEMENT OF CONSTRUCTION ACTIVITIES.

MISS UTILITY STATEMENT
 MISS UTILITY OF WEST VIRGINIA WAS NOTIFIED FOR THE LOCATING OF UTILITIES PRIOR TO
 THIS PROJECT DESIGN; TICKET #1307918514. IN ADDITION, MISS UTILITY WILL BE CONTACTED
 PRIOR TO START OF THE PROJECT.

FLOODPLAIN NOTE
 THE PROPOSED LIMITS OF DISTURBANCE FOR THIS PROJECT ARE NOT LOCATED IN FEMA
 FLOOD ZONE AE PER THE FLOOD INSURANCE RATE MAP (FIRM) NUMBER: 54017C0225C.

ENVIRONMENTAL NOTES
 A WETLAND DELINEATION WAS PERFORMED IN 2014, BY POTE STA & ASSOCIATES, INC. TO
 REVIEW THE SITE FOR WATERS AND WETLANDS THAT ARE MOST LIKELY WITHIN THE
 REGULATORY PURVIEW OF THE U.S. ARMY CORPS OF ENGINEERS (USACE) AND/OR THE
 WEST VIRGINIA DEPARTMENT OF ENVIRONMENTAL PROTECTION (WVDEP). THE 2014
 REPORT FOR THE EQT OXF 164 SITE WAS PREPARED BY POTE STA & ASSOCIATES, INC.,
 SUMMARIZES THE RESULTS OF THE FIELD DELINEATION. THE REPORT DOES NOT, IN ANY
 WAY, REPRESENT A JURISDICTIONAL DETERMINATION OF THE LANDWARD LIMITS OF
 WATERS AND WETLANDS WHICH MAY BE REGULATED BY THE USACE OR THE WVDEP. IT IS
 STRONGLY RECOMMENDED THAT THE AFORESAIDED AGENCIES BE CONSULTED IN AN
 EFFORT TO GAIN WRITTEN CONFIRMATION OF THE DELINEATION DESCRIBED BY THIS
 REPORT PRIOR TO ENGAGING CONSTRUCTION ON THE PROPERTY DESCRIBED HEREIN.
 THE DEVELOPER SHALL OBTAIN THE APPROPRIATE PERMITS FROM THE FEDERAL AND/OR
 STATE REGULATORY AGENCIES PRIOR TO ANY PROPOSED IMPACTS TO WATERS OF THE
 U.S., INCLUDING WETLAND FILLS AND STREAM CROSSINGS.

GEOTECHNICAL NOTES
 A SUBSURFACE INVESTIGATION HAS NOT BEEN PERFORMED AS OF NOVEMBER 06, 2014. THE
 ENGINEER AND SURVEYOR ARE NOT RESPONSIBLE FOR UNFORESEEN SUBSURFACE
 IRREGULARITIES CAUSING ADDITIONAL WORK OR ADDITIONAL CONSTRUCTION MEASURES
 REQUIRED BEYOND THOSE STANDARD PRACTICES SHOWN ON THIS PLAN AS A RESULT OF
 ANY OTHER GEOTECHNICAL COMPLICATIONS ENCOUNTERED DURING CONSTRUCTION.

MISS UTILITY of West Virginia
 1-800-245-8488
 West Virginia State Law
 (Section XIV, Chapter 24-C)
 Requires that you call two
 business days before you dig in
 the state of West Virginia.
 IT'S THE LAW!

OPERATOR
 EQT PRODUCTION COMPANY
 OPERATOR ID: 308686
 P.O. BOX 280
 BRIDGEPORT, WV 26630
 PHONE: (304) 348-3870

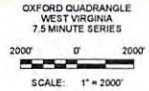
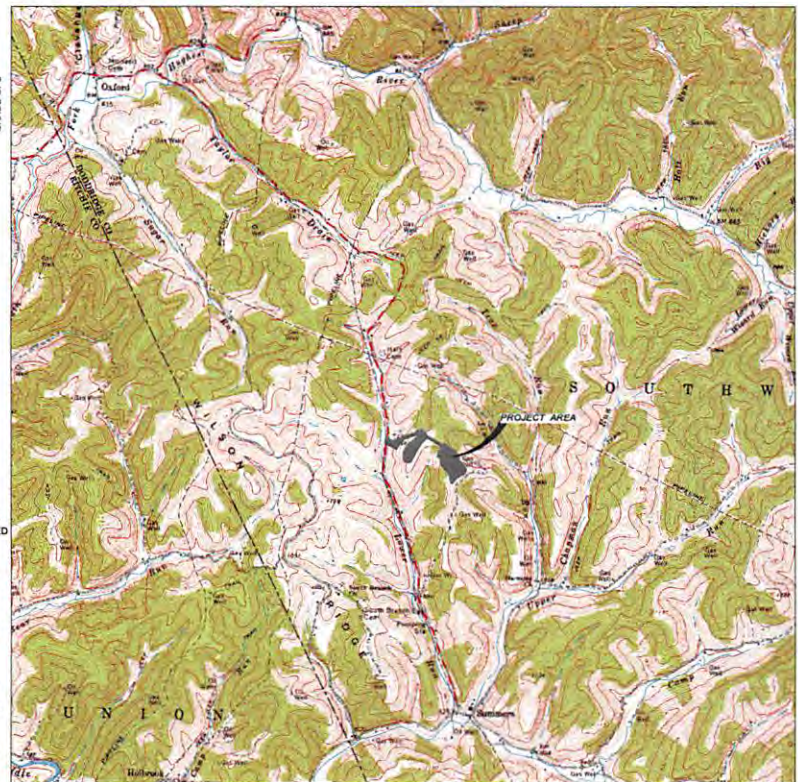
ENGINEER
 STANTEC CONSULTING
 SERVICES, INC.
 111 ELKINS STREET
 FAIRMONT, WV 26554
 PHONE: (304) 367-9401

SURVEYOR
 SMITH LAND SURVEYING, INC.
 PO BOX 150
 12 VANHORN DRIVE
 GLENVILLE, WV 26351
 PHONE: (304) 462-5634

EQT OXF 164 SITE PLAN

EQT PRODUCTION COMPANY

(PROPOSED WELL NO. WV 514179, WV 514180, WV 514181,
 WV 514182, WV 514183, WV 514184, WV 514185, WV 514186, WV 514187, WV514188)
 SITUATE ON THE WATERS OF TRIBUTARIES OF LOWER RUN OF MIDDLE FORK
 AND TRIBUTARIES OF JIMS RUN OF UPPER RUN IN SOUTH WEST
 DISTRICT, DODDRIDGE COUNTY, WEST VIRGINIA



LIST OF DRAWINGS	
SHEET NO.	DESCRIPTION
1	COVER SHEET
2	GENERAL NOTES
3	OVERALL PLAN SHEET INDEX
4-5	ACCESS ROAD & COMPLETION PIT LAYOUT
6	FLOW BACK PIT & WELL PAD LAYOUT
7-8	ACCESS ROAD PROFILES
9-13	CROSS SECTIONS
14-16	RECLAMATION PLAN SHEETS
17-19	CONSTRUCTION DETAILS
20	CONSTRUCTION QUANTITIES

LEGEND	
EX. INDEX CONTOUR	PROP. INDEX CONTOUR
EX. INTERMEDIATE CONTOUR	PROP. INTERMEDIATE CONTOUR
EX. EDGE OF ROAD PAVEMENT	PROP. CUT LINE
EX. OVERHEAD UTILITY	PROP. FILL LINE
EX. UTILITY POLE	PROP. LIMITS OF DISTURBANCE
EX. GASLINE	PROP. ORANGE SAFETY FENCE
EX. GASLINE MARKER	PROP. COMPOST FILTERSOCK
EX. WATER WELL	PROP. STONE CONSTRUCTION ENTRANCE
EX. TREETRINE	X-SECTION GRID INDEX
EX. REFERENCE TREE	X-SECTION GRID INTERMEDIATE
EX. CULVERT	X-SECTION PROPOSED GRADE
EX. DELINEATED STREAM	X-SECTION EXISTING GRADE
EX. DELINEATED WETLAND	PRO. CULVERT
EX. BUILDING	PRO. ROCK CHECK DAM
EX. RIGHT OF WAY	
EX. STREAM	
EX. CENTERLINE	
EX. FENCE LINE	

RESTRICTIONS NOTES

- THERE ARE NO INTERMITTENT STREAMS, LAKES PONDS, OR RESERVOIRS WITHIN 100 FEET OF THE PROJECT LOD. THERE ARE NO WETLANDS WITHIN 100 FEET OF THE LOD.
- THERE ARE NO AGRICULTURAL BUILDINGS LARGER THAN 2,500 SQUARE FEET WITHIN 625 FEET OF THE CENTER OF THE PAD.
- THERE ARE NO OCCUPIED DWELLING STRUCTURES WITHIN 625 FEET OF THE CENTER OF THE PAD.
- THERE ARE NO KNOWN EXISTING WATER WELLS OR DEVELOPED SPRINGS WITHIN 250 FEET OF THE WELLS OR LOCATIONS BEING DRILLED. STANTEC AND SMITH LAND SURVEYING ARE NOT RESPONSIBLE FOR ANY EXISTING WATER WELLS OR DEVELOPED SPRING DISCOVERED DURING CONSTRUCTION.
- THERE ARE NO GROUNDWATER INTAKE OR PUBLIC WATER SUPPLY FACILITIES WITHIN 1000 FEET OF THE PAD AND LOD.
- THERE ARE NO NATURALLY PRODUCING TROUT STREAMS WITHIN 300 FEET OF THE PAD AND LOD.



THIS DOCUMENT WAS
 PREPARED BY
 STANTEC INC.
 FOR EQT PRODUCTION
 COMPANY

TITLE SHEET
EQT OXF 164
 SOUTH WEST DISTRICT
 DODDRIDGE COUNTY, WV

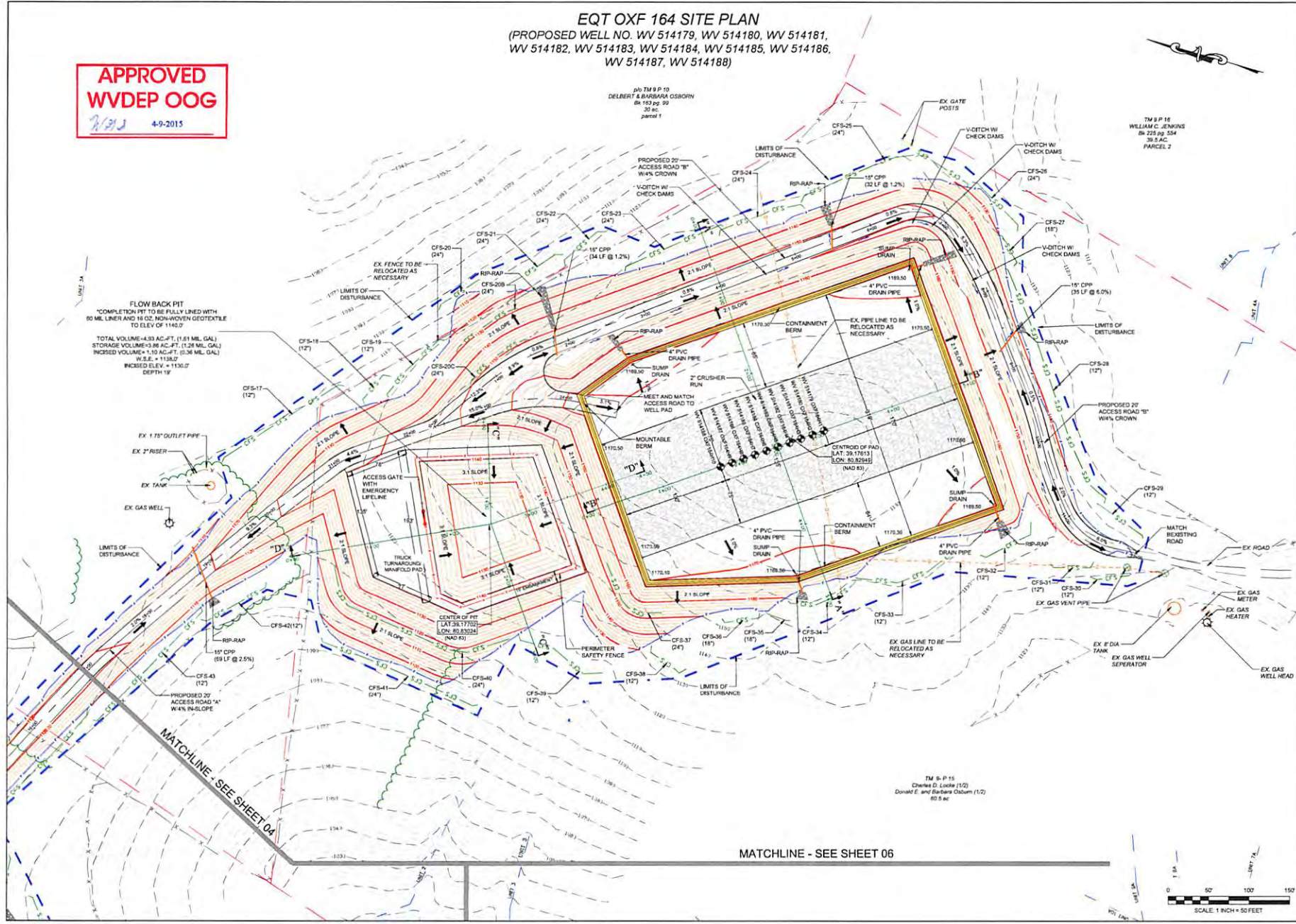
DATE: 12/20/14
 SCALE: AS SHOWN
 DESIGNED BY: RLJ
 FILE NO.: SL-7898
 SHEET 1 OF 20
 REV: 3/27/2015

APPROVED
WVDEP OOG
7/20 4-9-2015

EQT OXF 164 SITE PLAN
(PROPOSED WELL NO. WV 514179, WV 514180, WV 514181,
WV 514182, WV 514183, WV 514184, WV 514185, WV 514186,
WV 514187, WV 514188)

pl: TM 9 P 10
DELBERT & BARBARA OSBORN
84 103 sq. 90
30 ac
parcel 1

TM 9 P 16
WILLIAM C. JENKINS
84 223 sq. 554
38.8 ac.
PARCEL 2



FLOW BACK PIT
*COMPLETION PNT TO BE FULLY LINED WITH
60 MIL LINER AND 18 IN. NON-WOVEN GEOTEXTILE
TO ELEV OF 1140.0'
TOTAL VOLUME=4.93 AC-FT. (1.61 MIL. GAL.)
STORAGE VOLUME=3.86 AC-FT. (1.29 MIL. GAL.)
INCREASED VOLUME=1.07 AC-FT. (0.36 MIL. GAL.)
W.S.E. = 1138.0'
INCREASED ELEV. = 1130.0'
DEPTH=19'

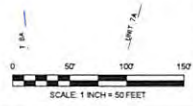
EX 1 7/8" OUTLET PIPE
EX 2" RISER
EX TANK
EX GAS WELL

LIMITS OF DISTURBANCE
EX 1 7/8" OUTLET PIPE
EX 2" RISER
EX TANK
EX GAS WELL

MATCHLINE - SEE SHEET 04

MATCHLINE - SEE SHEET 06

TM 9 P 15
Charles D. Louie (1/2)
Donald E. and Barbara Osborn (1/2)
80.5 ac



THIS DOCUMENT HAS
PREPARED BY
STANTEC INC
FOR EQT PRODUCTION
COMPANY

FLOW BACK PIT & WELL PAD LAYOUT
EQT OXF 164
SOUTH WEST DISTRICT
DODDRIDGE COUNTY, WV

DATE 12/9/2014
SCALE: AS SHOWN
DESIGNED BY: RLG
FILE NO: SLS-7699
SHEET 5 OF 20
REV 1/27/2015



Office of Oil and Gas

4701706784

West Virginia Department of
Environmental Protection
Office of Oil & Gas
601 57th Street SE
Charleston, WV 25304-2345

DEP Office Use only
Date Received by Oil & Gas:
Assigned Impoundment ID #: <u>017WIPA000104</u>

Permit Associated Impoundment / Pit Registration

Instruction: This form is to be used to register impoundments or waste pits, greater than 5,000 bbls, that are associated with a WVDEP, Office of Oil and Gas, well drilling permit. An **associated impoundment or pit** means it has been designed and included in the well drilling permit application, will follow the reclamation time frame of well work permit, and will be approved in conjunction with the well work permit. An impoundment ID number will be assigned by WVDEP, Office of Oil and Gas, to all impoundments and pits. This impoundment ID number will be sent to the applicant following receipt of this form by WVDEP. Please reference this impoundment ID number with all future correspondence and reference to this impoundment. Conditions as described in W.Va. State Rule §35-4-21 will be followed as it relates to impoundments and pits.

Section 1 – Operator Information

Operator Name: <u>EQT Production Company</u>			
Operator ID: <u>306686</u>			
Address: Street <u>115 Professional Place P.O. Box 280</u>			
City: <u>Bridgeport</u>	State: <u>WV</u>	Zip: <u>26330</u>	
Contact Name: <u>Ron Furby</u>	Contact Title: <u>Senior manager Water Operations</u>		
Contact Phone: <u>304-543-9849</u>	Contact Email: <u>rfurby@eqt.com</u>		

Section 2 – Engineering / Design Contractor Information

Design will be contracted <input type="checkbox"/> Designed in-house <input checked="" type="checkbox"/>			
Company Name: <u>Smith Land Surveying, Inc. & Stantec</u>			
Address: Street <u>12 Vanhorn Drive; P.O. Box 150</u>			
City: <u>Glenville</u>	State: <u>WV</u>	Zip: <u>26351</u>	
Contact Name: <u>Wes Wayne</u>	Contact Title: <u>Design Coordinator</u>		
Contact Phone: <u>304-462-5634</u>	Contact Email: <u>wwayne@slssurveys.com</u>		
Certifying Professional Engineer: <u>Richard Gaines</u>			
Professional Engineer Registration Number: <u>WV PE No. 17220</u>			

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Page 1 of 4
12/16/2016



Office of Oil and Gas

Section 3 - Impoundment / Pit Information

Type of Structure. Check one of two choices below:

Freshwater Impoundment

Waste Pit

Note: Any waste in a pit will make it a waste pit.

Name of Structure (Company Name :) OXF 164 Completion Pit

County: Doddridge District: Southwest

USGS 7.5' Quad Map Name: Oxford

Farm Name: _____

Pad Name: OXF 164's Site

Surface Owner Name: Charles D. Locke (1/2) and Donald E. and Barbara Osburn

Physical Description of Location: The well pad is located 3.1 miles southeast of the junction of Co. Rt. 19/11 and Co. Rt. 19

(Note: Give general location, example: 2 miles south of Smalltown, WV on Rt. 22, left on Buffalo Creek)

Watershed (nearest perennial): Tributaries of Lower Run of Middle Fork and tributaries of Jims Run of Upper Run

Distance (Drainage Distance) to nearest perennial stream: _____

Location Coordinates (NAD83, Decimal Degrees (xx.xxxx, -xx.xxxx))

Latitude: 39.17765 Longitude (Use negative sign): -80.83349

UTM Coordinates : 4336504.098 E 514382.273 N

Access Road Coordinates (junction of state highway access)

Latitude: 39.17842 Longitude (Use negative sign): -80.83631

UTM Coordinates : 4336589.105 E 514138.541 N

Approximate Dimensions

Length: 400' Width: 200' Height: 18'

Note: If irregularly shaped, give approximate dimensions of long axis.

Total Capacity – Provide all units of measure below:

Barrels: 152,046 Gallons: 6,385,925 Acre-Feet: 19.60

Capacity with 2' Freeboard – Provide all units of measure below:

Barrels: 126,719 Gallons: 5,322,195 Acre-Feet: 16.33

Incised volume:

Barrels: 82,987 Gallons: 3,485,458 Acre-Feet: 10.69

Net impounded volume: (Total volume less incised volume.)

Barrels: 69,059 Gallons: 2,900,467 Acre-Feet: 8.91

Anticipated Construction Start Date (estimation, non-binding): To be determined

Note: No construction may begin on Associated impoundment until WVDEP issues the Drilling permit. At least 7 calendar days prior to confirmed construction start date, notify the Office of Oil & Gas, and the local Oil and Gas inspector of construction start date. Use form IMP-2, "Notification of Impoundment / Pit Construction".

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WV DEP AUG 12 2016
 Environmental Protection
 12/16/2016



Section 4 - Associated Well Numbers and API Numbers. List associated well numbers and API number. API numbers may not be assigned at time of registering this impoundment, if so list as pending.

Well Number(s):	API Number(s) – If issued:
WV 516821 WV 514186	47-017-06709 (WV 514179)
WV 514180 WV 514187	
WV 514181 WV 514188	
WV 514182 WV 514447	
WV 514183 WV 516818	
WV 514184 WV 516819	
WV 514185 WV 516820	

Section 5 - Required Information Checklist To Register Permit Associated Impoundments or Pits. Include the following information and plans with application.

- Engineered Construction Plans, certified by WV Registered P.E.
- Erosion and Sediment Control Plan, certified by WV Registered P.E.
- Reclamation Plan, certified by WV Registered P.E.

Section 6 – Dam Standard Qualifying Evaluation

- The design of this structure has been evaluated by the applicant to determine it does NOT qualify to be defined as a dam, under W.Va Rule §47-34. If the design of this structure qualifies it to be defined as a dam, all permits regulating dams will be required prior to registering the structure with the Office of Oil and Gas. The dam standard, from the WVDEP, Div. Of Water and Waste, is available for review at: <http://www.dep.wv.gov/WWE/ee/ds/Pages/default.aspx>

Section 7 –Comments – Provide any additional comments concerning this project



Section 8 - Application Certification

I hereby certify that the information listed above is true and accurate. I understand that this pit/impoundment is to be constructed only in a location appropriate for the storage of water, including wastewater, and will be constructed in accordance with plans designed and certified by a West Virginia registered professional engineer. I further recognize that all required plans have been submitted to the Office of Oil and Gas. I understand that after construction, and prior to any fluid being placed in the pit/impoundment, it shall be inspected by a West Virginia registered professional engineer to ensure compliance with the certified design and construction plan, and that the professional engineer shall certify that this structure was constructed in accordance with design and construction plans. I understand that such certification shall be in writing to the Chief and that no fluids may be placed in the pit/impoundment until the certification has been filed with the chief. I agree that this pit/impoundment shall be constructed, maintained, operated and closed in accordance with all applicable laws and rules, including the requirements of W. Va. Code R § 35-4-2.

Name: Victoria J. Roark
Title: Permitting Supervisor
Signature: [Handwritten Signature]

Taken, subscribed and sworn to before me this, 9 Day of August 20 16
Notary Public: Rebecca L. Wanstreet
My commission expires: 4-7-2020

Notary Seal:



Section 9. Submittal Instructions

Submit original paper copy of application to:
West Virginia Department of Environmental Protection
Office of Oil and Gas
Impoundment Registration
601 57th Street, SE
Charleston WV 25304

Email PDF file format of this application and all related engineering Plans to :
Depimpoundments@wv.gov

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West Virginia Department of
Environmental Protection
Office of Oil & Gas
601 57th Street SE
Charleston, WV 25304-2345

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DEP Office Use only	
Date Received by Oil & Gas:	
Assigned Impoundment ID #:	017 WPA000105

Permit Associated Impoundment / Pit Registration

Instruction: This form is to be used to register impoundments or waste pits, greater than 5,000 bbls, that are associated with a WVDEP, Office of Oil and Gas, well drilling permit. An **associated impoundment or pit** means it has been designed and included in the well drilling permit application, will follow the reclamation time frame of well work permit, and will be approved in conjunction with the well work permit. An impoundment ID number will be assigned by WVDEP, Office of Oil and Gas, to all impoundments and pits. This impoundment ID number will be sent to the applicant following receipt of this form by WVDEP. Please reference this impoundment ID number with all future correspondence and reference to this impoundment. Conditions as described in W.Va. State Rule §35-4-21 will be followed as it relates to impoundments and pits.

Section 1 – Operator Information

Operator Name:	EQT Production Company		
Operator ID:	306686		
Address: Street	115 Professional Place P.O. Box 280		
City:	Bridgeport	State:	WV Zip: 26330
Contact Name:	Ron Furby	Contact Title:	Senior manager Water Operations
Contact Phone:	304-543-9849	Contact Email:	rfurby@eqt.com

Section 2 – Engineering / Design Contractor Information

Design will be contracted	<input type="checkbox"/>	Designed in-house	<input checked="" type="checkbox"/>
Company Name:	Smith Land Surveying, Inc. & Stantec		
Address: Street	12 Vanhorn Drive; P.O. Box 150		
City:	Glenville	State:	WV Zip: 26351
Contact Name:	Wes Wayne	Contact Title:	Design Coordinator
Contact Phone:	304-462-5634	Contact Email:	wwayne@slssurveys.com
Certifying Professional Engineer:	Richard Gaines		
Professional Engineer Registration Number:	WV PE No. 17220		

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Section 3 - Impoundment / Pit InformationType of Structure. Check one of two choices below: Freshwater Impoundment Waste PitNote: Any waste in a pit will make it a waste pit.Name of Structure (Company Name :) OXF 164 Flowback PitCounty: Doddrige District: SouthwestUSGS 7.5' Quad Map Name: Oxford

Farm Name: _____

Pad Name: OXF 164's SiteSurface Owner Name: Charles D. Locke (1/2) and Donald E. and Barbara OsburnPhysical Description of Location: The well pad is located 3.1 miles southeast of the junction of Co. Rt. 19/11 and Co. Rt. 19

(Note: Give general location, example: 2 miles south of Smalltown, WV on Rt. 22, left on Buffalo Creek)

Watershed (nearest perennial): Tributaries of Lower Run of Middle Fork and tributaries of Jims Run of Upper Run

Distance (Drainage Distance) to nearest perennial stream: _____

Location Coordinates (NAD83, Decimal Degrees (xx.xxxx, -xx.xxxx))

Latitude: 39.17702 Longitude (Use negative sign): -80.83024UTM Coordinates : 4336434.704 E 514663.122 N

Access Road Coordinates (junction of state highway access)

Latitude: 39.17842 Longitude (Use negative sign): -80.83631UTM Coordinates : 4336589.105 E 514138.541 N

Approximate Dimensions

Length: 170' Width: 160' Height: 19'

Note: If irregularly shaped, give approximate dimensions of long axis.

Total Capacity – Provide all units of measure below:

Barrels: 38,223 Gallons: 1,605,357 Acre-Feet: 4.93

Capacity with 2' Freeboard – Provide all units of measure below:

Barrels: 29,965 Gallons: 1,258,523 Acre-Feet: 3.86

Incised volume:

Barrels: 8,522 Gallons: 357,905 Acre-Feet: 1.10

Net impounded volume: (Total volume less incised volume.)

Barrels: 29,701 Gallons: 1,247,452 Acre-Feet: 3.83Anticipated Construction Start Date (estimation, non-binding): To be determined

Note: No construction may begin on Associated impoundment until WVDEP issues the drilling permit. At least 7 calendar days prior to confirmed construction start date, notify the Office of Oil & Gas, and the local Oil and Gas inspector of construction start date. Use form IMP-2, "Notification of Impoundment / Pit Construction."

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Section 4 - Associated Well Numbers and API Numbers. List associated well numbers and API number. API numbers may not be assigned at time of registering this impoundment, if so list as pending.

Well Number(s):	API Number(s) – If issued:
WW516821 WW 514186	47-017-06709 (WW 514179)
WW 514180 WW 514187	
WW 514181 WW 514188	
WW 514182 WW 514447	
WW 514183 WW 516818	
WW 514184 WW 516819	
WW 514185 WW 516820	

Section 5 - Required Information Checklist To Register Permit Associated Impoundments or Pits. Include the following information and plans with application.

- Engineered Construction Plans, certified by WV Registered P.E.
- Erosion and Sediment Control Plan, certified by WV Registered P.E.
- Reclamation Plan, certified by WV Registered P.E.

Section 6 – Dam Standard Qualifying Evaluation

- The design of this structure has been evaluated by the applicant to determine it does NOT qualify to be defined as a dam, under W.Va Rule §47-34. If the design of this structure qualifies it to be defined as a dam, all permits regulating dams will be required prior to registering the structure with the Office of Oil and Gas. The dam standard, from the WVDEP, Div. Of Water and Waste, is available for review at: <http://www.dep.wv.gov/WWE/ee/ds/Pages/default.aspx>

Section 7 –Comments – Provide any additional comments concerning this project

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Section 8 - Application Certification

I hereby certify that the information listed above is true and accurate. I understand that this pit/impoundment is to be constructed only in a location appropriate for the storage of water, including wastewater, and will be constructed in accordance with plans designed and certified by a West Virginia registered professional engineer. I further recognize that all required plans have been submitted to the Office of Oil and Gas. I understand that after construction, and prior to any fluid being placed in the pit/impoundment, it shall be inspected by a West Virginia registered professional engineer to ensure compliance with the certified design and construction plan, and that the professional engineer shall certify that this structure was constructed in accordance with design and construction plans. I understand that such certification shall be in writing to the Chief and that no fluids may be placed in the pit/impoundment until the certification has been filed with the chief. I agree that this pit/impoundment shall be constructed, maintained, operated and closed in accordance with all applicable laws and rules, including the requirements of W. Va. Code R § 35-4-2 .

Name: Victoria J. Rank
Title: Permitting Supervisor
Signature: [Handwritten Signature]

Taken, subscribed and sworn to before me this, 9 Day of August 20 16

Notary Public: Rebecca L. Wanstreet

My commission expires: 4-7-2020

Notary Seal:



Section 9. Submittal Instructions

Submit original paper copy of application to:
West Virginia Department of Environmental Protection
Office of Oil and Gas
Impoundment Registration
601 57th Street, SE
Charleston WV 25304

Email PDF file format of this application and all related engineering Plans to :
Depimpoundments@wv.gov

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