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**west virginia** department of environmental protection

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

Earl Ray Tomblin, Governor  
Randy C. Huffman, Cabinet Secretary  
[www.dep.wv.gov](http://www.dep.wv.gov)

June 09, 2016

**WELL WORK PERMIT**

**Horizontal 6A Well**

This permit, API Well Number: 47-8510285, issued to EQT PRODUCTION COMPANY, 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 all 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 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.

In addition to the applicable requirements of this permit, and the statutes and rules governing oil and gas activity in WV, this permit may contain specific conditions which must be followed. Permit conditions are attached to this cover letter.

Per 35CSR-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) 926-0499 ext. 1654.

James Martin  
Chief

Operator's Well No: 514083  
Farm Name: RAY, RICHARD L & SHERYL A  
**API Well Number: 47-8510285**  
**Permit Type: Horizontal 6A Well**  
Date Issued: 06/09/2016

# PERMIT CONDITIONS

4708510285

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

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1. Operator shall take additional measures with this permitted activity to avoid communication with offset wells. Such additional measures are described in the attached addendum. This addendum is part of the terms of the well work permit, and includes a description of depth and completed formations of offset wells. Also included is a description of monitoring activities that will take place during fracturing operations of the permitted well work.
2. This proposed activity may require permit coverage from the United States Army Corps of Engineers (USACOE). Through this permit, you are hereby being advised to consult with USACOE regarding this proposed activity.
3. 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.
4. 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.
5. 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.
6. 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.

# PERMIT CONDITIONS 4700510285

7. 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.
8. 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.
9. 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.
10. 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](mailto: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 Ritchie Union Oxford  
Operator ID County District Quadrangle

2) Operator's Well Number: 514083 Well Pad Name: OXF122

3) Farm Name/Surface Owner: Richard L & Sheryl A Ray Public Road Access: 7/18

4) Elevation, current ground: 1111 Elevation, proposed post-construction: 1111

5) Well Type (a) Gas  Oil  Underground Storage   
Other

(b) If Gas Shallow  Deep   
Horizontal

6) Existing Pad: Yes or No Yes

7) Proposed Target Formation(s), Depth(s), Anticipated Thickness and Expected Pressure(s):  
Marcellus, 6485, 54, 2190, Top of Marcellus 6461

8) Proposed Total Vertical Depth: 6485

9) Formation at Total Vertical Depth: Marcellus

10) Proposed Total Measured Depth: 15491

11) Proposed Horizontal Leg Length: 5678

12) Approximate Fresh Water Strata Depths: 236

13) Method to Determine Fresh Water Depths: By Offset wells

14) Approximate Saltwater Depths: None

15) Approximate Coal Seam Depths: 929

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: \_\_\_\_\_

*Michael Doff*  
*4/20/10*

4708510285

18)

CASING AND TUBING PROGRAM

TYPE	Size (in)	New or Used	Grade	Weight per ft. (lb/ft)	FOOTAGE: For Drilling (ft)	INTERVALS: Left in Well (ft)	CEMENT: Fill-up (Cu. Ft.)/CTS
Conductor	20	New	A-500	78.6	40	40	60 ft^3 / CTS
Fresh Water	13 3/8	New	J-55	54.5	386	386	365 ft^3 / CTS
Coal							
Intermediate	9 5/8	New	A-500	40	2982	2982	1285 ft^3 / CTS
Production	5 1/2	New	P-110	20	15491	15491	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							

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4/20/10

TYPE	Size (in)	Wellbore Diameter (in)	Wall Thickness (in)	Burst Pressure (psi)	Anticipated Max. Internal Pressure (psi)	Cement Type	Cement Yield (cu. ft./k)
Conductor	20	26	.375	1378	1102	Class A	1.18
Fresh Water	13 3/8	17 1/2	.38	2700	2160	See Variance	1.19
Coal							
Intermediate	9 5/8	12 3/8	.395	3950	3160	See Variance	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 4441'. Kick off and drill curve. Drill the lateral in the Marcellus. Cement casing.

4708510285

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): No Additional

22) Area to be disturbed for well pad only, less access road (acres): No Additional

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:

MAG  
4/20/16

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.

Environmental Protection  
Department of  
Oil and Gas

APR 25 2016

\*Note: Attach additional sheets as needed.

Office of Oil and Gas  
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Page 3 of 3

06/10/2016

Well 514083(OXF122H9)  
 EQT Production  
 Oxford Quad  
 Ritchie County, WV

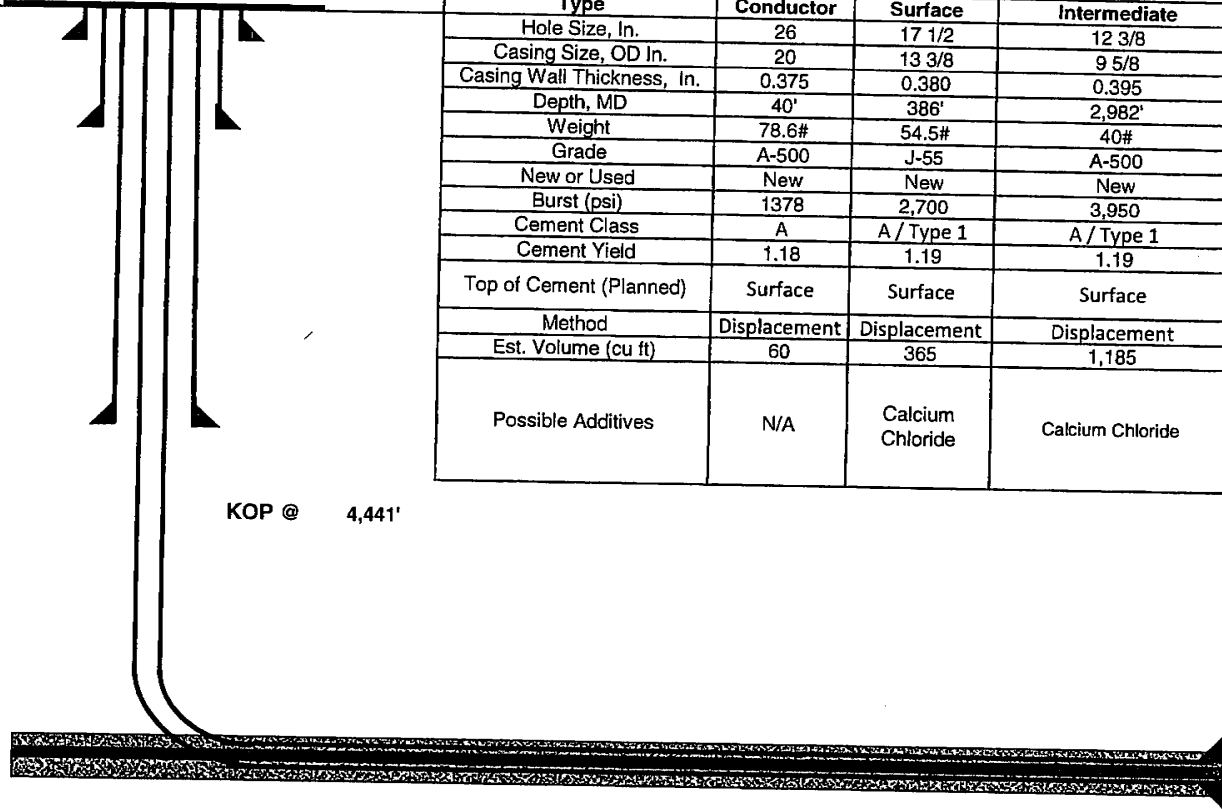
Azimuth 161  
 Vertical Section 9224

4708510285

Note: Diagram is not to scale

Formations	Top TVD	Base TVD
Conductor	40	
Base Fresh Water	236	
Surface Casing	386	
Base Red Rock	999	
Maxton	1689 - 1741	
Big Lime	1871 - 2014	
Weir	2147 - 2274	
Gantz	2372 - 2388	
Fifty foot	2465 - 2545	
Thirty foot	2564 - 2613	
Gordon	2621 - 2706	
Forth Sand	2709 - 2720	
Bayard	2884 - 2932	
Intermediate Casing	2982	
Warren	3204 - 3239	
Spechley	3262 - 3347	
Balltown A	3761 - 3771	
Riley	4340 - 4402	
Benson	4679 - 4792	
Alexander	5012 - 5121	
Sonyea	6124 - 6270	
Middlesex	6270 - 6323	
Genesee	6323 - 6400	
Geneseo	6400 - 6438	
Tully	6438 - 6451	
Hamilton	6451 - 6461	
Marcellus	6461 - 6515	
Production Casing	6491	MD
Onondaga	6515	

Casing and Cementing				
Deepest Fresh Water: 236'				
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	40'	386'	2,982'	15,491'
Weight	78.6#	54.5#	40#	20#
Grade	A-500	J-55	A-500	P-110
New or Used	New	New	New	New
Burst (psi)	1378	2,700	3,950	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)	60	365	1,185	1,885
Possible Additives	N/A	Calcium Chloride	Calcium Chloride	Calcium Carbonate, Fluid Loss, Extender, Dispersent, Viscosifier, Defoamer, POZ, Bonding Agent, Retarder, Anti-Settling/Suspension Agent



Land curve @ 6,485' TVD  
 9,813' MD

Est. TD @ 6,485' TVD  
 15,491' MD

5,678' Lateral

Produced Well Work:  
 Drill and complete a new horizontal well in the Marcellus formation.  
 Drill the vertical to an approximate depth of 4441'.  
 Kick off and drill curve. Drill lateral in the Marcellus. Cement casing.

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 APR 25 2016  
 MACG  
 4/20/16

WV Department of  
 Environmental Protection

4708510285



March 22, 2016

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

4708510285

Re: Casing Plan on Well (OXF122)

Dear Mr. Smith,

EQT is requesting the 13-3/8" surface casing be set at 386' KB, 150' below the deepest fresh water. We will set the 9-5/8" intermediate string at 2982' KB, 50' below the base of the Bayard formation.

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

Enc.

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Office of Oil and Gas

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WV Department of  
Environmental Protection

06/10/2016





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

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

March 18, 2014

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

Re: Cement Variance Request

470 851 0285

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

Promoting a healthy environment.

06/10/2016



west virginia department of environmental protection

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

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

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

**IN THE MATTER OF A VARIANCE FROM )  
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 )**

**ORDER NO. 2014 - 17**

4708510285

**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.

Promoting a healthy environment.

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Environmental Protection

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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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Environmental Protection  
06/10/2016

WW-9  
(2/15)

4708510285

API Number 47 - 085 - \_\_\_\_\_  
Operator's Well No. 514083

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) Straight Fork Quadrange 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 residual solids

Will a synthetic liner be used in the pit? Yes  No  If so, what ml? 60

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 \_\_\_\_\_)

*MAG  
4/20/16*

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.

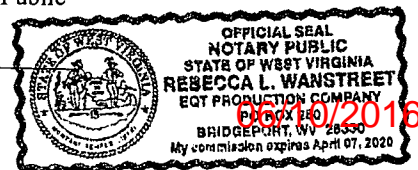
I certify under penalty of law that I have personally examined and am familiar with the information submitted on this application form and all attachments thereto and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is 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 11<sup>th</sup> day of April, 2016

Rebecca L. Wanstreet Notary Public

My commission expires 4-7-20



EQT Production Company

Proposed Revegetation Treatment: Acres Disturbed No Additional Prevegetation pH 5.8

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:

Drawing(s) of road, location, pit and proposed area for land application (unless engineered plans including this info have been provided)

Photocopied section of involved 7.5' topographic sheet.

Plan Approved by: Michael Laff

Comments: Presced & mulch any disturbed areas per WVAEP regulations. Maintain & upgrade E-r-s as necessary

4708510285

Title: Oil & Gas Inspector

Date: 4/20/16

Field Reviewed?  Yes  No

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Department of

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Office of Oil and Gas

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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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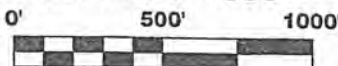
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APR 23 2016  
11/06/16

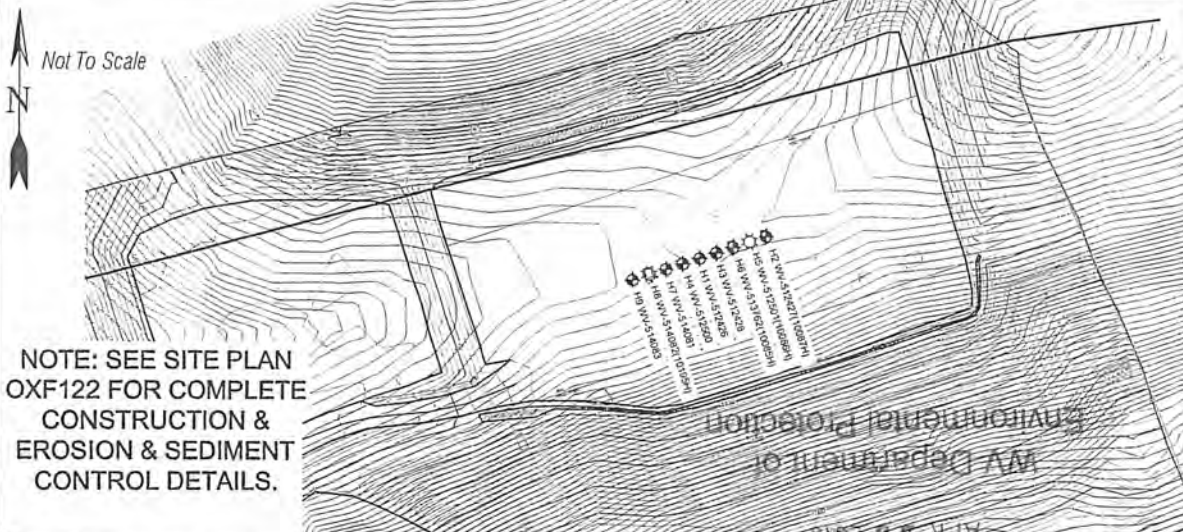
NOTE: SEE SITE PLAN  
OXF122 FOR COMPLETE  
CONSTRUCTION &  
EROSION & SEDIMENT  
CONTROL DETAILS.

MATCH LINE

SHEET 2 OF 2  
SCALE: 1"=500'



Detail Sketch for Proposed OXF122 Well No.s WV 512426, WV 512427, WV 512428, WV 512500, WV 512501, WV 513762, WV 514081, WV 514082 & WV514083



NOTE: SEE SITE PLAN  
OXF122 FOR COMPLETE  
CONSTRUCTION &  
EROSION & SEDIMENT  
CONTROL DETAILS.

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4/20/16

Professional Energy Consultants  
A DIVISION OF BATHLAND SURVEYING, P.C.

SURVEYORS  
ENGINEERS  
ENVIRONMENTAL  
PROJECT MGMT.

DRAWN BY K.D.W.	FILE NO. 6811	DATE 03-31-16	CADD FILE: 6811REPLANR.dwg
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TOPO SECTIONS OF OXFORD 7.5'  
TOPO QUADRANGLE

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06/10/2016



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Where energy meets innovation.™

# Site Specific Safety Plan

4708510285

EQT OXF 122 Pad  
Oxford Quardrant  
West Union  
Ritchie County, WV

514083

For Wells:

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Date Prepared:

March 22, 2016

  
 EQT Production

  
 WV Oil and Gas Inspector

Title

Title

Date

Date

4-11-16

4/20/16

06/10/2016



**Section V: BOP and Well Control**

BOP equipment and assembly installation schedule:

**BOP Equipment Marcellus/Upper Devonian Region**

Size (in)	Operation	Hole Section	Type	Pressure Class	Test Pressure (psi)	Testing Frequency
13-5/8"	Drilling	Intermediate	Annular	3M	2100	Initial
13-5/8"	Drilling	Pilot	Annular	3M	2100	Initial, Weekly, Trip
13-5/8"	Drilling	Production	Annular	5M	3500	Initial, Weekly, Trip
13-5/8"	Drilling	Production	Blind	5M	4000	Initial, Weekly, Trip
13-5/8"	Drilling	Production	Pipe	5M	4000	Initial, Weekly, Trip
7-1/16"	Completions	Production	Cameron U's	5M	4000	Initial
13-5/8"	Drilling	Pilot (Onondaga Tag)	Annular	5M	4000	Initial, Weekly, Trip

**BOP Equipment Utica Region**

Size (in)	Operation	Hole Section	Type	Pressure Class	Test Pressure (psi)	Testing Frequency
13-5/8"	Drilling	Intermediate	Annular	3M	2,100	Initial, Weekly, Trip
13-5/8"	Drilling	Intermediate	Pipe	5M	4,000	Initial, Weekly, Trip
13-5/8"	Drilling	Intermediate	Blind	5M	4,000	Initial, Weekly, Trip
13-5/8"	Drilling	Pilot/Production	Annular	5M	3,500	Initial, Weekly, Trip
13-5/8"	Drilling	Pilot/Production	Pipe	10M	8,000	Initial, Weekly, Trip
13-5/8"	Drilling	Pilot/Production	Blind	10M	8,000	Initial, Weekly, Trip

**Utica Region**

Test BOPs as follows:

- Annular to 250 psi low/2,100 psi high for 30 mins each
- All ram, choke/kill valves, TIW, IBOP and all choke manifold valves to 250 psi low/4,000 psi high for 30 mins each
- Annular to 250 psi low/3,500 psi high for 30 mins each
- All ram, choke/kill valves, TIW, IBOP and all choke manifold valves to 250 psi low/8,000 psi high for 30 mins each

**Wellhead Detail Marcellus/Upper Devonian Region**

Size (in)	Type	M.A.W.P. (psi)
13-3/8" SOW x 13-5/8" 5M	Multi-bowl Well Head	5,000
13-5/8" 5M x 7-1/16 10M	Tubing Head	10,000
2-1/16" 5M	Christmas Tree	5,000

**Wellhead Detail Utica Region**

Size (in.)	Type	M.A.W.P. (psi)
13-3/8" x 13-5/8" 10M	Multi-bowl Well Head	10,000
13-5/8" 10M x 7-1/16 15M	Tubing Head	15,000
2-9/16" 10M	Christmas Tree	15,000

**Well Control Trained Personnel:**

- Drilling
  - EQT On-Site Specialist – 2 on rotating hitches.
  - Contract Group's – Tool Pusher & Drillers
- Completions & Production
  - EQT On-Site Specialist or Consultant

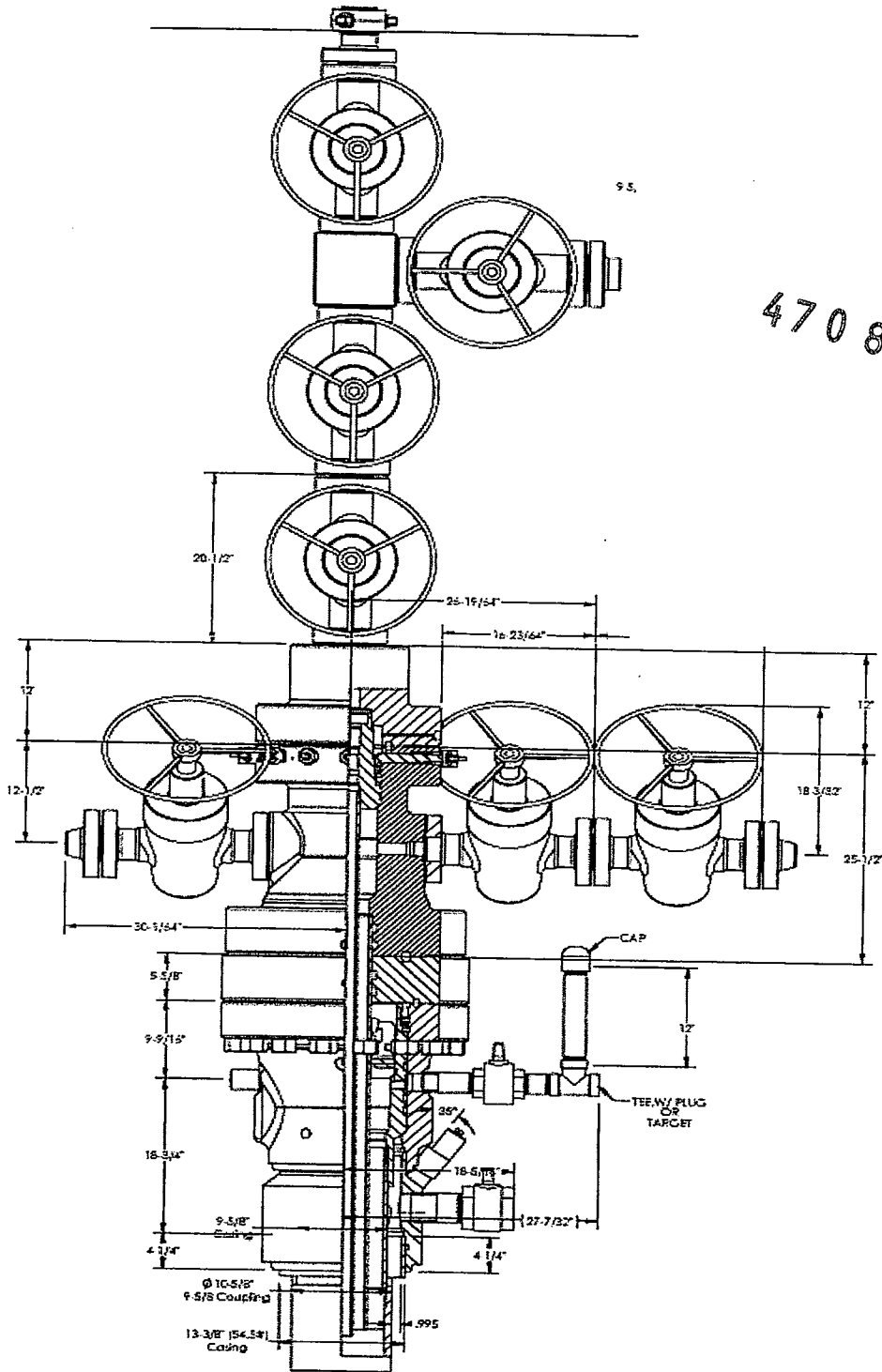
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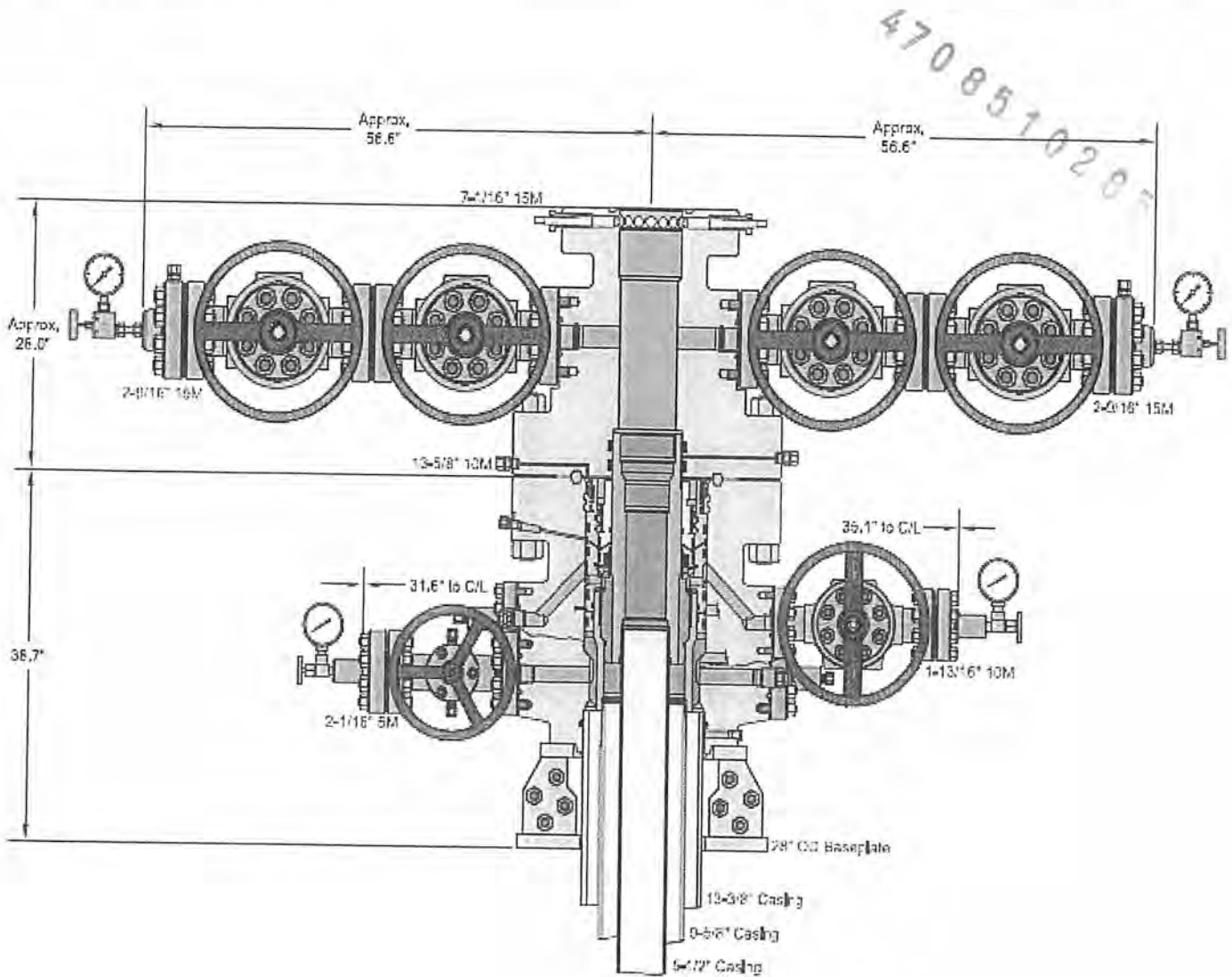
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Written Description:

Multi-bowl wellhead assembly with a 13 5/8" 10M x 13 3/8" SOW wellhead. A 13 5/8" 10M x 7 1/16" 15M DSA is used between the wellhead and tubing head. The tubing head is 7 1/16" 15M x 7 1/16" 15M. The tree is 2 9/16" 15M. Picture of stack up below.



INFORMATION CONTAINED HEREIN IS THE PROPERTY OF CACTUS WELLHEAD, LLC. REPRODUCTION, DISSEMINATION, OR USE THEREOF IS PROHIBITED, EXCEPT AS PROVIDED BY CONTRACT OR AGREEMENT AUTHORIZED BY CACTUS WELLHEAD, LLC.

<b>CACTUS WELLHEAD LLC</b>		<b>EQT PRODUCTION NORTHEAST</b>	
13-3/8" X 9-5/8" X 5-1/2" MBU-2LR Wellhead Assembly With 13-5/8" 10M x 7-1/16" 15M CTH-DBLHPS Tubing Head & 2-9/16" 15M Tubing Head Valves		DRAWN	DLE 04NOV15
		APPRV	Environmental Protection WV Department of DNE000013
		DRAWING NO	DNE000013

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**Well Kill Killing Operations**

In a well control situation, all influxes are to be handled using the Wait-and-Weight Method or the Driller's Method. With the Wait-and-Weight Method, the influx is circulated out while kill weight mud is simultaneously circulated down the drill pipe and up the annulus. The heavy mud is circulated to the bit at a slow kill rate, and the drill pipe pressure is maintained according to a prepared table that gives drill pipe pressure for the corresponding strokes of kill mud pumped.

The Driller's Method is accomplished in two circulations using constant drill pipe pressure and maintaining constant pump speed. The drill pipe pressure is kept constant by adjusting the choke. Once the annulus is clear of the influx, the mud weight is adjusted to kill-weight. The kill-weight mud is then circulated to the bit using constant pump speed and drill pipe pressure step-down plan. When kill-weight mud has reached the bit, the FCP is maintained until the heavy mud has reached the surface.

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**Section VI: Hydrogen Sulfide**MAC  
2/20/16**Purpose**

The purpose of this plan is to insure the safety of the all on-site personnel as well as those residents in close proximity. Hazards associated with the possibility of H<sub>2</sub>S encounters and the warning signs of H<sub>2</sub>S exposure will be covered.

**Scope**

The policy is to consider every encounter with H<sub>2</sub>S as potentially lethal until proven otherwise. Upon encountering H<sub>2</sub>S, EQT employees or contractors(s) will determine the concentration of H<sub>2</sub>S.

**General Information**

- Immediately upon suspicion or odor of H<sub>2</sub>S on location the concentration shall be determined using properly functioning single or multi-gas detection devices which have a sensor calibrated to detect the presence of H<sub>2</sub>S gas.
  - All readings should be documented along with the time they were obtained
  - All areas having a reading of greater than 10 ppm H<sub>2</sub>S shall be evacuated until the area has been cleared of H<sub>2</sub>S or properly trained personnel equipped with appropriate PPE arrive on location.
  - H<sub>2</sub>S deadens the sense of smell; the presence or absence of H<sub>2</sub>S odor is not an acceptable means for determining the presence of gas.
  - Never walk upwind or uphill towards any suspected source of H<sub>2</sub>S; approach using a cross wind approach.
- Identify wind direction and evacuate personnel upwind and uphill of the leak; H<sub>2</sub>S is heavier than air and will settle in low-lying areas.
- If necessary, the well will be shut in and the work will be stopped until adequate safety personnel and equipment have arrived on site.
- No work will take place until the appropriate personnel and equipment are in place.
- The primary considerations at this time will be:
  - H<sub>2</sub>S concentration
  - Gas Volume
  - Weather Conditions
  - Dwellings in the area.

**Personal Protective Equipment**

- The EQT H<sub>2</sub>S contractor will have an emergency trailer with SCBA's, additional gas detection equipment and other instrumentation and PPE required for appropriate response.
- All personnel on location; all personnel monitoring adjacent to the location; or all personnel associated with the operation, will be equipped with personal H<sub>2</sub>S monitors.
- There will be a H<sub>2</sub>S monitor located at the flow line exit, during the drilling of this well, as well as on the Rig Floor.
- This PPE shall be in addition to the PPE requirements listed in EQT's General Safety Policies and Procedures.

**Training**

- Only personnel whom have been properly trained; or are qualified in the hazards of H<sub>2</sub>S, will be allowed on location during operations that have encountered, or projected to encounter H<sub>2</sub>S.
- There will be a safety briefing prior to start of each shift or tower and hazards and currently readings of H<sub>2</sub>S will be documented on a TSM or JSA.

**Personnel Accountability and Briefing (Assembly) Areas**

- The sign in sheet of the EQT Tailgate Safety Meeting (TSM) Form shall be used for Accountability of on-site personnel as well as visual confirmation with the current supervisor of the site. Personnel should not leave the site without first informing their immediate supervisor, Emergency Coordinator, and/or On-Site Representative (OSR).
- The sign in roster is located at: EQT Company Trailer
- Primary Assembly Area: EQT Company Trailer
- Secondary Assembly Area: Access road intersection with pad entry
- Tertiary Assembly Area: Start of the access road or a safe location chosen based on site conditions.
- Specific considerations for H<sub>2</sub>S should include:
  - Windsocks or streamers for indication of wind direction.
  - Being upwind of harmful levels of H<sub>2</sub>S
  - Avoiding low lying areas
- Signage will be utilized along the location road, or any other entrances to the location, if H<sub>2</sub>S is encountered.

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**Flaring Operations**

**Drilling**

**Flare Line Installation**

The BOP equipment will all be located on the surface. The choke line coming off the stack will lead into a 5,000 psi choke manifold with 2 adjustable chokes. The 7" blooie line will divert any gas 50-75' away from rig substructure. Blooie line will be properly anchored with stakes or buried and will be set up so that gas can be vented. There will be a clearing of 25' for the gas to be vented. Duration of flare is expected to be ~ 7 days, depending on actual test results.

**Ignition Methods and**

1. Primary – Vent
2. Backup – Marine flare pistol

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**Notification**

Notification of a Flare will be given to the local Fire Department and/or 911 center, if possible. Refer to Section 3.0 for contact information.

**Completions**

**Flare Line Installation – Marcellus/ Upper Devonian Region**

The Flare Stacks will be positioned in a safe area at least 25' away from pit liners, trees and any other hazardous sites. The Flowback configuration consist of in order: 7 and 1/16" 10m frac valve; Flow Cross with 4 and 1/16" wing valve ; choke manifold; junk catcher; 1440 psi or 2000 psi horizontal test separator and 2" 1502 pipe to Flare Stack. Flowline will be properly anchored and tethered. Duration of flare is expected to be ~ 7 days, depending on actual test results.

**Ignition Methods**

1. Primary –Pilot Light

**Flare Line Installation – Utica Region**

The Flare Stacks will be positioned in a safe area at least 25' away from pit liners, trees and any other hazardous sites. The Flowback configuration consist of in order: 7 and 1/16" 15k frac valve; Flow Cross with 4 and 1/16" 15 k wing valve ; choke manifold; junk catcher; 1440 or 2000 psi horizontal test separator and 2" 1502 pipe to vertical Flare Stack. Flowline will be properly anchored and tethered. Duration of flare is expected to be ~ 7 days, depending on actual test results.

**Ignition Methods**

1. Primary –Pilot Light

**Notification**

Notification of a Flare will be given to the local Fire Department and/or 911 center, if possible. Refer to Section II for contact information.

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Section VIII: Collision Avoidance

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## Section VII: Collision Avoidance

Collision avoidance is managed by utilizing gyro tools, downhole steering tools (MWD/EM), and anti-collision software by engineers. Two drilling scenarios that occur are normal pad drilling and return to pad drilling. EQT categorizes these two scenarios as such because the two scenarios utilize very different mitigation plans.

Normal pad drilling is defined when a top hole rig drills each well on the pad down to kick off point (KOP) and then a bottom hole rig moves onto the pad after the top-hole rig moves off and drills the curve and lateral sections. Normal pad drilling can also be defined when a bottom hole rig moves to a pad and drills each well on the pad from surface to TD (Grassroots Well). Normal pad drilling carries much less risk and thus does not require frequent surveying and collision avoidance maneuvers because no producing wells are present and risk of unexpected pressure or well control events are not present.

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Return to pad drilling is a scenario where a top-hole rig or a bottom hole rigs returns to a pad to drill additional well(s) that currently have producing (live) wells on the pad. Return to pad drilling requires more frequent surveying and anti-collision avoidance management because producing wells are present. By utilizing good engineering well design, anti-collision software and frequent surveys, wells can safely be drilled while existing or producing wells exist on the pad.

With both normal and return to pad drilling operations, every well planned to be drilled has a surface plot diagram, 2-D plot diagram, and a pad plot diagram prepared. (Plots attached under "Collision Avoidance Diagrams") In each scenario, a continuous north seeking gyro tools, MWD/EM tools, and anti-collision processes are utilized to mitigate the risk of downhole collisions. Anti-collision processes include conformation of gyro accuracy, evaluation of anti-collision software (Compass or equivalent program), and 2-D/3-D model plotting. In both scenarios, it is EQT's standard operating procedure (SOP) for the on-site supervisor of EQT and the directional drilling company supervisor to confirm the orientation of the directional tools and ensure that the tools are orientated consistent with the directional motor's high side. When anti-collision is a risk and directional assemblies are required to navigate utilizing a gyro tool, it is EQT's SOP to use the Gyro company's muleshoe to ensure the accuracy of the gyro seat in the muleshoe. In addition, when using this muleshoe, it is EQT's SOP to have the EQT's on-site supervisor, directional drilling company supervisor, and gyro company supervisor confirm the alignment and orientation of the tool and ensure that the tools are orientated consistent with the directional motor's high side. This ensures the azimuthal direction is correct when steering the well.

### Normal Pad Drilling

In this scenario, there are no existing wells on the pad. A top-hole rig will move on to the pad and drill each well to KOP and then a bottom hole rig will move on after the top hole rig finishes and drill the each well to horizontal TD. At times, the bottom hole rig may drill each well from surface to horizontal TD.

During this scenario, if two wells come within 10 feet or a separation factor of 1.5, each survey is monitored closely and anti-collision is run after each survey until the wells are clear of a collision risk. The frequency of surveys can vary from 30-500' depending on the trajectory of the wells, hole walk, and risk of collision. If a  $SF \leq 1.0$  or  $\leq 5'$  separation is encountered or a collision occurs, an email notification will be sent by the EQT on-site drilling supervisor to the appropriate state inspector. In the event the proximity of wells get to a point where a collision cannot be avoided or a collision occurs, EQT will properly secure each well and evaluate the most prudent plan forward while communicating plans with the state inspector.

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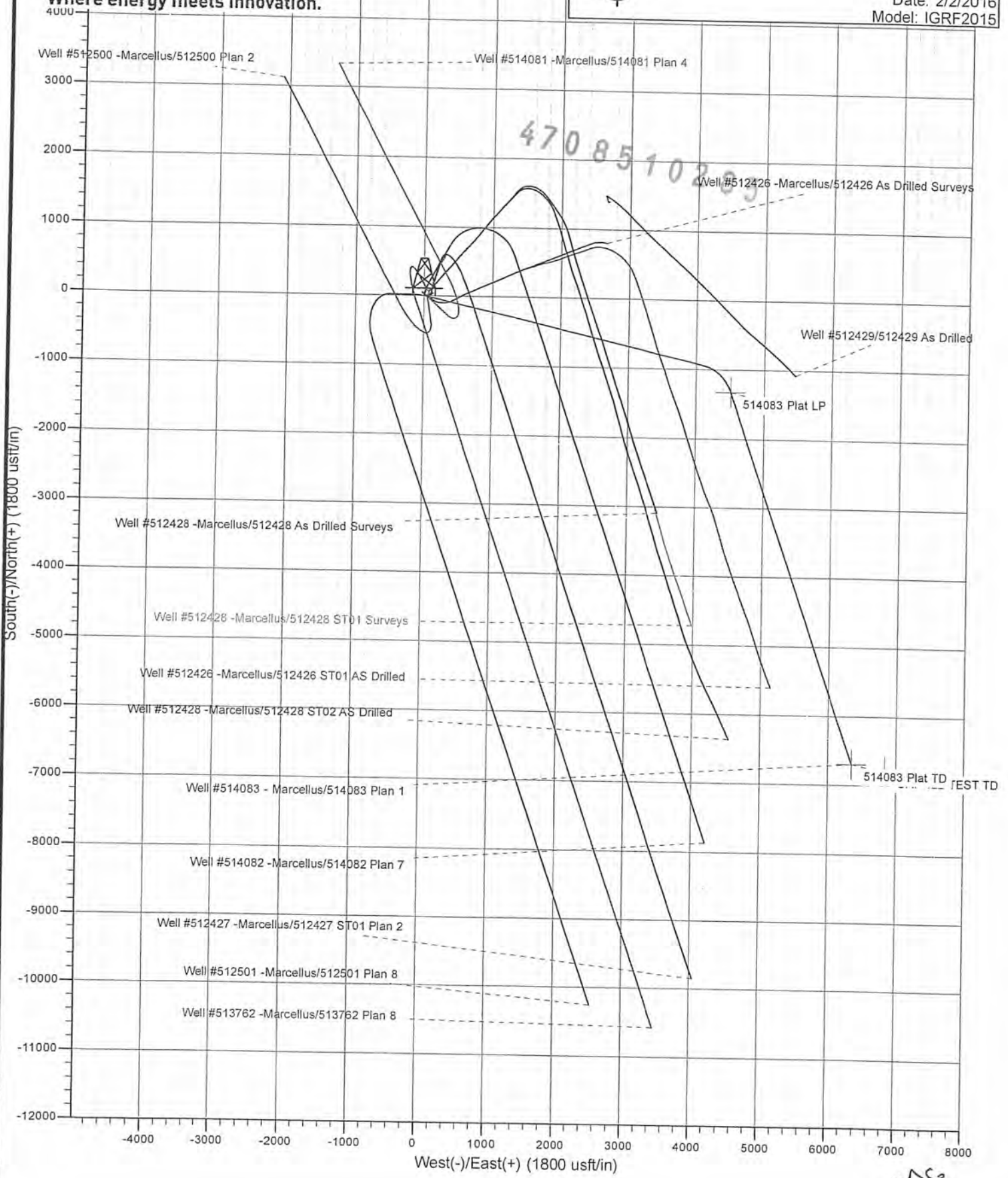
#### Vertical Section:

Each hole is drilled to KOP by either the top-hole rig or bottom hole rig. Once KOP is achieved the gyro survey is run. No nudges are planned.



Azimuths to Grid North  
 True North: 0.85°  
 Magnetic North: -7.57°  
 Magnetic Field  
 Strength: 52013.0snT  
 Dip Angle: 66.57°  
 Date: 2/2/2016  
 Model: IGRF2015

Where energy meets innovation.



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**OXF122**  
**WV 514083**  
**EQT PRODUCTION COMPANY**

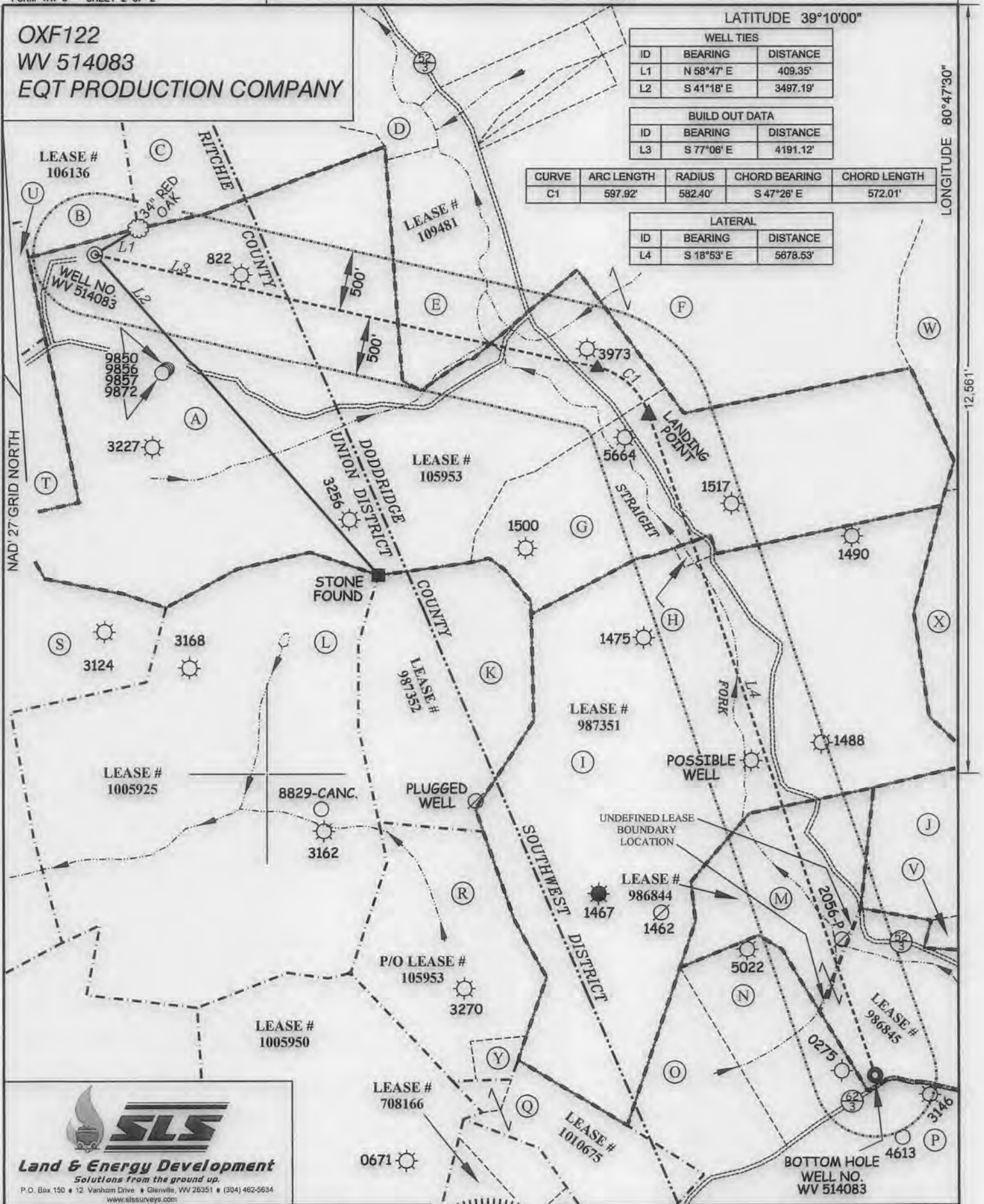
LATITUDE 39°10'00"

WELL TIES		
ID	BEARING	DISTANCE
L1	N 58°47' E	409.35'
L2	S 41°18' E	3497.19'

BUILD OUT DATA		
ID	BEARING	DISTANCE
L3	S 77°08' E	4191.12'

CURVE	ARC LENGTH	RADIUS	CHORD BEARING	CHORD LENGTH
C1	597.92'	582.40'	S 47°26' E	572.01'

LATERAL		
ID	BEARING	DISTANCE
L4	S 18°53' E	5678.53'



LONGITUDE 80°47'30"

12,561'

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 www.slsurveys.com

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

NAD'27 S.P.C.(FT)	N. 233,051.21	E. 1,622,340.01
NAD'27 GEO.	LAT-(N) 39.132179	LONG-(W) 80.831346
NAD'83 UTM (M)	N. 4,331,467.90	E. 514,591.79

**LANDING POINT**

NAD'27 S.P.C.(FT)	N. 231,728.34	E. 1,626,846.57
NAD'27 GEO.	LAT-(N) 39.128730	LONG-(W) 80.815393
NAD'83 UTM (M)	N. 4,331,087.83	E. 515,971.41

**BOTTOM HOLE**

NAD'27 S.P.C.(FT)	N. 228,355.43	E. 1,628,684.40
NAD'27 GEO.	LAT-(N) 39.114053	LONG-(W) 80.808640
NAD'83 UTM (M)	N. 4,329,460.37	E. 516,558.61



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

**LEGEND**

LEASE LINE	-----
SURFACE LINE	-----
WELL LATERAL	-----
OFFSET LINE	-----
TIE LINE	-----
CREEK	~~~~~
ROAD	-----
COUNTY ROUTE	-----
PROPOSED WELL	⊙
EXISTING WELL	⊙
PERMITTED WELL	⊙
DODDRIDGE COUNTY SOUTHWEST DISTRICT TAX MAP-PARCEL	D-SW-TM-00-00
RITCHIE COUNTY UNION DISTRICT TAX MAP-PARCEL	R-U-TM-00-00

SCALE 1" = 1000'

DATE APRIL 05 20 16

REVISED APRIL 11 20 16

OPERATORS WELL NO. WV 514083

API WELL NO. 47 STATE 085 COUNTY 10285 PERMIT 16A

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

COUNTY NAME PERMIT

06/10/2016

**OXF122**  
**WV 514083**  
**EQT PRODUCTION COMPANY**

LATITUDE 39°10'00"

LONGITUDE 80°47'30"

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

NAD'27 S.P.C.(FT) N. 233,051.21 E. 1,622,340.01  
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NAD'27 S.P.C.(FT) N. 226,355.43 E. 1,628,684.40  
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 NAD'83 UTM (M) N. 4,329,460.37 E. 516,558.61



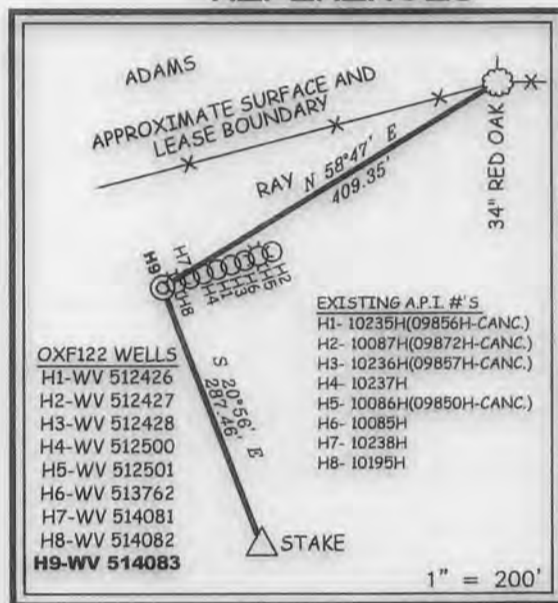
ROYALTY OWNERS			
ADELE McDOUGAL ET AL	2000 AC±	LEASE NO. 109481	
MICHAEL M. MCKENZIE ET AL	189.75 AC±	LEASE NO. 987351	
JAMES L. REED ET AL	40 AC±	LEASE NO. 986844	
JAMES L. REED ET AL	40 AC±	LEASE NO. 986845	

A	RICHARD L. & SHERYL A. RAY	255.5 ACRES±	R-U-TM-32-07
B	KENNETH P. ADAMS	47.15 ACRES±	R-U-TM-32-04
C	COASTAL FOREST RESOURCES CO. d/b/a COASTAL TIMBERLANDS CO.	145.192 ACRES±	D-SW-TM-16-04
D	JEFFREY SPERRY	72.86 ACRES±	D-SW-TM-16-4.1
E	RANDALL SR. & DEBBY FARLEY	42.92 ACRES±	D-SW-TM-16-8.6
F	COASTAL FOREST RESOURCES CO. d/b/a COASTAL TIMBERLANDS CO.	416.61 ACRES±	D-SW-TM-16-8.2
G	MARVIN EDWARDS JR.	94.5 ACRES±	D-SW-TM-18-02
H	MARVIN EDWARDS JR.	1 ACRE±	D-SW-TM-18-04
I	PAUL (LIFE) & JAMES MCKENZIE	228.75 ACRES±	D-SW-TM-18-05
J	RAYMOND A. TREWHELLA	35.5 ACRES±	D-SW-TM-18-12
K	JAMES MCKENZIE	57 ACRES±	R-U-TM-33-03
L	RANDALL SHORT	184.66 ACRES±	R-U-TM-32-15
M	SANDRA ADAMS	100 ACRES±	D-SW-TM-18-11
N	CHARLES & JUDITH WRIGHT	25 ACRES±	D-SW-TM-18-10
O	CHARLES & JUDITH WRIGHT	30.25 ACRES±	D-SW-TM-18-09
P	JEFFERY & JULIA SPERRY	53.44 ACRES±	D-SW-TM-18-14
Q	RUSSELL & CAROL WICK	30.05 ACRES±	R-U-TM-38-01
R	JAMES MCKENZIE	46.7 ACRES±	R-U-TM-33-01
S	BOBBY RIDDLE ET AL	188.88 ACRES±	R-U-TM-32-14
T	EQT PRODUCTION COMPANY	78.3 ACRES±	R-U-TM-32-06
U	JIMMIE JR. & SANDRA TRENT	76 ACRES±	R-U-TM-32-05
V	STEVEN P. ADAMS	7.3 ACRES±	D-SW-TM-18-03
W	MANSFIELD LEESON	189 ACRES±	D-SW-TM-16-09
X	CHARLES ADAMS	109.5 ACRES±	D-SW-TM-18-06
Y	JAMES MCKENZIE	3.43 ACRES±	R-U-TM-33-02

**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 IS 1"=2000'.

**REFERENCES**



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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. 849 *C. Victor Moyers*



(+) DENOTES LOCATION OF WELL ON UNITED STATES TOPOGRAPHIC MAPS.  
 DATE APRIL 05, 20 16  
 REVISED APRIL 11, 20 16  
 OPERATORS WELL NO. WV 514083  
 API WELL NO. 47-085-10285 HGA  
 STATE COUNTY PERMIT

MINIMUM DEGREE OF ACCURACY 1 / 2500  
 FILE NO. 6811P514083R  
 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  LIQUID INJECTION  WASTE DISPOSAL  IF "GAS" PRODUCTION  STORAGE  DEEP  SHALLOW

LOCATION: PAD ELEVATION 1,111' WATERSHED STRAIGHT FORK DISTRICT UNION COUNTY RITCHIE QUADRANGLE OXFORD 7.5'

SURFACE OWNER RICHARD L. & SHERYL A. RAY ACREAGE 255.50±  
 ROYALTY OWNER HAUGHT FAMILY TRUST ET AL ACREAGE 402±

PROPOSED WORK: DRILL  CONVERT  DRILL DEEPER  REDRILL  FRACTURE OR STIMULATE  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 6,461'

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

COUNTY NAME PERMIT

06/10/2016

**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 Roark  
 Its: Permitting Supervisor

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APR 14 2016

WV Department of Environmental Protection

Lease No.	Grantor, Lessor, etc.	Grantee, Lessee, etc.	Royalty	Book/Page
<b>105953</b>	<b><u>Haught Family Trust, et al (current royalty owner)</u></b>		min pd 1/8th	
	William Adams, et ux (original lessor)	The Philadelphia Company of West Virginia		LB29/244
	The Philadelphia Company of West Virginia	Pittsburgh and West Virginia Gas Company		LB55/362
	Pittsburgh and West Virginia Gas Company	Equitable Gas Company		LB126/473
	Equitable Gas Company	Equitrans, Inc.		LB201/253
	Equitrans, Inc.	Equitable Production-Eastern States, Inc.		LB234/830
	Equitable Production-Eastern States, Inc.	Equitable Production Company		DB281/346 Doddridge
	Equitable Production Company	EQT Production Company		DB281/346 Doddridge
<b>109481</b>	<b><u>Adele McDougal, et al (current royalty owner)</u></b>		min pd 1/8th	
	Jackson Leeson, et al (original lessor)	The Philadelphia Co. of West Virginia		LB21/76
	The Philadelphia Co. of West Virginia	Pittsburgh & West Virginia Gas Co.		DB87/90
	Pittsburgh & West Virginia Gas Co.	Equitable Gas Company		DB121/257
	Equitable Gas Company	Equitrans, Inc.		LB154/475
	Equitrans, Inc.	Equitable Production-Eastern States, Inc.		LB192/19
	Equitable Production-Eastern States, Inc.	Equitable Production Company		CB281/346 Doddridge
	Equitable Production Company	EQT Production Company		CB281/346 Doddridge
<b>987351</b>	<b><u>Michael M. McKenzie, et al (current royalty owner)</u></b>		min pd 1/8	
	Barbara R. Schultz (original lessor)	EQT Production Company		LB254/298
	Charles T. Reed	EQT Production Company		LB254/698
	James L. Reed	EQT Production Company		LB254/701
	Michael Marion McKenzie	EQT Production Company		LB255/717
	Donald E. Reed	EQT Production Company		LB256/355
	Jerry R. Reed	EQT Production Company		LB257/514
<b>986844</b>	<b><u>James L. Reed, et al (current royalty owner)</u></b>		min pd 1/8	
	Barbara Schultz (original lessor)	EQT Production Company		LB253/280
	Jerry R. Reed and Darlene M. Reed	EQT Production Company		LB254/616
	Charles T. Reed	EQT Production Company		LB267/144
	Donald E. Reed	EQT Production Company		LB267/148
	James L. Reed	EQT Production Company		LB267/152
<b>986845</b>	<b><u>James L. Reed, et al (current royalty owner)</u></b>		min pd 1/8	
	Barbara Schultz (original lessor)	EQT Production Company		LB252/25
	Jerry R. Reed and Darlene M. Reed	EQT Production Company		LB254/610
	Charles T. Reed	EQT Production Company		LB264/288
	Donald E. Reed	EQT Production Company		LB264/294
	James L. Reed	EQT Production Company		LB272/1

4708510285



January 13, 2016

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

Re: OXF122 well pad, well number 514083  
Union District, Ritchie County

4708510285

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: 04/13/2016

API No. 47- 085 - \_\_\_\_\_  
Operator's Well No. 514083  
Well Pad Name: OXF122

**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>WW</u>	UTM NAD 83 Easting:	<u>514591.79</u>
County:	<u>Ritchie</u>	Northing:	<u>4331467.90</u>
District:	<u>Union</u>	Public Road Access:	<u>7/18</u>
Quadrangle:	<u>Oxford</u>	Generally used farm name:	<u>Richard L &amp; Sheryl A Ray</u>
Watershed:	<u>Straight Fork</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.

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:

\*PLEASE CHECK ALL THAT APPLY

1. NOTICE OF SEISMIC ACTIVITY or  NOTICE NOT REQUIRED BECAUSE NO SEISMIC ACTIVITY WAS CONDUCTED
2. NOTICE OF ENTRY FOR PLAT SURVEY or  NO PLAT SURVEY WAS CONDUCTED
3. NOTICE OF INTENT TO DRILL or  NOTICE NOT REQUIRED BECAUSE NOTICE OF ENTRY FOR PLAT SURVEY WAS CONDUCTED or
- WRITTEN WAIVER BY SURFACE OWNER (PLEASE ATTACH)
4. NOTICE OF PLANNED OPERATION
5. PUBLIC NOTICE
6. NOTICE OF APPLICATION

OOG OFFICE USE ONLY

- RECEIVED/  
NOT REQUIRED
- RECEIVED
- RECEIVED/  
NOT REQUIRED
- RECEIVED
- RECEIVED
- RECEIVED

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**Required Attachments:**

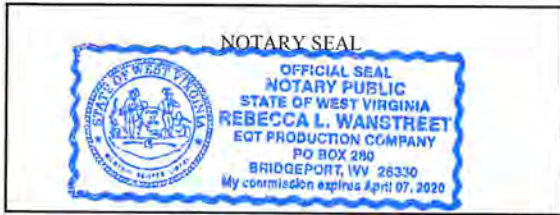
The Operator shall attach to this Notice Certification Form all Notice Forms and Certifications of Notice that have been provided to the required parties and/or any associated written waivers. For the Public Notice, the operator shall attach a copy of the Class II Legal Advertisement with publication 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 a first class or personal service, the return receipt card or other postal receipt for certified mailing.

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WV Department of Environmental Protection

**Certification of Notice is hereby given:**

THEREFORE, I *Victoria 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:	<u>EQT Production Company</u>	Address:	<u>115 Professional Place PO Box 280</u>
By:	<u>Victoria Roark</u>		<u>Bridgeport WV 26330</u>
Its:	<u>Permitting Supervisor</u>	Facsimile:	<u>304-848-0041</u>
Telephone:	<u>304-848-0076</u>	Email:	<u>vroark@eqt.com</u>



Subscribed and sworn before me this 11<sup>th</sup> day of April 2016.  
Rebecca L. Wanstreet Notary Public  
 My Commission Expires 4-7-20

**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](mailto:depprivacyofficer@wv.gov).

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**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:** 4/13/16 **Date Permit Application Filed:** 4-13-16

**Notice of:**

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

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**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: \_\_\_\_\_

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\*Please attach additional forms if necessary  
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Environmental Protection

06/10/2016



**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 57<sup>th</sup> Street, SE, Charleston, WV 25304 (304-926-0450) or by visiting [www.dep.wv.gov/oil-and-gas/pages/default.aspx](http://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. 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, on 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, the items

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

**Water Well Testing:**

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

**Water Testing Laboratories:**

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

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

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

**Written Comment:**

Pursuant to West Virginia Code § 22-6A-11(a), all persons described in subsection (b), section ten of this article may file written comments with the secretary as to the location or construction of the applicant's proposed well work within thirty days after the application is filed with the secretary. All persons described in West Virginia Code § 22-6A-10(b) may file 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 57<sup>th</sup> St. SE  
Charleston, WV 25304  
(304) 926-0450

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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.

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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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06/10/2016

WW-6A  
(8-13)

API NO. 47-085 -  
OPERATOR WELL NO. 514083  
Well Pad Name: OXF122

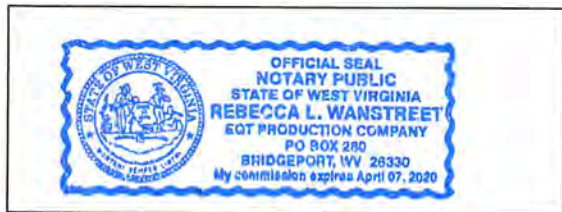
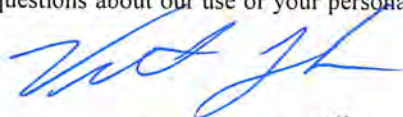
**Notice is hereby given by:**

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](mailto:depprivacyofficer@wv.gov).



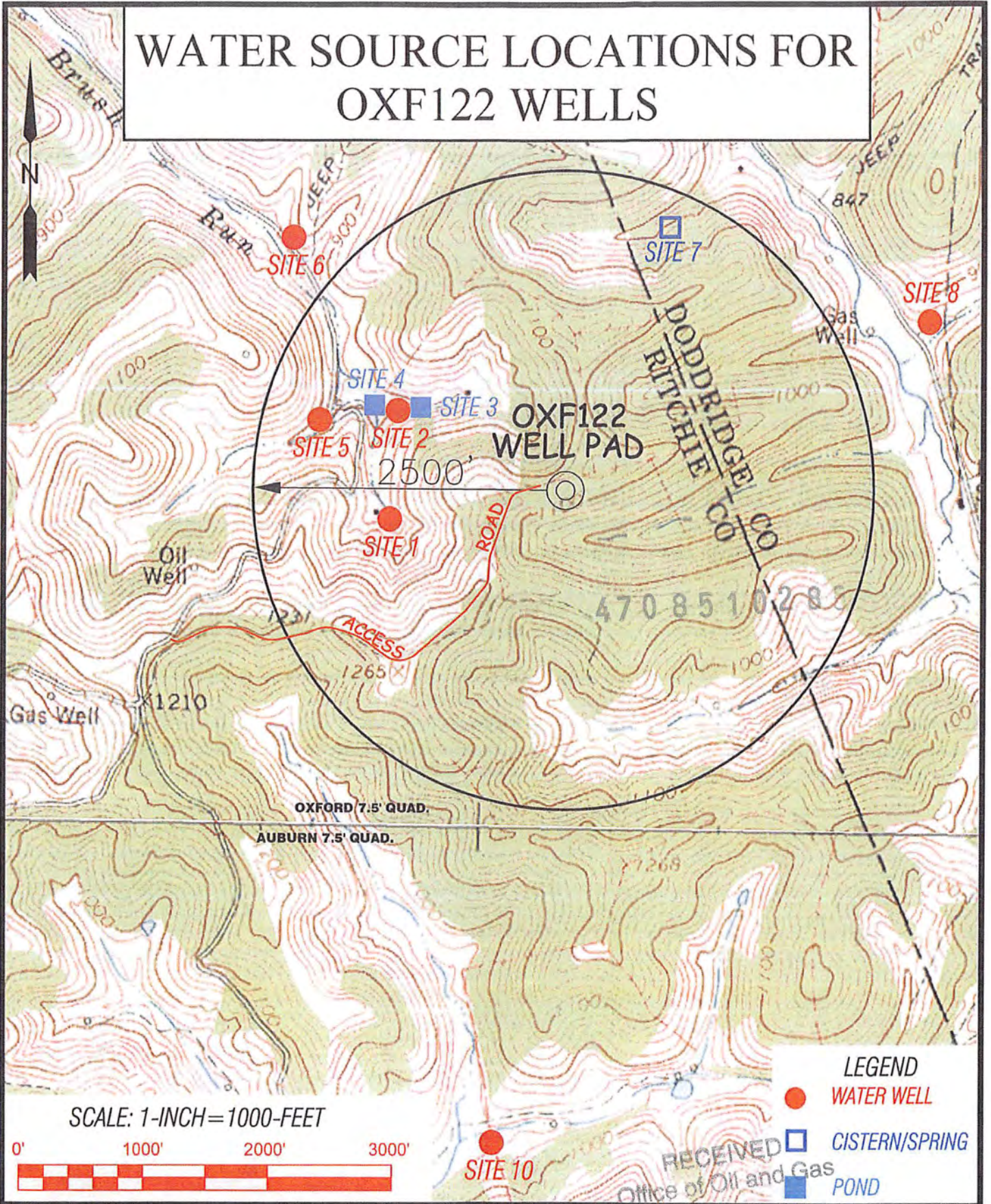
Subscribed and sworn before me this 11<sup>th</sup> day of April 2016.  
Rebecca L. Wanstreet Notary Public  
My Commission Expires 4-7-20

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# WATER SOURCE LOCATIONS FOR OXF122 WELLS



SCALE: 1-INCH=1000-FEET



**LEGEND**

- WATER WELL
- CISTERN/SPRING
- POND

**SLS**  
Land & Energy Development  
*Solutions from the ground up.*

1100 15th St. & 12th Avenue Drive, Birmingham, AL 35203-1814, USA, 800-253-3434

DRAWN BY: K.D.W. FILE NO: 6811 DATE: 03/17/16 CADD FILE: 6811WSOXF122.dwg

TOPO SECTION OF:  
OXFORD, WV 7.5' QUAD

DISTRICT	COUNTY	TAX MAP-PARCEL NO.
UNION	RITCHIE	32-07

OPERATOR:  
EQT PRODUCTION COMPANY  
115 PROFESSIONAL PLACE  
P.O. BOX 280  
BRIDGEPORT, WV 26330

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Office of Oil and Gas  
Environmental Protection

06/10/2016

**Surface Owners:**

Richard L. & Sheryl A. Ray  
757 Summersville Lake Road  
Mount Nebo WV 26679

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**Surface Owners (road or other disturbance):**

Richard L. & Sheryl A. Ray  
757 Summersville Lake Road  
Mount Nebo WV 26679

EQT Production Company  
625 Liberty Avenue  
Suite 1700  
Pittsburgh PA 15222

Kenneth P. Adams  
By Sandra D Adams POA  
3756 Brushy Fork Rd.  
West Union WV 26456

Jimmie R. Trent, Jr and Sandra S. Trent  
3630 Brushy Fork  
West Union WV 26456

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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: 4/13/16 Date Permit Application Filed: 4/13/16

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

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**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 57<sup>th</sup> Street, SE, Charleston, WV 25304 (304-926-0450) or by visiting [www.dep.wv.gov/oil-and-gas/pages/default.aspx](http://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 from the surface water intake. (3) For a groundwater source, the distance shall be measured from the wellhead or spring. The department may, in its discretion, waive these distance restrictions upon submission of a plan identifying sufficient measures, facilities or practices to be employed during well site construction, drilling and operations to protect the waters of the state. A waiver, if granted, shall impose any permit conditions as the secretary considers necessary. (c) Notwithstanding the foregoing provisions of this section, nothing contained in this section prevents an operator from conducting the activities permitted or authorized by a Clean Water Act Section 404 permit or other approval from the United States Army Corps of Engineers within any waters of the state or within the restricted areas referred to 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

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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** 4708510285

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

**Written Comment:**

Pursuant to West Virginia Code § 22-6A-11(a), all persons described in subsection (b), section ten of this article may file written comments with the secretary as to the location or construction of the applicant's proposed well work within thirty days after the application is filed with the secretary. All persons described in West Virginia Code § 22-6A-10(b) may file 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 57<sup>th</sup> St. SE  
Charleston, WV 25304  
(304) 926-0450

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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.

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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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API NO. 47-085 -  
OPERATOR WELL NO. 514083  
Well Pad Name: OXF122

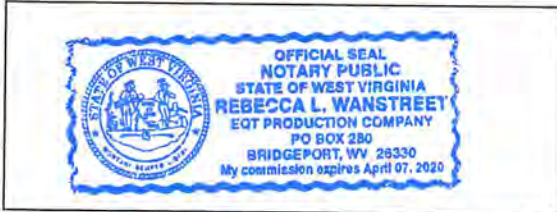
**Notice is hereby given by:**

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 [deprivacyofficer@wv.gov](mailto:deprivacyofficer@wv.gov).



*Handwritten signature*

Subscribed and sworn before me this 26 day of April, 2016.  
Rebecca L. Wanstreet Notary Public  
My Commission Expires 4-7-20

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**Surface Owners:**

Richard L. & Sheryl A. Ray  
757 Summersville Lake Road  
Mount Nebo WV 26679

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**Surface Owners (road or other disturbance):**

Richard L. & Sheryl A. Ray  
757 Summersville Lake Road  
Mount Nebo WV 26679

EQT Production Company  
625 Liberty Avenue  
Suite 1700  
Pittsburgh PA 15222

Kenneth P. Adams  
RR1 Box 143A  
West Union WV 26456

Jimmie R. Trent, Jr and Sandra S. Trent  
3630 Brushy Fork  
West Union WV 26456

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**Surface Owners (Pits or Impoundments):**

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757 Summersville Lake Road  
Mount Nebo WV 26679

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**Coal Owner(s):**

Haught Family Trust  
210 E Main Street  
Harrisville WV 26362

ET Blue Grass, LLC  
625 Liberty Ave STE 1700  
Pittsburgh PA, 15222

Sharron D. Otto  
7615 Leon Ave  
Southport FL 32409

Anthony S. Otto  
7615 Leon Ave  
Southport FL 32409

Joyce E. Strong Trust  
Sharon Strong Thomas, Trustee  
3561 Head of Pond  
New Albany OH 43054

Warren R and Lenna G Haught  
12684 Staunton Turnpike  
Smithville WV 26178

Betty M. Stanley Lee  
3029 Lakeshore Drive  
Longmont CO 80503-1613

Theodore J. Stanley  
c/o Theodore Paul Stanley  
38 Northridge Street  
Patchogue NY 11772--2822

William Nicholas Stanley  
4520 Winston Lane N.  
Sarasota, FL 34235

Jeffrey G Adams  
5800 Barbara Lane  
Prince George VA 23875-2243

Carey A. Adams  
510 Wellshire Place  
Chester VA 23835

Gregory J Adams  
109 S. Marion Avenue  
Hopewell VA 23860-3229

Kenneth E Adams  
716 Spring Valley Road  
Colonial Heights VA 23834

Michael A Adams  
c/o Kenneth Adams, et al  
120 Marlboro Drive  
McMurray PA 15317

Lisa A Adams  
120 Marlboro Drive  
McMurray PA 15317

Laura Lee McQuenney  
131 C. R. 916  
Anna TX 75404

Christian Andersen  
PO Box 393  
Mt. Nebo WV 26679

George W Adams Jr. Trust  
c/o Lisa A Adamsky  
120 Marlboro Drive  
McMurry PA 15317

Lucy Mae Jameson  
2320 Arlington Road  
Concord CA 94520

Roberta Neil Boston  
35 Dog Lane  
Marshfield MA 02050

Michael Robert Boston  
1420 22nd Street W  
Bradenton FL 34205

Deborah Jo Boston  
9312 Ohop Valley Ext. Rd E  
Eatonville WA 98328

David L. Andersen  
P.O. Box 115  
Sardis OH 43946

Darlene J Boston  
PO Box 232  
New Matamoras OH 45767

Thomas J Boston  
PO Box 232  
New Matamoras OH 45767

V. Kim Wayman  
616 New London Rd  
Newark DE 19711

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**Coal Owner(s):**

Terry F. Wayman  
1651 Dixie Line Road  
Elkton MD 21921

Dona L. Eberlin  
117 St. Louis Drive  
Elkton MD 21921

Kenneth Mark Wayman  
1649 Dixie Line Road  
Elkton MD 21921

Suzanne M Riggs  
1651 Dixie Line Road  
Elkton MD 21921

Neville A Boston  
PO Box 33  
Hannibal OH 43931

Nancy R Boston  
63 Kindsfather Drive  
Livingston MT 59047

Holmes and Vada J. Lemon  
1295 South Spring Street  
Harrisville WV 26362

William R Stalnaker  
160 Stalnaker Estate  
Glennville WV 26351

Reginald L Roberts  
2871 WV Hwy 5 W  
Glennville WV 26351

Dixie Lee Meyer  
26067 Twin Rivers Drive  
Shell Knob MO 65747

Adrian Cowgill  
Rt 1 Box 15  
Friendly WV 26146

Gerald Cowgill  
50 Thorn Ridge Road  
Friendly WV 26146

Janet Deaton  
50 Thorn Ridge Road  
Friendly WV 26146

Martha Ezratty  
6236 Cherie Lynn Drive  
Inglewood OH 45415

Melinda Debner  
C/o David Bowyer  
12088 Middle Island Rd.  
Alma WV 26320

Steve K Mix  
800 County Road 4120  
Meridan TX 76665

R.R. Cottrill Loving Trust  
6505 W. Brady Place  
Tulas OK 74136

Robin Huffman  
46245 Buckio Road  
Woodsfield OH 43793

Linda Zamora  
328 Darrell Road  
Roanoke TX 76262

James I Mix  
3374 Gonzaga Place  
Santa Clara CA 95051

Debra Rolling  
3409 Jamestown Road  
Flower Mound TX 75028

S. A. Smith & C. B. Morris Trust  
Union National Bank TTEE  
PO Box 659  
Wichita Falls TX 76307-0659

Michael K Mix  
1514 N. Valley Pkway  
Lewisville TX 75077

Will E. Morris  
Union National Bank TTEE  
I.C.G.  
PO Box 659  
Wichita Falls TX 76304-0659

Haight Family Trust  
Ira Haight TTEE  
210 E Main Street  
Harrisville WV 26362

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06/10/2016

**Coal Owner(s):**

John W Kerns Trust  
Union National Bank TTEE  
I.C.G.  
PO Box 659  
Witchita Falls TX 76307-0659

Jean L Mix  
c/o Local Excavating  
1865 C.R. 168  
Dundee, OH 44624

Daniel P George  
1018 Reigel School Road  
Rimersburg PA 16248

Howard Lee Swiger  
PO Box 402  
Salem WV 26426

Lisa Holzauer  
23 Blackburn Road  
Quarryville PA 17566

Nancy J Stelle  
2655 Monterey Road  
Rimersburg PA 16248

Donna Nell Boston  
2685 Summit Street  
Columbus OH 43202

George W Adams III  
740 Old Dribble Rd  
Aiken SC 29803

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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	\$

Sent To  
**George W Adams III**  
Street and Apt. No., or P.O. Box No.  
**740 Old Dribble Rd.**  
City, State, ZIP+4®  
**Aiken, SC 29803**

Postmark Here  
**APR 26 2016**  
RW  
OSE 122 Permit Ap.  
2633

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

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**Owners of Water Wells:**

**4708510285**

Ruby Adams  
RT. 1 Box 143-A  
West Union WV 26456

Jimmie R. Trent, Jr and Sandra S. Trent  
3630 Brushy Fork  
West Union WV 26456

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STATE OF WEST VIRGINIA  
DEPARTMENT OF ENVIRONMENTAL PROTECTION, OFFICE OF OIL AND GAS  
**VOLUNTARY STATEMENT OF NO OBJECTION**

**Instructions to Persons Named on Page WW-6A**

The well operator named on page WW-6A is applying for a permit from the State of West Virginia to conduct oil or gas well work. Well work permits are valid for twenty-four (24) months. Please contact the listed well operator and the Office of Oil and Gas if you do not own any interest in the listed surface tract.

**Comment and Waiver Provisions**

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.

Pursuant to West Virginia Code § 22-6A-8(b) No permit may be issued less than thirty days after the filing date of the application for any well work except plugging or replugging; and no permit for plugging or replugging may be issued less than five days after the filing date of the application except a permit for plugging or replugging a dry hole: *Provided*, That if the applicant certifies that all persons entitled to notice of the application under the provisions of subsection (b), section ten of this article have been served in person or by certified mail, return receipt requested, with a copy of the well work application, including the erosion and sediment control plan, if required, and the well plat, and further files written statements of no objection by all such persons, the secretary may issue the well work permit at any time.

**VOLUNTARY STATEMENT OF NO OBJECTION**

I, John W Damato, hereby state that I have read the Instructions to Persons Named on Page WW-6A and the associated provisions listed above, and that I have received copies of a Notice of Application, an Application for a Well Work Permit on Form WW-6A and attachments consisting of pages one (1) through \_\_\_\_\_, including the erosion and sediment control plan, if required, and the well plat, all for proposed well work on the tract of land as follows:

State: WV UTM NAD 83 Easting: 514591.79  
County: Ritchie Northing: 4331467.90  
District: Union Public Road Access: 7/18  
Quadrangle: Oxford Generally used farm name: Richard L & Sheryl A Ray  
Watershed: Straight Fork

I further state that I have no objection to the planned work described in these materials, and I have no objection to a permit being issued on those materials.

<p>*Please check the box that applies</p> <p><input type="checkbox"/> SURFACE OWNER</p> <p><input checked="" type="checkbox"/> SURFACE OWNER (Road and/or Other Disturbance)</p> <p><input type="checkbox"/> SURFACE OWNER (Impoundments/Pits)</p> <p><input type="checkbox"/> COAL OWNER OR LESSEE</p> <p><input type="checkbox"/> COAL OPERATOR</p> <p><input type="checkbox"/> WATER PURVEYOR</p> <p><input type="checkbox"/> OPERATOR OF ANY NATURAL GAS STORAGE FIELD</p>	<p><b>FOR EXECUTION BY A NATURAL PERSON</b></p> <p>Signature: _____</p> <p>Print Name: _____</p> <p>Date: _____</p> <p><b>FOR EXECUTION BY A CORPORATION, ETC.</b></p> <p>Company: <u>EQT Production Company</u></p> <p>By: <u>John W Damato</u></p> <p>Its: <u>Regional Land Director</u></p> <p>Signature: <u><i>John W Damato</i></u></p> <p>Date: <u>4-11-16</u></p>
--	--

**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](mailto:depprivacyofficer@wv.gov).

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**Surface Owners (Pits or Impoundments):**

Richard L. & Sheryl A. Ray  
757 Summersville Lake Road  
Mount Nebo WV 26679

470851020

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**Coal Owner(s):**

Haught Family Trust  
210 E Main Street  
Harrisville WV 26362

ET Blue Grass, LLC  
625 Liberty Ave STE 1700  
Pittsburgh PA, 15222

Sharron D. Otto  
7615 Leon Ave  
Southport FL 32409

Anthony S. Otto  
7615 Leon Ave  
Southport FL 32409

Joyce E. Strong Trust  
Sharon Strong Thomas, Trustee  
3561 Head of Pond  
New Albany OH 43054

Warren R and Lenna G Haught  
12684 Staunton Turnpike  
Smithville WV 26178

Betty M. Stanley Lee  
3029 Lakeshore Drive  
Longmont CO 80503-1613

Theodore J. Stanley  
c/o Theodore Paul Stanley  
38 Northridge Street  
Patchogue NY 11772--2822

William Nicholas Stanley  
4520 Winston Lane N.  
Sarasota, FL 34235

Jeffrey G Adams  
5800 Barbara Lane  
Prince George VA 23875-2243

Carey A. Adams  
510 Wellshire Place  
Chester VA 23835

Gregory J Adams  
109 S. Marion Avenue  
Hopewell VA 23860-3229

Kenneth E Adams  
716 Spring Valley Road  
Colonial Heights VA 23834

Lisa A Adamsky  
120 Marlboro Drive  
McMurray PA 15317

Laura Lee McQuenney  
131 C. R. 916  
Anna TX 75404

Christian Andersen  
PO Box 393  
Mt. Nebo WV 26679

Lucy Mae Jameson  
2320 Arlington Road  
Concord CA 94520

Roberta Neil Boston  
35 Dog Lane  
Marshfield MA 02050

Michael Robert Boston  
1420 22nd Street W  
Bradenton FL 34205

Deborah Jo Boston  
9312 Ohop Valley Ext. Rd E  
Eatonville WA 98328

David L. Andersen  
P.O. Box 115  
Sardis OH 43946

Darlene J Boston  
PO Box 232  
New Matamoras OH 45767

Thomas J Boston  
PO Box 232  
New Matamoras OH 45767

V. Kim Wayman  
616 New London Rd  
Newark DE 19711

Terry F. Wayman  
1651 Dixie Line Road  
Elkton MD 21921

Dona L. Eberlin  
117 St. Louis Drive  
Elkton MD 21921

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**Coal Owner(s) Continued:**

Kenneth Mark Wayman  
1649 Dixie Line Road  
Elkton MD 21921

Suzanne M Riggs  
1651 Dixie Line Road  
Elkton MD 21921

Neville A Boston  
PO Box 33  
Hannibal OH 43931

Nancy R Boston  
63 Kindsfather Drive  
Livingston MT 59047

Holmes and Vada J. Lemon  
1295 South Spring Street  
Harrisville WV 26362

William R Stalnaker  
160 Stalnaker Estate  
Glenville WV 26351

Reginald L Roberts  
2871 WV Hwy 5 W  
Glenville WV 26351

Dixie Lee Meyer  
26067 Twin Rivers Drive  
Shell Knob MO 65747

Adrian Cowgill  
Rt 1 Box 15  
Friendly WV 26146

Gerald Cowgill  
50 Thorn Ridge Road  
Friendly WV 26146

Janet Deaton  
50 Thorn Ridge Road  
Friendly WV 26146

Martha Ezratty  
6236 Cherie Lynn Drive  
Inglewood OH 45415

Melinda Debner  
C/o David Bowyer  
12088 Middle Island Rd.  
Alma WV 26320

Steve K Mix  
800 County Road 4120  
Meridan TX 76665

R.R. Cottrill Loving Trust  
6505 W. Brady Place  
Tulas OK 74136

Robin Huffman  
46245 Buckio Road  
Woodsfield OH 43793

Linda Zamora  
328 Darrell Road  
Roanoke TX 76262

James I Mix  
3374 Gonzaga Place  
Santa Clara CA 95051

Debra Rolling  
3409 Jamestown Road  
Flower Mound TX 75028

S. A. Smith & C. B. Morris Trust  
Bank One WV, NA, TTEE  
PO Box 9908  
Fort Worth TX 76199

Michael K Mix  
1514 N. Valley Pkway  
Lewisville TX 75077

Will E. Morris  
Bank One WV, NA, TTEE  
PO Box 9908  
Fort Worth TX 76199

Haught Family Trust  
Ira Haught TTEE  
210 E Main Street  
Harrisville WV 26362

John W Kerns Trust  
Bank One WV, NA, TTEE  
PO Box 9908  
Fort Worth TX 76199

Jean L Mix  
c/o Local Excavating  
1865 C.R. 168  
Dundee, OH 44624

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Environmental Protection

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**Coal Owner(s) Continued:**

Daniel P George  
1018 Reigel School Road  
Rimersburg PA 16248

Howard Lee Swiger  
PO Box 402  
Salem WV 26426

Lisa Holzauer  
23 Blackburn Road  
Quarryville PA 17566

Nancy J Steele  
2655 Monterery Road  
Rimersburg PA 16248

Donna Nell Boston  
2685 Summit Street  
Columbus OH 43202

4208510285

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STATE OF WEST VIRGINIA  
DEPARTMENT OF ENVIRONMENTAL PROTECTION, OFFICE OF OIL AND GAS  
**VOLUNTARY STATEMENT OF NO OBJECTION**

**Instructions to Persons Named on Page WW-6A**

The well operator named on page WW-6A is applying for a permit from the State of West Virginia to conduct oil or gas well work. Well work permits are valid for twenty-four (24) months. Please contact the listed well operator and the Office of Oil and Gas if you do not own any interest in the listed surface tract.

**Comment and Waiver Provisions**

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.

Pursuant to West Virginia Code § 22-6A-8(b) No permit may be issued less than thirty days after the filing date of the application for any well work except plugging or replugging; and no permit for plugging or replugging may be issued less than five days after the filing date of the application except a permit for plugging or replugging a dry hole: *Provided*, That if the applicant certifies that all persons entitled to notice of the application under the provisions of subsection (b), section ten of this article have been served in person or by certified mail, return receipt requested, with a copy of the well work application, including the erosion and sediment control plan, if required, and the well plat, and further files written statements of no objection by all such persons, the secretary may issue the well work permit at any time.

**VOLUNTARY STATEMENT OF NO OBJECTION**

I, John W Damato, hereby state that I have read the Instructions to Persons Named on Page WW-6A and the associated provisions listed above, and that I have received copies of a Notice of Application, an Application for a Well Work Permit on Form WW-6A and attachments consisting of pages one (1) through \_\_\_\_\_, including the erosion and sediment control plan, if required, and the well plat, all for proposed well work on the tract of land as follows:

State:	<u>WV</u>	UTM NAD 83 Easting:	<u>514591.79</u>
County:	<u>Ritchie</u>	UTM NAD 83 Northing:	<u>4331467.90</u>
District:	<u>Union</u>	Public Road Access:	<u>7/18</u>
Quadrangle:	<u>Oxford</u>	Generally used farm name:	<u>Richard L &amp; Sheryl A Ray</u>
Watershed:	<u>Straight Fork</u>		

I further state that I have no objection to the planned work described in these materials, and I have no objection to a permit being issued on those materials.

<p>*Please check the box that applies</p> <p><input type="checkbox"/> SURFACE OWNER</p> <p><input type="checkbox"/> SURFACE OWNER (Road and/or Other Disturbance)</p> <p><input type="checkbox"/> SURFACE OWNER (Impoundments/Pits)</p> <p><input checked="" type="checkbox"/> COAL OWNER OR LESSEE</p> <p><input type="checkbox"/> COAL OPERATOR</p> <p><input type="checkbox"/> WATER PURVEYOR</p> <p><input type="checkbox"/> OPERATOR OF ANY NATURAL GAS STORAGE FIELD</p>	<p><b>FOR EXECUTION BY A NATURAL PERSON</b></p> <p>Signature: _____</p> <p>Print Name: _____</p> <p>Date: _____</p>
	<p><b>FOR EXECUTION BY A CORPORATION, ETC.</b></p> <p>Company: <u>ET Blue Grass LLC</u></p> <p>By: <u>John W Damato</u></p> <p>Its: <u>Regional Land Director</u></p> <p>Signature: <u>[Signature]</u></p> <p>Date: <u>4-11-16</u></p>

**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](mailto:depprivacyofficer@wv.gov).

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WV Department of  
Environmental Protection

**Owners of Water Wells:**

Ruby Adams  
RT. 1 Box 143-A  
West Union WV 26456

Jimmie R. Trent, Jr and Sandra S. Trent  
3630 Brushy Fork  
West Union WV 26456

470 851 0285

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Environmental Protection

06/10/2016

**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:** 03/01/2016                      **Date Permit Application Filed:** 03/10/2016

**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: \_\_\_\_\_  
\_\_\_\_\_

4708510285

**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>514591.79</u>
County:	<u>Ritchie</u>	Northing:	<u>4331467.90</u>
District:	<u>Union</u>	Public Road Access:	<u>7/18</u>
Quadrangle:	<u>Oxford</u>	Generally used farm name:	<u>Richard L &amp; Sheryl A Ray</u>
Watershed:	<u>Straight Fork</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 57<sup>th</sup> Street, SE, Charleston, WV 25304 (304-926-0450) or by visiting [www.dep.wv.gov/oil-and-gas/pages/default.aspx](http://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:**

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APR 14 2016  
WV Department of  
Environmental Protection  
06/10/2016

**Surface Owners:**

Richard L. & Sheryl A. Ray  
757 Summersville Lake Road  
Mount Nebo WV 26679

470 85 102 85

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WV Department of  
Environmental Protection

06/10/2016

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

**WAIVER**

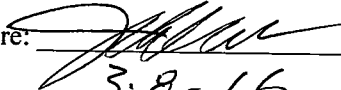
Pursuant to W. Va. Code § 22-6A-16(b), at least ten days prior to filing a permit application, an operator shall, by certified mail return receipt requested or hand delivery, give the surface owner notice of its intent to enter upon the surface owner's land for the purpose of drilling a horizontal well: *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.

**Surface Owner Waiver:**

I, \_\_\_\_\_, hereby state that I have read the notice provisions listed above and hereby waive the notice requirements under West Virginia Code § 22-6A-16(b) for the tract of land as follows:

State:	<u>WV</u>	UTM NAD 83	Easting:	<u>514591.79</u>
County:	<u>Ritchie</u>		Northing:	<u>4331467.90</u>
District:	<u>Union</u>	Public Road Access:		<u>7/18</u>
Quadrangle:	<u>Oxford</u>	Generally used farm name:		<u>Richard L &amp; Sheryl A Ray</u>
Watershed:	<u>Straight Fork</u>			

Name: John Damato  
Address: 115 Professional Place  
Bridgeport, WV 26330

Signature:   
Date: 3-8-16

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470 851 0285

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**Surface Owners (Pits or Impoundments):**

Richard L. & Sheryl A. Ray  
757 Summersville Lake Road  
Mount Nebo WV 26679

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WV Department of **06/10/2016**  
Environmental Protection

**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:** 04/13/2016      **Date Permit Application Filed:** 04/13/2016

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

- CERTIFIED MAIL                                       HAND  
RETURN RECEIPT REQUESTED                                      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: \_\_\_\_\_  
4708510285

**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>514591.79</u>
County:	<u>Ritchie</u>		Northing:	<u>4331467.90</u>
District:	<u>Union</u>	Public Road Access:		<u>7/18</u>
Quadrangle:	<u>Oxford</u>	Generally used farm name:		<u>Richard L &amp; Sheryl A Ray</u>
Watershed:	<u>Straight Fork</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 57<sup>th</sup> Street, SE, Charleston, WV 25304 (304-926-0450) or by visiting [www.dep.wv.gov/oil-and-gas/pages/default.aspx](http://www.dep.wv.gov/oil-and-gas/pages/default.aspx).

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

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Environmental Protection  
**06/10/2016**

**Surface Owners:**

Richard L. & Sheryl A. Ray  
757 Summersville Lake Road  
Mount Nebo WV 26679

4708510285

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WV Department of  
Environmental Protection 06/10/2016



**Surface Owners (road or other disturbance):**

Richard L. & Sheryl A. Ray ✓  
757 Summersville Lake Road  
Mount Nebo WV 26679

EQT Production Company ✓  
625 Liberty Avenue *Waino*  
Suite 1700  
Pittsburgh PA 15222

Kenneth P. Adams ✓  
By Sandra D Adams POA  
3756 Brushy Fork Rd.  
West Union WV 26456

Jimmie R. Trent, Jr and Sandra S. Trent ✓  
3630 Brushy Fork  
West Union WV 26456

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06/10/2016

STATE OF WEST VIRGINIA  
DEPARTMENT OF ENVIRONMENTAL PROTECTION, OFFICE OF OIL AND GAS  
**VOLUNTARY STATEMENT OF NO OBJECTION**

**Instructions to Persons Named on Page WW-6A**

The well operator named on page WW-6A is applying for a permit from the State of West Virginia to conduct oil or gas well work. Well work permits are valid for twenty-four (24) months. Please contact the listed well operator and the Office of Oil and Gas if you do not own any interest in the listed surface tract.

**Comment and Waiver Provisions**

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.

Pursuant to West Virginia Code § 22-6A-8(b) No permit may be issued less than thirty days after the filing date of the application for any well work except plugging or replugging; and no permit for plugging or replugging may be issued less than five days after the filing date of the application except a permit for plugging or replugging a dry hole: *Provided*, That if the applicant certifies that all persons entitled to notice of the application under the provisions of subsection (b), section ten of this article have been served in person or by certified mail, return receipt requested, with a copy of the well work application, including the erosion and sediment control plan, if required, and the well plat, and further files written statements of no objection by all such persons, the secretary may issue the well work permit at any time.

**VOLUNTARY STATEMENT OF NO OBJECTION**

I, John W Damato, hereby state that I have read the Instructions to Persons Named on Page WW-6A and the associated provisions listed above, and that I have received copies of a Notice of Application, an Application for a Well Work Permit on Form WW-6A and attachments consisting of pages one (1) through \_\_\_\_\_, including the erosion and sediment control plan, if required, and the well plat, all for proposed well work on the tract of land as follows:

State:	<u>WV</u>	UTM NAD 83 Easting:	<u>514591.79</u>
County:	<u>Ritchie</u>	Northing:	<u>4331467.90</u>
District:	<u>Union</u>	Public Road Access:	<u>7/18</u>
Quadrangle:	<u>Oxford</u>	Generally used farm name:	<u>Richard L &amp; Sheryl A Ray</u>
Watershed:	<u>Straight Fork</u>		

I further state that I have no objection to the planned work described in these materials, and I have no objection to a permit being issued on those materials.

<p>*Please check the box that applies</p> <p><input type="checkbox"/> SURFACE OWNER</p> <p><input checked="" type="checkbox"/> SURFACE OWNER (Road and/or Other Disturbance)</p> <p><input type="checkbox"/> SURFACE OWNER (Impoundments/Pits)</p> <p><input type="checkbox"/> COAL OWNER OR LESSEE</p> <p><input type="checkbox"/> COAL OPERATOR</p> <p><input type="checkbox"/> WATER PURVEYOR</p> <p><input type="checkbox"/> OPERATOR OF ANY NATURAL GAS STORAGE FIELD</p>	<p><b>FOR EXECUTION BY A NATURAL PERSON</b></p> <p>Signature: _____</p> <p>Print Name: _____</p> <p>Date: _____</p> <p><b>FOR EXECUTION BY A CORPORATION, ETC.</b></p> <p>Company: <u>EQT Production Company</u></p> <p>By: <u>John W Damato</u></p> <p>Its: <u>Regional Land Director</u></p> <p>Signature: <u><i>John W Damato</i></u></p> <p>Date: <u>4-11-16</u></p>
--	--

**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](mailto:depprivacyofficer@wv.gov).

APR 14 2016

**Surface Owners (Pits or Impoundments):**

Richard L. & Sheryl A. Ray  
757 Summersville Lake Road  
Mount Nebo WV 26679

4708510285

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WV Department of **06/10/2016**  
Environmental Protection



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

**June 30, 2015**

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

Subject: DOH Permit for the OXF 122 Pad Site, Ritchie County

512426 OXF122H1	512428 OXF122H3
512500 OXF122H4	514081 OXF122H7
<b>514083 OXF122H9</b>	514084 OXF122H10

Dear Dr. Martin,

This well site will be accessed from Permit # 03-2014-0058 issued to EQT Production Company for access to the State Road. The well site is located off of Ritchie County Route 7/18 SLS.

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-3, File

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06/10/2016

**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
	Tributyl tetradecyl phosphonium chloride	64742-47-8
Friction Reducer	Ammonium chloride	81741-28-8
Biocide	Hydrochloric Acid	12125-02-9
Scale Inhibitor	Propargyl Alcohol	7647-01-0
15% Hydrochloric Acid	Methanol	107-19-7
Corrosion Inhibitor	Guar Gum	67-56-1
Corrosion Inhibitor	Sodium Persulfate	9000-30-0
Gelling Agent	Potassium Carbonate	7775-27-1
Oxidizing Breaker		584-08-7
Buffering Agent		

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IMP 1A



Office of Oil and Gas

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 #	085-WPA-00020

### 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, Inc.		
Operator ID	306686		
Address Street	115 Professional Place		
City	Bridgeport	State	WV
		Zip	26330
Contact Name	Vicki Roark	Contact Title	Permitting Supervisor
Contact Phone	(304) 848-0076	Contact Email	VRoark@eqt.com

#### Section 2 – Engineering / Design Contractor Information

Design will be contracted	<input checked="" type="checkbox"/>	Designed in-house	<input type="checkbox"/>
Company Name	Smith Land Surveying, Inc & Navitus Engineering, Inc		
Address Street	12 Vanhorn Drive P O Box 150		
City	Glenville	State	WV
		Zip	26351
Contact Name	Wes Wayne	Contact Title	Staff Engineer/Project Manager
Contact Phone	(304) 462 5634	Contact Email	wwayne@sls-surveys.com
Certifying Professional Engineer	Cyrus B Kump		
Professional Engineer Registration Number	WV PE No 19578		

47085-10285

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06/10/2016



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 122 Associated Pit

County Ritchie County

District Union

USGS 7.5' Quad Map Name Oxford

Farm Name N/A

Pad Name OXF 122 Well Pad

Surface Owner Name Richard L. & Sheryl A. Ray

Physical Description of Location The OXF 122 Site is on a ridge east of Co. Rt. 718. The entrance to the site is approximately 675 ft. northeast of the Co. Rt. 718 and Co. Rt. 713 intersection.

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

Watershed (nearest perennial) Straight Fork

Distance (Drainage Distance) to nearest perennial stream 2,200 Feet

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

Latitude 39 129700

Longitude (Use negative sign) -80 029101

UTM Coordinates

514,771.4

E

4,331,103.6

N

Access Road Coordinates (junction of state highway access)

Latitude 39 128987

Longitude (Use negative sign) -80 041969

UTM Coordinates

513,659.3

E

4,331,102.5

N

Approximate Dimensions

Length 400 FT

Width 253 FT

Height 19 FT

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

Total Capacity - Provide all units of measure below

Barrels 132,763

Gallons 5,576,054.0

Acre-Feet 17.112

Capacity with 2' Freeboard - Provide all units of measure below

Barrels 110,500

Gallons 4,643,903.9

Acre-Feet 14.251

Incised volume

Barrels 24,787

Gallons 1,041,036.6

Acre-Feet 3.194

Net impounded volume (Total volume less incised volume)

Barrels 107,976

Gallons 4,535,017.4

Acre-Feet 13.916

Anticipated Construction Start Date (estimation, non-binding) As Soon As Possible

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:
WV 512426	Not Issued
WV 512427	Not Issued
WV 512428	Not Issued
WV 512429	Not Issued
WV 512500	Not Issued
WV 512501	Not Issued

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 547-34. 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/ec/ds/Pages/default.aspx>

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

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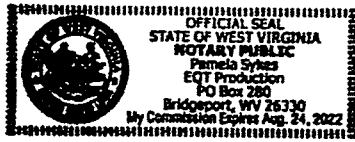
**Section 8 - Application Certification**

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 Rank  
Title: Permitting Supervisor  
Signature: [Handwritten Signature]

Taken, subscribed and sworn to before me this, 15 Day of January 20 14  
Notary Public: [Handwritten Signature]  
My commission expires 8-24-22

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 57<sup>th</sup> Street, SE  
Charleston WV 25304

Email PDF file format of this application and all related engineering Plans to:  
[Depimpoundments@wv.gov](mailto:Depimpoundments@wv.gov)

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APR 14 2016

WV Department of Environmental Protection 06/10/2016

GRID NORTH AND SURVEYED C. E. 1943 ONE SHOWN HEREON WERE ESTABLISHED BY COPS SURVEY GRADE



# OXF-122 SITE AS-BUILT EQT PRODUCTION COMPANY

EXISTING WELL # WV 512427, WV 512501 AND WV 513762  
PROPOSED WELLS# WV 512426, WV 512428, WV 514081, WV 514082 AND WV 512500

SITUATE ON THE WATERS OF A STRAIGHT FORK AND BRUSH RUN IN UNION DISTRICT, RITCHIE COUNTY, WEST VIRGINIA.

**OXF-122 LOCATION COORDINATES**

**ACCESS ROAD**  
LATITUDE: 38 22087 LONGITUDE: 80 841905 (NAD 83)  
N. 4331152.8 E. 513065.3 (UTM NAD 83 METERS)

**WELL PAD**  
LATITUDE: 38 12282 LONGITUDE: 80 838843 (NAD 83)  
N. 4327471.6 E. 514311.6 (UTM NAD 83 METERS)

**ASSOCIATED PIT**  
LATITUDE: 38 120780 LONGITUDE: 80 839101 (NAD 83)  
N. 4321183.6 E. 514771.4 (UTM NAD 83 METERS)

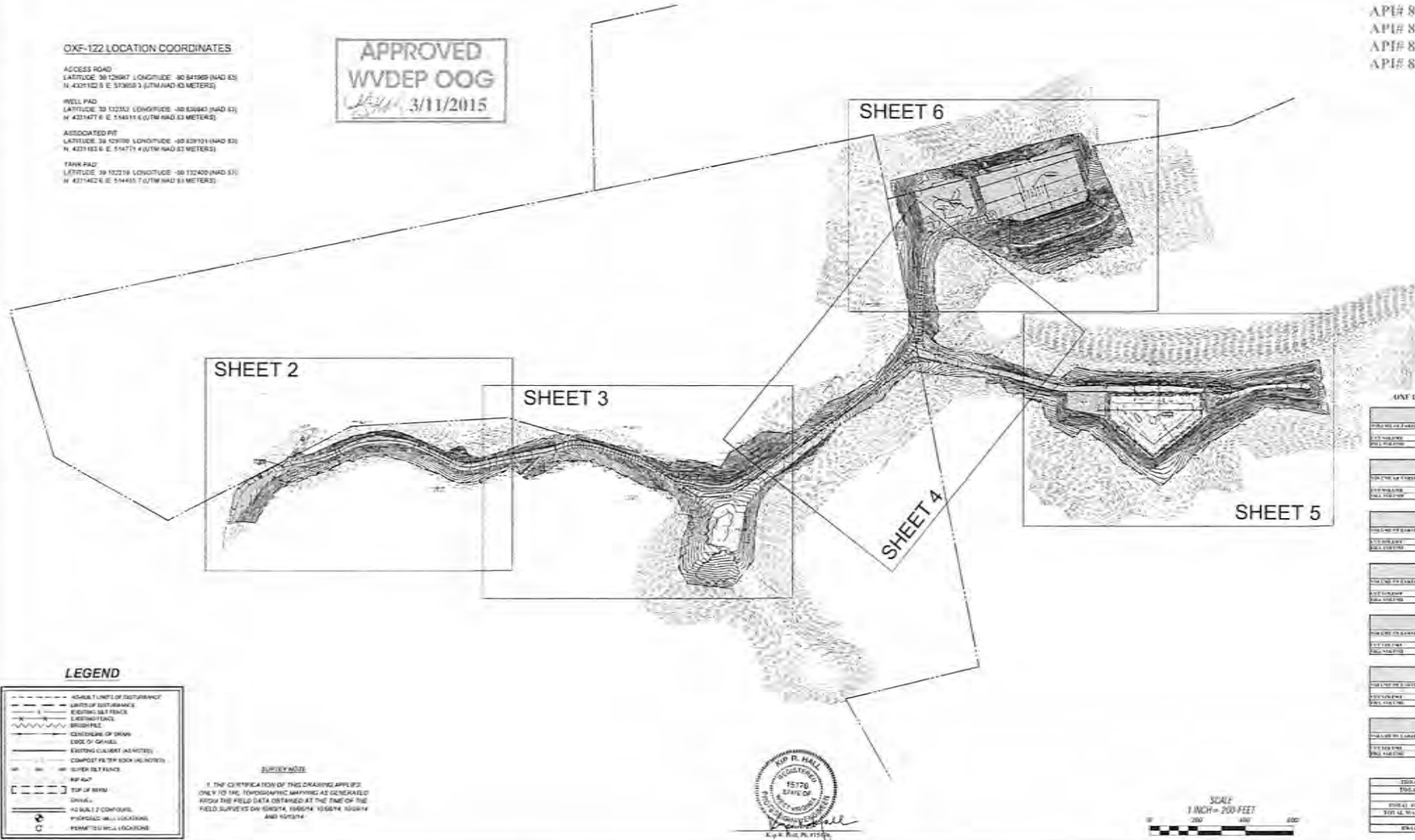
**TANK PAD**  
LATITUDE: 38 122218 LONGITUDE: 80 124700 (NAD 83)  
N. 4311462.6 E. 514435.7 (UTM NAD 83 METERS)



**SHEET INDEX**

- 1 - COVER SHEET
- 2 - ACCESS ROAD
- 3 - ACCESS ROAD & STOCKPILE
- 4 - ACCESS ROAD
- 5 - ACCESS ROAD, STOCKPILE, ASSOCIATED PIT AND PIT PROFILE
- 6 - ACCESS ROAD & PAD
- 7 - ACCESS ROAD PROFILE

API# 8510085  
API# 8510086  
API# 8510087  
API# 8510195



**LEGEND**

- CORNER POINTS OF DISTURBANCE
- BOUNDARY OF DISTURBANCE
- EXISTING SET FENCE
- EXISTING FENCE
- BRUSH PILE
- CONTOUR OF GRADE
- EDGE OF GRAVEL
- EXISTING CULVERT (AS NOTED)
- CONCRETE PATTERN (AS NOTED)
- SUPER SET FENCE
- WELLS
- TOP OF BURN
- DRAIN
- AS BUILT COMPOUND
- PROPOSED WELL LOCATIONS
- PROPOSED WELL LOCATIONS

**SURVEY NOTE**

1. THE CERTIFICATION OF THIS DRAWING APPLIES ONLY TO THE TOPOGRAPHY SHOWN AS GENERATED FROM THE FIELD DATA OBTAINED AT THE TIME OF THE FIELD SURVEY ON 10/25/14, 10/26/14, 10/28/14, 10/29/14 AND 10/30/14.

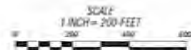


**OXF-122 AS-BUILT VOLUMES:**

WV 512426-01-01	WV 512426-01-02	WV 512426-01-03	WV 512426-01-04	WV 512426-01-05	WV 512426-01-06	WV 512426-01-07	WV 512426-01-08	WV 512426-01-09	WV 512426-01-10
PROPOSED FOR CONSTRUCTION	PROPOSED FOR CONSTRUCTION	PROPOSED FOR CONSTRUCTION	PROPOSED FOR CONSTRUCTION	PROPOSED FOR CONSTRUCTION	PROPOSED FOR CONSTRUCTION	PROPOSED FOR CONSTRUCTION	PROPOSED FOR CONSTRUCTION	PROPOSED FOR CONSTRUCTION	PROPOSED FOR CONSTRUCTION
DATE	DATE	DATE	DATE	DATE	DATE	DATE	DATE	DATE	DATE
DATE	DATE	DATE	DATE	DATE	DATE	DATE	DATE	DATE	DATE

**SUMMARY**

DESCRIPTION	DATE
DESIGN	10/25/14
FIELD SURVEY	10/25/14
AS BUILT	10/25/14
DATE	10/25/14
DATE	10/25/14
DATE	10/25/14
DATE	10/25/14



DATE: 3-4-15  
SCALE: 1"=200'  
DESIGNED BY: K.E.S.  
FILE NO: B139  
SHEET 1 OF 7

REG. NO. DATE

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A MEMBER OF THE HUNT GROUP  
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ENGINEERS  
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PROJECT MANAGERS  
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**OXF-122 SITE AS-BUILT**  
THIS DOCUMENT WAS PREPARED BY SMTI, INC. SURVEYING, INC. FOR EQT.

# OXF-122 SITE AS-BUILT EQT PRODUCTION COMPANY

**OXF 122 WELLS:** API #'s: 47-085-10087, 47-085-10085, 47-085-10195, 47-085-10235,  
47-085-10236, 47-085-10237, 47-085-10086 & 47-085-10238

**PROPOSED WELL:** (H9)-WV514083

SITUATE ON THE WATERS OF A STRAIGHT FORK IN UNION DISTRICT, RITCHIE COUNTY, WEST VIRGINIA.

**OXF-122 LOCATION COORDINATES**

**ACCESS ROAD**  
LATITUDE: 39 12867 LONGITUDE: 80 84198 (NAD 83)  
N: 433112.5 E: 51385.3 (UTM NAD 83 METERS)

**WELL PAD**  
LATITUDE: 39 12252 LONGITUDE: 80 83043 (NAD 83)  
N: 433447.8 E: 51481.8 (UTM NAD 83 METERS)

**ASSOCIATED PIT**  
LATITUDE: 39 12728 LONGITUDE: 80 82919 (NAD 83)  
N: 433183.6 E: 51471.4 (UTM NAD 83 METERS)

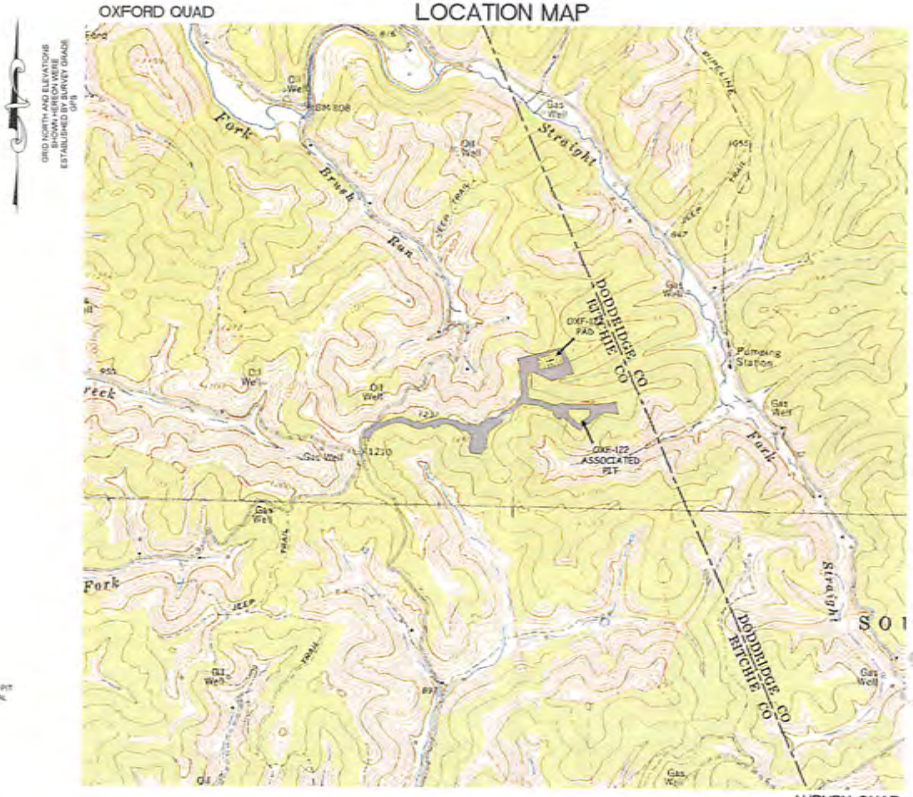
**TANK PAD**  
LATITUDE: 39 13219 LONGITUDE: 80 10240 (NAD 83)  
N: 433462.8 E: 51485.7 (UTM NAD 83 METERS)

**OXF 122 AS-BUILT VOLUMES**

OXF 122 AS-BUILT ACCESS ROAD	OXF 122 AS-BUILT WELL PAD	OXF 122 AS-BUILT TANK PAD	OXF 122 AS-BUILT ASSOCIATED PIT	OXF 122 AS-BUILT STOCKPILE & PAD
VOLUME OF MATERIALS	VOLUME OF MATERIALS	VOLUME OF MATERIALS	VOLUME OF MATERIALS	VOLUME OF MATERIALS
GRAVEL	GRAVEL	GRAVEL	GRAVEL	GRAVEL
ASPHALT	ASPHALT	ASPHALT	ASPHALT	ASPHALT
CONCRETE	CONCRETE	CONCRETE	CONCRETE	CONCRETE
STEEL	STEEL	STEEL	STEEL	STEEL
WOOD	WOOD	WOOD	WOOD	WOOD
OTHER	OTHER	OTHER	OTHER	OTHER
<b>SUMMARY</b>	<b>SUMMARY</b>	<b>SUMMARY</b>	<b>SUMMARY</b>	<b>SUMMARY</b>
TOTAL EST. QTY	TOTAL EST. QTY	TOTAL EST. QTY	TOTAL EST. QTY	TOTAL EST. QTY
TOTAL EST. PRICE	TOTAL EST. PRICE	TOTAL EST. PRICE	TOTAL EST. PRICE	TOTAL EST. PRICE
TOTAL MATERIAL PRICE	TOTAL MATERIAL PRICE	TOTAL MATERIAL PRICE	TOTAL MATERIAL PRICE	TOTAL MATERIAL PRICE
TOTAL LABOR PRICE	TOTAL LABOR PRICE	TOTAL LABOR PRICE	TOTAL LABOR PRICE	TOTAL LABOR PRICE
TOTAL PRICE	TOTAL PRICE	TOTAL PRICE	TOTAL PRICE	TOTAL PRICE

**SHEET INDEX**

- 1 - COVER SHEET
- 2 - CONSTRUCTION NOTES
- 3 - INDEX SHEET
- 4 - ACCESS ROAD
- 5 - ACCESS ROAD & STOCKPILE
- 6 - ACCESS ROAD
- 7 - ACCESS ROAD, STOCKPILE, ASSOCIATED PIT AND PIT PROFILE
- 8 - ACCESS ROAD & PAD
- 9 - ACCESS ROAD PROFILE
- 10 - CONSTRUCTION DETAILS
- 11 - CONSTRUCTION DETAILS
- 12 - CONSTRUCTION DETAILS
- 13 - CONSTRUCTION DETAILS



**LEGEND**

ORIGINAL 5MI-2V LUD	---
ADDITIONAL LUD AREA	---
RESTRICTED LUD AREA	---
PROPOSED COMPOST FILTER SOCK	---
EX ROAD EDGE OF GRAVEL/DIRT	---
EX ROAD EDGE OF PAVEMENT	---
EX ROAD CENTERLINE	---
EX STYOLINE	---
EX EULENT	---
EX SAFETY FENCE	---
EX GATE	---
EX OVERHEAD UTILITY	---
EX OVERHEAD UTILITY R/W	---
EX POWER POLE	---
EX TELEPHONE LINE	---
EX GASLINE	---
EX GASLINE R/W	---
PROPOSED RIP RAP	---
EX RIP RAP	---
EX BREWEN FILE	---
EX DELINEATED STREAM	---
EX STRUCTURE	---
EX PIPELINE MARKER	---
RIC FOOTPRINT	---
EDGE OF GRAVEL PAD	---
EDGE OF BEEM	---
EX SUPER SILT FENCE	---
EX REINFORCED SILT FENCE	---
BEEM	---
GRAVEL	---
ORIGINAL GRADING ± CONTOURS	---
AS BUILT ± CONTOURS	---
PROPOSED ± CONTOURS	---
EXISTING WELL LOCATIONS	---
PROPOSED WELL LOCATIONS	---
SPOT ELEVATIONS	---
WATCHLINE	---



**SURVEY NOTE**

THE CERTIFICATION OF THIS DRAWING APPLIES ONLY TO THE TOPOGRAPHIC MAPPING AS GENERATED FROM THE FIELD DATA OBTAINED AT THE TIME OF THE FIELD SURVEYS ON 10/23/14, 10/26/14, 10/28/14, 10/29/14, 10/31/14, 11/02/14 AND 12/08/14

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MDC  
7/10/14

WV Department of Environmental Protection

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 Office of Oil and Gas  
 APR 25 2016  
 MASS Utility of West Virginia  
 1-800-245-4848  
 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!!

BY: K.E.S.  
DATE: 03/17/16  
REVISION: 1  
DESCRIPTION: ASSES PICTURES AND REVISED TO PAD CELLS AND MAT HOLES TO PAD ASSES THE WELL TO ENTRANCE SIDE OF PAD

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THIS DOCUMENT WAS PREPARED BY SMITHLAND SURVEYING, INC. FOR EQT

**OXF-122 AS-BUILT SITE PLAN**  
THIS DOCUMENT WAS PREPARED BY SMITHLAND SURVEYING, INC. FOR EQT

DATE: 3/17/16  
BY: K.E.S.  
SCALE: 1"=1000'  
DESIGNED BY: K.E.S.  
FILE NO: 8139  
SHEET: 1 OF 13

4708510285

API#8510085  
 API#8510086  
 API#8510087

**PROJECT INFORMATION**

PROJECT NAME: OXF 122 01-1818  
 TAX PARCEL:  
 UNION DISTRICT  
 RITCHIE COUNTY, WV  
 TAX MAP 32

SURFACE OWNER:  
 JIMMIE E. TRENT, JR ET AL  
 TOTAL PROPERTY AREA: 78 ± ACRES  
 TAX MAP 32 PARCEL 05

KENNETH P. ADAMS  
 TOTAL PROPERTY AREA: 47.15 ± ACRES  
 TAX MAP 32 PARCEL 04

RICHARD L. & SHERYL A. RAY  
 TOTAL PROPERTY AREA: 255.50 ± ACRES  
 TAX MAP 32 PARCEL 07

OIL AND GAS ROYALTY OWNER:  
 HAUGHTY FAMILY TRUST, ET AL  
 LEASE #155903  
 UNION DISTRICT  
 RITCHIE COUNTY, WV  
 TOTAL PROPERTY AREA: 400 ± ACRES

SITE LOCATION:  
 THE OXF 122 SITE IS ON A RIDGE EAST OF CO. RT. 7/18. THE ENTRANCE TO THE SITE IS APPROXIMATELY 875 FT NORTH OF THE CO. RT. 7/18 AND CO. RT. 7/13 INTERSECTION.

**LOCATION COORDINATES**

OXF 122 01-1818 WELL PAD ENTRANCE  
 LATITUDE: 39.128987 LONGITUDE: -80.841869 (NAD 83)

OXF 122 01-1818 WELL PAD  
 LATITUDE: 39.123252 LONGITUDE: -80.850943 (NAD 83)

OXF 122 TANK PAD (CENTER OF TANK)  
 LATITUDE: 39.132219 LONGITUDE: -80.832460 (NAD 83)

OXF 122 ASSOCIATED PIT  
 LATITUDE: 39.129700 LONGITUDE: -80.828241 (NAD 83)

**SITE DISTURBANCE COMPUTATIONS**

ROAD A = 11.97 ± ACRES (ROAD A, STOCKPILE B & C)  
 WELL PAD AREA = 0.49 ± ACRES  
 TANK PAD AREA = 2.20 ± ACRES  
 ASSOCIATED PIT AREA = 0.30 ± ACRES (PIT, ROAD B & STOCKPILE A)  
 TOTAL SITE DISTURBANCE = 29.51 ± ACRES

**ENTRANCE PERMIT**

EQT PRODUCTION COMPANY WILL OBTAIN AN ENCROACHMENT PERMIT (FORM WV-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 THE PROJECT DESIGN. TICKET #138178232. IN ADDITION, MISS UTILITY WILL BE CONTACTED PRIOR TO START OF THE PROJECT.

**FLOODPLAIN NOTE**

THE PROPOSED LIMITS OF DISTURBANCE FOR THIS PROJECT IS LOCATED IN FEMA FLOOD ZONE 1. FOR THE FLOOD INSURANCE RATE MAP (FIRM) NUMBER 540650220C, DATED FEBRUARY 2, 2012.

**ENVIRONMENTAL NOTES**

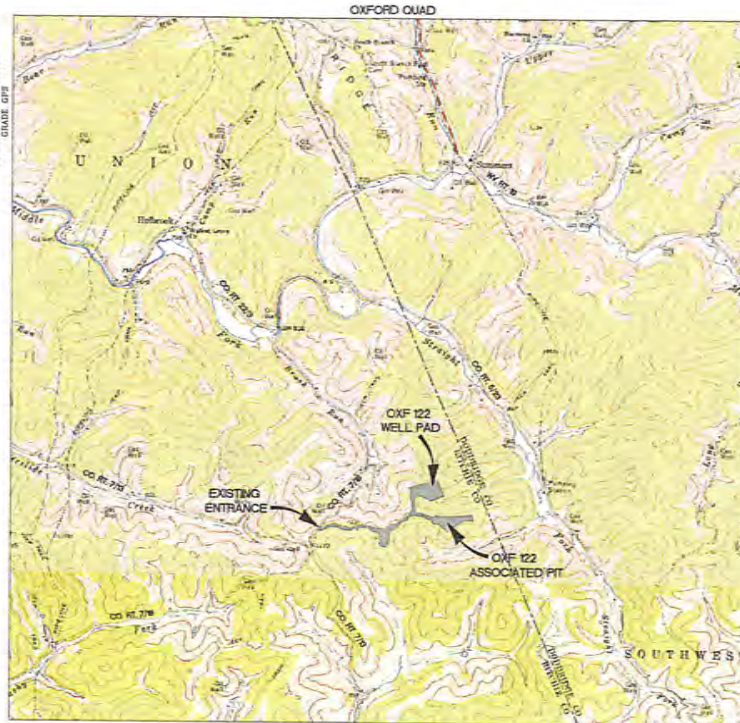
A WETLAND DELINEATION WAS PERFORMED ON JULY 31, 2013 BY POTESTA AND ASSOCIATES, INC. TO REVIEW THE SITE FOR WATERS AND WETLANDS THAT ARE MOST LIKELY WITHIN THE REGULATORY PERIPHERY OF THE U.S. ARMY CORPS OF ENGINEERS (USACE) AND/OR THE WEST VIRGINIA DEPARTMENT OF ENVIRONMENTAL PROTECTION (WVDEP). THE JULY 31, 2013 EXHIBIT FIGURE #3 WAS PREPARED BY POTESTA AND 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 OBTAIN WRITTEN CONTRIBUTION 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 FIELDS AND STREAM CROSSINGS.

**GENERAL DESCRIPTION**

THE WELL PAD, TANK PAD & ASSOCIATED PIT ARE BEING CONSTRUCTED TO AID IN THE DEVELOPMENT OF INDIVIDUAL MARCELLUS SHALE GAS WELLS.

**OXF 122 SITE PLAN**  
**EQT PRODUCTION COMPANY**  
 (PROPOSED WELL NO. WV 512427, WV 512501, WV 513762, WV 512428, WV 512426, WV 512500, WV 514081, WV 514082)

SITUATE ON THE WATERS OF BRUSH RUN AND STRAIGHT FORK IN UNION DISTRICT, RITCHIE COUNTY, WEST VIRGINIA.



**LIST OF DRAWINGS**

- 1 - COVER SHEET
- 2 - NOTES
- 3 - OVERALL SHEET INDEX & VOLUMES
- 4 - EXISTING UTILITY LAYOUT PLAN
- 5 - WELL & TANK PAD DETAILS
- 6 - ASSOCIATED PIT DETAILS
- 7 - STOCKPILE AREA "A" DETAILS
- 8 - ACCESS ROAD DETAILS
- 10 - WELL PAD, TANK PAD & ASSOCIATED PIT SECTIONS
- 11 - ASSOCIATED PIT SECTIONS
- 12 - ACCESS ROAD "A" PROFILE
- 13 - ACCESS ROAD "A" & "B" PROFILE
- 14-18 - ROAD SECTIONS
- 19 - TANK PAD RECLAMATION PLAN
- 20 - ASSOCIATED PIT & ROAD "B" RECLAMATION PLAN
- 21-24 CONSTRUCTION DETAILS

**APPROVED**  
**WVDEP OOG**  
 4/2/2014

LEGEND	
EX INDEX CONTOUR	PROF. INDEX CONTOUR
EX INTERMEDIATE CONTOUR	PROF. INTERMEDIATE CONTOUR
EX BOUNDARY LINE	PROF. GRADING LIMITS
EX ROAD EDGE OF GRAVEL/DIRT	PROF. LIMITS OF DISTURBANCE
EX ROAD EDGE OF PAVEMENT	PROF. WELL PAD
EX ROAD CENTERLINE	PROF. WELL HEAD
EX EROSION	PROF. 4" PVC DRAIN PIPE
EX CULVERT	PROF. TEMP. DRAIN
EX CURB/GRAVEL	PROF. CONTAINMENT BOW
EX FENCING	PROF. PIT/APPURTEINMENT CL.
EX GATE	PROF. PERIMETER SAFETY FENCE
EX OVERHEAD UTILITY	PROF. ACCESS GATE WITH EMERGENCY LIFTING
EX OVERHEAD UTILITY R/W	
EX POWER POLE	
EX CITY WIDE	
EX TELEPHONE LINE	
EX GASLINE	
EX GASLINE R/W	PROF. ROCK CONSTRUCTION ENTRANCE
EX WATERLINE	
EX WATER WELL	
EX GAS WELL	
EX TRUCKLINE	PROF. ROAD EDGE OF GRAVEL
EX REFERENCE TREE	PROF. ROAD CENTERLINE
EX DRAINATED STRAW	PROF. Y-DITCH W/ CHECK DAM
EX DRAINATED WETLAND	PROF. DITCH RELIEF CULVERT (18")
EX BUILDING	PROF. RIP-RAP OUTLET PROTECTION
EX BRIDGE	PROF. GUARDRAIL
100' WETLAND/STREAM BUFFER	PROF. ROCK LEVEL SPREADER
	PROF. EARTHEN DIVERSION BEAM
	PROF. ORANGE SAFETY FENCE
	PROF. SUPER SILT FENCE
	PROF. COMPOST FILTER SOCK
	PROF. COMPOST SOCK DIVERSION
	PROF. CIRCUMFERENCE DEMARKING TRINCH
	PROF. CIRCUMFERENCE DEMARKING PIPE
SECTION LINE	"A" "A"
MATCHLINE	3'-0"
X-SECTION GED INDEX	
X-SECTION GED INTERMEDIATE	
X-SECTION PROPOSED GRADE	
X-SECTION EXISTING GRADE	
X-SECTION PAVED SURFACE	
SPOT ELEVATION	
CENTER OF PAD	1000'

**NAVITUS**  
 ENERGY ENGINEERING  
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Professional Energy Consultants  
 SLS  
 ENVIRONMENTAL PROJECT MGMT.  
 4811 462-8284



THIS DOCUMENT WAS PREPARED BY:  
 NAVITUS ENGINEERING INC.  
 FOR EQT PRODUCTION COMPANY

COVER SHEET  
**OXF 122**  
 UNION DISTRICT  
 RITCHIE COUNTY, WV

DATE: 04/14/2014  
 SCALE: 1" = 2000'  
 DESIGNED BY: CSK  
 FILE NO. 6401  
 SHEET 1 OF 24  
 REV. 04/01/2014

WV Department of Environmental Protection

Office of Oil and Gas

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 APR 25 2014

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**OPERATOR**  
 EQT PRODUCTION COMPANY  
 OPERATOR ID: 30666  
 115 PROFESSIONAL PLACE  
 P.O. BOX 280  
 BRIDGEPORT, WV 26330  
 PHONE: (304) 348-3870

**ENGINEER**  
 NAVITUS ENGINEERING, INC.  
 151 WINDY HILL LANE  
 WINCHESTER, VA 22602  
 PHONE: (888) 862-4186

**SURVEYOR**  
 SMITH LAND SURVEYING, INC.  
 224 WEST MAIN STREET  
 P.O. BOX 150  
 GLENVILLE, WV 26031  
 PHONE: (304) 462-5624

4708510285



**PROJECT INFORMATION**

PROJECT NAME: OXF 122 HI-HB

TAX PARCEL:  
UNION DISTRICT  
RITCHIE COUNTY, WV  
TAX MAP 32

SURFACE OWNER:  
JIMMIE R. TRENT, JR ET AL  
TOTAL PROPERTY AREA: 76 ± ACRES  
TAX MAP 32 PARCEL 05

KENNETH P. ADAMS  
TOTAL PROPERTY AREA: 47.15 ± ACRES  
TAX MAP 32 PARCEL 04

EQT PRODUCTION COMPANY  
TOTAL PROPERTY AREA: 78.3 ± ACRES  
TAX MAP 32 PARCEL 06

RICHARD L. & SHERYL A. RAY  
TOTAL PROPERTY AREA: 255.50 ± ACRES  
TAX MAP 32 PARCEL 07

OIL AND GAS ROYALTY OWNER:  
HAUGHT FAMILY TRUST, ET AL  
LEASE #105933  
UNION DISTRICT  
RITCHIE COUNTY, WV  
TOTAL PROPERTY AREA: 402 ± ACRES

SITE LOCATION:  
THE OXF 122 SITE IS ON A RIDGE EAST OF CO. RT. 7/18. THE  
ENTRANCE TO THE SITE IS APPROXIMATELY 675 FT NORTH OF  
THE CO. RT. 7/18 AND CO. RT. 7/13 INTERSECTION.

**LOCATION COORDINATES**

OXF 122 HI-HB WELL PAD ENTRANCE  
LATITUDE: 39.126987 LONGITUDE: -80.841969 (NAD 83)

OXF 122 HI-HB WELL PAD  
LATITUDE: 39.132352 LONGITUDE: -80.830943 (NAD 83)

OXF 122 TANK PAD (CENTER OF TANK)  
LATITUDE: 39.132219 LONGITUDE: -80.832400 (NAD 83)

OXF 122 ASSOCIATED PIT  
LATITUDE: 39.129700 LONGITUDE: -80.829101 (NAD 83)

**SITE DISTURBANCE COMPUTATIONS**

ROAD A = 11.37 ± ACRES (ROAD A, STOCKPILE B & C)  
WELL PAD AREA = 6.49 ± ACRES  
TANK PAD AREA = 2.30 ± ACRES  
ASSOCIATED PIT AREA = 9.35 ± ACRES (PIT, ROAD B & STOCKPILE A)  
TOTAL SITE DISTURBANCE = 29.51 ± 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 #1328176232 IN ADDITION, MISS UTILITY WILL BE CONTACTED PRIOR TO START OF THE PROJECT.

**FLOODPLAIN NOTE**

THE PROPOSED LIMITS OF DISTURBANCE FOR THIS PROJECT IS LOCATED IN FEMA FLOOD ZONE X, PER THE FLOOD INSURANCE RATE MAP (FIRM) NUMBER 54085C0250C, DATED FEBRUARY 2, 2012.

**ENVIRONMENTAL NOTES**

A WETLAND DELINEATION WAS PERFORMED ON JULY 31, 2013 BY POTESTA AND 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 JULY 31, 2013 EXHIBIT FIGURE #3 WAS PREPARED BY POTESTA AND 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 AFOREMENTIONED 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.

**GENERAL DESCRIPTION**

THE WELL PAD, TANK PAD & ASSOCIATED PIT ARE BEING CONSTRUCTED TO AID IN THE DEVELOPMENT OF INDIVIDUAL MARCELLUS SHALE GAS WELLS.

MISS Utility of West Virginia  
1-800-245-4848  
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!!

API#8510085  
API#8510086  
API#8510087

**OXF 122 S  
EQT PRODUCTION**  
(PROPOSED WELL NO. WV 512427, WV  
WV 512426, WV 512500, WV

SITUATE ON THE WATERS OF BRUS  
UNION DISTRICT, RITCHIE

GRID NORTH AND ELEVATIONS  
SHOWN HEREON WERE  
ESTABLISHED BY SURVEY  
GRADE GPS



2000  
SCALE:

Electronic Version of These Plans May Be Viewed

06/10/2016

# TE PLAN ON COMPANY

512501, WV 513762, WV 512428,  
514081, WV 514082)

H RUN AND STRAIGHT FORK IN  
COUNTY, WEST VIRGINIA.

QUAD



N QUAD



red at: QOIL GAS\SAY FILES\REVIEWS

## LIST OF DRAWINGS

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**APPROVED  
WVDEP OOG**

SAY 4/2/2014

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APR 14 2016  
WV Department of  
Environmental Protection

## LEGEND

EX. INDEX CONTOUR	--- 700 ---	PROP. INDEX CONTOUR	--- 700 ---
EX. INTERMEDIATE CONTOUR	--- 700 ---	PROP. INTERMEDIATE CONTOUR	--- 700 ---
EX. BOUNDARY LINE	---	PROP. GRADING LIMITS	---
EX. ROAD EDGE OF GRAVEL/DIRT	---	PROP. LIMITS OF DISTURBANCE	---
EX. ROAD EDGE OF PAVEMENT	---	PROP. WELL PAD	---
EX. ROAD CENTERLINE	---	PROP. WELL HEAD	---
EX. DITCHLINE	---	PROP. 4" PVC DRAIN PIPE	---
EX. CULVERT	---	PROP. SUMP DRAIN	---
EX. GUARDRAIL	---	PROP. CONTAINMENT BERM	---
EX. FENCELINE	---	PROP. PIT/IMPONDMENT CL	---
EX. GATE	---	PROP. PERIMETER SAFETY FENCE	---
EX. OVERHEAD UTILITY	---	PROP. ACCESS GATE WITH EMERGENCY LIFELINE	---
EX. OVERHEAD UTILITY R/W	---		
EX. POWER POLE	---		
EX. GUY WIRE	---		
EX. TELEPHONE LINE	---		
EX. GASLINE	---		
EX. GASLINE R/W	---		
EX. WATERLINE	---		
EX. WATER WELL	---		
EX. GAS WELL	---		
EX. TREELINE	---		
EX. REFERENCE TREE	---		
EX. DELINEATED STREAM	---		
EX. DELINEATED WETLAND	---		
EX. BUILDING	---		
EX. BRIDGE	---		
100' WETLAND/STREAM BUFFER	---		
		PROP. ROCK CONSTRUCTION ENTRANCE	---
		PROP. ROAD EDGE OF GRAVEL	---
		PROP. ROAD CENTERLINE	---
		PROP. V-DITCH W/ CHECK DAMS	---
		PROP. DITCH RELIEF CULVERT (DRC)	---
		PROP. RIP-RAP OUTLET PROTECTION	---
		PROP. GUARDRAIL	---
		PROP. ROCK LEVEL SPREADER	---
		PROP. EARTHEN DIVERSION BERM	---
		PROP. ORANGE SAFETY FENCE	---
		PROP. SUPER SILT FENCE	---
		PROP. COMPOST FILTER SOCK	---
		PROP. COMPOST SOCK DIVERSION	---
		PROP. GROUNDWATER DEWATERING TRENCH	---
		PROP. GROUNDWATER DEWATERING PIPE	---
		SECTION LINE	---
		MATCHLINE	---
		X-SECTION GRID INDEX	---
		X-SECTION GRID INTERMEDIATE	---
		X-SECTION PROPOSED GRADE	---
		X-SECTION EXISTING GRADE	---
		X-SECTION WATER SURFACE	---
		SPOT ELEVATION	---
		CENTER OF PAD	---

Office of Oil and Gas

APR 14 2016

WV Department of  
Environmental Protection

### OPERATOR

EQT PRODUCTION COMPANY  
OPERATOR ID: 306688  
115 PROFESSIONAL PLACE  
P.O. BOX 280  
BRIDGEPORT, WV 26330  
PHONE: (304) 348-3870

### ENGINEER

NAVITUS ENGINEERING, INC.  
151 WINDY HILL LANE  
WINCHESTER, VA 22602  
PHONE: (888) 662-4185

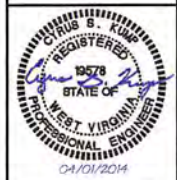
### SURVEYOR

SMITH LAND SURVEYING, INC.  
226 WEST MAIN STREET  
P.O. BOX 150  
GLENVILLE, WV 26351  
PHONE: (304) 462-5634

**NAVITUS**  
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PREPARED BY:  
NAVITUS ENGINEERING  
INC.  
FOR: EQT PRODUCTION  
COMPANY

COVER SHEET  
**OXF 122**  
UNION DISTRICT  
RITCHIE COUNTY, WV

DATE: 01/14/2014

SCALE: 1" = 2000'

DESIGNED BY: CSK

FILE NO. 6811

SHEET 1 OF 24

REV: 06/10/2016



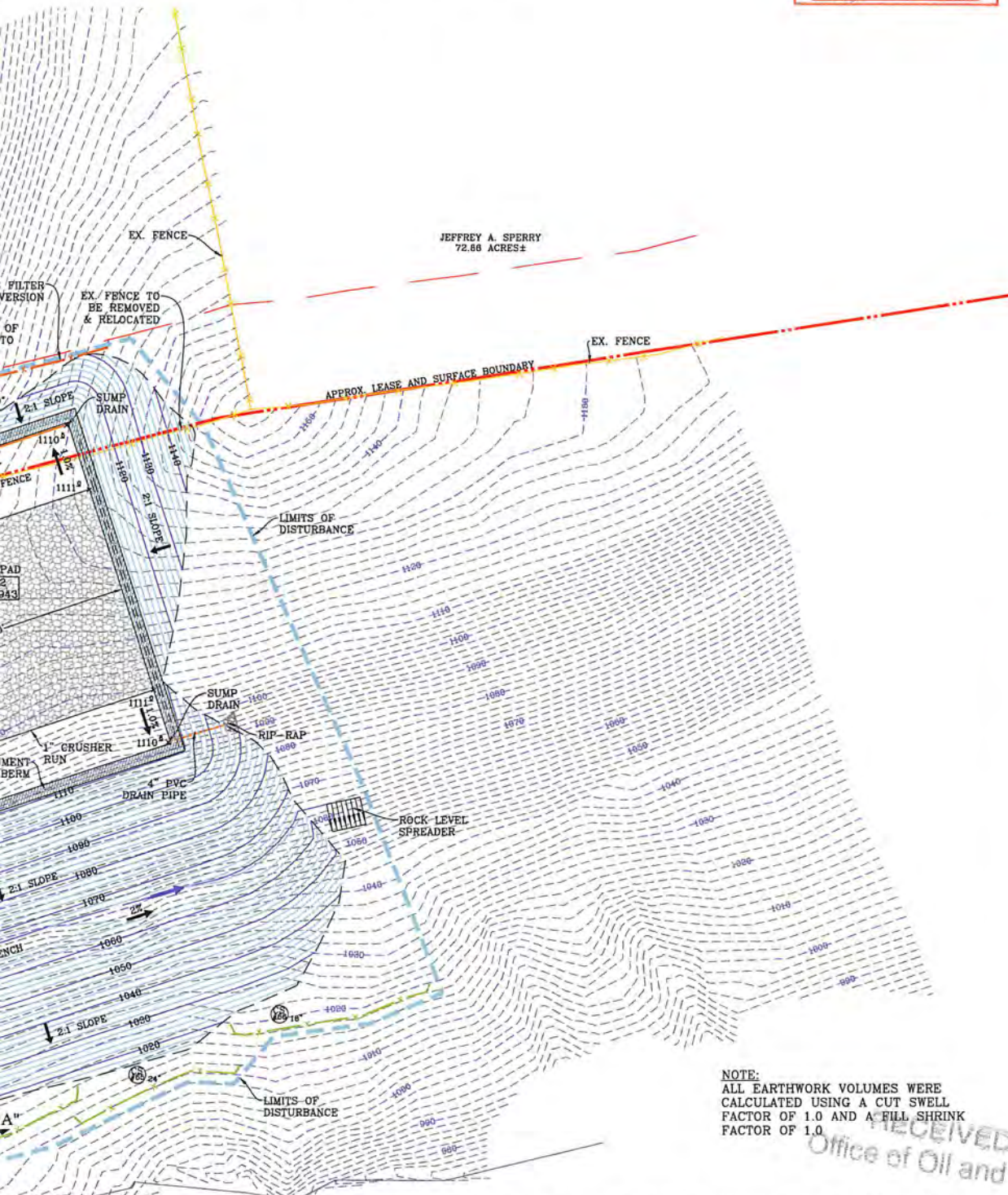


# PAD DETAILS

WV 512426, WV 512500, WV 514081, WV 514082)

APPROVED  
WVDEP OOG

SAY 4/2/2014



**NOTE:**  
ALL EARTHWORK VOLUMES WERE CALCULATED USING A CUT SWELL FACTOR OF 1.0 AND A FILL SHRINK FACTOR OF 1.0

**NOTE:**

1. ALL PROPOSED DRAINAGE CULVERTS AND DRAIN PIPES SHALL HAVE ADEQUATE OUTLET PROTECTION (RIP-RAP) AS SHOWN ON THESE PLANS.
2. ALL FILL AREAS SHALL BE "KEYED IN" AND COMPACTED IN 12" LIFTS (9" RECOMMENDED) WITH A VIBRATING SHEEPSFOOT ROLLER TO 95% COMPACTION PER STANDARD PROCTOR.
3. TOPSOIL SHALL BE STRIPPED FROM ALL STOCKPILE AREAS PRIOR TO CONSTRUCTING STOCKPILES. AFTER STOCKPILES ARE CONSTRUCTED TOPSOIL IS TO BE REAPPLIED AT A DEPTH OF 6". SLOPES SHALL BE TRACKED BY RUNNING TRACKED MACHINERY UP AND DOWN THE SLOPE, LEAVING TREAD MARKS PARALLEL TO THE CONTOUR.
4. ALL ACCESS ROAD IMPROVEMENTS SHALL BE KEPT WITHIN THE LIMITS OF THE EXISTING ACCESS ROAD.
5. STONE SHALL BE APPLIED IN A MANNER TO MAINTAIN ALL EXISTING FARM ROAD APPROACHES THAT ORIGINATE OFF THE EXISTING ACCESS ROAD ROAD.
6. INSTALL ROCK CHECK DAMS AND SEED AND MULCH ALL DISTURBED AREAS ALONG THE EXISTING ACCESS ROAD AS NECESSARY.

RICHARD L. & SHERYL A. RAY  
265.50 ACRES±

NAVITUS

ENERGY ENGINEERING

Telephone: (888) 662-4185 | www.NavitusEng.com

Professional Energy Consultants

A DIVISION OF SMITHLAND SURVEYING, INC.

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WWW.SLSURVEYS.COM  
(304) 462-6634



THIS DOCUMENT WAS PREPARED BY:  
NAVITUS ENGINEERING INC.  
FOR: EQT PRODUCTION COMPANY

WELL & TANK PAD DETAILS

OXF 122

UNION DISTRICT  
RITCHIE COUNTY, WV

DATE: 01/14/2014
SCALE: 1" = 50'
DESIGNED BY: CSK
FILE NO. 6811
SHEET 5 OF 24
REV: 06/10/2016

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APR 1 2016

Environmental Department of

4708510285

**EQT Production**

**Hydraulic Fracturing Monitoring Plan**

**Pad ID: OXF122**

**Ritchie County, WV**

**4/11/16**

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**APR 14 2016**

**WV Department of**  
**Environmental Protection**

Page 1 of 2

**06/10/2016**

## Purpose

The purpose of this pad-specific Hydraulic Fracturing Monitoring Plan is to identify and notify conventional well operators near EQT wells on the OXF122 pad: 514083,

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 6,400' TVD) and existing conventional natural gas wells in the partially-depleted, relatively high permeability Alexander formation (approximately 5,000' 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 1,500 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.

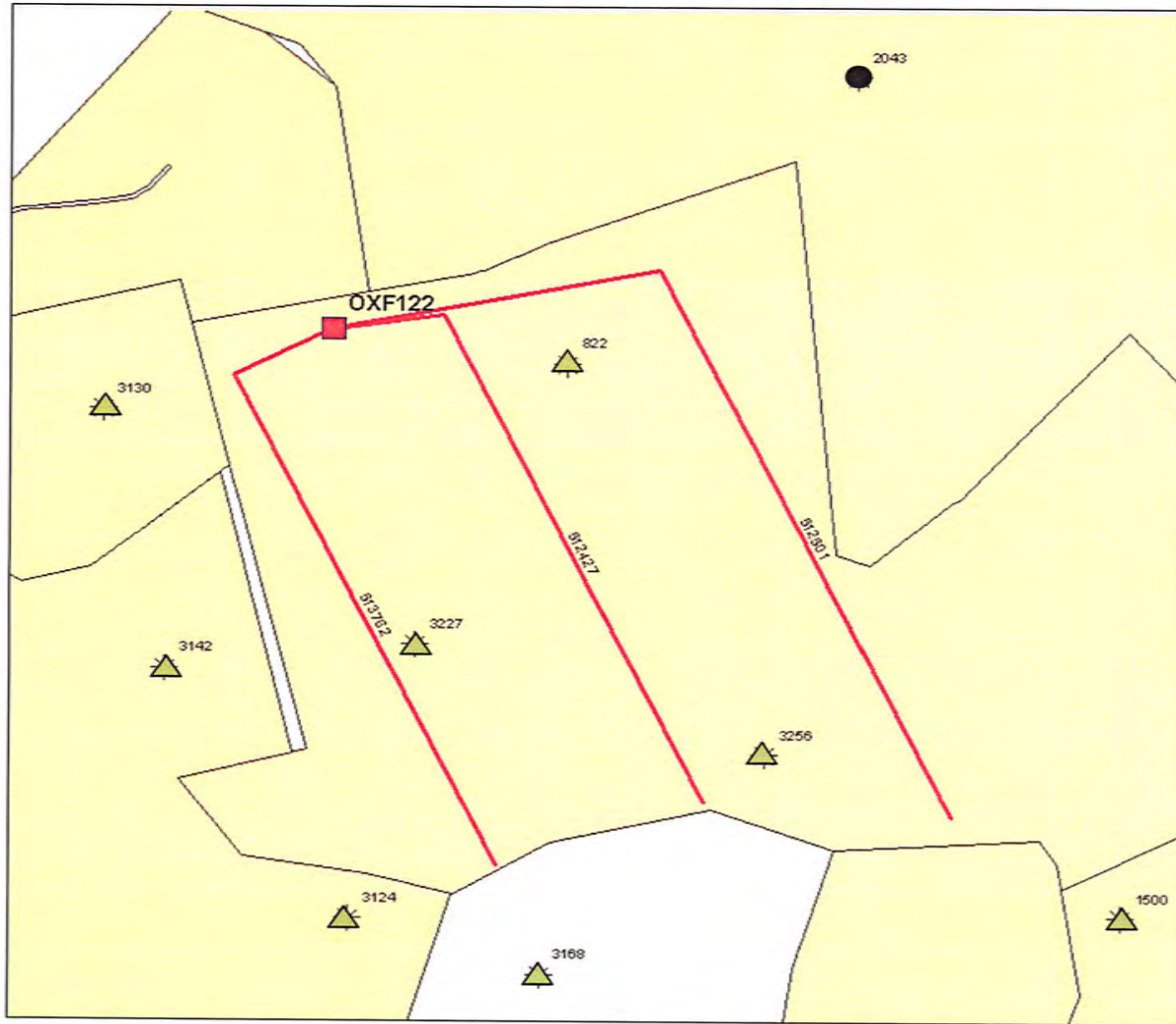
Specifically, the letter recommends that conventional well operators conduct the following activities during and after fracturing operations:




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.

# OXF122 Vertical Offsets



	Landed above 2,500'
	Plugged
	Planned/New EQT Horizontal Wells

4708510285

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APR 14 2016

WV Department of  
Environmental Protection  
Attachment A-1

Note: Vertical wells are only displayed if within 1500' (lateral distance) of the new/planned horizontal OXF122 wells.

Well ID	Prior Operator on Record	Operator-DEP*	Status	Latitude	Longitude	Vertical TD	Closest Distance from Pen15 Lateral Map View	OXF122 Horizontal TVD minus Offset Vertical TD	Hypotenuse Distance	Closest Well	Producing Formation	Gas Show/Pay Zone Depths	Notes
4701701500	WILLARS FERRELL	Jesam Energy	GAS	39.12402	-80.81815	2045	930.072	4453	4549.092539	512501	Big Lime, Big Injun	1964-2045	Not completed
4701702043	EPC	EQT	GAS-P	39.135802	-80.822424	1835	1349.239	4426	4627.085679	512501	Big Injun	1835	Plugged 5/1988
4708500822	EPC	EQT	GAS	39.131775	-80.827141	1821.5	408.451	4459.5	4478.166195	512427	Big Injun	1802-1810	Completed 6/1940 - Nitrogen frac
4708503124	E W BOWERS & R WEEKS	Jay-Bee Oil & Gas Co.	GAS	39.124	-80.8307	2053	745.78	4423	4485.433848	513762	Big Injun	1998-2030	Not completed
4708503130	WILLARD FERRELL	Deem, J.F. Oil and Gas, LLC	GAS	39.131128	-80.834704	1980	634.947	4370	4415.886966	513762	Big Injun	1909-1938	Completed 6/1966 - 700 bbls fluid, 500 gal acid, 40,000 lbs sand
4708503142	WOLF RUN OIL & GAS	Jay-Bee Oil & Gas Co.	GAS	39.1275	-80.8337	2120	949.716	4426	4526.746788	513762	Big Injun	1923-2120	Completed 8/1966 - acid, gelling agent, sand
4708503168	E W BOWERS & R WEEKS	Jay-Bee Oil & Gas Co.	GAS	39.1232	-80.8276	1905	602.916	4576	4615.548039	513762	Big Injun	1834-1869	Completed 12/1966 - acid, water, sand
4708503227	STARLIGHT DEVELOP	Prusack, James	GAS	39.127834	-80.829634	1929	142.828	4493	4495.269607	513762	Big Injun	2040-2105	Not completed
4708503256	STARLIGHT DEVELOP	Jesam Energy	GAS	39.126291	-80.823935	2031	355.521	4503	4517.01275	512427	Big Lime	1955-1970	Completed 1/1968 - 800 bbls fluid, 40,000 lbs sand

4708503124

Attachment A-2



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: Ritchie County Hydraulic Fracturing Notice**

Dear Sir/Madam,

EQT has developed a Marcellus pad (Oxford 122 pad) located in Ritchie 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 6,400' TVD) and existing conventional natural gas wells in the partially-depleted, relatively high permeability, Alexander formation (approximately 5,000' TVD).

EQT anticipates conducting hydraulic fracturing at the Oxford 122 pad during the [first,second, third, fourth] quarter of [year]. We have identified conventional natural gas wells operated by your company within 1,500' (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

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WV Department of  
Environmental Protection

Attachment 15

06/10/2016