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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

August 31, 2015

**WELL WORK PERMIT**

**Horizontal 6A Well**

This permit, API Well Number: 47-8510236, 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: 512428  
Farm Name: RAY, RICHARD L. & SHERYL A.  
**API Well Number: 47-8510236**  
**Permit Type: Horizontal 6A Well**  
Date Issued: 08/31/2015

**Promoting a healthy environment.**

**09/04/2015**

**PERMIT CONDITIONS 4708510236**

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.

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**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.
1. 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.
2. If the operator encounters an unanticipated void, or an anticipated void at an unanticipated depth, the operator shall notify the inspector within 24 hours. Modifications to the casing program may be necessary to comply with W. Va. Code § 22-6A-5a (12), which requires drilling to a minimum depth of thirty feet below the bottom of the void, and installing a minimum of twenty (20) feet of casing. Under no circumstance should the operator drill more than one hundred (100) feet below the bottom of the void or install less than twenty (20) feet of casing below the bottom of the void.
3. When compacting fills, each lift before compaction shall not be more than 12 inches in height, and the moisture content of the fill material shall be within limits as determined by the Standard Proctor Density test of the actual soils used in specific engineered fill, ASTM D698, Standard Test Method for Laboratory Compaction Characteristics of Soil Using Standard Effort, to achieve 95 % compaction of the optimum density. Each lift shall be tested for compaction, with a minimum of two tests per lift per acre of fill. All test results shall be maintained on site and available for review.
4. Operator shall install signage per § 22-6A-8g (6) (B) at all source water locations included in their approved water management plan within 24 hours of water management plan activation.
5. Oil and gas water supply wells will be registered with the Office of Oil and Gas and all such wells will be constructed and plugged in accordance with the standards of the Bureau for Public Health set forth in its Legislative rule entitled *Water Well Regulations*, 64 C.S.R. 19. Operator is to contact the Bureau of Public Health regarding permit requirements. In lieu of plugging, the operator may transfer the well to the surface owner upon agreement of the parties. All drinking water wells within fifteen hundred feet of the water supply well shall be flow tested by the operator upon request of the drinking well owner prior to operating the water supply well.

## PERMIT CONDITIONS

4708510236

6. Pursuant to the requirements pertaining to the sampling of domestic water supply wells/springs the operator shall, no later than thirty (30) days after receipt of analytical data provide a written copy to the Chief and any of the users who may have requested such analyses.
7. If any explosion or other accident causing loss of life or serious personal injury occurs in or about a well or well work on a well, the well operator or its contractor shall give notice, stating the particulars of the explosion or accident, to the oil and gas inspector and the Chief, within 24 hours of said accident.
8. During the casing and cementing process, in the event cement does not return to the surface, the oil and gas inspector shall be notified within 24 hours.
9. Operator shall provide the Office of Oil & Gas notification of the date that drilling commenced on this well. Such notice shall be provided by sending an email to [DEPOOGNotify@wv.gov](mailto:DEPOOGNotify@wv.gov) within 30 days of commencement of drilling.

4708510236

API NO. 47 - 085 -  
OPERATOR WELL NO. 512248  
Well Pad Name: OXF122

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

1) Well Operator: EQT Production Company  
Operator ID 306686 County 085 District 4 Quadrangle 526

2) Operator's Well Number: 512248 Well Pad Name OXF122

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

4) Elevation, current ground: 1,111.0 Elevation, proposed post-construction: 1,111.0

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 Thicknesses and Associated Pressure(s):

Target formation is Marcellus at a depth of 6489 with the anticipated thickness to be 54 feet and anticipated target pressure of 2190 PSI

8) Proposed Total Vertical Depth: 6489

9) Formation at Total Vertical Depth: Marcellus

10) Proposed Total Measured Depth: 15661

11) Proposed Horizontal Leg Length: 7,966

12) Approximate Fresh Water Strata Depths: 236

13) Method to Determine Fresh Water Depth: By offset wells

14) Approximate Saltwater Depths: N/A

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 x

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

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*Daniel Colman*  
7-27-15

WW - 6B  
(4/15)

4708510236

API NO. 47 - 0 -  
OPERATOR WELL NO. 512248  
Well Pad Name: OXF122

**CASING AND TUBING PROGRAM**

18)

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.)
Conductor	20	New	MC-50	81	40	40	38 C.T.S.
Fresh Water	13 3/8	New	MC-50	54	386	386	356 C.T.S.
Coal	-	-	-	-	-	-	-
Intermediate	9 5/8	New	MC-50	40	2,982	2,982	1,185 C.T.S.
Production	5 1/2	New	P-110	20	15,661	15,661	See Note 1
Tubing	2 3/8		J-55	4.6			May not be run, if run will be set 100' less than TD
Liners							

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	24	0.375	-	18	Construction	1.18
Fresh Water	13 3/8	17 1/2	0.38	2,480	2,184	* See Note 2	1.21
Coal							
Intermediate	9 5/8	12 3/8	0.395	3,590	3,160	* See Note 2	1.21
Production	5 1/2	8 1/2	0.361	12,640	10,112	-	1.27/1.86
Tubing							
Liners							

**Packers**

Kind:	N/A		
Sizes:	N/A		
Depths Set:	N/A		

**Note 1:** EQT plans to bring the TOC on the production casing cement job 1,000' above kick off point, which is at least 500' above the shallowest production zone, to avoid communication.

**Note 2:** Reference Variance 2014-17. (Attached)

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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. The vertical drill to go down to an approximate depth of 3378'.  
Then kick off the horizontal leg into the Marcellus using a slick water frac.

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 average approximately 8500 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 spaced every 1000' from KOP to Int csg shoe

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

Surface (Type 1 Cement): 0-3% Calcium Chloride

Used to speed the setting of cement slurries.

0.4% 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. 0.4% 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 1 Cement): 0.2-0.7% Lignosulfonate (Retarder). Lengthens thickening time.

0.3% CFR (dispersant). Makes cement easier to mix.

Tail (Type H Cement): 0.25-0.40% Lignosulfonate (Retarder). Lengthens thickening time.

0.2-0.3% CFR (dispersant). This is to make the cement easier to mix.

60 % Calcuim Carbonate. Acid solubility.

0.4-0.6% Halad (fluid loss). Reduces amount of water lost to formation.

25) Proposed borehole conditioning procedures. Surface: Circulate hole clean (Approximately 30-45 minutes) rotating & reciprocating

one full joint until cuttings diminish at surface. When cuttings returning to surface diminish, continue to circulate an additional 5 minutes. To ensure that there is no fill, short trip two stands with no circulation. If there is fill, bring compressors back on and circulate hole clean. A constant rate of higher than expected cuttings volume likely indicates washouts that will not clean up.

Intermediate: Circulate hole clean (Approximately 30-45 minutes) rotating & reciprocating one full joint until cuttings diminish at surface. When cuttings returning to surface diminish, continue to circulate an additional 5 minutes. If foam drilling, to enhance hole cleaning use a soap sweep or increase injection rate & foam concentration.

Production: Pump marker sweep with nut plug to determine actual hole washout. Calculate a gauge holes bottoms up volume.

Perform a cleanup cycle by pumping 3-5 bottoms up or until the shakers are clean. Check volume of cuttings coming across the shakers every 15 minutes.

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\*Note: Attach additional sheets as needed.

gpc  
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4708510236

Well: 512428 (OXF122H3)  
 EOT Production  
 Oxford Quad  
 Ritchie  
 West Virginia

Asmth: 151  
 Vertical Section: 7721

TVD Depth (feet)	Formation Tops (TVD)	Asmth	Vertical Section	Hole Size (inches)	Casing Type	Casing Size (inches)	Wt (ppg)/Grade
250'	River Bend Block	999	(10000')	17 1/2"	Surface	13 3/8"	54#/MC-50
500'	River Bend Block	999	(10000')	17 1/2"	Surface	13 3/8"	54#/MC-50
750'	River Bend Block	999	(10000')	17 1/2"	Surface	13 3/8"	54#/MC-50
1,000'	River Bend Block	999	(10000')	17 1/2"	Surface	13 3/8"	54#/MC-50
1,250'	River Bend Block	999	(10000')	17 1/2"	Surface	13 3/8"	54#/MC-50
1,500'	River Bend Block	999	(10000')	17 1/2"	Surface	13 3/8"	54#/MC-50
1,750'	River Bend Block	999	(10000')	17 1/2"	Surface	13 3/8"	54#/MC-50
2,000'	River Bend Block	999	(10000')	17 1/2"	Surface	13 3/8"	54#/MC-50
2,250'	River Bend Block	999	(10000')	17 1/2"	Surface	13 3/8"	54#/MC-50
2,500'	River Bend Block	999	(10000')	17 1/2"	Surface	13 3/8"	54#/MC-50
2,750'	River Bend Block	999	(10000')	17 1/2"	Surface	13 3/8"	54#/MC-50
3,000'	River Bend Block	999	(10000')	17 1/2"	Surface	13 3/8"	54#/MC-50
3,250'	River Bend Block	999	(10000')	17 1/2"	Surface	13 3/8"	54#/MC-50
3,500'	River Bend Block	999	(10000')	17 1/2"	Surface	13 3/8"	54#/MC-50
3,750'	River Bend Block	999	(10000')	17 1/2"	Surface	13 3/8"	54#/MC-50
4,000'	River Bend Block	999	(10000')	17 1/2"	Surface	13 3/8"	54#/MC-50
4,250'	River Bend Block	999	(10000')	17 1/2"	Surface	13 3/8"	54#/MC-50
4,500'	River Bend Block	999	(10000')	17 1/2"	Surface	13 3/8"	54#/MC-50
4,750'	River Bend Block	999	(10000')	17 1/2"	Surface	13 3/8"	54#/MC-50
5,000'	River Bend Block	999	(10000')	17 1/2"	Surface	13 3/8"	54#/MC-50
5,250'	River Bend Block	999	(10000')	17 1/2"	Surface	13 3/8"	54#/MC-50
5,500'	River Bend Block	999	(10000')	17 1/2"	Surface	13 3/8"	54#/MC-50
5,750'	River Bend Block	999	(10000')	17 1/2"	Surface	13 3/8"	54#/MC-50
6,000'	River Bend Block	999	(10000')	17 1/2"	Surface	13 3/8"	54#/MC-50
6,250'	River Bend Block	999	(10000')	17 1/2"	Surface	13 3/8"	54#/MC-50
6,500'	River Bend Block	999	(10000')	17 1/2"	Surface	13 3/8"	54#/MC-50

Proposed Well Work:  
 Drill and complete a new horizontal well in the Marcellus formation.  
 The vertical drill to go down to an approximate depth of 3378'.  
 Then kick off the horizontal leg into the Marcellus using a slick water frac.



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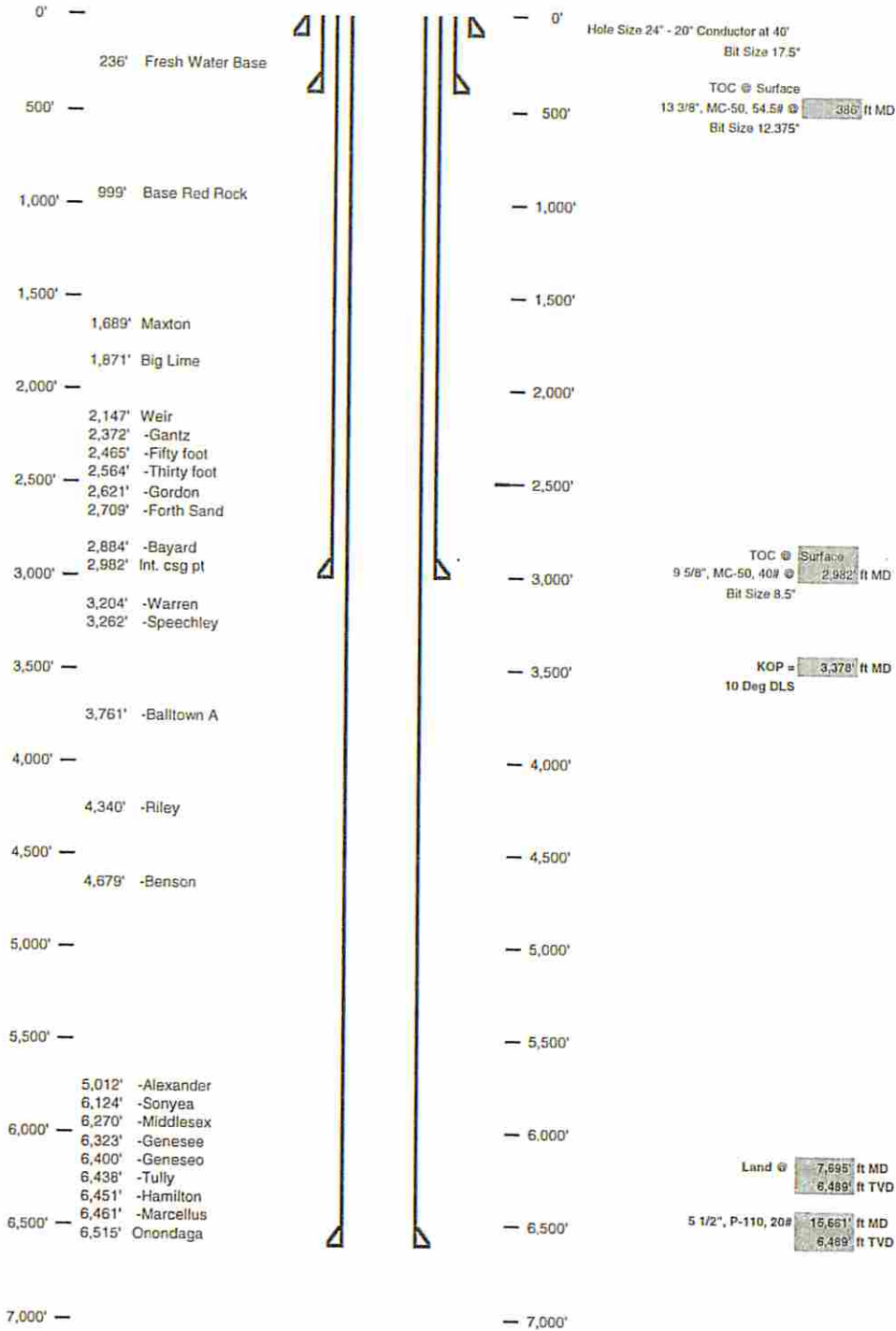
*Duc* 09/04/2015

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Well Schematic  
EQT Production

Well Name: 512428 (DXF122R3)  
County: Fitchita  
State: West Virginia

Elevation KB: 1124  
Target: Marcellus  
Prospect: Marcellus  
Azimuth: 161  
Vertical Section: 7783



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*[Handwritten signature]*

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4708510236

July 17, 2015

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

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,

Vicki Roark  
Permitting Supervisor

Enc.

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*pmc*



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

March 18, 2014

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

Re: Cement Variance Request

Dear Sir or Madam,

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

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

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

Sincerely,

James Peterson  
Environmental Resources Specialist / Permitting

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

**REPORT OF THE OFFICE**

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

**FINDINGS OF FACT**

1.) Nabors Completion & Production Services Co. proposes the following cement blend:

- 2% Calcium Chloride (Accelerator)
- 0.25 % Super Flake (Lost Circulation)
- 94% Type "1" Cement
- 5.20 % Water

2.) Laboratory testing results indicate that the blend listed in Fact No.1 will achieve a 500 psi compressive strength within 6 hours and a 2,435 psi compressive strength within 24 hours.

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**CONCLUSIONS OF LAW**

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

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

**ORDER**

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

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

4708510236

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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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 (HUC10) Straight Fork Quadrangle Oxford

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

Will a pit be used? Yes: X No:     

If so please describe anticipated pit waste: flowback water & residual solids

Will a synthetic liner be used in the pit? Yes X 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) 4708510236
- Other (Explain      )

Will closed loop system be used? 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.

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.

- If oil based, what type? Synthetic, petroleum, etc Synthetic 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, defloculates, biodegradable oil lubricant, defoaming, walnut shell, salt, x-cide, carbonates.

Oil based mud - synthetic base oil, barite, emulsifier, salt, lime, viscosifer, alkalinity control, filtration control, defloculates, biodegradable oil lubricant, defoaming, carbonates.

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 [Signature]

Company Official (Typed Name) Victoria J. Roark

Company Official Title Permitting Supervisor

Subscribed and sworn before me this 23 day of July, 20 15

Rebecca L. Heater Notary Public

My commission expires 4-7-20

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WV Department of  
Environmental Protection



Proposed Revegetation Treatment: Acres Disturbed No Additional Prevegetation pH 5.8

Lime 3 Tons/acre or to correct to pH 6.5

Fertilize type Granular 10-20-20

Fertilizer Amount 13 lbs/acre (500 lbs minimum)

Mulch 2 Tons/acre

Seed Mixtures

Temporary		Permanent	
Seed Type	lbs/acre	Seed Type	lbs/acre
KY-31	<u>40</u>	Orchard Grass	<u>15</u>
Alsike Clover	<u>5</u>	Alsike Clover	<u>5</u>
Annual Rye	<u>15</u>		

Attach:  
Drawing(s) of road, location, pit and proposed area for land application.

Photocopied section of involved 7.5' topographic sheet.

Plan Approved by: [Signature]

Comments: Preserve mulch all cutover - maintain all M or S during complete operation

Title: oil & gas inspector Date: 7-27-15

Field Reviewed? (  ) Yes (  ) No

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**EQT Production Water plan**  
**Offsite disposals for Marcellus wells**

**CWS TRUCKING INC.**

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

**LAD LIQUID ASSETS DISPOSAL INC.**

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

**TRI COUNTY WASTE WATER MANAGEMENT, INC.**

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

**Waste Management - Meadowfill Landfill**

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

**Waste Management - Northwestern Landfill**

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

**BROAD STREET ENERGY LLC**

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

**TRIAD ENERGY**

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

**KING EXCAVATING CO.**

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

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Where energy meets innovation.™

# Site Specific Safety Plan

EQT OXF 122 Pad

West Union  
Ritchie County, WV

512428

For Wells:

4708510236

Date Prepared:

December 3, 2014

EQT Production

WV Oil and Gas Inspector

Title

Title

Date

Date

Office of Oil & Gas

JUL 30 2015

09/04/2015



**EQT Production**  
**Hydraulic Fracturing Monitoring Plan**  
**Pad ID: Oxford 122**  
**Ritchie County, WV**

**7/23/15**

**4708510236**

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**Page 1 of 2**

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**Environmental Protection**  
**09/04/2015**

## Purpose

The purpose of this pad-specific Hydraulic Fracturing Monitoring Plan is to identify and notify conventional well operators near EQT hydraulic fracturing in Ritchie County, WV prior to hydraulic fracturing at the following EQT wells on the Oxford 122 pad: 513762, 512426, 512427, 512428, 512500, 512501, 514081, 514082.

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 5,200' 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 attached.

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 attached.

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.

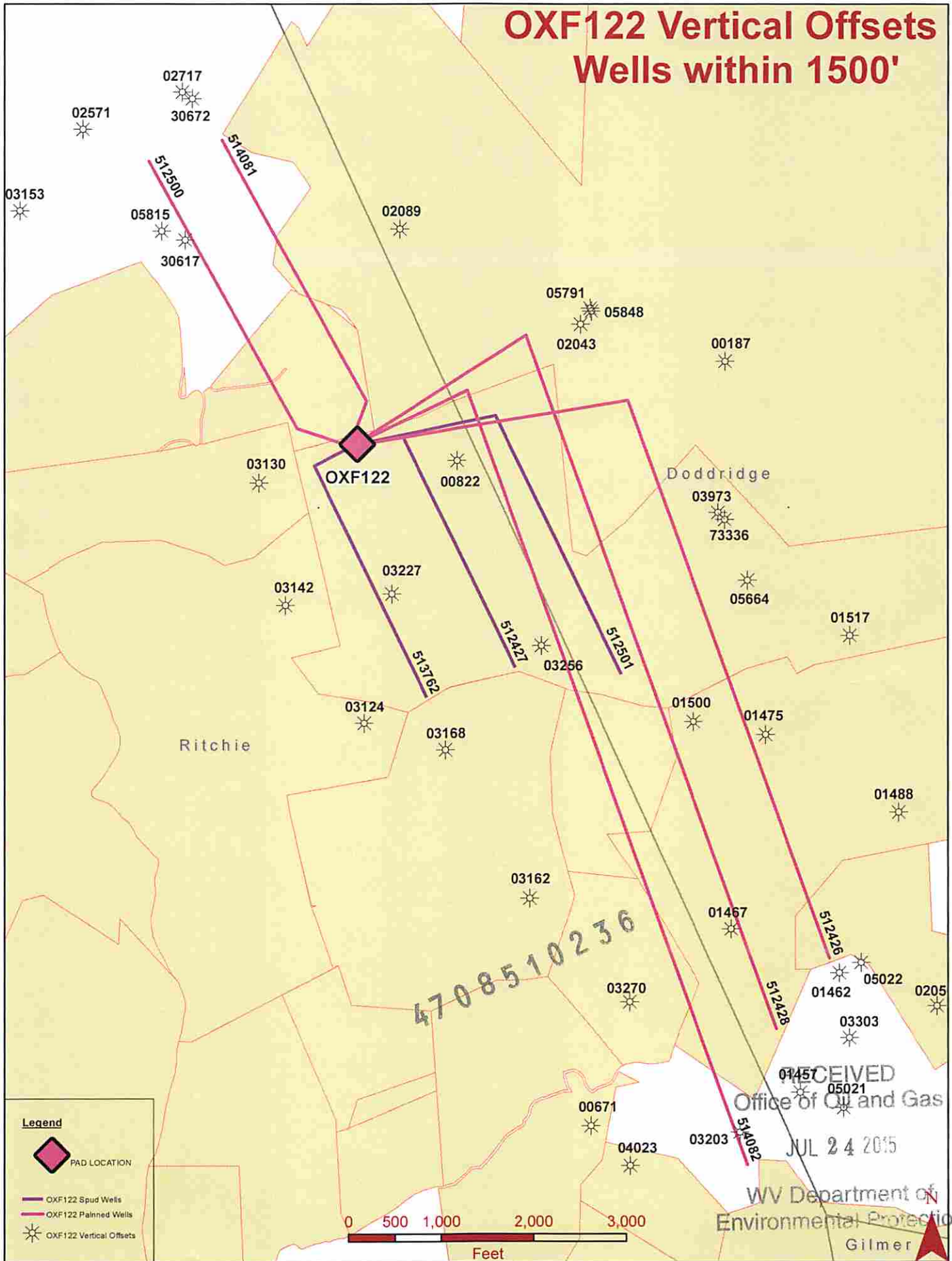
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Page 2 of 2  
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# OXF122 Vertical Offsets Wells within 1500'



WellID	Operator GSG	Operator DEP	Latitude	Longitude	Well Status	Permit	Datum Elevation	ID	TDSS	Lateral Map Distance (ft)	SS Horiz	horiz - TD	Hypot Dist	Measured from well#
4701700187	P & M OIL	MARSHALL GAS & OIL CORPORATION	39.1347000	-80.8169000	GAS	00187	1070.0000	1925.0000	-855.0000	1131	-5404	4549	4687.489947	512426
4701701457	WOLF RUN OIL & GAS	RITCHIE PETROLEUM CORP.	39.1129900	-80.8141050	GAS	01457	1101.0000	2110.0000	-1009.0000	741	-5404	4395	4457.028831	512428
4701701462	WOLF RUN OIL & GAS	RITCHIE PETROLEUM CORP.	39.1165500	-80.8126100	GAS	01462	1110.0000	2048.0000	-938.0000	193	-5404	4466	4470.168341	512426
4701701467	WOLF RUN OIL & GAS	RITCHIE PETROLEUM CORP.	39.1178600	-80.8167200	O&G	01475	1166.0000	2152.0000	-986.0000	90	-5404	4418	4418.916609	512428
4701701475	WOLF RUN OIL & GAS	RITCHIE PETROLEUM CORP.	39.1236200	-80.8154000	GAS	01475	1130.0000	1866.0000	-736.0000	170	-5404	4668	4671.094518	512426
4701701488	WOLF RUN OIL & GAS	RITCHIE PETROLEUM CORP.	39.1213200	-80.8103300	GAS	01488	1151.0000	2226.0000	-1075.0000	1241	-5404	4329	4503.367851	512426
4701701500	WILLARD FERRELL	JESAM ENERGY	39.1240200	-80.8181500	GAS	01500	1147.0000	2045.0000	-898.0000	284	-5404	4506	4514.940974	512428
4701701517	JESAM ENERGY	JESAM ENERGY	39.1265707	-80.8121801	GAS	01517	999.0000	1855.0000	-856.0000	1392	-5404	4548	4756.25567	512426
4701702043	EPC	EPC	39.1358020	-80.8224240	GAS-P	02043	910.0000	1835.0000	-925.0000	591	-5404	4479	4517.822706	512428
4701702056	EPC	EPC	39.1155500	-80.8088900	GAS-P	02056	0.0000	1981.0000	-1981.0000	1275	-5404	3423	3652.746009	512426
4701702089	EPC	EPC	39.1386400	-80.8293100	GAS	02089	0.0000	2041.0000	-2041.0000	1214	-5404	3363	3575.411165	514081
4701703303	J & J	EPC	39.1146100	-80.8122300	GAS-P	03303	1022.0000	5723.0000	-4701.0000	798	-5404	703	1063.49095	512428
4701705021	JAY-BEE	RITCHIE PETROLEUM CORP.	39.1125250	-80.8124550	GAS	05021	0.0000	5228.0000	-5228.0000	1129	-5404	176	1142.635988	512428
4701705022	JAY-BEE	RITCHIE PETROLEUM CORP.	39.1168600	-80.8117800	GAS	05022	1128.0000	5236.0000	-4108.0000	345	-5404	1296	1341.134221	512246
4701705664	EPC	EPC	39.1282050	-80.8160700	GAS	05664	895.0000	6378.0000	-5483.0000	554	-5404	-79	559.6043245	512426
4701705791	EPC	EPC	39.1361900	-80.8220000	GAS	05791	860.0000	6291.0000	-5431.0000	748	-5404	-27	748.4871408	512428
4701705848	EPC	EPC	39.1300000	-80.8169400	GAS	05848	874.0000	6260.0000	-5386.0000	752	-5404	18	752.2153947	512428
4701705848	EPC	EPC	39.1300000	-80.8169400	GAS	73336	0.0000	1526.0000	-1526.0000	542	-5404	3878	3915.692531	512426
4708500671	TRI COUNTY PRODUCING	ZICKEFOOSE, R. L. AND W.F.	39.1317750	-80.8271410	GAS	00671	1203.0000	2303.0000	-1100.0000	1447	-5404	4304	4540.729567	514082
4708500822	EPC	EPC	39.1416000	-80.8414000	GAS	00822	930.0000	1822.0000	-892.0000	362	-5404	4512	4526.498426	514082
4708502571	BRENNIE LYNCH	DALE, DAVID DBA DD OIL COMPANY	39.1416000	-80.8414000	GAS	02571	891.0000	1453.0000	-562.0000	788	-5404	4842	4905.701581	512500
4708502717	BRENNIE LYNCH	DALE, DAVID DBA DD OIL COMPANY	39.1427000	-80.8376000	GAS	02717	1120.0000	2460.0000	-1340.0000	666	-5404	4064	4118.209805	514081
4708503124	E W BOWERS & R WEEKS	RITCHIE PETROLEUM CORP.	39.1240000	-80.8307000	GAS	03124	1125.0000	2053.0000	-928.0000	737	-5404	4476	4536.269943	513762
4708503130	WILLARD FERRELL	DEEM, J. F. OIL & GAS, LLC	39.1311280	-80.8347040	GAS	03130	999.0000	1980.0000	-981.0000	627	-5404	4423	4467.220389	513762
4708503142	WOLF RUN OIL & GAS	RITCHIE PETROLEUM CORP.	39.1275000	-80.8337000	GAS	03142	1195.0000	2120.0000	-925.0000	947	-5404	4479	4578.01813	513762
4708503153	FRANCIS FRIESTAD	P & C OIL & GAS, INC.	39.1392000	-80.8438000	O&G	03153	859.0000	1806.0000	-947.0000	1491	-5404	4457	4695.779782	512500
4708503162	E W BOWERS & R WEEKS	RITCHIE PETROLEUM CORP.	39.1188000	-80.8244000	GAS	03162	971.0000	2077.0000	-1106.0000	1225	-5404	4298	4469.16424	514082
4708503168	E W BOWERS & R WEEKS	RITCHIE PETROLEUM CORP.	39.1232000	-80.8276000	GAS	03168	1130.0000	1905.0000	-775.0000	620	-5404	4629	4670.336283	513762
4708503203	WOLF RUN OIL & GAS	RITCHIE PETROLEUM CORP.	39.1180000	-80.8164000	GAS	03203	1180.0000	2170.0000	-980.0000	50	-5404	4414	4414.283181	514082
4708503227	STARLIGHT DEVELOP	JESAM ENERGY	39.1278340	-80.8296340	GAS	03227	1071.0000	1929.0000	-858.0000	142	-5404	4546	4548.217233	513762
4708503256	STARLIGHT DEVELOP	JESAM ENERGY	39.1262910	-80.8239350	GAS	03256	1183.0000	2031.0000	-848.0000	180	-5404	4556	4559.554364	514082
4708503270	WILLARD FERRELL	JESAM ENERGY	39.1302140	-80.8171970	GAS	03270	1010.0000	1969.0000	-959.0000	592	-5404	4445	4484.24889	514082
4708503973	EPC	EPC	39.1108050	-80.8206050	O&G	04023	0.0000	9999.0000	-9999.0000	500	-5404	-94595	94596.32141	512426
4708504023	EPC	EPC	39.1108050	-80.8206050	O&G	04023	0.0000	2180.0000	-2180.0000	1194	-5404	3224	3437.995346	514082
4708505815	PETROLEUM RESOURCES	DEEM, J. F. OIL & GAS, LLC	39.1386000	-80.8384000	O&G	05815	935.0000	5204.0000	-4269.0000	244	-5404	1135	1160.931092	512500
4708530617	PGH & WV GAS	UNKNOWN	39.1383300	-80.8375000	GAS	30617	0.0000	2531.0000	-2531.0000	69	-5404	2873	2873.828457	512500
4708530672	PGH & WV GAS	UNKNOWN	39.1425000	-80.8372200	GAS	30672	1124.0000	2018.0000	-894.0000	543	-5404	4510	4542.570748	514081

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March 25, 2014

[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 5,200' TVD).

EQT anticipates conducting hydraulic fracturing at the Oxford 122 pad during the second quarter of 2015. 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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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

Not To Scale

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

Received  
Office of Oil & Gas

JUL 30 2015

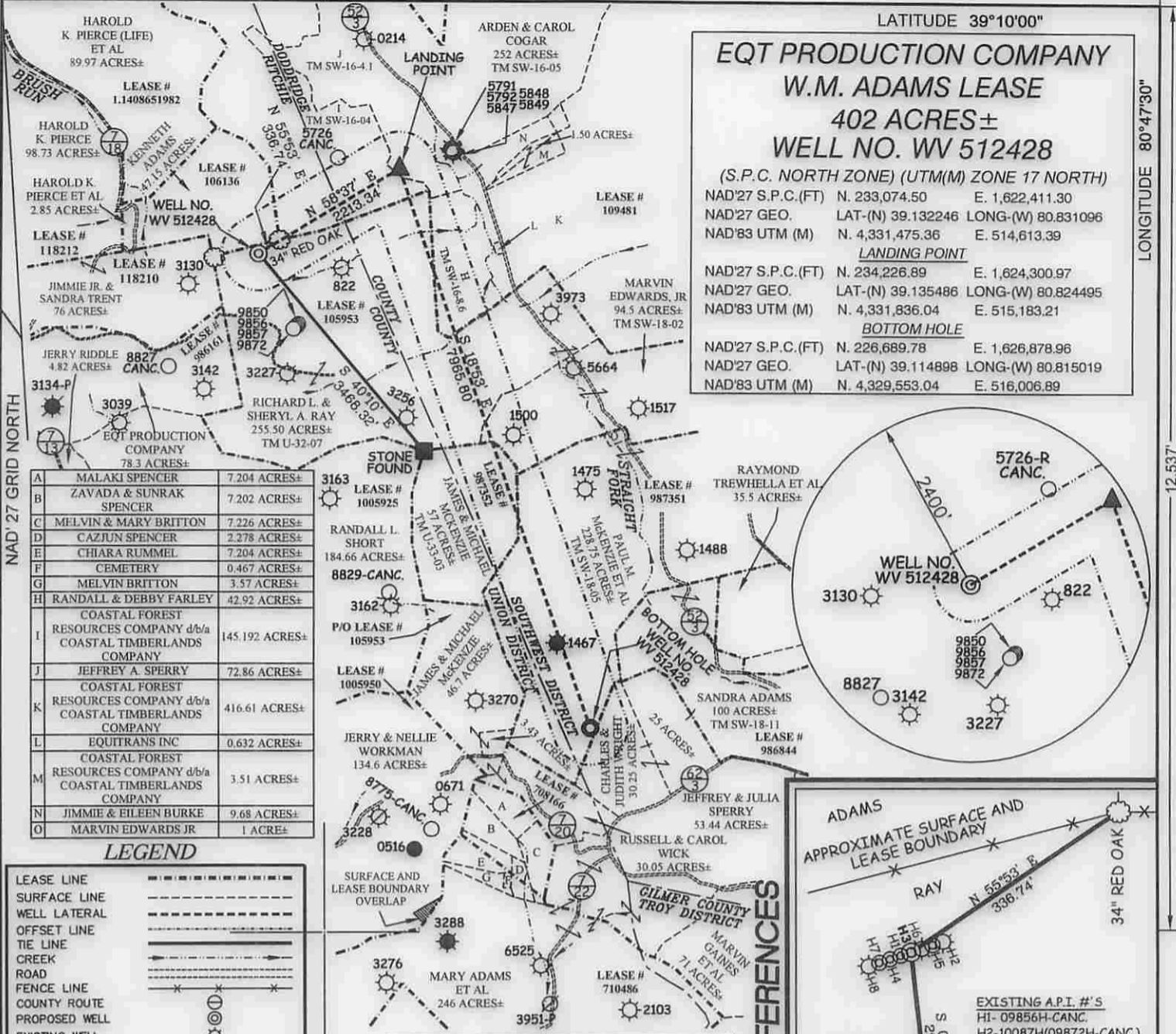


DRAWN BY: K.D.W. FILE NO.: 6811 DATE: 07-02-15 CADD FILE: 6811RECPLAN.dwg

TOPO SECTIONS OF OXFORD 7.5'  
TOPO QUADRANGLE

09/04/2015

*Handwritten signature*



**EQT PRODUCTION COMPANY  
W.M. ADAMS LEASE  
402 ACRES±  
WELL NO. WV 512428**

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

NAD'27 S.P.C.(FT) N. 233,074.50 E. 1,622,411.30  
 NAD'27 GEO. LAT-(N) 39.132246 LONG-(W) 80.831096  
 NAD'83 UTM (M) N. 4,331,475.36 E. 514,613.39

**LANDING POINT**

NAD'27 S.P.C.(FT) N. 234,226.89 E. 1,624,300.97  
 NAD'27 GEO. LAT-(N) 39.135486 LONG-(W) 80.824495  
 NAD'83 UTM (M) N. 4,331,836.04 E. 515,183.21

**BOTTOM HOLE**

NAD'27 S.P.C.(FT) N. 226,689.78 E. 1,626,878.96  
 NAD'27 GEO. LAT-(N) 39.114898 LONG-(W) 80.815019  
 NAD'83 UTM (M) N. 4,329,553.04 E. 516,006.89

A	MALAKI SPENCER	7.204 ACRES±
B	ZAVADA & SUNRAK SPENCER	7.202 ACRES±
C	MELVIN & MARY BRITTON	7.226 ACRES±
D	CAZJUN SPENCER	2.278 ACRES±
E	CHIARA RUMMEL	7.204 ACRES±
F	CEMETERY	0.467 ACRES±
G	MELVIN BRITTON	3.57 ACRES±
H	RANDALL & DEBBY FARLEY	42.92 ACRES±
I	COASTAL FOREST RESOURCES COMPANY d/b/a COASTAL TIMBERLANDS COMPANY	145.192 ACRES±
J	JEFFREY A. SPERRY	72.86 ACRES±
K	COASTAL FOREST RESOURCES COMPANY d/b/a COASTAL TIMBERLANDS COMPANY	416.61 ACRES±
L	EQUITRANS INC	0.632 ACRES±
M	COASTAL FOREST RESOURCES COMPANY d/b/a COASTAL TIMBERLANDS COMPANY	3.51 ACRES±
N	JIMMIE & EILEEN BURKE	9.68 ACRES±
O	MARVIN EDWARDS JR	1 ACRE±

**LEGEND**

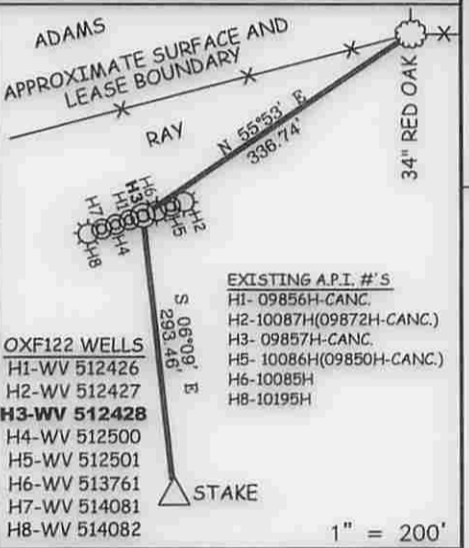
- LEASE LINE
- SURFACE LINE
- WELL LATERAL
- OFFSET LINE
- TIE LINE
- CREEK
- ROAD
- FENCE LINE
- COUNTY ROUTE
- PROPOSED WELL
- EXISTING WELL
- PERMITTED WELL
- RITCHIE COUNTY UNION DISTRICT TAX MAP-PARCEL
- DODDRIDGE COUNTY SOUTHWEST DISTRICT TAX MAP-PARCEL

**ROYALTY OWNERS**

ADELE McDUGAL ET AL	2000 AC±	LEASE NO. 109481
MICHAEL M. MCKENZIE ET AL	57 AC±	LEASE NO. 987352
MICHAEL M. MCKENZIE ET AL	199.75 AC±	LEASE NO. 987351

**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.



**Professional Energy Consultants**  
 A DIVISION OF SMITH LAND SURVEYING, INC.

SURVEYORS  
ENGINEERS  
ENVIRONMENTAL  
PROJECT MGMT.

(304) 462-6834 WWW.SLSURVEYS.COM

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 JANUARY 13, 20 14

REVISED JULY 10 15

OPERATORS WELL NO. WV 512428

API WELL NO. 47-085-10236H6A

STATE COUNTY PERMIT

MINIMUM DEGREE OF ACCURACY 1/2500 FILE NO. 6811P512428R3

HORIZONTAL & VERTICAL CONTROL DETERMINED BY DGPS (SURVEY GRADE TIE TO CORS NETWORK) SCALE 1" = 2000'

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: ELEVATION 1,111'(PAD ELEVATION) 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: LEASE NO. 105953 **09/04/2015**

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 TVD 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

**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
<u>105953</u>			Min 1/8 pd	
	William Adams, et ux	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
	Equitable Production Company	EQT Production Company		DB281/346
				Doddridge
				Doddridge
<u>109481</u>			Min 1/8 pd	
	Jackson Leeson, et al	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		DB121/303
	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
	Equitable Production Company	EQT Production Company		CB281/346
				Doddridge
				Doddridge
<u>987352</u>			Min 1/8 pd	
	Michael Marion McKenzie	EQT Production Company		LB252/989
<u>987351</u>			Min 1/8 pd	
	Jenny Catherine Burbank	EQT Production Company		LB253/576
	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

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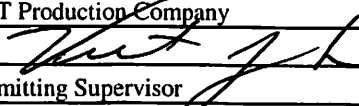
Upon information and belief, Operator's lease and/or other real property rights permit it to conduct drilling operations for the subject well in the location shown on the plat, including under any public roads that the well lateral crosses.

**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:   
Its: Permitting Supervisor

Page 2 of 2

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

Date of Notice Certification: \_\_\_\_\_

API No. 47 - 085 - 0  
Operator's Well No. 512428  
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>WV</u>	UTM NAD 83 Easting:	<u>514,613.39</u>
County:	<u>Ritchie</u>	UTM NAD 83 Northing:	<u>4,331,475.36</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>		

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

<p>Pursuant to West Virginia Code § 22-6A, the Operator has attached proof to this Notice Certification that the Operator has properly served the required parties with the following:</p> <p><b>*PLEASE CHECK ALL THAT APPLY</b></p> <p><input type="checkbox"/> NOTICE OF SEISMIC ACTIVITY or <input checked="" type="checkbox"/> NOTICE NOT REQUIRED BECAUSE NO SEISMIC ACTIVITY WAS CONDUCTED</p> <p><input type="checkbox"/> NOTICE OF ENTRY FOR PLAT SURVEY or <input checked="" type="checkbox"/> NO PLAT SURVEY WAS CONDUCTED</p> <p><input checked="" type="checkbox"/> NOTICE OF INTENT TO DRILL or <input type="checkbox"/> NOTICE OF ENTRY FOR PLAT SURVEY WAS CONDUCTED OR</p> <p style="padding-left: 150px;"><input type="checkbox"/> WRITTEN WAIVER BY SURFACE OWNER (PLEASE ATTACH)</p> <p><input checked="" type="checkbox"/> NOTICE OF PLANNED OPERATION</p> <p><input checked="" type="checkbox"/> PUBLIC NOTICE</p> <p><input checked="" type="checkbox"/> NOTICE OF APPLICATION</p>	<p><b>OOG OFFICE USE ONLY</b></p> <p><input type="checkbox"/> RECEIVED/NOT REQUIRED</p> <p><input type="checkbox"/> RECEIVED</p> <p><input type="checkbox"/> RECEIVED/NOT REQUIRED</p> <p><input type="checkbox"/> RECEIVED</p> <p><input type="checkbox"/> RECEIVED</p> <p><input type="checkbox"/> RECEIVED</p> <p><input type="checkbox"/> RECEIVED</p> <p><input type="checkbox"/> RECEIVED</p> <p style="text-align: right; font-size: small;">Office of Oil and Gas</p>
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**Required Attachments:**

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

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WV Department of Environmental Protection

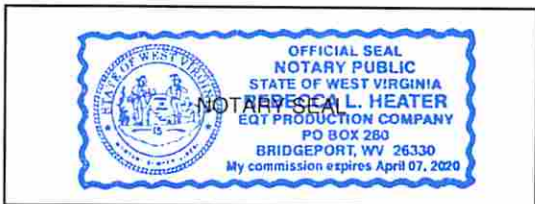
09/04/2015

**Certification of Notice is hereby given:**

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

Well Operator: EQT Production Company  
By: Victoria J. Roark  
Its: Permitting Supervisor  
Telephone: 304-848-0076

Address: P.O. Box 280  
Bridgeport, WV 26330  
Facsimile: 304-848-0040  
Email: [vroark@eqt.com](mailto:vroark@eqt.com)



Subscribed and sworn before me this 22 day of July, 2015

Rebecca L. Heater 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: 7-23-15 Date Permit Application Filed: 7-23-15

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

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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 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 requires a receipt or signature confirmation, copies of the application, the erosion and sediment control plan required by section seven of 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; 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 disturbance as described in the erosion and sediment control plan submitted pursuant to subsection (c), section seven of this article; (3) The 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 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 construction, enlargement, alteration, repair, removal or abandonment of any impoundment or pit as described in section nine of this water purveyor who is known to the applicant to have a water well, spring or water supply source located within one thousand five which is used to provide water for consumption by humans or domestic animals; and (6) The operator of any natural gas storage field 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 in the lands, the applicant may serve the documents required upon the person described in the records of the sheriff required to be 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 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 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: Richard L. & Sheryl A. Ray  
Address: 757 Summersville Lake Road  
Mount Nebo WV 26679

Name: \_\_\_\_\_  
Address: \_\_\_\_\_

SURFACE OWNERS(s) (Road and/or Other Disturbance)  
Name: Richard L. & Sheryl A. Ray  
Address: 757 Summersville Lake Road  
Mount Nebo WV 26679

Name: EQT Production Company  
Address: 625 Liberty Avenue Suite 1700  
Pittsburgh PA 15222

See attached for additional road/ disturbance owners.

SURFACE OWNER(s) (Impoundments/Pits)  
Name: Richard L. & Sheryl A. Ray  
Address: 757 Summersville Lake Road  
Mount Nebo WV 26679

COAL OWNER OR LESSEE  
Name: Haught Family Trust  
Address: 210 E Main Street  
Harrisville WV 26362

See attached for additional coal owners.

COAL OPERATOR  
Name: \_\_\_\_\_  
Address: \_\_\_\_\_

SURFACE OWNER OF WATER WELL AND/OR WATER PURVEYOR(s)  
Name: Ruby Adams  
Address: RT. 1 Box 143-A  
West Union WV 26456

See attached for additional water purveyors.

OPERATOR OF ANY NATURAL GAS STORAGE FIELD  
Name: \_\_\_\_\_  
Address: \_\_\_\_\_

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\*Please attach additional forms if necessary

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WW6-A

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

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

*pg. 2 receipts*

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

**Additional Coal Owners:**

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 Haight ✓  
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

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Carey A. Adams ✓  
510 Wellshire Place ✓  
Chester VA 23835

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

Kenneth E Adams ✓ *pg. 1 receipts*  
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

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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

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 ✓ *py. 11 receipts*  
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

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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

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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

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

John W Kerns Trust ✓  
Union National Bank TTEE  
I.C.G.  
PO Box 659  
Wichita 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 Holzhauer ✓  
23 Blackburn Road  
Quarryville PA 17566

Nancy J Stelle ✓ *pg. 6 Receipt*  
2655 Monterery Road  
Rimersburg PA 16248

Donna Nell Boston ✓  
2685 Summit Street  
Columbus OH 43202

**Additional Water Purveyors:**

Jimmie R. Trent, Jr and Sandra S. Trent ✓  
3630 Brushy Fork  
West Union WV 26456 *pg. 1 receipt*

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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.

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

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 57th St. SE  
Charleston, WV 25304  
(304) 926-0450

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.

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**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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Notice is hereby given by:

Well Operator: EQT Production Company

Address: 115 Professional Place P.O. Box 280

Telephone: 304-848-0082

Bridgeport, WV 26330

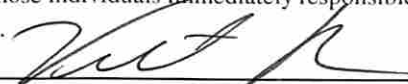
Email: Vroark@eqt.com

Facsimile: 304-848-0041

**Oil and Gas Privacy Notice:**

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

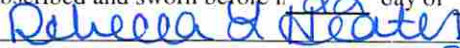
I certify under penalty of law that I have personally examined and am familiar with the information submitted on this application form and all attachments, and that based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate and complete.



By: Victoria Roark

Its: Permitting Supervisor

Subscribed and sworn before on 22 day of July, 2015



Notary Public

My Commission Expires 4-7-20



4708510236

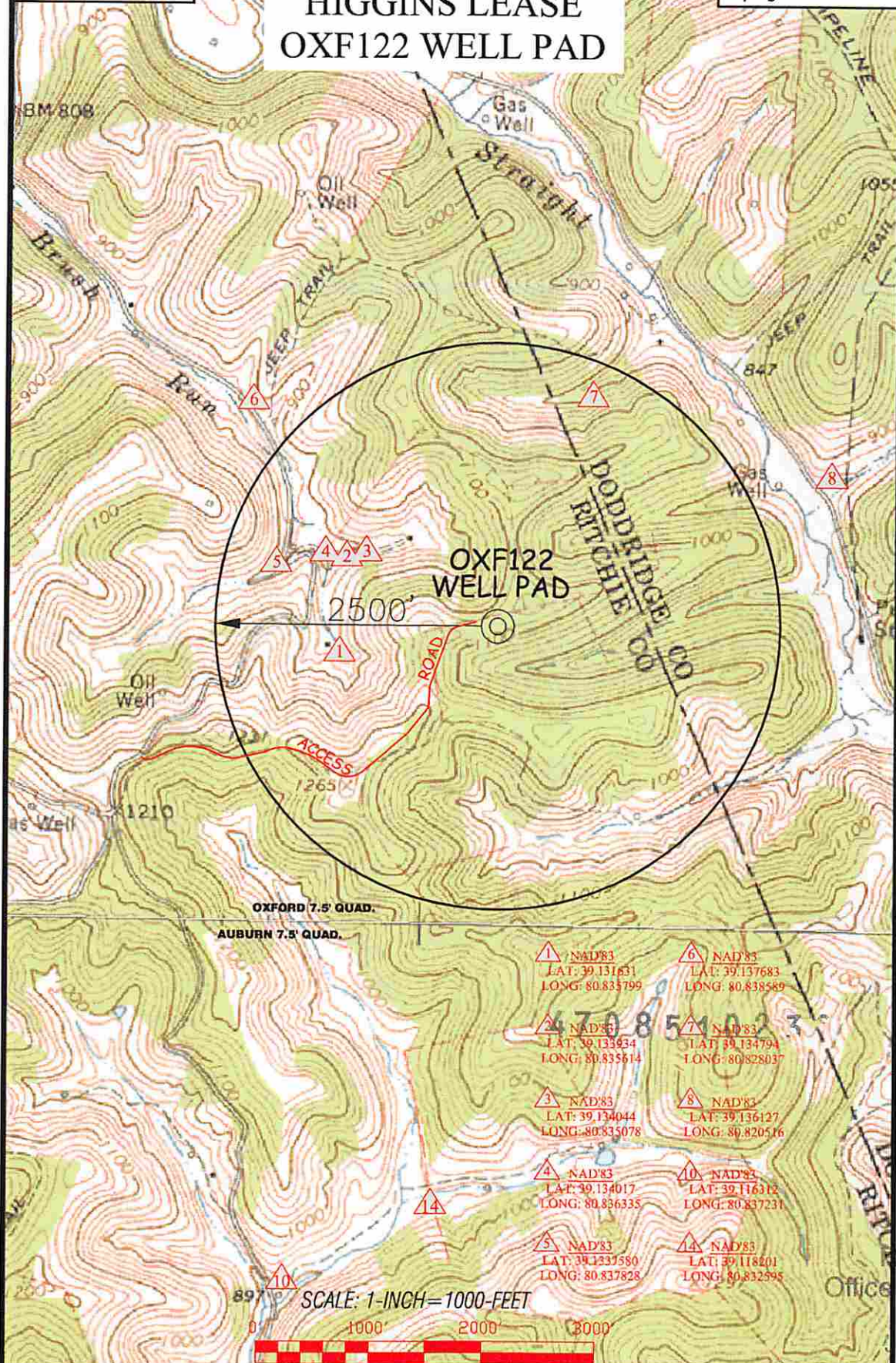
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JUL 24 2015

WV Department of  
Environmental Protection

09/04/2015

# HIGGINS LEASE OXF122 WELL PAD



- 1 NAD'83  
LAT: 39.131631  
LONG: 80.835799
- 2 NAD'83  
LAT: 39.133934  
LONG: 80.835614
- 3 NAD'83  
LAT: 39.134044  
LONG: 80.835078
- 4 NAD'83  
LAT: 39.134017  
LONG: 80.836335
- 5 NAD'83  
LAT: 39.1337580  
LONG: 80.837828
- 6 NAD'83  
LAT: 39.137683  
LONG: 80.838589
- 7 NAD'83  
LAT: 39.134794  
LONG: 80.828037
- 8 NAD'83  
LAT: 39.136127  
LONG: 80.820516
- 9 NAD'83  
LAT: 39.116312  
LONG: 80.837231
- 10 NAD'83  
LAT: 39.118201  
LONG: 80.832595

**Professional Energy Consultants**  
A DIVISION OF BATHLAND SURVEYING, INC.  
**SLS**  
SURVEYORS  
ENGINEERS  
ENVIRONMENTAL  
PROJECT MGMT.  
COURT REPORTERS  
WWW.BLSURVEYS.COM

DRAWN BY: K.D.W. FILE NO. 6811 DATE 07/02/15 CADD FILE: 6811WSOXF122

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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Environmental Protection  
09/04/2015

**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:** 6/30/2015 **Date Permit Application Filed:** 7/10/15

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

**Name:** EQT Production Company  
**Address:** 625 Liberty Avenue Suite 1700  
Pittsburgh PA 15222

**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>514,613.39</u>
County:	<u>Ritchie</u>		Northing	<u>4,331,475.36</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 57th 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, P.O Box 280  
Bridgeport, WV 26330  
**Telephone:** 304-848-0076  
**Email:** vroark@eqt.com  
**Facsimile:** 304-848-0041

4708510236

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

**Oil and Gas Privacy Notice:**

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

Office of Oil and Gas

JUL 24 2015

WV Department of Environmental Protection  
09/04/2015

**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:** 6/30/2015 **Date Permit Application Filed:** 7/10/15

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

**HAND DELIVERY**

**CERTIFIED MAIL RETURN RECEIPT REQUESTED**

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

**Name:** Kenneth P. Adams  
**Address:** RR 1 Box 143A  
West Union WV 26456

**Name:** Jimmie R. Trent Jr. and Sandra S. Trent  
**Address:** 3630 Brushy Fork  
West Union WV 26456

**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>514,609.07</u>
County:	<u>Ritchie</u>		Northing	<u>4,331,473.86</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 57th 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)

4708510236

**Notice is hereby given by:**

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

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Office of Oil and Gas

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JUL 24 2015  
WV Department of  
Environmental Protection




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>	Easting:	<u>514,613.39</u>
County:	<u>Ritchie</u>	UTM NAD 83 Northing:	<u>4,331,475.36</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:	<u>EQT Production Company</u>	Signature:	
Address:	<u>625 Liberty Ave Suit 1700</u>	Date:	_____
	<u>Pittsburgh PA 15222</u>		

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09/04/2015

WW-6A5  
(1/12)

Operator Well No. 512428

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: 7-23-15 Date Permit Application Filed: 7-23-15

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

CERTIFIED MAIL RETURN RECEIPT REQUESTED  HAND DELIVERY

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

4708510236

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

Name: EQT Production Company  
Address: 625 Liberty Ave Suit 1700  
Pittsburgh PA 15222

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: WV UTM NAD 83 Easting: 514,613.390000  
County: Ritchie Northing: 4,331,475.360000  
District: Union Public Road Access: 7/18  
Quadrangle: Oxford Generally used farm name: Richard L & Sheryl A Ray  
Watershed: Straight Fork

This Notice Shall Include:

Pursuant to West Virginia Code § 22-6A-16(c), this notice shall include: (1) A copy of this code section; (2) The information required to be provided by W. Va. Code § 22-6A-10(b) to a surface owner whose land will be used in conjunction with the drilling of a horizontal well; and (3) A proposed surface use and compensation agreement containing an offer of compensation for damages to the surface affected by oil and gas operations to the extent the damages are compensable under article six-b of this chapter. Additional information related to horizontal drilling may be obtained from the Secretary, at the WV Department of Environmental Protection headquarters, located at 601 57th Street, SE, Charleston, WV 25304 (304-926-0450) or by visiting [www.dep.wv.gov/oil-and-gas/pages/default.aspx](http://www.dep.wv.gov/oil-and-gas/pages/default.aspx).

Well Operator: EQT Production Company  
Telephone: 304-848-0082  
Email: vroark@eqt.com

Address: 115 Professional Place, P.O. Box 280  
Bridgeport, WV 26330  
Facsimile: 304-848-0040

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Environmental Protection  
09/04/2015

WW-6A5  
(1/12)

Operator Well No. 512428

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: 7-23-15 Date Permit Application Filed: 7-23-15

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

CERTIFIED MAIL  
RETURN RECEIPT REQUESTED  HAND  
DELIVERY

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

4708510236

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

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

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: WV UTM NAD 83 Easting: 514,613.390000  
County: Ritchie Northing: 4,331,475.360000  
District: Union Public Road Access: 7/18  
Quadrangle: Oxford Generally used farm name: Richard L & Sheryl A Ray  
Watershed: Straight Fork

This Notice Shall Include:

Pursuant to West Virginia Code § 22-6A-16(c), this notice shall include: (1) A copy of this code section; (2) The information required to be provided by W. Va. Code § 22-6A-10(b) to a surface owner whose land will be used in conjunction with the drilling of a horizontal well; and (3) A proposed surface use and compensation agreement containing an offer of compensation for damages to the surface affected by oil and gas operations to the extent the damages are compensable under article six-b of this chapter. Additional information related to horizontal drilling may be obtained from the Secretary, at the WV Department of Environmental Protection headquarters, located at 601 57th Street, SE, Charleston, WV 25304 (304-926-0450) or by visiting [www.dep.wv.gov/oil-and-gas/pages/default.aspx](http://www.dep.wv.gov/oil-and-gas/pages/default.aspx).

Well Operator: EQT Production Company  
Telephone: 304-848-0082  
Email: [vroark@eqt.com](mailto:vroark@eqt.com)

Address: 115 Professional Place, P.O. Box 280  
Bridgeport, WV 26330  
Facsimile: 304-848-0040

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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 Deumato 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>514,613.39</u>
County:	<u>Ritchie</u>	UTM NAD 83 Northing:	<u>4,331,475.36</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 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 Deumato</u></p> <p>Its: <u>Regional Land Director</u></p> <p>Signature: _____</p> <p>Date: <u>7-21-15</u></p>

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Environmental Protection  
09/04/2015



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

4708510236

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

512426 OXF122H1  
512500 OXF122H4  
514083 OXF122H9

512428 OXF122H3  
514081 OXF122H7  
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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Environmental Protection  
09/04/2015

**Anticipated Frac Additives**  
**Chemical Names and CAS numbers**

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

**4708510236**

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IMP-1A



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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 # <b>085-WPA-00020</b>

### Permit Associated Impoundment / Pit Registration

**4708510230**

**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				
Company Name:	Smith Land Surveying, Inc. & Navitus Engineering, Inc.				
Address: Street	12 Vanhorn Drive, P.O. Box 150				
City:	Glennville	State:	WV	Zip:	26351
Contact Name:	Wes Wayne	Contact Title:	Staff Engineer/Project Manager		
Contact Phone:	(304) 462-5634	Contact Email:	wwayne@slssurveys.com		
Certifying Professional Engineer	Cyrus B. Kump				
Professional Engineer Registration Number	WV PE No. 19578				

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## Section 3 - Impoundment / Pit Information

Type of Structure <u>Check one of two choices below:</u>		
<input type="checkbox"/> Freshwater Impoundment	<input checked="" type="checkbox"/> Waste Pit	
Note: <u>Any</u> waste in a pit will make it a waste pit.		
Name of Structure (Company Name ) <u>OXF 122 Associated Pit</u>		
County: <u>Ritchie County</u>	District: <u>Union</u>	
USGS 7.5' Quad Map Name: <u>Oxford</u>		
Farm Name: <u>N/A</u>		
Pad Name: <u>OXF 122 Well Pad</u>		
Surface Owner Name: <u>Richard L &amp; Sheryl A Ray</u>		
Physical Description of Location: <u>The OXF 122 Site is on a ridge east of Co. Rt. 7/18. The entrance to the site is approximately 675 ft. northeast of the Co. Rt. 7/18 and Co Rt. 7/13 intersection</u>		
(Note: Give general location, example: 2 miles south of Smalltown, WV on Rt. 22, left on Buffalo Creek)		
Watershed (nearest perennial): <u>Straight Fork</u>		
Distance (Drainage Distance) to nearest perennial stream: <u>2,200 Feet</u>		
Location Coordinates (NAD83, Decimal Degrees (xx.xxxx, -xx.xxxx))		
Latitude: <u>39.129700</u>	Longitude (Use negative sign): <u>-80.829101</u>	
UTM Coordinates: <u>514,771.4</u>	<u>E</u>	<u>4,331,183.6</u>
Access Road Coordinates (junction of state highway access)		
Latitude: <u>39.128987</u>	Longitude (Use negative sign): <u>-80.841969</u>	
UTM Coordinates: <u>513,659.3</u>	<u>E</u>	<u>4,331,102.5</u> <u>N</u>
Approximate Dimensions		
Length: <u>408 FT</u>	Width: <u>263 FT</u>	Height: <u>19 FT</u>
Note: If irregularly shaped, give approximate dimensions of long axis		
Total Capacity – Provide all units of measure below		
Barrels: <u>132,763</u>	Gallons: <u>5,576,054.0</u>	Acre-Feet: <u>17.112</u>
Capacity with 2' Freeboard – Provide all units of measure below		
Barrels: <u>110,569</u>	Gallons: <u>4,643,903.9</u>	Acre-Feet: <u>14.251</u>
Incised volume:		
Barrels: <u>24,787</u>	Gallons: <u>1,041,036.6</u>	Acre-Feet: <u>3.194</u>
Net impounded volume: (Total volume less incised volume )		
Barrels: <u>107,976</u>	Gallons: <u>4,535,017.4</u>	Acre-Feet: <u>13.918</u>
Anticipated Construction Start Date (estimation, non-binding): <u>As Soon As Possible</u>		
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
WV 512502 WV 512503	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 §47-34. If the design of this structure qualifies it to be defined as a dam, all permits regulating dams will be required prior to registering the structure with the Office of Oil and Gas. The dam standard, from the WVDEP, Div. Of Water and Waste, is available for review at: <http://www.dep.wv.gov/WWE/ee/ds/Pages/default.aspx>

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

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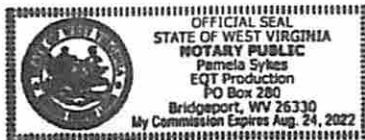
09/04/2015

**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 Roark  
Title: Permitting Supervisor  
Signature: [Signature]

Taken, subscribed and sworn to before me this, 15 Day of January 20 14  
Notary Public: [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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# OXF-122 SITE AS-BUILT EQT PRODUCTION COMPANY

EXISTING WELL # WV 512427, WV 512507 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.

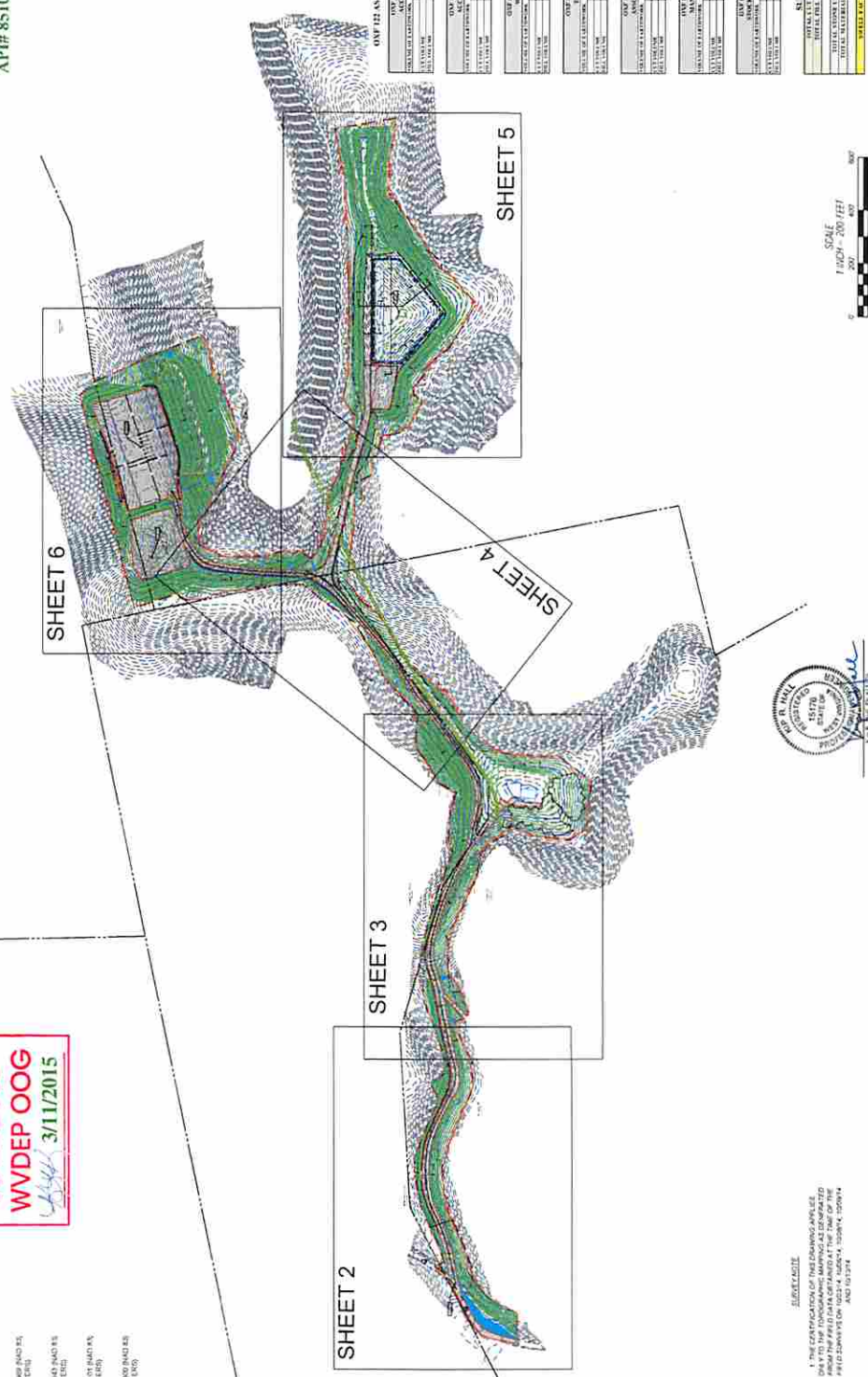
**APPROVED**  
**WV DEP OOG**  
*[Signature]*  
**3/11/2015**

**OXF-122 LOCATION COORDINATES:**  
ACCESS ROAD: N. 431777.8 E. 154017.9 (0.16M HAD TO METERS)  
LATTITUDE: 38.723282 LONGITUDE: -80.67840 (HAD TO METERS)  
WELL PAD: N. 431777.8 E. 154017.9 (0.16M HAD TO METERS)  
ASSOCIATED PIT: N. 431777.8 E. 154017.9 (0.16M HAD TO METERS)  
TANK PAD: N. 431777.8 E. 154017.9 (0.16M HAD TO METERS)  
LATTITUDE: 38.723274 LONGITUDE: -80.67840 (HAD TO METERS)  
N. 431777.8 E. 154017.9 (0.16M HAD TO 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**



**OXF 122 AS-BUILT VOLUMES**

ITEM	UNIT	AMOUNT
GRAVEL	CY	15,000.00
CRUSHED ROCK	CY	10,000.00
SPALLS	CY	5,000.00
CONCRETE	CY	2,000.00
ASPHALT	CY	1,000.00
SOIL	CY	50,000.00
WOOD	CU YD	100.00
STEEL	TONS	50.00
BRICK	1000'S	100.00
PAINT	1000'S	50.00
OTHER		
TOTAL		183,000.00

**SUMMARY**

ITEM	UNIT	AMOUNT
TOTAL SHEET AREA	SQ FT	1,500,000.00
TOTAL SHEET PERCENTAGE	%	100.00
TOTAL SHEET VOLUME	CY	183,000.00
TOTAL SHEET COST	DOLLARS	1,500,000.00

**DATE: 3-4-15**  
**SCALE: 1"=100'**  
**DESIGNED BY: KES**  
**FILE NO: 8130**  
**SHEET 1 OF 7**

**PROFESSIONAL ENGINEER**  
**REGISTERED PROFESSIONAL ENGINEER**  
**EXPIRES 12/31/2016**  
**WWW.SLS-ENGINEERS.COM**

**EQT**  
**WHERE ENERGY MEETS INNOVATION.**

**OXF-122 SITE AS-BUILT**  
**AS-BUILT**

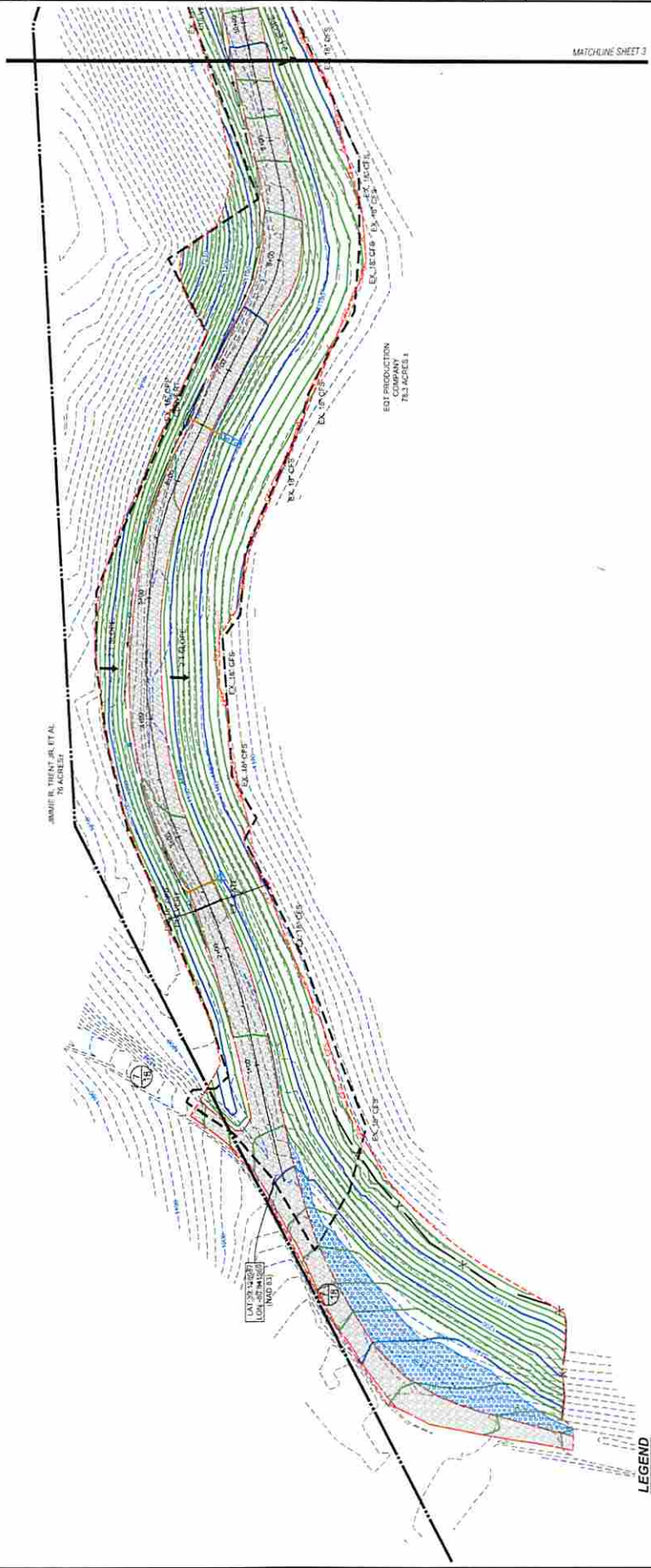
Electronic version of these plans may be viewed at: Q:\OIL\_GASSAY FILES\REVIEWS\

09/04/2015

GND NORTH AND SURVEITED ELEVATIONS ESTABLISHED BY DGPS SURVEY GRADE.

# OXF-122 ACCESS ROAD AS-B-BUILT

**APPROVED**  
WVDEP OOG  
3/11/2015



LEGEND	
---	ADJACENT PROPERTY
---	ADJACENT PROPERTY
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SCALE  
1 INCH = 40 FEET

<p>DATE: 3-4-15 SCALE: 1"=40' DESIGNED BY: K.E.S. FILE NO: 0159 SHEET: 2 OF 7</p>	<p><b>OXF-122 SITE AS-B-BUILT</b></p> <p><small>THIS DOCUMENT WAS PREPARED BY THE ENGINEER AND THE ENGINEER HAS REVIEWED THE DRAWING FOR CONFORMANCE WITH THE PROFESSIONAL ENGINEER SEALING REQUIREMENTS OF THE STATE OF WEST VIRGINIA.</small></p>	<p><b>SLS</b> SUNSHINE SURVEYORS ENGINEERS PROFESSIONAL MEMBERS OF THE WEST VIRGINIA SURVEYORS ASSOCIATION</p>	<p><b>EOT</b> Where energy meets innovation.</p>
REVISION	DATE	DESCRIPTION	BY

09/04/2015