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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

January 21, 2014

**WELL WORK PERMIT**

**Horizontal 6A Well**

This permit, API Well Number: 47-1706393, 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: 512479  
Farm Name: HARPER, LUCY E.  
**API Well Number: 47-1706393**  
**Permit Type: Horizontal 6A Well**  
Date Issued: 01/21/2014

**Promoting a healthy environment.**

## PERMIT CONDITIONS

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

### CONDITIONS

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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 fifty (50) feet below the bottom of the void or install less than twenty (20) feet of casing below the bottom of the void.
3. When compacting fills, each lift before compaction shall not be more than 12 inches in height, and the moisture content of the fill material shall be within limits as determined by the Standard Proctor Density test of the actual soils used in specific engineered fill, ASTM D698, Standard Test Method for Laboratory Compaction Characteristics of Soil Using Standard Effort, to achieve 95 % compaction of the optimum density. Each lift shall be tested for compaction, with a minimum of two tests per lift per acre of fill. All test results shall be maintained on site and available for review.
4. Operator shall install signage per § 22-6A-8g (6) (B) at all source water locations included in their approved water management plan within 24 hours of water management plan activation.
5. Oil and gas water supply wells will be registered with the Office of Oil and Gas and all such wells will be constructed and plugged in accordance with the standards of the Bureau for Public Health set forth in its Legislative rule entitled *Water Well Regulations*, 64 C.S.R. 19. Operator is to contact the Bureau of Public Health regarding permit requirements. In lieu of plugging, the operator may transfer the well to the surface owner upon agreement of the parties. All drinking water wells within fifteen hundred feet of the water supply well shall be flow tested by the operator upon request of the drinking well owner prior to operating the water supply well.
6. Pursuant to the requirements pertaining to the sampling of domestic water supply wells/springs the operator shall, no later than thirty (30) days after receipt of analytical data provide a written copy to the Chief and any of the users who may have requested such analyses.
7. If any explosion or other accident causing loss of life or serious personal injury occurs in or about a well or well work on a well, the well operator or its contractor shall give notice, stating the particulars of the explosion or accident, to the oil and gas inspector and the Chief, within 24 hours of said accident.
8. During the casing and cementing process, in the event cement does not return to the surface, the oil and gas inspector shall be notified within 24 hours.



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west virginia department of environmental protection

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WVDEP Office of Oil and Gas  
601 57<sup>th</sup> Street Southeast; Charleston, WV  
(304) 926-0450

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

January 17, 2014

Mr. Matthew Hamblet  
Xmatthewhambletx86@gmail.com

Re: Permit for EQT Production Company 512482, 512478, 512479 and 513136  
API number: 1706391 1706392 1706393 and 1705951

Mr. Hamblet:

The Office of Oil and Gas (OOG) has reviewed your comments concerning EQT's permits for the above referenced well. The comment was sent to the operator for its response. The operator has responded and the response is enclosed for your records.

After considering your comments, the applicant's response, and the inspector's findings, the OOG has determined that the application meets the requirements set forth in Article 6A Chapter 22 of the West Virginia Code and Legislative Rule Title 35 Series 8. Consequently, the OOG is issuing the permit today. For your information and convenience, I am including with this letter a copy of the permit as issued.

As you may know, surface owners are entitled to compensation for damages to their property resulting from oil and gas drilling activity. Absent an agreement by the parties, such damage compensation may be addressed pursuant to Article 7, Chapter 22 of the West Virginia Code.

Please contact me at (304) 926-0499, extension 1495 if you have any questions.

Sincerely,

Ashley E. LeMasters  
WV DEP Office of Oil and Gas  
Permitting Section



017 06393

October 9, 2013

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

Re: Hamblet Objection, API#'s 47-017-05951(513136), 017-06392(512478), 017-06393(512479), 017-06391(512482), 017-06389(512483), 017-06388(512484), and 017-06390(512476).

Dear Mr. Martin,

This letter is in response to a surface objection email filed by Mr. Matthew Lewis Hamblet, on September 29, 2013 for the above wells on the OXF-149 and OXF-150 well pads located in the West Union District, Doddridge County, WV. EQT wishes to respond to concerns raised by Mr. Hamblet.

Mr. Hamblet has insisted that we do a full survey of his property boundaries. The contracted surveyor has used the deed descriptions and field evidence to identify the property boundaries. The boundary line has also been identified on the site maps that were sent with the permit application. Disturbance will happen on both sides of the property boundary; on property owned by Mr. Hamblet et al and on property owned by Ms. Lucy Harper.

Mr. Hamblet mentions verbal promises that were made prior to Tim Groves, Landman, working in that area. Mr. Groves was not made aware of prior promises until he spoke with Mr. Hamblet and did not find any documentation in the previous Landman's file. If Mr. Matthew Hamblet would like for EQT to meet with him or his representative, we could discuss the earlier promises to find out what Mr. Hamblet expected and what he believes wasn't completed in order to resolve his concerns. Tim Groves has met with Mr. Gary Stevenson and Mr. Randall Hamblet, additional owners on the property, to discuss the activities and reclamation that will take place.

In response to securing his property EQT has installed a gate with combination lock for Mr. Hamblet to secure his property boundary.

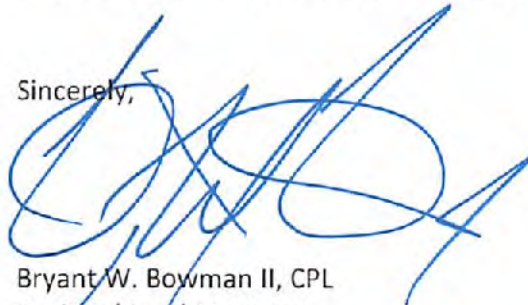
EQT's permit applications meet the technical requirement of W.Va. Code 22-6A-8(d) and the accompanying regulations. The remaining review is limited by statute to a

Mr. James A. Martin  
October 11, 2013  
Page 2

017 06393

determination as to the following: (1) whether the proposed work will constitute a hazard to the safety of persons; (2) whether the soil and erosion control is adequate or effective; (3) whether damage would occur to publicly owned lands or resources; or (4) whether the proposed well work fails to protect fresh water sources or supplies. Surface owner comments are considered by the Office of Oil and Gas during this determination with regard to those topics. The comments made by Mr. Matthew Hamblet do not concern those explicitly designated topics. As such, the permitting process is not the appropriate forum to deal with concerns and issues raised. EQT has met all the requirements under the relevant statutes, W.Va. Code 22-6A-8(d) and 22-6-11, and requests that the permits be granted.

Sincerely,



Bryant W. Boyman II, CPL  
Regional Land Manager

OFFICE OF OIL AND GAS  
COMMERCIAL  
OCT 11 2013  
10:00 AM

Nottingham, Justin E

Subject: FW: Well permits

API #13 :

17-06390  
.. 92  
.. 93  
.. 91  
.. 88  
.. 89

**From:** matthew hamblet [<mailto:xmatthewhamblet86@gmail.com>]  
**Sent:** Sunday, September 29, 2013 10:52 PM  
**To:** Martin, James A  
**Cc:** Cynthia J. T. Loomis; Gary L. Stephenson; [srogers@wrmills.com](mailto:srogers@wrmills.com); [vroark@eqt.com](mailto:vroark@eqt.com)  
**Subject:** Well permits

Mr. Martin ,

I Matthew Lewis Hamblet am in receipt of permits for wells # 513136. 512478. 512479.512482. 512483. 512484, & 512476. As the surface owner. I own 50% of 50% of a parcel located in Doddridge County. These permits-- in part requested for wells on property owned by myself and Gary Stephenson( undivided interest as joint tenants with with right of ownership ) and my brother( the other 1/2 undivided interest)include permits on property which we do not own .

As before stated on papers relating to these wells , I must insist that EQT perform a full survey on these boundaries "for line, right -of-way, and pad sights"many of which I believe to have been placed on others property .

Further, as I had stated in my earlier objection EQT's failure to this date to stand up to any of their verbal promises as to work to be done on the surface during the last drilling phase, their failure to maintain any type what so ever of a secure boundary on my property line, complete lack of regard to keeping their pad sites and roads trash and feces free . I refer back to my letter of Aug. 23 2013 for further detail. For these and others I object most strenuously to EQT entering onto my property for any reason but for those of maintaining their present wells.

Matthew Lewis Hamblet

**From:** [Smith, Gene C](#)  
**To:** [Paynter, Natalie G](#); [Nottingham, Justin E](#)  
**Subject:** FW: Permits - Maxwell/ Doddridge wells  
**Date:** Tuesday, August 27, 2013 9:27:14 AM  
**Attachments:** [image9b3c6c.jpg@c723aa32.870d4eb2](#)

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**From:** Martin, James A  
**Sent:** Monday, August 26, 2013 6:00 PM  
**To:** Smith, Gene C; Cooper, Laura K  
**Subject:** Fwd: Permits - Maxwell/ Doddridge wells

Sent from my iPhone

Begin forwarded message:

**From:** "Roark, Vicki" <[VROark@eqt.com](mailto:VROark@eqt.com)>  
**Date:** August 26, 2013 4:18:13 PM EDT  
**To:** "[james.a.martin@wv.gov](mailto:james.a.martin@wv.gov)" <[james.a.martin@wv.gov](mailto:james.a.martin@wv.gov)>  
**Cc:** "[natalie.g.paynter@wv.gov](mailto:natalie.g.paynter@wv.gov)" <[natalie.g.paynter@wv.gov](mailto:natalie.g.paynter@wv.gov)>  
**Subject:** FW: Permits - Maxwell/ Doddridge wells

His response is to a "Intent to Drill" notice. No permits have been applied for yet.

**From:** matthew hamblet [<mailto:xmatthewhambletx86@gmail.com>]  
**Sent:** Friday, August 23, 2013 4:45 PM  
**To:** [James.A.Martin@wv.gov](mailto:James.A.Martin@wv.gov); Roark, Vicki; Cynthia Loomis; Gary L. Stephenson;  
[rhamblet@truckenterprises.com](mailto:rhamblet@truckenterprises.com); [wshamblet@verizon.net](mailto:wshamblet@verizon.net); [srogers@wrmills.com](mailto:srogers@wrmills.com)  
**Subject:** Fwd: Permits - Maxwell/ Doddridge wells

Dear Sirs,

I can not, in good conscience, sign off on any and or all of the permit requests made by EQT Production, received by me August 19, 2013, at this time. These permits are for Wells 513136; 512478; 512479; 512482; 512483; 512484; and, 512476 in Doddridge County, WV.

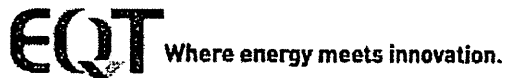
These permits--in part requested for proposed wells on property owned by myself and Gary Lee Stephenson (1/2 undivided interest as joint tenants with right of survivorship) and my brother (the other 1/2 undivided interest)-- include permits for wells on adjoining property which we do not own. Furthermore, I am no longer acting as legal power of attorney for the owner of the adjoining property. Please note that service for any well permits located on adjoining property is specifically not accepted by me on behalf of Lucy Harper.

I must insist that EQT perform a full survey on these boundaries "for

line, right-of-way and pad sights", many of which I believe to have been placed on other properties. Prior sloppiness has resulted in well pads which spill over onto the adjoining lands and which constitute statutory trespass as the correct owner was not served with proper notice under the law.

Further, EQT's failure to stand up to its verbal promises as to work to be done on the property during the last drilling phase, failure to secure a secure boundary of my property, and many other lapses in their conduct while operating on my property cause me to wish to have nothing further to do with EQT and their way of conducting business.

Matthew L. Hamblet



[www.eqt.com](http://www.eqt.com)



STATE OF WEST VIRGINIA  
DEPARTMENT OF ENVIRONMENTAL PROTECTION, OFFICE OF OIL AND GAS  
W.VA. CODE §22-6A - WELL WORK PERMIT APPLICATION

1) Well Operator: EQT Production Company Operator ID 017 County 8 District 526 Quadrangle

2) Operator's Well Number: 512479 Well Pad Name OXF149

3 Elevation, current ground: 1,240.0 Elevation, proposed post-construction: 1,242.5

4) Well Type: (a) Gas  Oil  Underground Storage

Other \_\_\_\_\_

(b) If Gas: Shallow  Deep

Horizontal

*DCN  
10-4-2013*

5) Existing Pad? Yes or No: yes

6) Proposed Target Formation(s), Depth(s), Anticipated Thicknesses and Associated Pressure(s):  
Target formation is Marcellus at a depth of 6670' with the anticipated thickness to be 60 feet and anticipated target pressure of 4489 PSI

7) Proposed Total Vertical Depth: 6,670

8) Formation at Total Vertical Depth: Marcellus

9) Proposed Total Measured Depth: 10,630

10) Approximate Fresh Water Strata Depths: 274, 313, 380, 425

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

12) Approximate Saltwater Depths: n/a

13) Approximate Coal Seam Depths: 629

14) Approximate Depth to Possible Void (coal mine, karst, other): None reported

15) Does proposed well location contain coal seams directly overlying or adjacent to an active mine? If so, indicate name and depth of Mine: None Reported

16) Describe 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 5780'. Then kick off the horizontal leg into the Marcellus using a slick water frac.

17) Describe fracturing/stimulating methods in detail: \_\_\_\_\_

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). Stage lengths vary from 150 to 450 feet. Average approximately 400,000 gallons of water per stage. Sand sizes vary from 100 mesh to 20/40 mesh. Average approximately 400,000 pounds of sand per stage.

18) Total area to be disturbed, including roads, stockpile area, pits, etc, (acres): 15.4

19) Area to be disturbed for well pad only, less access road (acres): 15.4

RECEIVED  
Office of Oil and Gas  
OCT 11 2013  
WV Department of  
Environmental Protection

WW - 6B  
(3/13)

**CASING AND TUBING PROGRAM**

18)

TYPE	Size	New or Used	Grade	Weight per ft.	FOOTAGE: for Drilling	INTERVALS: Left in Well	CEMENT: Fill-up (Cu.Ft.)
Conductor	20	New	MC-50	81	40	40	38 CTS
Fresh Water	13 3/8	New	MC-50	54	905	905	789 CTS
Coal							
Intermediate	9 5/8	New	MC-50	40	3,103	3,103	1,215 CTS
Production	5 1/2	New	P-110	20	9,924	9,924	See Note 1
Tubing	2 3/8		J-55	4.6			May not be run if run will be not TOC less than TD
Liners							

DCW  
1-14-2014

TYPE	Size	Wellbore Diameter	Wall Thickness	Burst Pressure	Cement Type	Cement Yield (cu. ft./k)
Conductor	20	24	0.375	-	Construction	1.18
Fresh Water	13 3/8	17 1/2	0.38	2,480	1	1.21
Coal						
Intermediate	9 5/8	12 3/8	0.395	3,590	1	1.21
Production	5 1/2	8 1/2	0.361	12,640	-	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.



017 06393

January 10, 2014

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

Re: Casing change on OXF149 (512479) 017-06393

Dear Mr. Smith,

Attached is a modification to the casing program for the above well. EQT is requesting the 13 3/8" surface casing to be set 50' below the deepest red rock show to cover potential red rock issues. The proposed casing set depth is above ground elevation. The reason for this is the red rock swells during drilling of the intermediate section causing many drilling problems such as but not limited to lost drilling assemblies and casing running issues.

After reviewing the OXF149, we would like to request to set the surface casing deeper on each well. The 13 3/8" casing will be set at a depth of approximately 905' KB (50' below the anticipated red rock show).

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

Sincerely,

A handwritten signature in blue ink, appearing to read 'Vicki Roark', is written over a light blue horizontal line.

Vicki Roark  
Permitting Supervisor-WV

Enc.

cc: Douglas Newlon  
4060 Dutchman Road  
Macfarlan, WV 26148

21) 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

22) 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.

23) 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.

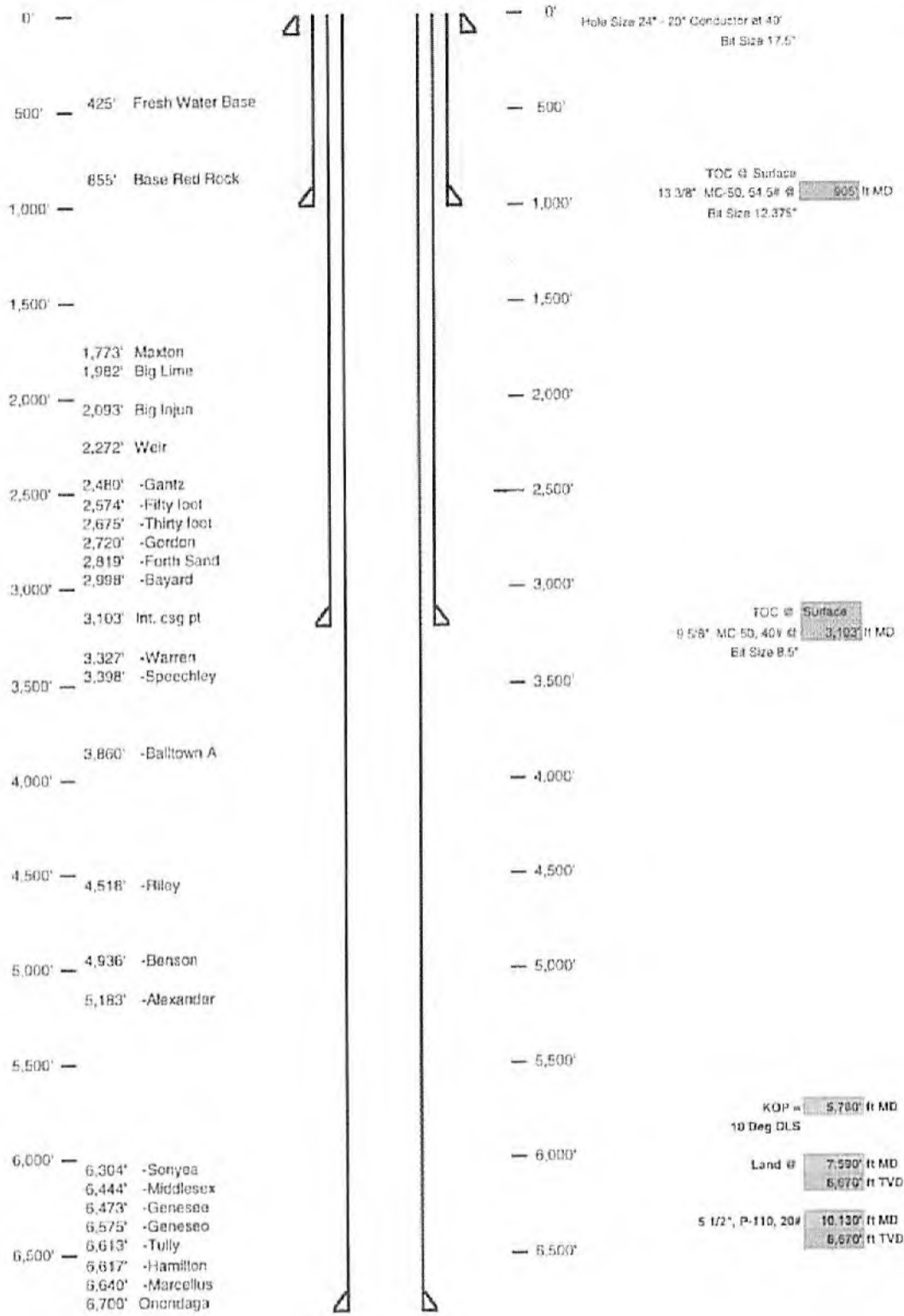
\*Note: Attach additional sheets as needed.

Well Schematic  
EQT Production

Well Name: 512479 (DXF149H2)  
County: Doddridge  
State: West Virginia

Elevation KB:  
Target:  
Prospect:  
Azimuth:  
Vertical Section:

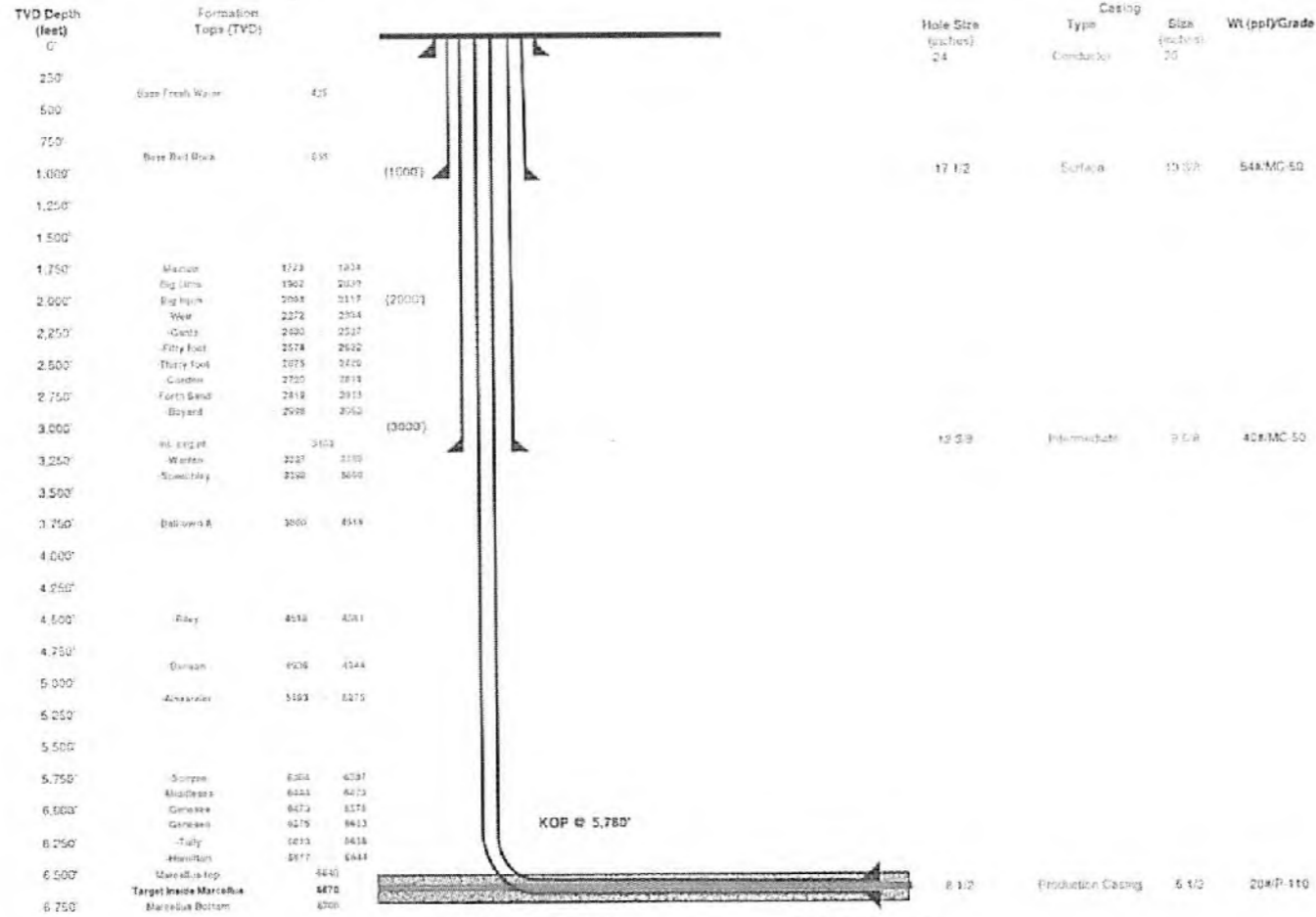
1250
Marcellus
335
3079



017 06393

Well 512479 (OXF149H2)  
 EOT Production  
 Oxford Quad  
 Doddridge West Virginia

Acres 333  
 Vertical Section 5079



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 5780'.  
 Then kick the horizontal leg into the Marcellus using a slick water frac.

Land curve @ 6,570' 11 TVD  
 7,590' RMD  
 Est TD @ 6,820' 11 TVD  
 10,100' RMD  
 3,530' 11 Lateral

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

Fluids/Cuttings Disposal & Reclamation Plan

Operator Name OXF149 OP Code \_\_\_\_\_

Watershed (HUC10) Left Fork Arnolds Creek Quadrangle Oxford 7.5'

Elevation 1242.5 County Doddridge District West Union

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 for drill cuttings: Yes: \_\_\_\_\_ No: X

If so please describe anticipated pit waste: \_\_\_\_\_

Will a synthetic liner be used in the pit? Yes \_\_\_\_\_ No X 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 \_\_\_\_\_ )
- \_\_\_\_\_  Off Site Disposal (Supply form WW-9 for disposal location)
- \_\_\_\_\_ Other (Explain \_\_\_\_\_ )

*DCN 10-1-2013*

Will closed loop system be used ? YES

Drilling medium anticipated for this well? Air, freshwater, oil based, etc. Air and water based mud

If oil based, what type? Synthetic, petroleum, etc \_\_\_\_\_

Additives to be used in drilling medium? MILBAR, Viscosifer, Alkalinity Control, Lime, Chloride Salts, Rate Filtration Control, Defloculant, Lubricant, Detergent, Defoaming, Walnut Shell, X-Cide, SOLTEX Terra

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

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

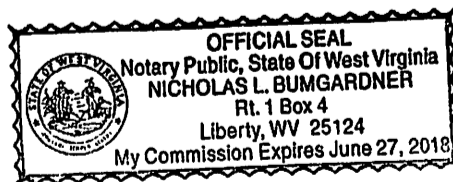
I certify under penalty of law that I have personally examined and am familiar with the information submitted on this application form and all attachments thereto and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine or imprisonment.

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

Subscribed and sworn before me this 17 day of SEPTEMBER, 20 13

*[Signature]* Notary Public

My commission expires 6/27/2018



Proposed Revegetation Treatment: Acres Disturbed 15.4 Prevegetation pH 6.8

Lime 3 Tons/acre or to correct to pH 6.5

Fertilizer (10-20-20 or equivalent) 13 lbs/acre (500 lbs minimum)

Mulch 2 Tons/acre

Seed Mixtures

Area I		Area II	
Seed Type	lbs/acre	Seed Type	lbs/acre
KY-31	40	Orchard Grass	15
Alsike Clover	5	Alsike Clover	5
Annual Rye	15		

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

Photocopied section of involved 7.5' topographic sheet.

Plan Approved by: Doug Neulan

Comments: Maintain ERS Preserved + Mulch any disturbed areas to WV Dep regulations

Title: Oil & Gas Inspector Date: 10-4-2013

Field Reviewed? (  ) Yes (  ) No

RECEIVED  
Office of Oil and Gas  
OCT 11 2013  
WV Department of  
Environmental Protection



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

017 06393

**CWS TRUCKING INC.**

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

**BROAD STREET ENERGY LLC**

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

**LAD LIQUID ASSETS DISPOSAL INC.**

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

**TRIAD ENERGY**

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

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

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

**KING EXCAVATING CO.**

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

**Waste Management - Meadowfill Landfill**

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

**Waste Management - Northwestern Landfill**

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

RECEIVED  
Office of Oil and Gas  
SEP 23 2013  
WV Department of  
Environmental Protection



017 06393

Where energy meets innovation.™

# Site Specific Safety and Environmental Plan For

EQT OXF 149 Pad

Doddridge County, WV

For Wells:

512482   512478   512479   513136   \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Date Prepared:

July 31, 2013

[Signature]  
EQT Production  
Permitting Supervisor  
Title  
9-20-13  
Date

[Signature]  
WV Oil and Gas Inspector  
Title  
10-4-2013  
Date



## Water Management Plan: Primary Water Sources



WMP- 01608

API/ID Number: 047-017-06393

Operator:

EQT Production Company

512479 (OXF149H2)

**Important:**

For each proposed primary water source (including source intakes for purchased water sources) identified in your water management plan, and summarized herein, DEP has made an evaluation concerning water availability over the specified date range. DEP's assessment is based on the following considerations:

- Statistical analysis of historical USGS stream gauge data (transferred to un-gauged locations as necessary);
- Identification of sensitive aquatic life (endangered species, mussels, etc.);
- Quantification of known existing demands on the water supply (Large Quantity Users);
- Minimum flows required by the Army Corps of Engineers; and
- Designated stream uses.

Based on these factors, DEP has provided, for each intake location (and origination point for purchased water), a reference gauge location and discharge flow reading which must be surpassed prior to withdrawals. Additionally, DEP has established a minimum passby flow at the withdrawal location which must also be surpassed prior to withdrawals. These thresholds are considered terms of the permit and are enforceable as such.

**DEP is aware that some intake points will be used for multiple wells and well sites. In these cases, the thresholds set by the Water Management Plan are to be interpreted as total withdrawal limits for each location over the specified date range regardless of how many wells are supported by that intake.**

For all purchased water intakes, determinations of water availability are made at the original source intake location. It is the responsibility of the Oil and Gas Operator, not the seller, to cease withdrawal of water from the seller when flows are less than the minimum gauge reading at the stream gauge referenced by the Water Management Plan in order to protect stream uses.

Note that the determinations made herein are based on the best available data, but it is impossible to predict water availability in the future. While the DEP has carefully established these minimum withdrawal thresholds, it remains the operator's responsibility to protect aquatic life at all times. Approval to withdrawal is contingent upon permission from the land owner. It is the responsibility of the operator to secure and maintain permission prior to any withdrawals.

The operator is reminded that 24-48 hours prior to withdrawing (or purchasing) water, DEP must be notified by email at [DEP.water.use@wv.gov](mailto:DEP.water.use@wv.gov).

APPROVED DEC 03 2013

Source Summary

017 06393

WMP-01608      API Number: 047-017-06393      Operator: EQT Production Company  
 512479 (OXF149H2)

Stream/River

● Source **Ohio River @ Westbrook Trucking Site**      Pleasants      Owner: **Stephen R. and Janet Sue Westbrook**

Start Date      End Date      Total Volume (gal)      Max. daily purchase (gal)      Intake Latitude:      Intake Longitude:  
 11/1/2013      11/1/2014      4,500,000           39.384455      -81.25645

Regulated Stream?      Ohio River Min. Flow      Ref. Gauge ID: 9999999      Ohio River Station: Willow Island Lock & Dam

Max. Pump rate (gpm): **1,260**      Min. Gauge Reading (cfs): **6,468.00**      Min. Passby (cfs)

DEP Comments: Refer to the specified station on the National Weather Service's Ohio River forecast website: <http://www.erh.noaa.gov/ohrfc//flows.shtml>

● Source **Ohio River @ Select Energy**      Pleasants      Owner: **Select Energy**

Start Date      End Date      Total Volume (gal)      Max. daily purchase (gal)      Intake Latitude:      Intake Longitude:  
 11/1/2013      11/1/2014      4,500,000           39.346473      -81.338727

Regulated Stream?      Ohio River Min. Flow      Ref. Gauge ID: 9999998      Ohio River Station: Racine Dam

Max. Pump rate (gpm): **1,500**      Min. Gauge Reading (cfs): **7,216.00**      Min. Passby (cfs)

DEP Comments: Refer to the specified station on the National Weather Service's Ohio River forecast website: <http://www.erh.noaa.gov/ohrfc//flows.shtml>

● Source **Middle Island Creek @ Travis Truck Pad**      Doddridge      Owner: **Michael J. Travis**

Start Date      End Date      Total Volume (gal)      Max. daily purchase (gal)      Intake Latitude:      Intake Longitude:  
 11/1/2013      11/1/2014      4,500,000           39.308545      -80.781102

Regulated Stream?      Ref. Gauge ID: 3114500      MIDDLE ISLAND CREEK AT LITTLE, WV

Max. Pump rate (gpm): **4,200**      Min. Gauge Reading (cfs): **72.16**      Min. Passby (cfs)      **28.33**

DEP Comments:

Source **Middle Island Creek @ Rock Run**

Doddridge

Owner: **017**

**06393**  
William Whitehill

Start Date	End Date	Total Volume (gal)	Max. daily purchase (gal)	Intake Latitude:	Intake Longitude:
11/1/2013	11/1/2014	4,500,000		39.298763	-80.760682

Regulated Stream? Ref. Gauge ID: **3114500** MIDDLE ISLAND CREEK AT LITTLE, WV

Max. Pump rate (gpm): **1,680** Min. Gauge Reading (cfs): **62.89** Min. Passby (cfs) **26.43**

DEP Comments:

Source **Middle Island Creek @ Barnes Withdrawal Site**

Doddridge

Owner: **Ellen L. Barnes**

Start Date	End Date	Total Volume (gal)	Max. daily purchase (gal)	Intake Latitude:	Intake Longitude:
11/1/2013	11/1/2014	4,500,000		39.29958	-80.75694

Regulated Stream? Ref. Gauge ID: **3114500** MIDDLE ISLAND CREEK AT LITTLE, WV

Max. Pump rate (gpm): **1,260** Min. Gauge Reading (cfs): **59.06** Min. Passby (cfs) **26.39**

DEP Comments:

Source **Meathouse Fork @ Spiker Withdrawal Site**

Doddridge

Owner: **John & Sue Spiker**

Start Date	End Date	Total Volume (gal)	Max. daily purchase (gal)	Intake Latitude:	Intake Longitude:
11/1/2013	11/1/2014	4,500,000		39.2591	-80.72489

Regulated Stream? Ref. Gauge ID: **3114500** MIDDLE ISLAND CREEK AT LITTLE, WV

Max. Pump rate (gpm): **1,260** Min. Gauge Reading (cfs): **74.77** Min. Passby (cfs) **9.26**

DEP Comments:

**017****06393**

● Source **South Fork of Hughes River @ Upper Wizard Run** Doddridge Owner: **I.L. Morris**

Start Date	End Date	Total Volume (gal)	Max. daily purchase (gal)	Intake Latitude:	Intake Longitude:
11/1/2013	11/1/2014	4,500,000		39.189998	-80.79511

Regulated Stream? Ref. Gauge ID: **3155220** SOUTH FORK HUGHES RIVER BELOW MACFARLAN, WA

**Max. Pump rate (gpm): 1,260** **Min. Gauge Reading (cfs): 33.12** **Min. Passby (cfs) 0.64**

DEP Comments:

● Source **South Fork of Hughes River @ Harmony Road** Doddridge Owner: **I.L. Morris**

Start Date	End Date	Total Volume (gal)	Max. daily purchase (gal)	Intake Latitude:	Intake Longitude:
11/1/2013	11/1/2014	4,500,000		39.1962	-80.81442

Regulated Stream? Ref. Gauge ID: **3155220** SOUTH FORK HUGHES RIVER BELOW MACFARLAN, WA

**Max. Pump rate (gpm): 1,260** **Min. Gauge Reading (cfs): 33.12** **Min. Passby (cfs) 0.98**

DEP Comments:

● Source **Straight Fork @ Maxson Withdrawal Site** Ritchie Owner: **Douglas L. Maxson**

Start Date	End Date	Total Volume (gal)	Max. daily purchase (gal)	Intake Latitude:	Intake Longitude:
11/1/2013	11/1/2014	4,500,000		39.144317	-80.848587

Regulated Stream? Ref. Gauge ID: **3155220** SOUTH FORK HUGHES RIVER BELOW MACFARLAN, WA

**Max. Pump rate (gpm): 1,680** **Min. Gauge Reading (cfs): 36.74** **Min. Passby (cfs) 2.45**

DEP Comments:

**017****06393**

Source

**Middle Fork @ Janscheck Withdrawal Site**

Doddridge

Owner:

**Mary Jo Janscheck**

Start Date

End Date

Total Volume (gal)

Max. daily purchase (gal)

Intake Latitude:

Intake Longitude:

11/1/2013

11/1/2014

4,500,000

39.151388

-80.812222

 Regulated Stream?

Ref. Gauge ID: 3155220

SOUTH FORK HUGHES RIVER BELOW MACFARLAN, WVA

Max. Pump rate (gpm): **840**Min. Gauge Reading (cfs): **35.81**

Min. Passby (cfs)

**0.86**

DEP Comments:

Source Detail

017 06393

WMP-01608

API/ID Number: 047-017-06393

Operator: EQT Production Company

512479 (OXF149H2)

Source ID: 30321 Source Name Ohio River @ Westbrook Trucking Site  
Stephen R. and Janet Sue Westbrook

Source Latitude: 39.384455  
Source Longitude: -81.25645

HUC-8 Code: 5030201

Drainage Area (sq. mi.): 25000 County: Pleasants

Anticipated withdrawal start date: 11/1/2013

Anticipated withdrawal end date: 11/1/2014

- Endangered Species?
- Trout Stream?
- Regulated Stream?
- Proximate PSD?
- Gauged Stream?
- Mussel Stream?
- Tier 3?
- Ohio River Min. Flow

Total Volume from Source (gal): 4,500,000

Max. Pump rate (gpm): 1,260

Max. Simultaneous Trucks: 0

Max. Truck pump rate (gpm): 0

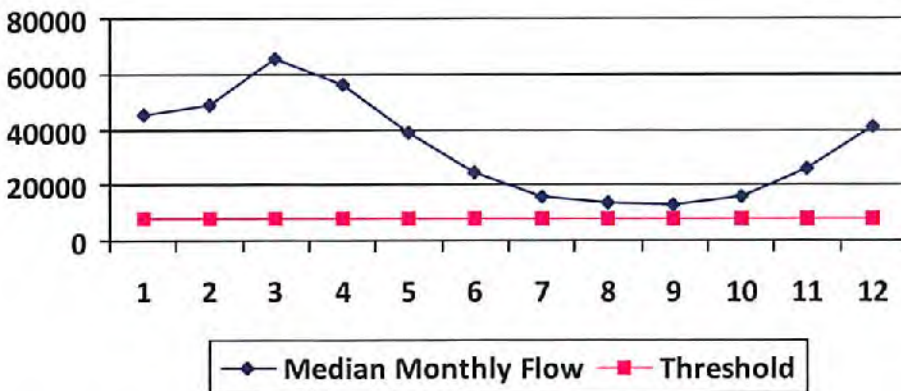
Reference Gaug 9999999 Ohio River Station: Willow Island Lock & Dam

Drainage Area (sq. mi.) 25,000.00

Gauge Threshold (cfs): 6468

Month	Median monthly flow (cfs)	Threshold (+ pump)	Estimated Available water (cfs)
1	45,700.00	-	-
2	49,200.00	-	-
3	65,700.00	-	-
4	56,100.00	-	-
5	38,700.00	-	-
6	24,300.00	-	-
7	16,000.00	-	-
8	13,400.00	-	-
9	12,800.00	-	-
10	15,500.00	-	-
11	26,300.00	-	-
12	41,300.00	-	-

Water Availability Profile



Water Availability Assessment of Location

Base Threshold (cfs):	-
Upstream Demand (cfs):	0.00
Downstream Demand (cfs):	0.00
Pump rate (cfs):	2.81
Headwater Safety (cfs):	0.00
Ungauged Stream Safety (cfs):	1,617.00
Min. Gauge Reading (cfs):	-
Passby at Location (cfs):	-

"Threshold", as depicted in the chart above is meant only to indicate the calculated base threshold at the proposed withdrawal location. This value does not include the proposed pump rate or existing demand on the stream. Refer to the monthly breakdown above for a more complete estimation of water availability by month.



Source Detail

017 06393

WMP-01608

API/ID Number: 047-017-06393

Operator: EQT Production Company

512479 (OXF149H2)

Source ID: 30322 Source Name: Ohio River @ Select Energy  
Select Energy

Source Latitude: 39.346473  
Source Longitude: -81.338727

HUC-8 Code: 5030201

Drainage Area (sq. mi.): 25000 County: Pleasants

Anticipated withdrawal start date: 11/1/2013

Anticipated withdrawal end date: 11/1/2014

Endangered Species?  Mussel Stream?

Total Volume from Source (gal): 4,500,000

Trout Stream?  Tier 3?

Max. Pump rate (gpm): 1,500

Regulated Stream? Ohio River Min. Flow

Max. Simultaneous Trucks: 0

Proximate PSD?

Max. Truck pump rate (gpm): 0

Gauged Stream?

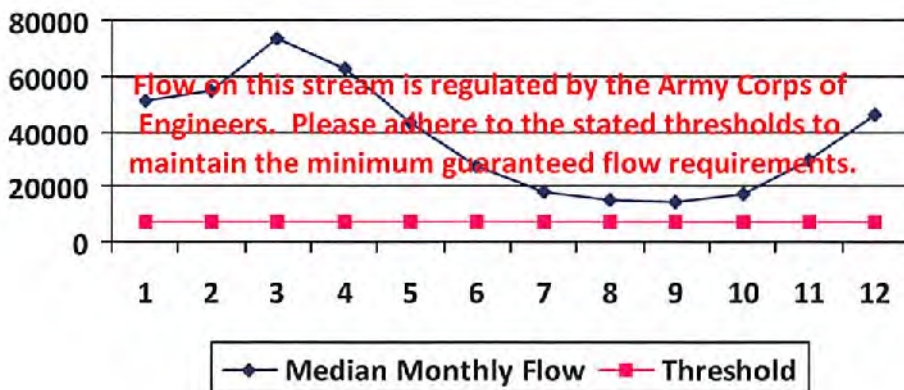
Reference Gaug: 9999998 Ohio River Station: Racine Dam

Drainage Area (sq. mi.): 25,000.00

Gauge Threshold (cfs): 7216

Month	Median monthly flow (cfs)	Threshold (+ pump)	Estimated Available water (cfs)
1	50,956.00	-	-
2	54,858.00	-	-
3	73,256.00	-	-
4	62,552.00	-	-
5	43,151.00	-	-
6	27,095.00	-	-
7	17,840.00	-	-
8	14,941.00	-	-
9	14,272.00	-	-
10	17,283.00	-	-
11	29,325.00	-	-
12	46,050.00	-	-

**Water Availability Profile**



Water Availability Assessment of Location

Base Threshold (cfs):	-
Upstream Demand (cfs):	0.00
Downstream Demand (cfs):	0.00
Pump rate (cfs):	3.34
Headwater Safety (cfs):	0.00
Ungauged Stream Safety (cfs):	0.00
Min. Gauge Reading (cfs):	-
Passby at Location (cfs):	-

"Threshold", as depicted in the chart above is meant only to indicate the calculated base threshold at the proposed withdrawal location. This value does not include the proposed pump rate or existing demand on the stream. Refer to the monthly breakdown above for a more complete estimation of water availability by month.

Source Detail

017 06393

WMP-01608

API/ID Number: 047-017-06393

Operator: EQT Production Company

512479 (OXF149H2)

Source ID: 30323 Source Name Middle Island Creek @ Travis Truck Pad  
Michael J. Travis

Source Latitude: 39.308545  
Source Longitude: -80.781102

HUC-8 Code: 5030201

Drainage Area (sq. mi.): 122.83 County: Doddridge

Anticipated withdrawal start date: 11/1/2013

Anticipated withdrawal end date: 11/1/2014

Endangered Species?  Mussel Stream?

Total Volume from Source (gal): 4,500,000

Trout Stream?  Tier 3?

Max. Pump rate (gpm): 4,200

Regulated Stream?

Proximate PSD? West Union Municipal Water

Max. Simultaneous Trucks: 10

Gauged Stream?

Max. Truck pump rate (gpm) 420

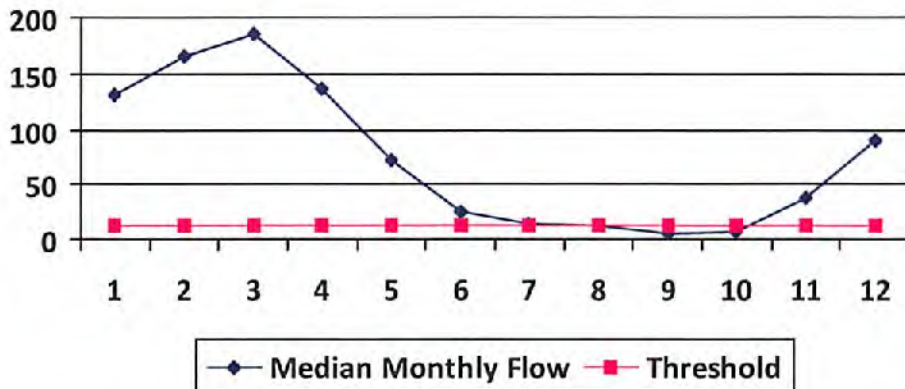
Reference Gaug 3114500 MIDDLE ISLAND CREEK AT LITTLE, WV

Drainage Area (sq. mi.) 458.00

Gauge Threshold (cfs): 45

Month	Median monthly flow (cfs)	Threshold (+ pump)	Estimated Available water (cfs)
1	131.72	30.99	101.10
2	165.69	30.99	135.07
3	185.40	30.99	154.78
4	137.68	30.99	107.05
5	72.63	30.99	42.00
6	25.36	30.99	-5.26
7	14.35	30.99	-16.27
8	11.82	30.99	-18.81
9	6.05	30.99	-24.57
10	7.60	30.99	-23.02
11	37.14	30.99	6.51
12	90.73	30.99	60.11

Water Availability Profile



Water Availability Assessment of Location

Base Threshold (cfs):	12.07
Upstream Demand (cfs):	6.55
Downstream Demand (cfs):	13.24
Pump rate (cfs):	9.36
Headwater Safety (cfs):	3.02
Ungauged Stream Safety (cfs):	0.00
Min. Gauge Reading (cfs):	72.16
Passby at Location (cfs):	28.33

"Threshold", as depicted in the chart above is meant only to indicate the calculated base threshold at the proposed withdrawal location. This value does not include the proposed pump rate or existing demand on the stream. Refer to the monthly breakdown above for a more complete estimation of water availability by month.

**Source Detail**

**017 06393**

WMP: 01608

API/ID Number: 047-017-06393

Operator: EQT Production Company

512479 (OXF149H2)

Source ID: 30324 Source Name: Middle Island Creek @ Rock Run  
William Whitehill

Source Latitude: 39.298763  
Source Longitude: -80.760682

HUC-8 Code: 5030201

Drainage Area (sq. mi.): 107.35 County: Doddridge

Anticipated withdrawal start date: 11/1/2013

Anticipated withdrawal end date: 11/1/2014

Endangered Species?  Mussel Stream?

Total Volume from Source (gal): 4,500,000

Trout Stream?  Tier 3?

Max. Pump rate (gpm): 1,680

Regulated Stream?

Max. Simultaneous Trucks: 4

Proximate PSD? West Union Municipal Water

Max. Truck pump rate (gpm): 420

Gauged Stream?

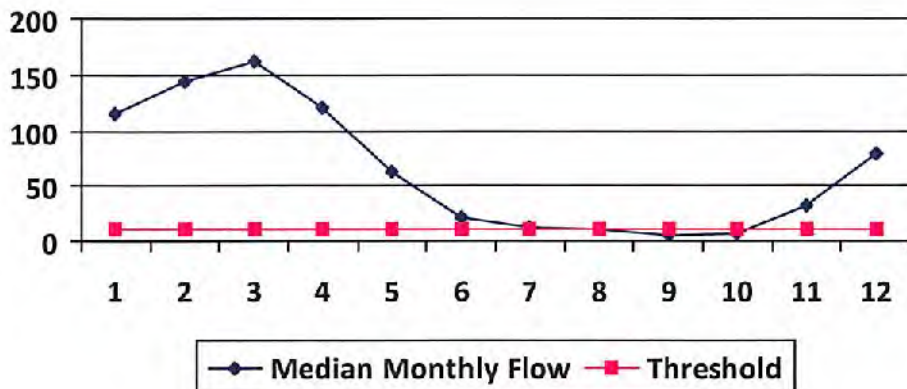
Reference Gaug: 3114500 MIDDLE ISLAND CREEK AT LITTLE, WV

Drainage Area (sq. mi.): 458.00

Gauge Threshold (cfs): 45

Month	Median monthly flow (cfs)	Threshold (+ pump)	Estimated Available water (cfs)
1	115.12	19.74	95.58
2	144.81	19.74	125.27
3	162.04	19.74	142.50
4	120.33	19.74	100.79
5	63.47	19.74	43.93
6	22.17	19.74	2.63
7	12.54	19.74	-7.00
8	10.33	19.74	-9.21
9	5.29	19.74	-14.25
10	6.65	19.74	-12.89
11	32.46	19.74	12.91
12	79.30	19.74	59.76

**Water Availability Profile**



Water Availability Assessment of Location

Base Threshold (cfs):	10.55
Upstream Demand (cfs):	2.81
Downstream Demand (cfs):	13.24
Pump rate (cfs):	3.74
Headwater Safety (cfs):	2.64
Ungauged Stream Safety (cfs):	0.00
Min. Gauge Reading (cfs):	62.80
Passby at Location (cfs):	26.42

"Threshold", as depicted in the chart above is meant only to indicate the calculated base threshold at the proposed withdrawal location. This value does not include the proposed pump rate or existing demand on the stream. Refer to the monthly breakdown above for a more complete estimation of water availability by month.

Source Detail

017 06393

WMP- 01608

API/ID Number: 047-017-06393

Operator: EQT Production Company

512479 (OXF149H2)

Source ID: 30325 Source Name Middle Island Creek @ Barnes Withdrawal Site  
Ellen L. Barnes

Source Latitude: 39.29958

Source Longitude: -80.75694

HUC-8 Code: 5030201

Drainage Area (sq. mi.): 107.08 County: Doddridge

Anticipated withdrawal start date: 11/1/2013

Anticipated withdrawal end date: 11/1/2014

Endangered Species?  Mussel Stream?

Total Volume from Source (gal): 4,500,000

Trout Stream?  Tier 3?

Max. Pump rate (gpm): 1,260

Regulated Stream?

Max. Simultaneous Trucks: 0

Proximate PSD? West Union

Gauged Stream?

Max. Truck pump rate (gpm) 0

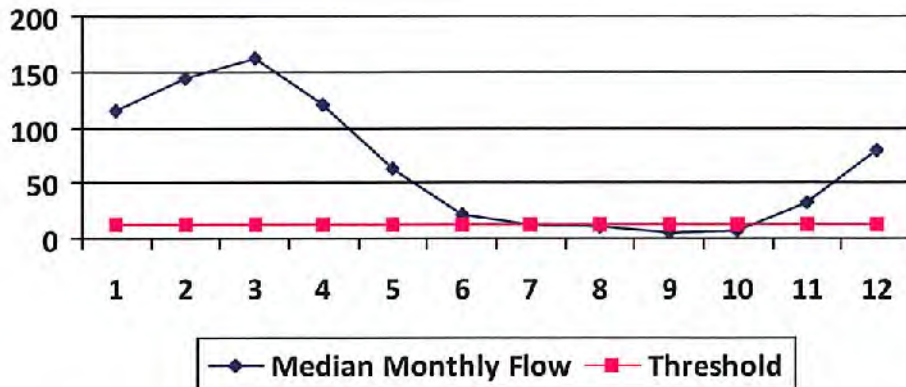
Reference Gaug 3114500 MIDDLE ISLAND CREEK AT LITTLE, WV

Drainage Area (sq. mi.) 458.00

Gauge Threshold (cfs): 45

Month	Median monthly flow (cfs)	Threshold (+ pump)	Estimated Available water (cfs)
1	114.83	18.59	96.42
2	144.45	18.59	126.03
3	161.63	18.59	143.21
4	120.02	18.59	101.61
5	63.31	18.59	44.90
6	22.11	18.59	3.69
7	12.51	18.59	-5.91
8	10.30	18.59	-8.12
9	5.28	18.59	-13.14
10	6.63	18.59	-11.79
11	32.37	18.59	13.96
12	79.10	18.59	60.68

Water Availability Profile



Water Availability Assessment of Location

Base Threshold (cfs):	10.52
Upstream Demand (cfs):	0.00
Downstream Demand (cfs):	13.24
Pump rate (cfs):	2.81
Headwater Safety (cfs):	2.63
Ungauged Stream Safety (cfs):	2.63
Min. Gauge Reading (cfs):	70.31
Passby at Location (cfs):	29.02

"Threshold", as depicted in the chart above is meant only to indicate the calculated base threshold at the proposed withdrawal location. This value does not include the proposed pump rate or existing demand on the stream. Refer to the monthly breakdown above for a more complete estimation of water availability by month.

**Source Detail**

**017 06393**

WMP-01608

API/ID Number: 047-017-06393

Operator: EQT Production Company

512479 (OXF149H2)

Source ID: 30326 Source Name Meathouse Fork @ Spiker Withdrawal Site  
John & Sue Spiker

Source Latitude: 39.2591  
Source Longitude: -80.72489

HUC-8 Code: 5030201

Drainage Area (sq. mi.): 62.75 County: Doddridge

Anticipated withdrawal start date: 11/1/2013

Anticipated withdrawal end date: 11/1/2014

Endangered Species?  Mussel Stream?

Trout Stream?  Tier 3?

Total Volume from Source (gal): 4,500,000

Regulated Stream?

Max. Pump rate (gpm): 1,260

Proximate PSD?

Max. Simultaneous Trucks: 0

Gauged Stream?

Max. Truck pump rate (gpm): 0

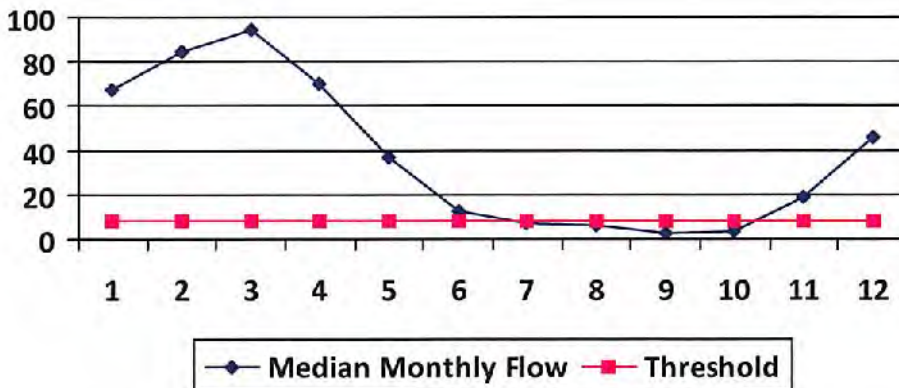
Reference Gaug 3114500 MIDDLE ISLAND CREEK AT LITTLE, WV

Drainage Area (sq. mi.) 458.00

Gauge Threshold (cfs): 45

Month	Median monthly flow (cfs)	Threshold (+ pump)	Estimated Available water (cfs)
1	67.29	16.52	51.09
2	84.65	16.52	68.45
3	94.72	16.52	78.52
4	70.34	16.52	54.14
5	37.10	16.52	20.90
6	12.96	16.52	-3.24
7	7.33	16.52	-8.87
8	6.04	16.52	-10.16
9	3.09	16.52	-13.11
10	3.88	16.52	-12.32
11	18.97	16.52	2.77
12	46.35	16.52	30.15

**Water Availability Profile**



**Water Availability Assessment of Location**

Base Threshold (cfs):	6.17
Upstream Demand (cfs):	4.46
Downstream Demand (cfs):	0.00
Pump rate (cfs):	2.81
Headwater Safety (cfs):	1.54
Ungauged Stream Safety (cfs):	1.54
Min. Gauge Reading (cfs):	74.77
Passby at Location (cfs):	9.25

"Threshold", as depicted in the chart above is meant only to indicate the calculated base threshold at the proposed withdrawal location. This value does not include the proposed pump rate or existing demand on the stream. Refer to the monthly breakdown above for a more complete estimation of water availability by month.

**Source Detail**

**017 06393**

WMP- 01608

API/ID Number: 047-017-06393

Operator: EQT Production Company

512479 (OXF149H2)

Source ID: 30327 Source Name South Fork of Hughes River @ Upper Wizard Run  
I.L. Morris

Source Latitude: 39.189998

Source Longitude: -80.79511

HUC-8 Code: 5030203

Drainage Area (sq. mi.): 5.33 County: Doddridge

Anticipated withdrawal start date: 11/1/2013

Anticipated withdrawal end date: 11/1/2014

Endangered Species?  Mussel Stream?

Total Volume from Source (gal): 4,500,000

Trout Stream?  Tier 3?

Max. Pump rate (gpm): 1,260

Regulated Stream?

Max. Simultaneous Trucks: 0

Proximate PSD?

Max. Truck pump rate (gpm) 0

Gauged Stream?

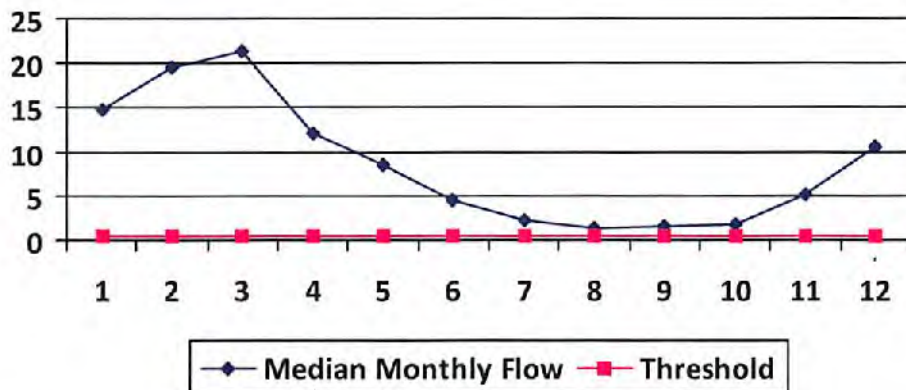
Reference Gaug 3155220 SOUTH FORK HUGHES RIVER BELOW MACFARLAN, WV

Drainage Area (sq. mi.) 229.00

Gauge Threshold (cfs): 22

Month	Median monthly flow (cfs)	Threshold (+ pump)	Estimated Available water (cfs)
1	14.97	6.26	8.79
2	19.52	6.26	13.33
3	21.37	6.26	15.19
4	12.08	6.26	5.90
5	8.48	6.26	2.29
6	4.56	6.26	-1.63
7	2.26	6.26	-3.93
8	1.31	6.26	-4.88
9	1.57	6.26	-4.62
10	1.70	6.26	-4.48
11	5.09	6.26	-1.09
12	10.51	6.26	4.32

**Water Availability Profile**



Water Availability Assessment of Location

Base Threshold (cfs):	0.51
Upstream Demand (cfs):	2.81
Downstream Demand (cfs):	0.00
Pump rate (cfs):	2.81
Headwater Safety (cfs):	0.13
Ungauged Stream Safety (cfs):	0.00
Min. Gauge Reading (cfs):	33.12
Passby at Location (cfs):	0.64

"Threshold", as depicted in the chart above is meant only to indicate the calculated base threshold at the proposed withdrawal location. This value does not include the proposed pump rate or existing demand on the stream. Refer to the monthly breakdown above for a more complete estimation of water availability by month.

Source Detail

017 06393

WMP-01608

API/ID Number: 047-017-06393

Operator: EQT Production Company

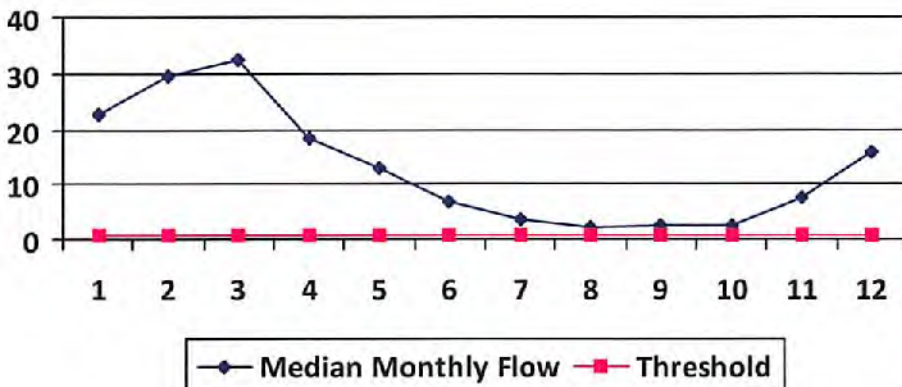
512479 (OXF149H2)

Source ID: 30328	Source Name: South Fork of Hughes River @ Harmony Road I.L. Morris	Source Latitude: 39.1962	Source Longitude: -80.81442
HUC-8 Code: 5030203	Drainage Area (sq. mi.): 8.1	County: Doddridge	Anticipated withdrawal start date: 11/1/2013
<input type="checkbox"/> Endangered Species?	<input checked="" type="checkbox"/> Mussel Stream?		Anticipated withdrawal end date: 11/1/2014
<input type="checkbox"/> Trout Stream?	<input type="checkbox"/> Tier 3?		Total Volume from Source (gal): 4,500,000
<input type="checkbox"/> Regulated Stream?			Max. Pump rate (gpm): 1,260
<input type="checkbox"/> Proximate PSD?			Max. Simultaneous Trucks: 0
<input checked="" type="checkbox"/> Gauged Stream?			Max. Truck pump rate (gpm): 0

Reference Gaug: 3155220	SOUTH FORK HUGHES RIVER BELOW MACFARLAN, WV	Gauge Threshold (cfs): 22
Drainage Area (sq. mi.): 229.00		

Month	Median monthly flow (cfs)	Threshold (+ pump)	Estimated Available water (cfs)
1	22.75	6.59	16.28
2	29.66	6.59	23.19
3	32.48	6.59	26.01
4	18.36	6.59	11.89
5	12.88	6.59	6.41
6	6.92	6.59	0.45
7	3.43	6.59	-3.04
8	1.98	6.59	-4.49
9	2.38	6.59	-4.09
10	2.59	6.59	-3.88
11	7.74	6.59	1.27
12	15.97	6.59	9.50

Water Availability Profile



Water Availability Assessment of Location

Base Threshold (cfs):	0.78
Upstream Demand (cfs):	2.81
Downstream Demand (cfs):	0.00
Pump rate (cfs):	2.81
Headwater Safety (cfs):	0.19
Ungauged Stream Safety (cfs):	0.00
Min. Gauge Reading (cfs):	33.12
Passby at Location (cfs):	0.97

"Threshold", as depicted in the chart above is meant only to indicate the calculated base threshold at the proposed withdrawal location. This value does not include the proposed pump rate or existing demand on the stream. Refer to the monthly breakdown above for a more complete estimation of water availability by month.

Source Detail

017 06393

WMP- 01608

API/ID Number: 047-017-06393

Operator: EQT Production Company

512479 (OXF149H2)

Source ID: 30329 Source Name Straight Fork @ Maxson Withdrawal Site  
Douglas L. Maxson

Source Latitude: 39.144317

Source Longitude: -80.848587

HUC-8 Code: 5030203

Drainage Area (sq. mi.): 16.99 County: Ritchie

Anticipated withdrawal start date: 11/1/2013

Anticipated withdrawal end date: 11/1/2014

Endangered Species?  Mussel Stream?

Total Volume from Source (gal): 4,500,000

Trout Stream?  Tier 3?

Max. Pump rate (gpm): 1,680

Regulated Stream?

Max. Simultaneous Trucks: 4

Proximate PSD?

Max. Truck pump rate (gpm) 420

Gauged Stream?

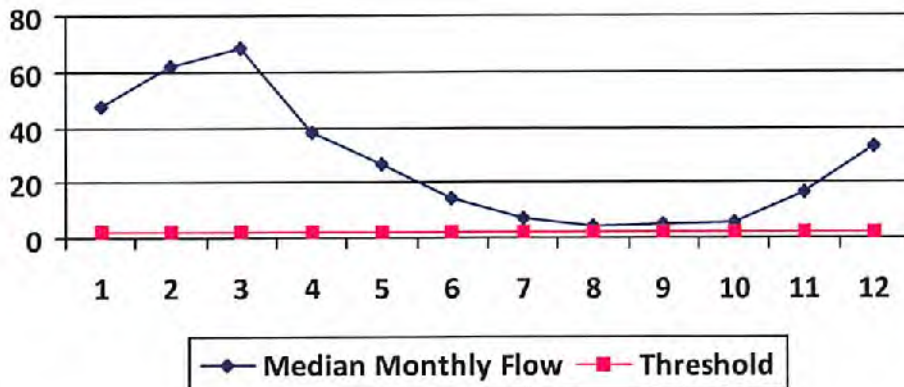
Reference Gaug 3155220 SOUTH FORK HUGHES RIVER BELOW MACFARLAN, WV

Drainage Area (sq. mi.) 229.00

Gauge Threshold (cfs): 22

Month	Median monthly flow (cfs)	Threshold (+ pump)	Estimated Available water (cfs)
1	47.72	6.19	41.62
2	62.22	6.19	56.12
3	68.13	6.19	62.04
4	38.52	6.19	32.42
5	27.03	6.19	20.93
6	14.52	6.19	8.42
7	7.20	6.19	1.10
8	4.16	6.19	-1.94
9	5.00	6.19	-1.10
10	5.43	6.19	-0.67
11	16.23	6.19	10.13
12	33.50	6.19	27.40

Water Availability Profile



Water Availability Assessment of Location

Base Threshold (cfs):	1.63
Upstream Demand (cfs):	0.00
Downstream Demand (cfs):	0.00
Pump rate (cfs):	3.74
Headwater Safety (cfs):	0.41
Ungauged Stream Safety (cfs):	0.41
Min. Gauge Reading (cfs):	36.74
Passby at Location (cfs):	2.45

"Threshold", as depicted in the chart above is meant only to indicate the calculated base threshold at the proposed withdrawal location. This value does not include the proposed pump rate or existing demand on the stream. Refer to the monthly breakdown above for a more complete estimation of water availability by month.



**Source Detail**

**017 06393**

WMP-01608

API/ID Number: 047-017-06393

Operator: EQT Production Company

512479 (OXF149H2)

Source ID: 30330 Source Name Middle Fork @ Janscheck Withdrawal Site  
Mary Jo Janscheck

Source Latitude: 39.151388  
Source Longitude: -80.812222

HUC-8 Code: 5030203

Drainage Area (sq. mi.): 5.92 County: Doddridge

Anticipated withdrawal start date: 11/1/2013

Anticipated withdrawal end date: 11/1/2014

Endangered Species?  Mussel Stream?

Total Volume from Source (gal): 4,500,000

Trout Stream?  Tier 3?

Max. Pump rate (gpm): 840

Regulated Stream?

Max. Simultaneous Trucks:

Proximate PSD?

Max. Truck pump rate (gpm)

Gauged Stream?

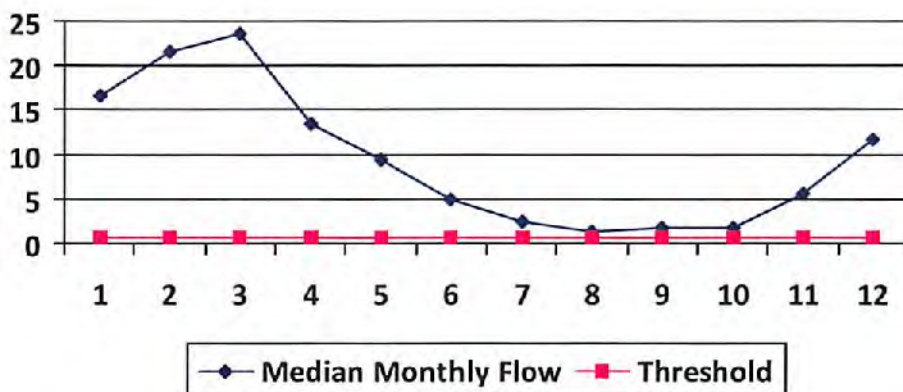
Reference Gaug 3155220 SOUTH FORK HUGHES RIVER BELOW MACFARLAN, WV

Drainage Area (sq. mi.) 229.00

Gauge Threshold (cfs): 22

Month	Median monthly flow (cfs)	Threshold (+ pump)	Estimated Available water (cfs)
1	16.63	2.72	14.03
2	21.68	2.72	19.08
3	23.74	2.72	21.14
4	13.42	2.72	10.83
5	9.42	2.72	6.82
6	5.06	2.72	2.46
7	2.51	2.72	-0.09
8	1.45	2.72	-1.15
9	1.74	2.72	-0.85
10	1.89	2.72	-0.70
11	5.66	2.72	3.06
12	11.67	2.72	9.08

**Water Availability Profile**



**Water Availability Assessment of Location**

Base Threshold (cfs):	0.57
Upstream Demand (cfs):	0.00
Downstream Demand (cfs):	0.00
Pump rate (cfs):	1.87
Headwater Safety (cfs):	0.14
Ungauged Stream Safety (cfs):	0.14
Min. Gauge Reading (cfs):	34.87
Passby at Location (cfs):	0.85

"Threshold", as depicted in the chart above is meant only to indicate the calculated base threshold at the proposed withdrawal location. This value does not include the proposed pump rate or existing demand on the stream. Refer to the monthly breakdown above for a more complete estimation of water availability by month.



## Water Management Plan: Secondary Water Sources



WMP-01608      API/ID Number    047-017-06393      Operator:    EQT Production Company  
512479 (OXF149H2)

**Important:**

For each proposed secondary water source identified in your water management plan (i.e., groundwater well, lake/reservoir, recycled frac water, multi-site impoundment, out-of-state source), DEP makes no estimation of the availability of water. These sources may prove to be unsuitable water supplies. Please review the following notes:

- For groundwater supply wells, DEP recommends that the operator contact the local health department prior to drilling any new well; and reminds the operator that all drinking water wells within 1,500 feet of a water supply well shall be flow- and quality-tested by the operator at the request of the drinking well owner prior to operation of the water supply well.
- For each proposed multi-site impoundment water source identified in your water management plan (if applicable), DEP will review the withdrawal limits established in the referenced Water Management Plan for current suitability and provide to the operator these limits for each identified intake. Note that withdrawal limits may be modified as necessary based on changing demands upon that water supply.

### Ground Water

Source ID:	30331	Source Name	Groundwater Well TW#1		Source start date:	11/1/2013
					Source end date:	11/1/2014
	Source Lat:	39.56059	Source Long:	-80.56027	County	Wetzel
	Max. Daily Purchase (gal)		Total Volume from Source (gal):			4,500,000

DEP Comments:

WMP-01608

API/ID Number: 047-017-06393

Operator: EQT Production Company

512479 (OXF149H2)

**Important:**

For each proposed secondary water source identified in your water management plan (i.e., groundwater well, lake/reservoir, recycled frac water, multi-site impoundment, out-of-state source), DEP makes no estimation of the availability of water. These sources may prove to be unsuitable water supplies. Please review the following notes:

- For groundwater supply wells, DEP recommends that the operator contact the local health department prior to drilling any new well; and reminds the operator that all drinking water wells within 1,500 feet of a water supply well shall be flow- and quality-tested by the operator at the request of the drinking well owner prior to operation of the water supply well.
- For each proposed multi-site impoundment water source identified in your water management plan (if applicable), DEP will review the withdrawal limits established in the referenced Water Management Plan for current suitability and provide to the operator these limits for each identified intake. Note that withdrawal limits may be modified as necessary based on changing demands upon that water supply.

**Lake/Reservoir**

Source ID: 30332	Source Name: Pennsboro Lake	Source start date: 11/1/2013
		Source end date: 11/1/2014
Source Lat: 39.281689	Source Long: -80.925526	County: Ritchie
Max. Daily Purchase (gal):	Total Volume from Source (gal):	4,500,000

DEP Comments:

WMP-01608

API/ID Number 047-017-06393

Operator: EQT Production Company

512479 (OXF149H2)

**Important:**

For each proposed secondary water source identified in your water management plan (i.e., groundwater well, lake/reservoir, recycled frac water, multi-site impoundment, out-of-state source), DEP makes no estimation of the availability of water. These sources may prove to be unsuitable water supplies. Please review the following notes:

- For groundwater supply wells, DEP recommends that the operator contact the local health department prior to drilling any new well; and reminds the operator that all drinking water wells within 1,500 feet of a water supply well shall be flow- and quality-tested by the operator at the request of the drinking well owner prior to operation of the water supply well.
- For each proposed multi-site impoundment water source identified in your water management plan (if applicable), DEP will review the withdrawal limits established in the referenced Water Management Plan for current suitability and provide to the operator these limits for each identified intake. Note that withdrawal limits may be modified as necessary based on changing demands upon that water supply.

**Multi-site impoundment**

Source ID: 30333	Source Name	Davies Centralized Freshwater Impoundment	Source start date:	11/1/2013	
			Source end date:	11/1/2014	
Source Lat:	39.269635	Source Long:	-80.77711	County	Doddridge
Max. Daily Purchase (gal)		Total Volume from Source (gal):		4,500,000	

DEP Comments:

The intake identified above has been defined in a previous water management plan. The thresholds established in that plan govern this water management plan unless otherwise noted.

Reference: WMP-1083

Source ID: 30334	Source Name	OXF149 Tank Pad A	Source start date:	11/1/2013	
			Source end date:	11/1/2014	
Source Lat:	39.221932	Source Long:	-80.799873	County	Doddridge
Max. Daily Purchase (gal)		Total Volume from Source (gal):		4,500,000	

DEP Comments:

The intake identified above has been defined in a previous water management plan. The thresholds established in that plan govern this water management plan unless otherwise noted.

Reference: WMP-1532

WMP 01608

API/ID Number 047-017-06393

Operator: EQT Production Company

512479 (OXF149H2)

**Important:**

For each proposed secondary water source identified in your water management plan (i.e., groundwater well, lake/reservoir, recycled frac water, multi-site impoundment, out-of-state source), DEP makes no estimation of the availability of water. These sources may prove to be unsuitable water supplies. Please review the following notes:

- For groundwater supply wells, DEP recommends that the operator contact the local health department prior to drilling any new well; and reminds the operator that all drinking water wells within 1,500 feet of a water supply well shall be flow- and quality-tested by the operator at the request of the drinking well owner prior to operation of the water supply well.
- For each proposed multi-site impoundment water source identified in your water management plan (if applicable), DEP will review the withdrawal limits established in the referenced Water Management Plan for current suitability and provide to the operator these limits for each identified intake. Note that withdrawal limits may be modified as necessary based on changing demands upon that water supply.

Source ID: 30335	Source Name	OXF149 Tank Pad B	Source start date:	11/1/2013
			Source end date:	11/1/2014
	Source Lat:	39.221733	Source Long:	-80.798991
			County	Doddridge
	Max. Daily Purchase (gal)		Total Volume from Source (gal):	4,500,000

DEP Comments:

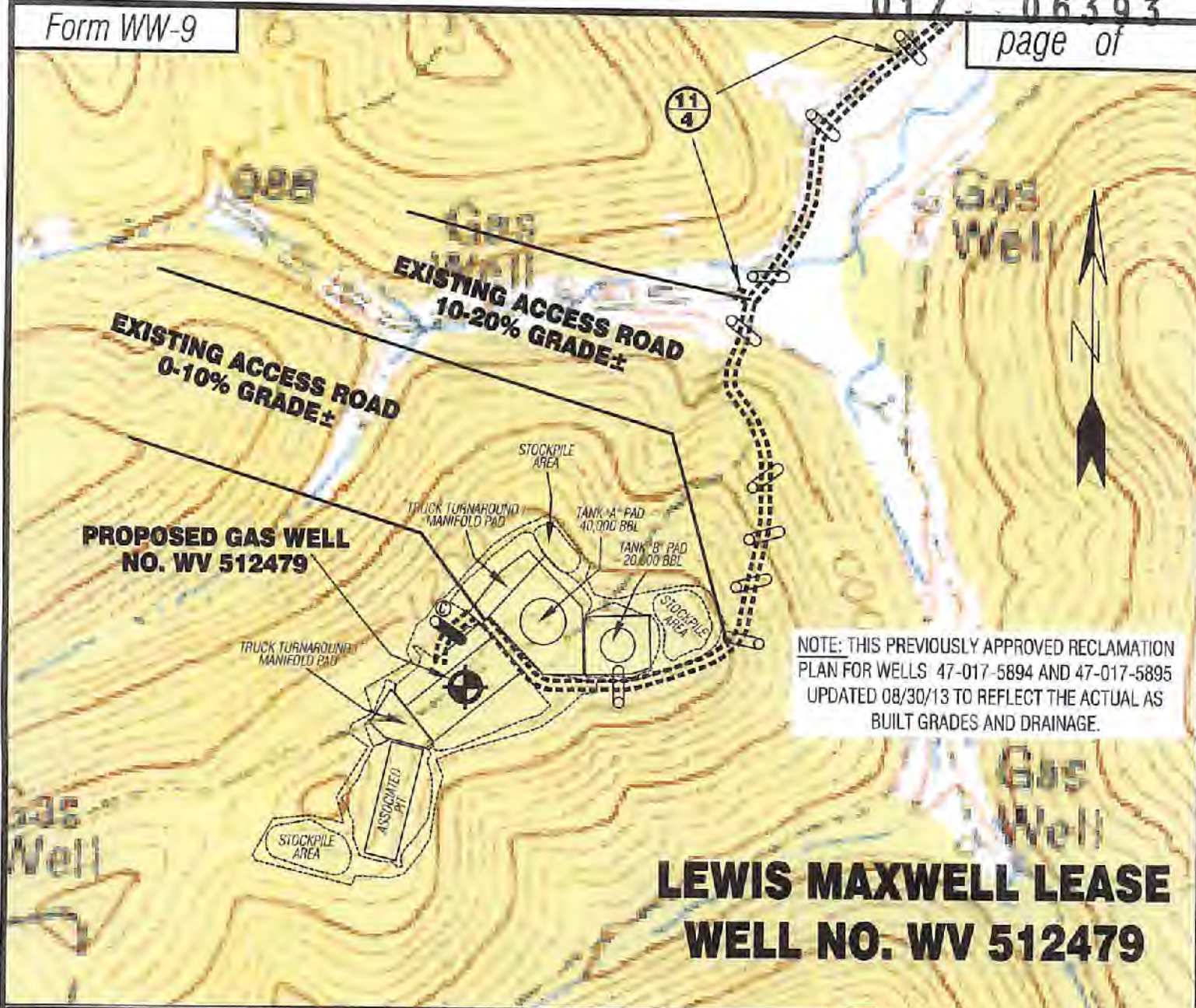
The intake identified above has been defined in a previous water management plan. The thresholds established in that plan govern this water management plan unless otherwise noted.

Reference: WMP-1533

**Recycled Frac Water**

Source ID: 30336	Source Name	Various	Source start date:	11/1/2013
			Source end date:	11/1/2014
	Source Lat:		Source Long:	
			County	
	Max. Daily Purchase (gal)		Total Volume from Source (gal):	4,500,000

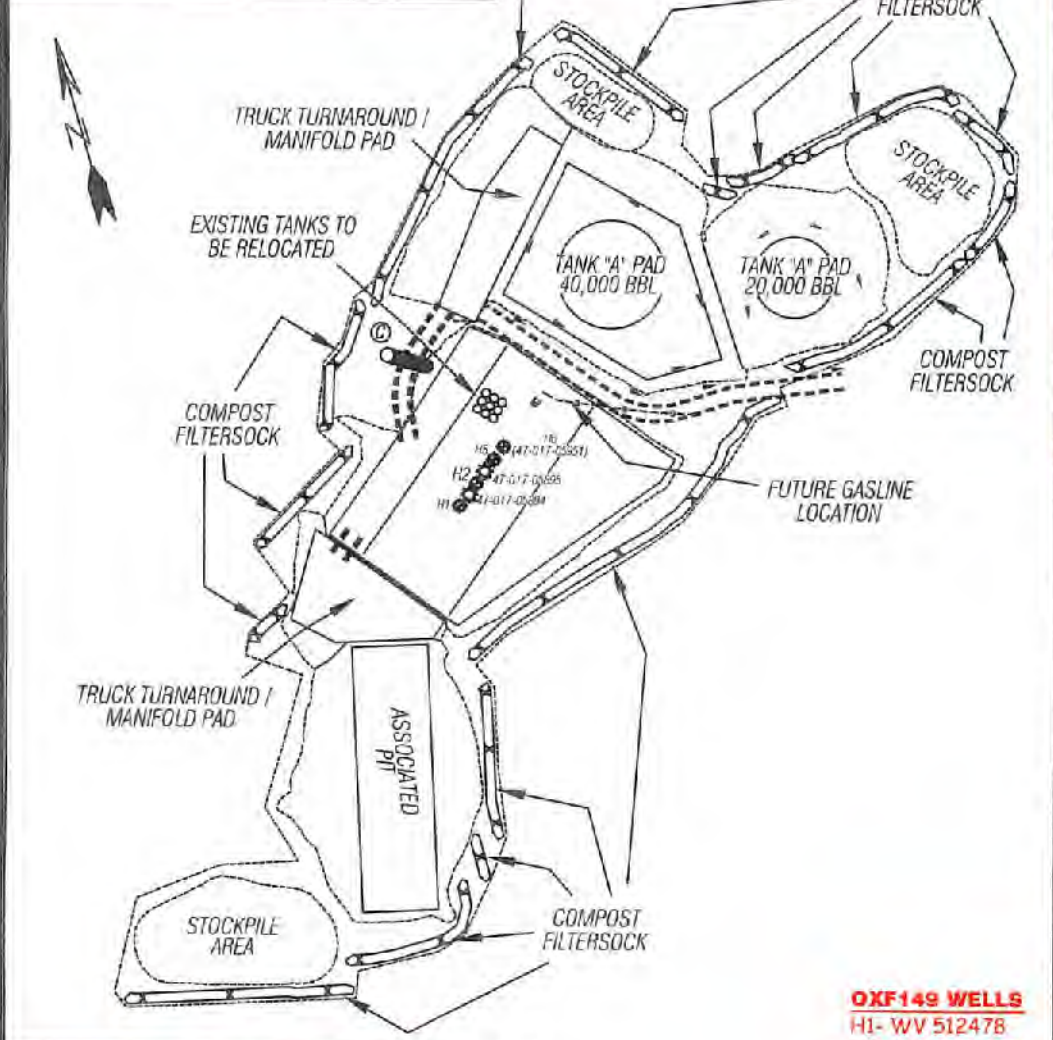
DEP Comments:



NOTE: THIS PREVIOUSLY APPROVED RECLAMATION PLAN FOR WELLS 47-017-5894 AND 47-017-5895 UPDATED 08/30/13 TO REFLECT THE ACTUAL AS BUILT GRADES AND DRAINAGE.

# LEWIS MAXWELL LEASE WELL NO. WV 512479

Detail Sketch for Proposed Well WV 512479



SCALE: 1"=500'



ALL ROADS SHOWN HEREON ARE EXISTING UNLESS OTHERWISE NOTED AND SHALL BE MAINTAINED IN ACCORDANCE WITH WV D.E.P. OIL AND GAS BMP MANUAL ENTRANCES AT COUNTY/STATE ROADS SHALL BE MAINTAINED IN ACCORDANCE WITH WV D.O.T. REGULATION SEPARATE PERMITS MAY BE REQUIRED BY THE D.O.T.

SEDIMENT BASINS (TRAPS) AND APPROPRIATE EROSION CONTROL BARRIERS ARE TO BE CONSTRUCTED AT ALL CULVERT AND CROSS DRAIN INLETS AND OUTLETS AS REQUIRED IN THE WV D.E.P. OIL AND GAS BMP MANUAL. FIELD CONDITIONS (ROCK OUTCROPS AND BEDROCK) MAY PROHIBIT INLET TRAPS BEING INSTALLED. WHEN THESE CONDITIONS EXIST ADDITIONAL EROSION CONTROL MEASURES SHALL BE EVALUATED AND UTILIZED AS NEEDED.

EARTHWORK CONTRACTORS ARE RESPONSIBLE FOR NOTIFICATION TO THE OPERATOR AND INSPECTOR PRIOR TO ANY DEVIATION FROM THIS PLAN.

TEMPORARY SEED & MULCH ALL SLOPES AFTER CONSTRUCTION OF LOCATION.

CUT & STACK ALL MARKETABLE TIMBER.  
STACKED BRUSH MAY BE USED FOR SEDIMENT CONTROL.  
APPLICATIONS FOR SEPARATE PERMITS ON THE ACCESS ROAD STREAM CROSSINGS HAVE BEEN PREPARED (IF APPLIES).

RECEIVED  
Office of Oil and Gas  
SEP 20 2013  
WV Department of Environmental Protection

(X) = PROPOSED STREAM CROSSING (IF APPLIES)  
 (C) = EXISTING CULVERT TO BE UPGRADED TO A 12" MIN. UNLESS OTHERWISE NOTED  
 (C) = EXISTING BROAD BASED DIP  
 \*SEE TABLE FOR CULVERT DETAIL

- OXF149 WELLS**  
 H1- WV 512478  
 H2- WV 512479  
 H3- WV 512480  
 H4- WV 512481  
 H5- WV 512482  
 H6- WV 513136

NOT TO SCALE

TOPO SECTION OF USGS  
OXFORD 7.5' QUADRANGLE

Professional Energy Consultants  
A DIVISION OF SRTM LATH SURVEYING

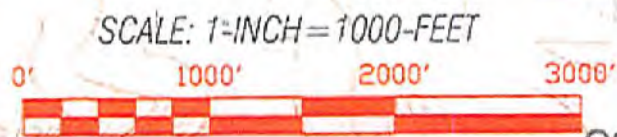
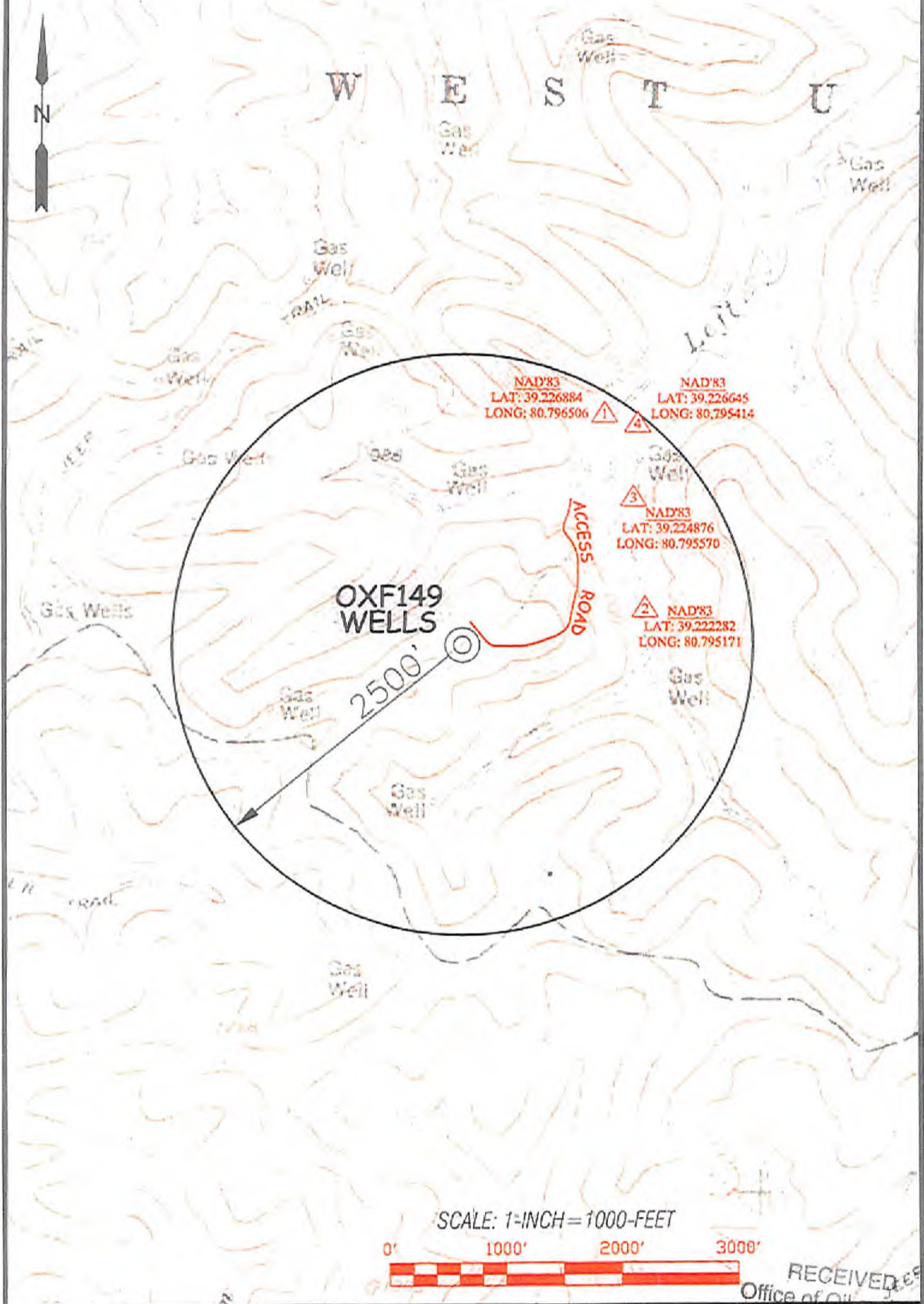
SURVEYORS  
 PROJECT MGMT.  
 ENGINEERS  
 ENVIRONMENTAL

700 West Main St.  
 P.O. Box 100  
 Daniels, WV 26031  
 (206) 422-2624

8003 D-Bay Bottom Road  
 Snowshoe, WV 26041  
 (206) 671-2611

DRAWN BY: K.D.W.  
 FILE NO.: 6980  
 DATE: 08/30/13  
 CADD FILE: 6980REC.WS12479R3.DWG

# LEWIS MAXWELL LEASE OXF149 WELLS



RECEIVED  
Office of Oil and Gas

Professional Energy Consultants  
A DIVISION OF SLS CONSULTANTS, INC.

225 West Main St.  
P.O. Box 100  
Henderson, KY 40424  
(502) 261-1000

DRAWN BY: K.D.W. FILE NO: 6980 DATE: 09/12/13 CADD FILE: 6980W3512478R2

TOPO SECTION OF:  
OXFORD, WV 7.5' QUAD.

DISTRICT	COUNTY	TAX MAP-PARCEL NO.
WEST UNION	DODDRIDGE	23-3.1

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

Department of Environmental Protection

# LEWIS MAXWELL LEASE

## 2654 ACRES±

### WELL NO. WV 512479

LATITUDE 39° 15' 00"

#### NOTES ON SURVEY

1. TIES TO WELLS, REFERENCES AND CORNERS ARE BASED ON GRID NORTH FOR THE WV STATE PLANE COORDINATE SYSTEM NORTH ZONE NAD'27.
2. LEASE BOUNDARY SHOWN HEREON TAKEN FROM DEED BOOK 28 PAGE 177.
3. SURFACE OWNER AND ADJOINER INFORMATION TAKEN FROM THE ASSESSOR AND COUNTY CLERK RECORDS OF DODDRIDGE COUNTY IN JULY, 2012.
4. WELL LAT./LONG. (NAD'27) ESTABLISHED BY DGPS(SURVEY GRADE).
5. PLAT DATED 03/10/10 REVISED 12/26/12 TO EXTEND HORIZONTAL LEG AND CHANGE BOTTOM HOLE COORDINATES, REVISED 06/06/13 TO SHOW NEW TOP HOLE COORDINATES, REVISED 08/12/13 TO CONFORM WITH WV CODE R. 35-8, ETC.

LONGITUDE 80° 47' 30"

598.0'

10.48'



**LANDING POINT**  
 WELL NO. WV 512479  
 STATE PLANE COORDINATES (NORTH ZONE) NAD 27  
 N. 265,241.8  
 E. 1,650,341.7  
 LAT=(N) 39.220875  
 LONG=(W) 80.804791  
 UTM (NAD83)(METERS)  
 N. 4,341,315.3  
 E. 516,886.8

**WELL NO. WV 512479**  
 STATE PLANE COORDINATES (NORTH ZONE) NAD 27  
 N. 265,349.7  
 E. 1,631,427.0  
 LAT=(N) 39.221214  
 LONG=(W) 80.800965  
 UTM (NAD83)(METERS)  
 N. 4,341,353.7  
 E. 517,196.0

#### REFERENCES



- OXF149 WELLS**  
 H1-WV 512478  
 H2-WV 512479  
 H3-WV 512480  
 H4-WV 512481  
 H5-WV 512482  
 H6-WV 513136



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. 677  
*Gregory A. Smith*



(+) DENOTES LOCATION OF WELL ON UNITED STATES TOPOGRAPHIC MAPS  
 DATE AUGUST 29, 20 13  
 OPERATORS WELL NO. WV 512479  
 API WELL NO. 47-017-0639316A  
 STATE COUNTY PERMIT

MINIMUM DEGREE OF ACCURACY 1/200  
 FILE NO. 6980P512479R8 (280-67)  
 PROVEN SOURCE OF ELEVATION DGPS (SURVEY GRADE TIES TO CORS NETWORK)  
 SCALE 1" = 1,000'

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

WELL TYPE	OIL	GAS	<input checked="" type="checkbox"/>	LIQUID INJECTION	WASTE DISPOSAL	IF "GAS" PRODUCTION	<input checked="" type="checkbox"/>	STORAGE	DEEP	SHALLOW	<input checked="" type="checkbox"/>
LOCATION	ELEVATION 1,240' (GROUND) 1,242.5' (PROPOSED) WATERSHED LEFT FORK										
DISTRICT	WEST UNION COUNTY DODDRIDGE QUADRANGLE OXFORD 7.5'										
SURFACE OWNER	LUCY E. HARPER ACREAGE 442.6±										
ROYALTY OWNER	LEWIS MAXWELL HEIRS LEASE ACREAGE 2,654±										
PROPOSED WORK	LEASE NO. 080616										
DRILL	<input checked="" type="checkbox"/>	CONVERT	<input type="checkbox"/>	DRILL DEEPER	<input type="checkbox"/>	REDRILL	<input type="checkbox"/>	FRACTURE OR STIMULATE	<input checked="" type="checkbox"/>	PLUG OFF OLD	<input type="checkbox"/>
FORMATION	PERFORATE NEW FORMATION PLUG AND ABANDON CLEAN OUT AND REPLUG OTHER										
PHYSICAL CHANGE IN WELL (SPECIFY)	TARGET FORMATION MARCELLUS ESTIMATED DEPTH										

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. 280 BRIDGEPORT, WV 26330

COUNTY NAME PERMIT



# LEWIS MAXWELL LEASE

2654 ACRES ±

WELL NO. WV 512479

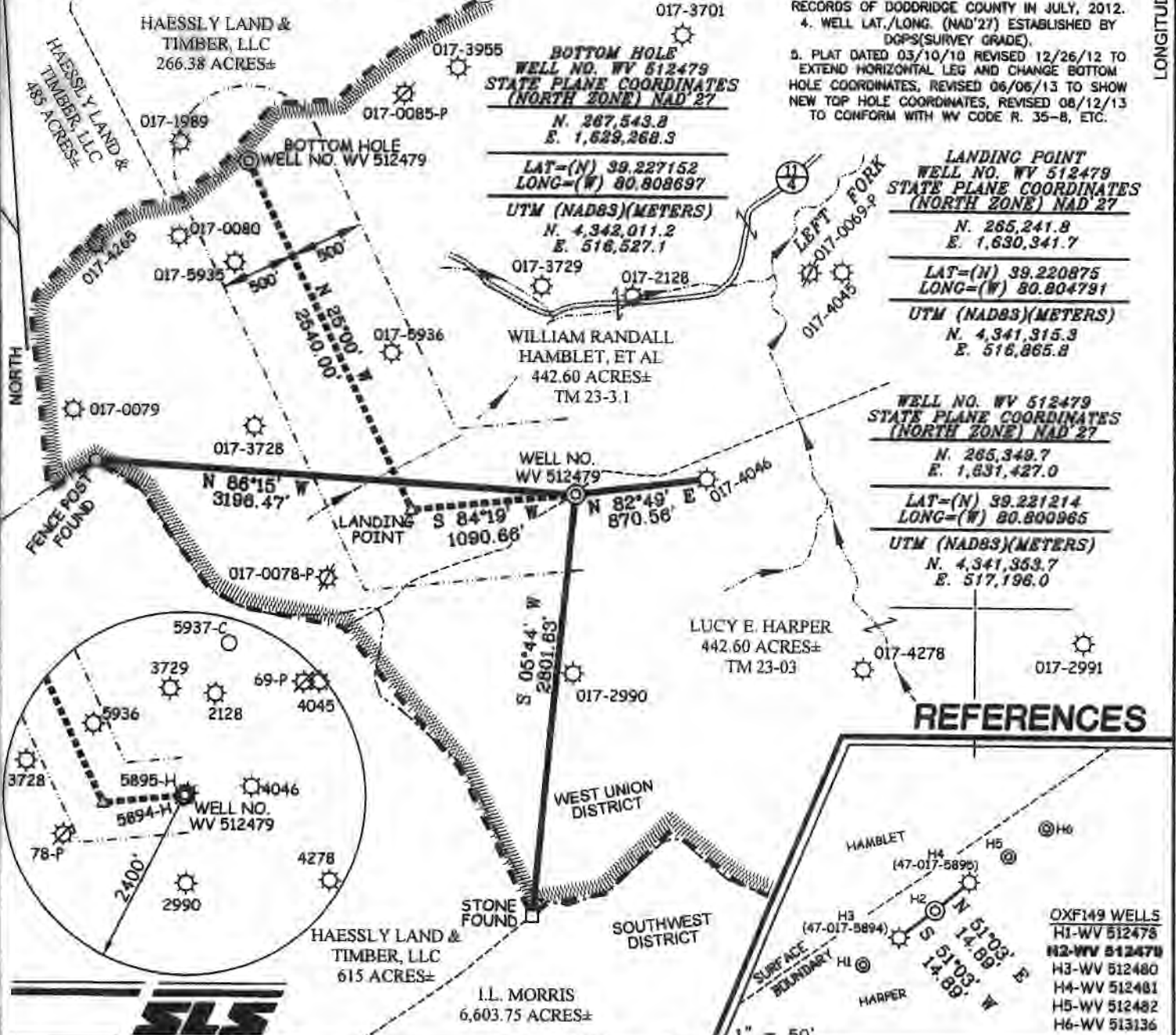
LATITUDE 39° 15' 00"

## NOTES ON SURVEY

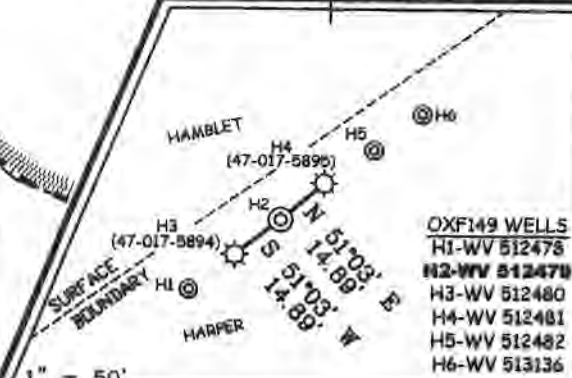
1. TIES TO WELLS, REFERENCES AND CORNERS ARE BASED ON GRID NORTH FOR THE WV STATE PLANE COORDINATE SYSTEM NORTH ZONE NAD'27.
2. LEASE BOUNDARY SHOWN HEREIN TAKEN FROM DEED BOOK 28 PAGE 177.
3. SURFACE OWNER AND ADJONER INFORMATION TAKEN FROM THE ASSESSOR AND COUNTY CLERK RECORDS OF DODDRIDGE COUNTY IN JULY, 2012.
4. WELL LAT./LONG. (NAD'27) ESTABLISHED BY DGPS(SURVEY GRADE).
5. PLAT DATED 03/10/10 REVISED 12/26/12 TO EXTEND HORIZONTAL LEG AND CHANGE BOTTOM HOLE COORDINATES, REVISED 06/06/13 TO SHOW NEW TOP HOLE COORDINATES, REVISED 08/12/13 TO CONFORM WITH WV CODE R. 35-8, ETC.

LONGITUDE 80° 47' 30"

10,485'



## REFERENCES



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

P.S. 677  
*Gregory A. Smith*



(+) DENOTES LOCATION OF WELL ON UNITED STATES TOPOGRAPHIC MAPS.  
 DATE AUGUST 29, 20 13  
 OPERATORS WELL NO. WV 512479  
 API WELL NO. 47-017-06393H6A  
 STATE COUNTY PERMIT

MINIMUM DEGREE OF ACCURACY 1/200  
 FILE NO. 8990P512479RB (280-67)  
 PROVEN SOURCE OF ELEVATION DGPS (SURVEY GRADE TIES TO CORS NETWORK)  
 SCALE 1" = 1,000'

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 1,240' (GROUND) 1,242.5' (PROPOSED) WATERSHED LEFT FORK  
 DISTRICT WEST UNION COUNTY DODDRIDGE QUADRANGLE OXFORD 7.5'  
 SURFACE OWNER LUCY E. HARPER ACREAGE 442.6±  
 ROYALTY OWNER LEWIS MAXWELL HEIRS LEASE ACREAGE 2,654±  
 PROPOSED WORK: LEASE NO. 080616  
 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

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. 280 BRIDGEPORT, WV 26330

COUNTY NAME PERMIT

**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
			1/8 min pd	
✓ 80616	Lewis & Sarah Maxwell	D.P. Stout		23/69
80616	D.P. Stout	Acme Carbon Company		23/476
80616	Acme Carbon Company	Columbian Carbon Company		33/1
80616	CBN Coporation (fka Columbian Carbon Company)	Columbian Carbon Company (fka Cities Service Carbon Corporation)		74/17
80616	Columbian Carbon Company	Columbian Fuel Corporation		137/28
80616	Columbian Fuel Corporation	Cities Service Oil Company		153/742
80616	Cities Service Oil Company	Cities Service Company		103/328
80616	Cities Service Company	Cities Services Oil & Gas Corporation		132/177
80616	Cities Service Oil & Gas Corporation	OXY USA, Inc.		205/614
80616 (100ac square)	OXY USA, Inc.	CNG Development Company		158/530
80616 (100ac square)	OXY USA, Inc.	CNG Development Company		158/708
80616 (100ac square)	OXY USA, Inc.	CNG Development Company		160/271
80616	OXY USA, Inc.	Ashland Exploration, Inc.		160/644
80616	Ashland Exploration Holdings, Inc. f/k/a Ashland Exploration Inc.	Blazer Energy Corp.		181/421
80616	Blazer Energy Corp.	Eastern States Oil & Gas Inc.		244/149 & 244/154
80616	Eastern States Oil & Gas, Inc.	Equitable Production - Eastern States Oil & Gas Co. Inc.,		255/154
80616	Equitable Production - Eastern States Oil & Gas Co. Inc.	Equitable Production Company		Cert.Corp 557/56
80616	Equitable Production Company	EQT Production Company		281/346
80616 (3-100ac squares)	CNX Gas Company, LLC (fka CNG Development Company)	EQT Production Company		272/249

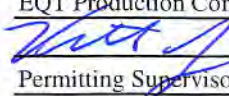
Upon information and belief, Operator's lease and/or other real property rights permit it to conduct drilling operations for the subject well in the location shown on the plat, including under any public roads that the well lateral crosses.

**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

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Page 1 of 1 SEP 23 2013

WV Department of  
Environmental Protection

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

Date of Notice Certification: 9-24-13

API No. 47 - 017 - 0  
Operator's Well No. 512479  
Well Pad Name: OXF149

**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>517,196.0</u>
County:	<u>Doddridge</u>	UTM NAD 83 Northing:	<u>4,341,353.7</u>
District:	<u>West Union</u>	Public Road Access:	<u>Co. Rt. 11/4</u>
Quadrangle:	<u>Oxford 7.5'</u>	Generally used farm name:	<u>Lewis Maxwell</u>
Watershed:	<u>Left Fork Arnolds Creek</u>		

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

<p>Pursuant to West Virginia Code § 22-6A, the Operator has attached proof to this Notice Certification that the Operator has properly served the required parties with the following:</p> <p><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 NOT REQUIRED BECAUSE 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>
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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.

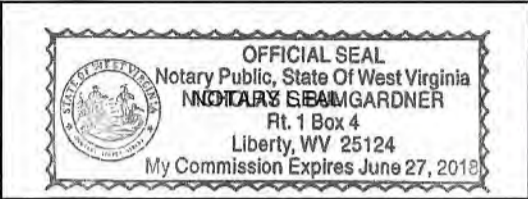
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**Certification of Notice is hereby given:**

THEREFORE, I *Vud JK*, 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



Subscribed and sworn before me this 17 day of SEPTEMBER, 2013  
*[Signature]* Notary Public  
My Commission Expires 6/27/2018

**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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API NO. 47 - 017 - 0  
OPERATOR WELL NO. 512479  
Well Pad Name: OXF149

**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: 9/23/13 Date Permit Application Filed: 9/23/13

**Notice of:**

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

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

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

Pursuant to W. Va. Code § 22-6A-10(b) no later than the filing date of the application, the applicant for a permit for any well work or for a certificate of approval for the construction of an impoundment or pit as required by this article shall deliver, by personal service or by registered mail or by any method of delivery that requires a receipt or signature confirmation, copies of the application, the erosion and sediment control plan required by section seven of this article, and the well plat to each of the following persons: (1) The owners of record of the surface of the tract on which the well is or is proposed to be located; (2) The owners of record of the surface tract or tracts overlying the oil and gas leasehold being developed by the proposed well work, if the surface tract is to be used for roads or other land disturbance as described in the erosion and sediment control plan submitted pursuant to subsection (c), section seven of this article; (3) The coal owner, operator or lessee, in the event the tract of land on which the well proposed to be drilled is located [sic] is known to be underlain by one or more coal seams; (4) The owners of record of the surface tract or tracts overlying the oil and gas leasehold being developed by the proposed well work, if the surface tract is to be used for the placement, construction, enlargement, alteration, repair, removal or abandonment of any impoundment or pit as described in section nine of this article; (5) Any surface owner or water purveyor who is known to the applicant to have a water well, spring or water supply source located within one thousand five hundred feet of the center of the well pad which is used to provide water for consumption by humans or domestic animals; and (6) The operator of any natural gas storage field within which the proposed well work activity is to take place. (c)(1) If more than three tenants in common or other co-owners of interests described in subsection (b) of this section hold interests in the lands, the applicant may serve the documents required upon the person described in the records of the sheriff required to be maintained pursuant to section eight, article one, chapter eleven-a of this code. (2) Notwithstanding any provision of this article to the contrary, notice to a lien holder is not notice to a landowner, unless the lien holder is the landowner. W. Va. Code R. § 35-8-5.7.a requires, in part, that the operator shall also provide the Well Site Safety Plan ("WSSP") to the surface owner and any water purveyor or surface owner subject to notice and water testing as provided in section 15 of this rule.

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

SURFACE OWNER(s)  
Name: Lucy E Harper  
Address: 511 Boca Ciega Point Blvd. North  
St Petersburg, FL 33708-2731

Name: 0  
Address: 0

SURFACE OWNERS(s) (Road and/or Other Disturbance)  
Name: Lucy E Harper  
Address: 511 Boca Ciega Point Blvd. North  
St Petersburg, FL 33708-2731

Name: 0  
Address: 0

SURFACE OWNER(s) (Impoundments/Pits)  
Name: Lucy E Harper  
Address: 511 Boca Ciega Point Blvd. North  
St Petersburg, FL 33708-2731

Name: 0

COAL OWNER OR LESSEE  
Name: Quinn Financial Mgmt. LLC  
Address: C/O Meredith, Quinn & Stenger, A.C.  
P.O. Box 2395  
Buckhannon, WV 26201

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

WATER PURVEYOR(s)  
Name: \_\_\_\_\_  
Address: \_\_\_\_\_

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

\*Please attach additional forms if necessary

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(8-13)

API NO. 47 - 017 - 0  
OPERATOR WELL NO. 512479  
Well Pad Name: OXF149

**Notice is hereby given:**

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

**This Notice Shall Include:**

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

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

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

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

Additional information related to horizontal drilling may be obtained from the Secretary, at the WV Department of Environmental Protection headquarters, located at 601 57th Street, SE, Charleston, WV 25304 (304-926-0450) or by visiting [www.dep.wv.gov/oil-and-gas/pages/default.aspx](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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API NO. 47 - 017 - 0  
OPERATOR WELL NO. 512479  
Well Pad Name: OXF149

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.

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

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**Notice is hereby given by:**

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: 304-848-0041

**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.

*Victoria Roark*

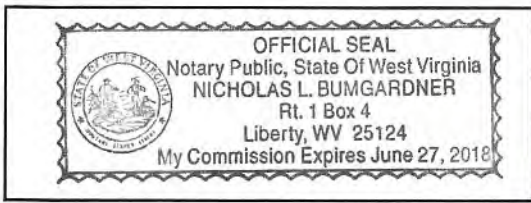
By: Victoria Roark

Its: Permitting Supervisor

Subscribed and sworn before me this 17 day of SEPTEMBER, 2013

*Nicholas L. Bumgardner*  
Notary Public

My Commission Expires 6/27/2018



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Environmental Protection

WW2-A

**Additional Surface Owners**

✓ Mathew Lewis Hamblet  
Gary L. Stephenson (surv)  
3351 Mar-Lu Ridge Road  
Jefferson, MD 21755

✓ William Randall Hamblet  
2413 Pinehill Circle  
Staunton, VA 24401

**Additional Surface Owners Access Road**

✓ Mathew Lewis Hamblet  
Gary L. Stephenson (surv)  
3351 Mar-Lu Ridge Road  
Jefferson, MD 21755

✓ William Randall Hamblet  
2413 Pinehill Circle  
Staunton, VA 24401

✓ Charles P Heaster et al  
Rt.1 Box 57  
West Union, WV 26456

**Additional Surface Owners Pits or Impoundments**

✓ Mathew Lewis Hamblet  
Gary L. Stephenson (surv)  
3351 Mar-Lu Ridge Road  
Jefferson, MD 21755

✓ William Randall Hamblet  
2413 Pinehill Circle  
Staunton, VA 24401

**Additional Coal Owners:**

✓ Robert S. Rieley  
19375 Cypress Ridge  
Lansdowne, VA 20176

✓ Robert D. Hall  
1455 Deervail Place  
Sherman Oaks, CA 91403

✓ Richard M. Hall  
105 W Kirkwood Avenue  
Fairfield, IA 52556

✓ Bruce P. Hall  
2015 Los Trancos Drive, Apt F  
Irving, CA 92617

✓ Margaret Hall Dowling  
3124 East Ruth Place  
Orange, CA 92869

✓ Andrea T. Hall  
240 N Thora  
Orange, CA 92869

✓ John R. Davies Trust, c/o Thomas Rhys Davies TTEE  
1006 43rd Street  
Vienna, WV 26105

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**Additional Coal Owners:**

- ✓ Eleanor Maxwell Meyer  
19 Heath Place  
Garden City, NY 11530
- ✓ Mary Maxine Welch  
P.O. Box 4308  
Parkersburg, WV 26104
- ✓ Charles Jr. & Barbara Wellings  
HC 68, Box 3  
West Union, WV 26456
- ✓ Sara Lynn Bailey  
11808 Clara Way  
Fairfax Station, VA 22039
- ✓ Mary Farr Secrist  
Route 1, Box 56A  
West Union, WV 26456
- ✓ Mary Ann Lyford  
735 Summit Lake Court  
Knoxville, TN 37922
- ✓ Katherine M. Sisler  
756 Shawnee Court  
O'Fallon, IL 62269
- ✓ LMSKAS Trust  
c/o Joe Fedeli CPA  
2013 Sandy Drive, Suite 200  
State College, PA 16803
- ✓ James Feldmeier  
4500 Mary Ellen Avenue  
Sherman Oaks, CA 91423
- ✓ John Feldmeier  
c/o Joseph Feldmeier  
1439 W Chapman #191  
Orange, CA 92868
- ✓ Joseph C. Feldmeier  
1439 W Chapman #191  
Orange, CA 92868
- ✓ The Ellis Children's Fund  
1048 Irving Avenue #761  
Newport Beach, CA 92660
- ✓ Mary Jane O'Brien  
1048 Irvine Avenue #761  
Newport Beach, CA 92660
- ✓ Mary H. Holland Irrevocable Trust  
c/o Jane H. Hardin, TTEE  
225 Watchung Fork  
Westfield, NJ 07090
- ✓ Susan Childers  
753 Burchs Creek Road  
Charlottesville, VA 22603
- ✓ Kathy L. Newberry  
51 Whiteberry Hollow  
Mineral Wells, WV 26150

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**Additional Coal Owners:**

✓  
Melissa A. Cross  
98 Louise Avenue  
West Union, WV 26456

✓  
Lucy E. Harper  
511 Boca Ciega Point Blvd N  
St. Petersburg, FL 33708

✓  
Susan Harper Hamblet  
119 Davies Avenue SW  
Leesburg, VA 20175

✓  
Franklin Maxwell Heirs  
Limited Partnership No. 1  
P.O. Box 2395  
Buckhannon, WV 26201

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SMITH LAND SURVEYING, INC.

P.O. BOX 150, GLENVILLE, WV 26031

(304) 462-6634 - FAX 462-6660

**WELL INFORMATION AND FINAL WATER WELL SAMPLE DATA SHEET**

**OPERATOR:** EQT Production Company

**LEASE NAME AND NUMBER:** OXF 149

COMMENTS

The initial field and/or mapping review of the area surrounding the proposed well site revealed the below listed surface owner(s) that were potentially utilizing groundwater (potable) for Human Consumption or other purposes within 2500' of the proposed well site. (For location of each site see attached area map.)

INDIVIDUAL CONTACTED OR NOTIFIED

Site: 1 Spacing 2400 Owner/Occupant: Gary Stephanson  
 Address: P.o. Box 71 West Union, WV 26456 Ph: (304)-588-7612  
 Field Contact Date: 9-12-13 Sampled: No Date Sampled: \_\_\_\_\_ Source: Water well  
 If No, declined by who \_\_\_\_\_ Letter/Notice Date: 1st \_\_\_\_\_ 2nd \_\_\_\_\_ Certified (3rd) \_\_\_\_\_  
 Comments: Northing: 39.226884  
Easting: 80.796506

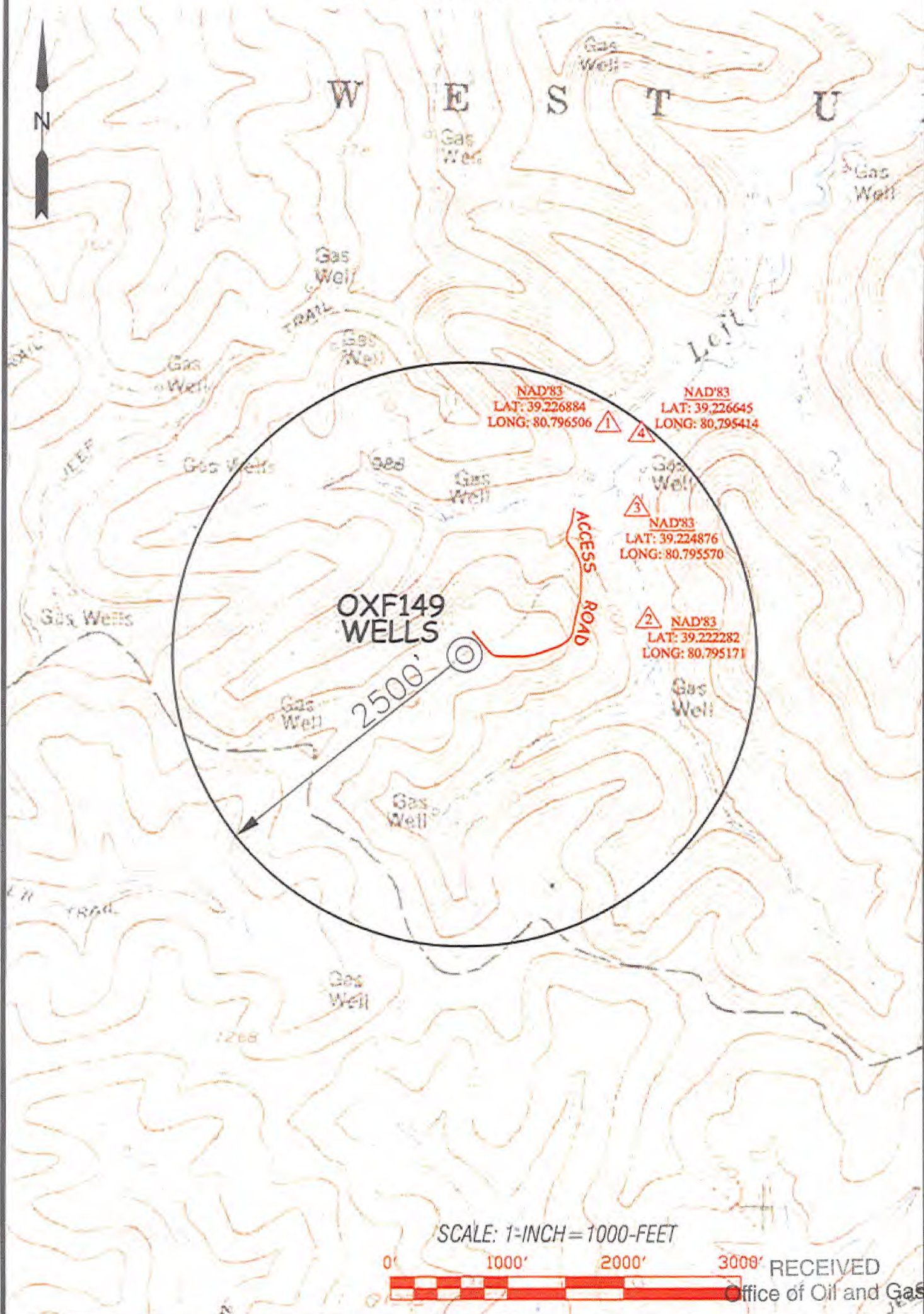
Site: 2 Spacing 1600 Owner/Occupant: EQT Production Company  
 Address: 1710 Pennsylvania Ave, Chareleston, WV 25302 Ph: \_\_\_\_\_  
 Field Contact Date: 9-12-13 Sampled: No Date Sampled: \_\_\_\_\_ Source: Creek  
 If No, declined by who \_\_\_\_\_ Letter/Notice Date: 1st \_\_\_\_\_ 2nd \_\_\_\_\_ Certified (3rd) \_\_\_\_\_  
 Comments: Eqt is not the land owner but would like water site sampled and results sent to them.  
Northing: 39.222282  
Easting: 80.795171

Site: 3 Spacing 1800 Owner/Occupant: Gary Stephanson  
 Address: P.o. Box 71 West Union, WV 26456 Ph: (304)-588-7612  
 Field Contact Date: 9-12-13 Sampled: No Date Sampled: \_\_\_\_\_ Source: Pond  
 If No, declined by who \_\_\_\_\_ Letter/Notice Date: 1st \_\_\_\_\_ 2nd \_\_\_\_\_ Certified (3rd) \_\_\_\_\_  
 Comments: Northing: 39.224876  
Easting: 80.795570


Site: 4 Spacing 2450 Owner/Occupant: EQT Production Company  
 Address: 1710 Pennsylvania Ave, Chareleston, WV 25302 Ph: \_\_\_\_\_  
 Field Contact Date: 9-12-13 Sampled: No Date Sampled: \_\_\_\_\_ Source: RECEIVED  
 If No, declined by who \_\_\_\_\_ Letter/Notice Date: 1st \_\_\_\_\_ 2nd \_\_\_\_\_ Certified (3rd) \_\_\_\_\_  
 Comments: Northing: 39.224876  
Easting: 80.795570

Office of Oil and Gas  
 SEP 23 2013  
 WV Department of Environmental Protection

# LEWIS MAXWELL LEASE OXF149 WELLS



Professional Energy Consultants  
a subsidiary of SLS (LANSING) INC.



2220 Peachtree Street NE  
Atlanta, GA 30329  
404.525.8888  
www.slsenergy.com

20100 Greenway Drive  
Westborough, MA 01581  
508.853.7600  
www.slsenergy.com

TOPO SECTION OF:  
OXFORD, WV 7.5' QUAD.

DISTRICT	COUNTY	TAX MAP-PARCEL NO.
WEST UNION	DODDRIDGE	23-3.1

OPERATOR: SEP 23 2013  
EQT PRODUCTION COMPANY  
115 PROFESSIONAL PLACE  
P.O. BOX 280  
BRIDGEPORT, WV 26330

WV Department of Environmental Protection

**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:** 8-14-13 **Date Permit Application Filed:** 8-24-13

**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:** Lucy E. Harper  
**Address:** 511 Boca Ciega Point Blvd. North  
St. Petersburg, FL 33708-2731

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

**Notice is hereby given:**

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

State:	<u>WV</u>	UTM NAD 83	Easting	<u>517,196.0</u>
County:	<u>Doddridge</u>		Northing	<u>4,341,353.6</u>
District:	<u>West Union</u>		Public Road Access:	<u>Co. Rt. 11/4</u>
Quadrangle:	<u>Oxford 7.5'</u>		Generally used farm name:	<u>Lewis Maxwell</u>
Watershed:	<u>Left Fork Arnolds Creek</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

**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).

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

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**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:** Mathew Lewis Hamblet  
**Address:** Gary L. Stephenson (surv)  
3351 Mar-Lu Ridge Rd.  
Jefferson, MD 21755

**Name:** William Randall Hamblet  
**Address:** 2413 Pinehill Circle  
Staunton, VA 24401

**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>517,196.0</u>
County:	<u>Doddridge</u>		Northing	<u>4,341,353.6</u>
District:	<u>West Union</u>		Public Road Access:	<u>Co. Rt. 11/4</u>
Quadrangle:	<u>Oxford 7.5'</u>		Generally used farm name:	<u>Lewis Maxwell</u>
Watershed:	<u>Left Fork Arnolds Creek</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@egt.com  
**Facsimile:** 304-848-0041

**Authorized Representative:** Victoria Roark  
**Address:** 115 Professional Place, P.O Box 280  
Bridegeport, WV 26330  
**Telephone:** 304-848-0076  
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**Facsimile:** 304-848-0041

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**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:** 9/11/2013      **Date Permit Application Filed:** 9/21/13

**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):**

<b>Name:</b> <u>Charles P Heaster et al</u>	<b>Name:</b> _____	<u>0</u>
<b>Address:</b> <u>Rt.1 Box 57</u>	<b>Address:</b> _____	<u>0</u>
<u>West Union, WV 26456</u>	_____	<u>0</u>

**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>517,196.0</u>
County: <u>Doddridge</u>		Northing: <u>4,341,353.7</u>
District: <u>West Union</u>		Public Road Access: <u>Co. Rt. 11/4</u>
Quadrangle: <u>Oxford 7.5'</u>		Generally used farm name: <u>Lewis Maxwell</u>
Watershed: <u>Left Fork Arnolds Creek</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:**

<b>Well Operator:</b> <u>EQT Production Company</u>	<b>Authorized Representative:</b> <u>Victoria Roark</u>
<b>Address:</b> <u>115 Professional Place, P.O Box 280</u>	<b>Address:</b> <u>115 Professional Place, P.O Box 280</u>
<u>Bridgeport, WV 26330</u>	<u>Bridegeport, WV 26330</u>
<b>Telephone:</b> <u>304-848-0076</u>	<b>Telephone:</b> <u>304-848-0076</u>
<b>Email:</b> <u>vroark@eqt.com</u>	<b>Email:</b> <u>vroark@eqt.com</u>
<b>Facsimile:</b> <u>304-848-0041</u>	<b>Facsimile:</b> <u>304-848-0041</u>

**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 PLANNED OPERATION

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

Date of Notice: 9/21/2013 Date Permit Application Filed: September 21, 2013

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

CERTIFIED MAIL RETURN RECEIPT REQUESTED  HAND DELIVERY

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

Notice is hereby provided to the SURFACE OWNER(s)

(at the address listed in the records of the sheriff at the time of notice):

Name: Lucy E Harper  
Address: 511 Boca Ciega Point Blvd. North  
St Petersburg, FL 33708-2731

Name: Charles P Heaster et al  
Address: Rt.1 Box 57  
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: 517,196.0  
County: Doddridge Northing: 4,341,353.7  
District: West Union Public Road Access: Co. Rt. 11/4  
Quadrangle: Oxford 7.5' Generally used farm name: Lewis Maxwell  
Watershed: Left Fork Arnolds Creek

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

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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Environmental Protection

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

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

**Date of Notice:** 9/21/2013      **Date Permit Application Filed:** September 21, 2013

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

**CERTIFIED MAIL**                       **HAND**  
**RETURN RECEIPT REQUESTED**              **DELIVERY**

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

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

(at the address listed in the records of the sheriff at the time of notice):

Name: Mathew Lewis Hamblet  
Address: Gary L. Stephenson (surv)  
3351 Mar-Lu Ridge Road  
Jefferson, MD 21755

Name: William Randall Hamblet  
Address: 2413 Pinehill Circle  
Staunton, VA 24401

**Notice is hereby given:**

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

State:	<u>WV</u>	UTM NAD 83	Easting:	<u>517,196.0</u>
County:	<u>Doddridge</u>		Northing:	<u>4,341,353.7</u>
District:	<u>West Union</u>	Public Road Access:		<u>Co. Rt. 11/4</u>
Quadrangle:	<u>Oxford 7.5'</u>	Generally used farm name:		<u>Lewis Maxwell</u>
Watershed:	<u>Left Fork Arnolds Creek</u>			

**This Notice Shall Include:**

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

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Telephone: 304-848-0082  
Email: vroark@eqt.com

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

**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).

**RECEIVED**  
**Office of Oil and Gas**  
  
SEP 23 2013  
  
WV Department of  
Environmental Protection

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

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

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Environmental Protection

**PROJECT INFORMATION**

PROJECT NAME: OXF 149 H1, H2 & H5  
 TAX PARCEL: WEST UNION DISTRICT MAP 23  
 SURFACE OWNER: LUCY E. HARPER, WEST UNION DISTRICT, DODDRIDGE COUNTY, WV, TOTAL PROPERTY AREA: 442.80 ± ACRES (7M 23 03)  
 MATHIEU HAMBLET ET AL, WEST UNION DISTRICT, DODDRIDGE COUNTY, WV, TOTAL PROPERTY AREA: 442.60 ± ACRES (7M 23-31)  
 OIL AND GAS ROYALTY OWNER: LEWIS MAXWELL HRS, WEST UNION DISTRICT, DODDRIDGE COUNTY, WV, TOTAL PROPERTY AREA: 2,654 ± ACRES

**SITE LOCATION**  
 THE OXF 149 SITE IS LOCATED ON A RIDGE SOUTH OF CO RT 11/4, APPROXIMATELY 4.5 MILES SOUTH OF THE CO RT 11 AND CO RT 11/4 INTERSECTION

**LOCATION COORDINATES**

OXF 149 H1, H2 & H5 WELL PAD ENTRANCE  
 LATITUDE: 39.224660 LONGITUDE: -80.797515 (NAD 83)  
 OXF 149 H1, H2 & H5 WELL PAD  
 LATITUDE: 39.221286 LONGITUDE: -80.800717 (NAD 83)  
 OXF 149 H1, H2 & H5 ASSOCIATED PIT  
 LATITUDE: 39.220301 LONGITUDE: -80.801979 (NAD 83)  
 OXF 149 H1, H2 & H5 TANK A PAD  
 LATITUDE: 39.221932 LONGITUDE: -80.799873 (NAD 83)  
 OXF 149 H1, H2 & H5 TANK B PAD  
 LATITUDE: 39.221733 LONGITUDE: -80.798931 (NAD 83)

**SITE DISTURBANCE COMPUTATIONS**

PAD/ASSOCIATED PIT & ACCESS ROAD AREA = 15.4 ± ACRES  
 TOTAL SITE DISTURBANCE = 15.4 ± ACRES  
 \*INCLUDES AREA OF THE WELL PAD, ASSOCIATED PIT & STOCKPILES

**ENTRANCE PERMIT**

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

**MISS UTILITY STATEMENT**

MISS UTILITY OF WEST VIRGINIA WAS NOTIFIED FOR THE LOCATING OF UTILITIES PRIOR TO THIS PROJECT DESIGN, TICKET #128466536 IN ADDITION, MISS UTILITY WILL BE CONTACTED PRIOR TO START OF THE PROJECT

**FLOODPLAIN NOTE**

THE PROPOSED LIMITS OF DISTURBANCE FOR THIS PROJECT IS LOCATED IN FEMA FLOOD ZONE X, PER THE FLOOD INSURANCE RATE MAP (FIRM) NUMBER 54017C0225C, DATED OCTOBER 04, 2011

**ENVIRONMENTAL NOTES**

A WETLAND DELINEATION WAS PERFORMED ON AUGUST 13, 2013 BY POTESTA ENGINEERS AND ENVIRONMENTAL CONSULTANTS TO REVIEW THE SITE FOR WATERS AND WETLANDS THAT ARE MOST LIKELY WITHIN THE REGULATORY JURISDICTION OF THE U.S. ARMY CORPS OF ENGINEERS (USACE), AND/OR THE WEST VIRGINIA DEPARTMENT OF ENVIRONMENTAL PROTECTION (WVDEP). THE AUGUST 13, 2013 EXHIBIT FIGURE # 2 WAS PREPARED BY POTESTA ENGINEERS AND ENVIRONMENTAL CONSULTANTS SUMMARIZES THE RESULTS OF THE FIELD DELINEATION. THE REPORT DOES NOT, IN ANY WAY, REPRESENT A JURISDICTIONAL DETERMINATION OF THE LANDWARD LIMITS OF WATERS AND WETLANDS WHICH MAY BE REGULATED BY THE USACE OR THE WVDEP. IT IS STRONGLY RECOMMENDED THAT THE AFOREMENTIONED AGENCIES BE CONSULTED IN AN EFFORT TO GAIN WRITTEN CONFIRMATION OF THE DELINEATION DESCRIBED BY THIS REPORT PRIOR TO ENGAGING CONSTRUCTION ON THE PROPERTY DESCRIBED HEREIN. THE DEVELOPER SHALL OBTAIN THE APPROPRIATE PERMITS FROM THE FEDERAL AND/OR STATE REGULATORY AGENCIES PRIOR TO ANY PROPOSED IMPACTS TO WATERS OF THE U.S., INCLUDING WETLAND FILLS AND STREAM CROSSINGS

**GENERAL DESCRIPTION**

THE WELL PAD & ASSOCIATED PIT IS BEING CONSTRUCTED TO AID IN THE DEVELOPMENT OF INDIVIDUAL MARCELLUS SHALE GAS WELLS

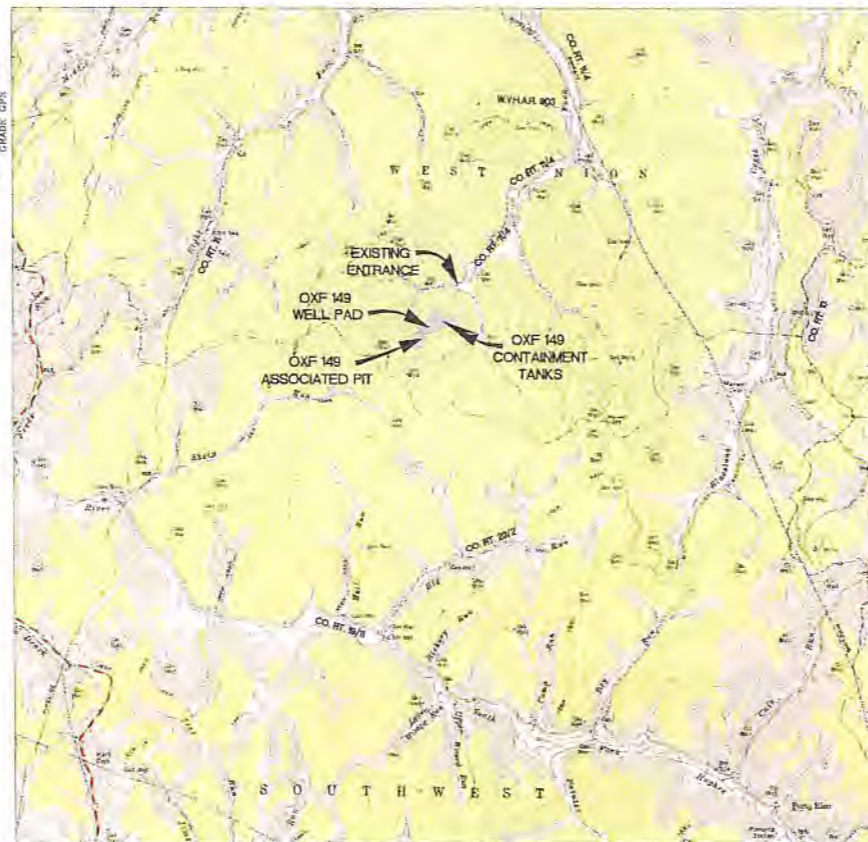
MISS Utility of West Virginia  
 1-800-245-4848  
 West Virginia State Law  
 (Section XIV, Chapter 24-C)  
 Requires that you call two  
 business days before you dig in  
 the state of West Virginia  
 IT'S THE LAW!!

# OXF 149 SITE PLAN

## EQT PRODUCTION COMPANY

PROPOSED WELL NO. H1 - WV 512478, H2 - WV512479, & H5 - WV512482  
 EXISTING WELL API NO. 47-017-05951, 47-017-05894, & 47-017-05895

SITUATE ON THE WATERS OF A TRIBUTARY OF LEFT FORK ARNOLDS CREEK IN WEST UNION DISTRICT, DODDRIDGE COUNTY, WEST VIRGINIA.



OXFORD QUAD



**LIST OF DRAWINGS**

- 1 - COVER SHEET
- 3 - NOTES
- 3 - OVERALL PLAN SHEET INDEX & VOLUMES
- 4 - WELL PAD & CONTAINMENT TANKS DETAILS
- 5 - ASSOCIATED PIT & EXISTING ROAD DETAILS
- 6 - WELL PAD & ASSOCIATED PIT SECTIONS
- 7 - ASSOCIATED PIT SECTIONS
- 8 - CONTAINMENT TANKS SECTIONS
- 9 - ROAD PROFILES AND CROSS SECTIONS
- 10 - EXISTING ROAD PROFILE
- 11 - EXISTING ROAD SECTIONS
- 12 - PIT & CONTAINMENT TANKS RECLAMATION PLAN
- 13 - ASSOCIATED PIT RECLAMATION PLAN
- 14-18 CONSTRUCTION DETAILS

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

NAVITUS ENGINEERING INC.  
 151 WINDY HILL LANE  
 WINCHESTER, VA 22602  
 WWW.NAVITUSINC.COM

Professional Energy Consultants  
 A DIVISION OF SLS  
 SLS  
 228 WINDY HILL LN  
 WINCHESTER, VA 22602  
 (540) 361-1000



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

COVER SHEET  
**OXF 149**  
 WEST UNION DISTRICT  
 DODDRIDGE COUNTY, WV

DATE: 09/10/2013  
 SCALE: 1" = 2000'  
 DESIGNED BY: CRK  
 FILE NO: 6980  
 SHEET 1 OF 18  
 REV: 09/11/2013

**OPERATOR**  
 EQT PRODUCTION COMPANY  
 OPERATOR ID: 308686  
 115 PROFESSIONAL PLACE  
 P.O. BOX 290  
 BRIDGEPORT, WV 26330  
 PHONE (304) 348-3870

**ENGINEER**  
 NAVITUS ENGINEERING, INC  
 151 WINDY HILL LANE  
 WINCHESTER, VA 22602  
 PHONE (688) 682-4185

**SURVEYOR**  
 SMITH LAND SURVEYING, INC  
 228 WEST MAIN STREET  
 P.O. BOX 150  
 GLENVILLE, WV 26351  
 PHONE: (304) 465-5634

Office of Oil and Gas Regulation  
 OCT 11 2013  
 WV Department of Environmental Protection

4701706393



**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

January 8, 2014

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

Subject: DOH Permit for the OXF149 Pad, Doddridge County  
OXF149H2 Well #512479

Dear Mr. Martin,

This well site will be accessed from Permit # 04-2013-0940 applied for by EQT Production Company for access to the State Road for a well site located off of Doddridge County Route 11/4 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,

A handwritten signature in cursive script that reads "Gary K. Clayton".

Gary K. Clayton  
Regional Maintenance Engineer  
Central Office O&G Coordinator

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