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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

April 24, 2015

**WELL WORK PERMIT**  
**Horizontal 6A Well**

This permit, API Well Number: 47-1706715, 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: 515970  
Farm Name: MORRIS, I.L.  
**API Well Number: 47-1706715**  
**Permit Type: Horizontal 6A Well**  
Date Issued: 04/24/2015

# 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 (USACE). Through this permit, you are hereby being advised to consult with USACE regarding this proposed activity.
2. If the operator encounters an unanticipated void, or an anticipated void at an unanticipated depth, the operator shall notify the inspector within 24 hours. Modifications to the casing program may be necessary to comply with W. Va. Code § 22-6A-5a (12), which requires drilling to a minimum depth of thirty feet below the bottom of the void, and installing a minimum of twenty (20) feet of casing. Under no circumstance should the operator drill more than 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.
9. Operator shall provide the Office of Oil & Gas notification of the date that drilling commenced on this well. Such notice shall be provided by sending an email to DEPOOGNotify@wv.gov within 30 days of commencement of drilling.

**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

306686	017	7	526
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Operator ID      County      District      Quadrangle

2) Operator's Well Number: 515970      Well Pad Name: OXF153

3) Farm Name/Surface Owner : I L Morris      Public Road Access: 19/11

4) Elevation, current ground: 1,139.0      Elevation, proposed post-construction: 1,141.0

5) Well Type: (a) Gas       Oil       Underground Storage   
Other \_\_\_\_\_

(b) If Gas:      Shallow       Deep   
Horizontal

6) Existing Pad? Yes or No: yes

7) Proposed Target Formation(s), Depth(s), Anticipated Thicknesses and Associated Pressure(s):  
Target formation is Marcellus at a depth of 6560' with the anticipated thickness to be 58 feet and anticipated target pressure of 2951 PSI

8) Proposed Total Vertical Depth: 6560'

9) Formation at Total Vertical Depth: Marcellus

10) Proposed Total Measured Depth: 10,463'

11) Proposed Horizontal Leg Length 2,700

12) Approximate Fresh Water Strata Depths: 49, 442

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

14) Approximate Saltwater Depths: 1365, 1407, 1457

15) Approximate Coal Seam Depths: none reported

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

17) Does proposed well location contain coal seams directly overlying or adjacent to an active mine?  
(a) If Yes, provide Mine Info:      Name: \_\_\_\_\_  
Depth: \_\_\_\_\_  
Seam: \_\_\_\_\_  
Owner: \_\_\_\_\_

*Received*  
*APR 21 2015*  
*DCW*  
*4-14-2015*  
*CSG Change*

WW - 6B  
(3/13)

API NO. 47 - 17 - 06715  
 OPERATOR WELL NO. 515970  
 Well Pad Name: OXF153

**CASING AND TUBING PROGRAM**

18)

TYPE	Size (in)	New or Used	Grade	Weight per lb/ft.	FOOTAGE: for Drilling (ft)	INTERVALS: Left in Well (ft)	CEMENT: Fill-up (Cu.Ft.)
Conductor	20	New	MC-50	81	40	40	38 C.T.S.
Fresh Water	13 3/8	New	J-55	54	592	592	528 C.T.S.
Coal	-	-	-	-	-	-	-
Intermediate	9 5/8	New	A-500	40	2,967	2,967	1,172 C.T.S.
Production	5 1/2	New	P-110	20	10,463	10,463	See Note 1
Tubing	2 3/8		J-55	4.6			May not be run, if run will be set 100' less than TD
Liners							

*12C  
4-14-2015*

TYPE	Size (in)	Wellbore Diameter (in)	Wall Thickness (in)	Burst Pressure (psi)	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	2,730	* See Note 2	1.21
Coal						
Intermediate	9 5/8	12 3/8	0.395	3,950	* See Note 2	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.

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

Received

APR 21 2015

Office of Oil and Gas  
 WV Dept. of Environmental Protection

**CASING AND TUBING PROGRAM**

18)

TYPE	Size (in)	New or Used	Grade	Weight per ft. (lb/ft)	FOOTAGE: For Drilling (ft)	INTERVALS: Left in Well (ft)	CEMENT: Fill-up (Cu.Ft.)
Conductor	20	New	MC-50	81	40	40	38 C.T.S.
Fresh Water	13 3/8	New	J-55	54.5	592	592	528 C.T.S.
Coal	-	-	-	-	-	-	-
Intermediate	9 5/8	New	A-500	40	2,967	2,967	1,172 C.T.S.
Production	5 1/2	New	P-110	20	10,463	10,463	See Note 1
Tubing	2 3/8		J-55	4.6			May not be run, if run will be set 100' less than TD
Liners							

TYPE	Size (in)	Wellbore Diameter (in)	Wall Thickness (in)	Burst Pressure (psi)	Anticipated Max. Internal Pressure (psi)	Cement Type	Cement Yield (cu. ft./k)
Conductor	20	24	0.375	-	18	Construction	1.18
Fresh Water	13 3/8	17 1/2	0.38	2,730	2184	* See Note 2	1.21
Coal							
Intermediate	9 5/8	12 3/8	0.395	3,950	3160	* See Note 2	1.21
Production	5 1/2	8 1/2	0.361	12,640	10112	-	1.27/1.86
Tubing							
Liners							

**Packers**

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

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

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

**Received**

APR 21 2015

Office of Oil and Gas  
 WV Dept. of Environmental Protection

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

Drill and complete a new horizontal well in the Marcellus formation. The vertical drill to go down to an approximate depth of 5113'.  
Then kick off the horizontal leg into the Maracellus using a slick water frac.

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

Hydraulic fracturing is completed in accordance with state regulations using water recycled from previously fractured wells and obtained from freshwater sources. This water is mixed with sand and a small percentage (less than 0.3%) of chemicals (including 15% Hydrochloric acid, gelling agent, gel breaker, friction reducer, biocide, and scale inhibitor), referred to in the industry as a "slickwater" completion. Maximum anticipated treating pressures are expected to average approximately 8500 psi, maximum anticipated treating rates are expected to average approximately 100 bpm. Stage lengths vary from 150 to 300 feet. Average approximately 200,000 barrels of water per stage. Sand sizes vary from 100 mesh to 20/40 mesh. Average approximately 200,000 pounds of sand per stage.

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

11.5

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

11.3

23) Describe centralizer placement for each casing string.

- Surface: Bow spring centralizers – One at the shoe and one spaced every 500'.
- Intermediate: Bow spring centralizers– One cent at the shoe and one spaced every 500'.
- Production: One spaced every 1000' from KOP to Int csg shoe

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

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

Used to speed the setting of cement slurries.

0.4% flake. Loss Circulation Material (LCM) is used to combat the loss of the cement slurry to a thief zone.

Intermediate (Type 1 Cement): 0-3% Calcium Chloride. Salt is used in shallow, low temperature formations to speed the setting of cement slurries. 0.4% flake. Loss Circulation Material (LCM) is used to combat the loss of whole drilling fluid or cement slurry (not filtrate) to a thief zone.

Production:

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

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

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

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

60 % Calcium Carbonate. Acid solubility.

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

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APR 21 2015

Office of Oil and Gas  
WV Dept. of Environmental Protection

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

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

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

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

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

\*Note: Attach additional sheets as needed.

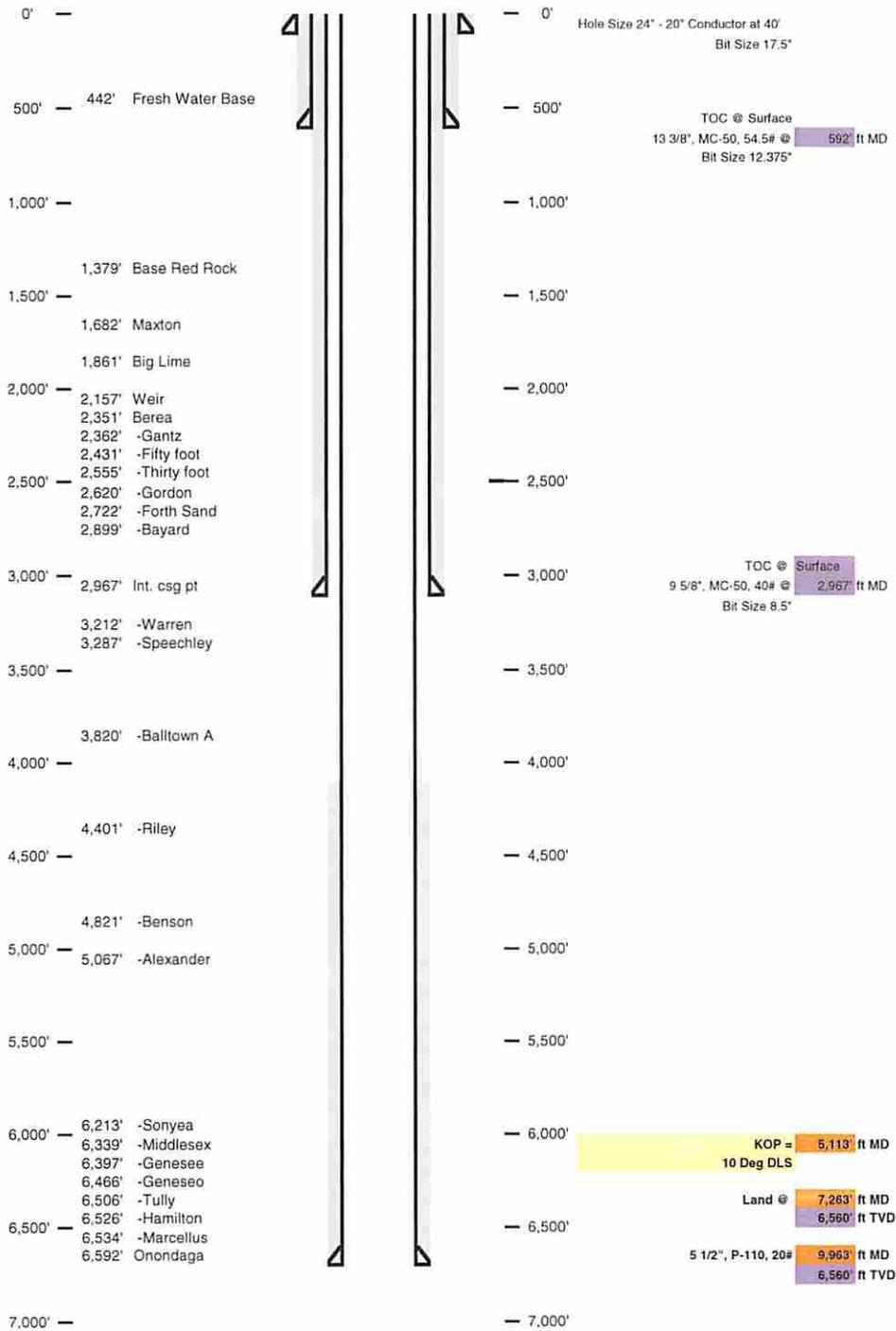
017-06715

Well Schematic  
EQT Production

Well Name: 515970 (OXF153H7)  
County: Doddridge  
State: West Virginia

Elevation KB:  
Target  
Prospect  
Azimuth  
Vertical Section

1154
Marcellus
335
3300

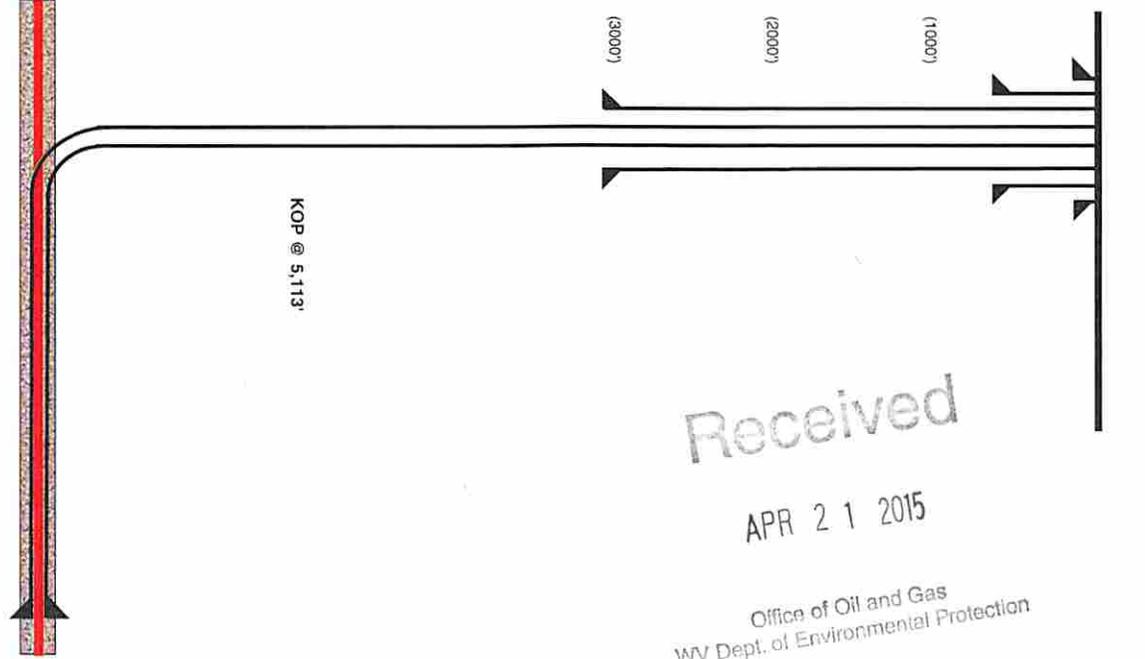


017-06715

Well 515970 (OXF153H7)  
 EOT Production  
 Oxford  
 Doddridge  
 West Virginia

Asimuth 335  
 Vertical Section 3390

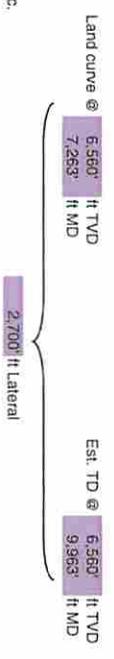
TVD Depth (feet)	Formation Tops (TVD)
250'	Base Fresh Water
500'	
750'	
1,000'	
1,250'	
1,500'	Base Red Rock
1,750'	Maxton
1,750'	Big Lime
2,000'	War
2,250'	Berry
2,500'	-Forty foot
2,500'	-Thirty foot
2,750'	-Gordon
3,000'	-Bayard
3,250'	int. csg. pl
3,500'	-Warren
3,750'	-Speechley
4,000'	-Balltown A
4,250'	
4,500'	-Riley
4,750'	
5,000'	-Benson
5,000'	-Alexander
5,250'	
5,500'	
5,750'	-Sonora
6,000'	-Middlesex
6,250'	-Geneva
6,500'	-Geneva
6,500'	-Tully
6,500'	-Hamilton
6,750'	Marcellus top
6,750'	Marcellus Bottom



Received  
 APR 21 2015  
 Office of Oil and Gas  
 WV Dept. of Environmental Protection

Hole Size (inches)	Casing Type	Casing Size (inches)	WT (pp)/Grade
24	Conductor	20	81#/MC-50
17 1/2	Surface	13 3/8	54.5#/J-55
12 3/8	Intermediate	9 5/8	40#/A-500
8 1/2	Production Casing	5 1/2	20#/P-110

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 5113'.  
 Then kick off the horizontal leg into the Marcellus using a slick water frac.





470 170 6715

west virginia department of environmental protection

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

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

March 18, 2014

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

Re: Cement Variance Request

Dear Sir or Madam,

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

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

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

Sincerely,

James Peterson  
Environmental Resources Specialist / Permitting

Promoting a healthy environment.

Registered  
Office of Oil & Gas

JAN 09 2015

04/24/2015



470 1706715

west virginia department of environmental protection

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601 57<sup>th</sup> Street, SE  
Charleston, WV 25304  
(304) 926-0450  
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Earl Ray Tomblin, Governor  
Randy C. Huffman, Cabinet Secretary  
dep.wv.gov

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

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

**REPORT OF THE OFFICE**

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

**FINDINGS OF FACT**

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

Promoting a healthy environment.

Received  
Office of Oil & Gas  
JAN 09 2015

04/24/2015

4701706715

**CONCLUSIONS OF LAW**

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

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

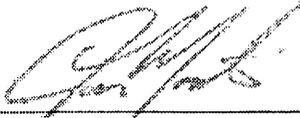
**ORDER**

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

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

IN THE NAME OF THE STATE OF WEST VIRGINIA

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

  
\_\_\_\_\_  
James Martin, Chief  
Office of Oil and Gas

Received  
Office of Oil and Gas

JAN 09 2015

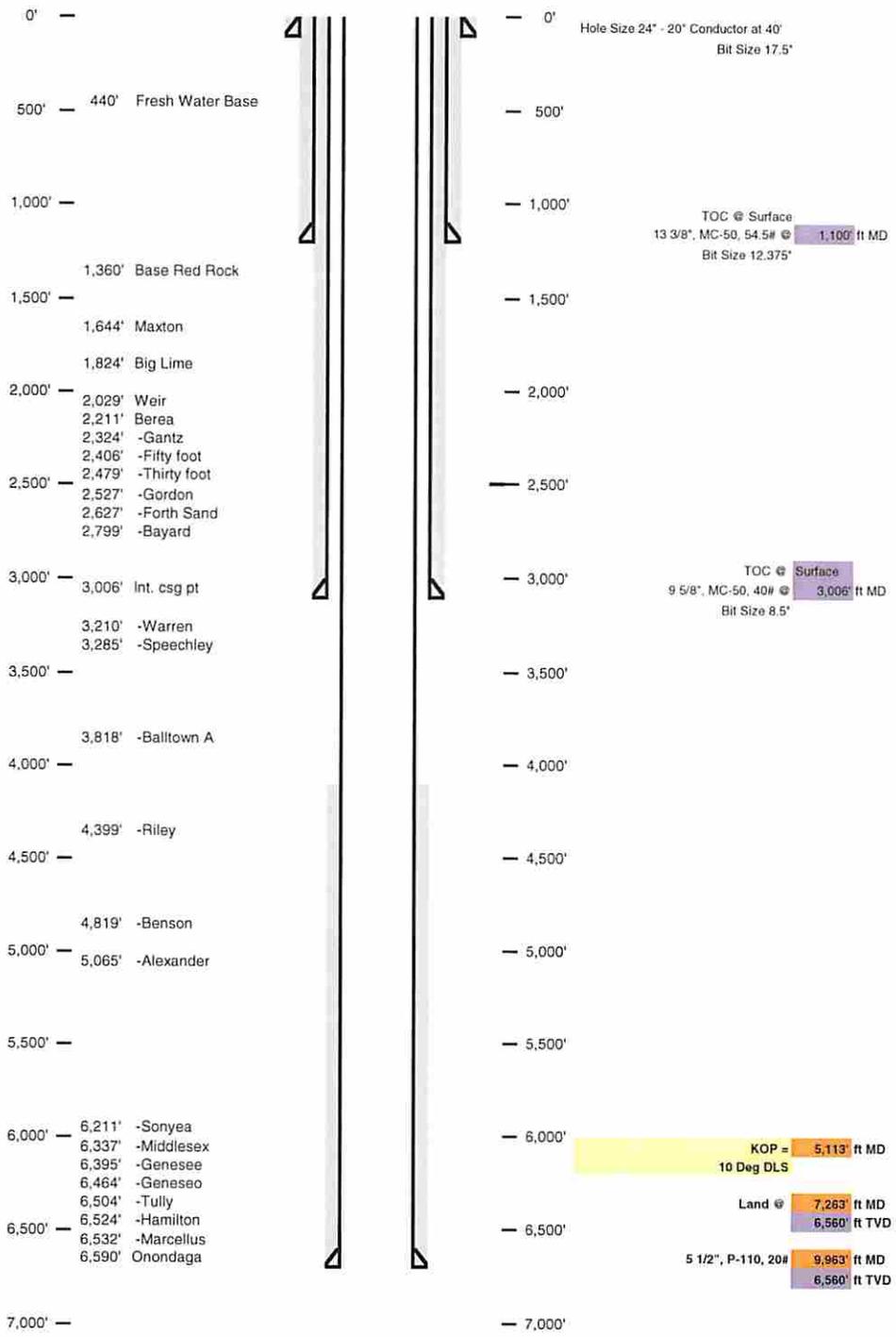
04/24/2015

Well Schematic  
EQT Production

4701706715

Well Name: 515970 (OXF153H7)  
County: Doddridge  
State: West Virginia

Elevation KB: 1152  
Target: Marcellus  
Prospect:  
Azimuth: 335  
Vertical Section: 3300



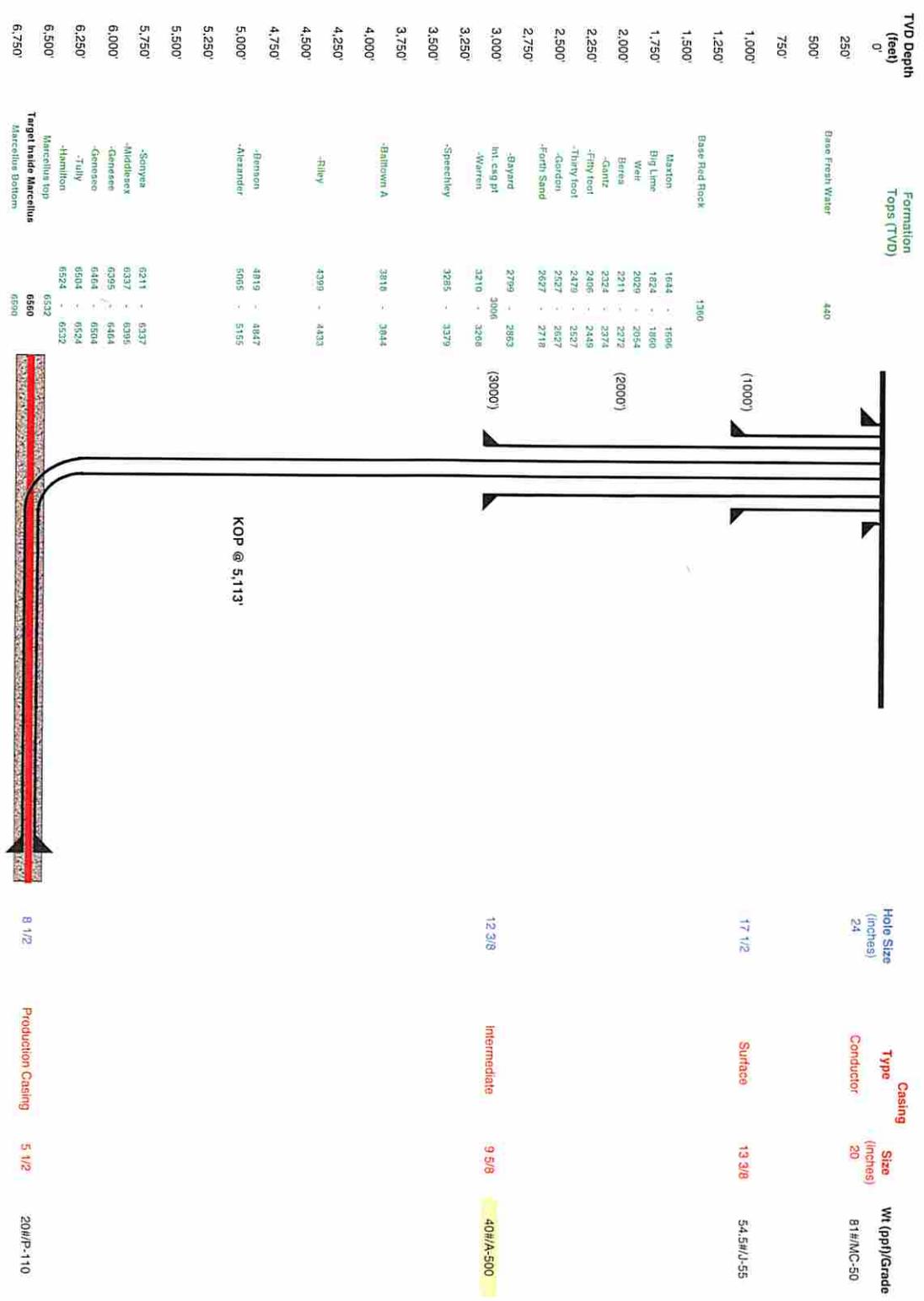
Received  
Office of Oil & Gas  
JAN 09 2015

04/24/2015

4701706715

Well 515970 (OXF153H7)  
 EOT Production  
 Oxford  
 Doddridge West Virginia

Azimuth 335  
 Vertical Section 3300



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 5113'.  
 Then kick off the horizontal leg into the Marcellus using a slick water frac.

Received  
 Office of Oil & Gas  
 JAN 09 2015

04/24/2015



WW-9

Operator's Well No. 515970

Proposed Revegetation Treatment: Acres Disturbed 11.5 Prevegetation pH 5.9

Lime 3 Tons/acre or to correct to pH 6.5

Fertilize type Granular 10-20-20

Fertilizer Amount 13 lbs/acre (500 lbs minimum)

Mulch 2 Tons/acre

Seed Mixtures

Temporary		Permanent	
Seed Type	lbs/acre	Seed Type	lbs/acre
KY-31	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: Douglas Newlin

Comments: Preseed + Mulch any disturbed areas. Install E+S to Wv Dep regulations

Title: Oil & Gas Inspector Date: 1-27-2015

Field Reviewed? ( / ) Yes ( ) No

RECEIVED  
Office of Oil and Gas

JAN 30 2015

WV Department of  
Environmental Protection

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

4701706715

**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

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JAN 09 2015

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Where energy meets innovation.™

# Site Specific Safety Plan

EQT OXF 153 Pad

Oxford

Doddridge County, WV

For Wells:

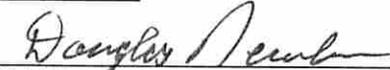
515969

515970

  
 EQT Production  
  
 Permitting Supervisor  
 Title  
12-28-14  
 Date

Date Prepared:

October 23, 2014

  
 WV Oil and Gas Inspector  
 Title

1-27-2015  
 Date

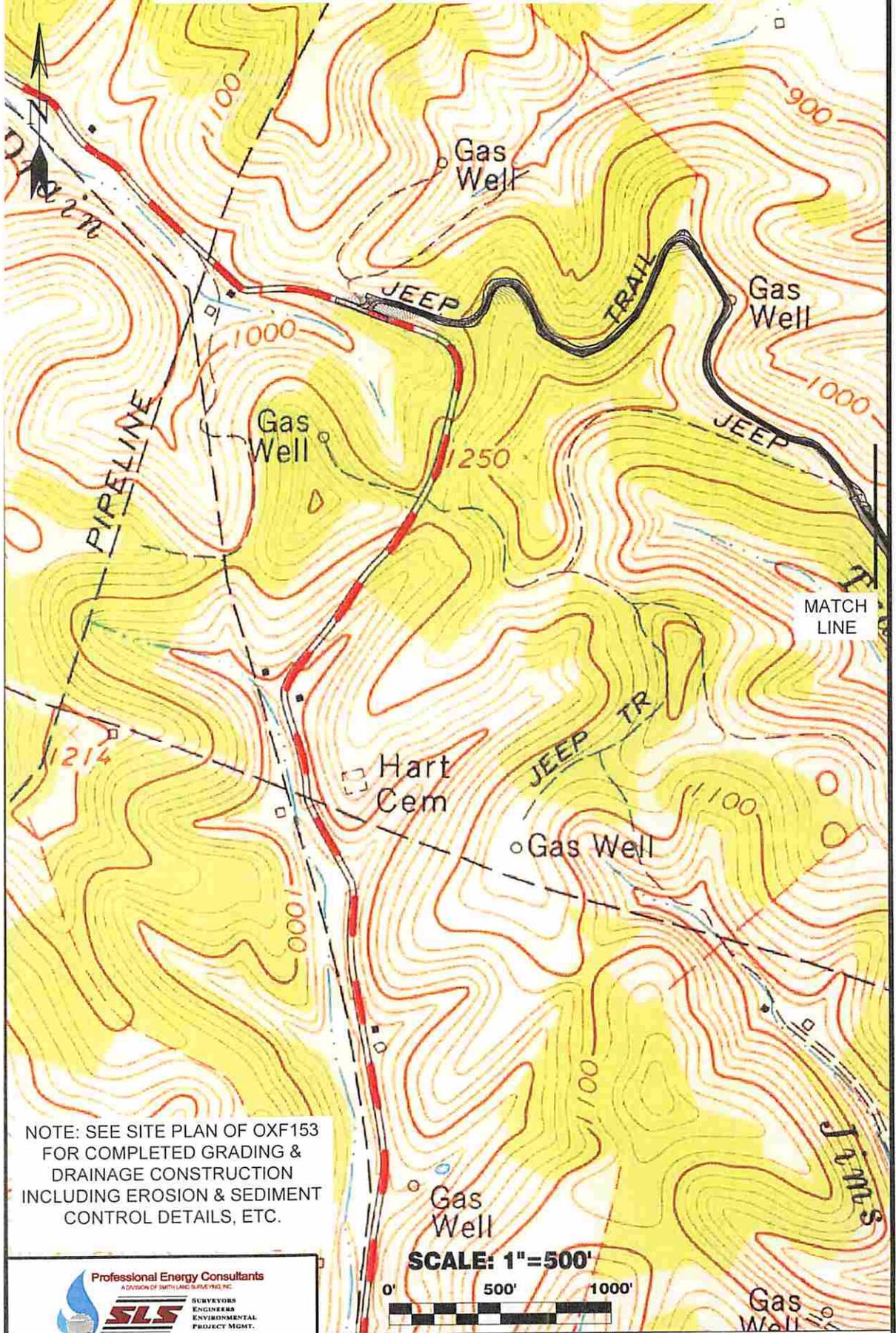
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Office of Oil and Gas

JAN 30 2015

WV Department of  
Environmental Protection

04/24/2015

# EAE/MAXWELL LEASE WELL NO.S WV 515969 & WV 515970



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Office of Oil & Gas  
JAN 09 2015

NOTE: SEE SITE PLAN OF OXF153  
FOR COMPLETED GRADING &  
DRAINAGE CONSTRUCTION  
INCLUDING EROSION & SEDIMENT  
CONTROL DETAILS, ETC.

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



**SLS**  
SURVEYORS  
ENGINEERS  
ENVIRONMENTAL  
PROJECT MGMT.

13541-HEI-8434 WWW.SLSURVEYS.COM

DRAWN BY K.D.W.	FILE NO. 7310	DATE 12-01-14	CADD FILE: 7310REC.dwg
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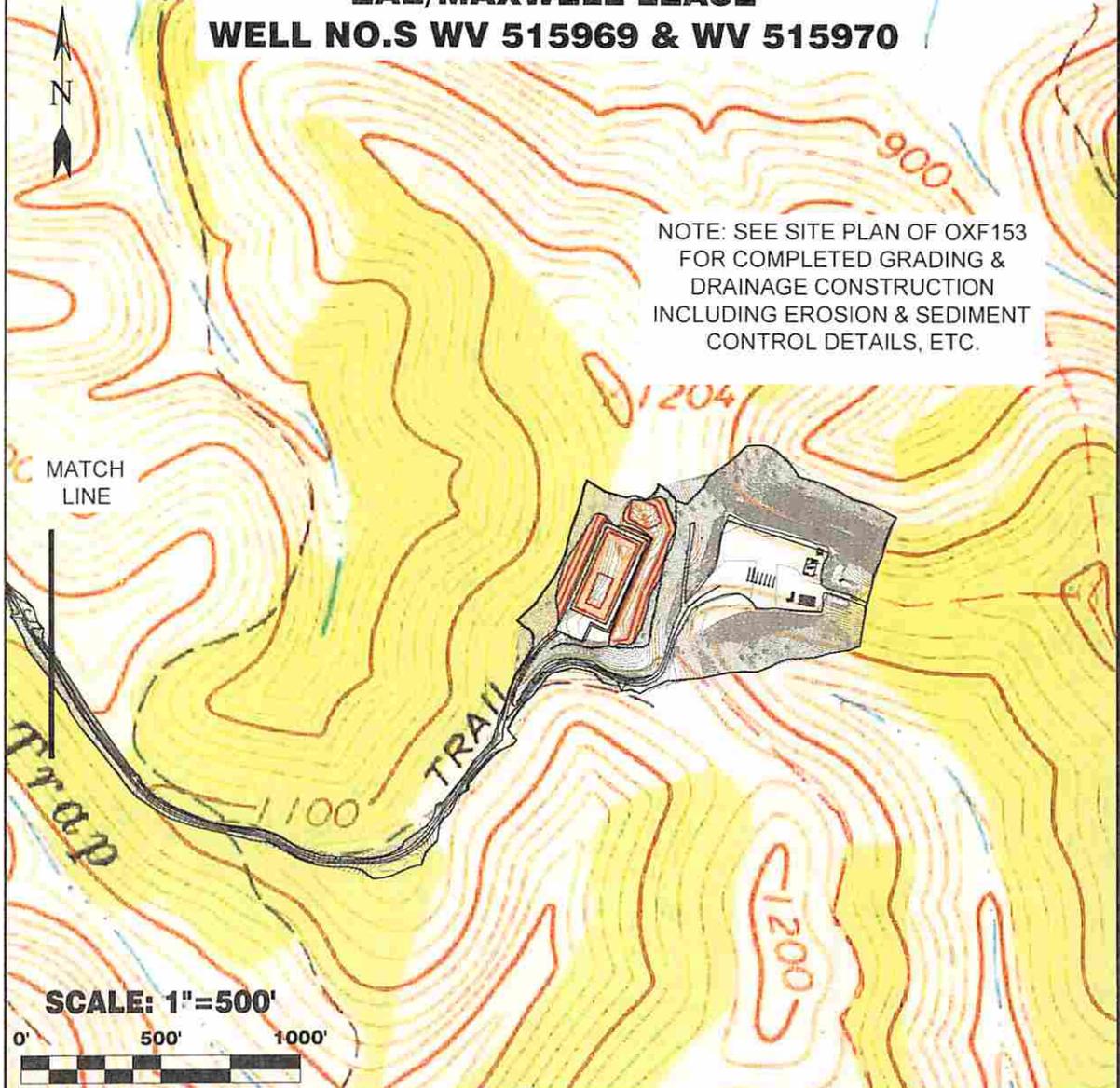
**SCALE: 1"=500'**



TOPO SECTION OF OXFORD 7.5'  
USGS TOPO QUADRANGLE

04/24/2015

# EAE/MAXWELL LEASE WELL NO.S WV 515969 & WV 515970



NOTE: SEE SITE PLAN OF OXF153 FOR COMPLETED GRADING & DRAINAGE CONSTRUCTION INCLUDING EROSION & SEDIMENT CONTROL DETAILS, ETC.

SCALE: 1"=500'

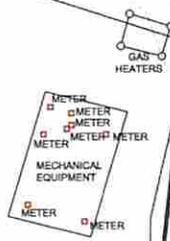


Detail Sketch for Proposed Wells WV 515969 & WV 515970

- OXF153 WELLS  
 H1-WV 512497  
 H2-WV 512498  
 H3-WV 512499  
 H4-WV 512445  
 H5-WV 512446  
 H6-WV 515969  
 H7-WV 515970

NOTES: SEE SITE PLAN OF OXF153 FOR COMPLETED GRADING & DRAINAGE CONSTRUCTION INCLUDING EROSION & SEDIMENT CONTROL DETAILS, ETC.

- H7 (WV 515970)
- H6 (WV 515969)
- H5 (WV 512446)
- H4 (WV 512445)
- H3 (WV 512499)
- H2 (WV 512498)
- H1 (WV 512497)



Received  
 Office of Oil & Gas  
 JAN 09 2015

**Professional Energy Consultants**  
 A DIVISION OF SMITH LAND SURVEYING INC.  
  
 SURVEYORS  
 ENGINEERS  
 ENVIRONMENTAL  
 PROJECT MGMT.  
 12041 HED 3438 WWW.SLSURVYS.COM

Not To Scale

TOPO SECTION OF OXFORD 7.5'  
 USGS TOPO QUADRANGLE

04/24/2015

DRAWN BY K.D.W.	FILE NO. 7310	DATE 12-01-14	CADD FILE: 7310REC.dwg
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4701706715



SMITH LAND SURVEYING, INC.

P.O. BOX 150, GLENVILLE, WV 26351

(304) 462-5634 • FAX 462-5658

WELL INFORMATION AND POTENTIAL WATER WELL SAMPLE DATA SHEET

OPERATOR: EQT Production Company
LEASE NAME AND NUMBER: OXF-153 Well Pad

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 Owner/Occupant: I.L. Morris
Address: P.O. Box 397 Glenville, WV 26351 Ph: (304)-462-5347
Field Contact Date: N/A Located: No Date Located: N/A Source: Unknown
If No, declined by who I.L. Morris Letter/Notice Date: 1st N/A 2nd N/A Certified (3rd) N/A
Comments: Tax Map 10, Parcel 2
Letter Of Refusal Signed 12/05/2014

Site: 2 Spacing 815' Owner/Occupant: EQT production company
Address: 115 Professional Place Bridgeport, WV 26330 Ph: (304)-848-0082
Field Contact Date: 12/05/2014 Located: Yes Date Located: 12/05/2014 Source: Creek
If No, declined by who Letter/Notice Date: 1st N/A 2nd N/A Certified (3rd) N/A
Comments: EQT production company is not the land owner but has requested the creek be tested.
Lat: 39.187273
Long: 80.926342

Site: 3 Spacing Owner/Occupant:
Address: Ph:
Field Contact Date: Located: Date Located: Source:
If No, declined by who Letter/Notice Date: 1st 2nd Certified (3rd)
Comments:

Site: 4 Spacing Owner/Occupant:
Address: Ph:
Field Contact Date: Located: Date Located: Source:
If No, declined by who Letter/Notice Date: 1st 2nd Certified (3rd)
Comments:

4701706715



SMITH LAND SURVEYING, INC.

P.O. BOX 150, GLENVILLE, WV 26351

(304) 462-5634 • FAX 462-5656

To Whom It May Concern:

Smith Land Surveying, Inc. of Glenville, WV has been contracted by:

EQT

To do some preliminary work for a proposed oil and gas well permit application.

Due to 1994 regulations set by the State of West Virginia Division of Environmental Protection, Department of Oil and Gas, operators are required to offer water testing for water wells or other non-public water sources that fall within 1500 feet of the proposed well. The operator is testing within 2500 feet of the well, if they are requested to do so by the resident or owner. This test will only help ensure the water quality control, which in turn benefits you as the resident or landowner.

Since your residence falls within the 2500 foot radius, you are entitled to have your potable water source(s) sampled and analyzed at an independent lab. Your lab analysis results would then be mailed to your home. This is done at no expense to you.

Please notify Smith Land Surveying immediately if you are interested in having your potable water tested. Please have this letter with you at the time of contact so that the client and well number may be referenced.

Thank you for your cooperation in this matter. I look forward to hearing from you at your earliest convenience. If you have any questions, please feel free to contact me at:

Smith Land Surveying, Inc.

Date: 12/5/14

PO Box 150

Glenville, WV 26351

Left/sent by: Daniel McKee

(304) 462-5634 (voice)

(304) 462-5656 (fax)

Well Number: OXF-153

E-Mail DMcKee@slssurveys.com

Tax Map / Parcel: 10/2

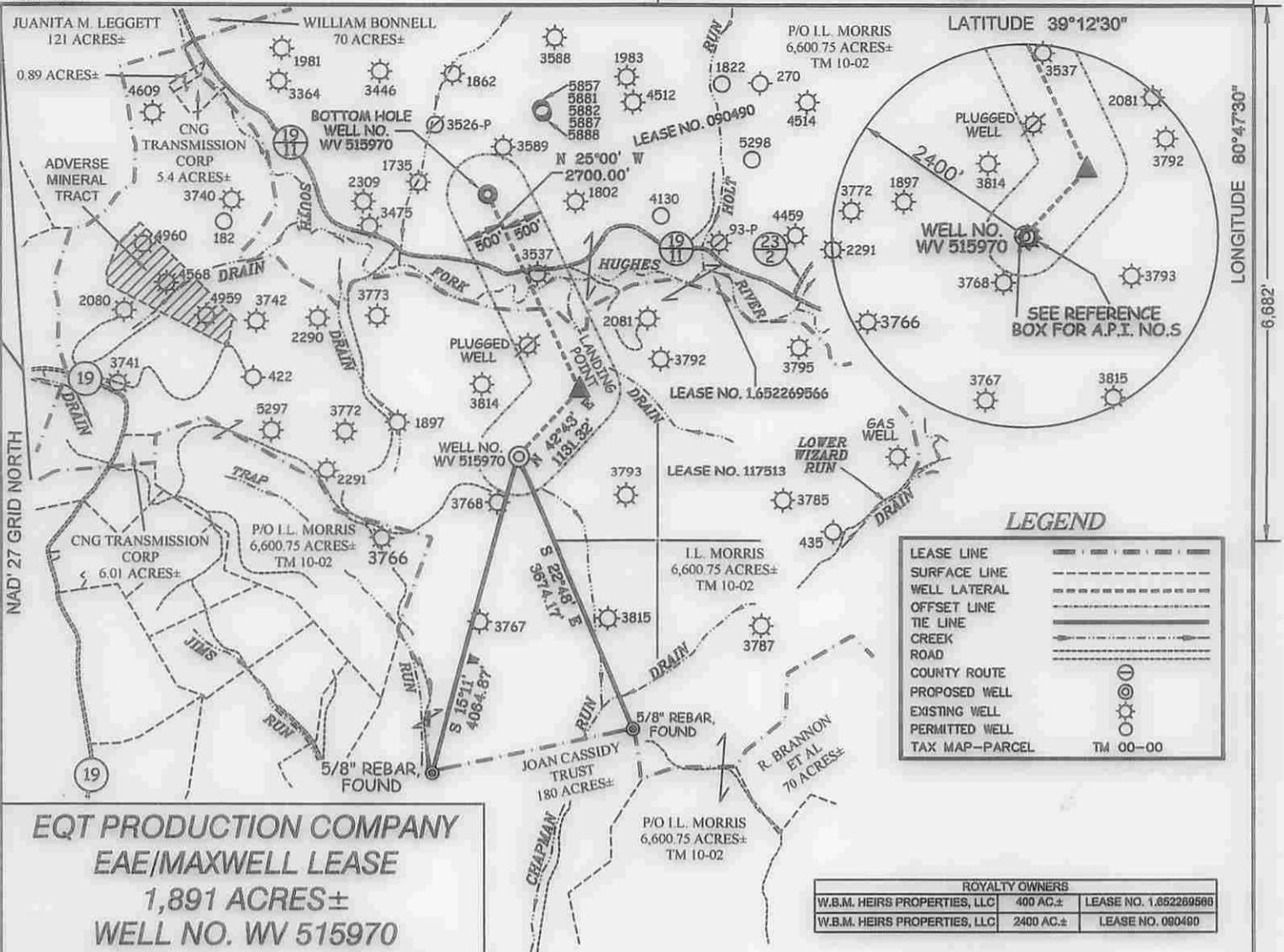
**Doddridge County, WV Southwest District**

\*If you do not have a water well or other non-public water source, please make note of it and include your name and address when you return this sheet.

If you do not feel the need to have your Water well/spring/or other non-public water source sampled, please sign on the line below and return to the above address. This will signify that a sample has been offered to the surface owner and has been declined. Please include printed name along with signature.

Signature: *D. L. Morris* Date: 12/5/14

04/24/2015



**LEGEND**

LEASE LINE	---
SURFACE LINE	----
WELL LATERAL	-----
OFFSET LINE	.....
TIE LINE	=====
CREEK	~ ~ ~ ~ ~
ROAD	==>==>==>
COUNTY ROUTE	⊙
PROPOSED WELL	⊙
EXISTING WELL	⊙
PERMITTED WELL	⊙
TAX MAP--PARCEL	TM 00--00

ROYALTY OWNERS		
W.B.M. HEIRS PROPERTIES, LLC	400 AC.±	LEASE NO. 1,652,269,566
W.B.M. HEIRS PROPERTIES, LLC	2400 AC.±	LEASE NO. 080490

**EQT PRODUCTION COMPANY  
EAE/MAXWELL LEASE  
1,891 ACRES±  
WELL NO. WV 515970**

(S.P.C. NORTH ZONE) (UTM(M) ZONE 17 NORTH)  
 NAD'27 S.P.C.(FT) N. 254,047.1 E. 1,626,496.6  
 NAD'27 GEO. LAT-(N) 39.189988 LONG-(W) 80.817781  
 NAD'83 UTM (M) N. 4,337,885.3 E. 515,751.3

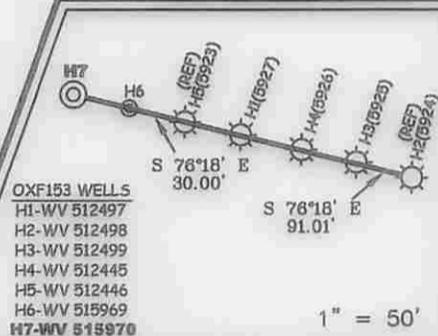
**LANDING POINT**  
 NAD'27 S.P.C.(FT) N. 254,878.4 E. 1,627,264.0  
 NAD'27 GEO. LAT-(N) 39.192301 LONG-(W) 80.815116  
 NAD'83 UTM (M) N. 4,338,142.5 E. 515,980.9

**BOTTOM HOLE**  
 NAD'27 S.P.C.(FT) N. 257,325.4 E. 1,626,122.9  
 NAD'27 GEO. LAT-(N) 39.198973 LONG-(W) 80.819269  
 NAD'83 UTM (M) N. 4,338,882.1 E. 515,620.8

**NOTES ON SURVEY**

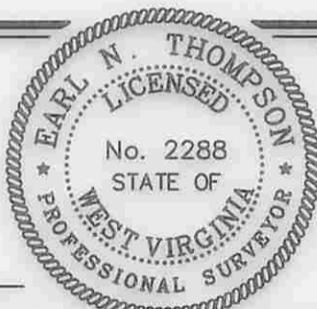
- NO WATER WELLS WERE FOUND WITHIN 250' OF PROPOSED GAS WELL. NO AGRICULTURAL BUILDINGS ≥ 2500 SQ. FT. OR DWELLINGS WERE FOUND WITHIN 625' OF THE CENTER OF PROPOSED WELL PAD.
- COUNTY ROUTE 19/11 IN THIS AREA APPEARS TO BE PART OF THE SALEM-HARRISVILLE TURNPIKE, A STRIP OF GROUND CLAIMED IN FEE BY THE WVDOT. SLS RECOMMENDS ANY LEGAL/LEASING PROCEDURES NEEDED TO BE COMPLETED PRIOR TO DRILLING.

**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. *Earl N. Thompson*  
 2288



(+) DENOTES LOCATION OF WELL ON UNITED STATES TOPOGRAPHIC MAPS.  
 DATE DECEMBER 1, 20 14  
 REVISED DECEMBER 29, 20 14  
 OPERATORS WELL NO. WV 515970  
 API WELL NO. 47-017-06715  
 STATE COUNTY PERMIT

MINIMUM DEGREE OF ACCURACY 1/200 FILE NO. 7310P515970R  
 HORIZONTAL & VERTICAL CONTROL DETERMINED BY DGPS (SURVEY GRADE TIE TO CORS NETWORK) SCALE 1" = 2000'

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

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

LOCATION: ELEVATION 1139(GROUND)1141'(PROPOSED) WATERSHED CHAPMAN RUN OF SOUTH FORK HUGHES RIVER  
 DISTRICT SOUTHWEST COUNTY DODDRIDGE QUADRANGLE OXFORD 7.5'

SURFACE OWNER I.L. MORRIS ACREAGE 6,600.75±  
 ROYALTY OWNER W.B.M. HEIRS PROPERTIES, LLC ACREAGE 1,891± **04/24/2015**

PROPOSED WORK: LEASE NO. 117513  
 DRILL  CONVERT  DRILL DEEPER  REDRILL  FRACTURE OR STIMULATE  PLUG OFF OLD FORMATION   
 PERFORATE NEW FORMATION  PLUG AND ABANDON  CLEAN OUT AND REPLUG  OTHER   
 PHYSICAL CHANGE IN WELL (SPECIFY) \_\_\_\_\_ TARGET FORMATION MARCELLUS  
 ESTIMATED DEPTH TVD 6,532'

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

COUNTY NAME PERMIT

WW-6A1  
(5/13)

Operator's Well No. \_\_\_\_\_

515970

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

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

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

Lease Name or Number	Grantor, Lessor, etc.	Grantee, Lessee, etc.	Royalty	Book/Page
<u>117513</u>			Min 1/8 pd	
	William Brent Maxwell, et al	Pittsburgh & West Virginia Gas Co.		LB37/48
	Pittsburgh & West Virginia Gas Co.	Equitable Gas Co.		DB216/457
	Equitable Gas Company	Equitrans, Inc.		DB468/325
	Equitrans, Inc.	Equitable Production-Eastern States, Inc.		DB639/599
	Equitable Production-Eastern States, Inc.	Equitable Production Company		CB281/346
	Equitable Production Company	EQT Production Company		CB281/346
<u>1.652269566</u>				
	William Brent Maxwell, Jr., et al	Consolidated Gas Supply Corp.		LB103/206
	Consolidated Gas Supply Corp.	Consolidated Gas Transmission Corp.		LB315/583
	Consolidated Gas Transmission Corp.	CNG Development Co.		LB139/41
	CNG Development Co.	CNG Producing Co.		CB1096/124 (Delaware)
	CNG Producing Co.	Dominion Exploration & Production, Inc.		CB82/07 (Delaware)
	Dominion Exploration & Production, Inc.	EQT Production Co.		LB322/391
<u>090490</u>				
	William Brent Maxwell, et al	Carter Oil Co.		LB14/376
	Carter Oil Co.	Hope Natural Gas Co.		LB42/410
	Hope Natural Gas Co.	Consolidated Gas Supply Corp.		DB143/345
	Consolidated Gas Supply Corp.	Consolidated Gas Transmission Corp.		LB135/583
	Consolidated Gas Transmission Corp.	UMC Petroleum Corp.		DB167/416
	UMC Petroleum Corp.	Ashland Exploration, Inc.		DB227/252
	Ashland Exploration, Inc.	Blazer Energy Corp.		LB181/412
	Blazer Energy Corp.	Eastern States Oil & Gas Inc.		LB182/96
	Eastern States Oil & Gas Inc.	Equitable Production Company		CB281/346
	Equitable Production Company	EQT Production Company		CB281/346

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.

Received  
Office of Oil & Gas  
JAN 09 2015

04/24/2015

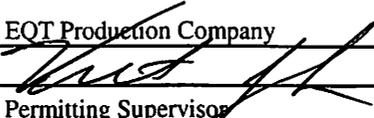
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**Acknowledgement of Possible Permitting/Approval  
In Addition to the Office of Oil and Gas**

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

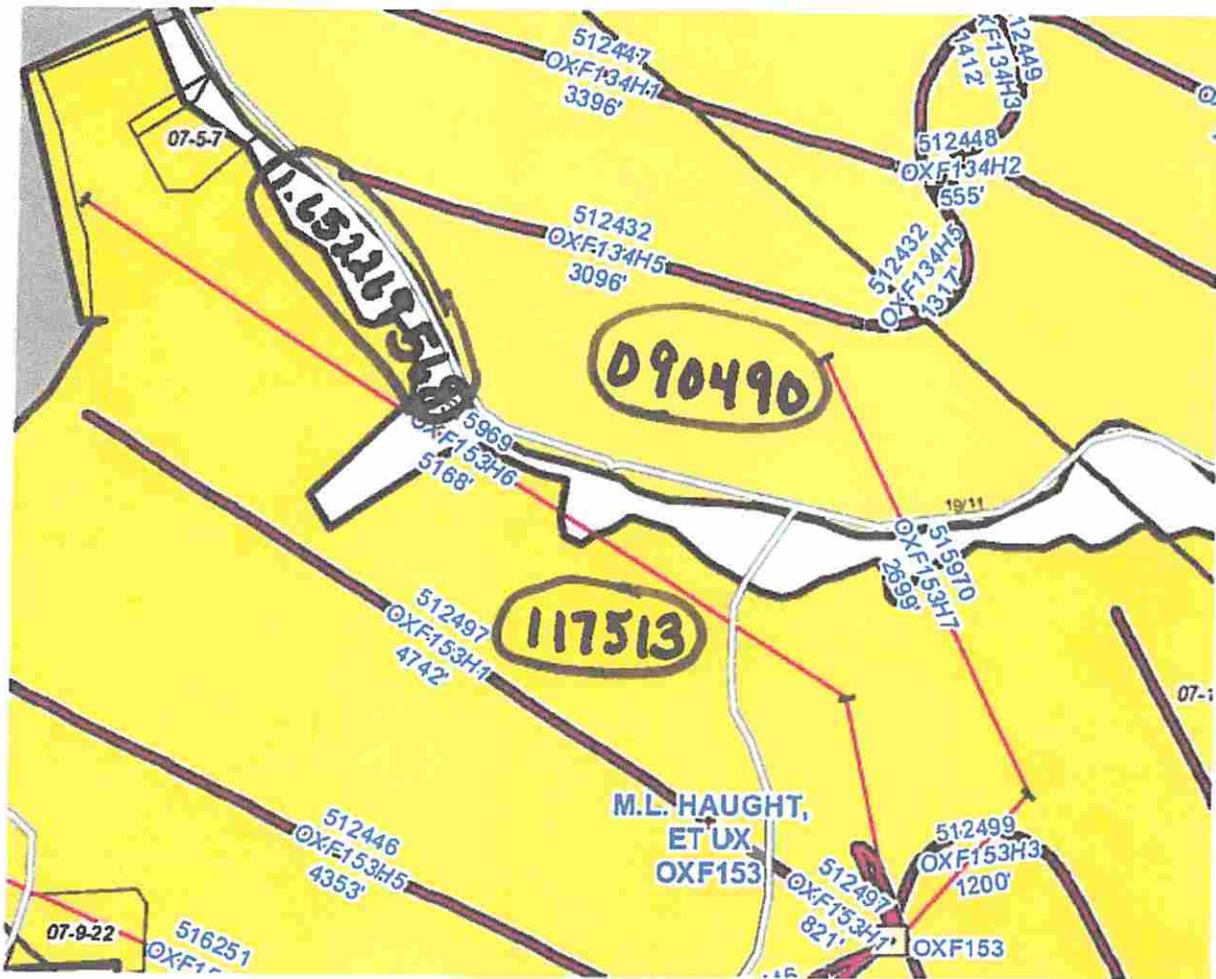
The applicant further acknowledges that any Office of Oil and Gas permit in no way overrides, replaces, or nullifies the need for other permits/approvals that may be necessary and further affirms that all needed permits/approvals should be acquired from the appropriate authority before the affected activity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

Well Operator: EQT Production Company  
 By:   
 Its: Permitting Supervisor

Office of Oil & Gas

JAN 09 2015

04/24/2015



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

Date of Notice Certification: 1-9-15

API No. 47 - 017 - 0  
Operator's Well No. 515970  
Well Pad Name: OXF153

**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>515,751.30</u>
County: <u>Doddridge</u>	UTM NAD 83 Northing: <u>4,337,885.30</u>
District: <u>Southwest</u>	Public Road Access: <u>19/11</u>
Quadrangle: <u>Oxford 7.5</u>	Generally used farm name: <u>I L Morris</u>
Watershed: <u>Chapman Run of South Fork Hughes River</u>	

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

Pursuant to West Virginia Code § 22-6A, the Operator has attached proof to this Notice Certification that the Operator has properly served the required parties with the following:

\*PLEASE CHECK ALL THAT APPLY

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

Received  
Office of Oil & Gas  
JAN 09 2015

**OOG OFFICE USE ONLY**

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

**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.

04/24/2015

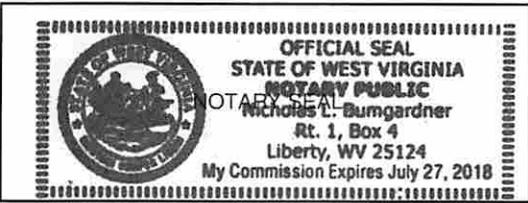
4701706715

**Certification of Notice is hereby given:**

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

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

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



Subscribed and sworn before me this 29 day of DECEMBER, 2014

*[Signature]* Notary Public  
My Commission Expires 7/27/2018

**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).

Received  
Office of Oil & Gas  
JAN 09 2015

04/24/2015

WW-6A  
(9-13)

API NO. 47 - 017 - 0  
OPERATOR WELL NO. 515970  
Well Pad Name: OXF153

4701706715

**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: 1-9-15 Date Permit Application Filed: 1-9-15

**Notice of:**

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

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

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

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

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

SURFACE OWNER(s)  
Name: I. L. (Ike) Morris  
Address: P.O. Box 397  
Glenville, WV 26351  
0

COAL OWNER OR LESSEE  
Name: I. L. (Ike) Morris  
Address: P.O. Box 397  
Glenville, WV 26351  
0

See attached for additional coal owners.

Name: 0  
Address: 0  
0  
0

COAL OPERATOR  
Name: 0  
Address: 0  
0  
0

SURFACE OWNERS(s) (Road and/or Other Disturbance)  
Name: I. L. (Ike) Morris  
Address: P.O. Box 397  
Glenville, WV 26351  
0

SURFACE OWNER OF WATER WELL AND/OR WATER PURVEYOR(s)  
Name: I. L. (Ike) Morris  
Address: P.O. Box 397  
Glenville, WV 26351  
0

Name: 0  
Address: 0  
0  
0

SURFACE OWNER(s) (Impoundments/Pits)  
Name: I. L. (Ike) Morris  
Address: P.O. Box 397  
Glenville, WV 26351  
0

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

Office of Oil & Gas  
IAN 09 2015

\*Please attach additional forms if necessary

04/24/2015

4701706715

WW6-A

**Additional Coal Owners:**

WBM Heirs Properties, LLC  
P.O. Box 2395  
Buckhannon, WV 26201

L.E. Sawyer Jr  
aka Logan E Sawyer Jr  
P.O. Box 584  
Midland, TX 79702

Office of Oil & Gas

JAN 09 2015

04/24/2015

**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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WW-6A  
(8-13)

API NO. 47 - 017 - 0  
OPERATOR WELL NO. 515970  
Well Pad Name: OXF153

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

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

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WW-6A  
(8-13)

API NO. 47 - 017 - 0  
OPERATOR WELL NO. 515970  
Well Pad Name: OXF153

**Time Limits and Methods for Filing Comments.**

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

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

**Comment Requirements**

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

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

**Permit Denial or Condition**

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

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

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

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

Office of Oil & Gas

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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.

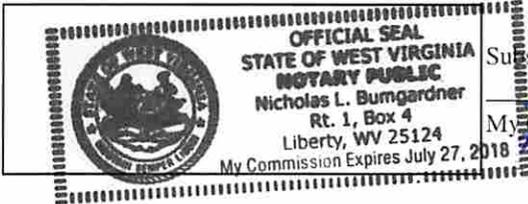
I certify under penalty of law that I have personally examined and am familiar with the information submitted on this application form and all attachments, and that based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true,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

*Victoria Roark*  
By: Victoria Roark

Its: Permitting Supervisor

Subscribed and sworn before on 29 day of DECEMBER 2014  
Notary Public

My Commission Expires 7/27/2018



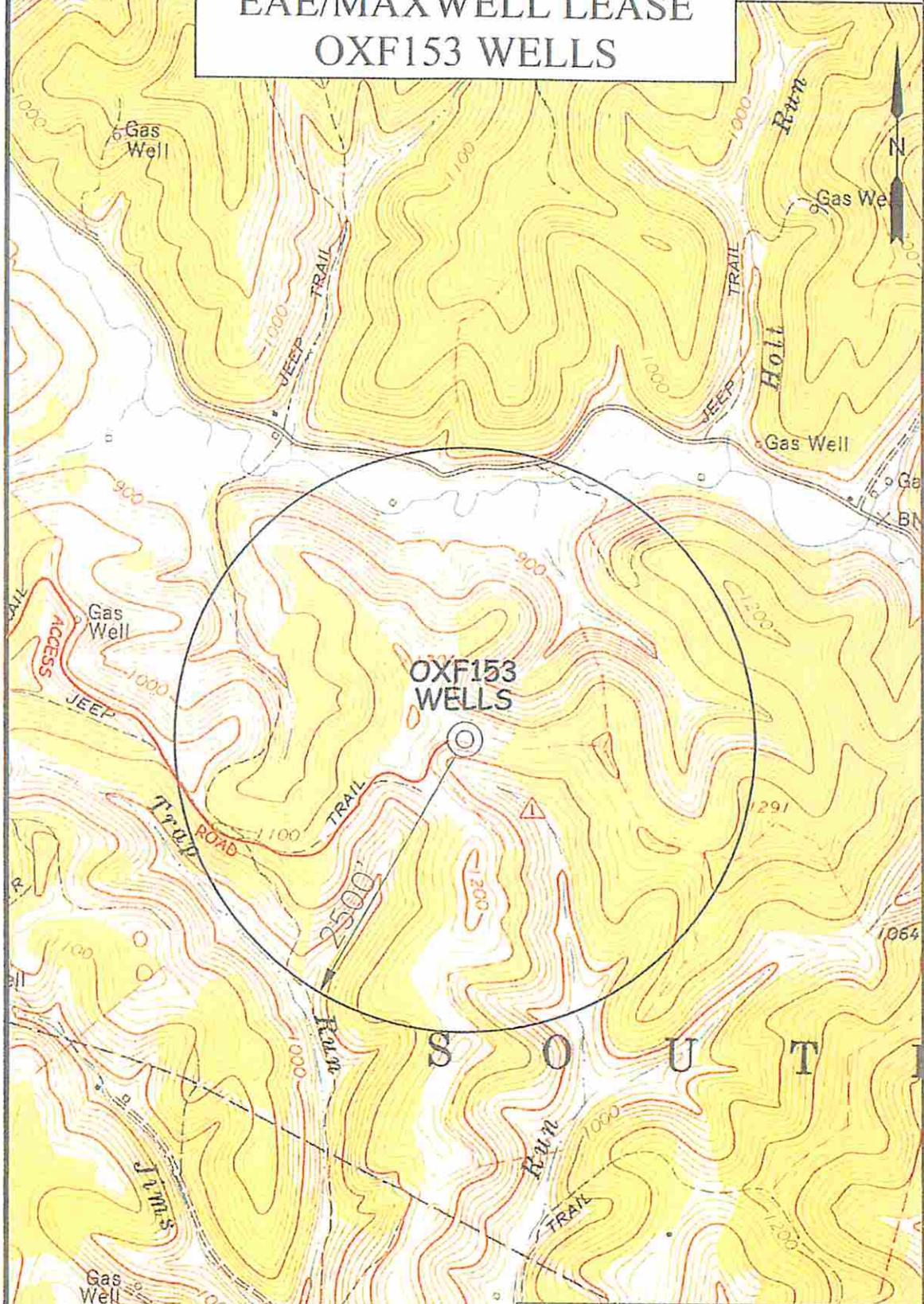
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WATER SAMPLES

# EAE/MAXWELL LEASE OXF153 WELLS

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▲ NAD83  
LAT: 39.187273  
LONG: 80.926342

SCALE: 1-INCH=1000-FEET



**Professional Energy Consultants**  
 **SLS**  
 SURVEYING  
ENGINEERING  
ENVIRONMENTAL  
PROJECT MGMT.

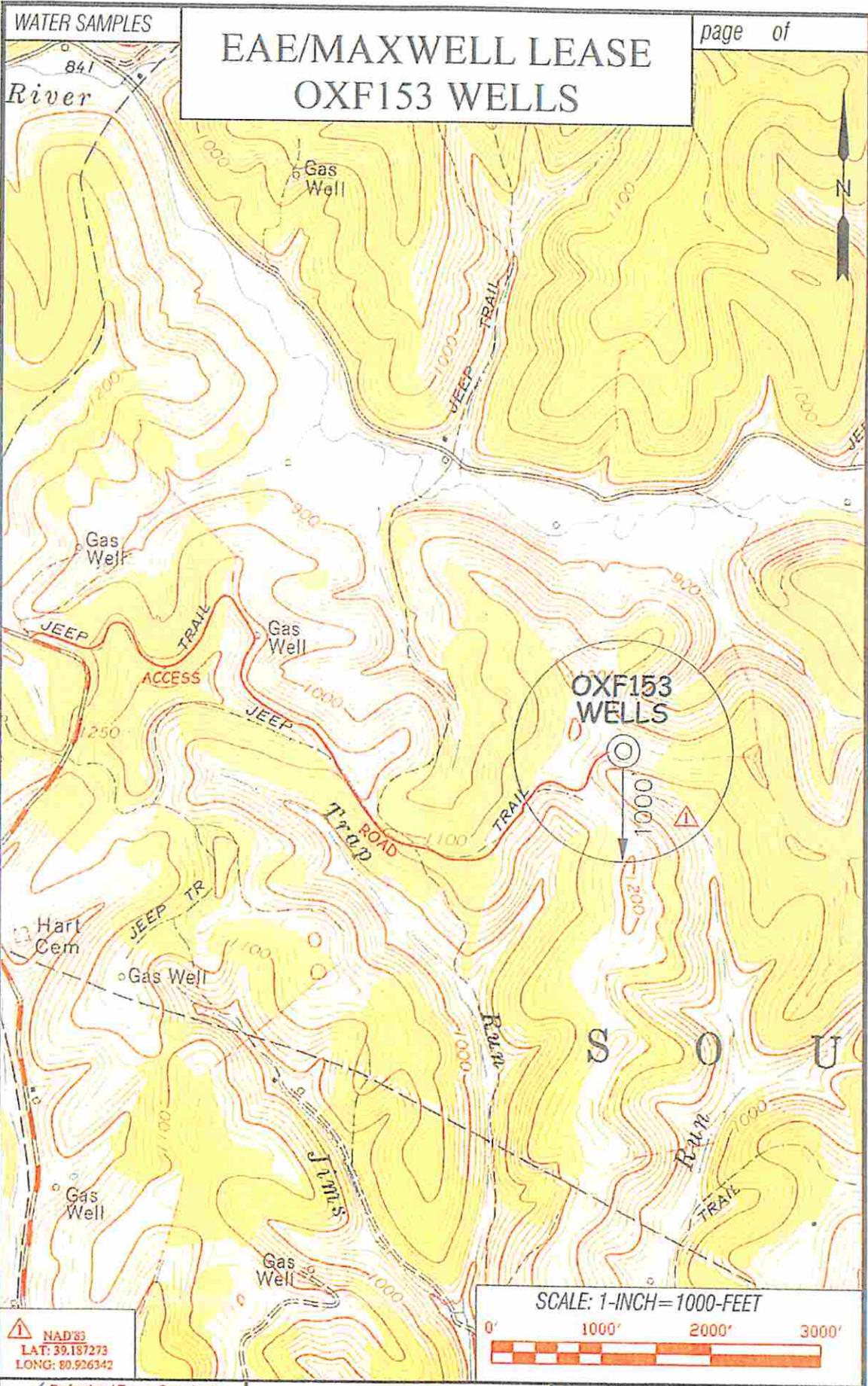
DRAWN BY: K.D.W. FILE NO: 7310 DATE: 12/XX/14 CADD FILE: 73100715195.dwg

TOPO SECTION OF:  
OXFORD, WV 7.5' QUAD

DISTRICT	COUNTY	TAX MAP-PARCEL NO.
SOUTH WEST	DODDRIDGE	10-02

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

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OXF153 WELLS

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NAD'83  
LAT: 39.187273  
LONG: 80.926342

Professional Energy Consultants  
SURVEYORS  
ENGINEERS  
ENVIRONMENTAL  
PROJECT MGMT.

**SLS**

TOPO SECTION OF:  
OXFORD, WV 7.5' QUAD

DISTRICT	COUNTY	TAX MAP-PARCEL NO.
SOUTH WEST	DODDRIDGE	10-02

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

DRAWN BY K.D.W.	FILE NO. 7310	DATE 12/05/14	CADD FILE: 731000152002.dwg
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04/24/2015

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

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

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

**Date of Notice:** 12/5/2014 **Date Permit Application Filed:** 12/15/14

**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: I. L. (Ike) Morris Name: \_\_\_\_\_ 0  
Address: P.O. Box 397 Address: \_\_\_\_\_ 0  
Glenville, WV 26351 \_\_\_\_\_ 0

**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: WV UTM NAD 83 Easting 515,751.30  
County: Doddridge Northing 4,337,885.30  
District: Southwest Public Road Access: 19/11  
Quadrangle: Oxford 7.5 Generally used farm name: I L Morris  
Watershed: Chapman Run of South Fork Hughes River

**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)

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**Notice is hereby given by:**

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

04/24/2015

WW-6A5  
(1/12)Operator Well No. 515970

**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:** 1-9-15 **Date Permit Application Filed:** 1-9-15

**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: I. L. (Ike) Morris  
Address: P.O. Box 397  
Glennville, WV 26351

Name: \_\_\_\_\_ 0  
Address: \_\_\_\_\_ 0  
\_\_\_\_\_ 0

**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>515,751.300000</u>
County:	<u>Doddridge</u>		Northing:	<u>4,337,885.300000</u>
District:	<u>Southwest</u>	Public Road Access:		<u>19/11</u>
Quadrangle:	<u>Oxford 7.5</u>	Generally used farm name:		<u>I L Morris</u>
Watershed:	<u>Chapman Run of South Fork Hughes River</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).

Well Operator:	<u>EQT Production Company</u>	Address:	<u>115 Professional Place, P.O. Box 280</u>
Telephone:	<u>304-848-0082</u>		<u>Bridgeport, WV 26330</u>
Email:	<u>vroark@eqt.com</u>	Facsimile:	<u>304-848-0040</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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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

March 12, 2015

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

Subject: DOH Permit for the OXF153 Well Site, Doddridge County

515969 OXF153H6                      515970 OXF153H7

Dear Mr. Martin,

This well site will be accessed from Permit # 04-2015-0149 which has been applied for by EQT Production Company for access to the State Road for a well pad located off of County Rt. 19 SLS in Doddridge County.

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

Very Truly Yours,

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

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MAR 16 2015

WV Department of  
Environmental Protection

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

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

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

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# EQT OXF 153 MODIFICATION SITE PLAN

## EQT PRODUCTION COMPANY (PROPOSED WELL NO. WV515969 (H6), WV515970 (H7), WV516239 (H8), AND WV516251 (H9))

### SITUATE ON THE WATERS OF UNNAMED TRIBUTARIES TO SOUTH FORK HUGHES RIVER; TRAP RUN, AND CHAPMAN RUN IN SOUTHWEST DISTRICT, DODDRIDGE COUNTY, WV

**PROJECT INFORMATION**

PROJECT NAME: EQT OXF 153  
 TAX PARCELS: DISTRICT, DODDRIDGE COUNTY, WV  
 TAX MAP: 10  
 SURFACE OWNERS:  
 SOUTHWEST DISTRICT, WV  
 TAX MAP: 10 PARCELS 2  
 TOTAL PROPERTY AREA: 6,626.74 ACRES  
 TOTAL DISTURBANCE AREA: 168.44 ACRES  
 OIL AND GAS JOINTALTY OWNER:  
 W.M. HERS PROPERTIES, LLC (1.8M +/- ACRES)  
 DODDRIDGE COUNTY, WV

**LOCATION COORDINATES**  
 EQT OXF 153 WELL PAD CENTER  
 CENTER POINT: 39 19 20.50 N 100 00 00.00 W (NAD 83)  
 CENTER POINT: 39 19 20.50 N 100 00 00.00 W (NAD 83)  
 CENTER POINT: 39 19 20.50 N 100 00 00.00 W (NAD 83)  
 EQT OXF 153 ACCESS ROAD AT CR 19  
 CENTER POINT: 39 19 24.58 N 100 00 00.00 W (NAD 83)  
 CENTER POINT: 39 19 24.58 N 100 00 00.00 W (NAD 83)

**GENERAL DESCRIPTION**

THE DEVELOPMENT OF INDIVIDUAL GAS WELLS, PONDING, OR RESEVCOBS WITHIN 100 FEET OF THE PROJECT L.O.D. THERE ARE NO WETLANDS WITHIN 300 FEET OF THE PAD AND L.O.D. THERE ARE NO NATURALLY PRODUCING TRIBUTARY STREAMS WITHIN 200 FEET OF THE WELLS OR DRILLED, STAFFED AND SMITH LAND SURVEY OR ADDITIONAL CONSTRUCTION MEASURES DEVELOPED BEYOND THOSE STIPULATED IN THE PERMIT. 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.

**SITE DISTURBANCE COMPUTATIONS**

WELL PAD CORNER POINT AREA = 11.9 +/- ACRES  
 ACCESS ROAD = 6.7 +/- ACRES  
 TOTAL SITE DISTURBANCE AREA = 18.6 +/- ACRES

**ENTRANCE PERMIT**

EQT PRODUCTION COMPANY WILL OBTAIN AN ENTRANCE PERMIT FROM THE WEST VIRGINIA DEPARTMENT OF TRANSPORTATION DIVISION OF HIGHWAYS, PRIOR TO START OF THE PROJECT.

**MISS UTILITY STATEMENT**

MISS UTILITY OF WEST VIRGINIA WAS NOTIFIED FOR THE LOCATING OF UTILITIES PRIOR TO THIS PROJECT DESIGN, TICKET #415309316. IN ADDITION, MISS UTILITY WILL BE CONTACTED PRIOR TO START OF THE PROJECT.

**ENVIRONMENTAL NOTES**

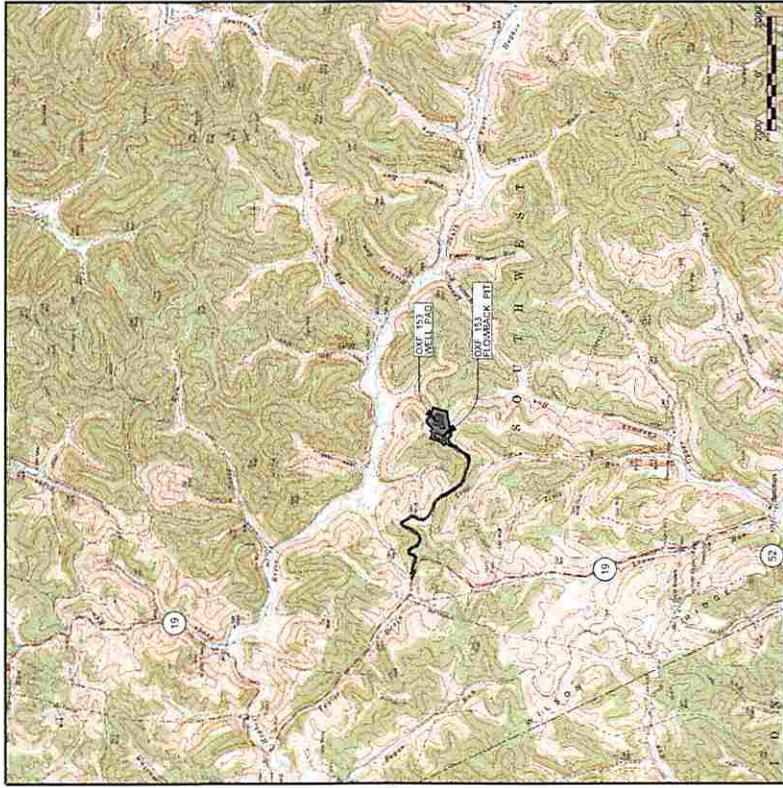
A WETLAND DELINEATION WAS PERFORMED BY POTLETT & ASSOCIATES, INC. ON 12/20/14 TO REVIEW THE SITE FOR WATERS AND WETLANDS THAT ARE MOST LIKELY WITHIN THE REGULATORY JURISDICTION OF THE U.S. ARMY CORPS OF ENGINEERS, USACE, AND THE U.S. ENVIRONMENTAL PROTECTION AGENCY, USEPA. THE RESULTS OF THE FIELD DELINEATION, THE REPORT DOES NOT IN ANY WAY, GUARANTEE THE ACCURACY OF THE DELINEATION. THE DELINEATION WAS PERFORMED BY WETLANDS WHICH MAY BE REGULATED BY THE USEPA OR THE USACE. IT IS STRONGLY RECOMMENDED THAT THE APPROPRIATE AGENCIES BE CONSULTED IN AN EFFORT TO OBTAIN WRITTEN COMMENTARY ON THE DELINEATION DESCRIBED BY THIS REPORT. THE DEVELOPER SHALL OBTAIN THE APPROPRIATE PERMITS FROM THE FEDERAL AND/OR STATE REGULATORY AGENCIES PRIOR TO ANY PROPOSED IMPACTS TO WATERS OF THE U.S., INCLUDING WETLAND FILLS AND STREAM CROSSINGS.

**GEOTECHNICAL NOTES**

SOILS AND ROCKS DATA WAS NOT OBTAINED AS OF 01/01/15. THE ENGINEER AND SURVEYOR ARE NOT RESPONSIBLE FOR UNFORESEEN SUBSURFACE IRREGULARITIES CAUSING ADDITIONAL WORK OR ADDITIONAL CONSTRUCTION MEASURES REQUIRED BEYOND THOSE STIPULATED IN THE PERMIT. THE DEVELOPER SHALL OBTAIN ANY OTHER GEOTECHNICAL CONSULTATIONS ENLIGHTENED DURING CONSTRUCTION.

**RESTRICTIONS NOTES**

1. THERE ARE INTERMITTENT PERENNIAL STREAMS, LAKES, PONDS, OR RESEVCOBS WITHIN 100 FEET OF THE PROJECT L.O.D. THERE ARE NO WETLANDS WITHIN 100 FEET OF THE L.O.D.
2. THERE ARE NO NATURALLY PRODUCING TRIBUTARY STREAMS WITHIN 300 FEET OF THE PAD AND L.O.D.
3. THERE ARE NO KNOWN EXISTING WATER WELLS OR DRILLED SPRINGS WITHIN 200 FEET OF THE WELLS OR DRILLED, STAFFED AND SMITH LAND SURVEY OR ADDITIONAL CONSTRUCTION MEASURES DEVELOPED BEYOND THOSE STIPULATED IN THE PERMIT.
4. THERE ARE NO KNOWN EXISTING WATER WELLS OR DRILLED SPRINGS WITHIN 200 FEET OF THE WELLS OR DRILLED, STAFFED AND SMITH LAND SURVEY OR ADDITIONAL CONSTRUCTION MEASURES DEVELOPED BEYOND THOSE STIPULATED IN THE PERMIT.
5. THERE ARE NO AGRICULTURAL BUILDINGS LARGER THAN 2,000 SQUARE FEET WITHIN 625 FEET OF THE CENTER OF THE PAD.
6. THERE ARE NO AGRICULTURAL BUILDINGS LARGER THAN 2,000 SQUARE FEET WITHIN 625 FEET OF THE CENTER OF THE PAD.



MISS (M) OF WEST VIRGINIA  
 1525-A-24-14A  
 (SECTION 116, CHAPTER 24C)  
 REVISOR: 01/01/15  
 REVISIONS THAT YOU WILL FIND  
 IN THIS STATE OF WEST VIRGINIA  
 IT'S THE LAST!



SHEET NO.	DESCRIPTION
1	TITLE SHEET
2	GENERAL NOTES
3	OVERALL PLAN SHEET INDEX
4-8	ACCESS ROAD AND WELL SITE LAYOUT
9-14	WELL PAD AND FLOWBACK PIT SECTIONS
15-17	ACCESS ROAD PROFILES
18-27	ACCESS ROAD SECTIONS AND TYPICAL SECTION
28-27	RECLAMATION PLAN
28-32	CONSTRUCTION DETAILS
33	CONSTRUCTION QUANTITIES

**LEGEND**

EX. INDEX CONTOUR	PROP. INDEX CONTOUR
EX. INTERMEDIATE CONTOUR	PROP. INTERMEDIATE CONTOUR
EX. BOUNDARY LINE	PROP. CUT LINE
EX. EDGE OF ROAD PAVEMENT	PROP. FILL LINE
EX. GUARDRAIL	PROP. LIMITS OF DISTURBANCE
EX. FENCELINE	ENVIRONMENTAL ASSESSMENT
EX. GATE	PROP. WELL HEAD
EX. OVERHEAD UTILITY	PROP. CONTAINMENT BERM
EX. UTILITY W/LE	PROP. ROAD CENTERLINE
EX. CITY W/LE	PROP. CULVERT
EX. TELEPHONE W/LE	PROP. RIP-RAP OUTLET PROTECTION
EX. GAS W/LE	PROP. COMPOST FILTERCOCK
EX. WATERLINE	PROP. ROCK CONSTRUCTION ENHANCE
EX. WATER WELL	X-SECTION GRID INDEX
EX. GAS WELL	X-SECTION PROPOSED GRADE
EX. TREE LINE	X-SECTION EXISTING GRADE
EX. REFERENCE TREE	PROP. PERIMETER SAFETY FENCE
EX. DELINEATED STREAM	PROP. ACCESS GATE WITH EMERGENCY LIFELINE
EX. DELINEATED WETLAND	
EX. BUILDING	
EX. UTILITY	



THE ENGINEERING PROFESSIONAL ENGINEER  
 STATE OF WEST VIRGINIA  
 401 PRODUCTION COMPANY  
 DODDRIDGE COUNTY, WV

DATE: 03/23/15  
 SCALE: AS SHOWN  
 DESIGNED BY: JAR  
 FILE NO.: 15-0151  
 SHEET: 1 OF 33  
 REV: 02/27/15

