



west virginia department of environmental protection

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

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

Friday, December 30, 2016
WELL WORK PERMIT
Horizontal 6A / New Drill


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

Re: Permit approval for 516722
47-017-06785-00-00

This well work permit is evidence of permission granted to perform the specified well work at the location described on the attached pages and located on the attached plat, subject to the provisions of Chapter 22 of the West Virginia Code of 1931, as amended, and all rules and regulations promulgated thereunder, and to any additional specific conditions and provisions outlined in the pages attached hereto. Notification shall be given by the operator to the Oil and Gas Inspector at least 24 hours prior to the construction of roads, locations, and/or pits for any permitted work. In addition, the well operator shall notify the same inspector 24 hours before any actual well work is commenced and prior to running and cementing casing. Spills or emergency discharges must be promptly reported by the operator to 1-800-642-3074 and to the Oil and Gas Inspector.

Please be advised that form WR-35, Well Operators Report of Well Work is to be submitted to this office within 90 days of completion of permitted well work, as should form WR-34 Discharge Monitoring Report within 30 days of discharge of pits, if applicable. Failure to abide by all statutory and regulatory provisions governing all duties and operations hereunder may result in suspension or revocation of this permit and, in addition, may result in civil and/or criminal penalties being imposed upon the operators.

Per 35 CSR 4-5.2.g this permit will expire in two (2) years from the issue date unless permitted well work is commenced. If there are any questions, please feel free to contact me at (304) 926- 0450.


James A. Martin
Chief

Operator's Well Number: 516722
Farm Name: COASTAL FOREST RESOURCES d/b/a COASTAL TIMBERLAND
U.S. WELL NUMBER: 47-017-06785-00-00
Horizontal 6A / New Drill
Date Issued: 12/30/2016

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12/29/2016

PERMIT CONDITIONS

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

CONDITIONS

1. This proposed activity may require permit coverage from the United States Army Corps of Engineers (USACE). Through this permit, you are hereby being advised to consult with USACE regarding this proposed activity.
2. If the operator encounters an unanticipated void, or an anticipated void at an unanticipated depth, the operator shall notify the inspector within 24 hours. Modifications to the casing program may be necessary to comply with W. Va. Code § 22-6A-5a (12), which requires drilling to a minimum depth of thirty feet below the bottom of the void, and installing a minimum of twenty (20) feet of casing. Under no circumstance should the operator drill more than one hundred (100) feet below the bottom of the void or install less than twenty (20) feet of casing below the bottom of the void.
3. When compacting fills, each lift before compaction shall not be more than 12 inches in height, and the moisture content of the fill material shall be within limits as determined by the Standard Proctor Density test of the actual soils used in specific engineered fill, ASTM D698, Standard Test Method for Laboratory Compaction Characteristics of Soil Using Standard Effort, to achieve 95 % compaction of the optimum density. Each lift shall be tested for compaction, with a minimum of two tests per lift per acre of fill. All test results shall be maintained on site and available for review.
4. Operator shall install signage per § 22-6A-8g (6) (B) at all source water locations included in their approved water management plan within 24 hours of water management plan activation.
5. Oil and gas water supply wells will be registered with the Office of Oil and Gas and all such wells will be constructed and plugged in accordance with the standards of the Bureau for Public Health set forth in its Legislative rule entitled *Water Well Regulations*, 64 C.S.R. 19. Operator is to contact the Bureau of Public Health regarding permit requirements. In lieu of plugging, the operator may transfer the well to the surface owner upon agreement of the parties. All drinking water wells within fifteen hundred feet of the water supply well shall be flow tested by the operator upon request of the drinking well owner prior to operating the water supply well.
6. Pursuant to the requirements pertaining to the sampling of domestic water supply wells/springs the operator shall, no later than thirty (30) days after receipt of analytical data provide a written copy to the Chief and any of the users who may have requested such analyses.
7. If any explosion or other accident causing loss of life or serious personal injury occurs in or about a well or well work on a well, the well operator or its contractor shall give notice, stating the particulars of the explosion or accident, to the oil and gas inspector and the Chief, within 24 hours of said accident.
8. During the casing and cementing process, in the event cement does not return to the surface, the oil and gas inspector shall be notified within 24 hours.
9. The operator shall provide to the Office of Oil and Gas the dates of each of the following within 30 days of their occurrence: completion of construction of the well pad, commencement of drilling, cessation of drilling, completion of any other permitted well work, and completion of the well. Such notice shall be provided by sending an email to DEPOOGNotify@wv.gov.

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

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

2) Operator's Well Number: 516722 Well Pad Name: OXF387

3) Farm Name/Surface Owner: Coastal Forest Resources d/b/a Coastal Timberlands Company Public Road Access: Co Rt 21

4) Elevation, current ground: 1227' Elevation, proposed post-construction: 1187'

5) Well Type (a) Gas Oil Underground Storage

Other _____

(b) If Gas Shallow Deep

Horizontal

6) Existing Pad: Yes or No No

7) Proposed Target Formation(s), Depth(s), Anticipated Thickness and Expected Pressure(s):
Marcellus, 6629', 54', 2951 PSI, top of Marcellus 6605

8) Proposed Total Vertical Depth: 6629

9) Formation at Total Vertical Depth: Marcellus

10) Proposed Total Measured Depth: 12801

11) Proposed Horizontal Leg Length: 2730

12) Approximate Fresh Water Strata Depths: 241

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

14) Approximate Saltwater Depths: 1062

15) Approximate Coal Seam Depths: none

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

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

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

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18)

CASING AND TUBING PROGRAM

TYPE	Size (in)	New or Used	Grade	Weight per ft. (lb/ft)	FOOTAGE: For Drilling (ft)	INTERVALS: Left in Well (ft)	CEMENT: Fill-up (Cu. Ft.)/CTS
Conductor	20	New	A-500	78.6	40	40	60 ft^3 / CTS
Fresh Water	13 3/8	New	J-55	54.5	391	391	369 ft^3 / CTS
Coal							
Intermediate	9 5/8	New	A-500	40	3005	3005	1194 ft^3 / CTS
Production	5 1/2	New	P-110	20	12801	12801	500' above top producing zone
Tubing	2 3/8		J-55	4.7		May not be run, if run set 40' above top perf or 80° inclination	
Liners							

TYPE	Size (in)	Wellbore Diameter (in)	Wall Thickness (in)	Burst Pressure (psi)	Anticipated Max. Internal Pressure (psi)	Cement Type	Cement Yield (cu. ft./k)
Conductor	20	26	.375	1378	1102	Class A	1.18
Fresh Water	13 3/8	17 1/2	.38	2700	2160	See Variance	1.19
Coal							
Intermediate	9 5/8	12 3/8	.395	3950	3160	See Variance	1.19
Production	5 1/2	8 1/2	.361	12640	10112	Class A/H	1.123/2.098
Tubing	2 3/8	NA	.19	7700			
Liners							

PACKERS

Kind:				
Sizes:				
Depths Set:				

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9/2/15

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

Drill and complete a new horizontal well in the Marcellus Formation. Drill the vertical to an approximate depth of 4506'. Kick off and drill curve. Drill the lateral in the Marcellus. Cement casing.

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

Hydraulic fracturing is completed in accordance with state regulations using water recycled from previously fractured wells and obtained from freshwater sources. This water is mixed with sand and a small percentage (less than 0.3%) of chemicals (including 15% Hydrochloric acid, gelling agent, gel breaker, friction reducer, biocide, and scale inhibitor), referred to in the industry as a "slickwater" completion. Maximum anticipated internal casing pressure is expected to be approximately 10000 psi, maximum anticipated treating rates are expected to average approximately 100 bpm. Stage lengths vary from 150 to 300 feet. Average approximately 200,000 barrels of water per stage. Sand sizes vary from 100 mesh to 20/40 mesh. Average approximately 200,000 pounds of sand per stage.

21) Total Area to be disturbed, including roads, stockpile area, pits, etc., (acres): 25.7

22) Area to be disturbed for well pad only, less access road (acres): 18.3

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 solid body cent spaced every joint from production casing shoe to KOP

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

Conductor: Class A no additives
 Surface (Type 1 Cement): 0-3% Calcium Chloride Used to speed the setting of cement slurries, .25% Flake Loss Circulation Material (LCM) is used to combat the loss of the cement slurry to a thief zone.
 Intermediate (Type 1 Cement): 0-3% Calcium Chloride. Salt is used in shallow, low temperature formations to speed the setting of cement slurries. 0.25% flake. Loss Circulation Material (LCM) is used to combat the loss of whole drilling fluid or cement slurry (not filtrate) to a thief zone.
 Production:
 Lead (Type H Cement): 0.2% CD-20 (dispersant makes cement easier to mix). .15% SuperFL-300 (fluid loss/lengthens thickening time) .15% SEC-10 (fluid loss) 50:50 POZ (extender)
 Tail (Type H Cement): 0.2% Super CR-1 (Retarder). Lengthens thickening time. .3% Super FL-200 (fluid loss) .2% SEC-10 (Fluid loss). .2% SuperFL-350 (fluid loss) Reduces amount of water lost to formation.
 60 % Calcium Carbonate. Acid solubility.

25) Proposed borehole conditioning procedures:

Surface: Circulate hole clean while rotating & reciprocating the drill string until cuttings diminish at surface.
 Intermediate: Circulate hole clean while rotating & reciprocating the drill string until cuttings diminish at surface.
 Production: Pump marker sweep with nut plug to determine actual hole washout. Calculate a gauge 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.

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Well 516722(OXF387H9)

EQT Production

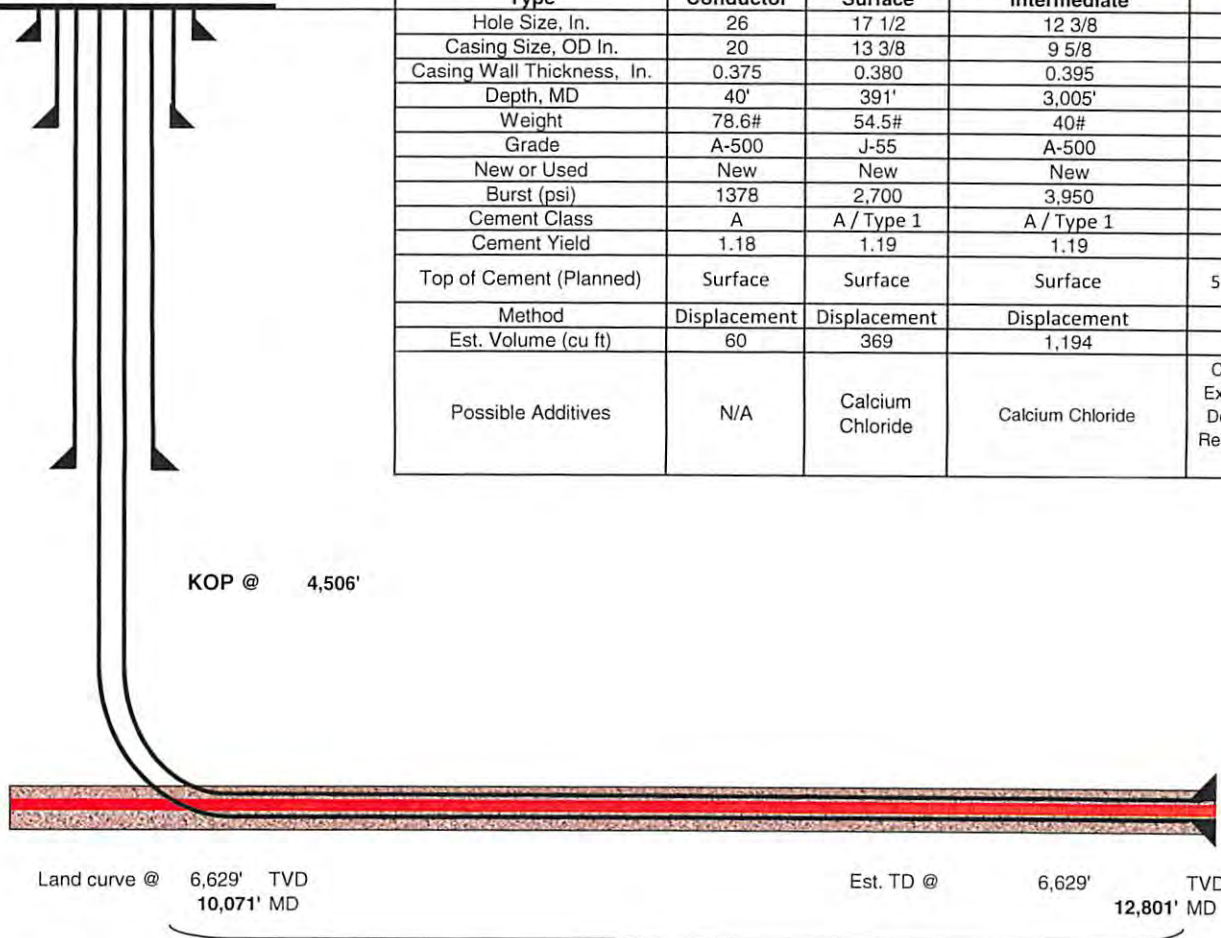
**Oxford Quad
Doddridge County, WV**

Azimuth 161
Vertical Section 3005

Note: Diagram is not to scale

Formations	Top TVD	Base TVD
Conductor	40	
Base Fresh Water	241	
Surface Casing	391	
Base Red Rock	1599	
Maxton	1736 - 1778	
Big Lime	1915 - 2054	
Weir	2183 - 2297	
Gantz	2394 - 2423	
Fifty foot	2475 - 2530	
Gordon	2612 - 2661	
Forth Sand	2677 - 2705	
Bayard	2900 - 2955	
Intermediate Casing	3005	
Warren	3229 - 3275	
Speechley	3297 - 3378	
Balltown A	3786 - 3834	
Riley	4418 - 4453	
Benson	4825 - 4832	
Alexander	5080 - 5165	
Sonyea	6262 - 6410	
Middlesex	6410 - 6463	
Genesee	6463 - 6533	
Geneseo	6533 - 6574	
Tully	6574 - 6591	
Hamilton	6591 - 6605	
Marcellus	6605 - 6658	
Production Casing	12801 MD	
Onondaga	6658	

Casing and Cementing				Deepest Fresh Water: 241'
Type	Conductor	Surface	Intermediate	Production
Hole Size, In.	26	17 1/2	12 3/8	8 1/2
Casing Size, OD In.	20	13 3/8	9 5/8	5 1/2
Casing Wall Thickness, In.	0.375	0.380	0.395	0.361
Depth, MD	40'	391'	3,005'	12,801'
Weight	78.6#	54.5#	40#	20#
Grade	A-500	J-55	A-500	P-110
New or Used	New	New	New	New
Burst (psi)	1378	2,700	3,950	12,640
Cement Class	A	A / Type 1	A / Type 1	A / H
Cement Yield	1.18	1.19	1.19	1.123 / 2.098
Top of Cement (Planned)	Surface	Surface	Surface	500' above top Producing Zone
Method	Displacement	Displacement	Displacement	Displacement
Est. Volume (cu ft)	60	369	1,194	2,533
Possible Additives	N/A	Calcium Chloride	Calcium Chloride	Calcium Carbonate, Fluid Loss, Extender, Dispersent, Viscosifier, Defoamer, POZ, Bonding Agent, Retarder, Anti-Settling/Suspension Agent



Proposed Well Work:
 Drill and complete a new horizontal well in the Marcellus formation.
 Drill the vertical to an approximate depth of 4506'.
 Kick off and drill curve. Drill lateral in the Marcellus. Cement casing.

4701706785

17-06785



west virginia department of environmental protection

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
dep.wv.gov

March 18, 2014

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

Re: Cement Variance Request

Dear Sir or Madam,

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

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

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

Sincerely,

James Peterson
Environmental Resources Specialist / Permitting

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12/29/2016



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601 57th Street, SE
Charleston, WV 25304
(304) 926-0450
(304) 926-0452 fax

Earl Ray Tomblin, Governor
Randy C. Huffman, Cabinet Secretary
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**BEFORE THE OFFICE OF OIL AND GAS
DEPARTMENT OF ENVIRONMENTAL PROTECTION
STATE OF WEST VIRGINIA**

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

REPORT OF THE OFFICE

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

FINDINGS OF FACT

- 1.) Nabors Completion & Production Services Co. proposes the following cement blend:
 - 2% Calcium Chloride (Accelerator)
 - 0.25 % Super Flake (Lost Circulation)
 - 94% Type "1" Cement
 - 5.20 % Water

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

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CONCLUSIONS OF LAW

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

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

ORDER

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

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

IN THE NAME OF THE STATE OF WEST VIRGINIA

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



James Martin, Chief
Office of Oil and Gas

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WW-9
(4/16)

API Number 47 - 017 - 06785
Operator's Well No. 516722

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

FLUIDS/ CUTTINGS DISPOSAL & RECLAMATION PLAN

Operator Name EQT Production Company OP Code 306686

Watershed (HUC 10) Long Run of Middle Fork of South Fork Hughes River Quadrangle Oxford

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

Will a pit be used? Yes No

If so, please describe anticipated pit waste: _____

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

Proposed Disposal Method For Treated Pit Wastes:

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

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

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

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

Additives to be used in drilling medium? See Attached

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

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

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

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

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

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

Company Official Signature _____

Company Official (Typed Name) Victoria J. Roark

Company Official Title Permitting Supervisor

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Subscribed and sworn before me this 24 day of August, 20 16

Rebecca L Wanstreet Notary Public

My commission expires 4-7-2020



WW-9 Attachment

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

- Air is used to drill the top-hole sections of the wellbore (surface, intermediate, and pilot). Water based mud may be necessary depending on hole conditions to stabilize and drill the intermediate section. The pilot hole, curve, and lateral sections will be drilled with either air, water based mud, or oil based mud.

Additives to be used in drilling medium?

- Air - biodegradable oil lubricant, detergent, defoaming, water. Water based mud – Barite, viscosifer, alkalinity control, lime, filtration control, deflocculates, biodegradable oil lubricant, defoaming, walnut shell, salt, x-cide, carbonates. Oil based mud – synthetic base oil, emulsifier, salt, lime, viscosifer, alkalinity control, filtration control, deflocculates, biodegradable oil lubricant, defoaming, carbonates.

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EQT Production Water plan
Offsite disposals for Marcellus wells

17-06785

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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EQT Production Company

Proposed Revegetation Treatment: Acres Disturbed 25.7 Prevegetation pH 6.6

Lime 3 Tons/acre or to correct to pH 6.5

Fertilizer type Granular 10-20-20

Fertilizer amount 1/3 lbs/acre

Mulch 2 Tons/acre

Seed Mixtures

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

Attach:

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

Photocopied section of involved 7.5' topographic sheet.

Plan Approved by: Daniel Flork

Comments: Proceed + mulch any disturbed areas per WV DEP regs before bringing rig on site. Maintain and upgrade E+S as necessary

Title: Daniel C. Zu

Date: 9/8/16

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Field Reviewed? (x) Yes () No

WV Department of Environmental Protection



June 30, 2016

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

Re: Casing Plan on Well (OXF387)

Dear Mr. Smith,

EQT is requesting the 13-3/8" surface casing be set at 391' KB, 150' below the deepest fresh water. We will set the 9-5/8" intermediate string at 3005' KB, 50' below the base of the Bayard formation.

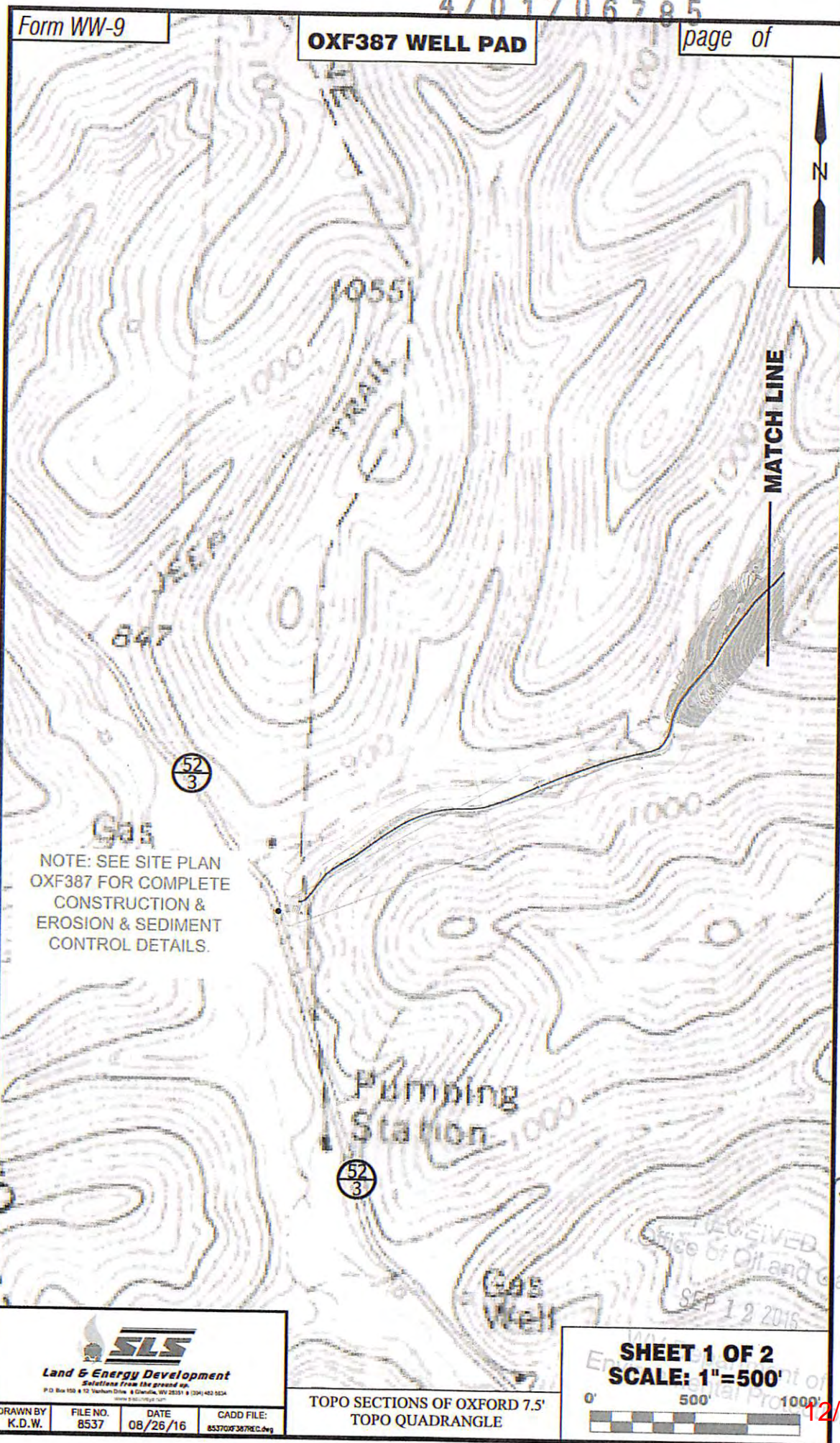
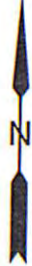
If you have any questions, please do not hesitate to contact me at (304) 848-0076.

Sincerely,

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

Vicki Roark
Permitting Supervisor

Enc.



NOTE: SEE SITE PLAN OXF387 FOR COMPLETE CONSTRUCTION & EROSION & SEDIMENT CONTROL DETAILS.

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9/8/16

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DRAWN BY K.D.W.	FILE NO. 8537	DATE 08/26/16	CADD FILE: 8537OXF387REC.dwg
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TOPO SECTIONS OF OXFORD 7.5'
TOPO QUADRANGLE

SHEET 1 OF 2
SCALE: 1"=500'

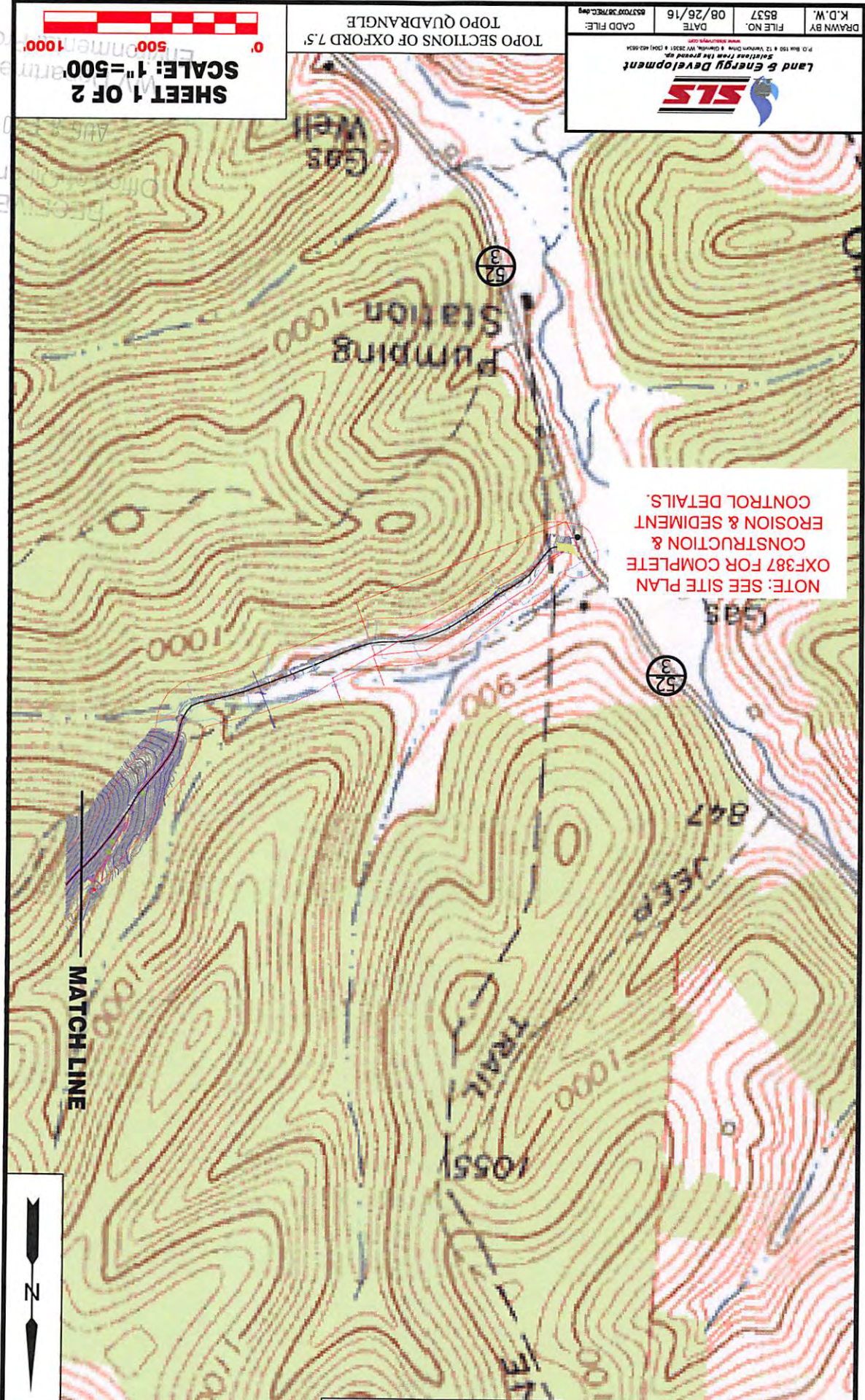
12/29/2016

Department of
and Gas
016
PROCESSED
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AVIS
SHEET 1 OF 2
SCALE: 1"=500'
500' 1000'

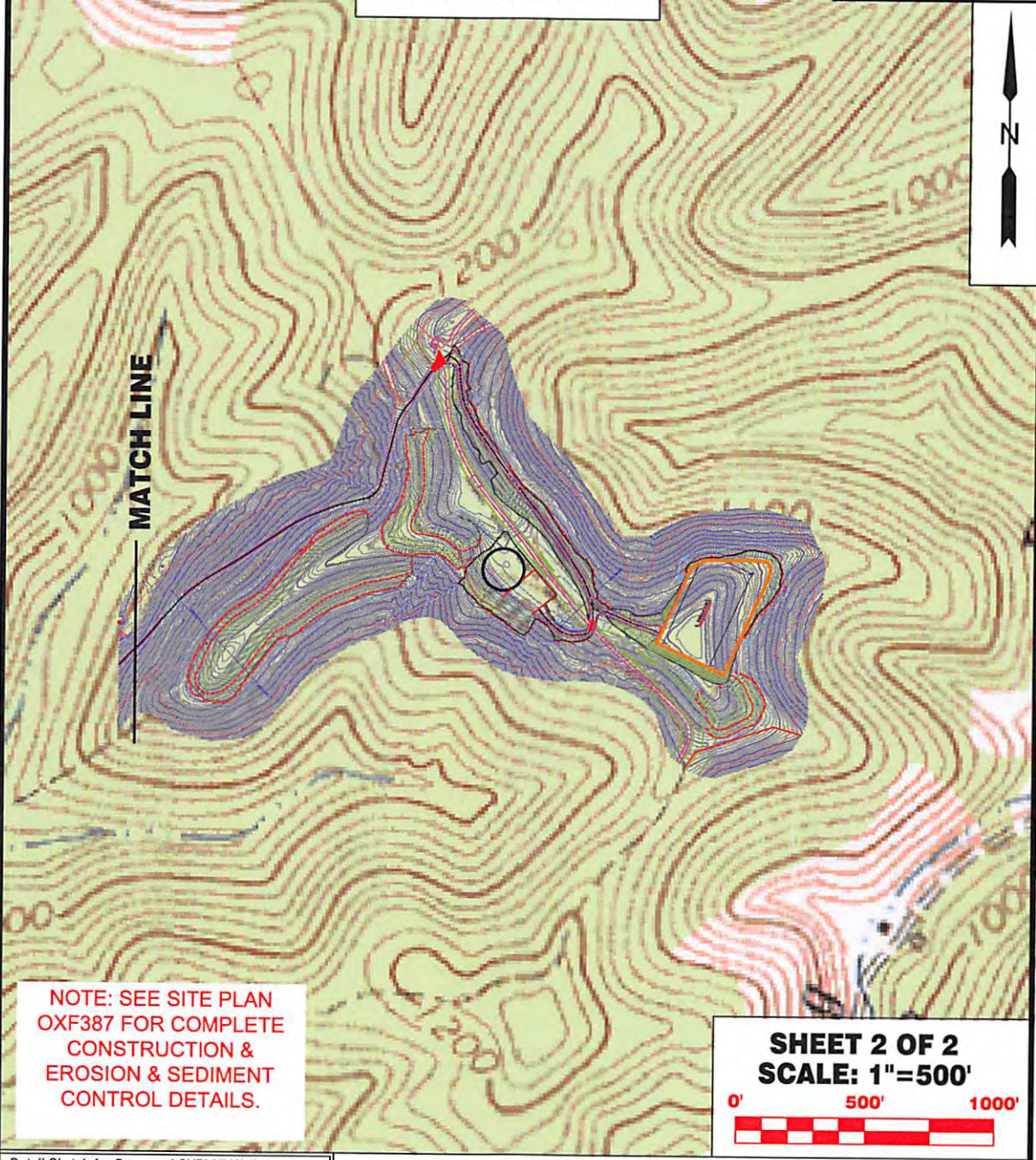
TOPO SECTIONS OF OXFORD 7.5'
TOPO QUADRANGLE

DRAWN BY	K.D.W.
FILE NO.	8537
DATE	08/26/16
CADD FILE:	853702387RCL.dwg

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Solutions from the Ground up
P.O. Box 150 • 12 Mountain View • Greenville, SC 29615 • (864) 682-1000
www.landenergy.com



NOTE: SEE SITE PLAN
OXF387 FOR COMPLETE
CONSTRUCTION &
EROSION & SEDIMENT
CONTROL DETAILS.



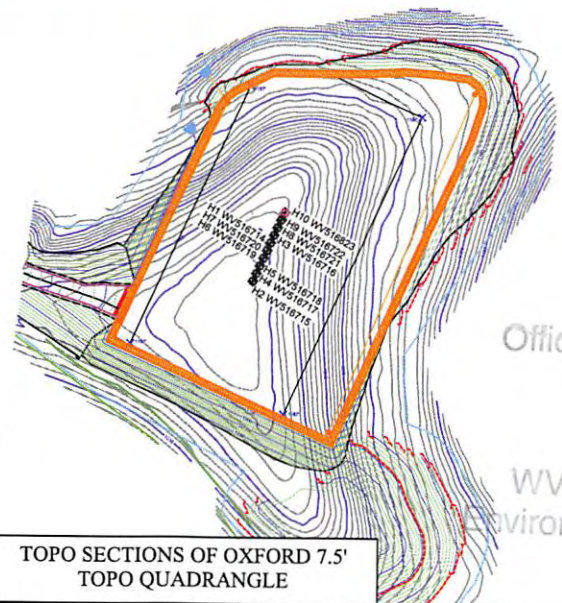
NOTE: SEE SITE PLAN OXF387 FOR COMPLETE CONSTRUCTION & EROSION & SEDIMENT CONTROL DETAILS.

SHEET 2 OF 2
SCALE: 1"=500'
 0' 500' 1000'

Detail Sketch for Proposed OXF387 Wells

Not To Scale

NOTE: SEE SITE PLAN OXF387 FOR COMPLETE CONSTRUCTION & EROSION & SEDIMENT CONTROL DETAILS.



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WV Department of
 Environmental Protection

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 Solutions From the ground up
 P.O. Box 190 • 12 Vanhook Drive • Glenview, WV 26031 • (204) 482-9834
 www.slsenergy.com

DRAWN BY: K.D.W.	FILE NO. 8537	DATE 08/26/16	CADD FILE: 8537OXF387REC.dwg
---------------------	------------------	------------------	---------------------------------

TOPO SECTIONS OF OXFORD 7.5'
 TOPO QUADRANGLE

12/29/2016

Site Specific Safety Plan

EQT OXF 387 Pad
Oxford Quadrant
West Union
Doddridge County, WV

5110722 For Wells: _____

[Signature]
EQT Production
Permitting Supervisor
Title
8-16-16
Date

Date Prepared:

July 30, 2016

[Signature]
WV Oil and Gas Inspector

RECEIVED
Office of Oil and Gas
9/8/16
Date
SEP 12 2016

WV Department of
Environmental Protection

12/29/2016

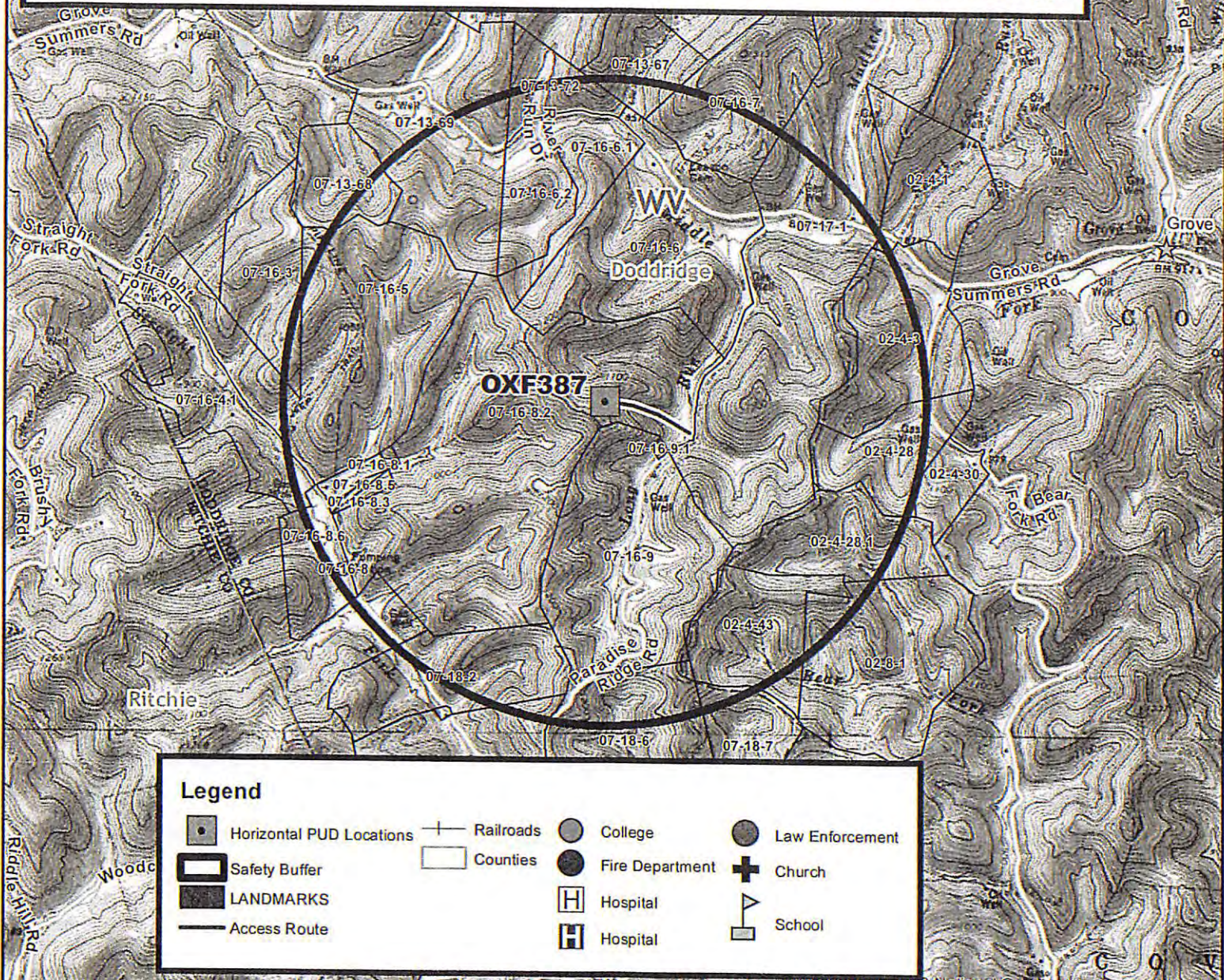
Access Road at Location
 Lat. 39.139909 / Long. -80.804460

Access Road at Entrance
 Lat. 39.138523 / Long. -80.799390



17-06785

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Legend

Horizontal PUD Locations	Railroads	College	Law Enforcement
Safety Buffer	Counties	Fire Department	Church
LANDMARKS	Hospital	Hospital	School
Access Route			

EQT
 EQT Production
 White Oaks Office
 120 Professional Place
 Bridgeport, WV 26330

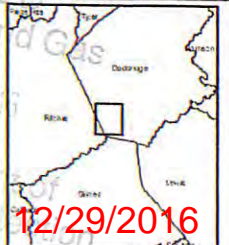
Site Safety Plan

**OXF387
 One Mile Safety Buffer
 Doddridge County, WV**

Handwritten: U.S. 9/8/16

DISCLAIMER
 ALL INFORMATION DEPICTED ON THIS MAP PROVIDED BY EQT (SAID TERM SHALL MEAN EQT PRODUCTION OR EQT MIDSTREAM, DEPENDING ON WHICH EQT ENTITY PROVIDED THE MAP) IS FOR INFORMATION PURPOSES ONLY AND SHALL BE TREATED AS CONFIDENTIAL INFORMATION AND SHALL ONLY BE USED FOR THE SOLE PURPOSE FOR WHICH IT WAS PROVIDED. ANY OTHER USE OF THIS MAP OR THE INFORMATION INCLUDED THEREON, IS STRICTLY PROHIBITED. THE EXACT LOCATION OF THE FACILITIES (INCLUDING BUT NOT LIMITED TO WELLS, PIPELINES, STRUCTURES, FACILITIES, LEASE BOUNDARIES OR ANY OTHER INFORMATION SHOWN ON THIS MAP SHALL NOT BE RELIED UPON FOR THE SPECIFIC LOCATION OF THE FACILITIES, AND THE PARTIES AGREE THAT THE INFORMATION SHOWN ON THIS MAP MAY NOT HAVE BEEN PLACED ON THE MAP USING SURVEY LINES OR GPS COORDINATES. EQT MAKES NO EXPRESS OR IMPLIED REPRESENTATION OR WARRANTY AS TO THE ACCURACY OF THE MAP OR THE INFORMATION SHOWN THEREON. THE SPECIFIC LOCATION OF ANY OF THE INFORMATION, INCLUDING ANY WELL, PIPELINE, STRUCTURE, FACILITY OR LEASE BOUNDARY SHOULD BE DETERMINED BY A FIELD SURVEY PERFORMED BY A LICENSED SURVEYOR UPON CONSULTATION WITH EQT. THIS MAP MAY NOT BE COPIED OR OTHERWISE MADE AVAILABLE TO ANY OTHER PARTY IN PAPER OR ELECTRONIC FORMAT WITHOUT WRITTEN CONSENT FROM EQT. RECIPIENT EXPRESSLY AGREES THAT ITS USE AND/OR RETENTION OF THIS MAP SHALL BE DEEMED ITS AGREEMENT TO THE TERMS SET FORTH ABOVE.

SEP 12 2016



12/29/2016



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17-06785

To Whom It May Concern:

Smith Land Surveying, INC. has been contracted by EQT Production Company (EQT) to do some preliminary work for a proposed oil and gas well permit application.

In accordance with West Virginia Code 35-8-15, the West Virginia Department of Environmental Protection (WVDEP), Office of Oil and Gas, requires gas well operators to offer pre-drill water testing for existing water wells or developed springs actually used by the surface owner or water purveyor for consumption by humans or domestic animals, which are located within 1,500 feet of the proposed gas well pad. Please note that the WVDEP requires this water testing offer to a radius of 1,500 feet; however, it is EQT's standard practice to conduct the water testing to a radius of 2,500 feet from the proposed gas well pad location.

EQT hereby notifies you (the surface owner and/or water purveyor) of the following:

- Your right to request sampling and analysis;
- The rebuttable presumption for contamination or deprivation of a fresh water source or supply;
- That refusal to allow the operator to conduct a pre-drilling water well test constitutes a method to rebut the presumption of liability;
- Your independent right to sample and analyze any water supply at your own expense;
- That EQT will utilize an independent laboratory to analyze any sample;
- That you can obtain from the WV DEP 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.

Therefore, EQT offers, at no charge to you, water testing of your water supply(s). Results of these tests will be sent to you upon our receipt from the independent testing laboratory.

Please contact Smith Land Surveying, INC. at your earliest convenience if you are interested in having your potable water tested. Please have this letter with you at the time of contact so that the well number may be referenced.

Thank you for your cooperation in this matter.

Smith Land Surveying, INC.
 P.O. Box 150
 Glenville, WV 26351
 (304)-462-5634
awilson@slssurveys.com

Date: 2/25/16

Left/sent by: Adam Wilson

EQT Well Number: OXF 387

County: Doddridge

Tax Map / Parcel: 16/8.2

*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.

Name (please print): EDWARD G. KRAYNOK Address: COASTAL TIMBERLANDS COMPANY P.O. BOX 709 BUCKHANNON, WV 26201

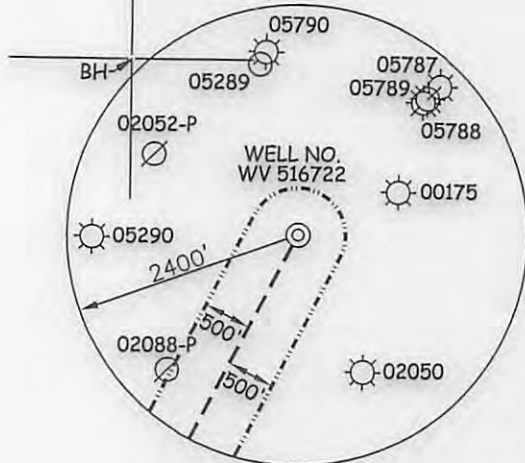
Signature: Edward G. Kraynok Date: 3/1/16

COASTAL TIMBERLANDS COMPANY DOES NOT HAVE A WATER WELL OR OTHER NON-PUBLIC WATER SOURCE,

12/29/2016

OXF387
WV 516722
EQT PRODUCTION COMPANY

(S.P.C. NORTH ZONE) (UTM(M) ZONE 17 NORTH)
 NAD'27 S.P.C.(FT) N. 235,830.64 E. 1,629,918.43
 NAD'27 GEO. LAT-(N) 39.140115 LONG-(W) 80.804776
 NAD'83 UTM (M) N. 4,332,353.20 E. 516,886.38
LANDING POINT
 NAD'27 S.P.C.(FT) N. 231,389.79 E. 1,627,807.88
 NAD'27 GEO. LAT-(N) 39.127839 LONG-(W) 80.811988
 NAD'83 UTM (M) N. 4,330,989.58 E. 516,265.99
BOTTOM HOLE
 NAD'27 S.P.C.(FT) N. 228,806.00 E. 1,628,691.68
 NAD'27 GEO. LAT-(N) 39.120781 LONG-(W) 80.808740
 NAD'83 UTM (M) N. 4,330,206.95 E. 516,548.37



NOTES ON SURVEY

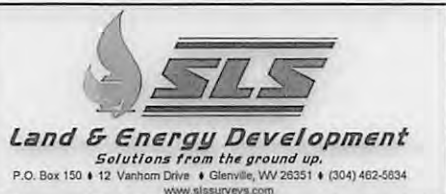
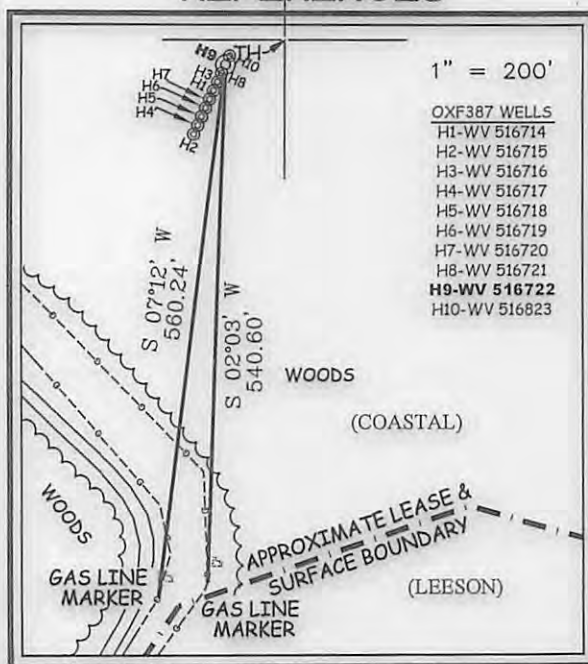
1. NO WATER WELLS WERE FOUND WITHIN 250' OF PROPOSED GAS WELL. NO AGRICULTURAL BUILDINGS ≥ 2500 SQ. FT. OR DWELLINGS WERE FOUND WITHIN 625' OF THE CENTER OF PROPOSED WELL PAD.
2. WELL SPOT CIRCLE & TOPO MARK SCALE IS 1"=2000'.

ROYALTY OWNERS

HAUGHT FAMILY TRUST ET AL	402 AC±	LEASE NO. 105953
MICHAEL M. MCKENZIE ET AL	199.75 AC±	LEASE NO. 987351

C-TM-04-03	MANSFIELD LEESON	123.52 ACRES±
C-TM-04-28	RANDY HUFF DECEDENTS TRUST B ET AL	63 ACRES±
C-TM-04-28.1	JERRY HOSAFLOOK ET AL	119.05 ACRES±
C-TM-04-43	JERRY HOSAFLOOK ET AL	85.31 ACRES±
C-TM-08-01	JERRY HOSAFLOOK ET AL	118 ACRES±
SW-TM-16-06	BETTY RYAN	217 ACRES±
SW-TM-16-8.2	COASTAL FOREST RESOURCES COMPANY d/b/a COASTAL TIMBERLANDS COMPANY	416.61 ACRES±
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SW-TM-18-05	PAUL M. MCKENZIE (LIFE) ET AL	228.75 ACRES±
SW-TM-18-06	CHARLES ADAMS	109.5 ACRES±

REFERENCES



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

P.S. C. Victor Moyers
 849



(+) DENOTES LOCATION OF WELL ON UNITED STATES TOPOGRAPHIC MAPS.
 DATE AUGUST 26, 20 16
 REVISED _____, 20 _____
 OPERATORS WELL NO. WV 516722
 API WELL NO. 47-017-06785
 STATE COUNTY PERMIT

MINIMUM DEGREE OF ACCURACY 1 / 2500 FILE NO. 8537P516722.dwg
 HORIZONTAL & VERTICAL CONTROL DETERMINED BY DGPS (SURVEY GRADE TIE TO CORS NETWORK) SCALE SEE NOTE 2

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

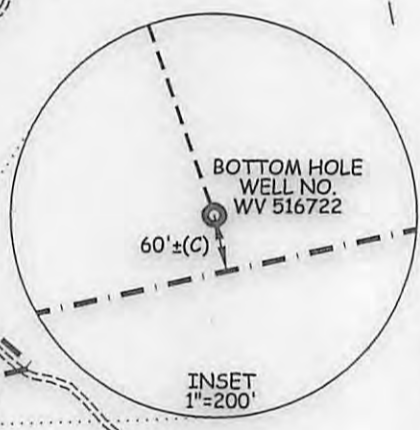
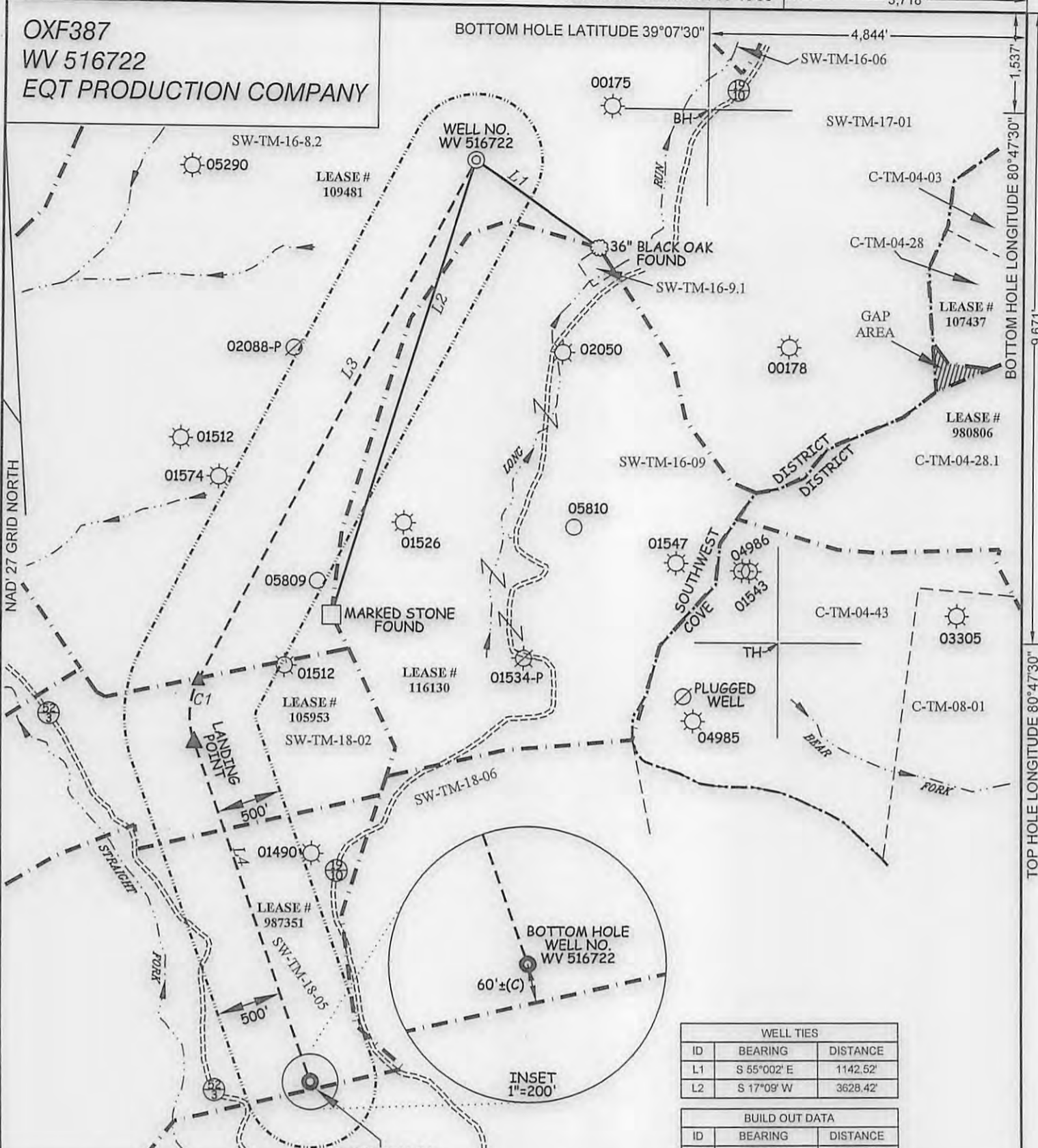
WELL TYPE: OIL ___ GAS X LIQUID INJECTION ___ WASTE DISPOSAL ___ IF "GAS" PRODUCTION X STORAGE ___ DEEP ___ SHALLOW X
 LOCATION: (GROUND) (PROPOSED)
 ELEVATION 1,228' 1,137' WATERSHED LONG RUN OF MIDDLE FORK OF SOUTH FORK HUGHES RIVER
 DISTRICT SOUTHWEST COUNTY DODDRIDGE QUADRANGLES OXFORD & AUBURN 7.5'
 SURFACE OWNER COASTAL FOREST RESOURCES COMPANY d/b/a COASTAL TIMBERLANDS COMPANY ACREAGE 416.61±
 ROYALTY OWNER ADELE McDOUGAL ET AL ACREAGE 2000±
 PROPOSED WORK: LEASE NO. 109481
 DRILL X CONVERT ___ DRILL DEEPER ___ REDRILL ___ FRACTURE OR STIMULATE X PLUG OFF OLD FORMATION ___ PERFORATE NEW FORMATION ___ PLUG AND ABANDON ___ CLEAN OUT AND REPLUG ___ OTHER ___
 PHYSICAL CHANGE IN WELL (SPECIFY) _____ TARGET FORMATION MARCELLUS
 ESTIMATED DEPTH 6,629'

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

12/29/2016

OXF387
WV 516722
EQT PRODUCTION COMPANY



WELL TIES		
ID	BEARING	DISTANCE
L1	S 55°00' E	1142.52'
L2	S 17°09' W	3628.42'

BUILD OUT DATA		
ID	BEARING	DISTANCE
L3	S 27°40' W	4480.83'

CURVE	ARC LENGTH	RADIUS	CHORD BEARING	CHORD LENGTH
C1	486.47'	601.25'	S 03°33' W	473.31'

LATERAL		
ID	BEARING	DISTANCE
L4	S 18°53' E	2730.77'

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 www.slsurveys.com

(S.P.C. NORTH ZONE) (UTM(M) ZONE 17 NORTH)			
NAD'27 S.P.C.(FT)	N. 235,830.64	E. 1,629,918.43	
NAD'27 GEO.	LAT-(N) 39.140115	LONG-(W) 80.804776	
NAD'83 UTM (M)	N. 4,332,353.20	E. 516,886.38	
LANDING POINT			
NAD'27 S.P.C.(FT)	N. 231,389.79	E. 1,627,807.88	
NAD'27 GEO.	LAT-(N) 39.127839	LONG-(W) 80.811988	
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BOTTOM HOLE			
NAD'27 S.P.C.(FT)	N. 228,806.00	E. 1,628,691.68	
NAD'27 GEO.	LAT-(N) 39.120781	LONG-(W) 80.808740	
NAD'83 UTM (M)	N. 4,330,206.95	E. 516,548.37	

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

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

LEGEND

- LEASE LINE
- SURFACE LINE
- WELL LATERAL
- OFFSET LINE
- TIE LINE
- CREEK
- ROAD
- COUNTY ROUTE
- PROPOSED WELL
- EXISTING WELL
- PERMITTED WELL
- SOUTHWEST DISTRICT TAX MAP-PARCEL SW-TM-00-00
- COVE DISTRICT TAX MAP-PARCEL C-TM-00-00

SCALE 1" = 1000' FILE NO. 8537P516722

DATE AUGUST 26, 2016

REVISED _____, 20____

OPERATORS WELL NO. WV 516722

API WELL NO. 47 - 017 - 06785

NO. STATE COUNTY PERMIT

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

WELL OPERATOR EQT PRODUCTION COMPANY DESIGNATED AGENT REX C. RAY

ADDRESS 115 PROFESSIONAL PLACE P.O. BOX 280 ADDRESS 115 PROFESSIONAL PLACE P.O. BOX 280

BRIDGEPORT, WV 26330 BRIDGEPORT, WV 26330

TOP HOLE LONGITUDE 80°47'30"

COUNTY NAME PERMIT

12/29/2016

4701706783

**OXF387
WV 516722
EQT PRODUCTION COMPANY**

TOP HOLE LATITUDE 39°10'00" 3,718'
BOTTOM HOLE LATITUDE 39°07'30" 4,844'

BOTTOM HOLE LONGITUDE 80°47'30" 1,537'

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

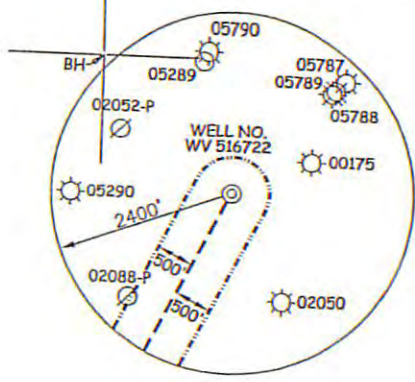
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ROYALTY OWNERS

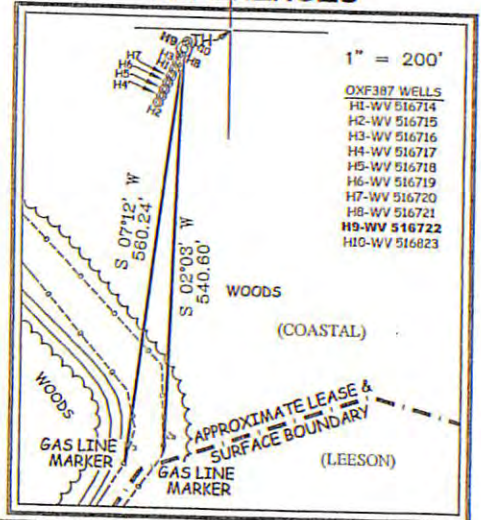
HAUGHT FAMILY TRUST ET AL	402 AC±	LEASE NO. 105953
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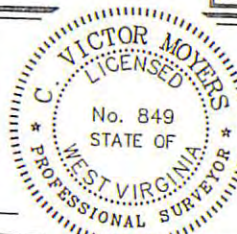
REFERENCES



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P.O. Box 150 & 12 Vanhorn Drive • Chelsea, WV 26031 • (304) 462-2534
www.slsurvey.com

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

P.S. 849 *C. Victor Moyers*



(+) DENOTES LOCATION OF WELL ON UNITED STATES TOPOGRAPHIC MAPS.
DATE AUGUST 26, 20 16
REVISED _____, 20 ____
OPERATORS WELL NO. WV 516722
API WELL NO. 47
STATE COUNTY PERMIT

MINIMUM DEGREE OF ACCURACY 1/2500 FILE NO. 8537P516722.dwg
HORIZONTAL & VERTICAL CONTROL DETERMINED BY DGPS (SURVEY GRADE TIE TO CORS NETWORK) SCALE SEE NOTE 2

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

and on 9/8/16

WELL TYPE: OIL ___ GAS X LIQUID INJECTION ___ WASTE DISPOSAL ___ IF "GAS" PRODUCTION X STORAGE ___ DEEP ___ SHALLOW X
LOCATION: (GROUND) (PROPOSED)
ELEVATION 1,228' 1,187' WATERSHED LONG RUN OF MIDDLE FORK OF SOUTH FORK HUGHES RIVER
DISTRICT SOUTHWEST COUNTY DODDRIDGE QUADRANGLES OXFORD & AUBURN 7.5'
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PROPOSED WORK: LEASE NO. 109481
DRILL X CONVERT ___ DRILL DEEPER ___ REDRILL ___ FRACTURE OR STIMULATE X PLUG OFF OLD FORMATION ___ PERFORATE NEW FORMATION ___ PLUG AND ABANDON ___ CLEAN OUT AND REPLUG ___ OTHER ___
PHYSICAL CHANGE IN WELL (SPECIFY) TARGET FORMATION MARCELLUS ESTIMATED DEPTH 6,629'

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

12/29/2016

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
See Attached				

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

The permit applicant for the proposed well work addressed in this application hereby acknowledges the possibility of the need for permits and/or approvals from local, state, or federal entities in addition to the DEP, Office of Oil and Gas, including but not limited to the following:

- WV Division of Water and Waste Management
- WV Division of Natural Resources WV Division of Highways
- U.S. Army Corps of Engineers
- U.S. Fish and Wildlife Service
- County Floodplain Coordinator

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

Well Operator: EQT Production Company
 By: Victoria J Roark
 Its: Permitting Supervisor

RECEIVED
Office of Oil and Gas
AUG 11 2016
WV Department of Environmental Protection

Lease No.	Grantor, Lessor, etc.	Grantee, Lessee, etc.	Royalty	Book/Page
109481	<u>Adele McDougal, et al (current royalty owner)</u>		***	
	Jackson Leeson, et al (original lessor)	The Philadelphia Co. of West Virginia		LB21/76
	The Philadelphia Co. of West Virginia	Pittsburgh & West Virginia Gas Co.		DB87/90
	Pittsburgh & West Virginia Gas Co.	Equitable Gas Company		DB121/303
	Equitable Gas Company	Equitrans, Inc.		DB154/475
	Equitrans, Inc.	Equitable Production-Eastern States, Inc.		LB192/19
	Equitable Production-Eastern States, Inc.	Equitable Production Company		CB281/346
	Equitable Production Company	EQT Production Company		CB281/346
105953	<u>Haught Family Trust, et al (current royalty owner)</u>		***	
	William Adams, et ux (original lessor)	The Philadelphia Company of West Virginia		LB29/244
	The Philadelphia Company of West Virginia	Pittsburgh and West Virginia Gas Company		LB55/362
	Pittsburgh and West Virginia Gas Company	Equitable Gas Company		LB126/473
	Equitable Gas Company	Equitrans, Inc.		LB201/253
	Equitrans, Inc.	Equitrans, L.P.		269/182
	Equitrans, L.P.	Equitable Production-Eastern States, Inc.		LB234/830
	Equitable Production-Eastern States, Inc.	Equitable Production Company		DB281/346
	Equitable Production Company	EQT Production Company		DB281/346
987351	<u>Michael M. McKenzie, et al (current royalty owner)</u>		min pd 1/8th	
	Michael Marion McKenzie (original lessor)	EQT Production Company		LB255/717

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

RECEIVED
 Office of Oil and Gas
 AUG 31 2016
 WV Department of
 Environmental Protection
 12/29/2016



August 8, 2016

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

Re: OXF387 well pad, well number 516722
Southwest District, Doddridge County

Dear Mr. Martin,

EQT Production Company is submitting an application for a new well work permit for the above well number. Upon information and belief, Operator's lease and/ or other real property rights permit it to conduct drilling operations for the subject well in the location shown on the plat, including under any public roads that the well lateral crosses.

Sincerely,

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

Vicki Roark
Permitting Supervisor-WV

RECEIVED
Office of Oil and Gas
AUG 31 2016
WV Department of
Environmental Protection

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

Date of Notice Certification: 8/24/16

API No. 47- 017 - _____
Operator's Well No. 516722
Well Pad Name: OXF387

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>516886.38</u>
County: <u>Doddridge</u>	Northing: <u>4332353.198</u>
District: <u>Southwest</u>	Public Road Access: <u>Co Rt 21</u>
Quadrangle: <u>Oxford</u>	Generally used farm name: <u>Coastal Forest Resources d/b/a Coastal Timberlands Company</u>
Watershed: <u>Long Run of Middle Fork 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.

<p>Pursuant to West Virginia Code § 22-6A, the Operator has attached proof to this Notice Certification that the Operator has properly served the required parties with the following:</p> <p>*PLEASE CHECK ALL THAT APPLY</p> <p><input type="checkbox"/> 1. NOTICE OF SEISMIC ACTIVITY or <input checked="" type="checkbox"/> NOTICE NOT REQUIRED BECAUSE NO SEISMIC ACTIVITY WAS CONDUCTED</p> <p><input type="checkbox"/> 2. NOTICE OF ENTRY FOR PLAT SURVEY or <input checked="" type="checkbox"/> NO PLAT SURVEY WAS CONDUCTED</p> <p><input checked="" type="checkbox"/> 3. NOTICE OF INTENT TO DRILL or <input type="checkbox"/> NOTICE NOT REQUIRED BECAUSE NOTICE OF ENTRY FOR PLAT SURVEY WAS CONDUCTED or</p> <p style="padding-left: 100px;"><input type="checkbox"/> WRITTEN WAIVER BY SURFACE OWNER (PLEASE ATTACH)</p> <p><input checked="" type="checkbox"/> 4. NOTICE OF PLANNED OPERATION</p> <p><input checked="" type="checkbox"/> 5. PUBLIC NOTICE</p> <p><input checked="" type="checkbox"/> 6. NOTICE OF APPLICATION</p>	<p>OOG OFFICE USE ONLY</p> <p><input type="checkbox"/> RECEIVED/ NOT REQUIRED</p> <p><input type="checkbox"/> RECEIVED</p> <p><input type="checkbox"/> RECEIVED/ NOT REQUIRED</p> <p><input type="checkbox"/> RECEIVED</p> <p><input type="checkbox"/> RECEIVED</p> <p><input type="checkbox"/> RECEIVED</p>
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Required Attachments:

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

WV Department of
Environmental Protection

12/29/2016

Certification of Notice is hereby given:

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

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



Subscribed and sworn before me this 24 day of August 2016.

Rebecca L Wanstreet Notary Public

My Commission Expires 4-7-2020

Oil and Gas Privacy Notice:

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

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AUG 31 2016
WV Department of
Environmental Protection
12/29/2016

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

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

Date of Notice: 8/29/16 **Date Permit Application Filed:** 8/29/16

Notice of:

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

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

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

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

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

SURFACE OWNER(s)
Name: See Attached
Address: _____

Name: _____
Address: _____

SURFACE OWNER(s) (Road and/or Other Disturbance)
Name: See Attached
Address: _____

Name: _____
Address: _____

SURFACE OWNER(s) (Impoundments or Pits)
Name: See Attached
Address: _____

COAL OWNER OR LESSEE
Name: See Attached
Address: _____

 COAL OPERATOR
Name: _____
Address: _____

SURFACE OWNER OF WATER WELL AND/OR WATER PURVEYOR(s)
Name: See Attached
Address: _____

OPERATOR OF ANY NATURAL GAS STORAGE FIELD
Name: _____
Address: _____

*Please attach additional forms if necessary

Notice is hereby given:

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

This Notice Shall Include:

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

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

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

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

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

Well Location Restrictions

Pursuant to W. Va. Code § 22-6A-12, Wells may not be drilled within two hundred fifty feet measured horizontally from any existing water well or developed spring used for human or domestic animal consumption. The center of well pads may not be located within six hundred twenty-five feet of an occupied dwelling structure, or a building two thousand five hundred square feet or larger used to house or shelter dairy cattle or poultry husbandry. This limitation is applicable to those wells, developed springs, dwellings or agricultural buildings that existed on the date a notice to the surface owner of planned entry for surveying or staking as provided in section ten of this article or a notice of intent to drill a horizontal well as provided in subsection (b), section sixteen of this article was provided, whichever occurs first, and to any dwelling under construction prior to that date. This limitation may be waived by written consent of the surface owner transmitted to the department and recorded in the real property records maintained by the clerk of the county commission for the county in which such property is located. Furthermore, the well operator may be granted a variance by the secretary from these distance restrictions upon submission of a plan which identifies the sufficient measures, facilities or practices to be employed during well site construction, drilling and operations. The variance, if granted, shall include terms and conditions the department requires to ensure the safety and protection of affected persons and property. The terms and conditions may include insurance, bonding and indemnification, as well as technical requirements. (b) No well pad may be prepared or well drilled within one hundred feet measured horizontally from any perennial stream, natural or artificial lake, pond or reservoir, or a wetland, or within three hundred feet of a naturally reproducing trout stream. No well pad may be located within one thousand feet of a surface or ground water intake of a public water supply. The distance from the public water supply as identified by the department shall be measured as follows: (1) For a surface water intake on a lake or reservoir, the distance shall be measured from the boundary of the lake or reservoir. (2) For a surface water intake on a flowing stream, the distance shall be measured from a semicircular radius extending upstream of the surface water intake. (3) For a groundwater source, the distance shall be measured from the wellhead or spring. The department may, in its discretion, waive these distance restrictions upon submission of a plan identifying sufficient measures, facilities or practices to be employed during well site construction, drilling and operations to protect the waters of the state. 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

WV Department of
Environmental Protection
12/29/2016

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

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AUG 31 2016

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.**

WV Department of
Environmental Protection

Time Limits and Methods for Filing Comments.

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

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

Comment Requirements

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

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

Permit Denial or Condition

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

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

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

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

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Environmental Protection

12/29/2016

WW-6A
(8-13)

API NO. 47-017 - _____
OPERATOR WELL NO. 516722 _____
Well Pad Name: OXF387 _____

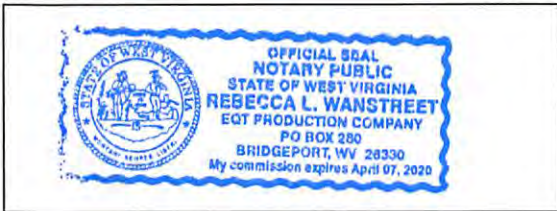
Notice is hereby given by:

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

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

Oil and Gas Privacy Notice:

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

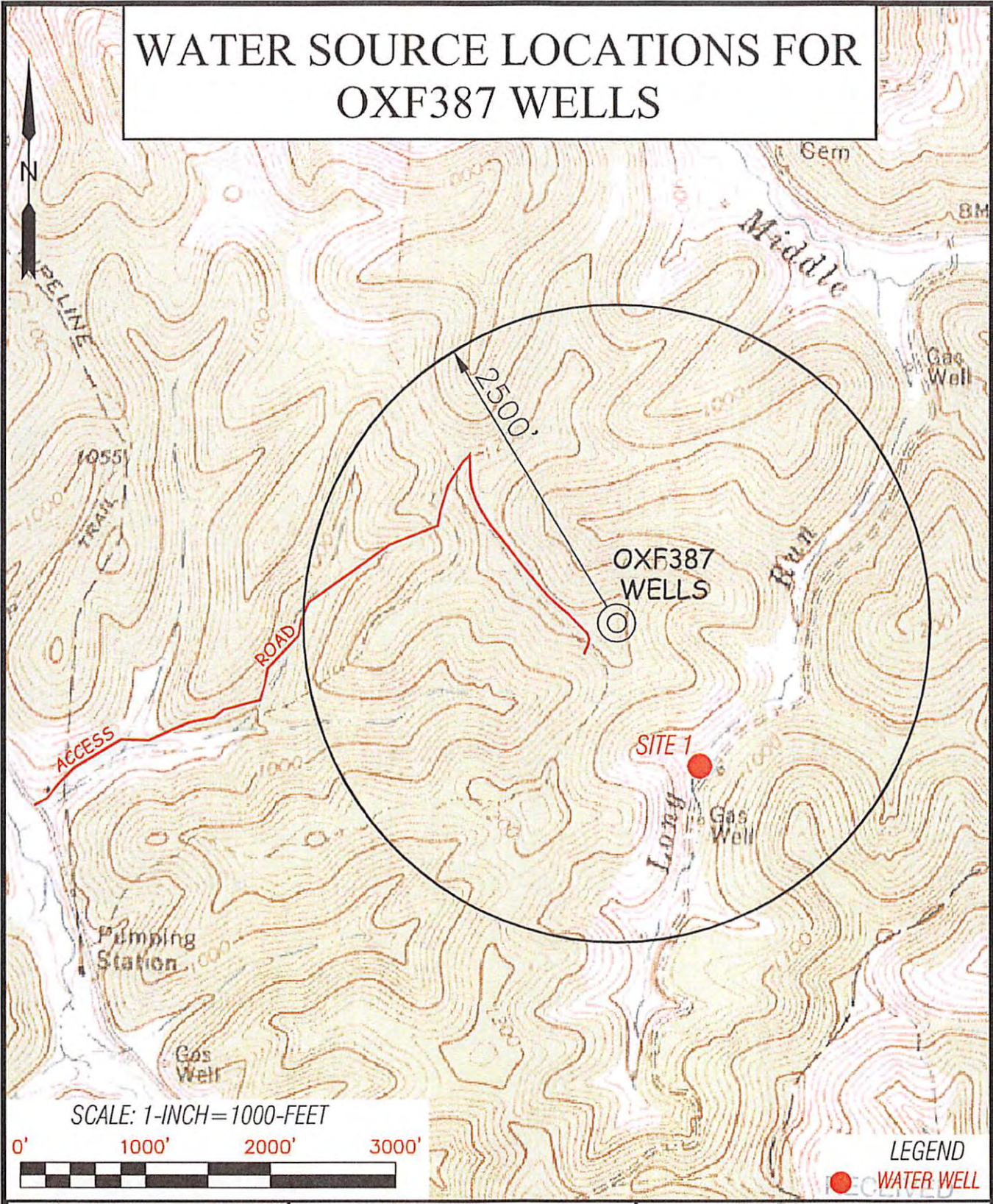


Subscribed and sworn before me this 24 day of August 2016 .
Rebecca L. Wanstreet Notary Public
My Commission Expires 4-7-2020

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WV Department of
Environmental Protection

12/29/2016


WATER SOURCE LOCATIONS FOR OXF387 WELLS



SCALE: 1-INCH=1000-FEET



LEGEND
● WATER WELL

 <p>Professional Energy Consultants A DIVISION OF SATELLITE SURVEYING, INC. SURVEYORS ENGINEERS ENVIRONMENTAL PRODUCT MGMT.</p> <p>1201 452 9874 www.slsurvey.com</p>	TOPO SECTION OF: OXFORD, WV 7.5' QUAD			OPERATOR: EQT PRODUCTION COMPANY 115 PROFESSIONAL PLACE P.O. BOX 280 BRIDGEPORT, WV 26330
	DRAWN BY K.D.W.	FILE NO. 8537	DATE 02/24/16	CADD FILE: OXF387WATERMAP.dwg

Office of Oil and Gas
 AUG 31 2016
 Environmental Protection

Surface Owners:

Coastal Forest Resources Co.
d/b/a Coastal Timberlands Co.
PO Box 709
Buckhannon WV 26201

7016 0750 0000 9581 5662

U.S. Postal Service™
CERTIFIED MAIL® RECEIPT
Domestic Mail Only

For delivery information, visit our website at www.usps.com™.

OFFICIAL USE

Certified Mail Fee
\$ _____

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

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

Postage
\$ _____

Total Postage
\$ _____

Sent To
Street and A/
City, State, Z

Coastal Forest Resources Co.
d/b/a Coastal Timberlands Co.
PO Box 709
Buckhannon WV 26201
OXF387 Permit App and Planned Op

BRIDGEPORT MPO
AUG 24 2016
Postmark
Date

9330-USPS

RW

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



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WV Department of
Environmental Protection
12/29/2016

Surface Owners (road or other disturbance):

Coastal Forest Resources Co.
 d/b/a Coastal Timberlands Co.
 PO Box 709
 Buckhannon WV 26201



Sandra Adams
 PO Box 472
 West Union WV 26456

2995 1856 0000 0520 9702

U.S. Postal Service™
CERTIFIED MAIL® RECEIPT
 Domestic Mail Only

For delivery information, visit our website at www.usps.com™.

OFFICIAL USE

Certified Mail Fee \$ _____

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

Return Receipt (hardcopy) \$ _____

Return Receipt (electronic) \$ _____

Certified Mail Restricted Delivery \$ _____

Adult Signature Required \$ _____

Adult Signature Restricted Delivery \$ _____

Postage \$ _____

Total Postage \$ _____

Sent To _____

Street and Apt. _____

City, State, ZIP+4 _____

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

BRIDGEPORT MPO
 AUG 29 2016
 Postmark Here
 Coastal Forest Resources Co.
 d/b/a Coastal Timberlands Co.
 PO Box 709
 Buckhannon WV 26201
 OXF387 Permit App and Planned Op
 RW

7016 0750 0000 9581 5679

U.S. Postal Service™
CERTIFIED MAIL® RECEIPT
 Domestic Mail Only

For delivery information, visit our website at www.usps.com™.

OFFICIAL USE

Certified Mail Fee \$ _____

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

Return Receipt (hardcopy) \$ _____

Return Receipt (electronic) \$ _____

Certified Mail Restricted Delivery \$ _____

Adult Signature Required \$ _____

Adult Signature Restricted Delivery \$ _____

Postage \$ _____

Total Postage \$ _____

Sent To _____

Street and Apt. _____

City, State, ZIP+4 _____

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

BRIDGEPORT MPO
 AUG 27 2016
 Postmark Here
 Sandra Adams
 PO Box 472
 West Union WV 26456
 OXF387 Permit App and Planned Op
 RW

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WV Department of
 Environmental Protection

12/29/2016

Surface Owners (Pits or impoundments): (AST)

Coastal Forest Resources Co.
d/b/a Coastal Timberlands Co.
PO Box 709
Buckhannon WV 26201

7016 0750 0000 9581 5662

U.S. Postal Service™
CERTIFIED MAIL® RECEIPT
Domestic Mail Only

For delivery information, visit our website at www.usps.com®

OFFICIAL USE

Certified Mail Fee
\$ _____

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

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

Postage
\$ _____

Total Postage
\$ _____

Sent To
Street and A1
City, State, Z

Coastal Forest Resources Co.
d/b/a Coastal Timberlands Co.
PO Box 709
Buckhannon WV 26201
OXF387 Permit App and Planned Op

BRIDGEPORT MPO
AUG 23 2016
Postmark Here
9330-USPS

RW

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

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Coal Owners:

Adele McDougal
213 High Street
Harrisville WV 26362

Lois L McKain
816 Woodard Dr.
Houston TX 77009

Patrick D Leggett
95 Intervale Road Unit 95
Stanford CT 06905

William Lee Huff
1108 W County Rd. 130
Midland TX 79706

Joy E. Huff as Trustee of Randy E. Huff Decedents Trust
826 Orange Ave #205
Coronado Ca 92118

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Adele McDougal
213 High Street
Harrisville WV 26362
OXF387 Permit App

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7016 0750 0000 9581 5686

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Lois L McKain
816 Woodard Dr.
Houston TX 77009
OXF387 Permit App

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Patrick D Leggett
95 Intervale Road Unit 95
Stanford CT 06905
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Joy E. Huff as Trustee of
Randy E. Huff Decedents Trust
826 Orange Ave #205
Coronado Ca 92118
OXF387 Permit App

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

7016 0750 0000 9581 5722

12/29/2016

Owners of Water Wells:

Mansfield Leeson
76 Bear Fork Rd.
New Milton WV 26411

7016 0750 0000 9581 5730

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<input type="checkbox"/> Adult Signature Required	\$
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Street and
City, State

Mansfield Leeson
76 Bear Fork Rd.
New Milton WV 26411
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Environmental Protection
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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: 8/5/10 **Date Permit Application Filed:** 8/5/10

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

- HAND DELIVERY
- CERTIFIED MAIL RETURN RECEIPT REQUESTED

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

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

Name: See Attached
Address: _____

Name: See Attached
Address: _____

Notice is hereby given:

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

State:	<u>WV</u>	UTM NAD 83	Easting:	<u>516886.38</u>
County:	<u>Doddridge</u>		Northing:	<u>4332353.198</u>
District:	<u>Southwest</u>	Public Road Access:		<u>Co Rt 21</u>
Quadrangle:	<u>Oxford</u>	Generally used farm name:		<u>Coastal Forest Resources d/b/a Coastal Timberlands Company</u>
Watershed:	<u>Long Run of Middle Fork of South Fork Hughes River</u>			

This Notice Shall Include:

Pursuant to West Virginia Code § 22-6A-16(b), this notice shall include the name, address, telephone number, and if available, facsimile number and electronic mail address of the operator and the operator's authorized representative. Additional information related to horizontal drilling may be obtained from the Secretary, at the WV Department of Environmental Protection headquarters, located at 601 57th Street, SE, Charleston, WV 25304 (304-926-0450) or by visiting www.dep.wv.gov/oil-and-gas/pages/default.aspx.

Notice is hereby given by:

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

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

Oil and Gas Privacy Notice:

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

AUG 31 2016
WV Department of
Environmental Protection
12/29/2016

Surface Owners:

Coastal Forest Resources Co.
d/b/a Coastal Timberlands Co.
PO Box 709
Buckhannon WV 26201

7015 3010 0100 1000 1 0045 7062

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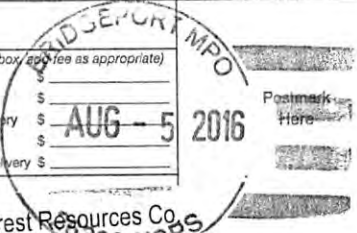
Certified Mail Fee	\$	
Extra Services & Fees (check box and fee as appropriate)	\$	
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<input type="checkbox"/> Adult Signature Restricted Delivery	\$	
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Total Postage	\$	

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d/b/a Coastal Timberlands Co.
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Buckhannon WV 26201

City, State, Zi: _____

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Surface Owners (road or other disturbance):

Coastal Forest Resources Co.
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 PO Box 709
 Buckhannon WV 26201

Sandra Adams
 PO Box 472
 West Union WV 26456

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 City, State, Zi _____

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 PO Box 472
 Street and West Union WV 26456
 City, State _____

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Surface Owners (Pits or impoundments):

Coastal Forest Resources Co.
d/b/a Coastal Timberlands Co.
PO Box 709
Buckhannon WV 26201

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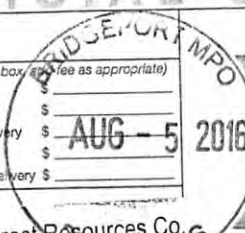
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d/b/a Coastal Timberlands Co.
PO Box 709
Buckhannon WV 26201

City, State, Zi _____

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12/29/2016

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

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

Date of Notice: 8/29/16 **Date Permit Application Filed:** 8/29/16

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: <u>See Attached</u>	Name: <u>See Attached</u>
Address: _____	Address: _____
_____	_____

Notice is hereby given:

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

State: <u>WV</u>	UTM NAD 83	Easting: <u>516886.38</u>
County: <u>Doddridge</u>		Northing: <u>4332353.198</u>
District: <u>Southwest</u>	Public Road Access: <u>Co Rt 21</u>	
Quadrangle: <u>Oxford</u>	Generally used farm name: <u>Coastal Forest Resources d/b/a Coastal Timberlands Company</u>	
Watershed: <u>Long Run of Middle Fork 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.

Well Operator: <u>EQT Production Company</u>	Address: <u>115 Professional Place PO Box 280</u>
Telephone: <u>304-848-0076</u>	<u>Bridgeport WV 26330</u>
Email: <u>wroark@eqt.com</u>	Facsimile: <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.

Office of Oil and Gas
AUG 31 2016
WV Department of
Environmental Protection

Surface Owners:

Coastal Forest Resources Co.
d/b/a Coastal Timberlands Co.
PO Box 709
Buckhannon WV 26201

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Buckhannon WV 26201
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Surface Owners (road or other disturbance):

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 PO Box 709
 Buckhannon WV 26201

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Sandra Adams
 PO Box 472
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 d/b/a Coastal Timberlands Co.
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Adult Signature Restricted Delivery \$ _____

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 West Union WV 26456
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Surface Owners (Pits or impoundments): (AST)

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d/b/a Coastal Timberlands Co.
PO Box 709
Buckhannon WV 26201

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<input type="checkbox"/> Return Receipt (electronic)	\$
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<input type="checkbox"/> Adult Signature Required	\$
<input type="checkbox"/> Adult Signature Restricted Delivery	\$
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Total Postage	\$
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Street and A1	
City, State, Z	

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d/b/a Coastal Timberlands Co.
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12/29/2016



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

August 15, 2016

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

Subject: DOH Permit for the OXF 387 Pad Site, Doddridge County

516714 OXF387H1 516715 OXF387H2 516716 OXF387H3 516717 OXF387H4
516718 OXF387H5 516719 OXF387H6 516720 OXF387H7 516721 OXF387H8
516722 OXF387H9 516823 OXF387H10

Dear Mr. Martin,

This well site will be accessed from Permit # 04-2014-1288 issued to EQT Production Company for access to the State Road. The well site is located off of Doddridge County Route 52/3 SLS.

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

Very Truly Yours,

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

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

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AUG 31 2016
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
	Tributyl tetradecyl phosphonium chloride	64742-47-8
Friction Reducer	Ammonium chloride	81741-28-8
Biocide	Hydrochloric Acid	12125-02-9
Scale Inhibitor	Propargyl Alcohol	7647-01-0
15% Hydrochloric Acid	Methanol	107-19-7
Corrosion Inhibitor	Guar Gum	67-56-1
Corrosion Inhibitor	Sodium Persulfate	9000-30-0
Gelling Agent	Potassium Carbonate	7775-27-1
Oxidizing Breaker		584-08-7
Buffering Agent		

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Environmental Protection

12/29/2016

EQT Production
Hydraulic Fracturing Monitoring Plan
Pad ID: OXF387
Doddridge County, WV

8/8/16

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AUG 8 1 2016
WV Department of
Environmental Protection

Purpose

The purpose of this pad-specific Hydraulic Fracturing Monitoring Plan is to identify and notify conventional well operators near EQT hydraulic fracturing in Doddridge County, WV prior to hydraulic fracturing at the following EQT wells on the OXF387 pad: 516714, 516715, 516716, 516717, 516718, 516719, 516720, 516721, 516722, 516823.

Due to the apparent presence of unique geological conditions, the potential for communication between deep geologic zones exists in this area. This potential communication, via natural gas, water, or both, may occur between hydraulically fractured wells in the Marcellus formation (approximately 6,600' TVD) and existing conventional natural gas wells in the partially-depleted, relatively high permeability Alexander formation (approximately 5,100' TVD).

The plan is being implemented as an additional safety measure to be utilized in conjunction with existing best management practices and emergency action plans for the site. These additional measures include pre-notification of conventional well operators of the timing and location of the hydraulic fracturing, establishment of measures conventional well operators should implement, and assurance that the OOG is notified of the timeline, as well as any issues that may arise during fracturing.

1. Communications with Conventional Well Operators

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

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

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

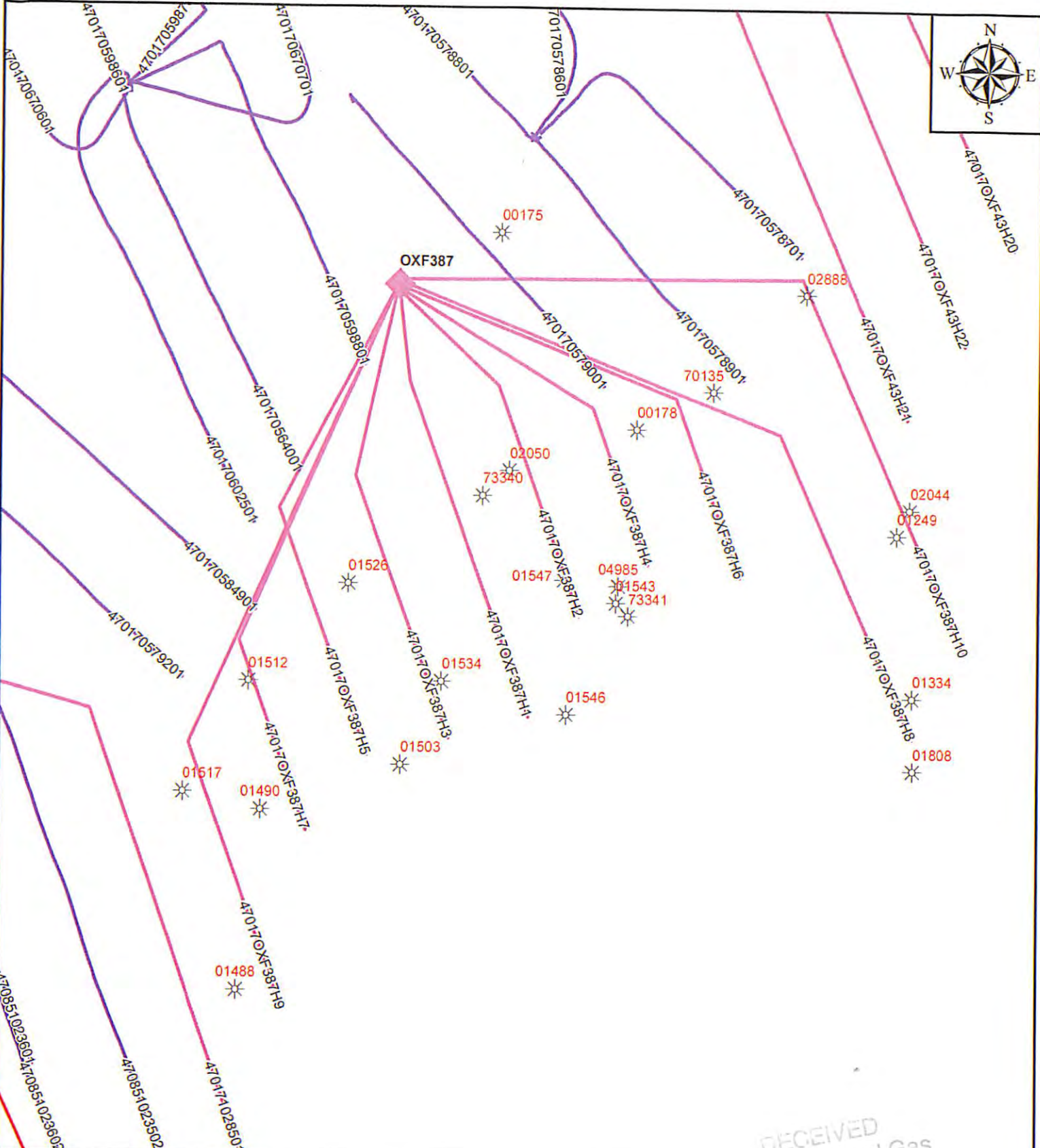
Specifically, the letter recommends that conventional well operators conduct the following activities during and after fracturing operations:

1. Inspect their surface equipment prior to fracturing to establish integrity and establish pre-frac well conditions
2. Observe wells closely during and after fracturing and monitor for abnormal increases in water, gas or pressure
3. Inspect or install master valves rated to 3,000 psi or other necessary equipment for wellhead integrity
4. Notify the OOG and EQT if any changes in water, gas production, pressure, or other anomalies are identified

2. Reporting

EQT will provide information relating to the hydraulic fracturing schedule, communication with conventional operators, and ongoing monitoring of the work upon request of OOG or immediately in the event of any noted abnormalities.

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Office of Oil and Gas
AUG 31 2016
WV Department of
Environmental Protection

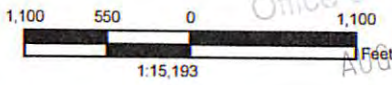


EQT
 EQT Corporation
 625 Liberty Avenue
 Pittsburgh, PA 15222

OXF387

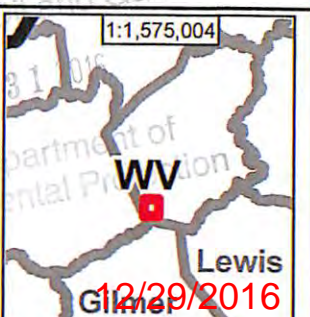
Vertical Offsets and Foreign Laterals within 500'

- Legend
- OXF387 Vertical Offsets
 - Genesee Spud
 - Marcellus Spud
 - Middlesex Spud
 - Uica Spud
 - GENESSEO
 - MARCELLUS
 - MIDDLESEX
 - POINT PLEASANT
 - UTICA



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Attachment A(c)

WellID	Well Status	Comp Date	FmatTD	Permit	Operator	Longitude	Latitude	Target Fm	Datum Eleva	SS Depth	Total Depth
4701700175	GAS	5/26/1947		00175	P & M OIL	-80.8013	39.1414		962.00	-1431.00	2393.00
4701702044	P&A	12/6/1917		02044	EPC	-80.7872	39.1341		1172.00	-1528.00	2700.00
4701702888	DRY	2/8/1981		02888	DORAN & ASSOC	-80.7908	39.1398		1163.00	-1087.00	2250.00
4701700178	GAS	7/17/1947		00178	P & M OIL	-80.7966	39.1362		1022.00	-1399.00	2421.00
4701701334	GAS-P	12/24/1965		01334	QUAKER STATE	-80.7871	39.1291		968.00	-1015.00	1983.00
4701701488	GAS	12/8/1967		01488	WOLF RUN OIL & GAS	-80.8103	39.1213		1151.00	-1075.00	2226.00
4701701490	GAS	1/23/1968		01490	WOLF RUN OIL & GAS	-80.8095	39.1261		1125.00	-1036.00	2161.00
4701701503	GAS	5/30/1968		01503	WOLF RUN OIL & GAS	-80.8047	39.1273		1197.00	-904.00	2101.00
4701701512	GAS	7/7/1968		01512	JESAM ENERGY	-80.8099	39.1295		1170.00	-880.00	2050.00
4701701517	GAS	8/23/1968		01517	JESAM ENERGY	-80.8122	39.1266		999.00	-856.00	1855.00
4701701526	GAS	10/23/1968		01526	TAMIAMI DEVELOPMENT	-80.8065	39.1321		1207.00	-863.00	2070.00
4701701534	GAS-P	12/8/1968		01534	W FERRELL	-80.8033	39.1295		1078.00	-1064.00	2142.00
4701701543	GAS	1/16/1969		01543	W & M OIL & GAS	-80.7973	39.1316		1323.00	-919.00	2242.00
4701701547	GAS	5/1/1969		01547	WILLARD FERRELL	-80.7991	39.1322		1231.00	-776.00	2007.00
4701702050	GAS	11/3/1917		02050	EPC	-80.8010	39.1351		0.00	-1744.00	1744.00
4701704985	GAS	5/4/2005		04985	JAY-BEE	-80.7972	39.1320		1322.00	-4170.00	5492.00
4701770135	GAS	6/27/1967		70135	EPC	-80.7940	39.1372		0.00	-1874.00	1874.00
4701701546	D&A	3/31/1969	SQUAW	01546	WEEKS & MYERS	-80.7990	39.1286		1269.00	0.00	2208.00
4701773340	UNKWN			73340	EQUITABLE RESOURCES EXPLORATION INC	-80.8019	39.1344		0.00	0.00	0.00
4701773341	UNKWN			73341	UNKNOWN	-80.7969	39.1313		0.00	0.00	0.00
4701701249	PSEUDO			01249	MOSES GEORGE W	-80.7876	39.1334		0.00	0.00	0.00
4701701808	PSEUDO			01808	FOSSIL PETROLEUM CORPORATION	-80.7871	39.1272		0.00	0.00	0.00

Attachment A (2)

UWI	Name	Depth Top	Base Depth
47017049850000	LITTLE LIME	2094	
47017049850000	BIG LIME	2161	
47017049850000	BIG INJUN	2181	
47017049850000	WEIR /SD/	2351	
47017049850000	GORDON	2771	
47017049850000	WARREN /SD/	3379	
47017049850000	WARREN LOWER /SD/	3454	
47017049850000	BALLTOWN	3844	
47017049850000	RILEY /SD/	4444	
47017049850000	RILEY 2	4790	
47017049850000	BENSON /SD/	4919	
47017049850000	ALEXANDER	5102	
47017049850000	ELK /SD/	5264	

Perforated Zones

* All data comes from IHS

12/29/2016

Attachment A₍₃₎

PROJECT INFORMATION

PROJECT NAME OXF-387
 TAX PARCEL
 SOUTHWEST DISTRICT
 MAP 45
 PARCELS 01, 02, 03 & 05
 SURFACE OWNER
 COASTAL FOREST RESOURCES
 TM 18 PAR 03
 SOUTHWEST DISTRICT
 DODDRIDGE COUNTY, WV
 TOTAL PROPERTY AREA 374 ACRES
 COASTAL FOREST RESOURCES
 TM 18 PAR 02
 SOUTHWEST DISTRICT
 DODDRIDGE COUNTY, WV
 TOTAL PROPERTY AREA 366 ACRES
 JIMMIE BURKE
 TM 18 PAR 01
 SOUTHWEST DISTRICT
 DODDRIDGE COUNTY, WV
 TOTAL PROPERTY AREA 466 ACRES
 JIMMIE BURKE
 TM 18 PAR 05
 SOUTHWEST DISTRICT
 DODDRIDGE COUNTY, WV
 TOTAL PROPERTY AREA 157 ACRES
 OIL AND GAS ROYALTY OWNER
 BEEF FAMILY TRUST DECEDENTS TRUST D ET AL
 SOUTHWEST DISTRICT
 DODDRIDGE COUNTY, WV
 LEASE AREA 4003 +/- ACRES

SITE LOCATION
 THE OXF-387 SITE IS LOCATED NORTHWEST OF CO RT 22.9 APPROXIMATELY 1.53 MILES SOUTHWEST OF THE CO RT 7.10

LOCATION COORDINATES

OXF-387 SITE ENTRANCE
 LATITUDE 38.941471 LONGITUDE -80.802237 (NAD 83)
 OXF-387 CENTER OF WELL PAD
 LATITUDE 38.941853 LONGITUDE -80.801824 (NAD 83)
 OXF-387 TANK PAD
 LATITUDE 38.942107 LONGITUDE -80.801746 (NAD 83)

PROPERTY DISTURBANCE COMPUTATIONS

PARCEL 02 0.2 ACRES
 PARCEL 04 0.0 ACRES
 PARCEL 05 0.4 ACRES
 PARCEL 01 0.2 ACRES
 TOTAL SITE DISTURBANCE 1.7 ACRES
SITE DISTURBANCE COMPUTATIONS
 WELL PAD AREA 0.2 ACRES
 EXCESS STOCKPILE A AREA 0.2 ACRES
 EXCESS STOCKPILE B AREA 0.2 ACRES
 TOPSOIL STOCKPILE AREA 1.4 ACRES
 TANK PAD AREA 0.0 ACRES
 TOTAL SITE DISTURBANCE 1.7 ACRES

GENERAL DESCRIPTION

THE OXF-387 PAD AND TANK PADS ARE BEING CONSTRUCTED TO AID IN THE DEVELOPMENT OF INDIVIDUAL MARCELLUS SHALE GAS WELLS

ENTRANCE PERMIT

EQT PRODUCTION COMPANY WILL OBTAIN AN ENTRANCE PERMIT FROM MW-100 FROM THE WEST VIRGINIA DEPARTMENT OF TRANSPORTATION DIVISION OF HIGHWAY PAVES TO COMMENCEMENT OF CONSTRUCTION ACTIVITIES

MISS UTILITY STATEMENT

MISS UTILITY OF WEST VIRGINIA WAS NOTIFIED FOR THE LOCATING OF UTILITIES PRIOR TO THE PROJECT DESIGN UNDER A PERMIT TO LOCATE. IN ADDITION, MISS UTILITY WILL BE CONTACTED PRIOR TO START OF THE PROJECT

FLOODPLAIN NOTE

THE PROPOSED LIMIT OF DISTURBANCE FOR THIS PROJECT IS LOCATED IN AN AREA THAT IS NOTED AS "OTHER AREAS" AND COULD BE DESIGNATED EITHER ZONE D OR ZONE X ON FLOOD INSURANCE RATE MAP NUMBER 580800020C DATED FEBRUARY 02, 2012.

ENVIRONMENTAL NOTES

A WETLAND DELINEATION WAS PERFORMED ON 3-11-16 BY PUTZIGA & ASSOCIATES, INC 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 JULY 14, 2016 REPORT WAS PREPARED BY PUTZIGA & ASSOCIATES, INC. (UNAWAIVERED). THE RESULTS OF THE FIELD DELINEATION OF 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 WVAEP. IT IS STRONGLY RECOMMENDED THAT THE APPROPRIATE AGENCIES BE CONSULTED IN AN EFFORT TO OBTAIN WRITTEN CONFIRMATION OF THE DELINEATION DESCRIBED BY THIS REPORT PRIOR TO COMMENCING CONSTRUCTION ON THE PROPERTY DESCRIBED. MEANWHILE, 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 FILL AND STREAM CHANNELIZATION.

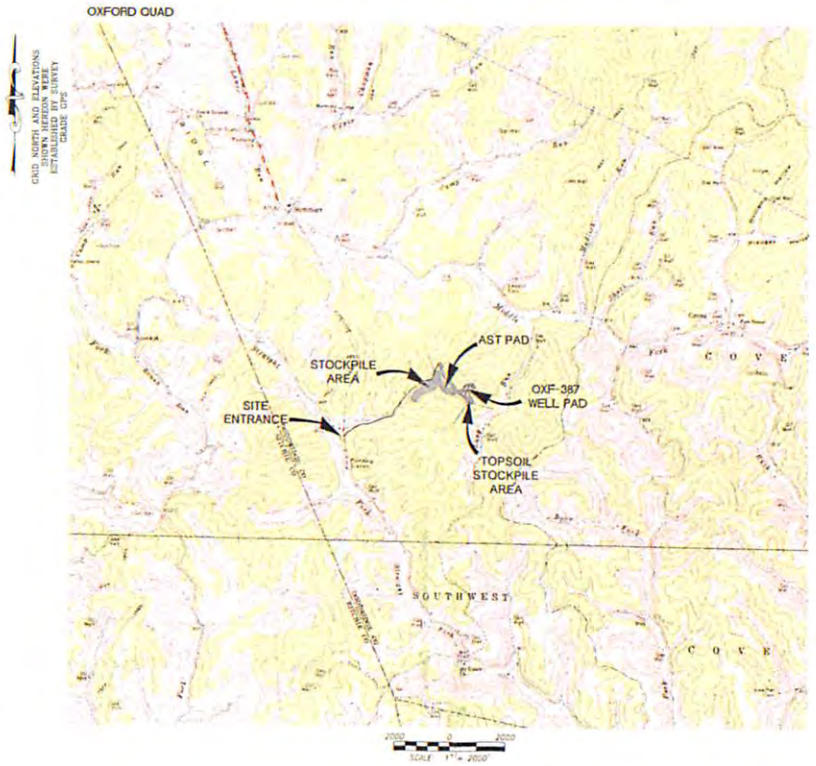
RESTRICTIONS NOTES

- 1. THERE ARE NO FRESHWATER STREAMS WITHIN 500 FEET OF OR RESERVOIRS WITHIN 100 FEET OF THE WELL PAD 100
- 2. THERE ARE NO NATURALLY FORMING TRAP OR STORAGE WITHIN 300 FEET OF THE WELL PAD AND 100
- 3. THERE ARE NO CONFINEMENT STRATA OR PUBLIC WATER SUPPLY FACTORS WITHIN 100 FEET OF THE WELL PAD AND 100
- 4. THERE ARE NO APPARENT EXISTING WATER WELLS OR DEVELOPED SPRINGS WITHIN 250 FEET OF THE WELLS BEING DRILLED
- 5. THERE ARE NO EXISTING BUILDINGS WITHIN 625 FEET OF THE CENTER OF THE WELL PAD
- 6. THERE ARE NO AGRICULTURAL BUILDINGS LARGER THAN 2500 SQUARE FEET WITHIN 625 FEET OF THE CENTER OF THE WELL PAD

OXF-387 FINAL SITE PLAN
EQT PRODUCTION COMPANY

PROPOSED WELL NUMBERS: H1-WV516714, H2-WV516715, H3-WV516716, H4-WV516717, H5-WV516718, H6-WV516719, H7-WV516720, H8-WV516721, H9-WV516722 & H10-WV516823.

SITUATE ON THE WATERS OF LONG RUN OF MIDDLE FORK OF SOUTH FORK OF HUGHES RIVER SOUTHWEST DISTRICT, DODDRIDGE COUNTY, WEST VIRGINIA.



LIST OF DRAWINGS

- 1 - COVER SHEET
- 2 - NOTES
- 3 - OVERALL SHEET INDEX & VOLUMES
- 4 - PRELIMINARY SITE PLAN
- 5 - PRELIMINARY SITE PLAN
- 6 - PRELIMINARY SITE PLAN
- 7 - PRELIMINARY SITE PLAN
- 8 - PRELIMINARY SITE PLAN
- 9 - ACCESS ROAD PROFILES
- 10 - ACCESS ROAD PROFILES
- 11 - PAS, TANK PAD AND STOCKPILE PROFILES
- 12 - MAIN ACCESS CROSS SECTIONS
- 13 - MAIN ACCESS CROSS SECTIONS
- 14 - MAIN ACCESS CROSS SECTIONS
- 15 - MAIN ACCESS CROSS SECTIONS
- 16 - MAIN ACCESS CROSS SECTIONS
- 17 - MAIN ACCESS CROSS SECTIONS
- 18 - MAIN ACCESS CROSS SECTION
- 19 - PRELIMINARY RECLAMATION PLAN
- 20 - CONSTRUCTION DETAILS
- 21 - CONSTRUCTION DETAILS
- 22 - CONSTRUCTION DETAILS
- 23 - CONSTRUCTION DETAILS
- 24 - CONSTRUCTION DETAILS

LEGEND	
EX INDEX CONTOUR	PROP INDEX CONTOUR
EX INTERMEDIATE CONTOUR	PROP INTERMEDIATE CONTOUR
EX BOUNDARY LINE	PROP RECLAMATION 2' CONTOUR
EX ROAD EDGE OF GRAVEL/DIRT	PROP RECLAMATION 40' CONTOUR
EX ROAD EDGE OF PAVEMENT	PROP GRADING LIMIT
EX ROAD CENTERLINE	PROP LIMITS OF ESTABLISHMENT
EX DITCHLINE	PROP WELL PAD
EX CURBLINE	PROP WELL HEAD
EX GROUNDLINE	PROP 4" PVC DRAIN PIPE
EX FENCELINE	PROP SUMP LEACH
EX GATE	PROP CONTAINMENT BERM
EX OVERHEAD UTILITY	PROP PIT/IMPOUNDMENT CL
EX OVERHEAD UTILITY R/W	PROP REINFORCED SAFETY FENCE
EX POWER POLE WITH EMERGENCY LIGHTLINE	PROP ACCESS GATE WITH EMERGENCY LIGHTLINE
EX GOV WIRE	
EX TELEPHONE LINE	
EX GASLINE	
EX GASLINE R/W	
EX WATER WELL	
EX GAS WELL	
EX TRENCH	
EX REFERENCE TREE	
EX DEDICATED STREAM	
EX DEDICATED WETLAND	
EX BUILDING	
EX BRIDGE	
100 WETLAND/STREAM BUFFER	
PROP ROAD EDGE OF GRAVEL	
PROP ROAD CENTERLINE	
PROP 4" DITCH W/ CHECK DAM	
PROP DITCH BELIEF (CVLERT) (SRC)	
PROP RIP-UP RIP-OUT PROTECTION	
PROP CURB/DRAIN	
PROP COMPOST FILTER SOCK	
SECTION LINE	
MATCHLINE	
X-SECTION GRID INDEX	
X-SECTION GRID INTERMEDIATE	
X-SECTION PROPOSED GRADE	
X-SECTION EXISTING GRADE	
X-SECTION WATER SURFACE	
SPICE ORIENTATION	
CENTER OF PAD	
PROPOSED WELL CELLAR	

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 the state of West Virginia.
IT'S THE LAW!



THIS DOCUMENT WAS PREPARED BY SMITH LAND SURVEYING FOR EQT PRODUCTION COMPANY

COVER SHEET
OXF-387 FINAL SITE PLAN
 SOUTHWEST DISTRICT
 DODDRIDGE COUNTY, WV

DATE 8/9/16
 SCALE 1" = 200'
 DESIGNED BY K.E.S.
 FILE NO 8537
 SHEET 1 OF 24
 REV. 8-11-16

OPERATOR
 EQT PRODUCTION COMPANY
 OPERATOR ID: JOSHUA
 115 PROFESSIONAL PLACE
 P.O. BOX 200
 BRIDGEFOOT, WV 26330
 PHONE (304) 340-3670

ENGINEER/SURVEYOR
 SMITH LAND SURVEYING, INC
 12 VANHORN DRIVE
 P.O. BOX 150
 GLENVILLE, WV 26351
 PHONE (204) 462-5638

Environmental Protection
 Division
 8/16
 MED
 and Gas
 2/16

OXF-387 FINAL SITE PLAN CONSTRUCTION NOTES EQT PRODUCTION COMPANY



CONSTRUCTION NOTES:

- 1 METHODS AND MATERIALS USED IN THE CONSTRUCTION OF THE IMPROVEMENTS HEREIN SHALL CONFORM TO THE CURRENT COUNTY CONSTRUCTION STANDARDS AND SPECIFICATIONS AND/OR CURRENT WEEP EROSION AND SEDIMENT CONTROL BEST MANAGEMENT PRACTICE MANUAL, STANDARDS AND SPECIFICATIONS.
- 2 MEASURES TO CONTROL EROSION AND SILTATION, INCLUDING DETENTION PONES SERVING AS SILET BASINS DURING CONSTRUCTION MUST BE PROVIDED PRIOR TO RESUMPTION OF THE SITE DEVELOPMENT PERMIT. THE APPROVAL OF THESE PLANS IN NO WAY RELIEVES THE DEVELOPER OR HIS AGENT OF THE RESPONSIBILITIES CONTAINED IN THE MOST EROSION AND SEDIMENT CONTROL BEST MANAGEMENT PRACTICE MANUAL.
- 3 AN APPROVED SET OF PLANS AND ALL APPLICABLE PERMITS MUST BE AVAILABLE AT THE CONSTRUCTION SITE. ALSO, A REPRESENTATIVE OF THE DEVELOPER MUST BE AVAILABLE AT ALL TIMES.
- 4 THE CONTRACTOR SHALL PROVIDE ADEQUATE MEANS OF CLEANING MUD FROM TRUCKS AND/OR OTHER EQUIPMENT PRIOR TO ENTERING PUBLIC STREETS, AND IT IS THE CONTRACTOR'S RESPONSIBILITY TO CLEAN STREETS, ALAY DUST, AND TO TAKE WHATEVER MEASURES ARE NECESSARY TO INSURE THAT THE STREETS ARE MAINTAINED IN A CLEAN MUD AND DUST FREE CONDITION AT ALL TIMES.
- 5 NOTIFICATION SHALL BE GIVEN TO THE APPROPRIATE UTILITY COMPANY PRIOR TO CONSTRUCTION OF WATER AND/OR GAS PIPE LINES. INFORMATION SHOULD ALSO BE OBTAINED FROM THE APPROPRIATE AUTHORITY CONCERNING PERMITS, CUT SHEETS AND COMPLETION TO EXISTING LINES.
- 6 THE LOCATION OF EXISTING UTILITIES SHOWN IN THESE PLANS ARE FROM FIELD LOCATIONS. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO VERIFY THE EXACT HORIZONTAL AND VERTICAL LOCATION OF ALL EXISTING UTILITIES AS NEEDED PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL INFORM THE ENGINEER OF ANY CONFLICTS ARISING FROM HIS EXISTING UTILITY VERIFICATION AND THE PROPOSED CONSTRUCTION.
- 7 THE DEVELOPER WILL BE RESPONSIBLE FOR ANY DAMAGE TO THE EXISTING STREETS AND UTILITIES WHICH OCCURS AS A RESULT OF HIS CONSTRUCTION PROJECT WITHIN OR CONTIGUOUS TO THE EXISTING RIGHT-OF-WAY.
- 8 WHEN GRADING IS PROPOSED WITHIN EASEMENTS OF UTILITIES, LETTERS OF PERMISSION FROM ALL INVOLVED COMPANIES MUST BE OBTAINED PRIOR TO GRADING AND/OR SITE DEVELOPMENT.
- 9 THE DEVELOPER WILL BE RESPONSIBLE FOR THE RELOCATION OF ANY UTILITIES WHICH IS REQUIRED AS A RESULT OF HIS PROJECT. THE RELOCATION SHOULD BE DONE PRIOR TO CONSTRUCTION.
- 10 THESE PLANS IDENTIFY THE LOCATION OF ALL KNOWN GRAVESTIES. GRAVESTIES SHOWN ON THIS PLAN WILL BE PROTECTED IN ACCORDANCE WITH STATE LAW. IN THE EVENT GRAVESTIES ARE DISCOVERED DURING CONSTRUCTION THE OWNER AND ENGINEER MUST BE NOTIFIED IMMEDIATELY.
- 11 THE CONTRACTOR IS TO VERIFY FIELD CONDITIONS PRIOR TO AND DURING CONSTRUCTION AND NOTIFY SOUTH LAND SURVEYING AT (214) 442-5224 IMMEDIATELY OF ANY DISCREPANCIES BETWEEN ACTUAL FIELD CONDITIONS AND THE APPROVED PLAN.
- 12 CONTRACTORS SHALL NOTIFY OPERATORS WHO MAINTAIN UNDERGROUND UTILITY LINES IN THE AREA OF PROPOSED EXCAVATING OR DRILLING AT LEAST TWO (2) WORKING DAYS, BUT NOT MORE THAN TEN (10) WORKING DAYS PRIOR TO COMMENCEMENT OF EXCAVATION OR DRILLING.
- 13 CONTRACTOR TO CONTACT OPERATOR AND ENGINEER IF GROUNDWATER IS ENCOUNTERED DURING CONSTRUCTION.
- 14 ALL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE MAINTAINED BY THE CONTRACTOR DAILY AND CHECKED AFTER EVERY RAINFALL. ALL DRAIN INLETS SHALL BE FREE OF SILTATION AND DEBRIS. INEFFECTIVE MEASURES SHALL BE REPLACED, AS NECESSARY.
- 15 THE CONTRACTOR SHALL SCHEDULE A PRE-CONSTRUCTION MEETING WITH THE EROSION AND SEDIMENT CONTROL INSPECTOR 2 DAYS PRIOR TO THE START OF CONSTRUCTION.
- 16 ROCK FILL LISTS WILL BE NO GREATER THAN 30"
- 17 THE CONTRACTOR IS RESPONSIBLE FOR CONSTRUCTING THE SITE IN ACCORDANCE WITH THE DESIGN PLANS AND CONSTRUCTION DOCUMENTS AND THE SCOPE OF WORK SHALL CONFORM WITH THE GRADING, EROSION, DEFENS, DIMENSIONS, ETC. SHOWN HEREON.
- 18 SOILS FOR EARTHEN EMBANKMENT CONSTRUCTION SHALL BE LIMITED TO TYPES CC, GM, SC, SM, CL, OR ML (ASTM D4457 - UNIFIED SOIL CLASSIFICATION). SOILS MUST CONTAIN A MINIMUM OF 20% FF PARTS NO. 200 AND BE "WELL GRADED" MATERIAL WITH NO CURBLES OR BOUNDER SIZE MATERIAL MIXED WITH CLAY. A MINIMUM OF THREE SAMPLES SHALL BE CLASSIFIED.
- 19 THE EARTHEN EMBANKMENT SHALL BE COMPACTED BY A VIBRATING SHEEPFOOT ROLLER. THE LIFTS MUST BE IN HORIZONTAL LAYERS WITH A MAXIMUM LIFTS LIFT THICKNESS OF 12" AND MAXIMUM PARTICLE SIZE LESS THAN 6". ALL FILL SHALL BE COMPACTED TO 95% PER THE STANDARD PROCTOR TEST (ASTM-D-698). ROCK FILL LIFTS WILL BE NO GREATER THAN 30"

CONSTRUCTION NOTES:

- 20 THE PLACEMENT OF ALL FILL MATERIAL SHALL BE FREE OF WOOD STUMPS AND ROOTS, LARGE ROCKS AND BouldERS, AND ANY OTHER NON-COMPACTABLE SOLID MATERIAL. THE EMBANKMENT SHALL BE COMPACTED TO A MINIMUM OF VISIBLE SOIL-MOVEMENT, HOWEVER, THE COMPACTOR EFFORT SHALL NOT EXCEED THE OPTIMUM MOISTURE LIMITS.
- 21 WHEN GROUND WATER IS ENCOUNTERED DURING EARTH MOVING ACTIVITIES, DRAIN PIPES SHALL BE INSTALLED WITH A MINIMUM SLOPE OF 1% AND DRAINAGED BEYOND THE CONSTRUCTION LIMITS.
- 22 ALL EXPOSED EMBANKMENT SLOPES NOT COVERED BY COMPACTED ROCKFILL OR REPRAP SHALL BE LIMED, FERTILIZED, SEEDED AND MULCHED. PERMANENT VEGETATIVE COVERING COVER IN COMPLIANCE WITH THE WEEP EROSION AND SEDIMENT CONTROL BEST MANAGEMENT PRACTICE MANUAL MUST BE ESTABLISHED UPON CONSTRUCTION. EMBANKMENTS SHALL BE MAINTAINED WITH A GRASSY VEGETATIVE COVER AND FREE OF BRUSH AND/OR TREE.
- 23 EQT WILL PROVIDE ALL FILL MATERIAL TESTING REQUIRED DURING THE CONSTRUCTION OF THE PROJECT. ALL MATERIAL TEST SHALL BE CONDUCTED BY A CERTIFIED MATERIALS TESTING LABORATORY AND A CERTIFICATION OF THE MATERIALS TESTED SHALL BE PROVIDED BY A LICENSED PROFESSIONAL ENGINEER REPRESENTING THE LABORATORY. ALL TEST RESULTS SHALL BE SUBMITTED TO THE ENGINEER VERIFYING THE CONSTRUCTED FACILITY. FAILURE TO CONDUCT THE DESIGN TEST SHALL BE CAUSE FOR NON-ACCEPTANCE OF THE CONSTRUCTED FACILITY.

CONSTRUCTION SEQUENCE

- 1 THE DEVELOPMENT OF THE SITE SHALL BE CONSISTENT WITH THE FOLLOWING GENERAL SEQUENCE OF CONSTRUCTION. THE CONTRACTOR SHALL MAINTAIN MAINTAIN AND OPERATE ALL EXISTING EROSION AND SEDIMENT CONTROL MEASURES TO EFFECTIVELY MITIGATE THE RISKS OF ACCELERATED EROSION AND SEDIMENTATION TO ACCEPTABLE LEVELS. MITIGATION FROM THIS SEQUENCE SHALL BE EXECUTED BY THE PROJECT'S SUPERINTENDENT TO AVOID TO ELIMINATE ANY POTENTIAL EROSION CONSTRUCTION THAT MAY ARISE FOR THE DURATION OF THE PROJECT. THE WEEP OFFICE OF OIL AND GAS SHALL BE NOTIFIED OF ANY AND ALL SUCH DEVIATIONS FROM THE APPROVED PLANS.
- 2 HOLD A PRE-CONSTRUCTION CONFERENCE WITH THE CONTRACTOR AND THE APPROPRIATE EROSION AND SEDIMENT CONTROL INSPECTOR 48 HOURS PRIOR TO BEGINNING WORK TO REVIEW THE CONSTRUCTION DRAWING AND PROVIDE ANY REQUESTED CLARIFICATION.
- 3 STATE THE LIMITS OF CONSTRUCTION.
- 4 INSTALL THE ROCK CONSTRUCTION ENTRANCE AS SHOWN ON THE PLANS.
- 5 INSTALL ALL ORANGE SAFETY FENCE AS SHOWN AROUND ANY DEEMERED STREAMS AND WETLANDS TO CLEARLY IDENTIFY THOSE AREAS THAT ARE NOT TO BE DISTURBED.
- 6 INSTALL ALL BMP'S (SUPER SILT FENCE, REINFORCED SILT FENCE, SEDIMENT TRAPS, ETC) AS SHOWN ON THE PLANS AND DETAILS.
- 7 CLEAN AND GRUB THE ACCESS ROAD AND WELL PAD AREA. ALL WOODY MATERIAL, BRUSH, TREES, STUMPS, LARGE ROOTS, BouldERS, AND DEBRIS SHALL BE CLEANED FROM THE SITE AREA AND DEPT TO THE MINIMUM NECESSARY FOR PROPER CONSTRUCTION, INCLUDING THE INSTALLATION OF NECESSARY EROSION CONTROL. THREE (3) INCHES IN DIAMETER AND LARGER SHALL BE CUT AND LOGS STACKED. SMALLER TREES, BRUSH, A STUMPS SHALL BE CUT AND OR CHIPPED AND WINDROWED IN APPROPRIATE AREAS FOR USE AS EROSION BARRIERS AT WATER DRAINAGE OUTLETS, WINDROWED BELOW THE WELL SITE, USED FOR WALKWAY BARRIERS, BURNED (AS PER OIL & GAS EROSION FENCE LANS), REMOVED FROM SITE, OR DISPOSURE OF BY OTHER METHODS APPROVED BY EQT.
- 8 INSTALL ANY WETLAND OR STREAM CROSSINGS AS SHOWN ON THE PLANS.
- 9 CONVEY EROSION DRAINAGE AROUND THE ACCESS ROAD, WELL PAD, AND TANK PAD AREAS BY CONSTRUCTING ALL DIVERSION BERMED AS SHOWN ON THE PLANS.
- 10 CONSTRUCT THE ACCESS ROAD. EXTER BENEATH CULVERTS SHALL BE INSTALLED AT A GRADE OF 1-8% TO MINIMIZE OUTLET VELOCITIES TO THE EXTENT POSSIBLE. INSTALL SLOPE PROTECTION AS SHOWN ON PLANS. STABILIZE THE ROAD WITH STONE AND SILET SLOPES AS SPECIFIED WITH PERMANENT SEEDING, STONE, AND STABILIZE TROPIC ALONG THE ACCESS ROAD AS NEEDED.
- 11 STIP THE TROPIC FROM THE WELL PAD AND ABOVE GROUND STORAGE TANK PAD AREAS. TROPIC SHALL BE STOCKPILED AND IMMEDIATELY STABILIZED.
- 12 GRADE THE WELL PAD AND ABOVE GROUND STORAGE TANK AREA AS SHOWN ON THE PLAN. IMMEDIATELY STABILIZE THE OUTER AREAS OF THE IMPOUNDMENT AS WELL AS THE WELL PAD AND ANY TURNSHOUND AREAS WITH STONE AND THE SILET SLOPES WITH EROSION CONTROL. BOUNDING WHEN DEEPER ARE 21" OR GREATER. APPLY SEED AND MULCH ALL DISTURBED AREAS. THIS SHALL INCLUDE ALL AREAS THAT WILL NOT BE SUBJECT TO REGULAR TRAFFIC ACTIVITY (TO BE STABILIZED WITH SIGNE) OR ANY DISTURBED AREA THAT WILL NOT BE RE-SEEDERED BEFORE SITE RECLAMATION BEGINS.
- 13 INSTALL THE ABOVE GROUND STORAGE TANK LEAK SYSTEM.
- 14 PERMANENTLY DISTURBED AREAS AND UNVEGETATED BOUND WEDGE AREAS SHALL BE INSPECTED AFTER EACH RAINFALL EVENT AND MONITORED WEEKLY FOR SIGNS OF ACCELERATED EROSION. IMPLEMENT ADDITIONAL BMP'S AS DETERMINED NECESSARY. THESE INSPECTIONS SHALL CONTINUE DURING THE DURATION OF THE PROJECT AND SUBSEQUENT SITE RECLAMATION.
- 15 ONCE DISTURBED AREAS HAVE BEEN RE-VEGETATED AND STABILIZED FOLLOWING RECLAMATION, THE TEMPORARY BMP'S IN THOSE AREAS MAY BE REMOVED CONTINUE TO MONITOR THESE AREAS TO ENSURE A UNIFORM COVER OF VEGETATION IS MAINTAINED. ANY AREAS FOUND TO BE DEFICIENT SHALL BE RE-SEEDERED AND MAINTAINED.

CONSTRUCTION SEQUENCE

- 16 ALL DITCH LINES SHALL BE CLEANED PRIOR TO INSTALLATION OF LINED PROTECTION.
- 17 FINALIZE GRADING OF THE TANK PADS. IMMEDIATELY STABILIZE THE OUTER AREAS OF THE TANK PADS. THE TANK PADS INCLUDING BOUND WEDGE PAD AND TURNSHOUND AREAS SHALL BE STABILIZED WITH GEOTEXTILE FABRIC AND STONE. STABILIZE ALL SILET SLOPES WITH GEOTEXTILE EROSION CONTROL BARRIERS. APPLY SEED AND MULCH TO ALL DISTURBED AREAS. THIS SHALL BE INCLUDED IN ALL AREAS THAT WILL NOT BE SUBJECT TO REGULAR TRAFFIC ACTIVITY (TO BE STABILIZED WITH SIGNE) OR ANY DISTURBED AREA THAT WILL NOT BE RE-SEEDERED BEFORE SITE RECLAMATION BEGINS.
- 18 COMMENCE THE DRILLING ACTIVITY.

SITE CLEANUP & RECYCLE PROGRAM

- 1 GARBAGE, FUEL OR ANY SUBSTANCE HARMFUL TO HUMAN AQUATIC OR FISH LIFE, WILL BE PREVENTED FROM ENTERING SPRINGS, STREAMS, PONDS, LAKES, WETLANDS OR ANY WATER BODY OR WATER BODY.
- 2 OILS, FUELS, LUBRICANTS AND COOLANTS WILL BE PLACED IN SUITABLE CONTAINERS AND REUSED PROPERLY.
- 3 ALL TRASH AND GARBAGE WILL BE COLLECTED AND DISPOSED PROPERLY.
- 4 ALL SEDIMENT PRODUCED FROM SEDIMENT CAPTURING DEVICES SHALL BE PLACED ON THE EROSION STOCKPILE, TRIP, SEEDED AND MULCHED AS NECESSARY. ALTERNATIVELY, THE REMOVED SEDIMENT CAN BE TRANSPORTED TO A SITE WITH AN APPROVED PERMIT.

MAINTENANCE PROGRAM

- 1 BMP'S WILL BE INSPECTED ON A WEEKLY BASIS AND AFTER EACH MEASURABLE RAINFALL EVENT DURING THE ACTIVE CONSTRUCTION PHASE OF THE PROJECT.
- 2 ALL DEVEGETATED ACCESS ROADS AND FACILITIES ARE TO BE MAINTAINED THROUGHOUT THE LIFE OF EACH STRUCTURE.
- 3 CULVERTS, ROAD BARRIERS, BROAD-BASED EPS, DIVERSION DITCHES, AND ROCK CHECK DAMS MUST BE MAINTAINED BY PROPER WORKING ORDER AND WILL BE CLEANED, OUT REPAIRED OR REPLACED AS NECESSARY.
- 4 FILTER STRIPS AND/OR SILT FENCE WILL BE MAINTAINED.
- 5 ALL AREAS OF EARTH DISTURBANCE WILL BE REPAIRED WHERE SIGNS OF ACCELERATED EROSION ARE DETECTED.
- 6 SEEDING AND MULCHING WILL BE REPEATED IN THOSE AREAS THAT APPEAR TO BE ERODING OR HAVE FAILED.

GEOTECHNICAL NOTES

- 1 A SURFACE INVESTIGATION HAS NOT BEEN PERFORMED AS OF AUGUST 03, 2016. THE ENGINEER AND SURVEYOR ARE NOT RESPONSIBLE FOR UNDISCOVERED SUBSURFACE INSTABILITIES CAUSING ADDITIONAL WORK OR ADDITIONAL CONSTRUCTION MEASURES OTHER GEOTECHNICAL COMPLICATIONS ENCOUNTERED DURING CONSTRUCTION.

DAF 9/8/16

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

THIS DOCUMENT WAS
 PREPARED BY SOUTH
 LAND SURVEYING
 FOR EQT PRODUCTION
 COMPANY

OXF-387 FINAL
 SITE PLAN
 SOUTHWEST DISTRICT
 DODDRIIDGE COUNTY, WV

DATE: 8/29/16
 SCALE:
 DESIGNED BY: K.E.S.
 FILE NO: 8537
 SHEET: 2 OF 24
 REV: 08-10-2016

OXF-387 FINAL SITE PLAN EQT PRODUCTION COMPANY

DAF 9/16/16



THIS DOCUMENT WAS PREPARED BY INGER LAND SURVEYING FOR EQT PRODUCTION COMPANY

OXF-387 FINAL SITE PLAN
SOUTHWEST DISTRICT
DODDRIIDGE COUNTY, WV

DATE: 6/29/16
SCALE: 1" = 200'
DESIGNED BY: K.R.S.
FILE NO: 8537
SHEET 3 OF 24
REV: 8-11-16

No.	Dist.	Length	No.	Dist.	Length	No.	Dist.	Length	No.	Dist.	Length	No.	Dist.	Length
1	12'	30	27	12'	245	63	12'	19	105	12'	12			
2	12'	23	28	12'	20	64	12'	23	106	12'	24			
3	12'	20	29	12'	68	65	12'	22	107	12'	51			
4	12'	31	30	12'	102	66	12'	53	108	12'	13			
5	12'	46	31	12'	151	67	12'	69	109	12'	42			
6	12'	31	32	12'	192	68	12'	79	110	12'	10			
7	12'	47	33	12'	25	69	12'	27	111	12'	75			
8	12'	16	34	12'	139	70	12'	58	112	12'	23			
9	12'	11	35	12'	14	71	12'	19	113	12'	22			
10	12'	45	36	12'	15	72	12'	79	114	12'	27			
11	12'	78	37	12'	16	73	12'	27	115	12'	34			
12	12'	115	38	12'	81	74	12'	12	116	12'	20			
13	12'	45	39	12'	80	75	12'	23	117	12'	14			
14	12'	22	40	12'	23	76	12'	79	118	12'	14			
15	12'	91	41	12'	54	77	12'	21	119	12'	10			
16	12'	45	42	12'	20	78	12'	27	120	12'	17			
17	12'	139	43	12'	19	79	12'	19	121	12'	21			
18	12'	42	44	12'	13	80	12'	46	122	12'	43			
19	12'	19	45	12'	15	81	12'	43	123	12'	52			
20	12'	79	46	12'	14	82	12'	26	124	12'	13			
21	12'	20	47	12'	17	83	12'	14	125	12'	26			
22	12'	34	48	12'	24	84	12'	14	126	12'	56			
23	12'	44	49	12'	29	85	12'	19	127	12'	37			
24	12'	14	50	12'	37	86	12'	19	128	12'	71			
25	12'	67	51	12'	23	87	12'	21	129	12'	78			
26	12'	28	52	12'	13	88	12'	27	130	12'	10			

Dist.	Area	Length
12'	187	8,079
24'	11	517



23.1 AC

NAME	VOLUME (CY)
A	61,000
B	48,500
TOTAL	109,500

NAME	VOLUME (CY)
A	15,200
TOTAL	15,200

DESCRIPTION	CUT (CY)	FILL (CY)	TOPSOIL (CY)	SPILL (CY)	BORROW (CY)	MAX SLOPE (%)	LENGTH OF SLOPE (FT)
MAIN ACCESS ROAD	9,751	1,647	3,996	8,111	-	3%	N/A
WATER TANK PAD	459	15,418	2,785	22,918	-	N/A	N/A
WELL PAD	278,897	8,886	1,809	107,849	-	N/A	N/A
TOTAL STIPPED TOPSOIL (CY)	TOTAL	TOTAL	TOTAL	TOTAL	TOTAL		
	128,955	24,911	10,800	120,562	12,918		
TOTAL REQUIRED TOPSOIL STOCKPILE VOLUME (1.2 S SWELL)			15,200				
TOTAL AVAILABLE TOPSOIL STOCKPILE VOLUME			15,200				
TOTAL REQUIRED EXCESS STOCKPILE VOLUME (1.2 S SWELL)			115,212				
TOTAL AVAILABLE EXCESS STOCKPILE VOLUME			115,000				

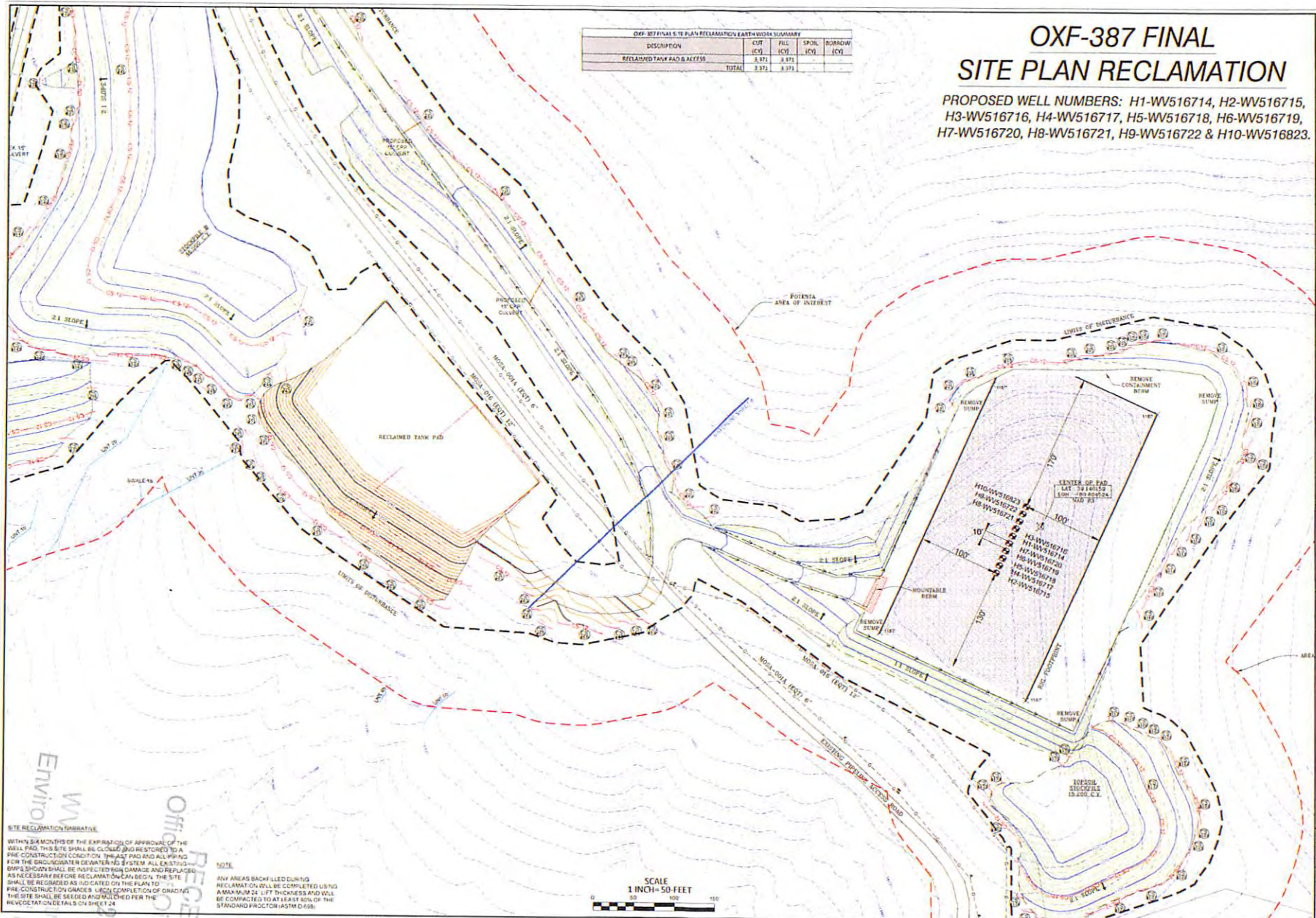
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 OXF-387 Oil and Gas
 SEP 12 2015
 WV Department of Environmental Protection



OXF-387 FINAL SITE PLAN RECLAMATION EARTH WORK SUMMARY				
DESCRIPTION	CUT (CY)	FILL (CY)	SPOIL (CY)	BORROW (CY)
RECLAIMED TANK PAD & ACCESS	3,371	3,371		
TOTAL	3,371	3,371		

OXF-387 FINAL SITE PLAN RECLAMATION

PROPOSED WELL NUMBERS: H1-WV516714, H2-WV516715, H3-WV516716, H4-WV516717, H5-WV516718, H6-WV516719, H7-WV516720, H8-WV516721, H9-WV516722 & H10-WV516823.



DAF
9/18/16



THIS DOCUMENT WAS
PREPARED BY
FOR EQT PRODUCTION
COMPANY

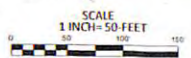
OXF 387 FINAL
SITE PLAN
SOUTHWEST DISTRICT
DODDRIDGE COUNTY, WV

DATE: 6/29/2016
SCALE: 1" = 50'
DESIGNED BY: K.E.S.
FILE NO: 8537
SHEET ID: 0F 24
REV: 08-10-2016

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M
Office of
Oil and Gas
RECEIVED
September 2016
Department of
Protection

WITHIN 24 MONTHS OF THE EXPIRATION OF APPROVAL OF THE
WELL PAD THIS SITE SHALL BE CLOSED AND RESTORED TO A
PRE-CONSTRUCTION CONDITION. THE LIFT PILING AND ALL PIPING
FOR THE GROUNDWATER DEWATERING SYSTEM ALL EXISTING
EMPS SHOWN SHALL BE INSPECTED FOR DAMAGE AND REPLACED
AS NECESSARY BEFORE RECLAMATION CAN BEGIN. THE SITE
SHALL BE REGRADED AS INDICATED ON THE PLAN TO
PRE-CONSTRUCTION GRADES. UPON COMPLETION OF GRADING
THE SITE SHALL BE SEEDING AND MULCHED PER THE
RECLAMATION DETAILS ON SHEET 14.

NOTE:
 ANY AREAS BACK FILLED DURING
 RECLAMATION WILL BE COMPLETED USING
 A MAXIMUM 24" LIFT THICKNESS AND WILL
 BE COMPACTED TO AT LEAST 90% OF THE
 STANDARD PROCTOR (ASTM D 698).



PROJECT INFORMATION

PROJECT NAME: OXF-387
TAX PARCEL:
SOUTHWEST DISTRICT
MAJOR PARCELS R.1, R.2, R.3, & R.5
SURFACE OWNER:
COASTAL FOREST RESOURCES
1M 18 PAR 8.3
SOUTHWEST DISTRICT
DODDRIDGE COUNTY, WV
TOTAL PROPERTY AREA 351 ACRES
COASTAL FOREST RESOURCES
1M 18 PAR 8.2
SOUTHWEST DISTRICT
DODDRIDGE COUNTY, WV
TOTAL PROPERTY AREA 418.61 ACRES
JIMMIE BURKE
1M 18 PAR 8.1
SOUTHWEST DISTRICT
DODDRIDGE COUNTY, WV
TOTAL PROPERTY AREA 1.57 ACRES
JIMMIE BURKE
1M 18 PAR 8.5
SOUTHWEST DISTRICT
DODDRIDGE COUNTY, WV
TOTAL PROPERTY AREA 1.57 ACRES
OIL AND GAS ROYALTY OWNER:
HUFF FAMILY TRUST DESCENDANTS TRUST B, ET AL
SOUTHWEST DISTRICT
DODDRIDGE COUNTY, WV
LEASE AREA 2000 +/- ACRES



OXF-387 FINAL SITE PLAN
EQT PRODUCTION COMPANY

PROPOSED WELL NUMBERS: H1-WV516714, H2-WV516715, H3-WV516716,
H4-WV516717, H5-WV516718, H6-WV516719, H7-WV516720, H8-WV516721,
H9-WV516722 & H10-WV516823.

SITUATE ON THE WATERS OF LONG RUN OF MIDDLE FORK OF SOUTH FORK OF HUGHES RIVER
SOUTHWEST DISTRICT, DODDRIDGE COUNTY, WEST VIRGINIA.

LIST OF DRAWINGS

- 1 - COVER SHEET
2 - NOTES
3 - OVERALL SHEET INDEX & VOLUMES
4 - PRELIMINARY SITE PLAN
5 - PRELIMINARY SITE PLAN
6 - PRELIMINARY SITE PLAN
7 - PRELIMINARY SITE PLAN
8 - PRELIMINARY SITE PLAN
9 - ACCESS ROAD PROFILES
10 - ACCESS ROAD PROFILES
11 - PAS. TANK PAD AND STOCKPILE PROFILES
12 - MAIN ACCESS CROSS SECTIONS
13 - MAIN ACCESS CROSS SECTIONS
14 - MAIN ACCESS CROSS SECTIONS
15 - MAIN ACCESS CROSS SECTIONS
16 - MAIN ACCESS CROSS SECTIONS
17 - MAIN ACCESS CROSS SECTIONS
18 - MAIN ACCESS CROSS SECTION
19 - PRELIMINARY RECLAMATION PLAN
20 - CONSTRUCTION DETAILS
21 - CONSTRUCTION DETAILS
22 - CONSTRUCTION DETAILS
23 - CONSTRUCTION DETAILS
24 - CONSTRUCTION DETAILS

OXFORD QUAD



LOCATION COORDINATES

OXF-387 SITE ENTRANCE
LATITUDE: 38.141775 LONGITUDE: -80.80827 (NAD 83)
OXF-387 CENTER OF WELL PAD
LATITUDE: 38.141058 LONGITUDE: -80.804524 (NAD 83)
OXF-387 TANK PAD
LATITUDE: 38.140527 LONGITUDE: -80.807418 (NAD 83)

PROPERTY DISTURBANCE COMPUTATIONS

PARCEL R.1 = 0.2 ACRES
PARCEL R.2 = 10.0 ACRES
PARCEL R.3 = 5.4 ACRES
PARCEL R.5 = 2.1 ACRES

TOTAL SITE DISTURBANCE = 27.7 ACRES

SITE DISTURBANCE COMPUTATIONS

WELL PAD AREA = 4.6 ACRES
EXISTING ACCESS ROAD AREA = 4.8 ACRES
ACCESS ROAD = 4.8 ACRES
EXCESS STOCKPILE A AREA = 0.7 ACRES
EXCESS STOCKPILE B AREA = 3.8 ACRES
TOPSOIL STOCKPILE AREA = 1.4 ACRES
TANK PAD AREA = 2.0 ACRES
TOTAL SITE DISTURBANCE = 27.7 ACRES

GENERAL DESCRIPTION

THE OXF-387 PAD AND TANK PADS ARE BEING CONSTRUCTED TO AID IN THE DEVELOPMENT OF INDIVIDUAL MARCELLUS SHALE GAS WELLS.

ENTRANCE PERMIT

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

MISS UTILITY STATEMENT

MISS UTILITY OF WEST VIRGINIA WAS NOTIFIED FOR THE LOCATING OF UTILITIES PRIOR TO THIS PROJECT DESIGN. TICKET #0181797888. 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 AN AREA THAT IS NOTED AS OTHER AREAS AND COULD BE DESIGNATED EITHER ZONE D OR ZONE X ON FLOOD INSURANCE RATE MAP NUMBER 580600020G DATED FEBRUARY 02, 2012.

ENVIRONMENTAL NOTES

A WETLAND DELINEATION WAS PERFORMED ON 8/21/18 AND 7/27/18 BY POTERBA & ASSOCIATES, INC. 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 JULY 14, 2018 REPORT WAS PREPARED BY POTERBA & ASSOCIATES, INC. FORWARDING THE RESULTS OF THE FIELD DELINEATION. THE REPORT DOES NOT, IN ANY WAY, REPRESENT A PROFESSIONAL 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 AFORESAIDMENTIONED AGENCIES BE CONSULTED IN AN EFFORT TO OBTAIN WRITTEN CONFIRMATION OF THE DELINEATION DESCRIBED BY THIS REPORT PRIOR TO ENGAGING CONSTRUCTION OR THE PROPERTY DESCRIBED HEREIN. THE DEVELOPER SHALL OBTAIN THE APPROPRIATE PERMITS FROM THE FEDERAL AND/OR STATE REGULATORY AGENCIES PRIOR TO ANY PROPOSED IMPACTS TO WATERS OF THE U.S., INCLUDING WETLAND FIELDS AND STREAM CROSSINGS.

RESTRICTIONS NOTES

- 1. THERE ARE NO PERENNIAL STREAMS, WETLANDS, LAKES, POND OR RESERVOIRS WITHIN 100 FEET OF THE WELL PAD LOG.
2. THERE ARE NO NATURALLY PRODUCING TROUT STREAMS WITHIN 300 FEET OF THE WELL PAD LOG.
3. THERE ARE NO GROUNDWATER INTAKE OR PUBLIC WATER SUPPLY FACILITIES WITHIN 1000 FEET OF THE WELL PAD AND LOG.
4. THERE ARE NO APPARENT SEEPING WATER WELLS OR DEVELOPED SPRINGS WITHIN 200 FEET OF THE WELLS BEING DRILLED.
5. THERE ARE NO OCCUPIED DWELLING STRUCTURES WITHIN 200 FEET OF THE CENTER OF THE WELL PAD.
6. THERE ARE NO AGRICULTURAL BUILDINGS LARGER THAN 2,500 SQUARE FEET WITHIN 200 FEET OF THE CENTER OF THE WELL PAD.

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!!

LEGEND table with symbols for EX INDEX CONTOUR, EX INTERMEDIATE CONTOUR, EX BOUNDARY LINE, EX ROAD EDGE OF GRAVEL/DIRT, EX ROAD EDGE OF PAVEMENT, EX ROAD CENTERLINE, EX DITCHLINE, EX CULVERT, EX GUARDRAIL, EX FENCING, EX GATE, EX OVERHEAD UTILITY, 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 STREAM, EX BUILDING, EX BRIDGE, 100' WETLAND/STREAM BUFFER, PROP INDEX CONTOUR, PROP INTERMEDIATE CONTOUR, PROP RECLAMATION 2' CONTOUR, PROP RECLAMATION 10' CONTOUR, PROP GRADING LIMITS, PROP LIMITS OF DISTURBANCE, PROP WELL PAD, PROP WELL HEAD, PROP 4" PVC DRAIN PIPE, PROP PUMP DRAIN, PROP CONTAINMENT BERM, PROP PIT/IMPOUNDMENT CL, PROP PERIMETER SAFETY FENCE, PROP ACCESS DATE WITH EMERGENCY LIFELINE, PROP ROCK CONSTRUCTION ENTRANCE, PROP ROAD EDGE OF GRAVEL, PROP ROAD CENTERLINE, PROP V-DITCH W/ CHECK DAMS, PROP DITCH RELIEF, PROP CLVERT (DSC), PROP RIP-RAP OUTLET PROTECTION, PROP GUARDRAIL, PROP COMPOST FILTER SOCK, SECTION LANE, MATCHLINE, X-SECTION GRID INDEX, X-SECTION GRID INTERMEDIATE, X-SECTION PROPOSED GRADE, X-SECTION EXISTING GRADE, X-SECTION WATER SURFACE, SPOT ELEVATION, PROPOSED WELL CELLAR



THIS DOCUMENT WAS PREPARED BY SMITH LAND SURVEYING FOR: EQT PRODUCTION COMPANY

COVER SHEET
OXF-387 FINAL SITE PLAN
SOUTHWEST DISTRICT
DODDRIDGE COUNTY, WV

DATE: 8/9/18
SCALE: 1" = 2000'
DESIGNED BY: R.E.S.
FILE NO: 8537
SHEET 1 OF 24
REV: 8-11-18

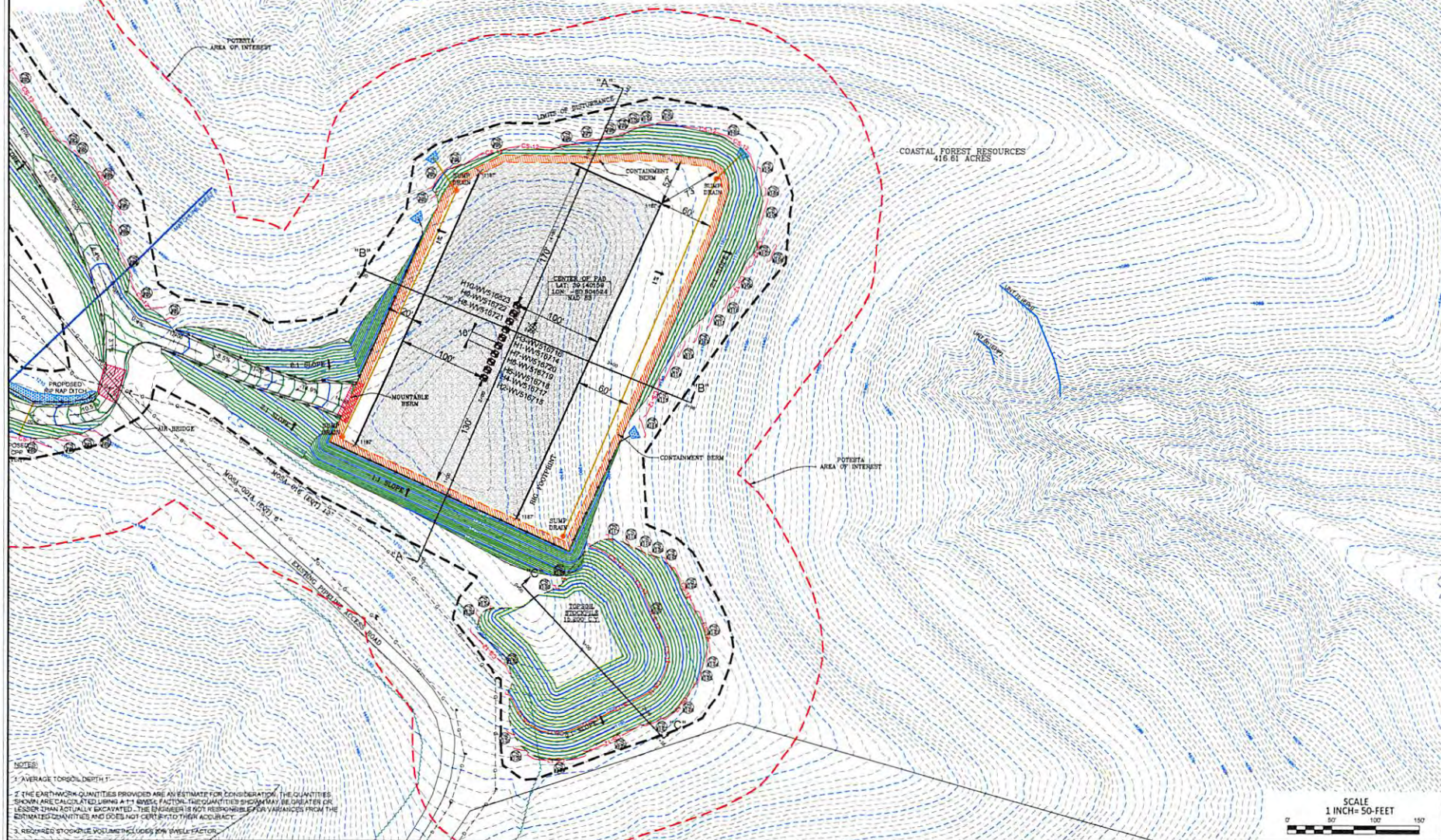
OPERATOR: EQT PRODUCTION COMPANY
ENGINEER/SURVEYOR: SMITH LAND SURVEYING, INC.



APPROVED
WVDEP OOG
12 / 12 / 2016

OXF 387 FINAL SITE PLAN

PROPOSED WELL NUMBERS: H1-WV516714, H2-WV516715, H3-WV516716,
H4-WV516717, H5-WV516718, H6-WV516719, H7-WV516720, H8-WV516721,
H9-WV516722 & H10-WV516823.



NOTES:
1. AVERAGE TOPSOIL DEPTH 1"
2. IF THE EARTHWORK QUANTITIES PROVIDED ARE AN ESTIMATE FOR CONSIDERATION, THE QUANTITIES SHOWN ARE CALCULATED USING A 1% BULKY FACTOR. THE QUANTITIES SHOWN MAY BE GREATER OR LESSER THAN ACTUALLY EXCAVATED. THE ENGINEER IS NOT RESPONSIBLE FOR VARIANCES FROM THE ESTIMATED QUANTITIES AND DOES NOT GUARANTEE THEIR ACCURACY.
3. REQUIRED STOCKPILE VOLUMES INCLUDES 5% SWELL FACTOR.



THIS DOCUMENT WAS
PREPARED BY:
FOR: EST PRODUCTION
COMPANY

**OXF 387 FINAL
SITE PLAN**
SOUTHWEST DISTRICT
DODDRIIDGE COUNTY, WV

DATE: 6/29/2018
SCALE: 1" = 50'
DESIGNED BY: K.E.S.
FILE NO: 0537
SHEET 8 OF 24
REV: 0-11-16

