

# 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 www.dep.wv.gov

June 15, 2016

# WELL WORK PERMIT Horizontal 6A Well

This permit, API Well Number: 47-1706770, issued to EQT PRODUCTION COMPANY, is evidence of permission granted to perform the specified well work at the location described on the attached pages and located on the attached plat, subject to the provisions of Chapter 22 of the West Virginia Code of 1931, as amended, and all rules and regulations promulgated thereunder, and to all conditions and provisions outlined in the pages attached hereto. Notification shall be given by the operator to the Oil and Gas Inspector at least 24 hours prior to the construction of roads, locations, and/or pits for any permitted work. In addition, the well operator shall notify the same inspector 24 hours before any actual well work is commenced and prior to running and cementing casing. Spills or emergency discharges must be promptly reported by the operator to 1-800-642-3074 and to the Oil and Gas inspector.

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

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

Per 35CSR-4-5.2.g this permit will expire in two (2) years from the issue date unless permitted well work is commenced. If there are any questions, please feel free to contact me at (304) 926-0499 ext. 1654.

Chief

James Martin

Operator's Well No: 514101

Farm Name: HART, RONALD & JEFFERY

API Well Number: 47-1706770

Permit Type: Horizontal 6A Well

Date Issued: 06/15/2016

API Number: 17-06770

# 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. <u>Failure to adhere to the specified permit conditions may result in enforcement action.</u>

#### CONDITIONS

- 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.

WW-6B (04/15)

API NO. 47-017 - 06770	
OPERATOR WELL NO. 514101	_
Well Pad Name: OXF160	_

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

1) Well Operator: EQT Produ	uction Company	1100000	Doddridge	Southwest	
2) Operator's Well Number: 5	1/101	Operator ID	County	District	Quadrangle
			ad Name: OXF		
3) Farm Name/Surface Owner:	Ronald Hart and Jeff	ery Hart Public Ro	ad Access: W	/-18	
4) Elevation, current ground:	1220 E	levation, proposed	nost-construct	ion: 1220	
5) Well Type (a) Gas x	Oil		derground Stora		
Other					
(b)If Gas Sha	allow X	Deep			
	rizontal X				
6) Existing Pad: Yes or No yes			=		
<ol> <li>Proposed Target Formation(s Marcellus, 6638' TVD, 58', 295</li> </ol>	), Depth(s), Antic 51 PSI Top of Marc	ipated Thickness cellus 6603	and Expected P	ressure(s):	
8) Proposed Total Vertical Dept	h: 6638				
9) Formation at Total Vertical D	epth: Marcellus	3			
10) Proposed Total Measured D	epth: 12080				
11) Proposed Horizontal Leg Le	ngth: 4651				
12) Approximate Fresh Water S	trata Depths:	31,215,262,358	,578		
13) Method to Determine Fresh	Water Depths:	By Offset wells			
14) Approximate Saltwater Dep	ths: None found				
15) Approximate Coal Seam De	pths: None foun	d			
16) Approximate Depth to Possi	ble Void (coal mi	ne, karst, other):	None reported	VED	
17) Does Proposed well location			Office of Oi		3
directly overlying or adjacent to	an active mine?	Yes	APR 2		
(a) If Yes, provide Mine Info:	Name:		APR Z	2 2010	
	Depth:		WV Depa	rtment of	12.5
	Seam:		Environment	al Protect	ion
	Owner:				

9/18/10

WW-6B	
(04/15)	

API NO. 47-17	-06770
OPERATOR W	ELL NO.
Well Pad Nam	ne:

# 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	80	80	120 ft^3 / CTS
Fresh Water	13 3/8	New	J-55	54.5	678	678	617 ft^3 / CTS
Coal					0.0	076	0171637018
Intermediate	9 5/8	New	A-500	40	3072	3072	1211 ft^3 / CTS
Production	5 1/2	New	P-110	20	12080	12080	500' above top producing zone
Tubing	2 3/8		J-55	4.7	,2000	May not be run, if run set 40'	ook above top producing zone
Liners						above top perf or 80° inclination.	

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	
Coal				2,00	2100	Gee valiance	1.19
Intermediate	9 5/8	12 3/8	.395	3950	3160	See Variance	1.10
Production	5 1/2	8 1/2	.361	12640	10112		1.19
Tubing	2 3/8	NA	.19	7700	10112	Class H	1.07/1.86
Liners				7.00			

# **PACKERS**

Kind:	
Sizes:	
Depths Set:	
	1929:

DAF

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Office of Oil and Gas APR 22 2016

WVA Pepartment of Environments Protection

06/17/2016

WW-6B (10/14)

API NO. 47-017 - 0677 OPERATOR WELL NO. 514101 Well Pad Name: OXF160

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 4918'. 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): +/- 16.9
- 22) Area to be disturbed for well pad only, less access road (acres): +/- 7.5
- 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 Conduction: Glass And address
Surface (Type 1 Cement): 0-3% Calcium Chloride Used to speed the selling 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.

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)
Tall (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.

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

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

Tollo WV Department of Environmental Protection

06/17/2016

Well

	514101(OXF16 d Quad e County, WV		Azimuth 165. cal Section 518							SEIVED Oil and Gas	0 7 2016	partment of ntal Protection
	Top Base			- 23	Casing and Cementing				Deepest Fresh Water	er: 578	EX	0 7
Formations	TVD TVD				Туре	Conductor	Mine Protection	Surface	Intermediate	P P	roduction	0 4
Conductor	80				Hole Size, In.	26	0	17 1/2	12 3/8	D- 0	8 1/2	\ \ \ \
		-111111	_		Casing Size, OD In.	20		13 3/8	9 5/8	last com	5 1/2	5 2
Base Fresh Water	578	111111			Casing Wall Thickness, In.	0.375		0.380	0.395	+	0.361	> 3
		3111111			Depth, MD	80'		678'	3,072"	0	12,080'	-
Surface Casing	678	_ <b>⊿</b>      <b>≥</b>			Weight	78.6#		54.5#	40#		20#	111
					Grade	A-500		J-55	A-500		P-110	
Base Red Rock	1278	1111			New or Used	New		New	New	1 -	New	
		1111			Burst (psi)	1378		2,700	3,950	N I	12,640	
		1111			Cement Class	A	-	A / Type 1	A / Type 1		Н	
Maxton	1760 - 1799	1111			Cement Yield	1.18		1.19	1.19		1.07/1.86	
Big Lime	1949 - 2053	1111			Top of Cement (Planned)	Surface		Surface	Surface	FOO! abaut	ton Dead of	
Big Injun	2067 - 2081	1111				Surface		Surface	Surface	500 above	top Producin	ig Zone
Weir	2172 - 2358	1111			Method	Displacement	-	Displacement	Displacement	Di	splacement	
Gantz	2464 - 2478	1111	100		Est. Volume (cu ft)	120	-	617	1,211		1,867	
Fifty foot	2639 - 2672	1111								Calcium Ca	arbonate, Flui	d Loss.
Gordon  Bayard Intermediate Casing	2735 - 2744 3002 - 3022 3072				Possible Additives	N/A	-	Calcium Chloride	Calcium Chloride	Extender, D	ispersent, Vis POZ, Bonding	cosifier, g Agent,
Warren	3268 - 3302											
Speechley	3318 - 3335	11										
Balltown A	3848 - 4774	- 11										
Riley	4774 - 4800	11										
Benson	4865 - 4875											
Alexander	5111 - 5211	11	KOP @ 4.9	918'								
Sonyea	6275 - 6406	- 11										
Middlesex	6406 - 6460	- 11										
Genesee	6460 - 6527	- 11										
Geneseo	6527 - 6571	11										

Proposed Well Work:

Tully

Hamilton

Marcellus

**Production Casing** 

Onondaga

Drill and complete a new horizontal well in the Marcellus formation.

6661

Drill the vertical to an approximate depth of 4918'.

Kick off and drill curve. Drill lateral in the Marcellus. Cement casing.

6571 - 6591

6591 - 6603

6603 - 6661

Land curve @

6,638' ft TVD

7,429' ft MD

12080 MD

Est. TD @

6,638

ft TVD 12,080' ft MD

4,651' ft Lateral



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

Promoting a healthy environment.

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Office of Oil and Gas

APR 0 7 2016



#### 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

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

Promoting a healthy environment.

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#### 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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March 7, 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 Wells (OXF160)

Dear Mr. Smith,

EQT is requesting the 13-3/8" surface casing be set at 678' KB, 100' below the deepest fresh water. We will set the 9-5/8" intermediate string at 3072' KB, 50' below the base of the Bayard formation.

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

Sincerely,

Vicki Roark

Permitting Supervisor

Enc.

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APR 0 7 2016

06770

Operator's Well No. 514101

# 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) Upper Run of Middle Fork of South Fork Hughes River	Quadrangle Oxford
Do you anticipate using more than 5,000 bbls of water to complete	e the proposed well work? Yes V No
Will a pit be used? Yes No	- 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1
If so, please describe anticipated pit waste: N/A	
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 N	umber 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 loot then prepared for tree.	p system will remove drill cuttings from the drilling fluid. The drill cuttings are ansportation 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. Synth	etic Mud
Additives to be used in drilling medium? See Attached	
Drill cuttings disposal method? Leave in pit, landfill, removed off	site, etc. Landfill
-If left in pit and plan to solidify what medium will be use	ed? (cement, lime, sawdust) N/A
-Landfill or offsite name/permit number? See Attached Lis	1,000,000,000,000,000
Permittee shall provide written notice to the Office of Oil and Gas West Virginia solid waste facility. The notice shall be provided wi where it was properly disposed.	
on August 1, 2005, by the Office of Oil and Gas of the West Virgin provisions of the permit are enforceable by law. Violations of ar law or regulation can lead to enforcement action.  I certify under penalty of law that I have personally exapplication form and all attachments thereto and that, based of	, accurate, and complete. I am aware that there are significant
Company Official Title Permitting Supervisor	APR 0 7 2016
Company Official Title - Striking Supervisor	
	WV Department of
Subscribed and sworn before me this day of	pril , 20 Environmental Protection
Reliecca & wanstree	
My commission expires 4-7-20	OFFICIAL SEAL NOTARY PUBLIC
The second secon	STATE OF WAST VIRGINA  REBECCA L. WANSTREET  EOT PROPELIES OF THE PROPERTY OF

#### WW-9

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

#### CWS TRUCKING INC.

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

#### LAD LIQUID ASSETS DISPOSAL INC.

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

# TRI COUNTY WASTE WATER MANAGEMENT, INC.

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

### **Waste Management - Meadowfill Landfill**

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

#### Waste Management - Northwestern Landfill

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

#### **BROAD STREET ENERGY LLC**

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

#### TRIAD ENERGY

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

#### KING EXCAVATING CO.

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

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Form WW-9

	Company		
Proposed Revegetation Tre	eatment: Acres Disturbed _+/-	16.9 Prevegetation	pH 6.3
Lime 3	Tons/acre or to correct to	o pH 6.5	
Fertilizer type Gr	ranular 10-20-20	_	
Fertilizer amount_	1/3	_lbs/acre	
Mulch_2	т	ons/acre	
т	emporary emporary	Seed Mixtures	
Seed Type	Ibs/acre		nanent
KY-31	40	Seed Type Orchard Grass	lbs/acre
Alsike Clover	5	Alsike Clover	15
Annual Rye	15	VISIVE CIOAEL	5
fomments:	W.		IED
tle:	W ook inspe		AECEIVED Gas
fomments:	W.		o of Oll all
tle:	W ook inspe	Les Date: 4/18/16  ) No Office	APR 2 2 2016
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# Site Specific Safety Plan

# EQT OXF160 Pad

Oxford Quadrant

Doddridge County, WV

5/4/0/	For Wells:	
EQT Production  Seem. thing Spenus  Vitle  4-6-16  Date	Title 4/15/16 Date Office	Inspector  RECEIVED Se of Oil and Gas APR 2 2 2016  NV Department of Aironmental Protection

# 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: HEDEIVED

- 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

Office of Oil and Gas

APR 0 7 2016

WV Department of

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 first the need for other permits/approvals that may be necessary and first the need for other permits/approvals that may be necessary and first the need for other permits/approvals that may be necessary and first the need for other permits/approvals that may be necessary and first the need for other permits/approvals that may be necessary and first the need for other permits/approvals that may be necessary and first the need for other permits/approvals that may be necessary and first the need for other permits/approvals that may be necessary and first the need for other permits/approvals that may be necessary and first the need for other permits/approvals that may be necessary and first the need for other permits/approvals that may be necessary and first the need for other permits/approvals that may be necessary and first the need for other permits/approvals that may be necessary and first the need for other permits/approvals that may be necessary and first the need for other permits/approvals that may be necessary and first the need for other permits/approvals that may be necessary and first the need for other permits/approvals that may be necessary and first the need for other permits/approvals that may be necessary and first the need for other permits/approvals that may be necessary and first the need for other permits/approvals that may be necessary and first the need for other permits/approvals permits/approvals should be acquired from the appropriate authority before the affected activity is initiated.

Well Operator: EQT Production Company

By: Victoria Roark

Its: Permitting Supervisor

Page 1 of 2

Operator's Well No.

514101

ease No.	Grantor, Lessor, etc.	Grantee, Lessee, etc.	Royalty	Book/Page
<u>107453</u>	Mona R. Cumberledge, et al (current royalty owner)		min pd 1/8t	h
	S. E. Gaston, et al (original lessor)	A. D. Wells	·	LB 22/420
	A. D. Wells	Fisher Oil Company/O.D. Harrin	gton	LB 24/16
	Fisher Oil Company/O.D. Harrington	The Philadelphia Company of W	N	LB 24/64
	The Philadelphia Company of WV	Pittsburgh & West Virginia Gas	Company	45/102
	The Philadelphia Company of WV	Pittsburgh & West Virginia Gas	Company	LB 32/253
	Pittsburgh & West Virginia Gas Company	Equitable Gas Company		DB 121/257
	Equitable Gas Company	Equitrans, Inc		LB 154/4 <b>7</b> 5
	Equitrans, Inc	Equitrans, L.P.		329/645
	Equitrans, L.P.	Equitable Production-Eastern St	tates, Inc	LB 192/19
	Equitable Production-Eastern States, Inc	EQT Production Company		DB 281/346 (name char
114449	Glenn H. Shive, et al (current royalty owner)		min pd 1/8t	h
	F.E. Gaston, et ux (original lessor)	The Philadelphia Company of W	N .	LB 32/463
	The Philadelphia Company of WV	Pittsburgh & WV Gas Company		LB 32/253
	Pittsburgh & WV Gas Company	Equitable Gas Company		DB 121/257
	Equitable Gas Company	Equitrans, Inc		LB 154/475
	Equitrans, Inc	Equitrans, L.P.		329/645
	Equitrans, L.P.	Equitable Production-Eastern St	tates, Inc	LB 192/19
	Equitable Production-Eastern States, Inc	EQT Production Company		DB 281/346 (name char
<u>114447</u>	C. Burke Morris & S.A. Smith, et al (current royalty owner)		min pd 1/8t	h
	Jane Woofter (original lessor)	The Philadelphia Company of W	N	LB 32/468
	The Philadelphia Company of WV	Pittsburgh & WV Gas Company		LB 32/253
	Pittsburgh & WV Gas Company	Equitable Gas Company		DB 121/257
	Equitable Gas Company	Equitrans, Inc		LB 154/475
	Equitrans, Inc	Equitrans, L.P.		329/645
	Equitrans, L.P.	Equitable Production-Eastern St	tatos Inc	LB 192/19
	Equitable Production-Eastern States, Inc	•	iaico, IIIC	
	Equitable Frouuction-Easiem States, Inc	EQT Production Company		DB 281/346 (name char

MEGEIVED
Office of Oil and Gas

APR 0 7 2016



April 4, 2016

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

Re: OXF160 well pad, well number 514101 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,

Vicki Roark

Permitting Supervisor-WV

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Office of Oil and Gas

APR 0 7 2016

# OXF160 WV 514101 EQT PRODUCTION COMPANY

(S.P.C. NORTH ZONE) (UTM(M) ZONE 17 NORTH) NAD'27 S.P.C.(FT) N. 250,870.75 E. 1,631,717.49 NAD'27 GEO. LAT-(N) 39.181476 LONG-(W) 80.799201 NAD'83 UTM (M) N. 4.336.944.23 E. 517,357.99

LANDING POINT

E. 1,630,573.44 NAD'27 S.P.C.(FT) N. 250,196.35 NAD'27 GEO. LAT-(N) 39.179579 LONG-(W) 80.803202 NAD'83 UTM (M) N. 4,336,732.96 E. 517,012.89

BOTTOM HOLE

NAD'27 S.P.C.(FT) N. 245,689.87 E. 1,631,723.63 NAD'27 GEO. LAT-(N) 39.167253 LONG-(W) 80.798915 NAD'83 UTM (M) N. 4,335,365.94 E. 517,386.20

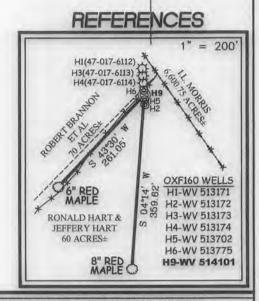
LATITUDE 39°12'30" 01898 03801 80°47'30' 03796-0 02458-P SEE REFERNCE BOX
FOR A.P.I. NO.S 03787 ONGITUDE 02066 03579 WELL NO. WV 514101 03647 03641-F 03651 NOTES ON SURVEY

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'.

ROY	ALTY OWNERS	Carlo Carlo Carlo
GLENN H. SHIVE ET AL	53 AC.±	LEASE NO. 114449
C. BURKE MORRIS & S.A. SMITH ET AL	28 AC.±	LEASE NO. 114447

A	ROBERT BRANNON ET AL	70 ACRES±	SW TM-09-19
В	RONALD HART & JEFFERY HART	60 ACRES±	SW TM-09-20
C	I.L. MORRIS	6,600.75 ACRES±	SW TM-10-02
D	ROBERT BRANNON ET AL	25.1 ACRES±	SW TM-13-18
E	RONALD HART & JEFFERY HART	46 ACRES±	SW TM-13-12
F	RONALD HART & JEFFERY HART	45 ACRES±	SW TM-09-21
G	MARIA HRUSCOV	57,5 ACRES±	SW TM-10-01
H	WILLIAM ARMENTROUT ET AL	44.35 ACRES±	SW TM-14-02
1	MICHAEL & SUSAN ZORN	52.5 ACRES±	SW TM-14-01
J	MICHAEL & SUSAN ZORN	47.5 ACRES±	SW TM-14-1.1
K	WILLIAM ARMENTROUT ET AL	16.8 ACRES±	SW TM-14-04
L	EDWARD & GINA BASSETT	41 ACRES±	SW TM-13-39
M	MARIAN ZORN	34.78 ACRES±	SW TM-13-40
N	WILLIAM ARMENTROUT ET AL	76 ACRES±	SW TM-13-41



Land & Energy Development
Solutions from the ground up.
P.O. Box 150 \* 12 Vanhom Drive \* Glenville, WV 26351 \* (304) 462-5834

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.

PS 849

MINIMUM DEGREE OF ACCURACY

1 / 2500

FILE NO.

No. 849
STATE OF
VIRCINATIONAL SURVIVIANTAL STATE OF 7310P514101R

SEE NOTE 2 SCALE

HORIZONTAL & VERTICAL

CONTROL DETERMINED BY DGPS (SURVEY GRADE TIE TO CORS NETWORK)

(+) DENOTES LOCATION OF WELL ON UNITED STATES TOPOGRAPHIC MAPS. DATE\_ MARCH 24 , 20 16 , 20 \_16 APRIL 06 REVISED OPERATORS WELL NO. WV 514101 WELL 47 06770H 017

COUNTY

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

STATE



PERMIT

PERMIT

LIQUID WASTE IF WELL GAS X "GAS" PRODUCTION\_X STORAGE OIL. DISPOSAL SHALLOW INJECTION DEEP TYPE: LOCATION : PAD ELEVATION\_ 1,220' WATERSHED\_ UPPER RUN OF MIDDLE FORK OF SOUTH FORK HUGHES RIVER COUNTY

SOUTHWEST DODDRIDGE OXFORD 7.5' DISTRICT COUNTY QUADRANGLE SURFACE OWNER \_ RONALD HART & JEFFERY HART 60± ACREAGE MONA R. CUMBERLEDGE ET AL 206± ROYALTY OWNER . ACREAGE . 06/17/2016

PROPOSED WORK:

FRACTURE OR STIMULATE X PLUG OFF OLD DRILL X CONVERT \_ DRILL DEEPER\_ REDRILL

FORMATION \_\_\_\_ PERFORATE NEW FORMATION \_\_\_ PLUG AND ABANDON\_ CLEAN OUT AND REPLUG\_\_\_ \_ OTHER PHYSICAL CHANGE IN WELL (SPECIFY) TARGET FORMATION **MARCELLUS** 

ESTIMATED DEPTH\_ 6,603

WELL OPERATOR EQT PRODUCTION COMPANY

115 PROFESSIONAL PLACE P.O. BOX 280

DESIGNATED AGENT

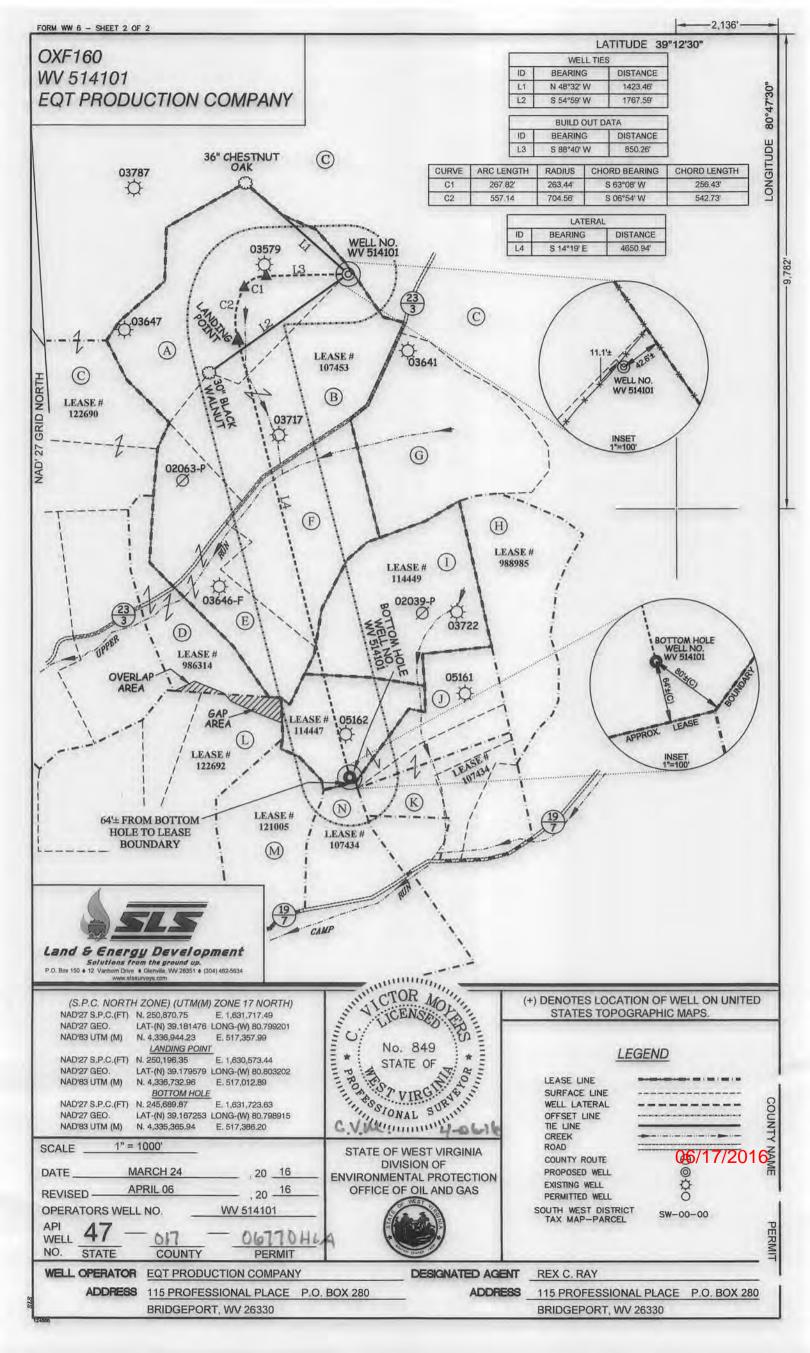
REX C. RAY ADDRESS

LEASE NO. .

115 PROFESSIONAL PLACE P.O. BOX 280 BRIDGEPORT, WV 26330

107453

BRIDGEPORT, WV 26330



Date of Notice Certification:

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

	7 1 4 11 11 2				06770
				Well No. 514	
vr. 41	A. S. W. C.		Well Pad N	Name: OXF16	0
Notice has b					
ursuant to the	e provisions in West Virginia Code tract of land as follows:	§ 22-6A, the Operator has provi	ided the rec	quired parties	with the Notice Forms lis
State:	WV		Dunklass	547057.00	
County:	Doddridge		Easting:	517357.99	
District:	Southwest	Public Road Acces	Northing:	4336944.23 WV-18	
Quadrangle:	Oxford	Generally used far			r romano
Vatershed:	Upper Run of Middle Fork of South Fork Hug	thes Diver	m name:	Ronald Hart and	Т Јепегу нап.
, moranea.		NGS THYO!			
t has provide information re of giving the equirements Virginia Code	the secretary, shall be verified and s of the owners of the surface describ equired by subsections (b) and (c), se surface owner notice of entry to su of subsection (b), section sixteen o § 22-6A-11(b), the applicant shall thave been completed by the applicant	ped in subdivisions (1), (2) and ection sixteen of this article; (ii) arvey pursuant to subsection (a f this article were waived in we ender proof of and certify to the	d (4), subs that the red i), section to writing by e secretary	ection (b), se quirement was en of this art the surface of that the notice	ction ten of this article, s deemed satisfied as a re icle six-a; or (iii) the no wner: and Pursuant to V
that the Oper	Vest Virginia Code § 22-6A, the Operator has properly served the require CK ALL THAT APPLY	erator has attached proof to thi d parties with the following:	is Notice Co	ertification	OOG OFFICE USE
*PLEASE CHE	ator has properly served the require	d parties with the following:			OOG OFFICE USE ONLY
*PLEASE CHE	ator has properly served the require	d parties with the following:			ONLY
*PLEASE CHE	ator has properly served the require	d parties with the following:  NOTICE NOT REQUIRE	ED BECAU	JSE NO	ONLY  RECEIVED/
*PLEASE CHE	rator has properly served the require  CK ALL THAT APPLY  TICE OF SEISMIC ACTIVITY or	d parties with the following:  NOTICE NOT REQUIRE SEISMIC ACTIVITY WAS	ED BECAU CONDUCT	JSE NO TED	ONLY
*PLEASE CHE	ator has properly served the require	d parties with the following:  NOTICE NOT REQUIRE SEISMIC ACTIVITY WAS	ED BECAU CONDUCT	JSE NO TED	ONLY  RECEIVED/ NOT REQUIRED
*PLEASE CHE  1. NOT  2. NOT	rator has properly served the require  CK ALL THAT APPLY  ICE OF SEISMIC ACTIVITY or  ICE OF ENTRY FOR PLAT SURV	Departies with the following:  NOTICE NOT REQUIRE SEISMIC ACTIVITY WAS OF THE NO PLAT SURVEY	ED BECAU CONDUCT Y WAS CO	USE NO FED ONDUCTED	ONLY  RECEIVED/ NOT REQUIRED
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that the Oper *PLEASE CHE  1. NOT  2. NOT  3. NOT	Tator has properly served the require  CK ALL THAT APPLY  ICE OF SEISMIC ACTIVITY or  ICE OF ENTRY FOR PLAT SURV  ICE OF INTENT TO DRILL or	Departies with the following:  ■ NOTICE NOT REQUIRE SEISMIC ACTIVITY WAS OF THE NOTICE NOT REQUIRE NOTICE OF ENTRY FOR PLE WAS CONDUCTED OF THE WAIVER BY	ED BECAU CONDUCT Y WAS CO ED BECAU LAT SURV	USE NO FED ONDUCTED USE FEY	ONLY  RECEIVED/ NOT REQUIRED  RECEIVED/ NOT REQUIRED

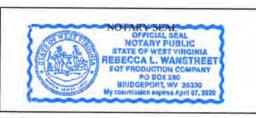
the required parties and/or any associated written waivers. For the Public Notice, the operator shall attach a copy of the Class II Legal Advertisement with publication date verification or the associated Affidavit of Publication. The attached Notice Forms and Certifications of Notice shall serve as proof that the required parties have been noticed as required under West Wirginia 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.

Certification of Notice is hereby given:

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

Well Operator:EQT Production CompanyAddress:115 Professional Place PO Box 280By:Victoria RoarkBridgeport WV 26330Its:Permitting SupervisorFacsimile:304-848-0041Telephone:304-848-0076Email:vroark@eqt.com



My Commission Expires 4-7 - 20

# Oil and Gas Privacy Notice:

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

RECEIVED Office of Oil and Gas

APR 0 7 2016

WW-6A
(9-13)

API NO. 47017 -	000,70
OPERATOR WELL	NO. 514101
Well Pad Name: OXF	160

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

Notice Time Requirement: notice shall be provided no later than the filing date of permit application. Date of Notice: 4/7/2016 Date Permit Application Filed: 4/7/2016 Notice of: PERMIT FOR ANY ☐ CERTIFICATE OF APPROVAL FOR THE WELL WORK CONSTRUCTION OF AN IMPOUNDMENT OR PIT Delivery method pursuant to West Virginia Code § 22-6A-10(b) ☐ REGISTERED ☐ PERSONAL ☑ METHOD OF DELIVERY THAT REQUIRES A **SERVICE** MAIL 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) COAL OWNER OR LESSEE Name: See Attached Name: See Attached Address: Address: COAL OPERATOR Name: Address: Address: ☑ SURFACE OWNER(s) (Road and/or Other Disturbance) Name: See Attached I SURFACE OWNER OF WATER WELL Address: AND/OR WATER PURVEYOR(s) Name: \_\_\_\_\_ Name: Address: Address: ☐ OPERATOR OF ANY NATURAL GAS STORAGE FIELD ☐ SURFACE OWNER(s) (Impoundments or Pits) Name: \_\_\_\_\_\_\_RECEIVED Address: Office of Oil and Gas Address: \*Please attach additional forms if necessary APR 0 7 2016

WW-6A	
(8-13)	

API NO. 47-017 - (	96770
OPERATOR WELL NO	514101
Well Pad Name: OXF160	

#### 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/oiland-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 Carried areas referenced in this section. (d) The well location restrictions set forth in this section shall not apply to any 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, which is 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, and if 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 17/2016

WW-6A (8-13)

API NO. 47-017 OPERATOR WELL NO. 514101

Well Pad Name: OXF160

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

### Water Well Testing:

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

#### Water Testing Laboratories:

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

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

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

#### Written Comment:

Pursuant to West Virginia Code § 22-6A-11(a), all persons described in subsection (b), section ten of this article may file written comments with the secretary as to the location or construction of the applicant's proposed well work within thirty days after the application is filed with the secretary. All persons described in West Virginia Code § 22-6A-10(b) may file written comments as to the location or construction of the applicant's proposed well work to the Secretary at:

Chief, Office of Oil and Gas Department of Environmental Protection 601 57<sup>th</sup> St. SE Charleston, WV 25304 (304) 926-0450

Office of Oil and Gas

(304) 926-0450

Such persons may request, at the time of submitting written comments, notice of the permit decision and a let be proposed qualified to Environment of Environmental Protection WW-6A (8-13)

API NO. 47-017 - 06770

OPERATOR WELL NO. 514101

Well Pad Name: OXF160

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

### Permit Denial or Condition

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

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

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

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

Office of Oil and Gas

APR 0 7 2016

WW-6A (8-13)

API NO. 47-017 OPERATOR WELL NO. 514101 Well Pad Name: OXF160

Notice is hereby given by:

Well Operator: EQT Production Company

Telephone: 304-848-0076 Email: vroark@eqt.com

Address: 115 Professional Place PO Box 280

Bridgeport WV 26330

Facsimile: 304-848-0041

### Oil and Gas Privacy Notice:

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

NOTARY PUBLIC STATE OF WEST VIRGINIA REBECCA L. WANGTREET PO BOX 280 BHIDGEPORT, WV 28336 continuation expires April 97.

Subscribed and sworn before me this \_\_\_\_\_ day of \_Apr; 2016

lanstreet Notary Public

My Commission Expires

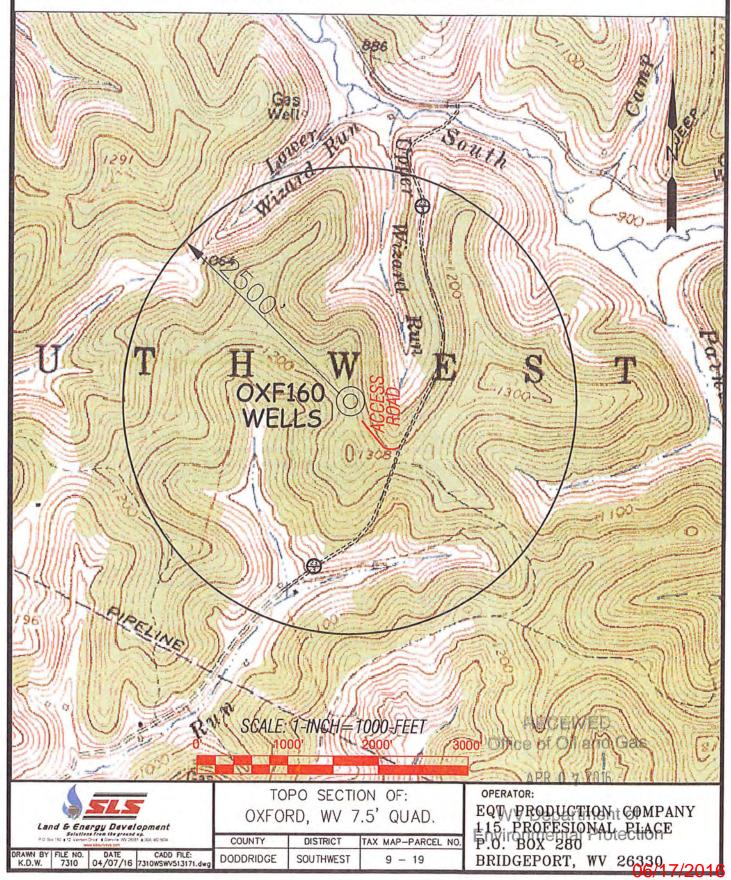
RECEIVED Office of Oil and Gas APR 0 7 2016

17-06770

WATER SAMPLES

page of

# S.E. GASTON LEASE OXF 160 WELL PAD



# Surface Owner(s)

Robert Brannon et al 881 Haystack Ln. West Union WV 26456

Ronald Hart 335 South 22<sup>nd</sup> Street Clarksburg WV 26301

Jeffery Hart 58 Abney Circle Charleston WV 26314

I.L. Morris P.O. Box 397 Glenville WV 26351

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> > APR 0 7 2016

WV Department of Environmental F06/47/2016

API NO. 47-017 - 06770

OPERATOR WELL NO. 514101

Well Pad Name: OXF160

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

Instructions to Persons Named on Page WW-6A

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

## Comment and Waiver Provisions

Pursuant to West Virginia Code § 22-6A-11(a), all persons described in subsection (b), section ten of this article may file written comments with the secretary as to the location or construction of the applicant's proposed well work within thirty days after the application is filed with the secretary.

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

# VOLUNTARY STATEMENT OF NO OBJECTION

State:	the well plat, all for proposed well work on the tra	UTM NAD 83	Easting:	517357.99
County:	Doddridge		Northing:	4336944.23
District:		Public Road Acc		WV-18
Quadrangle: Watershed:	Oxford Upper Run of Middle Fork of South Fork Hughes River	Generally used fa	arm name:	Ronald Hart and Jeffery Hart
*Please check	the box that applies			
*Plansa shool				
	THE DOX HIAI ADDITES	FOR	EXECUT	ION BY A NATUDAL DEDCON
		FOF	REXECUT	ION BY A NATURAL PERSON
	CE OWNER	Sign	ature:	
□ SURFA		Sign Print	ature: Name:	
□ SURFA	CE OWNER	Sign Print Date	ature: Name: :	
□ SURFAC	CE OWNER (Road and/or Other Disturbance)	Sign Print Date	ature: Name:  EXECUT	ION BY A CORPORATION, ETC.  T Bluegross LLC
□ SURFAC □ SURFAC □ SURFAC ☑ COAL C	CE OWNER CE OWNER (Road and/or Other Disturbance) CE OWNER (Impoundments/Pits)	Sign Print Date FOR Com By:	ature: i Name: i: REXECUT pany: _E  JOhn	ION BY A CORPORATION, ETC.
☐ SURFACE ☐ SURFACE ☐ SURFACE ☐ COAL CE	CE OWNER CE OWNER (Road and/or Other Disturbance) CE OWNER (Impoundments/Pits) OWNER OR LESSEE	Sign Print Date FOR Com By: Its:	ature: i Name: i: REXECUT pany: _E  JOhn	ION BY A CORPORATION, ETC.  T Bluegrass LLC  Dama to

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 <a href="mailto:depprivacyofficer@wv.gov">depprivacyofficer@wv.gov</a>.

WV Department of Environmental Protect/96/17/2016

#### Coal Owners:

WBM Heirs Properties LLC PO Box 659 Wichita Falls TX 76307

I.L. Morris PO Box 397 Glenville WV 26351

H3 LLC 1483 Johns Creek Road Milton WV 25541

E.T. Blue Grass LLC 625 Liberty Ave Suite 1700 Pittsburgh PA 15222

Janice K Snider PO Box 551 Kingwood WV 26357

Deborah Ann Coxx 22 Bates Rd PMB 133 Mashpee MA 02649

Eleanor F. Delauder 2153 Iveywood St. The Villages FL 32163

Patrick Michael Wright 624 South 7th Street Clarksburg WV 26301

S.J.J. Leggett 1010 N. North Street Washington CH OH 43160

Randall Leggett 1364 Locust Ave. Fairmont WV 26554

Brenda Jo Fulton 409 Dodge Ave Williamstown WV 26187

Carolyn Sue Gaston 1231 Bellaire St. Fairmont WV 26554

Beverlee Ann Grose 194 Welton Way Mooresville NC 28117 Bernadine Pearl Leggett 124 Clarksburg Rd. Buckhannon WV 26201

Jeffrey Scott Anderson 1359 Old River Rd. Williamstown WV 26187

Marsha Leggett 106 Neeley Ave West Union WV 26456

Kimberly Kay Davis 700 Caroline Ave Williamstown WV 26187

Patrick Dean Leggett 1625 Stonehenge Rd. Charleston WV 25314

Melanie K. Dienhart 7275 Iverson Place Paso Robles CA 93446

Eric Thomas Anderson Rt. 2 Box 192-V Jane Lew WV 26378

Patricia Susan Wright 842 Verdun St. Clarksburg WV 26301

Margaret E. Gress 1108 Wylie Ridge Rd New Cumberland WV 26047

Mona R Cumberledge 125 Ash Lane Sistersville WV 26175

Thomas E Straw Jr 4622 WV Hwy 5 East Glenville WV 26351

Karen M Monroe 245 S Prospect St. Apt 205 Ravenna OH 44266

Daniel Kester PO Box 177 Salt Lick KY 40371 RECEIVED
Office of Oil and Gas

APR 0 7 2016

### Additional Coal Owners:

Libby K Straw 245 S Prospect St. Apt 205 Ravenna OH 44266

Mike Kester C/o Daniel Kester 38 Thomas Ln.Trlr 9 Clearfield KY 40313

Patty A Thomas 3560 Orchard Dr. Lot #A14 Stow OH 44244

Ed Broome, Inc 4622 WV 5E Glenville WV 26351

Amanda Kester 438 West Main Rd. Apt. 102 Conneaut OH 44030

Freda B Jones 611 31st Street Vienna WV 26105

Kelleigh D Leggett 310 Wynwood Dr Willow Street PA 17584

Zadock Leggett 310 Wynwood Dr Willow Street PA 17584

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APR 0 7 2016

WW-6A4 (1/12) 17-06770 Operator Well No. 514101

# 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 Date of Noti	Requirement: Notice shall be provided a lice: 03/01/2016 Date Pe	nt least TEN (10) days prior to filing a rmit Application Filed: 03/10/2016	a permit application.
Delivery me	thod pursuant to West Virginia Code §	22-6A-16(b)	
☐ HAND	CERTIFIED MAIL		
DELIV		QUESTED	
receipt reque drilling a hor of this subsec subsection m	ested or hand delivery, give the surface ow rizontal well: <i>Provided</i> , That notice given ction as of the date the notice was providen	ner notice of its intent to enter upon to pursuant to subsection (a), section to do to the surface owner: <i>Provided, hower</i> . The notice, if required, shall include the control of the con	, an operator shall, by certified mail return he surface owner's land for the purpose of en of this article satisfies the requirements wever, That the notice requirements of this lude the name, address, telephone number, or's authorized representative.
	ereby provided to the SURFACE OV	VNER(s):	
Name: See Atta	ached	Name: See Attached	
Address:		Address:	
the surface or State: County: District: Quadrangle: Watershed:	wner's land for the purpose of drilling a how WV Doddridge Southwest Oxford Upper Run of Middle Fork of South Fork Hughes Rive	orizontal well on the tract of land as for Easting:  UTM NAD 83 Easting: Northing: Public Road Access: Generally used farm name:	well operator has an intent to enter upon ollows: 517357.99 4336944.23 WV-18 Ronald Hart and Jeffery Hart
This Notice Pursuant to V facsimile nur related to hor	e Shall Include: West Virginia Code § 22-6A-16(b), this mber and electronic mail address of the rizontal drilling may be obtained from the 1 57 <sup>th</sup> Street, SE, Charleston, WV 25304 (	notice shall include the name, addroperator and the operator's authorized Secretary, at the WV Department of	ed representative. Additional information of Environmental Protection headquarters.
Notice is he	ereby given by:		
	DT: EQT Production Company	Authorized Representative:	Victoria Roark
Address:	115 Professional Place PO Box 280	Address:	115 Professional Place PO Box 280
Bridgeport WV 2	6330	Bridgeport WV 26330	
Telephone:	304-848-0076	Telephone:	304-848-0076
Email:	vroark@eqt.com	Email:	vroark@ptctmc=IVED
Facsimile:	304-848-0041	Facsimile:	Offite®% Oll and Gas

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. Department of the parties of the parti

# Surface Owner(s)

Robert Brannon et al Route 1 Box 184 West Union WV 26456

\*\*\*Change of address\*\*\*

Robert Brannon et al 881 Haystack Ln. West Union WV 26456

Ronald Hart 335 South 22<sup>nd</sup> Street Clarksburg WV 26301

Jeffery Hart 58 Abney Circle Charleston WV 26314

I.L. Morris P.O. Box 397 Glenville WV 26351

> RECEIVED Office of Oil and Gas

> > APR 0 7 2016

# Surface Owners (Road or other Disturbance)

Robert Brannon et al Route 1 Box 184 West Union WV 26456

1

\*\*\*Change of address\*\*\*

Robert Brannon et al 881 Haystack Ln. West Union WV 26456

1

Ronald Hart 335 South 22<sup>nd</sup> Street Clarksburg WV 26301

Jeffery Hart 58 Abney Circle Charleston WV 26314

I.L. Morris P.O. Box 397 Glenville WV 26351

V

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APR 0 7 2016

## Surface Owners of Tank Site

Robert Brannon et al 881 Haystack Ln. West Union WV 26456

\*\*\*Change of address\*\*\*

Robert Brannon et al 881 Haystack Ln. West Union WV 26456

Ronald Hart 335 South 22<sup>nd</sup> Street Clarksburg WV 26301

Jeffery Hart 58 Abney Circle Charleston WV 26314

I.L. Morris P.O. Box 397 Glenville WV 26351

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> > APR 0 7 2016

WW-6A5 (1/12) 17-0 6770 Operator Well No. 514101

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

341,361	ce: 4-7-10 Date Permit	Application Filed:	4-7-14	application. 2
Delivery me	thod pursuant to West Virginia Code	§ 22-6A-16(c)		
	FIED MAIL [ RN RECEIPT REQUESTED	HAND DELIVERY		
return receipt the planned or required to be drilling of a damages to the	requested or hand delivery, give the supperation. The notice required by this provided by subsection (b), section tenderized the proposed supperation and gas operation and gas operation.	rface owner whose land subsection shall included the subsection of this article to a surarface use and compentations to the extent the design of the subsections to the subsections to the extent the design of the subsections to the subsections to the subsections are subsections to the subsection of the subsectio	d will be used for ide: (1) A copy face owner whost sation agreement amages are com	cation, an operator shall, by certified mail or the drilling of a horizontal well notice of of this code section; (2) The information se land will be used in conjunction with the at containing an offer of compensation for pensable under article six-b of this chapter. sted in the records of the sheriff at the time
	eby provided to the SURFACE OWN s listed in the records of the sheriff at the	e time of notice):	See Attached	
Notice is here Pursuant to W operation on State:	eby given:  Vest Virginia Code § 22-6A-16(c), notice the surface owner's land for the purpos wv	e of drilling a horizont	al well on the tra	ct of land as follows:
County:	Doddridge	UTM NAD	Easting: Northing:	517357.99 4336944.23
District:	Southwest	Public Road		WV-18
Quadrangle:	Oxford	Generally us	ed farm name:	Ronald Hart and Jeffery Hart
Watershed:	Upper Run of Middle Fork of South Fork Hughes Rive	er		
Pursuant to W to be provide horizontal we surface affect information re	ed by W. Va. Code § 22-6A-10(b) to a ill; and (3) A proposed surface use and ed by oil and gas operations to the extended to horizontal drilling may be ob- located at 601 57th Street, SE, Cha	a surface owner whos compensation agreement the damages are contained from the Secre	e land will be uent containing an ompensable und tary, at the WV	code section; (2) The information required used in conjunction with the drilling of a coffer of compensation for damages to the er article six-b of this chapter. Additional Department of Environmental Protection or by visiting <a href="https://www.dep.wv.gov/oil-and-">www.dep.wv.gov/oil-and-</a>
Well Operator	FOT Braduation Company	A ddragg	445 0 6 1 1-1	DO B 800
Well Operator	<del></del>	Address:	115 Professional Pla	
Well Operator Telephone: Email:	F: EQT Production Company 304-848-0076 vroark@eqt.com	Address: Facsimile:	Bridgeport WV 2633	

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 the Verilatory duties. Your personal information may be disclosed to other State agencies or third parties in the normal disclose of Oil income of of Oil i

# Surface Owner(s)

Robert Brannon et al 881 Haystack Ln. West Union WV 26456

Ronald Hart 335 South 22<sup>nd</sup> Street Clarksburg WV 26301

Jeffery Hart 58 Abney Circle Charleston WV 26314

I.L. Morris P.O. Box 397 Glenville WV 26351

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> > APR 0 7 2016

# Surface Owners (Road or other Disturbance)

Robert Brannon et al 881 Haystack Ln. West Union WV 26456

Ronald Hart 335 South 22<sup>nd</sup> Street Clarksburg WV 26301

Jeffery Hart 58 Abney Circle Charleston WV 26314

I.L. Morris P.O. Box 397 Glenville WV 26351

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> > APR 0 7 2016

## Surface Owners of Tank Site

Robert Brannon et al 881 Haystack Ln. West Union WV 26456

Ronald Hart 335 South 22<sup>nd</sup> Street Clarksburg WV 26301

Jeffery Hart 58 Abney Circle Charleston WV 26314

I.L. Morris P.O. Box 397 Glenville WV 26351

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APR 0 7 2016

WV Department of Environmental Protection

06/17/2016



# WEST VIRGINIA DEPARTMENT OF TRANSPORTATION

**Division of Highways** 

Earl Ray Tomblin

1900 Kanawha Boulevard East • Building Five • Room 110 Charleston, West Virginia 25305-0430 • (304) 558-3505

Paul A. Mattox, Jr., P. E. Secretary of Transportation/ Commissioner of Highways

March 7, 2016

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

Subject: DOH Permit for the OXF160 Well Site, Doddridge County

OXF160H5 #513702 OXF160H6 #513755 OXF160H9 #514101

Dear Dr. Martin,

This well site will be accessed from Permit # 04-12-0308 applied for by EQT Production Company for access to the State Road for a well pad located off of Doddridge County Route 23/3 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

Regional Maintenance Engineer

Cc: Nick Bumgardner

**EQT Production Company** 

CH, OM, D-4

File

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APR 0 7 2016

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

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

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Office of Oil and Gas

APR 0 7 2016

# WVDEP OOG CCEPTED AS-BUILT

4 / 28 / 2016

#### PROJECT INFORMATION

PROJECT NAME: ONF-180 SITE PLAN MODIFICATION TAX PARCELS: 19, 20 & 02 SOUTHWEST DISTRICT MAP 9 & U.

JEFFERY HART & RONALD L HART SOUTHWEST DISTRICT DODDRIDGE COUNTY, WV PROPERTY AREA: 60+ ACRES

INE WORRES SOUTHWEST DISTRICT DODDREDGE COUNTY, WV PROPERTY AREA: 6600 75± ACRES

ROYALTY OWNERS: MONA R CUMBERLEGE ET AL SOUTHWEST DISTRICT DUDDERIDGE COUNTY, WY PROPERTY AREA: 206± ACRES

WEW HEIRS PROPERTIES LLC SOUTHWEST DISTRICT DODDWIDGE COUNTY, WV PROPERTY AREA: 1891.25± ACRES

SITE LOCATION: THE OUT-160 SITE IS LOCATED ON A POINT SOUTHEAST OF CO. ET. 23/3, APPROXIMATELY 0.91 MILES SOUTHWEST OF CO. ST. 23/3 AND CO. ST. 10/11 INTERSECTION.

#### OXF-160 LOCATION COORDINATES

LATITUDE 38 180316 LONGETUDE -80.797033 (NAD 83) LATITUDE 4336808.4 LONGETUDE 517533.2 (UTW NAD 53)

#### SITE DISTURBANCE COMPUTATIONS

ORDGINAL LOD ACREAGE- 16.9± ACRES

#### GENERAL DESCRIPTION

THE GMF-180 WELL PAD AND ASSOCIATED IMPOUNDMENT ARE CONSTRUCTED. THE ASSOCIATED PIT WILL BE CONSTRUCTED, ALL THREE STRUCTURES WILL AND IN THE DEVELOPMENT OF ADDITIONAL MARGELIUS SHALE GAS WELLS.

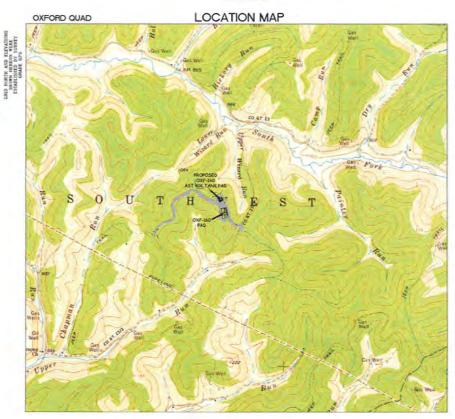
MISS Utility of West Virginia 1-800-245-4848 West Virginia State Law (Section XIV: Chapter 24-C) Requires that you call two business days before you dig in the state of West Virginia. IT'S THE LAW!!

# **OXF-160 SITE PLAN MODIFICATION EQT PRODUCTION COMPANY**

EXISTING WELL #s API NO. 47-017-6112, 47-017-6113 & 47-017-6114

PROPOSED WELL #s H2 WV-513172, H5 WV-513702, H6 WV-513775, & H9 WV-514101

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





#### SHEET INDEX

1 - COVER SHEET

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PROPUSED COMPOST FILTER SOCK PROPOSED COMPOST FILTER SOCK
EL ROAD EDGE OF GROEF/MEST
EL ROAD EDGE OF PAYEMENT
EL ROAD EDGE OF PAYEMENT
EL ROAD EDGE OF PAYEMENT
EL ROADELNE
EL CAUSET
EL SAFETY FENCE
EL CAUSET
EL CAUS

EX OVERMEAD UTBLITY R/W
EX POWER POLE
EX IELEPHONE LONE
EX GASLINE
EX GASLINE
EX GASLINE R/W
PROPOSED RIP RAP

EL RIP RAP EX BRUSH PILE EX DELINEATED STREAM EX. STRUCTURE

EX PIPELINE MARKER EX PPELINE MARKER
REC FOOLPRINT
ENCE OF SERM
LING OF SERM
LING OF SERM
LING OF SERM
CHAVE
CHAVE
CHAVE
ORIGINAL CHAVING 2' CONTIDUES
AS PULL 2' CONTIDUES
AS PULL 2' CONTIDUES

PRINTING WELL LOCATIONS PROPOSED WELL LOCATIONS
SPOT ELEVATIONS
MATCHEDS



Povereve

#### SURVEY NOTE

1 THE CERTIFICATION OF THIS DRAWING APPLIES ONLY TO THE POPOGRAPHIC MAPPING AS GENERATE FROM THE FIELD DATA COSTANEDAT THE TIME OF THE PLUS UNIVERS ON CONTRACT SECRET LIGIDATAL SOCIETY LIGIDAT



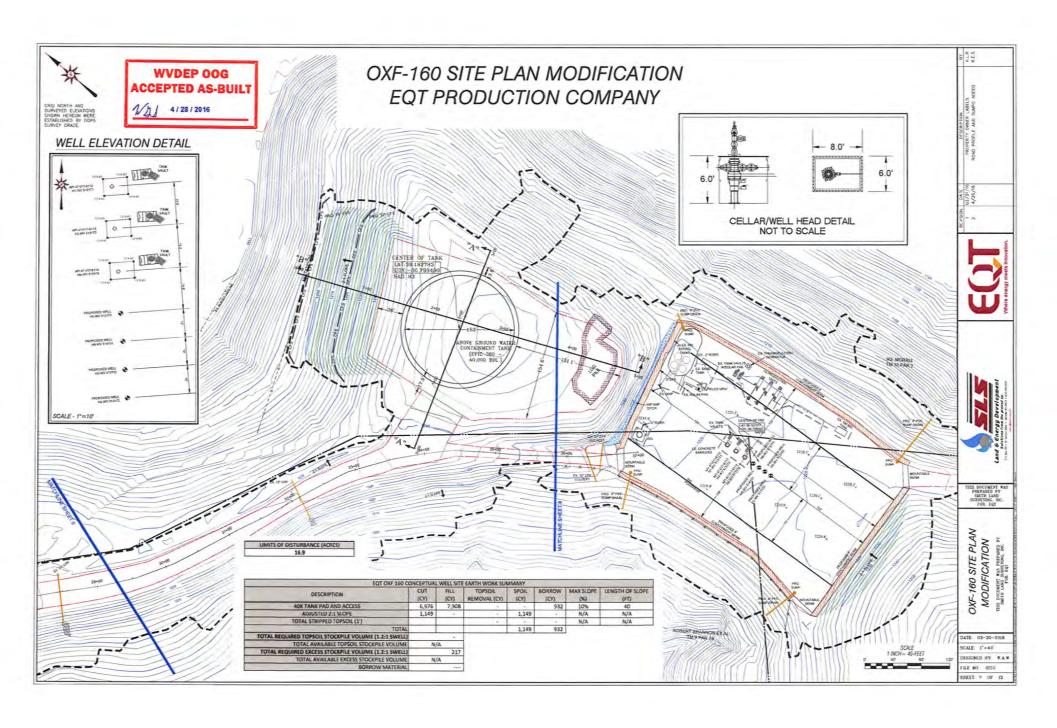




OXF-160 SITE PLAN MODIFICATION HIS DOCUMENT WAS PREPARED BY SAITH LAND SURVEYING, INC. FOR. EQT PRODUCTION COMPANY

DATE 03-30-2016 SCALE I' - DEM'

DESIGNED BY: WAW FILE NO. 8210 HEFT: 1 OF 13



# **OXF-160 SITE PLAN MODIFICATION EQT PRODUCTION COMPANY**

EXISTING WELL #s API NO. 47-017-6112, 47-017-6113 & 47-017-6114

PROPOSED WELL #s H2 WV-513172, H5 WV-513702, H6 WV-513775, & H9 WV-514101

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

JEFFERY HART & RONALD L HART

PROJECT INFORMATION

SURFACE OWNER

ROYALTY OWNERS: MONA R CUMBERLEDGE ET AL SOUTHWEST DISTRICT DEDERIDGE COUNTY, WY PROPERTY AREA 2064 ACRES

WHW HERRS PROPERTIES LLC SOUTHWEST DISTRICT DOUBLINGE COUNTY, WV PROPERTY AREA: 1891 25± ACRES

SITE LOCATION: THE OUF-160 SITE IS LOCATED ON A POINT SOUTHEAST OF CO. RT. 23/3, APPROXIMATELY 0-80 MEES SOUTHWEST OF CO. RT. 23/3 AND CO. RT. 19/11 INTERSECTION.

#### OXF-160 LOCATION COORDINATES

50K TANK PAD LATITUDE: 39.382793 LONGITUDE: -80.799450 (NAD 83) LATITUDE: 4337079 7 LONGITUDE: 517317 8 (UTM NAD 83)

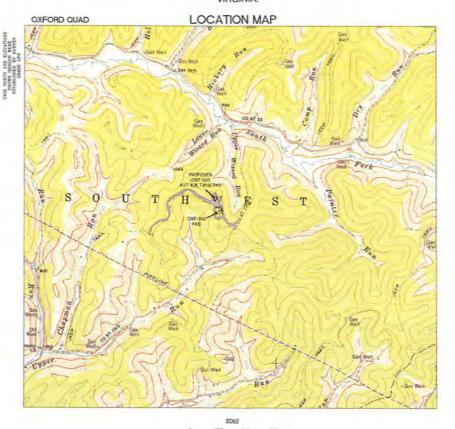
#### SITE DISTURBANCE COMPUTATIONS

ORIGINAL LOD ACREACE, 16 9+ ACRES

#### GENERAL DESCRIPTION

THE CXF-160 WELL PAD AND ASSOCIATED IMPOUNDMENT ARE CONSTRUCTED THE ASSOCIATED PIT WILL BE CONSTRUCTED ALL THREE STRUCTURES WILL AND IN THE DEVELOPMENT OF ADDITIONAL MARCELLUS SHARE CAS WELLS

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



SCALE: 1'=1000'

1-COVER SHEET 2 - CONSTRUCTION NOTES 1 - INDEX SHEET 63 5 - ACCESS ROAD AND PLE 6 - ACCESSIONED 9- TANK PAD PROFILE
10- CONSTRUCTION DETAILS 11 - CONSTRUCTION DETAILS 12 - CONSTRUCTION DETAILS

DAF



#### SURVEY NOTE

DATE: 03-30-2016 DESIGNED BY WAW

FILE NO. 8210 SHEET 1 OF 12

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OXF-160 SITE PLAN MODIFICATION SURVEYING, INC. SURVEYING, INC. SDUCTION COMPANY

