

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 Jim Justice , Governor Austin Caperton , Cabinet Secretary www.dep.wv.gov

Tuesday, February 28, 2017 WELL WORK PERMIT Horizontal 6A / New Drill

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

Re: Permit approval for 514366

47-103-03173-00-00

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: 514366 Farm Name: E. T. BLUE GRASS LLC

U.S. WELL NUMBER: 47-103-03173-00-00

Horizontal 6A / New Drill

Date Issued: 2/28/2017

Promoting a healthy environment.

API Number:	

PERMIT CONDITIONS 47 10 3 0 3 1 7 3

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

- 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. 24 hours prior to the initiation of the completion process the operator shall notify the Chief or his designee.
- 8. During the completion process the operator shall monitor annular pressures and report any anomaly noticed to the chief or his designee immediately.
- 9. 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.
- 10. 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.

PERMIT CONDITIONS 47 10 3 0 3 1 7

11. 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.



west virginia department of environmental protection

Shallow Gas Well Review Board 601 57th Street, SE Charleston, WV 25304 (304)926-0499, Ext 1656

Jim Justice, Governor Barry K Lay, Chairman

BEFORE THE SHALLOW GAS WELL REVIEW BOARD OF THE STATE OF WEST VIRGINIA

IN THE MATTER OF THE OBJECTIONS FROM WESTERN POCAHONTAS PROPERTIES, LP REGARDING THE DRILLING BY EQT PRODUCTION COMPANY FOR THE PROPOSED WELLS IDENTIFIED AS THE BIG 209 #515590 AND #515591 TO BE LOCATED IN GRANT DISTRICT, WETZEL COUNTY, WEST VIRGINIA.

DOCKET NO. 254 ORDER NO. 1

AND

IN THE MATTER OF THE OBJECTIONS FROM WESTERN POCAHONTAS PROPERTIES, LP REGARDING THE DRILLING BY EQT PRODUCTION COMPANY FOR THE PROPOSED WELLS IDENTIFIED AS THE BIG 245 #514366, #514367, #514368 AND #514369 TO BE LOCATED IN GRANT DISTRICT, WETZEL COUNTY, WEST VIRGINIA.

DOCKET NO. 255 ORDER NO. 1

ORDER

These matters came on for hearing on January 5, 2017, on the objection of Western Pocahontas Properties, LP ("WPP") to oil and gas well permits submitted to the West Virginia Department of Environmental Protection ("WV DEP") by EQT Production Company ("EQT"). With the agreement of the parties, Dockets 254 and 255 were consolidated for purposes of the statutorily required settlement conference, and failing settlement, for hearing.

Specifically, EQT submitted the following applications:

a. With respect to wells to be drilled on the Big 209 drilling pad to be located in Grant District, Wetzel County, West Virginia, EQT submitted applications for Well Numbers 515590 (API No. 47-103-03160) and 515591 (API No. 47-103-03161) (the "Big 209 Wells"); and

47 000000000

b. With respect to wells to be drilled on the Big 245 drilling pad to be located in Grant District, Wetzel County, West Virginia, EQT submitted applications for Well Numbers 514366 (API No. 47-103-03173), 514367 (API No. 47-103-03174), 514368 (API No. 47-103-03175), and 514369 (API No. 47-103-03176) to be located in Grant District, Wetzel County, West Virginia (the "Big 245 Wells").

WPP objected to all of the foregoing permit applications. At the pre-hearing conference, the Parties reached an agreement to resolve these matters, as follows:

- 1. EQT cancels and withdraws the pending permit applications for the Big 209 Wells.
- WPP cancels and withdraws its objections to the pending permit applications for the Big 245 Wells.

The Board having no objection to the agreement of the parties, does hereby ORDER that the permit applications for Big 209 Wells, Well Numbers 515590 (API No. 47-103-03160) and 515591 (API No. 47-103-03161), are withdrawn and cancelled.

The Board further Orders that the permit applications for the Big 245 Wells, being Well Numbers 514366 (API No. 47-103-03173), 514367 (API No. 47-103-03174), 514368 (API No. 47-103-03175), and 514369 (API No. 47-103-03176) are hereby REMANDED to the West Virginia Department of Environmental Protection Office of Oil and Gas for review.

SHALLOW GAS WELL REVIEW BOARD

Barry K Lay, Chairman



Western Pocahontas Properties

Limited Partnership

5260 Irwin Road Huntington, WV 25705-3247

304-522-5757 • Fax 304-522-5401; 304-302-2370

Certified Mail No. 7015 1730 0000 4756 7384

November 21, 2016

File: 42-09

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

Re: EQT Production Company

Notice of Permit Application for the following BIG 245 gas wells:

Well No. 514366, Grant District, Wetzel County – Marcellus Formation 41-103-03173
 Well No. 514367, Grant District, Wetzel County – Marcellus Formation 41-103-03174
 Well No. 514368, Grant District, Wetzel County – Marcellus Formation 41-103-03175
 Well No. 514369, Grant District, Wetzel County – Marcellus Formation 41-103-03176

Dear Mr. Martin:

Western Pocahontas Properties Limited Partnership respectfully objects to the drilling of the wells represented by the above referenced well drilling applications at this time, pending an opportunity to discuss the well applications in detail with EQT Production Company.

Subject wells are all planned into the Marcellus Formation in close proximity to existing wells (situated within 1500' spacing) and will have a substantial impact to our coal reserves and future mineability. The proposed gas wells are planned in an area of proven Coal Reserves. The gas wells, as proposed will interfere with the development of our Pittsburgh Seam of coal which is currently being developed in the surrounding area and would interfere with the future development of the Pittsburgh Seam of coal in this area.

Western Pocahontas is seeking a dialog with EQT for locating and approving future wells to include a methodology addressing relocation and or mine-through procedures relating to the future development of our coal reserves.

Respectfully submitted,

Deorge augus

George Angus

Vice President & Regional Manager

cc: Rick Johnson, GISP, RL
Landman - Coal
EQT Production - Land Department
Building 1 - Schedule 'A'
15 Professional Place
P.O. Box 280
Bridgeport, WV 26330

RECEIVED
Office of Oil and Gas

NOV 92 35

WV Department of Environmental Protection

4	7	1	0	3	0	3	1	7	API NO. 47-103
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OPERATOR WELL NO. 514388
Well Pad Name: BIG245

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

1) Well Operat	tor: EQTF	roduction	Company	306686	Wetzel	C4	T
-				Operator ID	County	Grant	Big Run
2) Operator's V	Well Numbe	r: 514366		-	•	District	Quadrangle
			24.		d Name: BIG2		
J) raim Name/	Surface Ow	ner: E.I.	Blue Grass	LLC Public Roa	d Access: Rt	19/2	
4) Elevation, cu	urrent groun	d: 1478	Ele	evation, proposed	nost_constmict	ion. 1420	
5) Well Type	(a) Gas	x	Oil	Unde	erground Store	1001: <u>1430</u>	
	Other				nground Stora	gc	
	(b)If Gas	Shallow	X	Deep			
		Horizonta		<u> </u>			D- 11
6) Existing Pad							Vm lt
7) Proposed Tar	rget Formati	on(s), Dept	h(s), Antici	pated Thickness a	nd Expected P	ressure(s):	11-14-16
Marcellus, 75	32, 53, 2620	PSI, Top o	f Marcellus 7	7511			
8) Proposed To			32				
9) Formation at	Total Vertic	cal Depth:	Marcellus				
10) Proposed To	otal Measure	ed Depth:	15975		1 7	ar of the	
11) Proposed H	orizontal Le	g Length:	6785			v Đ ∖	
12) Approximat	te Fresh Wat	ter Strata D	epths:	229′, 507, 662, 7	52, 1011		
13) Method to I	Determine F	resh Water	Depths: F	rom offset wells			
14) Approximat	te Saltwater	Depths: N	one				
15) Approximat	e Coal Sean	n Depths:	925, 1024,	1123			
16) Approximat	e Depth to F	Possible Vo	id (coal min	ne, karst, other): N	lone		
17) Does Propos				_			
directly overlying	ng or adjacer	nt to an acti	ve mine?	Yes	No	X	
(a) If Yes, prov	vide Mina In	ofor Nome					
(w) 11 103, pro-	A IGO TATILIE IL						
		Depth					
		Seam					
		Owne	r:			Rece	ived
					C	ittico of C	NI & Gas

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WW-6B (04/15)

API NO. 47- 103

OPERATOR WELL NO. 514366
Well Pad Name: BIG245

18)

CASING AND TUBING PROGRAM

Size	New or	<u>Grade</u>	Weight per ft.	FOOTAGE: For	INTERVALS:	CEMENT:
	<u>Used</u>		(1b/ft)	Drilling (ft)		Fill-up (Cu. Ft.)/CTS
20	New	A-500	78.6	40	40	60 ft^3 / CTS
13 3/8	New	J-55	54.5	1179	1170	1026 ft^3 / CTS
					1173	1020 1037 015
9 5/8	New	A-500	40	2925	2025	1126 #42 / 670
5 1/2	New	P-110	20		45055	1136 ft^3 / CTS
						500° above top producing zone
2 3/0		J-00	4.7		May not be run, if run set 40' above top perf or 80° inclination.	
	(in) 20 3 3/8 9 5/8	Size (in) Or Used 20 New 3 3/8 New 9 5/8 New 5 1/2 New	Size (in) or Used Grade 20 New A-500 3 3/8 New J-55 9 5/8 New A-500 5 1/2 New P-110	Size (in) or Used Grade (lb/ft) Weight per ft. (lb/ft) 20 New A-500 78.6 3 3/8 New J-55 54.5 9 5/8 New A-500 40 5 1/2 New P-110 20	Size Or Used Grade Weight per ft. FOOTAGE: For Drilling (ft)	SIZE (in) or Used Grade (lb/ft) Weight per ft. (lb/ft) FOOTAGE: For Drilling (ft) INTERVALS: Left in Well (ft) 20 New A-500 78.6 40 40 33 3/8 New J-55 54.5 1179 1179 9 5/8 New A-500 40 2925 2925 5 1/2 New P-110 20 15975 15975 2 3/8 J-55 4.7 May not be run, if run set 40°

Dalt 11-14-16

TYPE			777 11				•
	Size (in)	Wellbore Diameter (in)	<u>Wall</u> <u>Thickness</u> (in)	Burst Pressure (psi)	Anticipated Max. Internal Pressure (psi)	Cement Type	Cement Yield (cu. ft./k)
Conductor	20	26	.375	1378	1102	Class A	
Fresh Water	13 3/8	17 1/2	.38	2700	2160	See Variance	
Coal					2100	oce valiance	1.19
Intermediate	9 5/8	12 3/8	.395	3950	3160	Class H	1.07
Production ·	5 1/2	8 1/2	.361	12640	10112	Class H	1.123/2.098
Tubing	2 3/8	NA	.19	7700	10112	0103311	1.123/2.090
Liners							
				دي. د م	030		3

PACKERS

Kind: Sizes:		
Depths Set:		
	 	- Book and

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WW-6B (10/14)

4710303173

OPERATOR WELL NO. 514366

Well Pad Name: BIG245

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 3098'. 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): 36.41
- 22) Area to be disturbed for well pad only, less access road (acres): 32.63
- 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 the cement slurry 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 (exten in COS) Vac Tail (Type H Cament): 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) Rescue amount of water loss in the company of the co

25) Proposed borehole conditioning procedures:

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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.

514366(BIG245H5)

EQT Production

Big Run Quad Wetzel County, WV

Azimuth 157 7664 Vertical Section

Formations Conductor Base Red Rock Base Fresh Water Surface Casing	TVD TVD			Type Hole Size, In. Casing Size, OD In. Casing Wall Thickness, In. Depth, MD Weight	26 20 0.375 40'	Surface 17 1/2 13 3/8 0.380	Intermediate 12 3/8 9 5/8 0.395	Production 8 1/2 5 1/2
Conductor Base Red Rock Base Fresh Water	967 1011 1179			Casing Size, OD In. Casing Wall Thickness, In. Depth, MD	20 0.375	13 3/8	9 5/8	5 1/2
Base Fresh Water	1011 1179		5	Casing Wall Thickness, In. Depth, MD	0.375			
Base Fresh Water	1011 1179			Depth, MD		0.380	0.395	
Base Fresh Water	1011 1179				40'		0.000	0.361
	1179				40	1,179'	2,925'	15,975'
Surface Casing		4	I I N	Weight	78.6#	54.5#	40#	20#
Shirese Action 2		1000000		Grade	A-500	J-55	A-500	P-110
	2332 - 2426			New or Used	New	New	New	New
Maxton				Burst (psi)	1378	2,700	3,950	12,640
Big Lime	2463 - 2659	1.5		Cement Class	A	A / Type 1	Н	Н
Weir	2783 - 2875			Cement Yield	1.18	1.19	1.07	1.123/2.098
Intermediate Casing Gantz	2925 2982 - 3055	4	.4.	Top of Cement (Planned)	Surface	Surface	Surface	500' above top Producing Zone
	3108 - 3161		k and a second	Method	Displacement	Displacement	Displacement	Displacement
Thirty foot	3195 - 3234		2	Est. Volume (cu ft)	60	1,026	1,136	2,123
Gordon	3249 - 3297	1 8		200 10101110 (00 11)			Calcium Chloride, Fluid	Calcium Carbonate, Fluid Loss,
Forth Sand	3307 - 3320			· ·		4000	Loss, Defoamer, Dispersant,	Extender, Dispersent, Viscosifier
Bayard	3124 - 3486			Possible Additives	N/A	Calcium	POZ, Bonding Agent,	Defoamer, POZ, Bonding Agent,
Warren	3884 - 3931			1,438,440,344,3563	1.000	Chloride	Extender, Retarder,	Retarder, Anti-Settling/Suspensio
	4034 - 4067		KOP @ 3,098'				Flake/LCM	Agent
	4897 - 4939		2 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1					
Benson	5529 - 5586	10						
	5882 - 5941							
1.15-11-11-1-1-1	7087 - 7241							
	7241 - 7287	1.3		DMH				
	7287 - 7370	1		JI 1 H				
	7370 - 7403	1		line				
	7403 - 7421	1	1	11-19-16				
	7421 - 7511	,						4
	7511 - 7564	Exercise and the second	The Residence of the Party of t				THE PERSON NAMED IN COLUMN 1995	4

Land curve @

7,532' TVD 9,190' MD

Est. TD @

7,532' TVD 15,975' MD

Out

Proposed Well Work:

Production Casing

Onondaga

Drill and complete a new horizontal well in the Marcellus formation. Drill the vertical to an approximate depth of 3098'.

15975 MD

7564

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

Office of Oll & Gas NOV 1 7 2016

6,785' Lateral

CN 0 CN

EQT Production

Hydraulic Fracturing Monitoring Plan

Pad ID: BIG245

Wetzel County, WV

11/8/16

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WV Delay 0 9 2016
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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 Wetzel County, WV prior to hydraulic fracturing at the following EQT wells on BIG245 pad: 514366, 514367, 514368, 514369

Due to the requirements under 35CSR8 5.11, the permittee is required to review the area surrounding the proposed well pad so as to identify and evaluate potential conduits for unintended fracture propagation. A report is required to be submitted along with a well work permit application.

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 coordination with well operators of the timing and location of the hydraulic fracturing, establishment of measures 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 Well Operators

EQT, using available data (WV Geological Survey, WVDEP website, and IHS data service), has identified all known wells and well operators within 500 feet of this pad and the lateral sections that are known or could reasonably be expected to be within range of the fracture propagation. A map showing these wells along with a list of the wells and operators is included in **Attachment A**.

EQT will notify these operators of the hydraulic fracturing schedule for these wells, and coordinate with them throughout the fracturing process.

EQT will recommend to these operators at a minimum to:

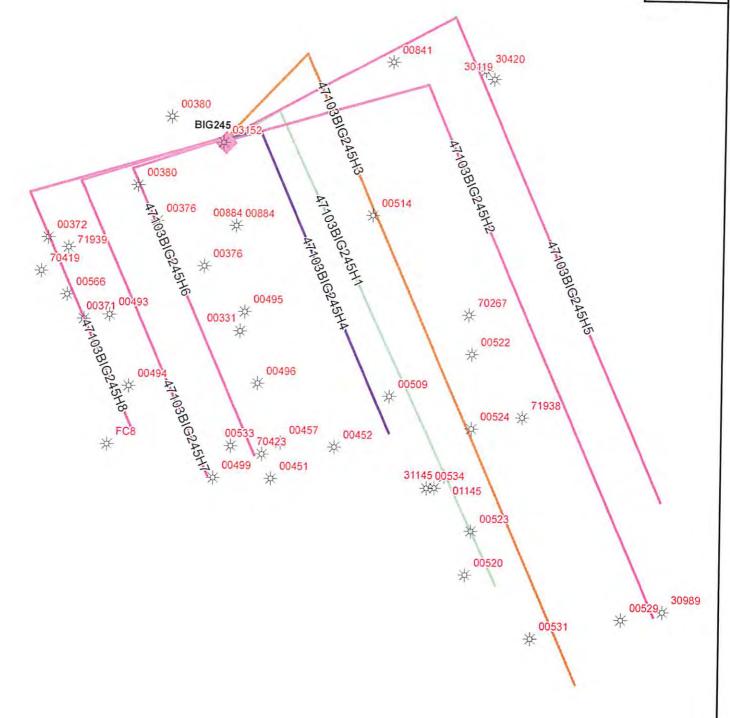
- Inspect their surface equipment prior to fracturing to establish integrity and establish pre-frac well conditions
- 2. Observe wells closely during and after fracturing and monitor for abnormal increases in water, gas or pressure
- 3. Inspect or install master valves or other necessary equipment for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

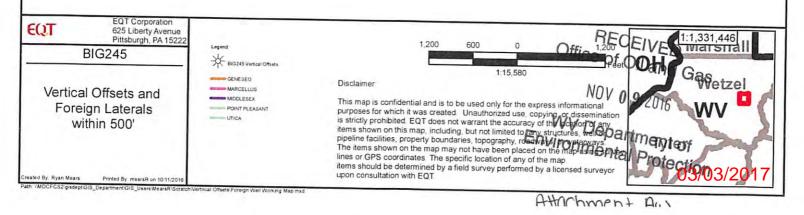
2. Reporting

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

Office of Oil and Gass
Office of Oil and Oil and







NO PERFORATION DATA ON IHS

Well ID	WellStatus	Comp Date	Permit	Operator	Latitude	Longitude	Datum Eleva	SS Depth	TotalDepth	
4710300331	GAS	11/17/1903	00331	PGH & WV GAS	39.588300	-80.568000	110	9 -117	•	2285
4710300372	GAS-P	3/10/1951	00372	FOSTER MCKENZIE	39.591700	-80.577300	84	2		
4710300376	GAS	4/11/1952	00376	P C MCKENZIE	39.590700	-80.569800	126	5		
4710300380	DRY	5/23/1952	00380	P C MCKENZIE	39.596200	-80.571400	126	7		
4710300495	STORAGE	3/15/1963	00495	EPC	39.589000	-80.567800	110	9 -101	1	2120
47103FC8	P&A		FC8	UNK	39.584100	-80.574400		-	_	
47103003710000	GAS-CB	2/1/1951	00371	J C R PETROLEUM INCORPORATED	39.588715	-80.575575	82	5		530 CONEMAUGH /SERIES/
47103004930000	ABD-GW	12/30/1915	00493	EQUITABLE GAS COMPANY	39.588872	-80.574319	116			2234 BIG INJUN /SD/
47103004960000	ABD-GW	8/4/1902	00496	PITTSBURGH & W VA GAS	39.586405	-80.567188	84	4		2785 HAMPSHIRE
47103005090000	ABD-GW	8/4/1919	00509	DUNN-MAR OIL & GAS COMPANY	39.585976	-80.560835	115			3243 CHEMUNG
47103005200000	ABD-GW	8/2/1919	00520	HOPE NATURAL GAS	39.579415	-80.557138	93	7		2025 BIG INJUN /SD/
47103005240000	GAS	4/5/1919	00524	EQUITABLE GAS COMPANY	39.584808	-80.556866	97	2		2882 CHEMUNG
47103005330000	ABD-GW	12/11/1902	00533	PITTSBURGH & W VA GAS	39.584071	-80.568456	82	9		1928 POCONO
47103005660000	GAS-CB	1/1/1965	00566	J C R PETROLEUM INCORPORATED	39.589598	-80.576384	88	0		548 CONEMAUGH /SERIES/
47103309890000	ABD-GW	1/17/1917	30989	CARNEGIE NATURAL GAS CORPORATION	39.578108	-80.547584	120	0		3221 HURON LOWER
47103005220000	UNKWN		00522	UNKNOWN	39.587566	-80.556866	121	4		3154 CHEMUNG
47103005290000	GSTG	5/1/1963	00529	EQUITABLE GAS COMPANY	39.577815	-80.549603	120	0		3228 FIFTH SAND
47103031520000	PERMIT		03152	EQT PRODUCTION COMPANY	39.595246	-80.568931	143	0		
47103005310000	PSEUDO		00531	EQUITABLE GAS COMPANY	39.577092	-80.553953	109	В		
47103008410000	PSEUDO		00841	UNKNOWN	39.598294	-80.560775				
47103011450000	PSEUDO		01145	MEADOW RIDGE DEVELOPMENT LLC	39.583043	-80.558152				
47103301190000	PSEUDO		30119	CARNEGIE NATURAL GAS CORPORATION	39.597714	-80.555904				
47103311450000	PSEUDO		31145	EQUITABLE GAS COMPANY	39.582608	-80.558637				
47103702670000	PSEUDO		70267	HOPE NATURAL GAS	39.589006	-80.557028				
47103704190000	PSEUDO		70419	HOPE NATURAL GAS	39.590457	-80.577635				
47103704230000	PSEUDO		70423	PHILADELPHIA OIL	39.583781	-80.566957				
47103003760000	GAS-CB	4/1/1952	00376	J C R PETROLEUM INCORPORATED	39.592356	-80.572067	1265	5		1008 CONEMAUGH /SERIES/
47103003800000		5/1/1952	00380	UNKNOWN	39.593662	-80.573006	1267	,		1185 CONEMAUGH /SERIES/
47103004570000		1/1/1958	00457	UNKNOWN	39.584228	-80.566062	1108	3		859 AMES /LM/
47103004510000		7/1/1957		NORTH FORK DEVELOPMENT	39.582898	-80.566505	817	,		529 PENNSYLVANIAN
47103004520000		8/1/1957		NORTH FORK DEVELOPMENT	39.584072	-80.563459	886	5		614 PITTSBURGH COAL
47103004940000			00494	EQUITABLE GAS COMPANY	39.586260	-80.573381	1086	5		2088 CHEMUNG
47103004990000			00499	EQUITABLE GAS COMPANY	39.582898	-80.569315	923	1		2712 CHEMUNG
47103005340000				EQUITABLE GAS COMPANY	39.582608	-80.559011	1067	,		2880 CHEMUNG
47103008840000				UNKNOWN	39.592199	-80.568269	1167	•		
47103005140000		5/1/1962	_	J A & M OIL & GAS	39.592630	-80.561681	1107			BIG INJUN /SD/
47103005230000		1/1/1963		EQUITABLE GAS COMPANY	39.581035	-80.556866	846	•		BIG INJUN /SD/
47103304200000		2/16/1918		UNKNOWN	39.598016	-80.556303	1310	1		3226 HURON LOWER
47103719380000				HOPE NATURAL GAS	39.585232	-80.554406				
47103719390000				UNKNOWN	39.591328	-80.576324				
47103008840001	D&A	11/7/1989	00884	EQUITRANS INCORPORATED	39.592199	-80.568269	1167			2211 GREENBRIER /LM/



API Number 47 - 103 1 0 3 0 3 1 7 3

Operator's Well No. 514366

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) Rockcamp Run of Wiley Fork Ouadrangle Big Run	
Do you anticipate using more than 5,000 bbls of water to complete the proposed well work? Yes No No Vill a pit be used? Yes No Vill a pit be used?	
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	PAH
Off Site Disposal (Supply form WW-9 for disposal location) Other (Explain	PAH 11-14-16
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.	y :
I certify that I understand and agree to the terms and conditions of the GENERAL WATER POLLUTION PERMIT is on August 1, 2005, by the Office of Oil and Gas of the West Virginia Department of Environmental Protection. I understand that provisions of the permit are enforceable by law. Violations of any term or condition of the general permit and/or other application can lead to enforcement action. I certify under penalty of law that I have personally examined and am familiar with the information submitted on application form and all attachments thereto and that, based on my inquiry of those individuals immediately responsible obtaining the information, I believe that the information is true, accurate, and complete. I am aware that there are significantly penalties for submitting false information, including the possibility of fine or imprisonment.	this
Company Official Signature Received	
Company Official (Typed Name) Victoria J. Roark Office of Oil &	Gas
Company Official Title Permitting Supervisor NOV 1 7 2016	440
Subscribed and sworn before me this 13 day of October, 2016	
Notary Public	
My commission expires 4-7-2070 SOFFICIAL SOFFI	BAL IBLIC VIRGINIA INSTREE

Operator's Well No. 514366

rioposed Kevegelation i re	atment: Acres Disturbed 3	2.63 Prevegetation p	н 6.3
	Tons/acre or to corre		H
	ranular 10-20-20	or to pri	
	1/3	lbs/acre	
		Tons/acre	
		Seed Mixtures	
. T	Temporary	Perm	anent
Seed Type	lbs/acre	Seed Type	lbs/acre
KY-31	40	Orchard Grass	15
Alsike Clover	5	Alsike Clover	5
Annual Rye	15		
Maps(s) of road, location, porovided). If water from the acreage, of the land applicated	e pit will be land applied, inc	d application (unless engineered plans incluctude dimensions (L x W x D) of the pit, and	ding this info have been d dimensions (L x W), and
Maps(s) of road, location, porovided). If water from the acreage, of the land applicate Photocopied section of involutions.	tion area.	clude dimensions (L x W x D) of the pit, and	ding this info have been d dimensions (L x W), and
Maps(s) of road, location, porovided). If water from the acreage, of the land applicate Photocopied section of involutions.	tion area.	clude dimensions (L x W x D) of the pit, and	ding this info have been d dimensions (L x W), and
Maps(s) of road, location, porovided). If water from the acreage, of the land applicate Photocopied section of involved approved by:	tion area.	clude dimensions (L x W x D) of the pit, and	ding this info have been d dimensions (L x W), and
Maps(s) of road, location, porovided). If water from the acreage, of the land applicate Photocopied section of involved the provided by:	tion area.	clude dimensions (L x W x D) of the pit, and	ding this info have been d dimensions (L x W), and
Maps(s) of road, location, porovided). If water from the acreage, of the land applicate Photocopied section of involved the provided by:	tion area.	clude dimensions (L x W x D) of the pit, and	ding this info have been d dimensions (L x W), and
Maps(s) of road, location, porovided). If water from the acreage, of the land applicate Photocopied section of involved the provided by:	tion area.	clude dimensions (L x W x D) of the pit, and	d dimensions (L x W), and
Plan Approved by:	tion area.	clude dimensions (L x W x D) of the pit, and	Received
Maps(s) of road, location, porovided). If water from the acreage, of the land applicate Photocopied section of involved the provided by:	tion area.	clude dimensions (L x W x D) of the pit, and	d dimensions (L x W), and
Maps(s) of road, location, p provided). If water from the acreage, of the land applican Photocopied section of invo	tion area.	clude dimensions (L x W x D) of the pit, and	Received Office of Oil &
Maps(s) of road, location, pprovided). If water from the acreage, of the land applicate Photocopied section of involved by:	tion area.	clude dimensions (L x W x D) of the pit, and	Received Office of Oil &
Maps(s) of road, location, p provided). If water from the acreage, of the land applicant Photocopied section of involved Plan Approved by: Comments:	tion area. Olved 7.5' topographic sheet.	clude dimensions (L x W x D) of the pit, and	Received Office of Oil & NOV 17 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

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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WV Department of 2017 Environmental Protection



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	97.
REGULATIONS OF CEMENTING OIL) / / / ~
AND GAS WELLS) 50 =
	075
REPORT OF TH	HE 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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WV Departm397592017 Environmental Protection

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

orch, 2014.

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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Office of Oil and Gas

NOV 0 9 2016

WV Department of Environmental Protection 7

Well 514366(BIG245H5)

EQT Production

Big Run Quad Wetzel County, WV

Vertical Section

157 Azimuth 7664

Note: Diagram is not to scale Casing and Cementing Deepest Fresh Water: 1,011' Top Base TVD Conductor Surface Intermediate Production TVD Type **Formations** 12 3/8 Conductor 40 Hole Size, In. 26 17 1/2 8 1/2 9 5/8 Casing Size, OD In. 20 13 3/8 5 1/2 Casing Wall Thickness, In. 0.375 0.380 0.395 0.361 40' 1,179 2,925 15,975 Base Red Rock 967 Depth, MD 78.6# 54.5# Weight 40# 20# Base Fresh Water 1011 Grade A-500 J-55 A-500 P-110 Surface Casing 1179 New or Used New New New New Burst (psi) 1378 2,700 3,950 12,640 2332 -2426 Maxton Cement Class Α A / Type 1 Н Н **Big Lime** 2463 -2659 2783 - 2875 Cement Yield 1.18 1.19 1.07 1.123/2.098 Weir 2925 Intermediate Casing Top of Cement (Planned) Surface Surface Surface 500' above top Producing Zone Gantz 2982 - 3055 Method Displacement Displacement Displacement Displacement Fifty foot 3108 - 3161 Est. Volume (cu ft) 60 1.026 1,136 2,123 3195 - 3234 Thirty foot Calcium Chloride, Fluid Gordon 3249 - 3297 Calcium Carbonate, Fluid Loss, 3307 - 3320 Loss, Defoamer, Dispersant, Extender, Dispersent, Viscosifier, Forth Sand Calcium N/A 3124 - 3486 Possible Additives POZ, Bonding Agent, Defoamer, POZ, Bonding Agent, Bayard Chloride Extender, Retarder, Retarder, Anti-Settling/Suspension Warren 3884 - 3931 Flake/LCM 4034 - 4067 KOP@ 3,098 Agent Speechley 4897 - 4939 Riley 5529 - 5586 Benson 5882 - 5941 Alexander 7087 - 7241 Sonyea 4710303175 Middlesex 7241 - 7287 7287 - 7370 Genesee Geneseo 7370 - 7403 Tully 7403 - 7421 7421 - 7511 Hamilton Marcellus 7511 - 7564 **Production Casing** 15975 MD 7564 Onondaga

> 7,532' TVD Land curve @ 9,190' MD

Est. TD@

7.532' TVD 15,975' MD

Proposed Well Work:

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

Drill the vertical to an approximate depth of 3098'.

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

6,785' Lateral



October 11, 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 (BIG245)

Dear Mr. Smith,

EQT is requesting the 13-3/8" surface casing be set at 1179' KB, 50' below the deepest mineable Pittsburgh Coal. We will set the 9-5/8" intermediate string at 2925' KB, 50' below the base of the Weir formation.

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

Sincerely,

Vicki Roark

Permitting Supervisor

471030=+=-

Enc.

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NOV 0 9 2016

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.

471030575

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WV Depart กิเลียง 2017 Environmental Protection

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.

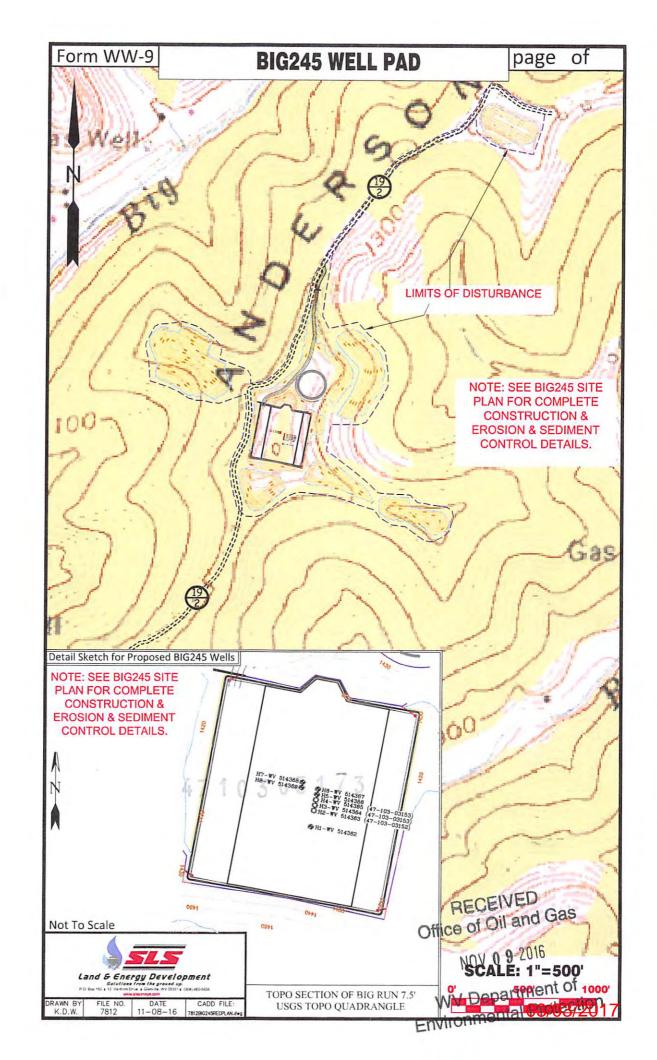
Advanced Waste Services 101 River Park Drive New Castle, Pa. 16101 Facility Permit# PAR000029132

4700507775

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WV Department of Environmenta Derote 21017





Site Specific Safety Plan

EQT BIG 245 Pad

4710303173

Burton Wetzel County, WV

514366 514367	For W 	/ells: 514369	
			Office of Oil & Gas
			NOV 1 7 2016
That 1/L	Date Prepared:	April 4, 2016	_
EQT Production		WV Oil and Gas	Inspector
fille Sperusor		0) + 6 cr Title	Ingeche
10-13-16		11-1416	
Date		Date	

Anticipated Frac Additives Chemical Names and CAS numbers

4710303173

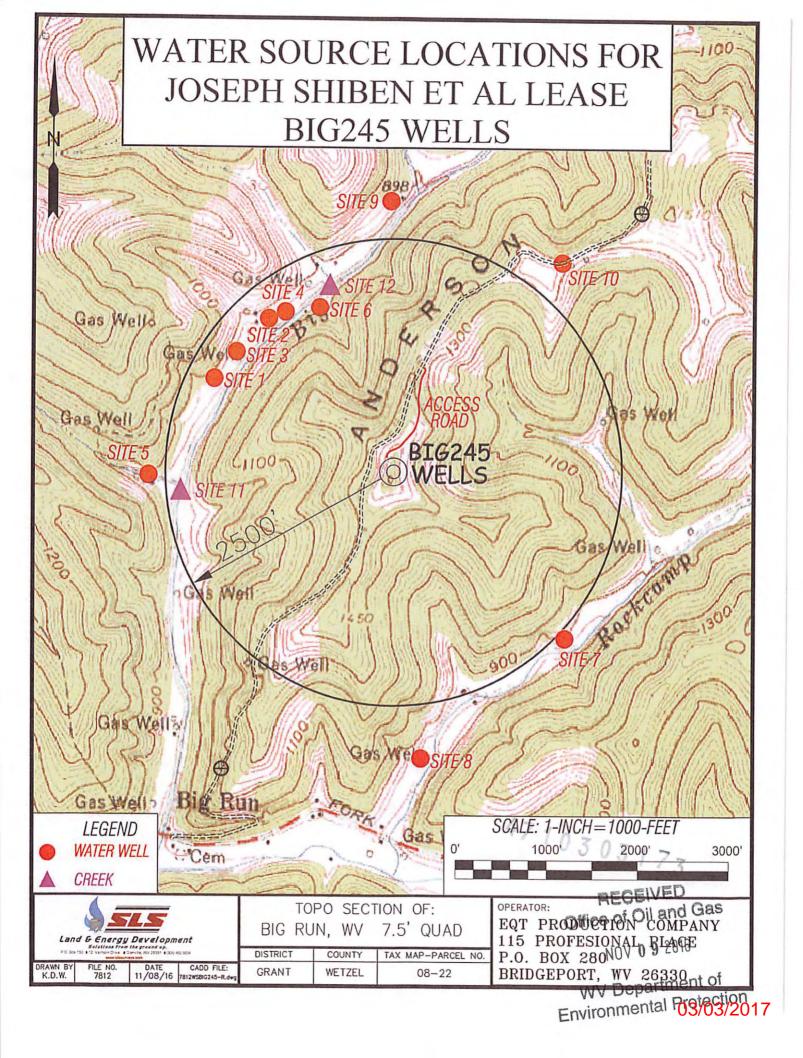
<u>Material</u>	Ingredient	CAS Number
Water Sand Friction Reducer Biocide Scale Inhibitor 15% Hydrochloric Acid Corrosion Inhibitor Corrosion Inhibitor Gelling Agent Oxidizing Breaker Buffering Agent	Hydrotreated light petroleum distillate Tributyl tetradecyl phosphonium chloride Ammonium chloride Hydrochloric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

471030777

Dn4 11-14-16

> Received Office of Oil & Gas

NOV 17 2016



P384

2400'/ WELL NO. WV 514366

SEE REFERENCE BOX FOR A.P.I. #'S

0884

[⇔]376 △⁴⁹⁵

NAD'27 S.P.C.(FT) N. 400,733.49

NAD'83 UTM (M) N. 4,382,942.02

NAD'27 S.P.C.(FT) N. 402,109.68

NAD'27 S.P.C.(FT) N. 395,863.97

NAD'27 GEO.

NAD'27 GEO. NAD'83 UTM (M)

NAD'27 GEO. NAD'83 UTM (M) BOTTOM HOLE LONGITUDE 80°32'30"

-1.703'-

BH

514

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'.

N. 400,733.49 E. 1,698,787.11 LAT-(N) 39.595327 LONG-(W) 80.568912

LAT-(N) 39.599211 LONG-(W) 80.557376

LAT-(N) 39.582150 LONG-(W) 80.547710

E. 537,030.03

E. 1.702.054.43

E. 538,018.49

E. 1,704,705,66

E. 538.857.92

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

LANDING POINT

BOTTOM HOLE

N. 4,383,377.94

N. 4,381,488.61

BIG245 WV 514366 EQT PRODUCTION COMPANY

G-TM-4-13	OLIVE UTT	15.17 ACRES±
G-TM-8-7	JAMES & MARTIN STONEKING	19.12 ACRES±
G-TM-8-8	WANDA BYARD	59.16 ACRES±
G-TM-8-9	MARY WRIGHT ET AL	24 ACRES±
G-TM-8-9.1	OAK GROVE SCHOOL	0.5 ACRES±
G-TM-8-13	NEAL UTT	3.75 ACRES±
G-TM-8-13.1	DUANE GOODRICH	3.56 ACRES±
G-TM-8-14	NEAL UTT	51 ACRES±
G-TM-8-15	JOHN M. BYARD	71,60 ACRES±
G-TM-8-21	IKEY JOE WILLEY	76.27 ACRES±
G-TM-8-22	ET BLUE GRASS LLC	138.93 ACRES:
G-TM-8-24	DORN HIGGINBOTHAM ET AL	7.1 ACRES±
G-TM-8-25	JAMES YOHO	6.25 ACRES±
G-TM-8-27	JAMES YOHO	21.75 ACRES±
G-TM-8-28	JAMES A. & FLORENCE D. YOHO	61 ACRES±
G-TM-8-29	MARY & HUGH BYARD HRS	15 ACRES±
G-TM-8-32	JOE PIGG	82.4 ACRES±
G-TM-8-53	DORN HIGGINBOTHAM	196.21 ACRES
G-TM-8-54	SHERILYN SNIDER	20 ACRES±
G-TM-8-63	MARY WRIGHT ET AL	4.25 ACRES±
G-TM-9-6	JAMES & FLORENCE YOHO	45.08 ACRES±
G-TM-9-9	LOSSIE WATSON ET AL	11.3 ACRES±
G-TM-9-13	JAMES & FLORENCE YOHO	27 ACRES±
G-TM-9-14	JAMES & FLORENCE YOHO	0.8 ACRES±
G-TM-9-15	OPAL STONEKING EST	8.82 ACRES±
G-TM-9-17	HURSEL WILLEY ET AL	20.08 ACRES±
G-TM-9-22	JAMES & FLORENCE YOHO	17.6 ACRES±
G-TM-9-23	STEPHEN & CAROLYN GANTZ	119 ACRES±
G-TM-9-28	SHERILYN SNIDER	55.52 ACRES±
G-TM-9-29	WILLIAM SCHLEICHER	38 ACRES±
G-TM-9-40	SHERIYLN SNIDER	24 ACRES±
G-TM-9-40.1	DONALD DULANY ET AL	22 ACRES±
G-TM-9-40.2	TERRI DERBY	0.09 ACRES±
G-TM-9-40.3	NORMAN & VIVIAN DERBY	0.005 ACRES±
G-TM-9-41	WILLIAM SCHLEICHER	11.56 ACRES±
G-TM-9-52	NORMAN DERBY	61.51 ACRES±
G-TM-9-52.1	NORMAN & VIVIAN DERBY	1 ACRES±
G-TM-9-53	NORMAN & VIVIAN DERBY	32.9 ACRES±
G-TM-9-54	JACK & LEANNA BARNETTE	17.4 ACRES±
G-TM-9-55	JACK & LEANNA BARNETTE	18.4 ACRES±
G-TM-9-63	MARY WRIGHT ET AL	46 ACRES±
G-TM-9-65	TERRI & JASON BEATY	0.61 ACRES±
G-TM-13-09	MARY HIGGINBOTHAM	30.1 ACRES±
G-TM-14-07	NORMAN DERBY	83 ACRES±
G-TM-14-08	ESTHER COEN	59.5 ACRES±
G-TM-14-09	LEONARD RICE ET AL	55 ACRES±

	OWNERS	
LIBERTY HOLDING COMPANY	71.6 AC.±	LEASE NO. 988605
JOSEPH F. & NONDIS A KIGER	46 AC.±	LEASE NO. 125371
IVA M. HALL ET AL	27 AC.±	LEASE NO. 125361
JORDAN Z. PIGG	100 AC.±	LEASE NO. 125374
WILLIAM SCHLEICHER	48 AC.±	LEASE NO. 125363
NORMAN R. DERBY & VIVIAN L. DERBY	33 AC.±	LEASE NO. 125365
OXY USA INC	18 AC.±	LEASE NO. 125366

TH.



BIG245 WELLS H1-WV 514362 STAKE 4 H2-WV 514363 H3-WV 514364 H4-WV 514365 H5-WV 514366 H6-WV 514367 H7-WV 514368 PPROXIMATE ASE/SURFACE BOUNDARY ALE: 1"=200"

Land & Energy Development
Solutions from the ground up.
P.O. Box 150 • 12 Vanhom Drive • Gierville, WV 28351 • (304) 462-5634
www.slasurveys.com

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

P.S. 849

MINIMUM DEGREE OF ACCURACY

1/2500

FILE NO.

No. 849

* STATE OF VIRCHAMA

7812P514366R dwg 7812P514366R.dwg SEE NOTE 2

HORIZONTAL & VERTICAL

SCALE CONTROL DETERMINED BY DGPS (SURVEY GRADE TIE TO CORS NETWORK) (+) DENOTES LOCATION OF WELL ON UNITED STATES TOPOGRAPHIC MAPS. DATE___OCTOBER 04 REVISED_ OPERATORS WELL NO. WV 514366

WELL

STATE

103

COUNTY

03173 M PERMIT

. 20

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



LIQUID WASTE WELL GAS_X "GAS" PRODUCTION_X STORAGE___ DEEP_ _ INJECTION_ DISPOSAL TYPE: SHALLOW LOCATION: (GROUND) (PROPOSED) 1,478' TRIBUTARY OF ROCKCAMP RUN **ELEVATION** 1,430' WATERSHED_ GRANT WETZEL BIG RUN 7.5' COUNTY QUADRANGLE SURFACE OWNER _ ET BLUE GRASS LLC 138.93± ACREAGE -ROYALTY OWNER SHIBEN ESTATES INC. ACREAGE . 125397 PROPOSED WORK: LEASE NO. . DRILL X CONVERT _ __ DRILL DEEPER__ FRACTURE OR STIMULATE X PLUG OFF OLD REDRILL_ FORMATION_ PERFORATE NEW FORMATION ____ __ PLUG AND ABANDON_ CLEAN OUT AND REPLUG____ OTHER PHYSICAL CHANGE IN WELL (SPECIFY) TARGET FORMATION _ MARCELLUS

WELL OPERATOR EQT PRODUCTION COMPANY

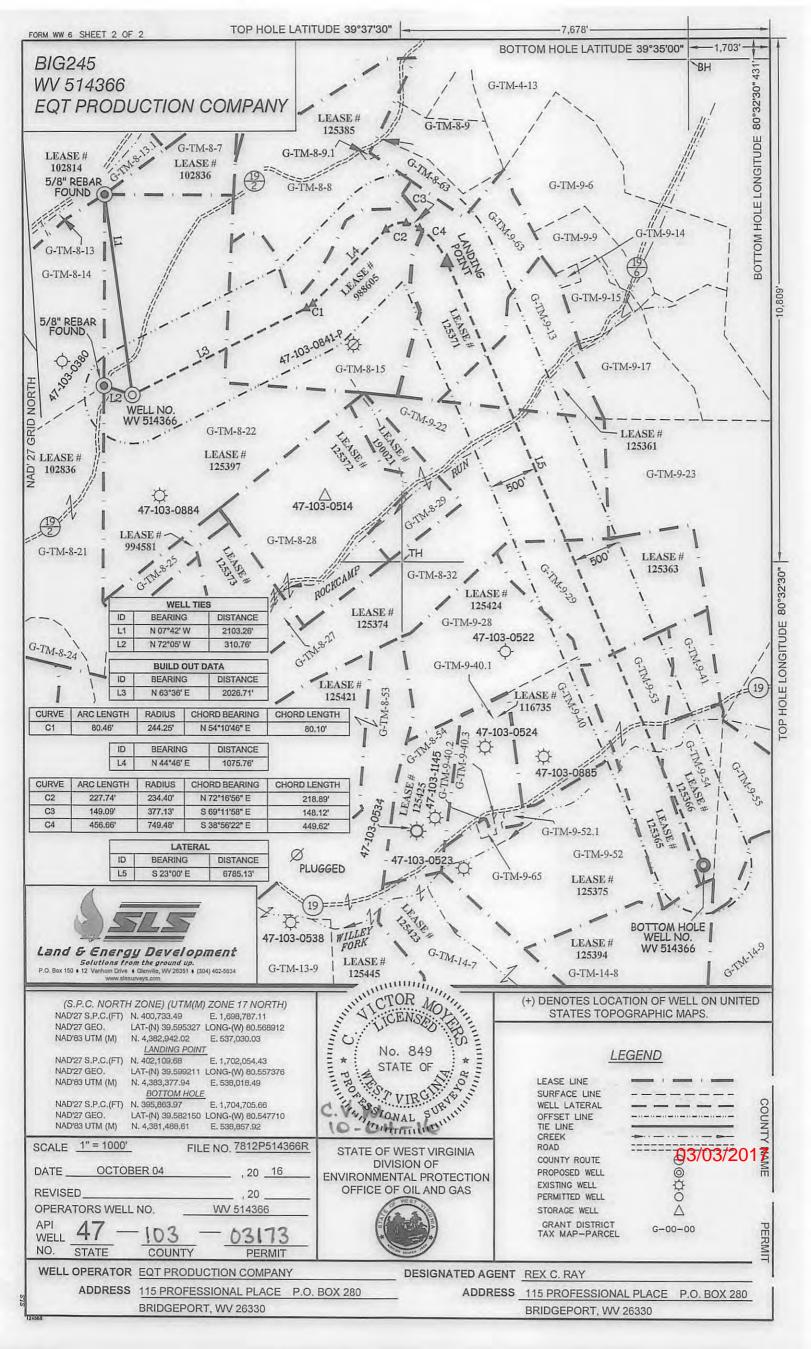
ADDRESS 115 PROFESSIONAL PLACE P.O. BOX 280

BRIDGEPORT, WV 26330

DESIGNATED AGENT REX C. RAY

ESTIMATED DEPTH_

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



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

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

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

Lease Name or Number	Grantor, Lessor, etc.	Grantee, Lessee, etc.	Royalty	Book/Page
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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 NOV 03 2016

WV Department of Environmental Profescion

ease No.	Grantor, Lessor, etc.	Grantee, Lessee, etc.	Royalty	Book/Page
	· · · · · · · · · · · · · · · · · · ·			
125397	ET Blue Grass LLC, et al. (current royalty owner)		***	
	Joseph Shiben, et al.	Equitable Gas Company		DB 44A/224
	Equitable Gas Company	Equitrans, Inc.		O&G 71A/453
	Equitrans, Inc.	Equitrans, LP		DB 105/908
	Equitrans, LP	EQT Production Company		O&G 131A/81
88605	Liberty Holding Company	EQT Production Company	•••	DB 129A/862
	Joseph F. Kiger and Nondis A. Kiger, et al. (current	royalty owner)	***	
<u>5371</u>	Alphia Earl Byard, et al.	Equitable Gas Company		DB 57/125
	Equitable Gas Company	Equitrans, Inc.		O&G 71A/453
	Equitrans, Inc.	Equitrans, LP		DB 105/908
	Equitrans, LP	EQT Production Company		O&G 131A/81
	iva M. Hall, et al. (current royalty owner)			•
<u>5361</u>	A.L. Stoneking, et al.	Equitable Gas Company		4 DB 52A/93
	Equitable Gas Company	Equitrans, Inc.		O&G 71A/453
	Equitrans, Inc.	Equitrans, LP		DB 105/908
	Equitrans, LP	EQT Production Company		O&G 131A/81
	Jordan Zachary Pigg, et al. (Current Royalty Owner)	***	
<u>5374</u>	Josephine J. Pigg, et vir.	Equitable Gas Company		DB 52A/165
	Equitable Gas Company	Equitrans, Inc.		O&G 71A/453
	Equitrans, Inc.	Equitrans, LP		DB 105/908
	Equitrans, LP	EQT Production Company		O&G 131A/81
	•			040 1017101
	William Schleicher (current royalty owner)		***	
<u> 363</u>	Earl L. Tuttle & Opal B. Tuttle	Equitable Gas Company		DB 52A/98
	Equitable Gas Company	Equitrans, Inc.		O&G 71A/453
	Equitrans, Inc.	Equitrans, LP		DB 105/908
	Equitrans, LP	EQT Production Company		O&G 131A/81
	Norman R. Derby & Vivian L. Derby (Current Royalty	/ Owner)	***	
36 <u>5</u>	Swain W. Haught	Equitable Gas Company		DB 52A/95
	Equitable Gas Company	Equitrans, Inc.		O&G 71A/453
	Equitrans, Inc.	Equitrans, LP		DB 105/908
	Equitrans, LP	EQT Production Company		O&G 131A/81
	Oxy USA (nc., et al. (Current Royalty Owner)		400	
36 <u>6</u>	Harvey Haught, Widower	Equitable Gas Company		DB 48A/312
	Equitable Gas Company	Equitrans, Inc.		
	Equitrans, Inc.	Equitrans, Inc. Equitrans, LP		O&G 71A/453
	Equitrans, LP	EQT Production Company		DB 105/908
	*** We certify that we will pay a minimum one-eighth o			O&G 131A/81

*** We certify that we will pay a minimum 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.

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Office of Oil and Gas

NOV 0 9 2016

WV Department of Environmental Protection



October 12, 2016

Mr. James Martin West Virginia Department of Environmental Protection Office of Oil and Gas 601 57th Street SE 4710307173 Charleston, WV 25304

Re: BIG245 well pad, well number 514366

Grant District, Wetzel 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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WV Department of Environmental Protection

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

Date of Notic	ce Certification: 11-8-10		API No. 47	7_ 103 _	
		•	Operator's	Well No. 5143	66
				lame: BIG245	
Notice has b					
Pursuant to th	e provisions in West Virginia Code § 22-6A, tl	he Operator has prov	ided the req	juired parties v	vith the Notice Forms listed
	tract of land as follows:				
State:	<u>w</u>		Easting:	537030.03	
County:	Wetzel		Northing:	4382942.02	
District:	Grant	Public Road Acce		Rt 19/2	
Quadrangle:	Big Run	Generally used far	rm name:	E.T. Bluegrass LI	<u>.c </u>
Watershed:	Rockcamp Run of Wiley Fork				
prescribed by it has provide information re of giving the requirements Virginia Code	West Virginia Code § 22-6A-7(b), every per the secretary, shall be verified and shall contained the owners of the surface described in subsequired by subsections (b) and (c), section sixte surface owner notice of entry to survey pursof subsection (b), section sixteen of this article § 22-6A-11(b), the applicant shall tender prochave been completed by the applicant.	in the following informations (1), (2) and the center of this article; (ii) uant to subsection (as the center waived in the center of the cent	rmation: (14 ad (4), substitute the record that the record, section to writing by	4) A certification (b), section (b), section (b), section (c), section	on from the operator that (i) ction ten of this article, the deemed satisfied as a result cle six-a; or (iii) the notice wher; and Pursuant to West
Pursuant to V	West Virginia Code § 22-6A, the Operator has rator has properly served the required parties v	attached proof to th	is Notice C	ertification	
*PLEASE CHE	CK ALL THAT APPLY				OOG OFFICE USE ONLY
☐ 1. NOT	CICE OF SEISMIC ACTIVITY or INOT SEISMIC	TICE NOT REQUIR C ACTIVITY WAS			RECEIVED/
☐ 2. NOT	TICE OF ENTRY FOR PLAT SURVEY or	NO PLAT SURVE	Y WAS CO	ONDUCTED	☐ RECEIVED
■ 3. NO1		FICE NOT REQUIRE OF ENTRY FOR PONDUCTED or		i	☐ RECEIVED/ NOT REQUIRED
		ITTEN WAIVER B PLEASE ATTACH)		CE OWNER	
■ 4. NOT	FICE OF PLANNED OPERATION				□ RECEIVED
■ 5. PUB	BLIC NOTICE				□ RECEIVED_
■ 6. NOT	FICE OF APPLICATION				RECEIVED
					

Required Attachments:

The Operator shall attach to this Notice Certification Form all Notice Forms and Certifications of Notice that have been provided to the required parties and/or any associated written waivers. For the Public Notice, the operator shall attach a copy of the Class II Legal Advertisement with publication date verification or the associated Affidavit of Publication. The Laurence Notice Forms and Certifications of Notice shall serve as proof that the required parties have been noticed as required fineer of Silvands Gaes 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 03/03/2017

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Certi	fica

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 J RoarkBridgeport WV 26330Its:Permitting SupervisorFacsimile:304-848-0041Telephone:304-848-0076Email:vroark@eqt.com

NOTARY SEAL
NOTARY PUBLIC
STATE OF WEST VIRGINIA
REBECCA L. WANSTREET
EGT PRODUCTION COMPANY
PO BOX 280
BRIDGEPORT, WV 20330
My commission supires April 07, 2020

Subscribed and sworn before me this 13 day of CCtober 2016

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 deprivacyofficer@wv.gov.

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Office of Oil and Gas

NOV 0 9 2016

WV Department of Environmental Protection 03/03/2017

API NO. 47- 103 -	
OPERATOR WELL NO.	514366
Well Pad Name: BIG245	

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

Notice Time Requirement: notice shall be p	rovided no later than the filing date of permit application.
Date of Notice: 11/8/10 Date Permit App Notice of:	lication Filed: 11/8/10
	TIFICATE OF APPROVAL FOR THE STRUCTION OF AN IMPOUNDMENT OR PIT
Delivery method pursuant to West Virginia	a Code § 22-6A-10(b)
PERSONAL REGISTERED MAIL	METHOD OF DELIVERY THAT REQUIRES A RECEIPT OR SIGNATURE CONFIRMATION
registered mail or by any method of delivery tha sediment control plan required by section seven the surface of the tract on which the well is or is oil and gas leasehold being developed by the prodescribed in the erosion and sediment control ploperator or lessee, in the event the tract of land of more coal seams; (4) The owners of record of the well work, if the surface tract is to be used for the impoundment or pit as described in section nine have a water well, spring or water supply source provide water for consumption by humans or do proposed well work activity is to take place. (c)(subsection (b) of this section hold interests in the records of the sheriff required to be maintained provision of this article to the contrary, notice to Code R. § 35-8-5.7.a requires, in part, that the o	than the filing date of the application, the applicant for a permit for any well work or for a impoundment or pit as required by this article shall deliver, by personal service or by trequires a receipt or signature confirmation, copies of the application, the erosion and of this article, and the well plat to each of the following persons: (1) The owners of record of proposed to be located; (2) The owners of record of the surface tract or tracts overlying the oposed well work, if the surface tract is to be used for roads or other land disturbance as an submitted pursuant to subsection (c), section seven of this article; (3) The coal owner, on which the well proposed to be drilled is located [sic] is known to be underlain by one or extract or tracts overlying the oil and gas leasehold being developed by the proposed replacement, construction, enlargement, alteration, repair, removal or abandonment of any of this article; (5) Any surface owner or water purveyor who is known to the applicant to located within one thousand five hundred feet of the center of the well pad which is used to mestic animals; and (6) The operator of any natural gas storage field within which the 1) If more than three tenants in common or other co-owners of interests described in the pursuant to section eight, article one, chapter eleven-a of this code. (2) Notwithstanding any a lien holder is not notice to a landowner, unless the lien holder is the landowner. W. Va. operator shall also provide the Well Site Safety Plan ("WSSP") to the surface owner and any e and water testing as provided in section 15 of this rule.
☐ Application Notice ☐ WSSP Notice ☐ ☐ SURFACE OWNER(s)	E&S Plan Notice
Name: See Attached	☑ COAL OWNER OR LESSEE Name: See Attached
Address:	Address:
Name:Address:	COAL OPERATOR Name:
SURFACE OWNER(s) (Road and/or Other Name: See Attached Address:	☑ SURFACE OWNER OF WATER WELL AND/OR WATER PURVEYOR(s)
Name:	Name:Address:
Address: SURFACE OWNER(s) (Impoundments or P Name: See Attached	OPERATOR OF ANY NATURAL GAS STORAGE FIELD Name:
Address:	Address:RECEIVED
	*Please attach additional form Offices of Oil and Gas

NOV 0 9 2016

WV Department of Environmental Protection Pr

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API NO. 47- <u>103</u> -	
OPERATOR WELL NO. 514366	
Well Pad Name: BIG245	

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 Clear Received 404 permit or other approval from the United States Army Corps of Engineers within any waters of the state of of the wells was permitted prior to the effective date of this article. (e) The secretary shall, by December 3 h 12012, 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 Mariane and location restrictions regarding occupied dwelling structures are inadequate or otherwise Mariane and location restrictions regarding occupied dwelling structures are inadequate or otherwise Mariane and location restrictions regarding occupied dwelling structures are inadequate or otherwise Mariane and location restrictions regarding occupied dwelling structures are inadequate or otherwise Mariane and location restrictions regarding occupied dwelling structures are inadequate or otherwise Mariane and location restrictions regarding occupied dwelling structures are inadequate or otherwise and location restrictions regarding occupied dwelling structures are inadequate or otherwise and location restrictions regarding the location restriction restriction restriction restrictions regarding restriction r

Environmental Protection

WW-6A (8-13)

API NO. 47-103 -OPERATOR WELL NO. 514366

Well Pad Name: BIG245

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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Office of Oil and Gas

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 03/03/2017

WW-6A (8-13) API NO. 47-103 OPERATOR WELL NO. 514366
Well Pad Name: BIG245

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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Office of Oil and Gas

NOV 0 9 2016

WV Department of Environmental Protection 03/03/2017

API NO. 47- 103

OPERATOR WELL NO. 514366

Well Pad Name: BIG245

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.

OFFICIAL SEAL
NOTARY PUBLIC
STATE OF WEST VIRGINIA
REBECCA L. WANSTREET PO BOX 280

BRIDGEPORT, WV 26330

commission expires April 07, 2020

Subscribed and sworn before me this 13 day of October 2016.

4210303175

Notary Public

My Commission Expires

& Wansheld

Surface Owners:

ET Blue Grass LLC 625 Liberty Ave Suite 1700 Pittsburgh PA 15222

4710303173

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Office of Oil and Gas

NOV 0 9 2016

WV Department of Environmental Protection 03/03/2017

API NO. 47- 103 -	
OPERATOR WELL NO.	514366
Well Pad Name: BIG245	

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

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

required, and State: County: District:	ted above, and that I have received copies of attachments consisting of pages one (1) through the well plat, all for proposed well work on the www. Wetzel Grant	a Notice of A	pplication, an App , including as follows: Easting: Northing:	amed on Page WW-6A and the associated plication for a Well Work Permit on Form the erosion and sediment control plan, if 537030.03 4382942.02 Rt 19/2
Quadrangle: Watershed:	Big Run Rockcamp Run of Wiley Fork	Generally	used farm name:	E.T. Bluegrass LLC
	that I have no objection to the planned work do e materials. the box that applies	escribed in the		have no objection to a permit being
■ SURFAC	CE OWNER	ı		
■ SURFAC	E OWNER (Road and/or Other Disturband	ce)	Fillit Name:	
■ SURFAC	E OWNER (Impoundments/Pits)		Date:	
	WNER OR LESSEE		Company: ET Blue	ON BY A CORPORATION, ETC.
☐ COAL O	PERATOR		By: John Damato Its: Regional Land Dir	ector
□ WATER	PURVEYOR		Signature:	Mal
☐ OPERAT	OR OF ANY NATURAL GAS STORAG	E FIELD	Date:	11-7-16

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WV Department of **Environmental Protection** 03/03/2017

Surface Owners (Road or other Disturbance):

ET Blue Grass LLC 625 Liberty Ave Suite 1700 Pittsburgh PA 15222

Wanda L. Byard 1250 Meadowlane Drive Lewisport KY 42351

Neal Utt 1204 Big Run Road Burton WV 26562





47103031:-

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WV Department of Environmental Protection

03/03/2017

API NO. 47-103 -	
OPERATOR WELL NO.	514366
Well Pad Name: BIG245	

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

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VOLUNTARY STATEMENT OF NO OBJECTION

WW-6A and required, and State: County: District:	, hereby state that I have rested above, and that I have received copies of attachments consisting of pages one (1) the well plat, all for proposed well work on the work work work of the well plat, all for proposed well work on the work work work work work work work work	r a Notice of A rough he tract of land UTM NAI Public Roa	Application, an Application, an Application, including the second	plication for a Well Work Permit on Form the erosion and sediment control plan, if 537030.03 4382942.02 Rt 19/2
Quadrangle: Watershed:	Big Run Rockcamp Run of Wiley Fork	Generally	used farm name:	E.T. Bluegrass LLC
		described in th	ese materials, and	I have no objection to a permit being
*Please check	the box that applies		FOR EXECUTI	ON BY A NATURAL PERSON
SURFACE	CE OWNER		Signature	
■ SURFAC	CE OWNER (Road and/or Other Disturba	nce)	Finit Name:	
SURFACE	CE OWNER (Impoundments/Pits)		1	· · · · · · · · · · · · · · · · · · ·
■ COAL O	WNER OR LESSEE		Company: ET Blue	ON BY A CORPORATION, ETC. Grass
□ COAL O	PERATOR		By: John Damato Its: Regional Land Dir	rector
□ WATER	PURVEYOR		Signature:	Mel
☐ OPERAT	TOR OF ANY NATURAL GAS STORAG	GE FIELD	Date:	11-7-16
			<u> </u>	RECEIVED

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Environmental Protection

Surface Owners (Pits, Impoundments, or AST):

ET Blue Grass LLC 625 Liberty Ave Suite 1700 Pittsburgh PA 15222

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Office of Oil and Gas

NOV 0 9 2016

WV Department of Environmental Protection

03/03/2017

API NO. 47- <u>103</u> -	
OPERATOR WELL NO.	514366
Well Pad Name: BIG245	

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

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VOLUNTARY STATEMENT OF NO OBJECTION

WW-6A and attachments c required, and the well plat, a State: ww County: Wetzel District: Grant Quadrangle: Big Run Watershed: Rockcamp Run of V	onsisting of pages one (1) thro Il for proposed well work on the	tract of land a UTM NAD Public Road Generally u	polication, an App, including to see follows: 83	amed on Page WW-6A and the associated olication for a Well Work Permit on Form the erosion and sediment control plan, in 537030.03 4382942.02 Rt 19/2 E.T. Bluegrass LLC
*Please check the box that a	pplies		FOR EXECUTI	ON BY A NATURAL PERSON
■ SURFACE OWNER				
■ SURFACE OWNER (Road and/or Other Disturbanc	re)	Print Name:	
■ SURFACE OWNER (Date:	
■ COAL OWNER OR L	•		FOR EXECUTI	ON BY A CORPORATION, ETC.
	ESSEE		Company: ET Blue of By: John Damato	Grass
☐ COAL OPERATOR			Its: Regional Land Dir	ector
☐ WATER PURVEYOR			Signature:	Mel
☐ OPERATOR OF ANY	NATURAL GAS STORAGI		Date:	11-7-16

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WV Department of Environmental Protection 03/03/2017

Coal Owner

ET Blue Grass LLC 625 Liberty Ave Suite 1700 Pittsburgh PA 15222

Western Pocahontas Properties LLC 5260 Irwin Road Huntington WV 25705

CNX Land LLC Engineering Operations Support Dept. Coal 1000 Consol Energy Drive Canonsburg PA 15317

Domestic I	FIED MAIL® RECEIPT Mail Only
For delivery	information, visit our website at www.usps.com®.
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ostage	6750 11000
otal Postr	D. L. tan Droportios IIC
	Western Pocahontas Properties LLC
	5260 Irwin Road
Sent To	
Sent To Street and	Huntington WV 25705

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39	U.S. Postal Service™ CERTIFIED MAIL® RECEIPT Domestic Mail Only	
0640 0005 9572 50	For delivery information, visit our website at www.usps.com OFFICIAL SE Certified Mail Fee \$ Extra Services & Fees (check box, add fee as appropriate) Return Receipt (hardcopy) Return Receipt (lectronic) Certified Mail Restricted Delivery Adult Signature Reculred Adult Signature Restricted Delivery \$ Postage \$ Total Po CNX Land LLC	
7015	Sent To Engineering Operations Support Dept. Coal 1000 Consol Energy Drive Canonsburg PA 15317 City, Sta Attn: Ryan Arp BIG245 Permit App	uctions

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Office of Oil and Gas

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WV Department of Environmental Protection Pr

API NO. 47-103 -	
OPERATOR WELL NO.	514366
Well Pad Name: BIG245	

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

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VOLUNTARY STATEMENT OF NO OBJECTION

County: District: Quadrangle: Watershed:	Grant	UTM NAD 83 Rasting: Northing: Public Road Access:	4382942.02
Quadrangle:		Public Pond Assess	1002042.02
	Rin Dun		Rt 19/2
	Rockcamp Run of Wiley Fork	Generally used farm name:	E.T. Bluegrass LLC
		FOR EXECUT	ION BY A NATURAL PERSON
*Dlagga ahaal	k the box that applies	Tage says	
SURFAC	CE OWNER		
_ 501411	CE O WILEK	C:	
		Signature:	
■ SURFAC	CE OWNER (Road and/or Other Disturbance)	Print Name:	
	CE OWNER (Road and/or Other Disturbance) CE OWNER (Impoundments/Pits)	Print Name: Date:	
■ SURFAC		Print Name: Date:	ION BY A CORPORATION, ETC.
■ SURFAC	CE OWNER (Impoundments/Pits)	Print Name: Date: FOR EXECUT	ION BY A CORPORATION, ETC.
SURFACE COAL COAL COAL COAL COAL COAL COAL COAL	CE OWNER (Impoundments/Pits) OWNER OR LESSEE	Print Name: Date: FOR EXECUTE Company: ET Blue By: John Damato	ION BY A CORPORATION, ETC.

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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 Notice	Requirement: Notice shall be provided at least 7 ee: 09/30/2016 Date Permit A	ΓΕΝ (10) days prior to filing a pplication Filed: 10/10/2016	permit application.
Delivery met	hod pursuant to West Virginia Code § 22-6A-	16(b)	
☐ HAND	CERTIFIED MAIL		
DELIVE		ED	
drilling a hor of this subsection ma	V. Va. Code § 22-6A-16(b), at least ten days prior ted or hand delivery, give the surface owner not zontal well: <i>Provided</i> , That notice given pursuation as of the date the notice was provided to the by be waived in writing by the surface owner. The le, facsimile number and electronic mail address	ice of its intent to enter upon the unit to subsection (a), section to surface owner: <i>Provided, hower notice</i> , if required, shall include the notice, if required is not	the 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.
	reby provided to the SURFACE OWNER	(s):	
Name: See Atta	ched	Name: See Attached	
Address:		Address:	
the surface ov State: County:	vner's land for the purpose of drilling a horizonta W Wetzel	I well on the tract of land as for UTM NAD 83 Easting: Northing:	bllows: 537030.03 4382942.02
District:	Grant	Public Road Access:	Rt 19/2
Quadrangle:	Big Run	Generally used farm name:	E.T. Bluegrass LLC
Watershed:	Rockcamp Run of Wiley Fork	continuity asou farm hame.	Z diagram LEO
Pursuant to V facsimile numerilated to hor	Shall Include: Vest Virginia Code § 22-6A-16(b), this notice of the operator izontal drilling may be obtained from the Secret 57 th Street, SE, Charleston, WV 25304 (304-920)	r and the operator's authorized	ed representative. Additional information f Environmental Protection headquarters.
Notice is he	reby given by:		
Well Operato	EQT Production Company	Authorized Representative:	Victoria Roark
Address:	115 Professional Place PO Box 280	Address:	115 Professional Place PO Box 280
Bridgeport WV 20	330	Bridgeport WV 26330	
Telephone:	304-848-0076	Telephone:	304-848-0076
Email:	vroark@eqt.com	Email:	vroark@eqt.com
Facsimile:	304-848-0041	Facsimile:	304-848-0041
01 16	D : N ::		

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NOV 0 9 2016

Surface Owners:

ET Blue Grass LLC 625 Liberty Ave Suite 1700 Pittsburgh PA 15222

**/070-175

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WV Department of Environmental Protection 2017

Surface Owners (Road or other Disturbance):

ET Blue Grass LLC 625 Liberty Ave Suite 1700 Pittsburgh PA 15222

Wanda L. Byard 1250 Meadowlane Drive Lewisport KY 42351

Neal Utt 1204 Big Run Road Burton WV 26562

1 703137

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NOV 0 9 2016

WV Department of Environmental Protection 03/03/2017

Surface Owners (Pits, Impoundments, or AST):

ET Blue Grass LLC 625 Liberty Ave Suite 1700 Pittsburgh PA 15222 N

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NOV 0 9 2016

WV Department of Environmental Pi03/03/2017

WAIVER

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

		UTM NAD 83	Easting:	537030.03
County:	Wetzel	UTM NAD 83	Northing:	4382942.02
District:	Grant	Public Road Acc	ess:	Rt 19/2
Quadrangle:	Big Run	Generally used f	arm name:	E.T. Bluegrass LLC
Watershed:	Rockcamp Run of Wiley Fork			

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Office of Oil and Gas

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WV Department of Environmental 19349942017

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Surface Own	<u> </u>	e read the notice pro	ovisions listed	I above and hereby waive the
notice require	ments under West Virginia Code § 22-6A	A-16(b) for the tract	of land as fo	llows:
State:	w	LIMITALLE	Easting:	537030.03
County:	Wetzel	UTM NAD 83	Northing:	4382942.02
District:	Grant	Public Road Acc	_	Rt 19/2
Quadrangle:	Big Run	Generally used	farm name:	E.T. Bluegrass LLC
Watershed:	Rockcamp Run of Wiley Fork	•		
Name: W Address: 19	anda Byard 150 Mendowlaxe Os wesport, Ky 42351	Signature:	Wan 10-6	da L Byard

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Office of Oil and Gas

NOV 0 9 2016

WV Department of Environmental Protection 17

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State:	W	UTM NAD 83	Easting:	537030.03	
County:	Wetzel	UTWINAD 83	Northing:	4382942.02	
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Office of Oil and Gas

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WV Department of Environmental Protection 03/03/2017

WW-6A5 (1/12)

Operator Well No. 514366

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

Notice 1 ime Date of Notic	Requirement: notice shall be provided no later ce: 11 8 110 Date Permit Applica			application.
Delivery met	hod pursuant to West Virginia Code § 22-6A	-16(c)		
	FIED MAIL HAN RN RECEIPT REQUESTED DEL	ND LIVERY		
return receipt the planned o required to be drilling of a l damages to th	V. Va. Code § 22-6A-16(c), no later than the derequested or hand delivery, give the surface own operation. The notice required by this subsect a provided by subsection (b), section ten of this anorizontal well; and (3) A proposed surface us the surface affected by oil and gas operations to the surface by this section shall be given to the surface.	oner whose land ion shall inclute article to a surfule and compense he extent the de	d will be used for de: (1) A copy ace owner whose sation agreement amages are com	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.
(at the address	eby provided to the SURFACE OWNER(s) s listed in the records of the sheriff at the time o	,	See Due	Ohed
	HHACNECT	Addres	See Atta	Chea
Notice is here Pursuant to Woperation on		Addres by given that the sing a horizontal	ne undersigned v	well operator has developed a planned ct of land as follows:
Address:	eby given: Yest Virginia Code § 22-6A-16(c), notice is here the surface owner's land for the purpose of drill	Addres	ne undersigned value well on the tra	well operator has developed a planned
Notice is here Pursuant to W operation on State: County:	eby given: Vest Virginia Code § 22-6A-16(c), notice is here the surface owner's land for the purpose of drill wv	Addres by given that the sing a horizontal	ne undersigned value on the tra Easting: Northing:	well operator has developed a planned oct of land as follows: 537030.03
Notice is here Pursuant to W operation on State: County: District:	eby given: Vest Virginia Code § 22-6A-16(c), notice is here the surface owner's land for the purpose of drill wv Wetzel	Addres by given that the sing a horizonta UTM NAD 8 Public Road	ne undersigned value on the tra Easting: Northing: Access:	well operator has developed a planned oct of land as follows: 537030.03 4382942.02
Notice is here Pursuant to W operation on State: County: District: Quadrangle: Watershed:	eby given: Yest Virginia Code § 22-6A-16(c), notice is here the surface owner's land for the purpose of drill wwwetzel Grant Big Run Rockcamp Run of Wiley Fork	Addres by given that the sing a horizonta UTM NAD 8 Public Road	ne undersigned value on the tra Easting: Northing: Access:	well operator has developed a planned oct of land as follows: 537030.03 4382942.02 Rt 19/2
Notice is here Pursuant to W operation on State: County: District: Quadrangle: Watershed: This Notice S Pursuant to W to be provide horizontal we surface affect	eby given: Vest Virginia Code § 22-6A-16(c), notice is here the surface owner's land for the purpose of drill wwwetzel Grant Big Run Rockcamp Run of Wiley Fork Shall Include: Vest Virginia Code § 22-6A-16(c), this notice shall include: Vest Virginia Code § 22-6A-10(b) to a surface lit; and (3) A proposed surface use and compensed by oil and gas operations to the extent the celated to horizontal drilling may be obtained follocated at 601 57th Street, SE, Charleston,	Addres by given that the second of the secon	ne undersigned value on the tra Beasting: Northing: Access: ad farm name: A copy of this copy of	well operator has developed a planned act of land as follows: 537030.03 4382942.02 Rt 19/2 E.T. Bluegrass LLC code section; (2) The information required used in conjunction with the drilling of a noffer of compensation for damages to the ler article six-b of this chapter. Additional Department of Environmental Protection
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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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NOV 0 9 2016

WV Department of Environmental Profession 7

Surface Owners:

ET Blue Grass LLC 625 Liberty Ave Suite 1700 Pittsburgh PA 15222

471030- --

PECEIVED
Office of Oil and Gas

NOV 0 9 2016

WV Department of Environmental Pro@@@2017

API NO. 47- 103 -	
OPERATOR WELL NO.	514366
Well Pad Name: BIG245	

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

VOLUNTARY STATEMENT OF NO OBJECT

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

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VOLUNTARY STATEMENT OF NO OBJECTION

I further state that I have no objection to the planned work described in these materials, and I have no objection to a permit being issued on those materials. *Please check the box that applies SURFACE OWNER SURFACE OWNER (Road and/or Other Disturbance) SURFACE OWNER (Impoundments/Pits) COAL OWNER OR LESSEE COAL OPERATOR WATER PURVEYOR OPERATOR OF ANY NATURAL GAS STORAGE FIELD FOR EXECUTION BY A NATURAL in these materials, and I have no objection to a permit being issued on those materials, and I have no objection to a permit being issued on those materials, and I have no objection to a permit being issued on those materials, and I have no objection to a permit being issued on those materials, and I have no objection to a permit being issued on those materials, and I have no objection to a permit being issued on those materials, and I have no objection to a permit being issued on those materials, and I have no objection to a permit being issued on those materials, and I have no objection to a permit being issued on those materials.	· · · · · · · · · · · · · · · · · · ·	, hereby state that I have rea ted above, and that I have received copies of attachments consisting of pages one (1) through the well plat, all for proposed well work on the work work. Wetzel Grant Big Run Rockcamp Run of Wiley Fork	a Notice of A ough e tract of land UTM NAI Public Roa	pplication, an App including t as follows: Easting: Northing:	the erosion and sediment control plan, if 537030.03 4382942.02 Rt 19/2
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	□ WATER	PURVEYOR			Med
	□ OPERAT	OR OF ANY NATURAL GAS STORAG	E FIELD		11-7-16

Oil and Gas Privacy Notice:

RECEIVED The Office of Oil and Gas processes your personal information, such as name, address and telephone number, Ciparoto Casculatory 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 four 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.

WV Department of **Environmental Protection** 03/03/2017

Surface Owners (Road or other Disturbance):







4710303173

API NO. 47-103 -	
OPERATOR WELL NO.	514366
Well Pad Name: BIG245	

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

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133464 011 11103	that I have no objection to the planned work of the materials. I the box that applies	described in the		have no objection to a permit being ON BY A NATURAL PERSON
SURFACSURFACSURFAC		nce)	Signature: Print Name: Date:	ON BY A CORPORATION, ETC.
□ COAL O		GE FIELD	By: John Damato Its: Regional Land Dir Signature: Date:	

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NOV 0 9 2016

Surface Owners (Pits, Impoundments, or AST):

ET Blue Grass LLC 625 Liberty Ave Suite 1700 Pittsburgh PA 15222



API NO. 47-103 -	
OPERATOR WELL NO.	514366
Well Pad Name: BIG245	

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

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VOLUNTARY STATEMENT OF NO OBJECTION

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WEST VIRGINIA DEPARTMENT OF TRANSPORTATION

Division of Highways

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

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

November 7, 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 BIG245 Pad Site, Wetzel County

514362 BIG245H1	514363 BIG245H2	514364 BIG245H3	514365BIG245H4
514366 BIG245H5	514367 BIG245H6	514368 BIG245H7	514369 BIG245H8
514370 BIG245H9	514371 BIG245H10	514372 BIG245H11	514373 BIG245H12
515606 BIG245H13	515607 BIG245H14	515608 BIG245H15	515609 BIG245H16
516520 BIG245H17	516521 BIG245H18	516522 BIG245H19	516523 BIG245H20
516524 BIG245H21	516525 BIG245H22	516526 BIG245H23	516527 BIG245H24
516528 BIG245H25	516529 BIG245H26	516530 BIG245H27	516531 BIG245H28
516532 BIG245H29	516533 BIG245H30		510051 BIGE 151120

Dear Mr. Martin,

Earl Ray Tomblin

Governor

This well site will be accessed from existing Permit # 06-2016-0430 issued to EQT Production Company for access to the State Road for a well site located off of Wetzel County Route 19/2 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

67103031

Cc: Nick Bumgardner

EQT Production Company

CH, OM, D-6, File

Anticipated Frac Additives Chemical Names and CAS numbers

<u>Material</u>	Ingredient	CAS Number
Water		
Sand	Hydrotreated light petroleum distillate Tributyl tetradecyl phosphonium	14808-60-7
Friction Reducer	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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NOV 0 9 2016

WV Department of Environmental Protection

TAY DADCE) GRANT DISTRICT, WETZEL COUNTY, WV MAP 03 PARCELS 14, 21, 22

SURFACE OWNER:

NEAL UTT MAP 08, PARCEL 14 GRANT DISTRICT, WETZEL COUNTY, WY TOTAL PROPERTY AREA: 81,0 of ACRES TOTAL DISTURBANCE AREA: 6.1 of ACRES

MEY JOE WILLEY
MAP 03. PARCEL 21
GRANT DISTRICT, WETZEL COUNTY, WY
TOTAL PROPERTY AREA: 78.27 ++ ACRES
TOTAL DISTURBANCE AREA: 0.2 ++ ACRES

ET BLUE GRASS LLC.
MAP 08, PARCEL 22
GRANT DISTRICT, WETZEL COUNTY, WY
TOTAL PROPERTY AREA: 133.53 ++ ACRES
TOTAL DISTURBANCE AREA: 30.5 ++ ACRES

OIL AND GAS ROYALTY OWNER: SHIBEN ESTATER, INC.
GRANT DISTRICT, WETZEL COUNTY, WY
TOTAL PROPERTY AREA: 140.0 + ACRES

SITE LOCATION

ITE LOCATION:
THE EOT BIG 245 ACCESS ROAD ENTRANCE IS LOCATED 4,427-1NORTHEAST OF THE JUNCTION OF GO RT. 19 AND CO. RT. 192.
THE WELL PAD IS LOCATED 1.9 MILES 4/- NORTHEAST OF THE
JUNCTION OF CO. RT. 18 AND CO. RT. 19

LOCATION COORDINATES

EQT BIO 245 CONSTRUCTION ENTRANCE LATITUDE: 39.59386 LONGITUDE: 80.589747 (NAD 83)

EQT BIG 245 WELL PAD CENTER LATITUDE: 39 585312 LONGITUDE: 80 568705 (HAD 83)

EQT 8IG 245 AST PAD CENTER LATITUDE: 39,545496 LONGITUDE; 80,866501 (NAD 83)

GENERAL DESCRIPTION

THE WELL PAD, ACCESS ROAD AND TANK PAD ARE BEING CONSTRUCTED TO AID IN THE DEVELOPMENT OF INDIVIDUAL MARCELLUS SHALE CAS

SITE DISTURBANCE COMPUTATIONS

WELL PADYMAN ACCESS ROAD= 4.8 -+ ACRES AST PADVAST ACCESS ROAD= 3.1 -+ ACRES STOCKPLES = 30.8 -+ ACRES TOTAL SITE DISTURDANCE AREA = 38.4 -+ ACRES

ENTRANCE PERMIT

EQT PRODUCTION COMPANY WILL OBTAIN AN ENCROACHMENT PERMIT (FORM MALEO) FROM THE WEST VIRIGINAL DEPARTMENT OF TRANSPORTATION DIVISION OF HOLHWAYS, PRIOR TO COMMENCEMENT OF CONSTRUCTION

MISS UTILITY STATEMENT

MESS UTBLITY OF WEST VIRGING WAS NOTED FOR THE LOCATING OF UTBLITTES PRIOR TO THIS PROJECT DESIGN; TICKET #132580035 IN ADDITION, MISS UTBLITY WILL BE CONTACTED PRIOR TO START OF THE PROJECT.

GEOTECHNICAL NOTES

A SUBSURFACE INVESTIGATION HAS BEEN PERFORMED FOR THIS SITE AND
GEOTECHNICAL REPORT HAS BEEN PERFORMED BY LARSON DESIGN GROUP
DATED 10722705. THE BRONDLER AND SURVEYORABLE NOT RESPONSIBLE
FOR UNFORSEEN BUSBURFACE REPOULDANTER CAMENON ADDITIONAL
WORK OR ADDITIONAL CONSTRUCTION MEASURES REQUIRED BYFOND
THOSE STANDARD PRACTICES SHOWN ON THIS PLANES A RESIGT OF ANY
OTHER CECTIC-POWCAL COMPLICATIONS ENCOUNTERED DUTING CONSTRUCTION.

ENVIRONMENTAL NOTES

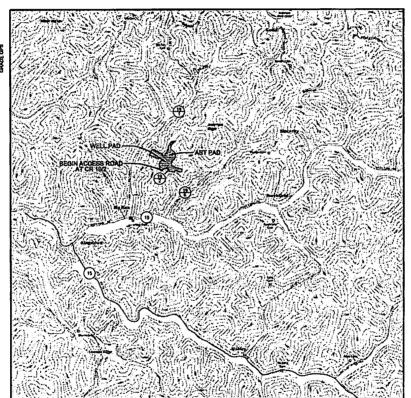
ENVIRONMENTAL NOTES

A WELLAND DEBARTOW WAS PEPTONIED ON JALY 7, 2911, IMMY 30, 2012, AUGUST 14,
2012, IMARCH 11-12, 2013, APREA 3, 2013, AND UMY 8, 2013, BY POTESTA A ASSOCIATES TO
SERVIEW THE SIEF FOR WAITEST, AND WELLANDS THAT ARE MOST LIBELY WITHOUT THE
REGULATORY PURVIEW OF THE U.S. ARMY CORPS OF ENGINEERS (MAGCE) ANDORT THE
WEST VIRONING DEPARTMENT OF EMPRONISHED THAT A PROTECTION (MOSE). THE MY, 27
2013 REPORT FOR THE BIG 34S SITE WAS PREPARED BY POTESTA A ASSOCIATE, INC.,
SUMMARIZES THE REBALTS OF THE FILED DELIBELATION. THE REPORT DOES NOT, IN ANY
WAY, REPRESENT A JURISDICTIONAL DETERMINATION OF THE LADOWARD LISTES OF
WAITEST AND WELLANDS WAS ON HAVE SER CARD LATED BY THE SUMPLE OF THE WHOLE, IT IS
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REPORT FROM TO REMAINDED CONSTRUCTION OF THE PROPERTY DESCRIBED HERD.
THE DEVELOPER BHALL OSTAIN THE APPROPRIATE PREMITS FROM THE FEDERAL ANDORS
STATE REGULATORY ADDRESS PRICH TO ANY PROPOSED BEACTS TO WATERS OF THE
U.S., INCLUDING WELLAND FILE AND STREAM CROSSINGS.

EQT BIG 245 SITE PLAN EQT PRODUCTION COMPANY

PROPOSED WELL NO. H1-WV 514362, H2-WV 514363, H3-WV 514364, H4-WV 514365

SITUATED ON THE WATERS OF BIG RUN, A TRIBUTARY OF WILLEY FORK, GRANT DISTRICT, WETZEL COUNTY, WV



RESTRICTIONS NOTES

NEST KILCT LONS NOTES

I. THERE ARE INTERNETTED STREAMS, LAKES, PONDS, OR RESERVOIRS WITHIN 100 FEET OF THE PROJECT LOD. THERE ARE WELTANDS WITHIN 100 FEET OF THE LOD, AND A WANNER FROM THE WORDS PWILE BE APPLIED FOR THEOLOGY THE ARMY CORPS OF ENDOUGETS BY CITY PRODUCTION COMPANY.

THERE ARE NO GROUNDWATER WITHIN COR PURILLY WATER SUPPLY FACALITIES WITHIN 100 FEET OF THE PAD AND LOD.

A. THERE ARE NO CROUNDWATER WITHIN COR PURILLY WATER SUPPLY FACALITIES WITHIN 100 FEET OF THE WITHIN 100 FEET OF THE

BIO RUN QUADRANGLE WEST VIRONIA 7.5 MINUTE BERIES

MISS Utility of West Virginia 1-800-245-4848

APPROVED

WVD	ΕP	OOG
2/3/1	4/28	3/2016



2	GENERAL NOTES		
,	OVERALL PLAN SHEET INDEX		
4-7	WELL PAD LAYOUT		
•	ACCESS ROAD PROFILES		
•	WELL PAD PROFILES		
10-12	ACCESS ROAD CROSS SECTIONS		
13-16	WELL PAD CROSS SECTIONS		
17-20	AST TANK PAD CROSS SECTIONS		
21-22	EXCESS MATERIAL STOCKPILE PROFILES		
23-39	EXCESS MATERIAL STOCKPILE CROSS SECTIONS		
40-43	RECLAMATION PLAN		
44	TYPICAL ACCESS ROAD CROSS SECTIONS		
45-47	CONSTRUCTION DETAILS		
44	CONSTRUCTION QUANTITIES		

SHEET NO.

LEGEND				
EX. INDEX CONTOUR		PROP, INDEX CONTOUR	1560	
EX, INTERMEDIATE CONTOUR	1550	PROP. INTERMEDIATE CONTOUR		
EX. BOUNDARY LINE		PROP, CUT LINE		
EX. EDGE OF ROAD PAVEMENT		PROP. FILL LINE		
EX. GUARDRAIL	•	PROP. LIMITE OF DISTURBANCE		
EX. FENCELINE		ENVIRONMENTAL ASSESSMENT		
EX. GATE	••	AREA OF DELINEATION		
EX. OVERHEAD UTILITY	— ε —	PROP. WELL HEAD	٠.خ.	
EX. OVERHEAD UTILITY RAW			<u> </u>	
EX. UTILITY POLE	↔	PROP. CONTAINMENT BERM		
EX. OUY WIRE		PROP. ROAD CENTERLINE		
EX, TELEPHONE LINE	,	PROP. V-DITCH		
EX. GASLINE		WITH CHECK DAMS		
EX. CASLINE RAW		PROP. CULVERT		
EX, WATERLINE	— w —	PROP. RIP-RAP OUTLET PROTECTION		
EX, WATER WELL	0	PROP. RIP-RAP INLET PROTECTION	120	
	ũ	PROP. COMPOST FILTERSOCK	4 160	
EX, GAB WELL	- ☆			
EX, TREELINE	~~~	PROP. TREELINE	~~~	
EX. REFERENCE TREE	\Diamond	PROP. STONE CONSTRUCTION ENTRANCE		
EX. OELINEATED STREAM			•	
EX. DELINEATED WETLAND		X-SECTION GRID INDEX		
CA. DECOME TO METONO	I	X-SECTION GRID INTERMEDIATE		
EX, BUILDING		X-SECTION PROPOSED GRADE		
		X-SECTION EXISTING GRADE		

OPERATOR

EQT PRODUCTION COL P.O. BOX 200 BRIDGEPORT, WV 26630 PHONE: (304) 348-3870

ENGINEER

STANTEC CONSULTING INC. 111 FI KINS STREET

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Stante







24 BIG EQT

DATE: 02-25-2016 CALE: AS SHOWN

DESIGNED: KDS CHEDKED: CSM REVEWED: RLG FRE NO: \$18-7812 SHEET 1 OF 48 REV: 04-21-2016

