

#### 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

Austin Caperton, Cabinet Secretary www.dep.wv.gov

Tuesday, March 5, 2019 WELL WORK PERMIT Horizontal 6A / New Drill

EOT PRODUCTION COMPANY 625 LIBERTY AVE., SUITE 1700

PITTSBURGH, PA 15222

Permit approval for BIG 245 H4 Re:

47-103-03265-00-00

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:

BIG 245 H4 ET BLUE GRASS, LLC

Farm Name: U.S. WELL NUMBER: 47-103-03265-00-00

Horizontal 6A New Drill Date Issued: 3/5/2019

Promoting a healthy environment.

API Number:	03/08/2019

## PERMIT CONDITIONS

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

#### CONDITIONS

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

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API Number:

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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, cessation of drilling, sending an email to DEPOOGNotify@wv.gov.

#### **EQT Production**

Hydraulic Fracturing Monitoring Plan

Pad ID: BIG245

County: Wetzel

11/29/2018

RECEIVED
Office of Oil and Gas
DEC 13 2018

WV Department of Environmental Protection

Page 1 of 2

#### 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 BIG245H4, BIG245H5, BIG245H6, BIG245H8, BIG245H16, and BIG245H17.

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:

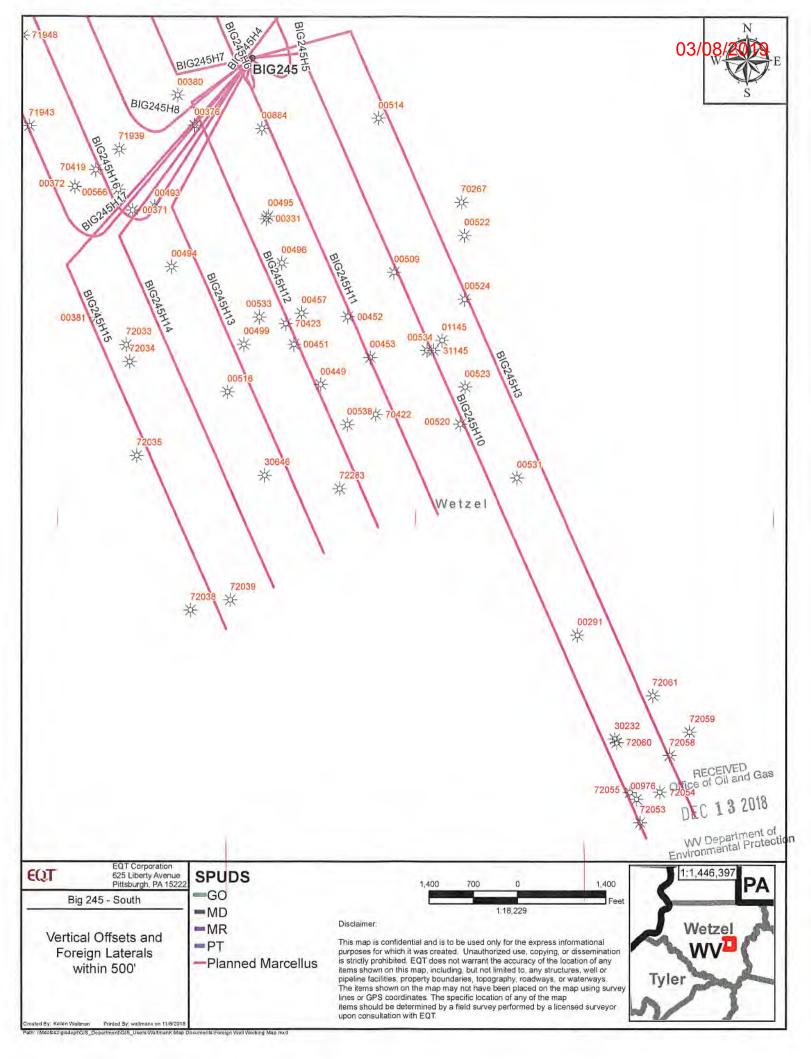
- Inspect their surface equipment prior to fracturing to establish integrity and establish prefrac well conditions
- Observe wells closely during and after fracturing and monitor for abnormal increases in water, gas or pressure
- Inspect or install master valves or other necessary equipment for wellhead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

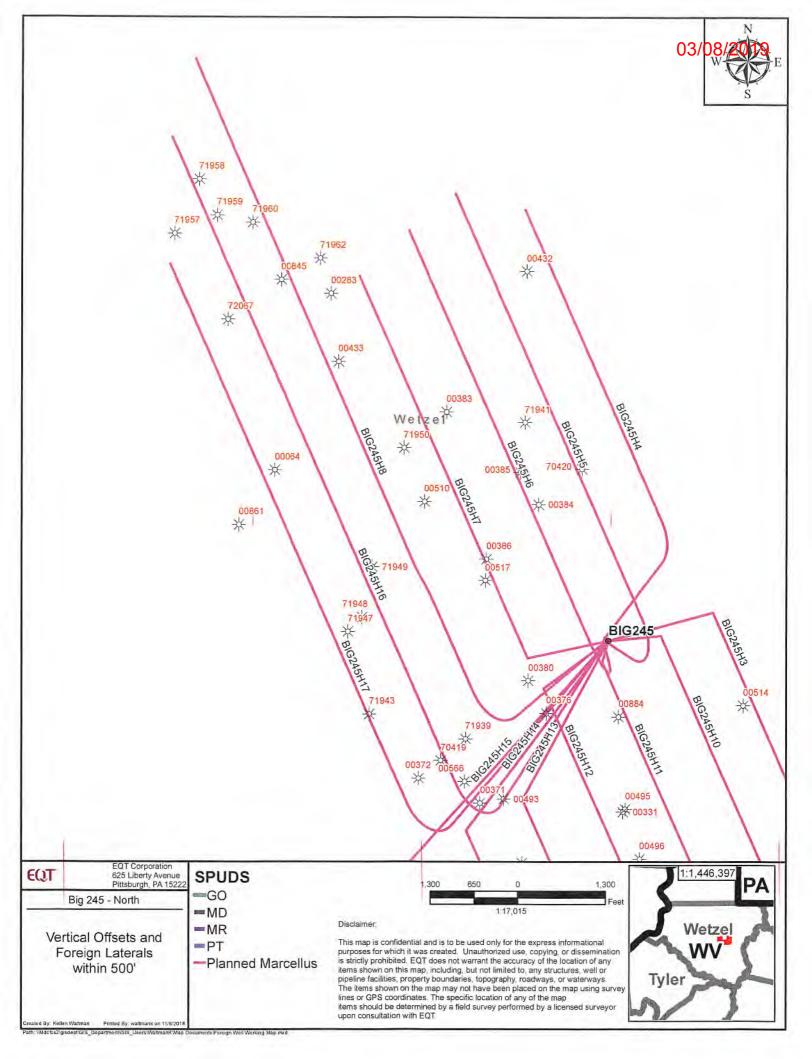
#### Reporting

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 and gas noted abnormalities.

Page 200F2 Protection

API Number	Abandoned Date	Completion Date	Current Operator	Elevation Elevation Reference	Final Status	Lat	Long Well Name	Permit Date S	PUD Date TD Formation	Total Depth Permit
4710300331			PGH & WV GAS	1109 GR	GA5		-80.568			2285 00331
47103000640000	5/21/1934		PITTSBURGH & W VA GAS	1505 GR			-80.5863 5403 J P ASHCRAFT		1/31/1932 FOURTH SAND	3634 00064
47103002830001			STANDARD OIL COMPANY INCORPORATED	1515 GR	GAS		-80.5833 1374 H L & I UTT E		6/13/1944 GORDON	3289 00283
47103003710000 47103003720000	8/7/1963		J C R PETROLEUM INCORPORATED UNKNOWN	825 GR 842 GR	GAS-CB ABD-CB		-80.5756 1 5 B HIGGINBOTHAM ET AL -80.5788		1/2/1951 CONEMAUGH /SERIES/ 1/30/1951 PITTSBURGH COAL	530 00371 523 00372
47103003720000	6///1903		J C R PETROLEUM INCORPORATED	1265 GR	GAS-CB		-80.5721 2 5 J ROBINSON ET AL		3/2/1952 CONEMAUGH /SERIES/	1008 00376
47103003700000	7/6/1952		UNKNOWN	1267 GR	D&A-OG		-80.5730		4/1/1952 CONEMAUGH /SERIES/	1185 00380
47103003810000		6/24/1952	J C R PETROLEUM INCORPORATED	818 GR	GAS-CB	39.5841	-80.5776 1 5 B HIGGINBOTHAM	5/10/1952	5/25/1952 PITTSBURGH COAL	515 00381
47103003830000		4/10/1953	J C R PETROLEUM INCORPORATED	960 GR	GAS-CB	39.6045	-80.5773 1 J C ASHCRAFT		LO/21/1952 CONEMAUGH /5ERIE5/	686 00383
47103003840000			J C R PETROLEUM INCORPORATED	B55 GR	GAS-CB		-80.5724 2 J P ASHCRAFT	3/17/1953	4/1/1953 CONEMAUGH /SERIES/	585 00384
47103003850000			J C R PETROLEUM INCORPORATED	905 GR	GAS-CB		-80.5734 3 J P ASHCRAFT	6/17/1953	7/2/1953 CONEMAUGH /SERIES/	647 00385
47103003860000 47103004320000	7/18/1956		EQT PRODUCTION COMPANY UNKNOWN	847 GR 994 GR	GAS-CB D&A		-80.5752 1 H L SMITH -80.5730	4/17/1953 4/17/1956	5/2/1953 CONEMAUGH /SERIES/ 5/2/1956 TIONESTA /SD/	570 00386 1495 00432
47103004320000	// 10/ 1330		J C R PETROLEUM INCORPORATED	1509 GR	GAS-CB		-80.5830 7 J P ASHCRAFT	6/17/1956	7/2/1956 CONEMAUGH /SERIES/	1235 00432
47103004490000			NORTH FORK DEVELOPMENT	827 GR	GAS-CB		-80.5650	5/18/1957	6/2/1957 PENNSYLVANIAN	537 00449
47103004510000	1/1/1965	7/1/1957	NORTH FORK DEVELOPMENT	817 GR	ABD-CB	39.5829	-80.5665 2 J HERBERT HIGGINBOTHAM	5/17/1957	6/1/1957 PENNSYLVANIAN	529 00451
47103004520000			NORTH FORK DEVELOPMENT	886 GR			-80,5635 3 J HERBERT HIGGINBOTHAM	6/17/1957	7/2/1957 PITTSBURGH COAL	614 00452
47103004530000	11/16/1957	10/1/1957		979 GR	D&A		-80.5622	8/17/1957	9/1/1957 PENNSYLVANIAN	725 00453
47103004570000 47103004930000	2/14/1958 10/4/1953		UNKNOWN EQUITABLE GAS COMPANY	1108 GR 1163 GR	D&A-G ABD-GW		-80.5661 -80.5743 5131 5 I ROBINSON 2		12/2/1957 AME5 /LM/ I1/15/1915 BIG INJUN /5D/	859 00457 2234 00493
.47103004930000	10/4/1955	12/30/1913	EQUITABLE GAS COMPANY	1086 GR	GSTG		-80.5743 5131 5 I ROBINSON 2		/1/1801 CHEMUNG	2088 00494
47103004950001	11/19/1952	6/19/1946	PITTSBURGH & W VA GAS	1109 GR	D&A-G		-80,5679 1768 J M 5NIDER 1		5/20/1946 BIG INJUN /5D/	2285 00495
47103004960000	1/1/1935		PITTSBURGH & W VA GAS	844 GR	ABD-GW		-80.5672 1737 5 I ROBINSON		6/20/1902 HAMP5HIRE	2785 00496
47103004990000			EQUITABLE GAS COMPANY	923 GR	GSTG	39.5829	-80.5693 5434 5OLE	1/1/1801 1	/1/1801 CHEMUNG	2712 00499
47103005090000	6/19/1948		DUNN-MAR OIL & GAS COMPANY	1155 GR	ABD-GW		-80.5608 5398 ISAAC HIGGIN8OTHAM 1		12/23/1918 CHEMUNG	3243 00509
47103005100000			PEMCO GAS INCORPORATED	934 GR	GAS-CB		-80.5784 2 H L SMITH		7/2/1961 CONEMAUGH /SERIES/	662 00510
47103005140000			JA & M OIL & GAS	1107 GR	GSTG		-80.5617 5447 C A LONG		4/1/1962 BIG INJUN /SD/	00514
47103005160000 47103005170000			J A & M OIL & GAS EQUITABLE GAS COMPANY	1034 GR 869 GR	UNKWN GSTG		-80.5703 5448 L B SMITH 1 -80.5753 5449 M D SMITH		/1/1801 BIG INJUN /5D/ 5/2/1962 BIG INJUN /5D/	2090 00516 00517
47103005200000	1/1/1964		HOPE NATURAL GAS	937 GR	ABD-GW		-80.5571 5532 J M BROWN		7/3/1919 BIG INJUN /5D/	2025 00520
47103005220000	-,-,	-, -,	UNKNOWN	1214 GR	UNKWN		-80.5569 5441 FRANCES SHREVES		/1/1801 CHEMUNG	3154 00522
47103005230000		1/1/1963	EQUITABLE GAS COMPANY	846 GR	GSTG	39.5810	-80.5569 5451 F SHREVE	11/17/1962	12/2/1962 BIG INJUN /SD/	00523
47103005240000		4/5/1919	EQUITABLE GAS COMPANY	972 GR	GAS		-80.5569 5296 SILAS SHREVES 1	1/7/1919	1/22/1919 CHEMUNG	2882 00524
47103005310000	1/1/1962		EQUITABLE GAS COMPANY	1098 GR	PSEUDO		-80.5540 5440 C E BROWN ETAL 1			00531
47103005330000	1/1/1962		PITTSBURGH & W VA GAS	829 GR	ABD-GW		-80.5685 1751 JOHN E SNYDER		10/27/1902 POCONO	1928 00533
47103005340000 47103005380000			EQUITABLE GAS COMPANY EQUITABLE GAS COMPANY	1067 GR 836 GR	GSTG UNKWN		-80.5590 5443 SOLE -80.5635 5454 ELVA R KING		/1/1801 CHEMUNG /1/1801 BIG INJUN /5D/	2880 00534 1850 00538
47103005560000		1/1/1965	J C R PETROLEUM INCORPORATED	880 GR	GAS-CB		-80.5764 3 5 B HIGGINBOTHAM HRS		12/2/1964 CONEMAUGH /SERIES/	548 00566
47103003650000	11/7/1990		PITTSBURGH & W VA GAS	1290 GR	ABD-GW		-80.5860 1847 J P ASHCRAFT	7/5/1905		3112 00845
47103008610000	6/29/1990		EQUITABLE GAS COMPANY	1000 GR	UNKWN		-80.5882 5198 ASHCRAFT		/1/1801 UNKNOWN	3500 00861
47103008840001		11/7/1989	EQUITRANS INCORPORATED	1167 GR	D&A	39.5922	-80.5683 5426 D/R LUMBER CO	10/17/1989	11/1/1989 GREENBRIER /LM/	2211 00884
47103011450000			MEADOW RIDGE DEVELOPMENT LLC	GR	PSEUDO		-80.5582 122 MILLS			01145
47103306460000	1/1/1948	3/19/1915	DUNN-MAR OIL & GAS COMPANY	1197 GR	ABD-GW		-80.5682 3725 F L HIGGINBOTHAM	1/10/1915	1/25/1915 HAMPSHIRE	3339 30646
47103311450000 47103702670000	1/1/1962		EQUITABLE GAS COMPANY HOPE NATURAL GAS	O GR GR	PSEUDO PSEUDO		-80.5586 5443 ADDA M SOLE 1 -80.5570 4983 SILAS SHREVE			31145 70267
47103702870000			HOPE NATURAL GAS	GR	PSEUDO		-80.5776 1 5 B HIGGINBOTHAM			70419
47103704200000			PHILADELPHIA OIL	GR	PSEUDO		-80.5701 1 J P ASHCRAFT ET AL			70420
47103704220000			HOPE NATURAL GAS	GR	PSEUDO		-80.5619 1 L HIGGINBOTHAM			70422
47103704230000			PHILADELPHIA OIL	GR	PSEUDO	39.5838	-80.5670 1 ISRAEL SNYDER			70423
47103719390000			UNKNOWN	GR	UNKWN		-80.5763 1 S B HIGGINBOTHAM			71939
47103719410000			PHILADELPHIA OIL	GR	UNKWN		-80.5731 385 J F UTT			71941
47103719430000 47103719470000			UNKNOWN	GR GR	UNKWN		-80.5814 2 J B HICKS -80.5825 1 JAMES SHIRLEY			71943 71947
47103719480000			UNKNOWN	GR	UNKWN		-80.5818 1 JAMES SHIRLEY			71948
47103719490000			UNKNOWN	GR	UNKWN		-80.5812 5933 JOLLY MINOR			71949
47103719500000			PEMCO GAS INCORPORATED	GR	UNKWN	39.6031	-80.5795 5247 M & J SHIVEN HEIRS 10			71950
47103719570000			UNKNOWN	GR	UNKWN	39.6118	-80.5916 1787 OLLIE SIX 1			71957
47103719580000	rr1	0	UNKNOWN	GR	UNKWN		-80.5903 5304 OLLIE SIX			71958
47103719590000 47103719600000	9 -		UNKNOWN	GR	UNKWN		-80.5893 1 OLLIE SIX -80.5875 1 OLLIE SIX			71959 71960
47103719600000	= 2 -	77 8 T	UNKNOWN	GR GR	UNKWN		-80.5839 1736 THOMAS UTT			71962
47103719820000	37 7	., ОМ	UNKNOWN	GR	UNKWN		-80.5759 1 C BROOKOVER			72033
47103720340000	30		CARNEGIE NATURAL GAS CORPORATION	GR			-80.5758 747 C BROOKOVER 1			72034
47103720350000	30		LINKNOWN	GR			-80.5754 5307 JAMES JOHNSON 1			72035
47103720380000	鱼	ELS ST	PHILADELPHIA OIL UNKNOWN	GR	UNKWN		-80.5724 5287 CHARLES BREWER			72038
47103720390000	퍨	% g	UNKNOWN	GR	UNKWN		-80.5701 1 R BARR			72039
47103720670000 47103722830000	<u>0</u> 1		EQUITRANS INCORPORATED HOPE NATURAL GAS	GR GR	UNKWN		-80.5888 1770 M & J SHIBEN HEIRS -80.5640 852 F L HIGGINBOTHAM			72067 72283
4/103/22830000	N Department of Onmental Protection	<u>ئ</u> م	HOLE HATOMEDAS	UR.	CHEAALA	35.3/0/	-00.3040 032 F L HIGGINBU E HAIVI			/2283
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API NO. 47-103	- 03265	00/00/0040
OPERATOR	WELL NO.	ві <mark>033/08/20</mark> 19
Well Pad N		

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

1) Well Operator:	EQT P	roduction Co	ompany	306686	Wetzel	Grant	Big Run
				Operator ID	County	District	Quadrangle
2) Operator's Wel	l Number	r: BIG245H4	<u> </u>	Well P	ad Name: Blo	G245	
3) Farm Name/Su	rface Ow	ner: E.T. Blu	uegrass	Public Ro	oad Access: F	Rt. 19/2	
4) Elevation, curre	ent groun	d: <u>1483</u>	Ele	evation, propose	d post-constru	ction: 1430	
· ·	) Gas ther	X	_ Oil	Un	derground Sto	rage	
(b	)If Gas	Shallow	×	Deep			
		Horizontal	x				UMY
6) Existing Pad: Y	es or No	No					1210-18
7) Proposed Targe Marcellus, 7531			(s), Antici	ipated Thickness	and Expected	l Pressure(s):	
8) Proposed Total	Vertical	Depth: 753	1 1			1	
9) Formation at To	1		Marcellus				
10) Proposed Tota	ıl Measur	red Depth: _	18026				
11) Proposed Hor	izontal L	eg Length: _{	3697				
12) Approximate	Fresh Wa	ater Strata Dej	pths:	229, 507, 662,	752, 1011		
13) Method to De	termine F	resh Water D	epths: F	rom offset well	s		
14) Approximate	Saltwater	Depths: No	ne				
15) Approximate	Coal Sea	m Depths: 92	25, 1024,	1132			
16) Approximate	Depth to	Possible Void	d (coal mi	ne, karst, other):	none		
17) Does Proposedirectly overlying				ns Yes	]	<sub>No</sub> X	
	_						RECEIVED Gas Office of Oil and Gas
(a) If Yes, provide	ae iviine i						DEC 1 3 5018
		Depth					W Department of W Department Protect
		Seam:					WV Department of WV Department al Protect

WW-6B	
(04/15)	

API NO. 47- 103 - 03265 03/08/2019
OPERATOR WELL NO. BIG245H4

Well Pad Name: BIG245

18)

#### **CASING AND TUBING PROGRAM**

ТҮРЕ	Size (in)	New or Used	Grade	Weight per ft. (lb/ft)	FOOTAGE: For Drilling (ft)	INTERVALS: Left in Well (ft)	CEMENT: Fill-up (Cu. Ft.)/CTS
Conductor	26	New	A-500	85.6	40	40	60 ft^3 / CTS
Fresh Water	13 3/8	New	J-55	54.5	1179	1179	734 ft^3 / CTS
Coal							
Intermediate	9 5/8	New	P-110	40	2855	2855	2085 ft^3 / CTS
Production	5 1/2	New	P-110	20	18026	18026	500' above top producing zone
Tubing	2 3/8		J-55	4.7		May not be run, if run set 40' above top perf or 80° inclination.	
Liners				,			•

Dm 13 1270-18

TYPE	Size (in)	Wellbore Diameter (in)	Wall Thickness (in)	Burst Pressure (psi)	Anticipated Max. Internal Pressure (psi)	Cement Type	Cement Yield (cu. ft./k)
Conductor	_ 26	30	.312	1378	18	Class A	1.18
Fresh Water	13 3/8	17 1/2	.38	2700	2160	See Variance	1.19
Coal							
Intermediate	9 5/8	12 3/8	.395	3950	3160	Class H	1.07
Production	5 1/2	8 1/2	.361	12640	10112	Class A/H	1.123/2.098
Tubing	2 3/8	NA	.19	7700			
Liners							

### **PACKERS**

Kind:		
Sizes:		
Depths Set:		Office of Oil and Gas  Office of Oil and Jule  DEC 13 2018  WV Department of Environmental Protection
		DEC 13 2010
		WV Deparaj Proteos Environmentaj Proteos

WW-6B
(10/14)

API NO. 47- 103 - 03265 02/00/2010
API NO. 47-103 - 03265 03/08/2019 OPERATOR WELL NO. BIG245H4
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 2569'. Kick off and drill curve. Drill the lateral in the Marcellus. Cement casing.

DAY 12-10-18

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 0.1%) of chemicals (including 15% Hydrochloric acid, 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 350,000 gallons of water per stage. Sand sizes vary from 100 mesh to 20/40 mesh. Average approximately 400,000 pounds of proppant per stage.

- 21) Total Area to be disturbed, including roads, stockpile area, pits, etc., (acres): no additional
- 22) Area to be disturbed for well pad only, less access road (acres): no additional
- 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 sturries, .25% Flake Loss Circulation Material (LCM)
Intermediate (Class H Cement): 0-3% Calcium Chloride. Used to speed the setting of cement sturries, .25% flake. Loss Circulation Material (LCM) .6% Super FL-300 (fluid loss/lengthens thickening time)
Production:

2.5% Flake Loss Circulation Material (LCM) .6% Super FL-300 (fluid loss/lengthens thickening time)
Production:

Lead (Class A Cement): 0.2% CD-20 (dispersant makes cement easier to mix). .15% SuperFL-300 (fluid loss/lengthens thickening time) .15% SEC-10 (fluid loss) 50:50 POZ (extender)
Tail (Class H Cement): 0.2% Super CR-1 (Retarder). Lengthens thickening time. .3% Super FL-200 (fluid loss) .2% SEC-10 (Fluid loss). .2% SuperFL-350 (fluid loss) Reduces amount of water lost to formation. 60 % Calcuim Carbonate. Acid solubility.

25) Proposed borehole conditioning procedures:

Surface: Circulate hole clean while rotating & reciprocating the drill string until cuttings diminish at surface. Intermediate: Circulate hole clean while rotating & reciprocating the drill string until cuttings diminish at surface.

Production: Pump marker sweep with nut plug to determine actual hole washout. Calculate a gauge holes bottoms up volume. Perform a cleanup cycle by pumping 3-5 bottoms up or until the shakers are cleanup cycle by pumping 3-5 bottoms up or until the shakers are cleanup cycle by pumping 3-5 bottoms up or until the shakers are cleanup cycle by pumping 3-5 bottoms up or until the shakers are cleanup cycle by pumping 3-5 bottoms up or until the shakers are cleanup cycle by pumping 3-5 bottoms up or until the shakers are cleanup cycle by pumping 3-5 bottoms up or until the shakers are cleanup cycle by pumping 3-5 bottoms up or until the shakers are cleanup cycle by pumping 3-5 bottoms up or until the shakers are cleanup cycle by pumping 3-5 bottoms up or until the shakers are cleanup cycle by pumping 3-5 bottoms up or until the shakers are cleanup cycle by pumping 3-5 bottoms up or until the shakers are cleanup cycle by pumping 3-5 bottoms up or until the shakers are cleanup cycle by pumping 3-5 bottoms up or until the shakers are cleanup cycle by pumping 3-5 bottoms up or until the shakers are cleanup cycle by pumping 3-5 bottoms up or until the shakers are cleanup cycle by pumping 3-5 bottoms up or until the shakers are cleanup cycle by pumping 3-5 bottoms up or until the shakers are cleanup cycle by pumping 3-5 bottoms up or until the shakers are cleanup cycle by pumping 3-5 bottoms up or until the shakers are cleanup cycle by pumping 3-5 bottoms up or until the shakers are cleanup cycle by pumping 3-5 bottoms up or until the shakers are cleanup cycle by pumping 3-5 bottoms up or until the shakers are cleanup cycle by pumping 3-5 bottoms up or until the shakers are cleanup cycle by pumping 3-5 bottoms up or until the shakers are cleanup cycle by pumping 3-5 bottoms up or until the shakers are cleanup cycle by are cleanup cycle by pumping 3-5 bottoms up or until the shakers are cleanup cycle by are cleanup cycle

\*Note: Attach additional sheets as needed.

W Department of
W Department of
Environmental Protection
Page 3 of 3

Well

BIG245H4

**EQT Production** 

Big Run Quad Wetzel County, WV

ENERTIA# 514365 337 Azimuth 8481 Vertical Section

Note: Diagram is not to scale

te: Diagram is not to scale	Тор	Base			Casing and Cementing			Deepest Fresh Water:	1.011'
Formations	TVD	TVD		-	Type	Conductor	Surface	Intermediate	Production
Conductor	- 4	10			Hole Size, In.	30	17 1/2	12 3/8	8 1/2
3 0114130431			4		Casing Size, OD In.	26	13 3/8	9 5/8	5 1/2
				111	Casing Wall Thickness, In.	0.312	0.380	0.395	0,361
Base Red Rock	9	67	111	111	Depth, MD	40'	1,179'	. 2,855'	18,026'
Base Fresh Water		11	111	111	Weight	85.6#	54.5#	40#	20#
Surface Casing		179	411		Grade	A-500	J-55	A-500	P-110
		_			New or Used	New	New	New	New
Maxton	2305	- 2346	- 11	1.1	Burst (psi)	1378	2,700	3,950	12,640
Big Lime	2359	- 2429	- 11	11	Cement Class	A	A / Type 1	H	Н
Big Injun	2429	- 2596	- 11	Alaka .	Cement Yield	1.18	1.19	1.07	1.123/2.098
Intermediate Casing	28	355	4	<b>A</b>	Top of Cement (Planned)	Surface	Surface	Surface	500' above top Producing Zone
			- 1		Method	Displacement	Displacement	Displacement	Displacement
			1	1	Est. Volume (cu ft)	49	1,086	1,108	2,640
Gordon Forth Sand Bayard	3221	- 3202 - 3265 - 3499			Possible Additives	N/A	Calcium Chloride	Calcium Chloride, Fluid Loss, Defoamer, Dispersant, POZ, Bonding Agent, Extender, Retarder,	Calcium Carbonate, Fluid Loss, Extender, Dispersent, Viscosifie Defoamer, POZ, Bonding Agent Retarder, Anti-Settling/Suspension
Speechley	3891	- 4113		KOP @ 2,569'				Flake/LCM	Agent
Riley	4684	- 4916	- 1						
Benson	5380	- 5528	1	1				_	
Alexander	5842	- 6158	- 1						
Sonyea	7063	- 7140	1	1					
Middlesex	7140	- 7324			Durylorg				
Genesee	7324	- 7362	1	1	110019				
Geneseo	7362	- 7388	1		13.4				
Tully	7388	- 7410			10				
Hamilton	7410	- 7509							
Marcellus		- 7560							4
			Control of the last	THE RESIDENCE OF THE PARTY OF T		College (Character) in the college (A)	Service and the service of the service of	Company of the base of the company of the company	
Production Casing	18026	MD	550 L. C. C.	AND PARTY OF THE P	THE RESERVE OF THE PARTY OF THE	Contract of the Contract of th	AND DESCRIPTION OF THE PERSON NAMED IN	the state of the s	

7,531' TVD Land curve @ 9,329' MD

Est. TD @

7,531' TVD V 18,026' MD V

Proposed Well Work:

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

Drill the vertical to an approximate depth of 2569'.

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

8,697' Lateral 1



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. Huffinan, 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	j		
REGULATIONS OF CEMENTING OIL	)		
AND GAS WELLS	í		

#### REPORT OF THE OFFICE

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

#### FINDINGS OF FACT

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

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Promoting a healthy environment.

#### CONCLUSIONS OF LAW

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

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

#### ORDER

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

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

IN THE NAME OF THE STATE OF WEST VIRGINIA

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

James Martin, Chief Office of Oil and Gas

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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.vv.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 I (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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Operator's Well No. BIG245H4

#### 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 For	ork Quadrangle Big Run	
Do you anticipate using more than 5,000 bbls of wa		
Will a pit be used? Yes No		
If so, please describe anticipated pit waste	e: N/A	
Will a synthetic liner be used in the pit? Y	Yes No ✓ If so, what ml.? N/A	2
Proposed Disposal Method For Treated Pi	it Wastes:	MH
Land Application		121078
	( UIC Permit Number 0014, 8462, 4037	)
Reuse (at API Number_ Off Site Disposal (Supp	ply form WW-9 for disposal location)	)
Other (Explain_	,	
Will closed loop system be used? If so, describe:	Yes, The closed loop system will remove drill cuttings from the drilling fluid. The drill cuttings are then prepared for transportation to an off-site disposal facility.	
Drilling medium anticipated for this well (vertical a	and horizontal)? Air, freshwater, oil based, etc. See Attached	
-If oil based, what type? Synthetic, petrole	leum, etc. Synthetic Mud	
Additives to be used in drilling medium? See Attac	ached	
Drill cuttings disposal method? Leave in pit, landfi	fill, removed offsite, etc. Landfill	
-If left in pit and plan to solidify what med	dium will be used? (cement, lime, sawdust) N/A	
-Landfill or offsite name/permit number?		
		_
Permittee shall provide written notice to the Office West Virginia solid waste facility. The notice shall where it was properly disposed.	of Oil and Gas of any load of drill cuttings or associated waste rejected at be provided within 24 hours of rejection and the permittee shall also disclo	any ose
on August 1, 2005, by the Office of Oil and Gas of provisions of the permit are enforceable by law. Value or regulation can lead to enforcement action.  I certify under penalty of law that I have application form and all attachments thereto and obtaining the information, I believe that the information penalties for submitting false information, including Company Official Signature  Company Official (Typed Name) Erin Spine	S of Salar Life II and Particle and American	that the plicable on this ible for nificant
Company Official Title Regional Land Supervisor	ne(.	1 3 2018
200		Department of mental Protection
Subscribed and sworn before me this	day of November, 2018 Environ	Department of mental Protection
Allecea & ubino	Notary Public Notary Public NOTARY PUBLIC STATE OF WEST VIRGINIA	}
My commission expires 4-7-2030	REBECCA L. WANSTREE EQT PRODUCTION COMPANY PO BOX 280 BRIDGEPORT, WV 200330	}

#### 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.

Office of Oil and Gas

DEC 13 2018

WW Department of Environmental Protection

<del>-</del>	ntment: Acres Disturbed n	o additional Prevegetation nH	
Lime 3	Tons/acre or to correct	<u> </u>	
Fertilizer type Gra			
Fertilizer amount	1/3	lbs/acre	
Mulch 2		_Tons/acre	
T		Seed Mixtures	
	emporary	Perma	
Seed Type KY-31	lbs/acre <b>40</b>	Seed Type Orchard Grass	lbs/acre 15
Alsike Clover	5	Alsike Clover	5
Annual Rye	15		
provided). If water from the acreage, of the land applicat	pit will be land applied, incion area.	d application (unless engineered plans include lude dimensions (L $\times$ W $\times$ D) of the pit, and	ing this info have been dimensions (L x W), and area in
provided). If water from the acreage, of the land applicat Photocopied section of invo	pit will be land applied, incion area.  lved 7.5' topographic sheet.	clude dimensions (L x W x D) of the pit, and	dimensions (L x W), and area in
provided). If water from the acreage, of the land applicate Photocopied section of invo	pit will be land applied, incion area.  lved 7.5' topographic sheet.	clude dimensions (L x W x D) of the pit, and	dimensions (L x W), and area in
provided). If water from the acreage, of the land applicate Photocopied section of invo	pit will be land applied, incion area.  lved 7.5' topographic sheet.	clude dimensions (L x W x D) of the pit, and	dimensions (L x W), and area in
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provided). If water from the acreage, of the land applicate Photocopied section of invo	pit will be land applied, incion area.  lved 7.5' topographic sheet.	clude dimensions (L x W x D) of the pit, and	dimensions (L x W), and area in
provided). If water from the acreage, of the land applicate Photocopied section of invo	pit will be land applied, incion area.  Ived 7.5' topographic sheet.	clude dimensions (L x W x D) of the pit, and	RECEIVED
provided). If water from the acreage, of the land applicate Photocopied section of invo	pit will be land applied, incion area.  Ived 7.5' topographic sheet.	elude dimensions (L x W x D) of the pit, and	dimensions (L x W), and area in

## **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

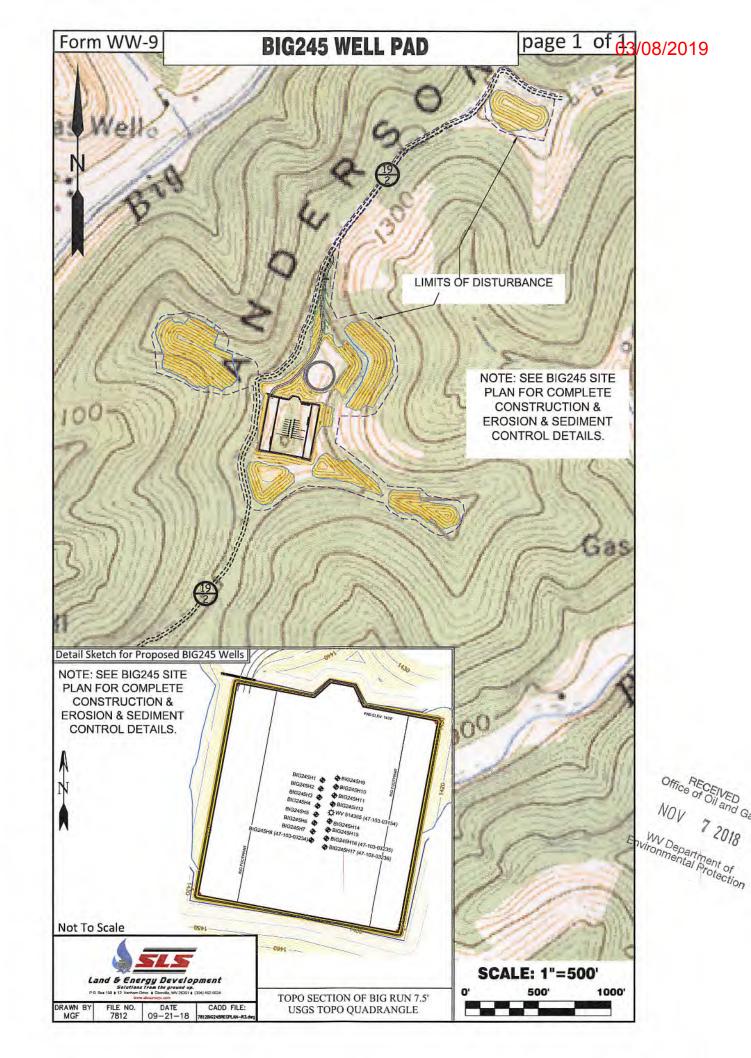
#### **TRIAD ENERGY**

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







September 21, 2018

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)

Behecca Wanstreet

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,

Rebecca Wanstreet

Landman I

Enc.

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## Site Specific Safety and Environmental Plan

EQT
BIG245 Pad
Burton
Wetzel County, WV

BIG245H4,	BIG245H5,	BIG245H6,	BIG245H8,	BIG245H16, BIG245H	17
				<del>, , , , , , , , , , , , , , , , , , , </del>	-

Date Prepared: February 23, 2018

EQT Production

Regional Land Supervisor

Title

11/29/2018

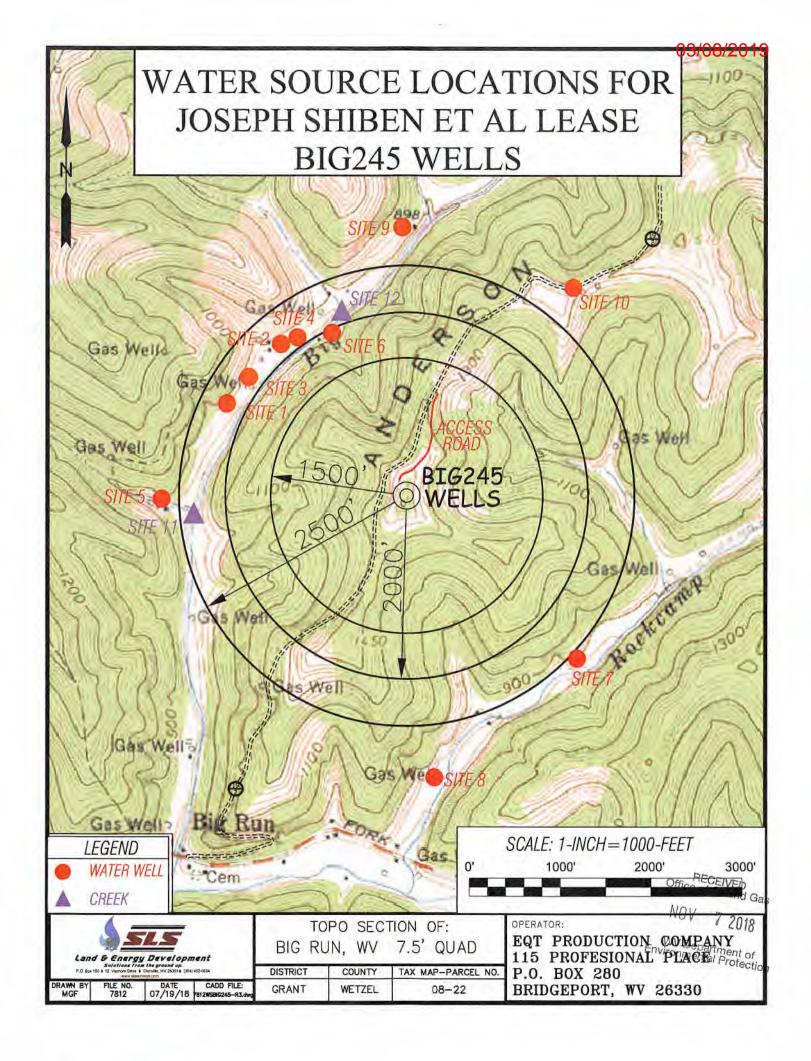
Date

WV Oil and Gas Inspector

Dil + Ges Inspector

12-10-18 Date Office of Oil and Gas DEC 1 3 2018 WV Department of the control of the control

WV Departi Protecti





## Table 1 - Water Source Identification

The following information should be provided for each identified water source. Site n should be labeled consecutively and correspond to the topographic map.	umbers
Site Number: _1 Distance from Gas Well (feet):2100	
Surface Owner / Occupant: Shirley A. Titus	
Address: 1069 Big Run Rd., Burton, WV 26562 Phone #: Unknown	
Field Located Date: 10/31/2013 Owner home during survey (yes/no): Yes	
Coordinates: <u>Lat: 39.597976, Long: -80.575667</u> (decimal degrees – NAD 83)	
Comments: Tax Map 8 Parcel 12 (First Residence)	
Site Number: 2 Distance from Gas Well (feet): 2150	
Surface Owner / Occupant: Shirley A. Titus	
Address: 1069 Big Run Rd., Burton, WV 26562 Phone #: Unknown	
Field Located Date: 10/31/2013 Owner home during survey (yes/no): Yes	
Coordinates: <u>Lat: 39.599743, Long: -80.573828</u> (decimal degrees – NAD 83)	
Comments: Tax Map 8 Parcel 12 (Second Residence)	
Site Number: 3 Distance from Gas Well (feet): 2100	
Surface Owner / Occupant: Lola Sapp	
Address: 20 Rose St., New Martinsville, WV 26155 Phone #: (304) 889-8168	3
Field Located Date: 11/10/2013 Owner home during survey (yes/no): Yes	
Coordinates: <u>Lat: 39.598754, Long: -80.574799</u> (decimal degrees – NAD 83)	
Comments: Tax Map 8 Parcel 12.1	
	Office of Oil and Ga
(Insert additional pages as needed)	- / / 0 -
	Environmental Protection

Site Number: 4 Distance from Gas Well (feet): 2700		
Surface Owner / Occupant: Shirley A. Titus		
Address: 1069 Big Run Rd., Burton, WV 26562 Phone #: Unknown		
Field Located Date: 10/31/2013 Owner home during survey (yes/no): Yes		
Coordinates: <u>Lat: 39.595114, Long: -80.57181</u> (decimal degrees – NAD 83)		
Comments: Tax Map 8 Parcel 12 (Third Residence)		
Site Number: _5 Distance from Gas Well (feet):2200		
Surface Owner / Occupant: <u>Bonnie M. Henthorne</u>		
Address: <u>767 Mesa Verde Dr., Barberton, Ohio 44203</u> Phone #: <u>Unknown</u>		
Field Located Date: 10/31/2013 Owner home during survey (yes/no): Yes		
Coordinates: <u>Lat: 39.600019, Long: -80.572983</u> (decimal degrees – NAD 83)		
Comments: Tax Map 8 Parcel 11	<del></del>	
Site Number: _6 Distance from Gas Well (feet):1950		
Surface Owner / Occupant: Neal Utt		
Address: 1204 Big Run Rd., Burton WV 26562 Phone #: (304) 889-2714		
Field Located Date: 10/31/2013 Owner home during survey (yes/no): Yes		
Coordinates: <u>Lat: 39.6000050, Long: -80.571597</u> (decimal degrees – NAD 83)		
Comments: Tax Map 8 Parcel 13 (Site to be tested), Also owns Tax Map 8 Parcel 14		
Site Number: _7 Distance from Gas Well (feet):2600		
Surface Owner / Occupant: <u>James Yoho</u>		
Address: 565 Rock Run Rd., Burton WV 26562 Phone #: (304) 889-2164		
Field Located Date: 10/31/2013 Owner home during survey (yes/no): Yes		
Coordinates: <u>Lat: 39.590463, Long: -80.561900</u> (decimal degrees – NAD 83)	Office of C	EIVED il and Gas
Comments: Tax Map 8 Parcel 28 (Additional Properties - Tax Map 8 Parcel 25, 26 & 30)		

Site Number: 8 Distance from Gas Well (feet): 3100	
Surface Owner / Occupant: <u>Jim Yoho</u>	
Address: PO Box 142, Big Run, WV 26561 Phone #: (304) 889-3402	
Field Located Date: 10/31/2013 Owner home during survey (yes/no): Yes	
Coordinates: <u>Lat: 39.586859, Long: -80.567390</u> (decimal degrees – NAD 83)	
Comments: Tax Map 8 Parcel 31	
Site Number: 9 Distance from Gas Well (feet): 2550	
Surface Owner / Occupant:	
Address: 1459 Big Run Rd., Burton, WV 26562 Phone #: (304) 889-2565	
Field Located Date: 10/31/2013 Owner home during survey (yes/no): Yes	
Coordinates: <u>Lat: 39.603290, Long: -80.568927</u> (decimal degrees – NAD 83)	
Comments: Tax Map 8 Parcel 13.1	
Site Number: 10 Distance from Gas Well (feet): 2890	
Surface Owner / Occupant: <u>James E. Stoneking</u>	
Address: 44 Holly Rd. NW, Dellroy, OH 44620 Phone #: (330) 866-2460	
Field Located Date:1/13/2014 Owner home during survey (yes/no): _Yes	
Coordinates: <u>Lat: 39.6000050, Long: -80.571597</u> (decimal degrees – NAD 83)	
Comments: Tax Map 8 Parcel 13 (Additional properties Tax Map 8 Parcel 4)	<del></del>
Site Number:11 Distance from Gas Well (feet):	<del></del>
Surface Owner / Occupant: <u>EQT Production Company</u>	
Address: 115 Professional Place, PO Box 280, Bridgeport, WV 26330 Phone #:	<del></del>
Field Located Date: 10/31/2013 Owner home during survey (yes/no): N/A	
Coordinates: <u>Lat: 39.594673, Long: -80.576971</u> (decimal degrees – NAD 83)	
Comments: Tax Map 8 - Creek (At EQT discretion to sample)	RECEIVED Office of Oil and Gas

NOV 7 2018

Site Number: 12 Distance from Gas Well (feet):
Surface Owner / Occupant: <u>EQT Production Company</u>
Address: 115 Professional Place, PO Box 280, Bridgeport, WV 26330 Phone #:
Field Located Date: 10/31/2013 Owner home during survey (yes/no): N/A
Coordinates: <u>Lat: 39.600755, Long: -80.571267</u> (decimal degrees – NAD 83)
Comments: Tax Map 8 - Creek (At EQT discretion to sample)
Site Number: Distance from Gas Well (feet):
Surface Owner / Occupant: <u>Ikey Willey</u>
Address: 12359 Willey Fork Rd., Pine Grove, WV 26419 Phone #: Unknown
Field Located Date: 11/31/2013 Owner home during survey (yes/no): Yes
Coordinates: (decimal degrees – NAD 83)
Comments: Tax Map 8 Parcel 21  Letter of refusal signed
Site Number: Distance from Gas Well (feet):
Surface Owner / Occupant: _ET Bluegrass LLC
Address: PO Box 6135, Pittsburgh, PA 15212 Phone #: Unknown
Field Located Date: N/A Owner home during survey (yes/no): No
Coordinates: (decimal degrees – NAD 83)
Comments: Tax Map 8 Parcel 22  Letter of Refusal signed
Site Number: Distance from Gas Well (feet):
Surface Owner / Occupant: Mike White
Address: 44 Holly Rd., Dellroy, OH 44620 Phone #: Unknown
Field Located Date: N/A Owner home during survey (yes/no): No
Coordinates: (decimal degrees – NAD 83) Office of Oil and Gas Comments: Tax Map 8 Parcel 23, Certified delivered 11/25/2013, New Certified Letter Sent NOV 7 2018
WV Department of Environmental Protection

Site Number:Distance from Gas Well (feet):
Surface Owner / Occupant: <u>Donal Dulaney</u>
Address: 10686 Willey Fork Rd., Burton, WV 26562 Phone #: Unknown
Field Located Date: N/A Owner home during survey (yes/no): No
Coordinates: (decimal degrees – NAD 83)
Comments: Tax Map 8 Parcel 23 Certified delivered 11/25/2013, New Certified Letter Sent 1/31/2018
Site Number:Distance from Gas Well (feet):
Surface Owner / Occupant: <u>Wanda L. Byard</u>
Address: 1250 Meadowlane Dr., Lewisport, KY 42351 Phone #: Unknown
Field Located Date: N/A Owner home during survey (yes/no): No
Coordinates: (decimal degrees – NAD 83)
Comments: <u>Tax Map 8 Parcel 8</u> <u>Certified delivered to Sheral Byard at same address on 11/25/2013</u> New certified sent to Wanda Byard on 2/15/2016 w/no response. Additional Certified Letter Sent
1/31/18
Site Number: Distance from Gas Well (feet):
Surface Owner / Occupant:
Surface Owner / Occupant:John Michael Byard
Surface Owner / Occupant:
Surface Owner / Occupant:John Michael Byard  Address:703 6 <sup>th</sup> St., St. Marys, WV 26170 Phone #:Unknown  Field Located Date:N/A Owner home during survey (yes/no):No
Surface Owner / Occupant: John Michael Byard  Address: Phone #: Phone #: Unknown  Field Located Date: Owner home during survey (yes/no): No  Coordinates: (decimal degrees – NAD 83)  Comments: Tax Map 8 Parcel 15
Surface Owner / Occupant: John Michael Byard  Address: 703 6 <sup>th</sup> St., St. Marys, WV 26170 Phone #: Unknown  Field Located Date: N/A Owner home during survey (yes/no): No  Coordinates: (decimal degrees – NAD 83)  Comments: (decimal degrees – NAD 83)  Comments: (additional degrees – NAD 83)  Continued to the continue of the continu
Address:
Surface Owner / Occupant:
Surface Owner / Occupant:

Coordinates:(decimal degrees – NAD 83)
Comments: Tax Map 8 Parcel 29 Certified letter was undeliverable.
Site Number: Distance from Gas Well (feet): N/A
Surface Owner / Occupant: <u>Dorn Higginbotham</u>
Address: PO Box 359, Reader, WV 26167 Phone #: Unknown
Field Located Date: Owner home during survey (yes/no): No
Coordinates: (decimal degrees – NAD 83)
Comments: Tax Map 8 Parcel 24 Certified delivered 11/26/2013. New Certified Letter Sent 1/31/2018
Site Number:Distance from Gas Well (feet):
Surface Owner / Occupant:
Address: 565 Rock Run Rd., Burton, WV 26562 Phone #: Unknown
Field Located Date: N/A Owner home during survey (yes/no): No
Coordinates: (decimal degrees – NAD 83)
Comments: <u>Tax Map 8 Parcel 27</u> Old water Well fell in. The water well Mr. Yoho uses now was located and listed as Site No. 7.
Site Number: Distance from Gas Well (feet):
Surface Owner / Occupant:
Address: Phone #:
Field Located Date: Owner home during survey (yes/no):
Coordinates: (decimal degrees – NAD 83)
Comments:

Office of Oil and Gas

NOV 7 2018

WV Department of Environmental Protection



SMITH LAND SURVEYING, INC. P.O. BOX 150, GLENVILLE, WV 26351

(304) 462-5634 · FAX 462-5656

Smith Land Surveying, Inc. o	f Glenville, WV has been contracted by:
<u> </u>	
To do some preliminary work for a p	roposed oil and gas well permit application.
Protection, Department of Oil and Gawater wells or other non-public water proposed well, if they are requested t	te of West Virginia Division of Environmental as, operators are required to offer water testing for sources that fall within 2500 feet of the o do so by the resident or owner. This test will only which in turn benefits you as the resident or
your potable water source(s) sampled	foot radius, you are entitled to have and analyzed at an independent lab. Your lab to your home. This is done at no expense to you.
	immediately if you are interested in having your letter with you at the time of contact so that the enced.
	is matter. I look forward to hearing from you at we any questions, please feel free to contact me at:
Smith Land Surveying, Inc.	Date: 11-10-13
PO Box 150 Glenville, WV 26351	Left/sent by: Nathan Spencer
(304) 462-5634 (voice) (304) 463-5656 (fax) E-Mail mmurphy@slsserveys.com	Well Number: Big 245 (Job# 2712) Site Number: Site #/O
*If you do not have a water well or other no name and address when you return this shee	n-public water source, please make note of it and include your t.
	1
you do not feel the need to have your	Water well/spring/or other non-public water source

sampled, If you do not feel the need to nave your water well spring of other hon-paons much sample happened below and return to the above address. This will signify that a sample happened and Gas offered to the surface owner and has been declined. Signature: - lky & Wille WV Department of Environmental Protection



To Whom It May Concern:

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

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

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

- · Your right to request sampling and analysis:
- The rebuttable presumption for contamination or deprivation of a fresh water source or supply;
- That refusal to allow the operator to conduct a pre-drilling water well test constitutes a method to rebut the presumption of liability;
- Your independent right to sample and analyze any water supply at your own expense;
- · That EQT will utilize an independent laboratory to analyze any sample;
- That you can obtain from the WV DEP Chief a list of water testing laboratories in the subject area capable of and qualified to test water supplies in accordance with standard acceptable methods.

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

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

Thank you for your cooperation in this matter.

Smith Land Surveying, INC.

P.O. Box 150

Glenville, WV 26351

(304)-462-5634

awilson@slssurveys.com

EQT Well Number: BIG 245

County: Wetzel

Tax Map / Parcel: 8/22

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

the line below and return to the above address. and has been declined.	ell, spring, or other non-public water source sampled, please sign on This will signify that a sample has been offered to the surface owner
Name (please print): Jason Ranson . Dri	Iling - LandAddress:
Signature:	Date: 4/23/2018
A /	Office of
	NUV
	Environmenta

## BIG245 BIG245H4 EQT PRODUCTION COMPANY

TAG	TM-PAR.	SURFACE OWNERS	ACRES
Α	G-TM-3-2	JOSEPH F & GAY BLAKE IRREVOCABLE GRANTOR TR.	194 AC.
В	G-TM-3-5	COASTAL FOREST RESOURCES CO	179 AC.
C	G-TM-3-6	VIRGINIA RUTH BLAKE	5.75 AC.
D	G-TM-3-10	CHARLES STONEKING ET AL	9.75 AC.
E	G-TM-3-11	VIRGINIA RUTH BLAKE	2.5 AC.
F	G-TM-3-13	EDWARD LEE DULANEY, II	164.75 AC.
G	G-TM-3-14	CHARLES STONEKING ET AL.	70.50 AC.
H	G-TM-3-15	CHARLES STONEKING ET AL.	45 AC
	G-TM-3-16	CHARLES STONEKING ET AL	14.11 AC.
J	G-TM-3-18	VIRGINIA RUTH BLAKE	28.75 AC.
K	G-TM-3-23	COASTAL FOREST RESOURCES CO	167 75 AC.
1	G-TM-3-24	COASTAL FOREST RESOURCES CO	35.89 AC.
M	G-TM-3-25	CHARLES STONEKING ET AL.	34.4 AC
N	G-TM-3-26	VIRGINIA RUTH BLAKE	20.69 AC.
0	G-TM-3-27	VIRGINIA RUTH BLAKE	45.83 AC.
p	G-TM-3-30	THOMAS E & CHERYL A LEASURE	51.80 AC.
0	G-TM-3-31	HEARTWOOD FORESTLAND FUND ILLP	27 56 AC.
R	G-TM-3-34	MIKE & MADELINE WHITE	30.6 AC.
S	G-TM-7-3	COASTAL FOREST RESOURCES CO	178.AC.
T	G-TM-7-3.2	COASTAL FOREST RESOURCES CO	156.98 AC.
U	G-TM-8-1	DANNY STOCKSLAGER ET AL.	170 AC.
V	G-TM-8-2	MIKE & MADELINE WHITE	40,13 AC.
W	G-TM-8-3	MIKE & MADELINE WHITE	3 AC.
X	G-TM-8-4	DUANE M GDODRICH	1.625 AC.
Y	G-TM-8-5	DUANE M GOODRICH	130 SQ RDS
Z	G-TM-8-6	DUANE M GOODRICH	164 SQ RDS
AA	G-TM-8-7	JAMES E & MARTIN A STONEKING	19.12 AG.
BB	G-TM-8-B	WANDA L BYARD	59.16 AC
CC	G-TM-8-10	GARLAND E MINOR	48.1 AC.
DD	G-TM-8-11	BONNIE M HENTHORNE	63.50 AC.
EE	G-TM-8-12	SHIRLEY A TITUS	41.9 AC.
FF	G-TM-8-12.1	DALE F SAPP L/E, LOLA J SAPP	10.1 AC
GG	G-TM-8-13	NEAL UTT	51 AC.
HH	G-TM-8-13.1	DUANE M GOODRICH	3.56 AC.
- 11	G-TM-8-14	NEAL UTT	51 AC.
JJ	G-TM-8-15	JOHN MICHAEL BYARD	71.60 AC.
KK	G-TM-8-18	COASTAL FOREST RESOURCES CO.	337 AC.
LL	G-TM-8-19	PHILLIP & KIMBERLY BRENT	46.45 AC.
MM	G-TM-8-21	IKEY JOE WILLEY	76.27 AC.
NN.	G-TM-8-22	ET BLUEGRASS LLC, C/O EQT PRODUCTION CO	138,93 AC.
00	G-TM-8-23	DALE K, JAMES L & DONALD J DULANEY	70.B1 AG.
PP	G-TM-8-23.1	JAMES L DULANEY	3,19 AC.
00	G-TM-8-25	JAMES ARTHUR YOHO	6,25 AC.

(S.P.C. NORTH ZONE) (UTM(M) ZONE 17 NORTH) NAD'27 S.P.C.(FT) N. 400,735,61 E. 1,698,762.07 NAD'27 GEO. LAT-(N) 39.595332 LONG-(W) 80.569001 NAD'27 GEO. NAD'83 UTM (M) N. 4,382,942.536 E. 537,022.389 LANDING POINT E. 1,695,807.13 NAD'27 S.P.C.(FT) N. 398,347.32 NAD'27 GEO LAT-(N) 39.588678 LONG-(W) 80.579385 NAD'83 UTM (M) N. 4,382,199.862 E. 536,134.237 **BOTTOM HOLE** NAD'27 S.P.C.(FT) N. 406,352.96 E. 1,692,408.69 LAT-(N) 39.610543 LONG-(W) 80,591787

N. 4.384,621,561

Land & Energy Development

NAD'83 UTM (M)

NOTES ON SURVEY

TH

1. NO WATER WELLS WERE FOUND
WITHIN 250' OF PROPOSED GAS WELL.
NO AGRICULTURAL BUILDINGS 2500 SQ.
FT. OR GREATER WERE FOUND WITHIN
625' OF THE CENTER OF PROPOSED
WELL PAD.
2. WELL SPOT CIRCLE (SHEET 1) AND
TOPO MARK SCALE ARE 1" = 2000'.

munimi,

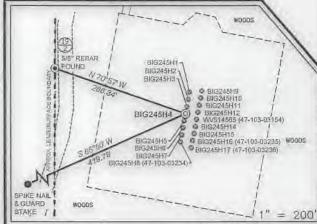
CTOR

BOTTOM HOLE LATITUDE 39°37'30" 2 382' BH-△○→386 517 WELL NO. BIG245H4 03/08/2019 BH

					P.		
			SUBSURFACE AGREE	MENT			10
		IKEY JOE	WILLEY	76.27 AC.±	G-7	TM 08-21	80°35'00"
			ROYALTY OWNER	S			8
	1	ACROPOLIS II	VC. ET AL	80 AC.±	LEASE	NO. 121160	0
1	NORMA	JEAN PHILLI	PS RIGGS ET AL.	47 AC.±	LEASE	NO. 125407	1100
	Ġ.	ARLAND E. M	INOR ET AL.	49 AC,±	LEASE	NO. 125440	UDE
	EQT	PRODUCTIO	N COMPANY	300 AC.±	LEASE	NO. 102894	1 4
JOSEP	H SHIBI	EN & MINNIE:	SHIBEN ESTATE ET AL	1030 AC,±	LEASE	NO. 102814	E
	SHIE	BEN ESTATES	, INC., ET AL	100 AC.±	LEASE	NO. 102813	TIĐNO
	-						Z
	TAG	TM-PAR.	SURF	FACE OWNERS	3	ACRES	1
	RR	G-TM-8-27	JAMES ARTHUR YOHO			21.75 AC.	ш
	SS	G-TM-B-28	JAMES ARTHUR YOHO			61 AC	HOLE
	TT	G-TM-B-38	DALE K & SHERRY L DU	ILANEY		28 82 AC.	Ĭ
	UU	G-TM-8-39	DORN H HIGGINBOTHA	METAL		23.62 AC	5
	VV	G-TM-8-53	DORN II HIGGINBOTHA	METAL		196,21 AC.	MO
	WW	G-TM-13-6.1	COASTAL FOREST RES	OURCES COM	PANY	55.06 AC	
1	XX	G-TM-B-35	DEBRA FRONCZEK ET /	AL.		15 1/2 AG.	BOTT
	YY	G-TM-8-36	JAMES L & KAREN DULA	ANEY		14.1 AC.	m

TAG	TM-PAR.	SURFACE OWNERS	ACRES
RR	G-TM-8-27	JAMES ARTHUR YOHO	21.75 AC.
SS	G-TM-B-28	JAMES ARTHUR YOHO	61 AC
TT	G-TM-B-38	DALE K & SHERRY L DULANEY	28 82 AC.
UU	G-TM-8-39	DORN H HIGGINBOTHAM ET AL	23.52 AC
VV	G-TM-8-53	DORN I LHIGGINEOTHAM ET AL	196,21 AC
WW	G-TM-13-6.1	COASTAL FOREST RESOURCES COMPANY	55.06 AC
XX	G-TM-8-35	DEBRA FRONCZEK ET AL	15 1/2 AC
YY	G-TM-8-36	JAMES L & KAREN DULANEY	14.1 AC.
22	G-TM-8-37	JAMES L & KAREN DULANEY	14.1 AC.
AAA	G-TM-8-30	JAMES & JIM YOHO	7.50 AC
BBB	G-TM-8-38,1	JAMES L DULANEY	.137 AC.
CCC		FRANKLIN M. BLAKE HEIRS AND/OR ASSIGNS	3.25 AC.
DDD	G-TM-8-24	DORN H HIGGINBOTHAM ET AL	7.1.AC

REFERENCES



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

BY THE DIVISION OF ENVIRONMENTAL PROTECTION

PS 849

MINIMUM DEGREE 1/2500 OF ACCURACY

No. 849
\*\* STATE OF \*\*

STONAL SORTH 7812PBIG245H4-R.dwg FILE NO.

SEE NOTE 2 SCALE HORIZONTAL & VERTICAL CONTROL DETERMINED BY DGPS (SURVEY GRADE TIE TO CORS NETWORK)

E. 535,058,229

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

OCTOBER 31 , 20 DATE REVISED\_ NOVEMBER 30 18

BIG245H4 OPERATORS WELL NO

API WELL NO. STATE COUNTY

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



PERMIT

RCV.

2

WELL TYPE: OIL	A	IQUID IJECTION	WASTE DISPOSAL	IF "GAS" PRODU	ICTION_X STORAGE	DEEP SHALLOW_
LOCATION: PAD ELEVATION	GROUND ELEV	PROPOSED EL 1430'	ev; WATERSHED	ROCKCAMP I	RUN OF WILLEY FORK	
DISTRICT	GRANT		COUNTY	WETZEL	QUADRANGLE	BIG RUN 7.5'
SURFACE OWNER	ET BLUE C	GRASS, LLC			ACREAGE	138.93±
ROYALTY OWNER	SHIBEN E	STATES, INC			ACREAGE	140±
PROPOSED WORK					LEASE NO	125397
DRILL X C	ONVERT	DRILL D	EEPER	REDRILL	FRACTURE OR STIMULAT	E_X PLUG OFF OLD
FORMATION	PERFORAT	E NEW FORMA	TION PLI	JG AND ABAND	ON CLEAN OUT AND	REPLUGOTHER
PHYSICAL CHANG	E IN WELL (SF	PECIFY)			TARGET FORMATION ESTIMATED DEPTH	MARCELLUS 7531'

WELL OPERATOR

EQT PRODUCTION COMPANY **ADDRESS** 

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

DESIGNATED AGENT

JASON RANSON

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

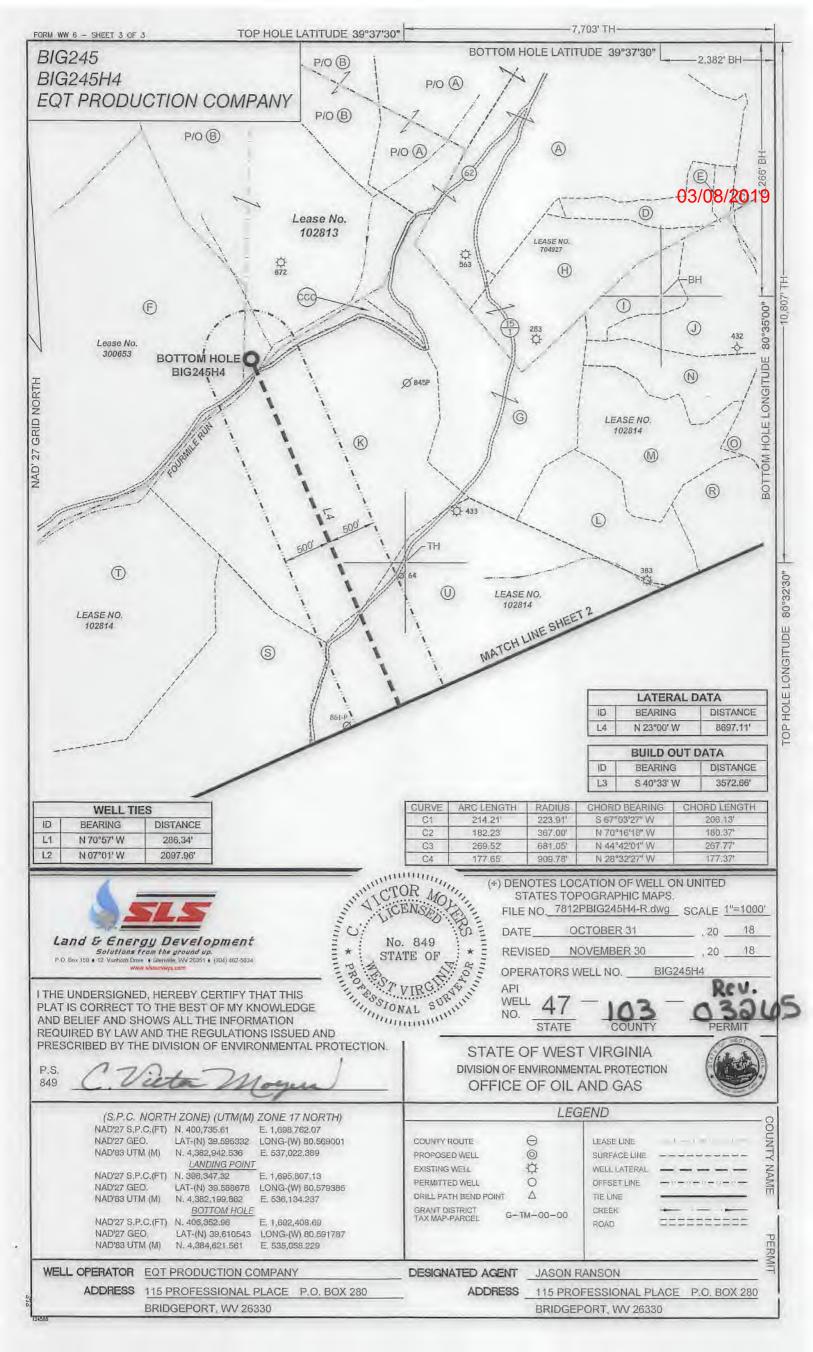
BRIDGEPORT, WV 26330

80°32'30"

HOLE LONGITUDE

TOP !





WW-6A1 (5/13)

Operator's Well No. BIG245H4

#### 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:

Number	Grantor, Lessor, etc.	Grantee, Lessee, etc.	Royalty	Book/Page
Lease Name or			200	

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, he DL. Office of Oil and Gas 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:	Erin Spine 2:
Its:	Regional Land Supervisor

WW-6A1 attachment

Operator's Well No.

BIG245H4

ease No.	Grantor, Lessor, etc.	Grantee, Lessee, etc.	Royalty	Book/Page
105207	ET Phus Crass I I C et al (Quarant Bassalta Quarant		**	
<u>125397</u>	ET Blue Grass LLC, et al. (Current Royalty Owner) Joseph Shiben, et al.			DD 444/004
	Equitable Gas Company	Equitable Gas Company Equitrans, Inc.		DB 44A/224 OG 71A/453
	Equitans, Inc.	Equitans, Inc. Equitrans, LP		DB 105/908
	Equitrans, Inc.	EQT Production Company		
	Equitario, Li	EQT Floduction Company		OG 131A/81
<u>988605</u>	Liberty Holding Company	EQT Production Company	**	DB 129A/862
102836	Shiben Estates, Inc., et al (Current Royalty Owner)	L	**	
	S I Robinson	The Philadelphia Company		DB 47/469
	The Philadelphia Company	Pittsburgh and West Virginia Gas Co.		DB 146/98
	Pittsburgh and West Virginia Gas Co.	Equitable Gas Company		DB 187/374
	Equitable Gas Company	Equitrans, Inc.		OG 71A/453
	Equitrans, Inc.	Equitrans, LP		DB 105/908
	Equitrans, LP	EQT Production Company		OG 131A/81
125367	EQT Mineral Purchasing Group, et al (Current Roy	alty Owner)	**	
	A. G. Higginbotham, et al	Equitable Gas Company		DB 52A/190
	Equitable Gas Company	Equitrans, Inc.		OG 71A/453
	Equitrans, Inc.	Equitrans, LP		DB 105/908
	Equitrans, LP	EQT Production Company		OG 131A/81
102814	Shiben Estates, Inc., et al (Current Royalty Owner)	!	**	
	J. P. Ashcraft, et al	The Oxford Oil Company		DB 39/471
	The Oxford Oil Company	The Philadelphia Company		LB 47/553
	The Philadelphia Company	The Philadelphia Company of WV		DB 47/561
	The Philadelphia Company of WV	Pittsburgh & West Virginia Gas Company		OG 22A/352
	Pittsburgh & West Virginia Gas Company	Equitable Gas Company		DB 187/321
	Equitable Gas Company	Equitrans, Inc.		OG 71A/453
	Equitrans, Inc.	Equitrans, LP		DB 105/908
	Equitrans, LP	EQT Production Company		OG 131A/81

<sup>\*\*</sup> Per West Virginia Code Section 22-6-8.

Office of Oil and Gas

NOV 7 2018

WV Department of Environmental Protection



October 17, 2018

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

Re: BIG245 well pad, well numbers BIG245H4, BIG245H5, BIG245H6, Grant District, Wetzel County

Dear Mr. Brewer,

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,

Erin Spine

Regional Land Supervisor

Office of Oil and Gas

NOV 7 2018

WV Department of Environmental Protection

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

	e Certification: 11 1 18		No. 47-		
	,			Well No. BIG24	45H4
	Managarana	Wel	l Pad Na	me: BIG245	
	oeen given:	22 6A the Operator has provided	Pall's value	had a side a	dale also Nicolano Promon Marcoll
	e provisions in West Virginia Code { tract of land as follows:	§ 22-6A, the Operator has provided	the requ	ired parties w	ith the Notice Forms fisted
tate:	W	East	ting:	537022.39	
ounty:	Wetzel			4382942.54	
istrict:	Grant	Public Road Access:	-	Rt. 19/2	
uadrangle:	Big Run	Generally used farm n	name:	E.T. Bluegrass LL	C
atershed:	Rockcamp Run of Wiley Fork				
giving the quirements irginia Code	equired by subsections (b) and (c), se surface owner notice of entry to su of subsection (b), section sixteen o e § 22-6A-11(b), the applicant shall t have been completed by the applican	rivey pursuant to subsection (a), so f this article were waived in writi ender proof of and certify to the se	ection te	n of this article ow	ele six-a; or (iii) the notice oner; and Pursuant to West
that the Ope	West Virginia Code § 22-6A, the Operator has properly served the require		lotice Ce	rtification	OOG OFFICE USE
					ONLY
					ONLY
☐ 1. NOT	TICE OF SEISMIC ACTIVITY or	■ NOTICE NOT REQUIRED SEISMIC ACTIVITY WAS CO			ONLY  RECEIVED/ NOT REQUIRED
	TICE OF SEISMIC ACTIVITY or	SEISMIC ACTIVITY WAS CO	NDUCT	ED	□ RECEIVED/
□ 2. NO		SEISMIC ACTIVITY WAS CO	NDUCT VAS CO BECAU	ED NDUCTED SE	RECEIVED/ NOT REQUIRED
□ 2. NO	TICE OF ENTRY FOR PLAT SURV	SEISMIC ACTIVITY WAS CONTEST OF NO PLAT SURVEY WE NOTICE NOT REQUIRED NOTICE OF ENTRY FOR PLAT	NDUCT VAS CO BECAU T SURV	ED  NDUCTED  SE EY	□ RECEIVED/ NOT REQUIRED □ RECEIVED/
☐ 2. NOT ■ 3. NOT	TICE OF ENTRY FOR PLAT SURV	SEISMIC ACTIVITY WAS COVEY OF NO PLAT SURVEY WE NOTICE NOT REQUIRED NOTICE OF ENTRY FOR PLATWAS CONDUCTED OF WRITTEN WAIVER BY S	NDUCT VAS CO BECAU T SURV	ED  NDUCTED  SE EY	☐ RECEIVED/ NOT REQUIRED ☐ RECEIVED ☐ RECEIVED/ NOT REQUIRED
2. NO	FICE OF ENTRY FOR PLAT SURV	SEISMIC ACTIVITY WAS COVEY OF NO PLAT SURVEY WE NOTICE NOT REQUIRED NOTICE OF ENTRY FOR PLATWAS CONDUCTED OF WRITTEN WAIVER BY S	NDUCT VAS CO BECAU T SURV	ED  NDUCTED  SE EY	□ RECEIVED/ NOT REQUIRED □ RECEIVED □ RECEIVED/ NOT REQUIRED

Required Attachments:

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

03/08/2019

# Certification of Notice is hereby given:

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

Well Operator: EQT Production Company By: Erin Spine Its:

Regional Land Supervisor

NOTARY SEAL MOTARY PUSILIC STATE OF WEST VICTINIA

EBECGA L. WANSTREET EGT FRODUCTION COMPANY FO HOX FRO CHANGE TO LAY 28330 VALUE OF THE PROPERTY OF THE PROPERT

Telephone: 304-848-0035 Address: 2400 Ansys Drive, Suite 200 Canonsburg PA 15317

Facsimile: 304-848-0041 Email: espine@eqt.com

Subscribed and sworn before me this

Notary Public

My Commission Expires

# 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.

Environmental Protection

WW-6A (9-13) API NO. 47- 103

OPERATOR WELL NO. BIG 103/08/2019

Well Pad Name: BIG245

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

NOU	ice Time Requiremen	it: notice shall be provid	ded no later that	n the filing date of permit application.	
	e of Notice: 11/2/18 ice of:	Date Permit Applicat	tion Filed: 11	2/18	
☑	PERMIT FOR ANY WELL WORK			ROVAL FOR THE IN IMPOUNDMENT OR PIT	
Deli	very method pursual	nt to West Virginia Co	de § 22-6A-10	(b)	
	PERSONAL [ SERVICE	REGISTERED MAIL		OD OF DELIVERY THAT REQUIRES A PT OR SIGNATURE CONFIRMATION	
certi regis sedin the social a description	ficate of approval for the stered mail or by any moment control plan requisurface of the tract on wind gas leasehold being ribed in the erosion and ator or lessee, in the every coal seams; (4) The owner, if the surface trace trace water well, spring or ide water for consumpt osed well work activity ection (b) of this section of the sheriff requirision of this article to the R. § 35-8-5.7.a require	the construction of an impethod of delivery that requested by section seven of the thich the well is or is projected by the proposed sediment control plan suggested the tract of land on womers of record of the suggested in section nine of the water supply source location by humans or domestrist to take place. (c)(1) If in hold interests in the langed to be maintained pursue contrary, notice to a lighter, in part, that the operation of the contrary, notice to a lighter.	coundment or pit quires a receipt of his article, and the posed to be local ed well work, if ubmitted pursual which the well pro- rface tract or tra- acement, constru- his article; (5) A atted within one to tic animals; and f more than three ands, the applican- uant to section e- en holder is not atter shall also pro-	of the application, the applicant for a permit for any as required by this article shall deliver, by personal r signature confirmation, copies of the application, the well plat to each of the following persons: (1) The ted; (2) The owners of record of the surface tract or the surface tract is to be used for roads or other land into subsection (c), section seven of this article; (3) apposed to be drilled is located [sic] is known to be used so verlying the oil and gas leasehold being develop uction, enlargement, alteration, repair, removal or about surface owner or water purveyor who is known to thousand five hundred feet of the center of the well person in the person of any natural gas storage field with the tenants in common or other co-owners of interests of the material surface one, chapter eleven-a of this code. (2) Notice to a landowner, unless the lien holder is the late ovide the Well Site Safety Plan ("WSSP") to the surface provided in section 15 of this rule.	service or by the erosion and towners of record of tracts overlying the disturbance as The coal owner, inderlain by one or sed by the proposed andonment of any the applicant to had which is used to hin which the described in described in the otwithstanding any andowner, W. Va.
☑ A	application Notice	WSSP Notice ☑ E&	S Plan Notice	☑ Well Plat Notice is hereby provided to:	
_	URFACE OWNER(s) ne; See Attached			☐ COAL OWNER OR LESSEE Name: See Attached	
	ress:			Address:	
Nam Add	ress:			COAL OPERATOR Name:	
Nam	e: See Attached	(Road and/or Other Dis		Address:  SURFACE OWNER OF WATER WELL  AND/OR WATER PURVEYOR(s)	Office of Oil and Gas
Nam				Name: See Attached	E WY DEDAM
Add	ress.			Address:	E WY Department of
				Bor Elettion of that Introduce Grassion	CHOLILLE
		(Impoundments or Pits)		Name:	
	e: See Attached			Address:	
Audi	1655.			*Please attach additional forms if necessary	

OPERATOR WELL NO. BIG 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 and Gas Protection headquarters, located at 601 57<sup>th</sup> Street, SE, Charleston, WV 25304 (304-926-0450) or by visiting www.dep.ww.gov/oiland-gas/pages/default.aspx.

W Department of Well Location Restrictions

Environmental Bent of
Pursuant to W. Va. Code § 22-6A-12, Wells may not be drilled within two hundred fifty feet measured horizontally from any existing ction water well or developed spring used for human or domestic animal consumption. The center of well pads may not be located within six hundred twenty-five feet of an occupied dwelling structure, or a building two thousand five hundred square feet or larger used to house or shelter dairy cattle or poultry husbandry. This limitation is applicable to those wells, developed springs, dwellings or agricultural buildings that existed on the date a notice to the surface owner of planned entry for surveying or staking as provided in section ten of this article or a notice of intent to drill a horizontal well as provided in subsection (b), section sixteen of this article was provided, whichever occurs first, and to any dwelling under construction prior to that date. This limitation may be waived by written consent of the surface owner transmitted to the department and recorded in the real property records maintained by the clerk of the county commission for the county in which such property is located. Furthermore, the well operator may be granted a variance by the secretary from these distance restrictions upon submission of a plan which identifies the sufficient measures, facilities or practices to be employed during well site construction, drilling and operations. The variance, if granted, shall include terms and conditions the department requires to ensure the safety and protection of affected persons and property. The terms and conditions may include insurance, bonding and indemnification, as well as technical requirements. (b) No well pad may be prepared or well drilled within one hundred feet measured horizontally from any perennial stream, natural or artificial lake, pond or reservoir, or a wetland, or within three hundred feet of a naturally reproducing trout stream. No well pad may be located within one thousand feet of a surface or ground water intake of a public water supply. The distance from the public water supply as identified by the department shall be measured as follows: (1) For a surface water intake on a lake or reservoir, the distance shall be measured from the boundary of the lake or reservoir. (2) For a surface water intake on a flowing stream, the distance shall be measured from a semicircular radius extending upstream of the surface water intake. (3) For a groundwater source, the distance shall be measured from the wellhead or spring. The department may, in its discretion, waive these distance restrictions upon submission of a plan identifying sufficient measures, facilities or practices to be employed during well site construction, drilling and operations to protect the waters of the state. A waiver, if granted, shall impose any permit conditions as the secretary considers necessary. (c) Notwithstanding the foregoing provisions of this section, nothing contained in this section prevents an operator from conducting the activities permitted or authorized by a Clean Water Act Section 404 permit or other approval from the United States Army Corps of Engineers within any waters of the state or within the restricted areas referenced in this section. (d) The well location restrictions set forth in this section shall not apply to any well on a multiple well pad if at least one of the wells was permitted prior to the effective date of this article. (e) The secretary shall, by December 31, 2012, report to the Legislature on the noise, light, dust and volatile organic compounds generated by the drilling of horizontal wells as they relate to the well location restrictions regarding occupied dwelling structures pursuant to this section. Upon a finding, if any, by the secretary that the well location restrictions regarding occupied dwelling structures are inadequate or otherwise require alteration to address the items

WW-6A (8-13) 471 0303265

API NO. 47-103

OPERATOR WELL NO. BIG 25-1/08/2019

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:

Office of Oil and Gas

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

NOV 7 2018

WV Department of Environmental Protection

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.

WW-6A (8-13)

API NO. 47- 103

OPERATOR WELL NO. BIG 254/08/2019

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 <a href="http://www.dep.wv.gov/oil-and-gas/Horizontal-and-gas/ 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.

WV Department of Environmental Protection

WW-6A (8-13) API NO. 47-103 7 1 0 3 0 3 2 6 5 OPERATOR WELL NO. BIG 203/08/2019 Well Pad Name: BIG245

Notice is hereby given by:

Well Operator: EQT Production Company

Telephone: 304-848-0035 Email: espine@eqt.com Address: 2400 Ansys Drive Suite 200 Canonsburg PA 15317

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

OFFICIAL SEAL
NOTARY PUBLIC
STATE OF WEST VIRGINIA
REBECCA L. WANSTHEET
EOT PHODUCTION COMPANY
PO BOX 280
BRIDGEPOPT. W 28330
My commission expires April 97, 2020

Subscribed and sworn before me this \_\_\_\_\_\_ day of November 2018.

My Commission Expires 4-7-2020

Office of Oil and Gas

NOV 7 2018

WV Department of Environmental Protection

4710303265 WATER SOURCE LOCATIONS FOR JOSEPH SHIBEN ET AL LEASE **BIG245 WELLS** 898 Gas Wello Gas Well BIG245 WELLS Gas Well's Gas We Gas Well? SCALE: 1-INCH=1000-FEETNOV 7 20 LEGEND Gas 2000' W Department 1000 WATER WELL Cem Environme CREEK TOPO SECTION OF: EQT PRODUCTION COMPANY BIG RUN, WV 7.5' QUAD 115 PROFESIONAL PLACE Land & Energy Development DISTRICT COUNTY TAX MAP-PARCEL NO. P.O. BOX 280

DATE CA 07/19/18 7812WSE

GRANT

WETZEL

08-22

BRIDGEPORT, WV 26330

# **Surface Owners:**

ET Blue Grass LLC 625 Liberty Avenue Suite 1700 Pittsburgh, PA 15222

Ikey J. Willey 12359 Willey Fork Road Pine Grove, WV 26419

# Surface Owners (road or other disturbance):

ET Blue Grass LLC 625 Liberty Avenue Suite 1700 Pittsburgh, PA 15222

Wanda L. Byard 1250 Meadowlane Drive Lewisport, KY 42351

Neal Utt 1204 Big Run Road Burton, WV 26562

# Surface Owners (Pits or impoundments or AST):

ET Blue Grass LLC 625 Liberty Avenue Suite 1700 Pittsburgh, PA 15222

# **Coal Owner**

ET Blue Grass LLC 625 Liberty Avenue 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

Office of Oil and Gas

NOV 7 2018

Wy Department of Protection

### **Surface Owners:**

ET Blue Grass LLC 
625 Liberty Avenue Suite 1700
Pittsburgh, PA 15222

Ikey J. Willey 12359 Willey Fork Road Pine Grove, WV 26419

# Surface Owners (road or other disturbance):

ET Blue Grass LLC 625 Liberty Avenue Suite 1700 Pittsburgh, PA 15222

Wanda L. Byard 1250 Meadowlane Drive Lewisport, KY 42351

Neal Utt 1204 Big Run Road Burton, WV 26562

# Surface Owners (Pits or impoundments or AST):

ET Blue Grass LLC 625 Liberty Avenue Suite 1709 W Pittsburgh, PA 15222

## Coal Owner

ET Blue Grass LLC 625 Liberty Avenue 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

Office of Oil and Gas

NOV 7 2018

WW Department Control Protection

API NO. 47-103 -	03/08/2019
OPERATOR WELL NO.	BIG245H4
Well Dad Name: BIG245	<del></del>

## STATE OF WEST VIRGINIA

# DEPARTMENT OF ENVIRONMENTAL PROTECTION, OFFICE OF OIL AND GAS

# VOLUNTARY STATEMENT OF NO OBJECTION

# Instructions to Persons Named on Page WW-6A

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

### **Comment and Waiver Provisions**

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

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

# VOLUNTARY STATEMENT OF NO OBJECTION

I, Jason Ranson , hereby state that I have real provisions listed above, and that I have received copies of WW-6A and attachments consisting of pages one (1) through required, and the well plat, all for proposed well work on the State: ww County: Wetzel District: Grant Quadrangle: Big Run Watershed: Rockcamp Run of Wiley Fork  I further state that I have no objection to the planned work dissued on those materials.	a Notice of Applications ough, tract of land as follo UTM NAD 83 Public Road Acces Generally used far	ion, an App including the ows: Easting: Northing: ss: rm name:	blication for a Well Work Permit on Form the erosion and sediment control plan, if  537022.39  4382942.54  Rt. 19/2  E.T. Bluegrass LLC
*Please check the box that applies	FOR	EXECUTI	ON BY A NATURAL PERSON
SURFACE OWNER	Signa	ture:	/
■ SURFACE OWNER (Road and/or Other Disturbar	nce) Print	Name:	
■ SURFACE OWNER (Impoundments/Pits)	FOR	EXECUTI	ON BY A CORPORATION, ETC.
■ COAL OWNER OR LESSEE	Comp	oany: E.T. Blue	
☐ COAL OPERATOR		ason Ranson Pirector, Drilling L	and NOV 230
☐ WATER PURVEYOR	Signa	iture:	1/1/18
☐ OPERATOR OF ANY NATURAL GAS STORAG	Dete		Environmental Protection

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.

WW-6A4 (1/12)

Operator Well No. BIG245H4 03/08/2019

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

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

elivery met	hod pursuant to West Virginia Code § 22-6	A-16(b)	
] HAND	CERTIFIED MAIL		
DELIVE	RETURN RECEIPT REQUE	STED	
ceipt requestilling a horithis subsection ma	V. Va. Code § 22-6A-16(b), at least ten days peted or hand delivery, give the surface owner reizontal well: <i>Provided</i> , That notice given purtion as of the date the notice was provided to any be waived in writing by the surface owner. le, facsimile number and electronic mail address.	notice of its intent to enter upon the suant to subsection (a), section te the surface owner: <i>Provided, how</i> . The notice, if required, shall incl	ne surface owner's land for the purpose of n of this article satisfies the requirements vever, That the notice requirements of this and the name, address, telephone number,
	reby provided to the SURFACE OWNI	• •	
Vame: See Atta	ched	Name: See Attached Address:	<del></del>
	Vest Virginia Code § 22-6A-16(b), notice is horner's land for the purpose of drilling a horizo www.  Wetzel  Grant  Big Run  Rockcamp Run of Wiley Fork  Shall Include:	ntal well on the tract of land as fo UTM NAD 83 Easting: Northing: Public Road Access:	
ursuant to Vacsimile nun	West Virginia Code § 22-6A-16(b), this not ober and electronic mail address of the oper	ator and the operator's authorize	d representative. Additional information
Pursuant to Vacsimile nun elated to hor ocated at 601 Votice is he Vell Operato	West Virginia Code § 22-6A-16(b), this not observed and electronic mail address of the oper izontal drilling may be obtained from the Se 57th Street, SE, Charleston, WV 25304 (304-reby given by:  EQT Production Company	rator and the operator's authorized cretary, at the WV Department of 1926-0450) or by visiting www.de Authorized Representative:	ed representative. Additional information f Environmental Protection headquarters, p.wv.gov/oil-and-gas/pages/default.aspx.  Erin Spine
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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 <a href="mailto:deprivacyofficer@wv.gov">deprivacyofficer@wv.gov</a>.

# **Surface Owners:**

ET Blue Grass LLC 625 Liberty Avenue Suite 1700 Pittsburgh, PA 15222

Ikey J. Willey 12359 Willey Fork Road Pine Grove, WV 26419

# Surface Owners (road or other disturbance):

ET Blue Grass LLC 625 Liberty Avenue Suite 1700 Pittsburgh, PA 15222

Wanda L. Byard 1250 Meadowlane Drive Lewisport, KY 42351

Neal Utt 1204 Big Run Road Burton, WV 26562

# Surface Owners (Pits or impoundments or AST):

ET Blue Grass LLC 625 Liberty Avenue Suite 1700 / Pittsburgh, PA 15222

Office of Oil and Gas

NOV 7 2018

WV Department of Environmental Protection

WW-6A4W (1/12)

Operator Well No. BIG 45/18/2019

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

# **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.

Surface Own	ier Waiver:			
I, E.T. Bluegrass	that , hereby state that	I have read the notice pro	ovisions listed	d above and hereby waive the
notice require	ements under West Virginia Code §	22-6A-16(b) for the tract	t of land as fo	llows:
State:	wv	TITM NIATS 02	Easting:	537022.39
County:	Wetzel	UTM NAD 83	Northing:	4382942.54
District:	Grant	Public Road Acc	cess:	Rt. 19/2
Quadrangle:	Big Run	Generally used t	farm name:	E.T. Bluegrass LLC
Watershed:	Rockcamp Run of Wiley Fork	··· =		
	Ranson- Director, Drilling Land Liberty Ave, Suite 1700	Signature:	J.	pyl-
Pittsburgh, PA 15		Date:		

Oil and Gas Privacy Notice:

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

Office of Oil and Gas

NOV 7 2018

WV Department of Environmental Protection

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

Date of Notic	Requirement: notice shall be provide: _11/2/18 Date Per	mit Application Filed: 11 2 18		
Delivery met	hod pursuant to West Virginia Co	ode § 22-6A-16(c)		
■ CERTII	FIED MAIL	☐ HAND		
	RN RECEIPT REQUESTED	DELIVERY		
return receipt the planned of required to be drilling of a l damages to th (d) The notice of notice.	requested or hand delivery, give the operation. The notice required by a provided by subsection (b), section horizontal well; and (3) A proposed se surface affected by oil and gas oper required by this section shall be g	e surface owner whose land will be used this subsection shall include: (1) A cop in ten of this article to a surface owner who d surface use and compensation agreem perations to the extent the damages are co- given to the surface owner at the address	olication, an operator shall, by certified mail for the drilling of a horizontal well notice of by of this code section; (2) The information ose land will be used in conjunction with the ent containing an offer of compensation for impensable under article six-b of this chapter. listed in the records of the sheriff at the time	
	eby provided to the SURFACE O' s listed in the records of the sheriff			
Name: See Atta	ched	Name:	Name:	
	eby given: /est Virginia Code § 22-6A-16(c), n	Address:		
Notice is here Pursuant to W operation on State: County:	eby given: /est Virginia Code § 22-6A-16(c), n the surface owner's land for the pur W Wetzel	Address: notice is hereby given that the undersigne rpose of drilling a horizontal well on the UTM NAD 83  Output  Description:	ract of land as follows: 537022,39 4382942.54	
Notice is here Pursuant to W operation on State: County: District:	eby given: /est Virginia Code § 22-6A-16(c), n the surface owner's land for the pur WW Wetzel Grant	Address:	ract of land as follows: 537022.39 : 4382942.54 Rt. 19/2	
Notice is here Pursuant to W pperation on State: County:	eby given: /est Virginia Code § 22-6A-16(c), n the surface owner's land for the pur W Wetzel	Address: notice is hereby given that the undersigne rpose of drilling a horizontal well on the UTM NAD 83  Output  Description:	ract of land as follows: 537022.39 : 4382942.54 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: //est Virginia Code § 22-6A-16(c), n the surface owner's land for the pur  W/  Wetzel  Grant  Big Run  Rockcamp Run of Wiley Fork  Shall Include: //est Virginia Code § 22-6A-16(c), t ed by W. Va. Code § 22-6A-10(b) ell; and (3) A proposed surface use a ed by oil and gas operations to the elated to horizontal drilling may b located at 601 57th Street, SE,	Address:	ract of land as follows: 537022.39 : 4382942.54 Rt. 19/2	
Notice is here Pursuant to We peration on State: County: District: Quadrangle: Watershed:  This Notice S Pursuant to We to be provide thorizontal we surface affect information re meadquarters, gas/pages/def	eby given: //est Virginia Code § 22-6A-16(c), n the surface owner's land for the pur W/ Wetzel Grant Big Run Rockcamp Run of Wiley Fork  Shall Include: //est Virginia Code § 22-6A-16(c), t ed by W. Va. Code § 22-6A-10(b) ell; and (3) A proposed surface use a ed by oil and gas operations to the elated to horizontal drilling may b located at 601 57 <sup>th</sup> Street, SE, ault.aspx.	Address:  notice is hereby given that the undersigne rpose of drilling a horizontal well on the response to the response of drilling a horizontal well on the response of drilling a horizontal well and surface owner whose land will be and compensation agreement containing extent the damages are compensable use obtained from the Secretary, at the W. Charleston, WV 25304 (304-926-045)	ract of land as follows:  537022.39  : 4382942.54  Rt. 19/2  E.T. Bluegrass LLC  Is code section; (2) The information required a used in conjunction with the drilling of a an offer of compensation for damages to the order article six-b of this chapter. Additional IV Department of Environmental Protection	
Notice is here Pursuant to We operation on State: County: District: Quadrangle: Watershed:  This Notice Sepursuant to We obe provided provided and p	eby given: //est Virginia Code § 22-6A-16(c), n the surface owner's land for the pur W/ Wetzel Grant Big Run Rockcamp Run of Wiley Fork  Shall Include: //est Virginia Code § 22-6A-16(c), t ed by W. Va. Code § 22-6A-10(b) ell; and (3) A proposed surface use a ed by oil and gas operations to the elated to horizontal drilling may b located at 601 57 <sup>th</sup> Street, SE, ault.aspx.	Address:  notice is hereby given that the undersigne rpose of drilling a horizontal well on the response to the response of drilling a horizontal well on the response of drilling a horizontal well and surface owner whose land will be and compensation agreement containing extent the damages are compensable use obtained from the Secretary, at the W. Charleston, WV 25304 (304-926-045)	ract of land as follows:  537022,39  : 4382942.54  Rt. 19/2  E.T. Bluegrass LLC  as code section; (2) The information required a used in conjunction with the drilling of a an offer of compensation for damages to the inder article six-b of this chapter. Additional V Department of Environmental Protection (0) or by visiting <a href="https://www.dep.wv.gov/oil-and-number-19">www.dep.wv.gov/oil-and-number-19</a>	

Oil and Gas Privacy Notice:

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

### **Surface Owners:**

ET Blue Grass LLC 625 Liberty Avenue Suite 1700 / Pittsburgh, PA 15222

Ikey J. Willey 12359 Willey Fork Road Pine Grove, WV 26419

# Surface Owners (road or other disturbance):

ET Blue Grass LLC 625 Liberty Avenue Suite 1700 Pittsburgh, PA 15222

Wanda L. Byard 1250 Meadowlane Drive Lewisport, KY 42351

Neal Utt 1204 Big Run Road Burton, WV 26562

# Surface Owners (Pits or impoundments or AST):

ET Blue Grass LLC 625 Liberty Avenue Suite 1700 / Pittsburgh, PA 15222

Office of Oil and Gas

NOV 7 2018

WW Department of Environmental Protection

API NO. 47-103 -	03/08/2019
OPERATOR WELL NO.	BIG245H4
Well Pad Name: BIG245	

# STATE OF WEST VIRGINIA

# DEPARTMENT OF ENVIRONMENTAL PROTECTION, OFFICE OF OIL AND GAS

# VOLUNTARY STATEMENT OF NO OBJECTION

### Instructions to Persons Named on Page WW-6A

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

### Comment and Waiver Provisions

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

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

# VOLUNTARY STATEMENT OF NO OBJECTION

*Please check the box that applies  SURFACE OWNER SURFACE OWNER (Road and/or Other Disturbance)  SURFACE OWNER (Impoundments/Pits)  SURFACE OWNER (Impoundments/Pits)  COAL OWNER OR LESSEE COAL OPERATOR  WATER PURVEYOR  OPERATOR OF ANY NATURAL GAS STORAGE FIELD  FOR EXECUTION BY A NATURAL PERSON  Signature: Print Name: Date: Date	provisions lis WW-6A and required, and State: County: District: Quadrangle: Watershed:  I further state	, hereby state that I have read ted above, and that I have received copies of a attachments consisting of pages one (1) thro the well plat, all for proposed well work on the wwwwetzel  Grant  Big Run  Rockcamp Run of Wiley Fork  that I have no objection to the planned work de	Notice of App ough tract of land as UTM NAD 8 Public Road Generally use	olication, an Application, including follows:  Easting: Northing: Access: ad farm name:	plication for a Well Work Permit on Form the erosion and sediment control plan, if  537022.39  4382942.54  Rt. 19/2  E.T. Bluegrass LLC
■ SURFACE OWNER (Road and/or Other Disturbance)  ■ SURFACE OWNER (Impoundments/Pits)  ■ COAL OWNER OR LESSEE  □ COAL OPERATOR  □ WATER PURVEYOR  Signature:  Print Name:  Date:  Print Name:  Date:  Print Name:  Date:  Print Name:  Date:  Signature:  Print Name:  Date:  Date:  NOV  7 2018	issued on thos	se materials.			
■ SURFACE OWNER (Road and/or Other Disturbance)  ■ SURFACE OWNER (Impoundments/Pits)  FOR EXECUTION BY A CORPORATION, ETC.  Company: E.T. Bluegrass LLC.  By: Jason Ranson  Its: Director, Drilling Land  NOV  7 2018	*Please check	the box that applies	]	FOR EXECUT	ION BY A NATURAL PERSON
■ SURFACE OWNER (Road and/or Other Disturbance)  ■ SURFACE OWNER (Impoundments/Pits)  FOR EXECUTION BY A CORPORATION, ETC.  Company: E.T. Bluegrass LLC.  By: Jason Ranson  Its: Director, Drilling Land  NOV  7 2018	■ SURFAC	CE OWNER		Signature:	
■ SURFACE OWNER (Impoundments/Pits)  FOR EXECUTION BY A CORPORATION, ETC.  Company: E.T. Bluegrass LLC.  By: Jason Ranson  Its: Director, Drilling Land  NOV  Value of Olivaria Gas	■ SURFAC	CE OWNER (Road and/or Other Disturband	re) I	Print Name:	
© COAL OWNER OR LESSEE  Company: E.T. Bluegrass LLC.  By: Jason Ranson  Its: Director, Drilling Land  NOV  7 2018	■ SURFAC	CE OWNER (Impoundments/Pits)			
□ WATER PURVEYOR Signature: NUV 7 2018	■ COAL C	OWNER OR LESSEE	(	Company: E.T. Blu	egrass LLC.
□ WATER PURVEYOR Signature: NUV 7 2018	□ COAL O	PERATOR			Land Office of Oil and Co
OPERATOR OF ANY NATURAL GAS STORAGE FIELD  Date:  Environmental two of	□ WATER	PURVEYOR		Signature: _	NIV A
	□ OPERA	TOR OF ANY NATURAL GAS STORAG	E FIELD	Date:	Environmental Protection

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.



# WEST VIRGINIA DEPARTMENT OF TRANSPORTATION

# **Division of Highways**

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

Thomas J. Smith, P. E. Secretary of Transportation/ Commissioner of Highways

Reissued July 18, 2018

Jili M. Newman Deputy Commissioner

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

BIG245H5 BIG245H6 BIG245H7 BIG2	45H8
BIG245H5 BIG245H6 BIG245H7 BIG2	
BIG245H9 BIG245H10 BIG245H11 BIG2	45H12
BIG245H13 BIG245H14 BIG245H15 BIG2	45H16
BIG245H17 BIG245H18 BIG245H19 BIG2	45H20
BIG245H21 BIG245H22 BIG245H23 BIG2	45H24
BIG245H25 BIG245H26 BIG245H27 BIG2	45H28
BIG245H29 BIG245H30	

Dear Mr. Martin,

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.

RECEIVED Office of Oil and Gas

103-03265

Very Truly Yours,

NOV 7 2018

Gary K. Clayton, P.E.

WV Department of Environmental Protection

Regional Maintenance Engineer Central Office O&G Coordinator

Nick Bumgardner Cc:

**EQT Production Company** CH, OM, D-6, File

JUL 25 2018

RECEIVED

Office of Oil and Gas

WV Department of **Environmental Protection** 

# Anticipated Frac Additives Chemical Names and CAS numbers

Material	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

RECEIVED
Office of Oil and Gas

NOV 7 2018

WV Department of Environmental Protection

#### PROJECT INFORMATION

PROJECT NAME: FOT BIG 245 TAX PARCEL GRANT DISTRICT, WETZEL COUNTY, WV MAP 08 PARCELS 08, 14, 21, 22

SURFACE DWINER:
WANDA L. SYARD
MAP 08, PARCEL 08
GRANT DISTRICT, WETZEL COUNTY, WY
TOTAL PROPERTY AREA: 58,16 +/- ACRES
TOTAL DISTURBANCE AREA: 4.05 +/- ACRES MAP 08, PARCEL 14 GRANT DISTRICT, WETZEL COUNTY, WV

TOTAL DISTURBANCE AREA: 6,14 =/- AGRES MEY JOE WILLEY
MAP 08, PARCEL 21
GRANT DISTRICT. WETZEL COUNTY, WV
TOTAL PROPERTY AREA; 76,27 %- ACRES
TOTAL DISTURBANCE AREA; 0,46 4/4 ACRES

ET BLUE GRASS LLC. MAP 08, PARCEL 22 GRANT DISTRICT. WETZEL COUNTY, WV TOTAL PROPERTY AREA: 138,83 14. ACRES TOTAL DISTURBANCE AREA: 29,07 +4. ACRES OIL AND GAS ROYALTY OWNER:

SHIBEN ESTATER, INC. GRANT DISTRICT, WETZEL COUNTY, WY TOTAL PROPERTY AREA: 140.0 1/4 ACRES

THE EQT BIG 245 ACCESS ROAD ENTRANCE IS LOCATED 4,427+/
NORTHEAST OF THE JUNCTION OF CORT. 19 AND CO. RT. 19/2. THE WELL PAD IS LOCATED 1.9 MILES +/- NORTHEAST OF THE JUNCTION OF CO. RT. 15 AND CO. RT. 19.

### LOCATION COORDINATES

FOT HIG 245 CONSTRUCTION ENTRANCE LATITUDE: 30 SQUEDO L'ONGITUDE: 40 SEZREZ (NAD 83)

EQT BIG 245 WELL PAD CENTER LATITUDE: 39.595411 LONGITUDE: -80.568809 (NAD 83)

EQT BIG 245 AST TANK CENTER LATITUDE: 39,598373482 LONGITUDE: -80,56789453 (NAD 83)

### GENERAL DESCRIPTION

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

### SITE DISTURBANCE COMPUTATIONS

WELL PADE 5.78 HL ACRES (WELL PADE 5.76 + A. ACMES)
AST PADE 1.50 + A. ACMES
(MAIN ACCESS ROAD) = 5.76 + A. ACMES
(STOCKPLES = 25.33 + A. ACMES
(TOTAL SITE DISTURBANCE AREA = 40.35 + A. ACMES

### ENTRANCE PERMIT

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

### MISS UTILITY STATEMENT

MISS UTILITY OF WEST VIRGINIA WAS NOTED FOR THE LOCATING OF UTILITIES PRIOR TO THIS PROJECT DESIGN: TICKET #132598835 IN ADDITION, MISS UTILITY WILL BE CONTACTED PRIOR TO START OF THE

#### GEOTECHNICAL NOTES

A SUBSURFACE INVESTIGATION HAS BEEN PERFORMED FOR THIS SITE AND GEDTECHNICAL REPORT HAS BEEN PRARED BY LARSON DESIGN GROUP DATED 100/2003 I. THE ENGINEER AND SURVEYORARE NOT RESPONSIBLE FOR UNFORSEEN SUBSURFACE INVESULABITIES GAUSING ADDITIONAL WORK OR ADDITIONAL CONSTRUCTION MEASURES REQUIRED BEYOND THOSE STANDARD PRACTICES SHOWN ON THIS PLANAS A RESULT OF ANY OTHER GEORECHINAL COMPLICATIONS ENCOUNTERED DURING CONSTRUCTION.

### **ENVIRONMENTAL NOTES**

U.S., INCLUDING WETLAND FILLS AND STREAM CROSSINGS

# EQT BIG 245 SITE PLAN EQT PRODUCTION COMPANY

PERMITTED WELL NO. WV 514365, API 47-103-03154 PROPOSED WELL NO. BIG245H1 BIG245H2, BIG245H3, BIG245H4, BIG245H5, BIG245H6, BIG245H7, BIG245H8, BIG245H9. BIG245H10, BIG245H11, BIG245H12, BIG245H14, BIG245H15, BIG245H16, BIG245H17

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



#### RESTRICTIONS NOTES

- 1. THERE ARE INTERMITTENT STREAMS, LAKES, PONDS, OR RESERVOIRS WITHIN 100 FEET OF THE PROJECT LOD, THERE 1. THERE ARE INTERNATIFIENT 3 THEAMS, LAKES, POINS, OR RESERVOIRS WITHIN TO VIETE OF THE PROJECT LOD, TH-HE ARE WETLANDS WITHIN 100 FEET OF THE LOD, AND A MAYNER FROM THE WIDDE WILL BE APPLIED FOR THIS CHAPTER OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE PROJECT LOD, TH-HE ARE NO OR OWNERS OF ENGINEERS BY EQ IPRODUCTION COMPANY.
  2. THERE ARE NO GROUNDWATER WITHIN OR PROJECT STREAMS WITHIN 300 FEET OF THE PAD AND LOD.
  3. THENE ARE NO GROUNDWATER WITHIN OR PUBLIC OF THE PAD AND LOD.
  4. THERE ARE NO DESIGNIS WATER WILLS OR DEVELOPED SPRINGS WITHIN 320 FEET OF THE WELLS) SEENS DRILLED.
- STANTEG AND SMITH LAND SURVEYING ARE NOT RESPONSIBLE FOR ANY EXISTING WATER WELL DEVELOPED SPRING DISCOVERED DURING CONSTRUCTION
- DISCOVERED DUNING COMS FOR WITHOUT THE PAIR. 5. THERE ARE NO OCCUPIED DWELLING STRUCTURES WITHIN 850 FEET OF THE CENTER OF THE PAIR. 6. THERE ARE NO AGRICULTURAL BUILDINGS LARGER THAN 2500 SQUARE FEET OF THE CENTER OF THE PAIR.
- MISS Utility of West Virginia 1-803-245-4848 1-505-245-4848
  West Virginis State Law
  (Section XIV. Chapter 24-C)
  Requires that you call two
  costness days before you dig in
  the state of West Virginia.
  IT'S THE LAW!!

BIG RUN QUADRANGLE WEST VIRGINIA 7.6 MINUTE SERIES





	LIST OF DRAWINGS
SHEET NO.	DESCRIPTION
Ť	COVER SHEET
2	GENERAL NOTES
3	OVERALL PLAN SHEET INDEX
4-8	WELL PAD LAYOUT
g	ACCESS ROAD PROFILES
10	WELL PAD PROFILES
11-12	ACCESS ROAD CROSS SECTIONS
13-17	WELL PAD CROSS SECTIONS
18-22	AST TANK PAD CROSS SECTIONS
23-24	EXCESS MATERIAL STOCKPILE PROFILES
25-46	EXCESS MATERIAL STOCKPILE CROSS SECTIONS
47	RECLAMATION PLAN
48	TYPICAL ACCESS ROAD CROSS SECTIONS
49-51	CONSTRUCTION DETAILS
52	CONSTRUCTION QUANTITIES
53	RECLAIMATION QUANTITIES

LEGEND		
EX. INDEX CONTOUR EX. INTERMEDIATE CONTOUR EX. BONDARY LINE EX. EDGE OF RADD AVEMENT EX. FENCELINE EX. FENCELINE EX. OATE EX. OATE EX. OATE EX. OVERHEAD UTILITY RW EX. UTILITY POLE EX. CLY WINBE EX. CLY WINBE EX. GASLINE EX. GASLINE EX. GASLINE EX. GASLINE EX. GASLINE EX. WATERLINE	(55b	PROP. INDEX CONTOUR PROP. INTERMEDIATE CONTOUR PROP. GUT LINE PROP. GUT LINE PROP. LILLINE PROP. LIMITS OF DISTURBANCE SIMIRONIVENTAL ASSESSMENT AREA OF DELINATION PROP. WELL HEAD PROP. CONTAINMENT BERM PROP. ROAD CENTERLINE PROP. VICTOH WITH CHECK DAMS PROP. PROP. GUTCH PROP. PROP. PROP. PROTECTION PROP. PROP. PROP. PROTECTION PROP. PROP. PROP. PROTECTION PROP. PROP. PROTECTION PROP. PROP. PROTECTION PROP. PROP. PROTECTION PROP. PROP. PROP. PROTECTION PROTECTIO
EX WATER WELL  EX GAS WELL  EX TRESUNE  EX REFERENCE YREE  EX DELINEATED STREAM  EX DELINEATED WETLAND  EX BUILDING	\$\langle \frac{\phi}{\phi}	PROP, RIP-RAP INLET PROTECTION PROP, COMPOST PI, TERSOCK PROP, TREELINE PROP, STONE CONSTRUCTION ENTRANCE X-SECTION GRID INTERMEDIATE X-SECTION PROPOSED GRADE X-SECTION EXISTING GRADE

### **OPERATOR**

EQT PRODUCTION COMPANY OPERATOR ID: 306685 P.O. BOX 250 BRIDGEPORT, VM 26630 PHONE: (304) 348-3870

# **ENGINEER**

STANTEC CONSULTING INC. 111 ELKING STREET FAIRMONT, WAY 2655 PHONE: (304) 367-940

### SURVEYOR

SMITH LAND SURVEYING, INC. PO BOX 150 226 WEST MAIN STREET

A REVISED MATURBANCE AREAS



245

Stante

DATE: 01-19-2016 CALL AS SHOWN CHECKED: JOV REMEMBED: RLG

FILE NO: SLS-7512 SHIET 1 CF 13 REV: 07-21-2018

