

## west virginia department of environmental protection

Office of Oil and Gas 601 57th Street, S.E. Charleston, WV 25304 (304) 926-0450 fax: (304) 926-0452 Earl Ray Tomblin , Governor Randy C. Huffman , Cabinet Secretary www.dep.wv.gov

Tuesday, October 25, 2016 WELL WORK PERMIT Horizontal 6A / Horizontal 6A Well - 1

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

Re: Permit approval for 516600 47-095-02371-00-00

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: 516600

Farm Name: PETER, DONNA J.

U.S. WELL NUMBER: 47-095-02371-00-00

Horizontal 6A / Horizontal 6A Well - 1

Date Issued: 10/25/2016

Promoting a healthy environment.

API Number:	
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## PERMIT CONDITIONS 47 0 9 5 0 2 3 7 1

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

### **CONDITIONS**

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

WW-6B (04/15)

.PI NO. 47- <u>95      </u>	
OPERATOR WELL NO. 516600	
Well Pad Name: WEU4	

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

1) Well Opera	tor: EQTP	roduction	n Company	306686	Tyler	Centerville	West Union
				Operator ID	County	District	Quadrangle
2) Operator's	Well Numbe	r: <u>516600</u>	)	Well P	ad Name: WE	U4	
3) Farm Name	:/Surface Ow	ner: Don	na J. Peter	Public Ro	oad Access: <u>V</u>	W-18	
4) Elevation, c	current groun	d: 1079	9 E	Elevation, propose	d post-constru	ction: 1079	
5) Well Type	(a) Gas	<u>x</u>	Oil	Un	derground Sto	rage	
	Other	ClII	~		·····		
	(b)If Gas	Shallow		Deep			
6) Existing Page	d· Yes or No	Horizon Yes	tal X	<del> </del>			Jm H
7) Proposed Ta		ion(s), De		cipated Thickness s 6649	and Expected	Pressure(s):	6/7/16
8) Proposed To	otal Vertical	Depth: 6	680				
9) Formation a	at Total Verti	cal Depth	: Marcellu	ls			
10) Proposed 7	Total Measur	ed Depth:	16406				
11) Proposed I	Horizontal Le	eg Length	8122				
12) Approxima	ate Fresh Wa	iter Strata	Depths:	132,175,186,2			
13) Method to	Determine F	resh Wate	er Depths:	By Offset wells		4700	02371
14) Approxima	ate Saltwater	Depths:	1128,1219	,1222		95	022
15) Approxima	ate Coal Sear	n Depths:	230,281,6	396			-371
16) Approxima	ate Depth to	Possible \	/oid (coal m	nine, karst, other):	None report	ed	
17) Does Propdirectly overly					1	No X	
(a) If Yes, pr	ovide Mine I	nfo: Na	me:				
		De	pth:				· · · · · · · · · · · · · · · · · · ·
1/2 /1		Sea	.m:	-		Received	
J. 14/1/		Ow	/ner:		Off	ice of Oil R	Gas
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WW-6B	
(04/15)	

API NO. 4795
OPERATOR WELL NO. 516600
Well Pad Name: WEU4

18)

## **CASING AND TUBING PROGRAM**

ТҮРЕ	Size (in)	New or Used	<u>Grade</u>	Weight per ft. (lb/ft)	FOOTAGE: For Drilling (ft)	INTERVALS: Left in Well (ft)	CEMENT: Fill-up (Cu. Ft.)/CTS
Conductor	20	New	A-500	78.6	40	40	60 ft^3 / CTS
Fresh Water	13 3/8	New	J-55	54.5	750	750	668 ft^3 / CTS
Coal							
Intermediate	9 5/8	New	A-500	40	2865	2865	1126 ft^3 / CTS
Production	5 1/2	New	P-110	20	16406	16406	500° above top producing zone
Tubing	2 3/8		J-55	4.7		May not be run, if run set 40'	
Liners			-			above top perf or 80° inclination	

DM H 6.7-16

ТҮРЕ	Size (in)	Wellbore Diameter (in)	<u>Wall</u> <u>Thickness</u> <u>(in)</u>	Burst Pressure (psi)	Anticipated Max. Internal Pressure (psi)	Cement Type	Cement Yield (cu. ft./k)
Conductor	20	26	.375	1378	1102	Class A	1.18
Fresh Water	13 3/8	17 1/2	.38	2700	2160	See Variance	1.19
Coal							1.10
Intermediate	9 5/8	12 3/8	.395	3950	3160	Class H	1.07
Production	5 1/2	8 1/2	.361	12640	10112	Class H	1.07/1.86
Tubing	2 3/8	NA	.19	7700			
Liners		***					



4709502371

## **PACKERS**

Kind:		
Sizes:		
Depths Set:		

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JUN 1 4 2016

WW-6B	,
(10/14)	

API NO. 47- 95 OPERATOR WELL NO. 516600
Well Pad Name: WEU4

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 2935'. Kick off and drill curve. Drill the lateral in the Marcellus. Cement casing.

Om H 6-7-16

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

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

- 21) Total Area to be disturbed, including roads, stockpile area, pits, etc., (acres): 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 slumes, .25% Flake Loss Circulation Material (LCM) is used to combat the loss of the cement slumy to a thief zone. Intermediate (Type 1 Cement): 0-3% Calcium Chloride. Salt is used in shallow, low temperature formations to speed the setting of cement slumes. 0.25% flake. Loss Circulation Material (LCM) is used to combat the loss of the cement slumy to a thief zone. Production:

Production:
Lead (Type H Cement): 0.2% CD-20 (dispersant makes cement easier to mix). .15% SuperFL-300 (fluid loss) engineers thickening time) .15% SEC-19 (fluid loss) 50:50 PO (extender) .15% SEC-10 (fluid loss) .2% SuperFL-350 (fluid loss) .2% Su

25) Proposed borehole conditioning procedures:

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

Production: Pump marker sweep with nut plug to determine actual hole washout. Calculate a gauge holes bottoms up volume. Perform a cleanup cycle by pumping 3-5 bottoms up or until the shakers are clean. Check volume of cuttings coming across the shakers every 15 minutes.

Office of Oil & Gas

\*Note: Attach additional sheets as needed.

15 / All

JUN 1 4 2016

Well

516600(WEU4H14)

**EQT Production** 

West Union Quad Tyler County, WV

Azimuth **Vertical Section** 8283.63

Note: Diagram is not to scale									
	Тор	Base			Casing and Cementing			Deepest Fresh Water	: 204'
Formations	TVD	TVD			Туре	Conductor	Surface	Intermediate	Production
Conductor		40			Hole Size, In.	26	17 1/2	12 3/8	8 1/2
				1117	Casing Size, OD In.	20	13 3/8	9 5/8	5 1/2
Base Fresh Water	2	04	1111	1 1 1	Casing Wall Thickness, In.	0.375	0.380	0.395	0.361
			111	111	Depth, MD	40°	750'	2,865'	16,406'
Surface Casing	7	50	4		Weight	78.6#	54.5#	40#	20#
					Grade	A-500	J-55	A-500	P-110
Base Red Rock	1	101		4.1	New or Used	New	New	New	New
			- 11		Burst (psi)	1378	2,700	3,950	12,640
			- 11	11	Cement Class	A	A / Type 1	Н	H
Maxton		- 2037	- 11	11	Cement Yield	1.18	1.19	1.07	1.07/1.86
Big Lime Weir		- 2395 - 2450			Top of Cement (Planned)	Surface	Surface	Surface	500' above top Producing Zone
Gantz	2490	- 2507	71	LI	Method	Displacement	Displacement	Displacement	Displacement
Fifty foot		- 2659	1.1		Est. Volume (cu ft)	60	668	1,126	3.051
Thirty foot Gordon Intermediate Casing Forth Sand Bayard Warren	2770 28 2841 3011	- 2744 - 2815 365 - 2903 - 3148 - 3440			Possible Additives	N/A	Calcium Chloride	Calcium Chloride, Fluid Loss, Defoamer, Dispersant, POZ, Bonding Agent, Extender, Retarder, Flake/LCM	Calcium Carbonate, Fluid Loss, Extender, Dispersent, Viscosifier, Defoamer, POZ, Bonding Agent, Retarder, Anti-Settling/Suspension Agent
Speechley Balltown A Riley Benson Alexander Sonyea Middlesex Genesee Geneseo Tully Hamilton Marcellus	3460 3976 4574 4995 5242 6328 6449 6496 6570 6605 6626 6649	- 3574 - 4088 - 4864 - 5058 - 5324 - 6449 - 6496 - 6570 - 6605 - 6626 - 6649 - 6702			17095023	on a constant so	44 NOVEMBER ON THE OWN OF		4/0
Onondaga	6702		Land cur		Artininas en		Est. TD @	6,680' 16,406'	TVD C

8,122 Lateral

Proposed Well Work:

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

Drill the vertical to an approximate depth of 2935'.

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

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**EQT Production** 

**Hydraulic Fracturing Monitoring Plan** 

Pad ID: WEU4

Tyler County, WV

8/22/16

### **Purpose**

The purpose of this pad-specific Hydraulic Fracturing Monitoring Plan is to identify and notify conventional well operators near EQT hydraulic fracturing in Tyler County, WV prior to hydraulic fracturing at the following EQT wells on the WEU4 pad: 516600

Due to the apparent presence of unique geological conditions, the potential for communication between deep geologic zones exists in this area. This potential communication, via natural gas, water, or both, may occur between hydraulically fractured wells in the Marcellus formation (approximately 6,600' TVD) and existing conventional natural gas wells in the partially-depleted, relatively high permeability Alexander formation (approximately 5,200' TVD).

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

## 1. Communications with Conventional Well Operators

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

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

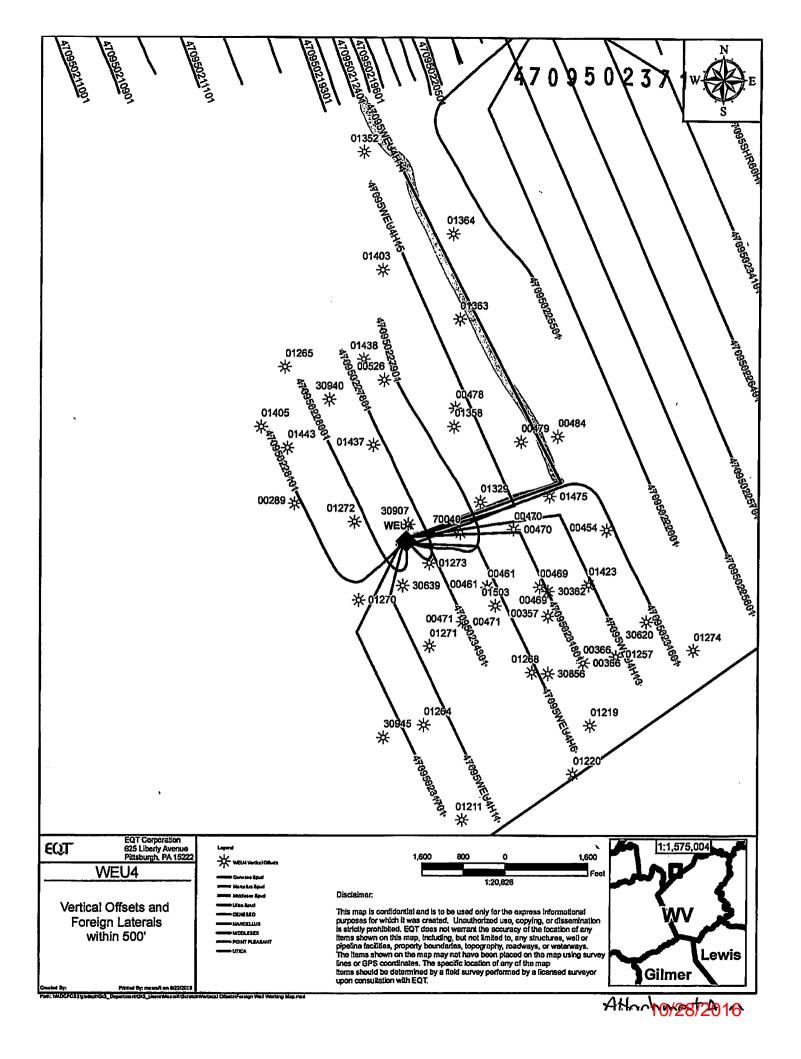
The letter provides recommendations to these conventional operators to 1) increase their monitoring of their wells during that time period, 2) ensure that their well head equipment is sound, and 3) provide immediate notification to EQT and the OOG in the event of any changes in their well conditions.

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

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

### 2. Reporting

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



UWI	Date Abandon	COMP DATE Operator	Elevation Datum Type	Status	LATITUDE	LONGITUDE	PERMIT Date PROJ FM Name	SPUD DATE TO FORM Name	TOTAL DEPTH
4709500366		3/19/1975 EQUITABLE GAS COMPANY	914 KB	SWDOP	39,3602	-80,8087	9/9/1974 UNKNOWN	9/19/1974 MISSISSIPPIAN	1942.00
4709500471		8/26/1975 EQUITABLE GAS COMPANY	933 GR	SWDOP	39.3624	-80.8169	8/2/1974 UNKNOWN	8/12/1974 GORDON /SD/	2576.00
4709501329		12/9/1989 CONSOL GAS COMPANY	1086 KB	GAS	39.3686	-80.8158	11/7/1989 BENSON /SD/	11/17/1989 BENSON /SD/	5200.00
4709501352		12/9/1989 CONSOL GAS COMPANY	1106 KB	GAS	39.3869	-80.8238	11/15/1989 BENSON /SD/	11/25/1989 DEVONIAN /SH/	5170.00
4709501403		8/17/1990 CONSOL GAS COMPANY	1008 KB	GAS	39,3808	-80,8225	7/23/1990 BENSON /SD/	8/2/1990 DEVONIAN /SH/	5210.00
4709501405		8/1/1990 DAC ENERGY LLC	986 KB	GAS	39.3726	-80.8308	7/9/1990 BIG INJUN /SD/	7/19/1990 BEREA	2136.00
4709501423		9/7/1990 CONSOL GAS COMPANY	1166 KB	GAS	39.3643	-80.8084	8/15/1990 BENSON /SD/	8/25/1990 DEVONIAN /SD/	5225.00
4709501475		6/11/1992 CONSOL GAS COMPANY	1192 KB	GAS	39.3689	-80.8111	5/10/1992 BENSON /SD/	5/20/1992 DEVONIAN /SD/	5284.00
4709501503		12/8/1992 CONSOL GAS COMPANY	998 GR	GAS	39.3632	-80.8148	10/4/1992 BENSON /5D/	10/14/1992 DEVONIAN /SD/	5100.00
4709501437		12/11/1990 CONSOL GAS COMPANY	982 KB	GAS	39.3716	-80.8231	10/23/1990 BENSON /SD/	11/2/1990 DEVONIAN /SD/	5100.00
4709501438		1/3/1991 CONSOL GAS COMPANY	1004 KB	GAS	39.3761	-80.8238	11/29/1990 BENSON /SD/	12/9/1990 DEVONIAN /SD/	5100.00
4709501443		1/2/1991 CONSOL GAS COMPANY	1054 KB	GAS	39.3715	-80.8290	11/22/1990 BENSON /SD/	12/2/1990 DEVONIAN /SD/	5150.00
4709500461		9/21/1973 EQUITABLE GAS COMPANY	919 GR	SWDOP	39.3642	-80.8153	8/10/1973 UNKNOWN	8/20/1973 DEVONIAN /SD/	2556.00
4709530940	7/5/1966	HOPE NATURAL GAS	O GR	PSEUDO	39.3740	-80.8261			
4709570040		CARTER OIL COMPANY	0 GR	PSEUDO	39,3670	-80.8171			
4709500469		1/17/1975 EQUITABLE GAS COMPANY	999 GR	SWDOP	39.3642	-80.8117	6/2/1974 UNKNOWN	6/12/1974 DEVONIAN /SD/	2659.00
4709500357	10/23/1974	9/1/1962 LENNOX OIL & GAS	947 GR	ABD-GW	39,3627	-80.8112	7/18/1962	8/2/1962 POCONO	2010.00
4709500366		1/1/1963 LENNOX OIL & GAS	886 GR	D&A-OG	39.3602	-80.8087	11/17/1962	12/2/1962 BIG INJUN /SD/	1942.00
4709500454	10/28/1949	6/27/1913 HOPE NATURAL GAS	1007 GR	ABD-GW	39.3672	-80.8072	5/1/1913	5/16/1913 HURON LOWER	2886.00
4709500471	5/17/1950	7/30/1910 HOPE NATURAL GAS	933 GR	ABD-GW	39.3624	-80.8169	6/14/1910	6/29/1910 HURON LOWER	3026.00
4709530362	9/2/1944	12/6/1910 HOPE NATURAL GAS	1022 GR	ABD-GW	39.3640	-80.8112	10/10/1910	10/25/1910 HURON LOWER	2661.00
4709530620	4/27/1950	3/10/1911 HOPE NATURAL GAS	905 GR	ABD-GW	39.3624	-80.8044	12/28/1910	1/12/1911 GORDON	2565.00
4709530639	6/14/1950	8/12/1911 HOPE NATURAL GAS	956 GR	ABD-GW	39.3643	-80.8211	6/2/1911	6/17/1911 POCONO	1999.00
4709530856	5/19/1955	6/20/1911 HOPE NATURAL GAS	968 GR	ABD-GW	39.3596	-80.8112	5/4/1911	5/19/1911 POCONO	2091.00
4709500289	10/24/1962	6/18/1960 STONESTREET LANDS	830 GR	ABDOGW	39,3686	-80.8285	5/10/1960	5/25/1960 BIG INJUN /SD/	1908.00
4709530945	12/7/1968	5/21/1914 CONSOLIDATED GAS SUPPLY CORPORATION	O GR	UNKWN	39.3563	-80.8224	4/6/1914	4/21/1914	-
4709530907	11/8/1959	2/16/1902 HOPE NATURAL GAS	0 GR	UNKWN	39.3675	-80.8207	1/2/1902	1/17/1902	
4709501358		1/25/1990 CONSOL GAS COMPANY	1034 KB	GA5	39.3726	-80.8176	12/20/1989 BENSON /SD/	12/30/1989 DEVONIAN /SD/	5100.00
4709501363		1/30/1990 CONSOL GAS COMPANY	1107 KB	GAS	39.3782	-80.8172	12/30/1989 BENSON /SD/	1/9/1990 DEVONIAN /SD/	5190.00
4709501364		9/26/1990 CONSOL GAS COMPANY	1065 KB	GAS	39.3826	-80.8177	9/1/1990 BENSON /SD/	9/11/1990 DEVONIAN /SD/	5200.00
4709500470		8/28/1974 EQUITABLE GAS COMPANY	1027 GR	GSTGW	39,3672	-80.8135	3/24/1974 BIG INJUN /SD/	4/3/1974 GORDON	2657.00
4709501265		11/8/1988 CONSOL GAS COMPANY	993 KB	GAS	39.3757	-80.8292	10/15/1988 BENSON /SD/	10/25/1988 DEVONIAN /SD/	4992.00
4709501268		2/26/1989 CONSOL GAS COMPANY	1020 KB	GAS	39.3597	-80.8122	2/3/1989 BENSON /SD/	2/13/1989 DEVONIAN /SD/	5100.00
4709501270	L <sup>2</sup>	2/23/1989 CONSOL GAS COMPANY	1072 KB	GAS	39.3635	-80.8241	1/29/1989 BENSON /SD/	2/8/1989 DEVONIAN /SD/	5200.00
4709501271		2/11/1989 CONSOL GAS COMPANY	953 KB	GAS	39.3611	-80.8192	1/17/1989 BENSON /SD/	1/27/1989 DEVONIAN /SD/	5102.00
4709501272		2/2/1989 CONSOL GAS COMPANY	1024 KB	GAS	39.3676	-80.8244	1/10/1989 BENSON /SD/	1/20/1989 DEVONIAN /SD/	5200.00
4709501273		2/17/1989 CONSOL GAS COMPANY	1130 KB	GAS	39.3654	-80.8193	1/23/1989 BENSON /SD/	2/2/1989 DEVONIAN /SD/	5300.00
4709501274		2/1/1991 CONSOL GAS COMPANY	1038 KB	GAS	39.3609	-80.8012	12/24/1990 BENSON /SD/	1/3/1991 DEVONIAN /SD/	5100.00
4709501211		10/10/1987 CONSOL GAS COMPANY	970 KB	GAS	39.3519	-80.8170	9/16/1987 BENSON /SD/	9/26/1987 DEVONIAN /SH/	5150.00
4709501219		12/14/1987 CONSOL GAS COMPANY	937 KB	GAS	39.3569	-80.8082	11/15/1987 BENSON /SD/	11/25/1987 DEVONIAN /SH/	5020.00
4709501220	0	1/7/1988 CONSOL GAS COMPANY	827 KB	GAS	39.3543	-80.8094	12/18/1987 BENSON /SD/	12/28/1987 DEVONIAN /SH/	4916.00
4709501257		10/24/1988 CONSOL GAS COMPANY	1030 KB	2GAS	39.3605	-80.8065	10/8/1988 BENSON /SD/	10/18/1988 DEVONIAN /SD/	5150.00
4709501264	ř.	11/15/1988 CONSOL GAS COMPANY	936 KB	GAS	39.3569	-80.8196	10/22/1988 BENSON /SD/	11/1/1988 DEVONIAN /SD/	5022.00
4709500478		9/1/1976 EQUITABLE GAS COMPANY	1049 GR	GAS	39.3736	-80.8175	7/18/1976	8/2/1976 BIG INJUN /SD/	2126.00
4709500479	n -	7/1/1977 EQUITABLE GAS COMPANY	1010 GR	GSTG	39.3718	-80.8130	5/17/1977	6/1/1977 GANTZ /SD/	2417.00
4709500484	i+	7/20/1977 EQUITABLE GAS COMPANY	1137 GR	GSTG	39.3721	-80.8105	6/12/1977	6/27/1977 GORDON	2450.00
4709500526		4/23/1980 EQUITABLE GAS COMPANY	1045 GR	GSTG	39.3750	-80.8224	8/2/1979	8/17/1979 POCONO	2170.00
4709500461		UNKNOWN	822 GR	PSEUDO	39.3642	-80.8153		-11	22,5.00
4709500469	r .	UNKNOWN	999 GR	PSEUDO	39,3642	-80.8117			N N
4709500470		UNKNOWN	1027 GR	PSEUDO	39.3672	-80.8135			

uwı	Name	Depth Top	Base Depth
47095012700000	BIG LIME	1920	2030
47095012700000	BIG INJUN /SD/	2030	2130
47095012700000	GORDON /SD/	2690	2750
47095012700000	RILEY /SD/	4550	4610
47095012700000	BENSON /SD/	4970	5040
47095014030000	BIG LIME	1868	1932
47095014030000	BIG INJUN /SD/	1976	2075
47095014030000	BEREA	2428	2430
47095014030000	RILEY /SD/	4512	4560
47095014030000	BENSON /SD/	4933	
47095013290000	BIG LIME	1870	2010
47095013290000	BIG INJUN /SD/	2010	2110
47095013290000	RILEY /SD/	4510	4580
47095013290000	BENSON /SD/	4580	5200
47095012740000	LITTLE LIME	1863	1877
47095012740000	BIG LIME	1895	1982
47095012740000	BIG INJUN /SD/	1982	2100
47095012740000	GORDON /SD/	2650	2700
47095012740000	RILEY /SD/	4500	4555
47095012740000	BENSON /SD/	4958	4963
47095012190000	BIG LIME	1790	1870
47095012190000	BIG INJUN /SD/	1870	1940
47095012190000	BEREA	2330	2340
47095012190000	GORDON /SD/	2540	2570
47095012190000	RILEY /SD/	4370	4440
47095012190000	BENSON /SD/	4810	4870
47095015030000	BIG LIME	1844	1933
47095015030000	BIG INJUN /SD/	1933	1977
47095015030000	RILEY /SD/	4510	4890
47095014750000	LITTLE LIME	1989	2025
47095014750000	BIG LIME	2025	2100
47095014750000	BIG INJUN /SD/	2106	2265
47095014750000	RILEY /SD/	4640	5450
47095014750000	BENSON /SD/	5090	5150
47095012680000	BIG LIME	1850	1935
47095012680000	BIG INJUN /SD/	1935	2050
47095012680000	GORDON /SD/	2600	2650 4510
47095012680000	RILEY /SD/	4450	4960
47095012680000	BENSON /SD/	4897	1935
47095013630000	LITTLE LIME BIG LIME	1915 1945	2020
47095013630000 47095013630000	BIG INJUN /SD/	2020	2020
47095013630000	GORDON /SD/	2675	2730
47095013630000	RILEY /SD/	4525	2,30
47095013630000	BENSON /SD/	4985	
47095013030000	BIG LIME	1847	1940
1,00001400000		1047	

**Perforated Formations** 

Attachment A(3)

47095014380000	BIG INJUN /SD/	1940	2070
47095014380000	GORDON /SD/	2604	2620
47095014380000	RILEY /SD/	4495	4570
47095012650000	BIG LIME	1810	1865
47095012650000	BIG INJUN /SD/	1865	2055
47095012650000	BEREA	2408	
47095012650000	RILEY /SD/	4488	
47095012650000	BENSON /SD/	4912	
47095014050000	MAXTON	1790	1810
47095014050000	BIG LIME	1830	1902
47095014050000	BIG INJUN /SD/	1948	2032
47095014430000	LITTLE LIME	1863	1875
47095014430000	BIG LIME	1899	1990
47095014430000	GORDON /SD/	2680	2695
47095014430000	RILEY /SD/	4515	4595
47095014430000	BENSON /SD/	4925	7333
47095012200000	BIG LIME	1708	
47095012200000	BEREA	2255	
47095012200000	GORDON /SD/	2469	
47095012200000	RILEY /SD/	4339	
47095012200000	BENSON /SD/	4760	
.,		1809	1824
47095014370000	LITTLE LIME		
47095014370000	BIG LIME	1835	1943
47095014370000	BIG INJUN /SD/	1943	2050
47095014370000	GORDON /SD/	2600	2620
47095014370000	RILEY /SD/	4465	4000
47095014370000	BENSON /SD/	4900	4930
47095013520000	BIG LIME	1968	2035
47095013520000	BIG INJUN /SD/	2035	2114
47095013520000	RILEY /SD/	4600	4659
47095013520000	BENSON /SD/	4659	
47095013580000	LITTLE LIME	1840	1855
47095013580000	BIG LIME	1872	1965
47095013580000	BIG INJUN /SD/	1965	2080
47095013580000	GORDON /SD/	2635	2643
47095013580000	RILEY /SD/	4475	
47095013580000	BENSON /SD/	4915	
47095012730000	BIG LIME	2000	2110
47095012730000	BIG INJUN /SD/	2110	
47095012730000	GORDON /SD/	2770	2830
47095012730000	RILEY /SD/	4596	4660
47095012730000	BENSON /SD/	4955	5190
47095012570000	LITTLE LIME	1828	1838
47095012570000	BIG LIME	1860	
47095012570000	BIG LIME	1870	1956
47095012570000	BIG INJUN /SD/	1938	
47095012570000	BIG INJUN /SD/	1956	2060

Attachment A(4) 10/28/2016

47095012570000	WEIR/SD/	2207	
47095012570000	BEREA	2410	
47095012570000	GORDON /SD/	2615	
47095012570000	GORDON /SD/	2654	2675
47095012570000	RILEY /SD/	4457	
47095012570000	RILEY /SD/	4478	4534
47095012570000	BENSON /SD/	4905	
47095012570000		4915	4927
47095014230000		2085	2196
47095014230000		2745	2805
47095014230000		4595	4668
47095014230000	• •	5030	.000
47095012110000		1830	1920
47095012110000		1920	2020
47095012110000		2170	2280
47095012110000		2380	2390
47095012110000		2580	2630
47095012110000	RILEY /SD/	4430	4520
47095012110000	BENSON /SD/	4850	4920
47095012640000	BIG LIME	1749	.020
47095012640000	BIG LIME	1760	1822
47095012640000	BIG INJUN /SD/	1822	1941
47095012640000	BIG INJUN /SD/	1834	
47095012640000	WEIR /SD/	2100	
47095012640000	BEREA	2302	
47095012640000	GORDON /SD/	2500	2535
47095012640000	GORDON /SD/	2500	
47095012640000	RILEY /SD/	4337	
47095012640000	RILEY /SD/	4358	4414
47095012640000	BENSON /SD/	4796	
47095012640000	BENSON /SD/	4802	4817
47095012710000	BIG LIME	1800	1910
47095012710000	BIG INJUN /SD/	1910	2010
47095012710000	GORDON /SD/	2570	2620
47095012710000	RILEY /SD/	4400	4490
47095012710000	BENSON /SD/	4840	4940
47095013640000	LITTLE LIME	1892	1905
47095013640000	BIG LIME	1924	2010
47095013640000	BIG INJUN /SD/	2016	2145
47095013640000	GORDON /SD/	2668	2715
47095013640000	RILEY /SD/	4535	4565
47095012720000	BIG LIME	1900	2010
47095012720000	BIG INJUN /SD/	2010	2110
47095012720000	GORDON /SD/	2670	2730
47095012720000	RILEY /SD/	4500	4590
47095012720000	BENSON /SD/	4920	5040

Atlach (5)

EQT

625 Liberty Ave, Suite 1700 Pittsburgh PA 15222 www.eqt.com

TEL: (412) 395-3305 FAX: (412) 395-2156

John Centofanti Corporate Director, Environmental Affairs

(date)

[Conventional Well Operator] [address] [state]

RE: Tyler County Hydraulic Fracturing Notice

Dear Sir/Madam.

EQT has developed a Marcellus pad (West Union 4 pad) located in Tyler County, WV. As an owner or operator of conventional natural gas wells in this area, we are requesting your assistance in this matter.

Due to the apparent presence of unique geological conditions the potential for communication between deep geologic zones exists in this area. This potential communication, via natural gas, water, or both, may occur between hydraulically fractured wells in the Marcellus formation (approximately 6,600' TVD) and existing conventional natural gas wells in the partially-depleted, relatively high permeability, Alexander formation (approximately 5,200 TMD).

EQT anticipates conducting hydraulic fracturing at the West Union 4 pad during the [first, second, third, fourth] quarter of [year]. We have identified conventional natural gas wells operated by your company within 500' (lateral distance) of our new/planned laterals. Plats for each well on this pad are attached.

We recommend that conventional well operators conduct the following activities before, during, and after fracturing operations:

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

Please feel free to contact me at 412-395-3305 with any questions or comments. You may also contact the West Virginia Office of Oil and Gas at 304-926-0440.

Sincerely, EQT Production

John Centofanti Corporate Director, Environmental Affairs

cc: James Martin, WV Office of Oil and Gas

Affachment 0/28/2016



April 28, 2016

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

4709502371

Re: Casing change on WEU4 (516600,

Dear Mr. Smith,

EQT is requesting the 13 3/8" surface casing to be set at 750' KB, 50' below the coal at 696-700' KB. We will set the 9-5/8" intermediate string at 2865' KB, 50' below the base of the Gordon.

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

Sincerely,

Vicki Roark

Permitting Supervisor-WV

Enc.



west virginia department of environmental protection

Office of Oil and Gas 601 57th Street, SE Charleston, WV 25304 (304) 926-0450 (304) 926-0452 fax Earl Ray Tomblin, Governor Randy C. Huffman, Cabinet Secretary dep.wv.gov

March 18, 2014

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

Re: Cement Variance Request

Dear Sir or Madam,

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

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

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

Sincerely.

James Peterson

Environmental Resources Specialist / Permitting

Promoting a healthy environment.

Office of Oil and Gas

JUN 0 1 2016

WV Department of
Environmental Protection



west virginia department of environmental protection

Office of Oil and Gas 601 57th Street, SE Charleston, WV 25304 (304) 926-0450 (304) 926-0452 fax Earl Ray Tomblin, Governor Randy C. Huffman, Cabinet Secretary dep.wv.gov

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

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

### REPORT OF THE OFFICE

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

### FINDINGS OF FACT

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

Promoting a healthy environment.

Office of Oil and Gas

JUN 0 1 2016

WV Department of
Environmental Protection

#### CONCLUSIONS OF LAW

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

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

#### ORDER

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

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

IN THE NAME OF THE STATE OF WEST VIRGINIA

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

James Martin, Chief Office of Oil and Gas

Office of all and Gas
JUN 0 1 2016
WV Department of
Environmental Protection

API Number 47 - 95

Operator's Well No. 516600

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

FLUIDS/ CUTTINGS DISPOSAL & RECLAMATION PLAN  Operator Name EQT Production Company  Watershed (HUC 10) Tributary of Camp Mistake Run  Quadrangle West Union  Do you anticipate using more than 5,000 bbls of water to assemble the company to the comp
Operator Name EQT Production Company
Watershed (HUC 10) Tributary of Camp Mistake Run Quadrangle West Union
Do you anticipate using more than 5,000 bbls of water to complete the proposed well work? Yes No
Will a pit be used? Yes No
If so, please describe anticipated pit waste: flowback and residual solids
Will a synthetic liner be used in the pit? Yes No If so, what ml.? 60 DN H-
Proposed Disposal Method For Treated Pit Wastes:
Linderground Injection (AUG Paration) - 0014 0460 4007
Underground Injection (UIC Permit Number 0014, 8462, 4037  Reuse (at API Number Various
Off Site Disposal (Supply form WW-9 for disposal location)
Other (Explain
Yes, The closed loop system will remove drill cuttings from the drilling fluid. The drill cuttings are then prepared for transportation to an off-site disposal facility.
Drilling medium anticipated for this well (vertical and horizontal)? Air, freshwater, oil based, etc. See Attached
-If oil based, what type? Synthetic, petroleum, etc. Synthetic Mud
Additives to be used in drilling medium? See Attached
Drill cuttings disposal method? Leave in pit, landfill, removed offsite, etc. Landfill
-If left in pit and plan to solidify what medium will be used? (cement, lime, sawdust) N/A
-Landfill or offsite name/permit number? See Attached List
Permittee shall provide written notice to the Office of Oil and Gas of any load of drill cuttings or associated waste rejected at any West Virginia solid waste facility. The notice shall be provided within 24 hours of rejection and the permittee shall also disclose where it was properly disposed.
I certify that I understand and agree to the terms and conditions of the GENERAL WATER POLLUTION PERMIT issued on August 1, 2005, by the Office of Oil and Gas of the West Virginia Department of Environmental Protection. I understand that the provisions of the permit are enforceable by law. Violations of any term or condition of the general permit and/or other applicable law or regulation can lead to enforcement action.  I certify under penalty of law that I have personally examined and am familiar with the information submitted on this application form and all attachments thereto and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine or imprisonment.  Received  Company Official Signature  Office of Oil & Ga
Company Official (Typed Name) Victoria J. Roark
Company Official Title Permitting Supervisor
Subscribed and sworn before me this
Notary Public
My commission expires  OFFICIAL SEAL NOTARY PUBLIC STATE OF WEST VIRGINIA  FOR EXAMPLE COPANY FOR EXAMPLE COPANY FOR EXAMPLE COPANY FOR EXAMPLE COPANY NO CONTRIBUTE COPANY NO C

Operator's Well No. 516	600

roposed revegeration frea	atment: Acres Disturbed _n	o additional Prevegetation p	<sub>H</sub> 6.3
	Tons/acre or to corre		
Fertilizer type Gra	anular 10-20-20		
Fertilizer amount_	1/3	lbs/acre	
Mulch 2		_Tons/acre	
		Seed Mixtures	
T	emporary	Perm	anent
Seed Type KY-31	lbs/acre 40	Seed Type Orchard Grass	lbs/acre 15
Alsike Clover	5	Alsike Clover	5
Annual Rye	15		
			2231
creage, of the land applicat	tion area	d application (unless engineered plans incl clude dimensions (L x W x D) of the pit, an	uding this info have b nd dimensions (L x W
creage, of the land applicat	pit will be land applied, in	clude dimensions (L x W x D) of the pit, and $(x,y)$	uding this info have b
creage, of the land applicat	tion area	clude dimensions (L x W x D) of the pit, and	uding this info have bend dimensions (L x W
provided). If water from the acreage, of the land applicate Photocopied section of invo	ition area	clude dimensions (L x W x D) of the pit, and	uding this info have b
Plan Approved by:	ition area	clude dimensions (L x W x D) of the pit, and	uding this info have b
Plan Approved by:	ition area	clude dimensions (L x W x D) of the pit, and	uding this info have b
Plan Approved by:	ition area	clude dimensions (L x W x D) of the pit, and	uding this info have b
Plan Approved by:	ition area	clude dimensions (L x W x D) of the pit, and	uding this info have b
Plan Approved by:	ition area	clude dimensions (L x W x D) of the pit, and	uding this info have b
Plan Approved by:	ition area	clude dimensions (L x W x D) of the pit, and	nd dimensions (L x W
Plan Approved by:	I pit will be land applied, intion area	clude dimensions (L x W x D) of the pit, and	Receive Office of Oil

#### WW-9 Attachment

Drilling medium anticipated for this well (vertical and horizontal)? Air, freshwater, oil based, etc. - 0 5 0 -

• 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.

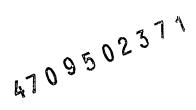
RECEIVED
Office of Oil and Gas
JUN 0 1 2016
WV Department of
Environmental Protection

## **EQT Production Water plan**

## Offsite disposals for Marcellus wells

### **CWS TRUCKING INC.**

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



## LAD LIQUID ASSETS DISPOSAL INC.

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

## TRI COUNTY WASTE WATER MANAGEMENT, INC.

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

## Waste Management - Meadowfill Landfill

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

## **Waste Management - Northwestern Landfill**

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

### **BROAD STREET ENERGY LLC**

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

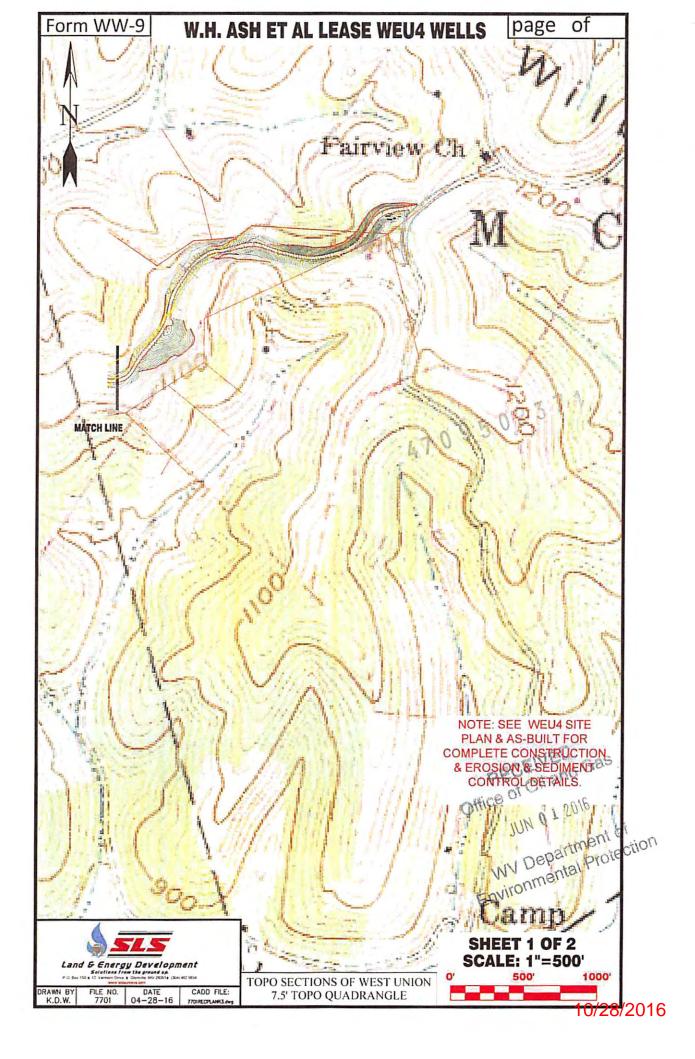
### **TRIAD ENERGY**

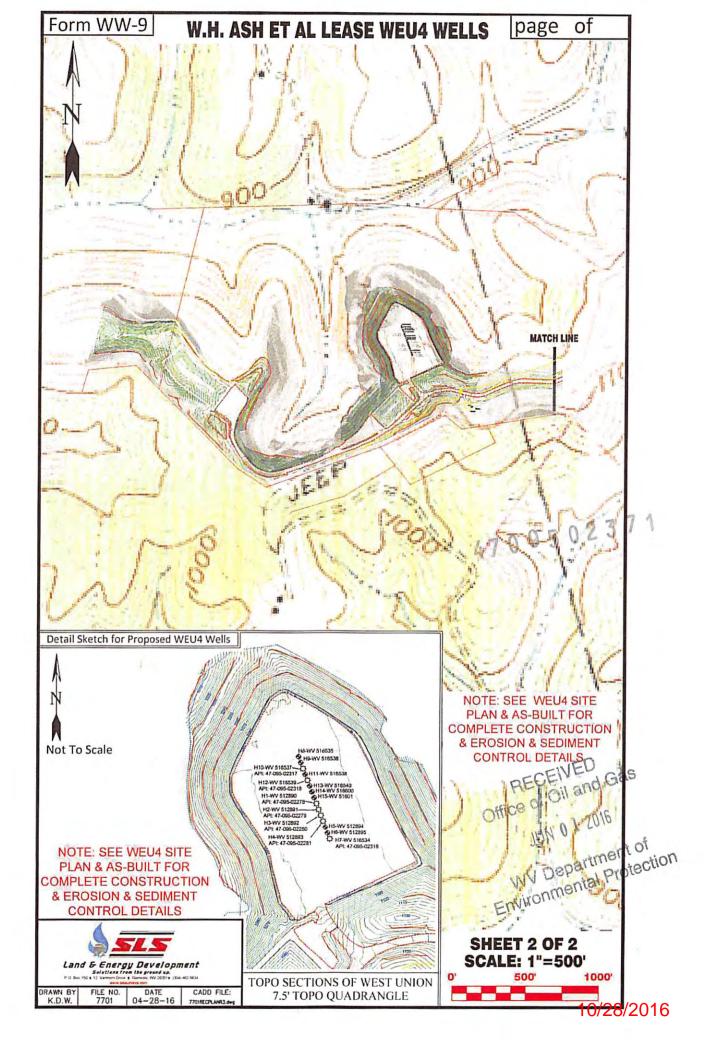
P.O. Box 430
Reno, OH 45773
740-516-6021 Well
740-374-2940 Reno Office Jennifer
Nobel County/Jackson Township
Permit # 4037

#### KING EXCAVATING CO.

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

PECEIVED
Office of Oil and Gas
JUN 0 1 2016
WY Department of
Environmental Protection







# Site Specific Safety Plan

# **EQT WEU 4 Pad**

4709502371

# Alma Tyler County, WV

For Wells:

EQT Production  Le mitting person  Title  5/10/16  Date	Date Prepared:	WVOil and Gas Inspector  Moderas INSPECTOR  Title  LATIL  Date  Received  Office Coll 8. Gas

## 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			4	20121

See Attached

4709502371

## 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 and Gas possibility of the need for permits and/or approvals from local, state, or federal entities in addition to the DEP, Office of Oil and Gas, including but not limited to the following:

WV Division of Water and Waste Management

WV Division of Natural Resources WV Division of Highways

- U.S. Army Corps of Engineers
- U.S. Fish and Wildlife Service
- County Floodplain Coordinator

WV Department of Environmental Protection

PECEIVED

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

Well Operator: EQT Production Company

By:

Victoria Roark

Its:

Permitting Supervisor

Page 1 of 3

Lease No.	Grantor, Lessor, etc.	Grantee, Lessee, etc.	Royalty	 Book/Page
126129	Waco Oil & Gas Co. Inc., et al (current royalty owner)		***	
	Willam H. Ash, et ux, et al (original lessor)	Equitable Gas Company		LB191/321
	Equitable Gas Company	Equitrans, Inc.		DB 274/471
	Equitrans, Inc.	Equitrans, LP		DB 433/777
	Equitrans, LP	EQT Production Company		DB 396/640
	Equitrans, LP	EQT Production Company		OG 440/107
	Equitoria, E	Eq. ( ) design company		00 <del>110</del> 107
<u>126208</u>	Roxie Davis, et al (current royalty owner)		***	
	Lucy Davis, et al. (original lessor)	Equitable Gas Company		DB 197/551
	Equitable Gas Company	Equitrans,Inc.		DB 274/471
	Equitrans,Inc./Equitable Gas Company/Equitable	Equitrans, L.P.		DB 433/777
	Resources, Inc.	Equitario, E.F.		00 400/11
	Equitrans, L.P.	EQT Production Company		DB 396/640
<u>126165</u>	Hester Britton, et al (current royalty owner)			
	Asia Dell Cumberledge, et al (orignal lessor)	Equitable Gas Company		LB192/360
	Equitable Gas Company	Equitrans,Inc.		DB 274/471
	Equitrans, Inc.	Equitrans, LP		DB 433/777
	Equitrans, LP	EQT Production Company		DB 396/640
	equium, ei	• •		
<u>126187</u>	Jerry Ray Brown, et al (current royalty owner)	Equitable Gas Company	E "h A	_
	Addie Keys, et al (original lessor)	Equitable Gas Company	002	3 LB395/44/5
	Equitable Gas Company	Equitrans, Inc.		DB 274/471
	Equitrans, Inc./Equitable Gas Company/Equitable	Equitrans, L.P.		DB 433/777
	Resources, Inc. Equitrans, L.P.	EQT Production Company		
	Equitors, C.1.	EQ1 Floduction Company		DB 396/640
126221	EQT Mineral Purchasing Group, et al (current royalty ow	vner)		
	Ora E. Pratt, et al (original lessor)	Equitable Gas Company		DB 200/38
	Equitable Gas Company	Equitrans,Inc.		DB 274/471
	Equitrans,Inc./Equitable Gas Company/Equitable	Equitrans, L.P.		DB 433/777
	Resources, Inc.			
	Equitrans, L.P.	EQT Production Company		DB 396/640
	Formations below the base of the Fifth Sand			
<u>126213</u>	BRC Appalachian Minerals I LLC, et al (current royalty of	owner)	***	
	Carrie Robinson & J.B. Robinson (original lessor)	Hope Natural Gas Company		DB 70/483
	Hope Natural Gas Company	Consolidated Gas Supply Corporation		DB 169/26
	Consolidated Gas Supply Corporation	Consolidated Gas Transmission Corporation		DB 249/287
	Consolidated Gas Transmission Corporation	CNG Development Company		DB 253/57
	CNG Development Company	CNG Producing Company		1096/124 (Delaware)
	CNC Producing Company	Deminion Euglandian & Bradustian Inc		unrecorded name change (filed with
	CNG Producing Company	Dominion Exploration & Production, Inc		secretary of state 5/10/00)
	Dominion Exploration & Production, Inc	CNX Gas Company LLC		384/191
	CNX Gas Company LLC	EQT Production Company		525/244 DERENCED
<u>126191</u>	EQT Mineral Purchasing Group (current royalty owner)			RECEIVED
	D.L. Haught, et al (original lessor)	Equitable Gas Company	Ų	Office of Oil and Gas
	Equitable Gas Company	Equitrans, Inc.		
	Equitrans,Inc./Equitable Gas Company/Equitable	·		DB 374N 0 1 2016
	Resources, Inc.	Equitrans, L.P.	_	DB 433/777
	Equitrans, L.P.	EQT Production Company	'	N b 19 epartment of
			Env	ironmentar Protection
				2.000.011

<u>126131</u>	CNX Gas Company, LLC (current royalty owner)		***		
	Walton E. Smith, Jr., et ux (original lessor)	Equitable Gas Company		DB 211/555	
	Equitable Gas Company	Equitrans,Inc.		DB 274/471	
	Equitrans,Inc./Equitable Gas Company/Equitable Resources, Inc.	Equitrans, L.P.		DB 433/777	
	Equitrans, L.P.	EQT Production Company		DB 396/640	
<u>126130</u>	George Berklein, et al (current royalty owner)		***		
	Donald Underwood, et al. (original lessor)	Equitable Gas Company		DB 191/313	
	Equitable Gas Company	Equitrans,Inc.		DB 274/471	
	Equitrans,Inc./Equitable Gas Company/Equitable Resources, Inc.	Equitrans, L.P.		DB 433/777	
	Equitrans, L.P.	EQT Production Company		DB 396/640	
<u>126164</u>	Robert Seckman, et al (current royalty owner)		***		
	Retha Seckman, et al (original lessor)	Equitable Gas Company		DB 192/351	
	Equitable Gas Company	Equitrans, Inc.		DB 274/471	
	Equitrans,Inc./Equitable Gas Company/Equitable Resources, Inc.	Equitrans, L.P.		DB 433/777	
	Equitrans, L.P.	EQT Production Company		DB 396/640	

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

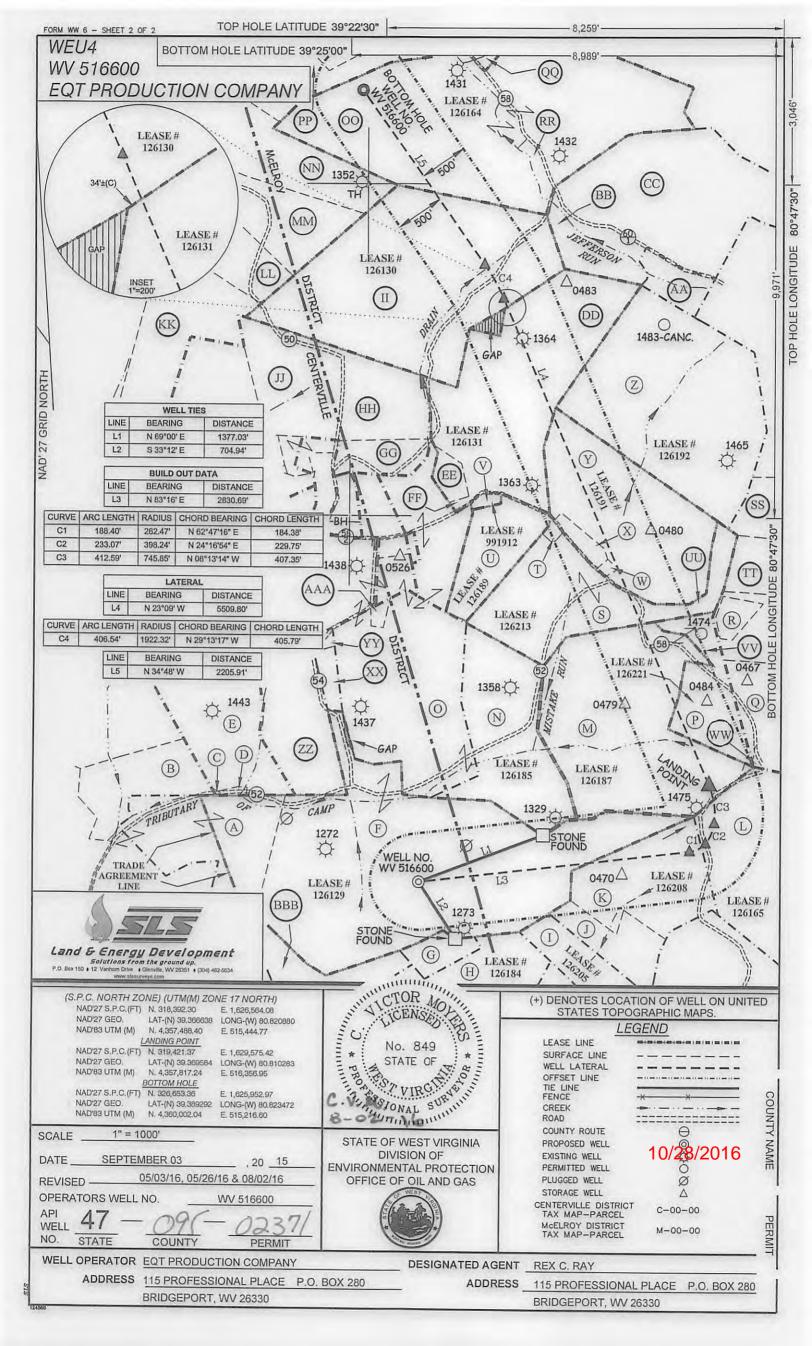
Page 2 of 2

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JUN 0 1 2016

WV Department of Environmental Protection 10/28/2016



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## Office of Secretary of State

I, MICHAEL HARKINS, SECRETARY OF STATE OF THE STATE OF 5 DELAWARE DO HEREBY CERTIFY THE ATTACHED IS A TRUE AND CORRECT COPY OF THE CERTIFICATE OF AGREEMENT OF MERGER OF "CNG DEVELOPMENT COMPANY" MERGING WITH AND INTO "CNG PRODUCING COMPANY" UNDER THE NAME OF "CNG PRODUCING COMPANY" AS RECEIVED AND FILED IN THIS OFFICE THE TWENTIETH DAY OF DECEMBER, A.D. 1990, AT 1 D'CLOCK F.M.

EVELYN I. A' TWAR PERAREA

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HEGEIVED ice of Oil and Gas

Michael Harkins, Secretary of State

JUN 0 1 2016

AUTHENTICATION: 12897263

WV Department o

12/20 Environmental Protection DATE:

16 36248

10/28/2016



Certificate

I, Ken Hechler, Secretary of State of the State of West Virginia, hereby certify that

riginals of an application by

CNG PRODUCING COMPANY

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for an amended certificate of authority to transact business in West Virginia are filed in my office, as required by the provisions of Chapter 31, Article 1, Sections 57 and 59 of the West Virginia Code and conform to law. Therefore, I issue this

## AMENDED CERTIFICATE OF AUTHORITY

to transact business in West Virginia under the name of

## DOMINION EXPLORATION & PRODUCTION, INC.

and I attach to this certificate a duplicate original of the application.



Given under my hand and the Great Peal of the Plate of West Virginia on

May 10 expoorment of Environmental Protection

Secretary of State 10/28/2016



April 28, 2016

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

Re: WEU4 well pad, well number 516600 Centerville District, Tyler County

Dear Mr. Martin,

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

Sincerely.

Vicki Roark

Permitting Supervisor-WV

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RECEIVED
Office of Oil and Gas

JUN 0 1 2016

WV Department of Environmental Protection

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

-1...1110

	ce Certification: 5/11/10	API No. 47- 95	<del>-</del>
	, ,	Operator's Well	
		Well Pad Name:	WEU4
Notice has Pursuant to the	ne provisions in West Virginia Code	§ 22-6A, the Operator has provided the required	parties with the Notice Forms listed
State:	tract of land as follows: West Virginia	Pasting. 5454	14.700
County:	Tyler	—— UTM NAD 83 — ——	14.769 188.399
District:	Centerville	Public Road Access: WV-1	
Quadrangle:	West Union		a J. Peter
Watershed:	Tributary of Camp Mistake Run		
it has provid information r of giving the requirements Virginia Cod	ed the owners of the surface descri- equired by subsections (b) and (c), s surface owner notice of entry to s of subsection (b), section sixteen of	shall contain the following information: (14) A clibed in subdivisions (1), (2) and (4), subsection ection sixteen of this article; (ii) that the requirementary pursuant to subsection (a), section ten of this article were waived in writing by the subtender proof of and certify to the secretary that that.	n (b), section ten of this article, the nent was deemed satisfied as a result this article six-a; or (iii) the notice arface owner; and Pursuant to West
that the Ope	West Virginia Code § 22-6A, the Orator has properly served the require ECK ALL THAT APPLY	perator has attached proof to this Notice Certificed parties with the following:	OOG OFFICE USE ONLY
∐ 1. NOʻ	FICE OF SEISMIC ACTIVITY or	■ NOTICE NOT REQUIRED BECAUSE N SEISMIC ACTIVITY WAS CONDUCTED	O RECEIVED/ NOT REQUIRED
			NOT REQUIRED
☐ 2. NO		SEISMIC ACTIVITY WAS CONDUCTED	NOT REQUIRED
☐ 2. NO	FICE OF ENTRY FOR PLAT SUR	SEISMIC ACTIVITY WAS CONDUCTED  VEY or  NO PLAT SURVEY WAS CONDU  NOTICE NOT REQUIRED BECAUSE  NOTICE OF ENTRY FOR PLAT SURVEY	NOT REQUIRED    RECEIVED     RECEIVED     NOT REQUIRED
□ 2. NO′ ■ 3. NO′	FICE OF ENTRY FOR PLAT SUR	SEISMIC ACTIVITY WAS CONDUCTED  VEY or NO PLAT SURVEY WAS CONDU  NOTICE NOT REQUIRED BECAUSE  NOTICE OF ENTRY FOR PLAT SURVEY  WAS CONDUCTED or  WRITTEN WAIVER BY SURFACE OF	NOT REQUIRED    RECEIVED     RECEIVED     NOT REQUIRED
□ 2. NO′ ■ 3. NO′ ■ 4. NO′	FICE OF ENTRY FOR PLAT SURVICE OF INTENT TO DRILL or	SEISMIC ACTIVITY WAS CONDUCTED  VEY or NO PLAT SURVEY WAS CONDU  NOTICE NOT REQUIRED BECAUSE  NOTICE OF ENTRY FOR PLAT SURVEY  WAS CONDUCTED or  WRITTEN WAIVER BY SURFACE OF	NOT REQUIRED  RECEIVED  RECEIVED/ NOT REQUIRED  NOT REQUIRED  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-I1(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.

JUN 0 1 2016

WV Department of Environmental Protection 6

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(1/12)	

Certification	of Notice	is hereby a	ven
Cumication	OI INDUICE	15 HELEBY 2	IV CIV.

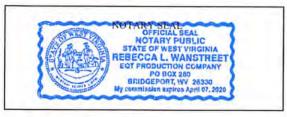
THEREFORE, I , have read and understand the notice requirements within West Virginia Code § 22-6A. I certify that as required under West Virginia Code § 22-6A, I have served the attached copies of the Notice Forms, identified above, to the required parties through personal service, by registered mail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

 Well Operator:
 EQT Production Company
 Address:
 115 Professional Place PO Box 280

 By:
 Victoria Roark
 Bridgeport WV 26330

 Its:
 Permitting Supervisor
 Facsimile:
 304-848-0041

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



Subscribed and sworn before me this 11 day of May 2016.

Pulca Wantolt Notary Public

My Commission Expires 4-7-20

## Oil and Gas Privacy Notice:

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

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Office of Oil and Gas

JUN 0 1 2016

WV Departh 0/28/2016 Environmental Protection WW-6A (9-13)

API NO. 47- <u>95</u>	
<b>OPERATOR WELL NO</b>	516600
Well Pad Name: WEU4	

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

Notice Time Requirement: notice shall be provided no later	than the filing date of permit application.	
Date of Notice: Date Permit Application Filed:	5 31 10	
PERMIT FOR ANY WELL WORK CONSTRUCTION O	PPROVAL FOR THE F AN IMPOUNDMENT OR PIT	
Delivery method pursuant to West Virginia Code § 22-6A-	10(b)	
	CHOD OF DELIVERY THAT REQUIRES A SEIPT OR SIGNATURE CONFIRMATION	
the surface of the tract on which the well is or is proposed to be looil and gas leasehold being developed by the proposed well work, described in the erosion and sediment control plan submitted pursoperator or lessee, in the event the tract of land on which the well more coal seams; (4) The owners of record of the surface tract or well work, if the surface tract is to be used for the placement, con impoundment or pit as described in section nine of this article; (5) have a water well, spring or water supply source located within or provide water for consumption by humans or domestic animals; a proposed well work activity is to take place. (c)(1) If more than the subsection (b) of this section hold interests in the lands, the application of the sheriff required to be maintained pursuant to section provision of this article to the contrary, notice to a lien holder is not code R. § 35-8-5.7.a requires, in part, that the operator shall also	of or signature confirmation, copies of the application, the erosion and defined the well plat to each of the following persons: (1) The owners of record of pocated; (2) The owners of record of the surface tract or tracts overlying the pocated; (2) The owners of record of the surface tract or tracts overlying the proposed to be drilled is located [sic] is known to be underlain by one or tracts overlying the oil and gas leasehold being developed by the proposed struction, enlargement, alteration, repair, removal or abandonment of any of Any surface owner or water purveyor who is known to the applicant to the thousand five hundred feet of the center of the well pad which is used to not (6) The operator of any natural gas storage field within which the ree tenants in common or other co-owners of interests described in the meight, article one, chapter eleven-a of this code. (2) Notwithstanding any of notice to a landowner, unless the lien holder is the landowner. W. Va. provide the Well Site Safety Plan ("WSSP") to the surface owner and any g as provided in section 15 of this rule.	
☐ Application Notice ☐ WSSP Notice ☐ E&S Plan Notice	g as provided in section 15 of this rule.  Ele  Well Plat Notice is hereby/provided to:  COAL OWNER OR LESSEE  Name: See Attached	
SURFACE OWNER(s) Name: See Attached	© COAL OWNER OR LESSEE 30237	
Address:	Address:	
Name:Address:	COAL OPERATOR Name:	
☑ SURFACE OWNER(s) (Road and/or Other Disturbance)	Address:	
Name: See Attached	☑ SURFACE OWNER OF WATER WELL	
Address:	AND/OR WATER PURVEYOR(s)	
Name:	Name: See Attached	
Address:	Address:	
<del></del>	OPERATOR OF ANY NATURAL GAS STORAGE FIELD	
SURFACE OWNER(s) (Impoundments or Pits)	Name:	
Name: See Attached	Address:	
Address:	*Please attach additional forms if necessary CEIVED  Office of Oil and Gas	

JUN 0 1 2016

WV Department Protection

WW-6A
(8-13)

API NO. 47- <u>95</u>	
OPERATOR WELL NO.	516600
Well Pad Name: WEU4	

## Notice is hereby given:

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

## This Notice Shall Include:

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

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

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

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

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

Well Location Restrictions

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

WW-6A (8-13)

API NO. 47-95 OPERATOR WELL NO. 516600

Well Pad Name: WEU4

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 095023 authorized to do so by the secretary or a court of competent jurisdiction.

## Written Comment:

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

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

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Such persons may request, at the time of submitting written comments, notice of the permit decimal actis of persons from the comments of the permit decimal actis of the permit decimal action actions action actions action actio test water. NOTE: YOU ARE NOT REQUIRED TO FILE ANY COMMENT.

JUN 0 1 2016



API NO. 47- 95 OPERATOR WELL NO. 516600
Well Pad Name: WEU4

## Time Limits and Methods for Filing Comments.

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

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

## **Comment Requirements**

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

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

## **Permit Denial or Condition**

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

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

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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.

WW-6A (8-13)

API NO. 47-95 OPERATOR WELL NO. 516600 Well Pad Name: WEU4

Notice is hereby given by:

Well Operator: EQT Production Company

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

Address: 115 Professional Place PO Box 280

Bridgeport WV 26330

Facsimile: 304-848-0041

## Oil and Gas Privacy Notice:

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

OFFICIAL SEAL NOTARY PUBLIC RESECCA L. WANSTREET PO ROX 280 BRIDGEPORT, WV 26330

Subscribed and sworn before me this \_\_\_\_\_ day of \_\_\_\_\_\_\_

2016

Notary Public

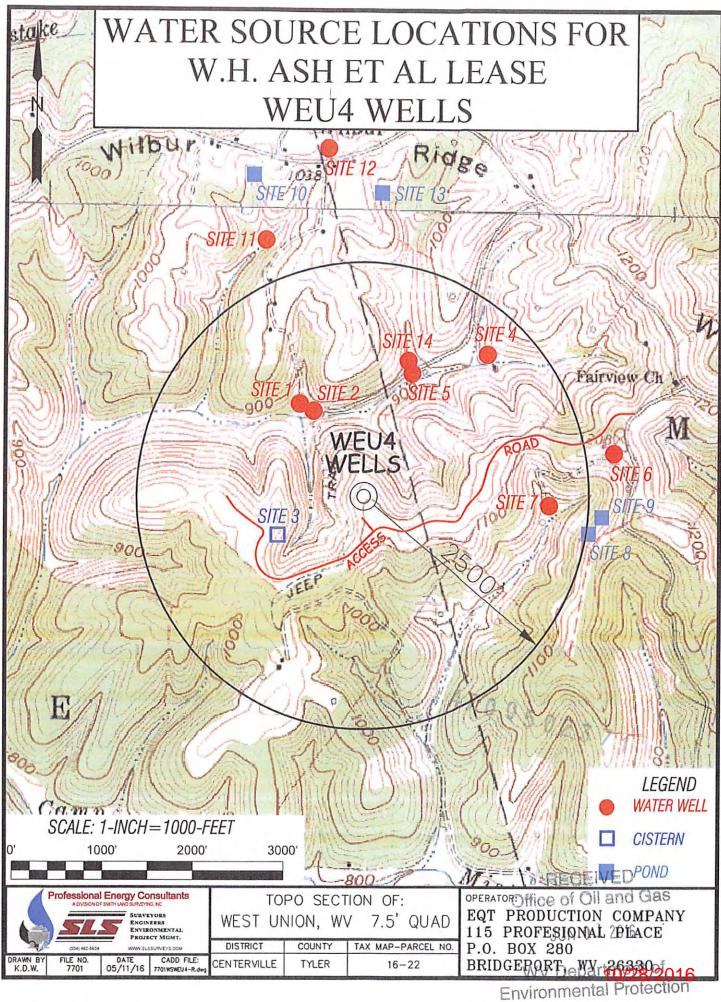
My Commission Expires

470950235-

RECEIVED Office of Oil and Gas

JUN 0 1 2016

WV Department of Environmental Protection



## **Surface Owners:**

Donna J Peter 733 Ridge Rd Wilbur WV 26320





4709502371

## Surface Owners(road or other disturbance):

Donna J Peter 733 Ridge Rd Wilbur WV 26320

L. Bruce and Sandra Jean Stoneking RR1 Box 304-BB Elkins WV 26241

James B. and Brenda J. Stoneking 2 Deerhaven Drive Wheeling WV 26241

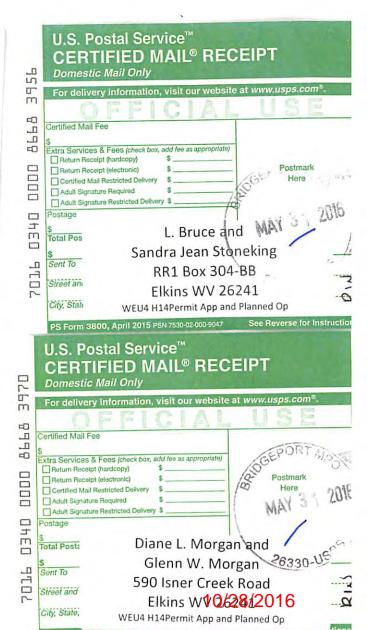
Diane L. Morgan and Glenn W. Morgan / 590 Isner Creek Road Elkins WV 26241

Richard Metcalf 415 Wildlife Lane

Bric U.S. Postal Service™ CERTIFIED MAIL® RECEIPT Domestic Mail Only m 69 Certified Mail Fee 99 Extra Services & Fees (check box, add fee as appropria Return Receipt (hardcopy) Return Receipt (electronic) Certified Mail Restricted De Postmark Adult Signature Required Adult Signature Restricted D 田田 Total Postr James B. and 970 Sent To Brenda J. Stoneking Street and 2 Deerhaven Drive City, State, Wheeling WV 26241 WEU4 H14Notice of Intent PS Form U.S. Postal Service™ CERTIFIED MAIL® RECEIPT 15 m 9 99 Certified Mail Fee 8 Extra Services & Fees (check box Return Receipt (hardcopy) 0000 GEPORT Return Receipt (electronic) Certifled Mail Restricted De Postmark Adult Signature Required Here Adult Signature Restricted Total Post 0.16 Richard Metcalf Sent To 415 Wildlife Lane Street and Bridgeport WV 26330 City, State WEU4 H14Permit App and Planned Op

Б	U.S. Postal Service  CERTIFIED MAIL® RECEIPT
コ	Domestic Mail Only
BHHE	For delivery information, visit our website at www.usps.com®.
	OFFICIAL ISE
9	Certified Mail Fee
999	¢
	Extra Services & Fees (check box, add fee as appropriate)
0000	Return Receipt (hardcopy) \$  Return Receipt (electronic) \$  Postmark
	Return Receipt (electronic) \$ Postmark  Certified Mail Restricted Delivery \$ Here
_	Adult Signature Required S Adult Signature Restricted Delivery S Postage
0460	Postage
m	S Total Postage
	s Donna J Reter
7016	Sent To
H	/33 Ridge Rd
2	Street and Apt Wilbur WV 26320
1 -	City, State, Zif WEU4 H14Permit App and Planned Op
	PS Form 380 See Neverse for Instruction

4709502371



## Surface Owners(Pits or impoundments):

Donna J Peter 733 Ridge Rd Wilbur WV 26320

Richard Metcalf 415 Wildlife Lane Bridgeport WV 26330



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WV Department of Environmental Protection

## Coal Owner

Rosemary Brandon 3913Delaware Avenue Kenner, LA 70065



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JUN 0 1 2016

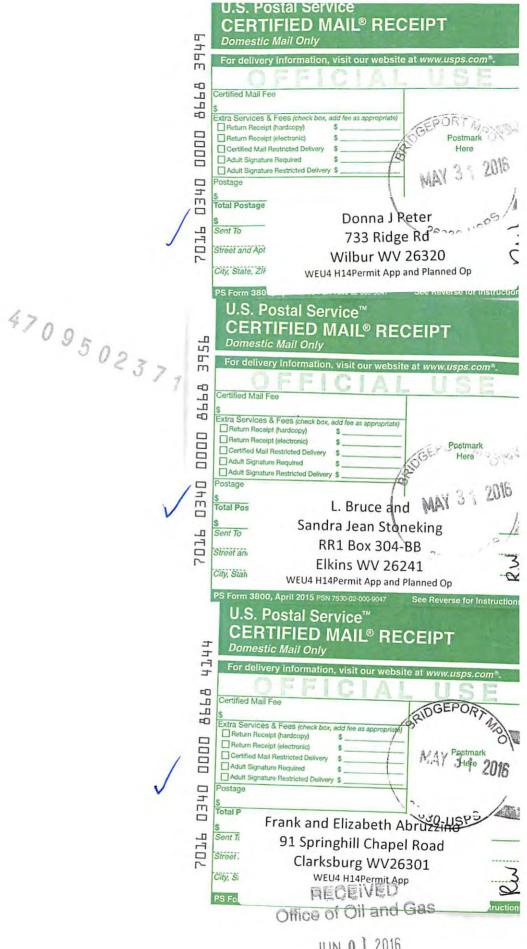
WV Department of Environmental Portaction

## Owners of Water Wells

Donna J Peter 733 Ridge Rd Wilbur WV 26320

Bruce Stoneking R.D. 1 Box BB Elkins WV 26241

Frank and Elizabeth Abruzzino 91 Springhill Chapel Road Clarksburg, WV 26301



JUN 0 1 2016

WV Department of Environmenta 1 9/28/2016

Operator	Well	No.	516600

## 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.

` ,			arrad in writing by the surface owner.
Notice Time Date of Noti	Requirement: Notice shall be ce: 04/09/2016	provided at least TEN (10) days prior to filing a Date Permit Application Filed: 04/19/2016	permit application.
Delivery me	thod pursuant to West Virgin	a Code § 22-6A-16(b)	
☐ HAND	■ CERTIFIED N	AII.	
DELIV		EIPT REQUESTED	
drilling a hor of this subsection m	sted or hand delivery, give the size on tall well: Provided, That notion as of the date the notice was ay be waived in writing by the size of the size	rast ten days prior to filing a permit application, arface owner notice of its intent to enter upon the tice given pursuant to subsection (a), section test provided to the surface owner: <i>Provided, howerface</i> owner. The notice, if required, shall inclinic mail address of the operator and the operator	the surface owner's land for the purpose of en of this article satisfies the requirements seever, That the notice requirements of this sude the name, address, telephone number
Notice is he	ereby provided to the SURF	ACE OWNER(s):	
Name: See Atta	ached	Name: See Attached	
Address:		Address:	
State: County: District: Quadrangle: Watershed:	West Virginia Tyler Centerville West Union Tributary of Camp Mistake Run	UTM NAD 83  Public Road Access:  Generally used farm name:	515444.769 4357488.399 W-18- Donne J. Peter)
This Notice	Shall Include:		
Pursuant to \ facsimile nun related to hor	West Virginia Code § 22-6A-1 nber and electronic mail addre rizontal drilling may be obtaine	s of the operator and the operator's authorize from the Secretary, at the WV Department of 25304 (304-926-0450) or by visiting	

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(a.wv.gov. Office of Oil and Gas

JUN 0 1 2016

## Surface Owners:

Donna J Peter 733 Ridge Rd Wilbur WV 26320



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4709502371

## Surface Owners(road or other disturbance):

Donna J Peter 733 Ridge Rd Wilbur WV 26320

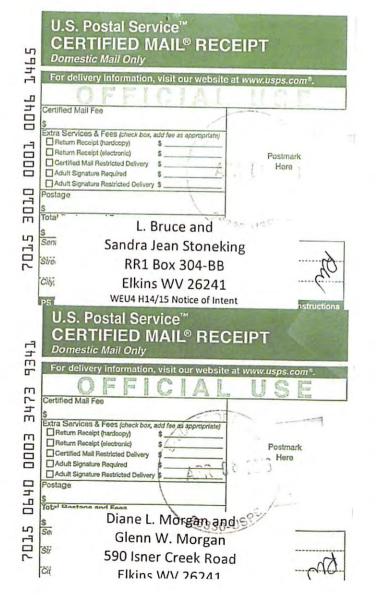
L. Bruce and Sandra Jean Stoneking RR1 Box 304-BB Elkins WV 26241

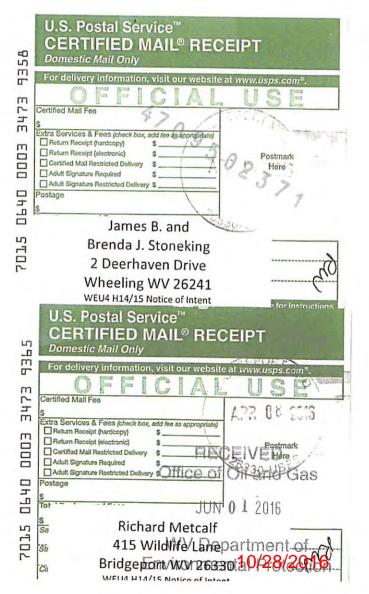
James B. and Brenda J. Stoneking 2 Deerhaven Drive Wheeling WV 26241

Diane L. Morgan and Glenn W. Morgan 590 Isner Creek Road Elkins WV 26241

Richard Metcalf 415 Wildlife Lane Bridgeport WV 26330







## Surface Owners(Pits or impoundments):

Donna J Peter 733 Ridge Rd Wilbur WV 26320



Richard Metcalf 415 Wildlife Lane Bridgeport WV 26330



9365	U.S. Postal Service™ CERTIFIED MAIL® RECEIPT  Domestic Mail Only
93	For delivery information, visit our website at www.usps.com*.
ELHE	OFFICIAL USE
HE	S ARR Services & East State Land
E000	Extra Services & Fees (check box, add fee as appropriate)    Return Receipt (hardcopy)
0490	S Tot
1.5	Richard Metcalf  415 Wildlife Lane  Bridgeport WV 26330  WEU4 H14/15 Notice of Intent
	Instructions

\$>095023>7

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JUN 0 1 2016

WV Department of 2012 Environmental Protection

## **Owners of Water Wells**

Donna J Peter 733 Ridge Rd Wilbur WV 26320

Bruce Stoneking R.D. 1 Box BB Elkins WV 26241

Frank and Elizabeth Abruzzino 91 Springhill Chapel Road Clarksburg, WV 26301

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JUN 0 1 2016

WV Department of Environmental Profestion/2016

WW-6A5 (1/12)

Operator Well No. 516600

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

Delivery			J10
- Jii ( )	method pursuant to West Virginia Code § 2	22-6A-16(c)	
	RTIFIED MAIL TURN RECEIPT REQUESTED	HAND DELIVERY	
return reco the planned required to drilling of damages t	eipt requested or hand delivery, give the surfa ed operation. The notice required by this su to be provided by subsection (b), section ten of f a horizontal well; and (3) A proposed surfa to the surface affected by oil and gas operation otices required by this section shall be given to	ce owner whose land will absection shall include: (If this article to a surface ownce use and compensation as to the extent the damage	rmit application, an operator shall, by certified mail be used for the drilling of a horizontal well notice of A copy of this code section; (2) The information where whose land will be used in conjunction with the agreement containing an offer of compensation for a are compensable under article six-b of this chapter. Address listed in the records of the sheriff at the time
	hereby provided to the SURFACE OWNER dress listed in the records of the sheriff at the to a Atlached		ched
Address:		Address:	
Pursuant t	on the surface owner's land for the purpose o  West Virginia Tyler Centerville  West Union	f drilling a horizontal well	asting 515444.769 Orthing: 54357488.399 :: Wuris 5
Pursuant to to be proving the	vided by W. Va. Code § 22-6A-10(b) to a solutely; and (3) A proposed surface use and confected by oil and gas operations to the extention related to horizontal drilling may be obtain	urface owner whose land mpensation agreement con the damages are compen- ned from the Secretary, a	y of this code section; (2) The information required will be used in conjunction with the drilling of a taining an offer of compensation for damages to the sable under article six-b of this chapter. Additional the WV Department of Environmental Protection 26-0450) or by visiting

## 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.

## Surface Owners:

Donna J Peter 733 Ridge Rd Wilbur WV 26320

6 4 4 4 A	For delivery information, visit our website at www.usps.com®.
8668	Certified Mail Fee \$ Extra Services & Feet (1)
0000	Return Receipt (hardcopy)  Return Receipt (hardcopy)  Return Receipt (electronic)  Certified Mail Restricted Delivery  Adult Signature Required  Adult Signature Required
0340	Postage S Total Postage
	Total Postage  Sent To  Donna J Peter  733 Ridge Pd 6330
7076	Street and Apt 733 Ridge Rd
~	City, State, Zif WEU4 H14Permit App and Planned Op
	PS Form 380
	0950233

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JUN 0 1 2016

WV Departm**40**/28/2016 Environmental Protection

## Surface Owners(road or other disturbance):

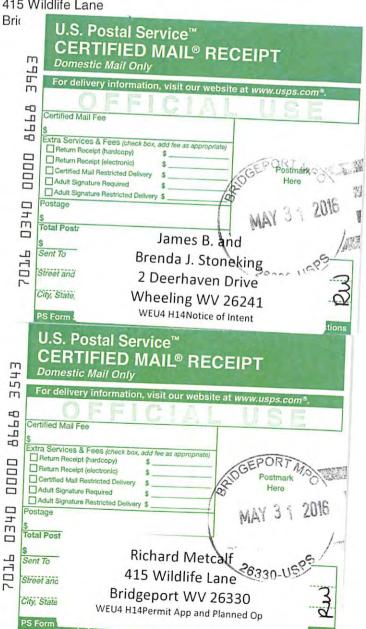
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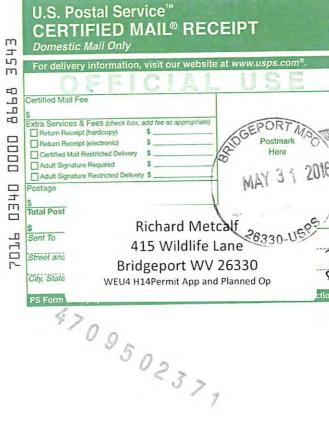


## Surface Owners(Pits or impoundments):

Donna J Peter 733 Ridge Rd Wilbur WV 26320

Richard Metcalf 415 Wildlife Lane Bridgeport WV 26330







# WEST VIRGINIA DEPARTMENT OF TRANSPORTATION

Division of Highways

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

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

Revised September 4, 2015

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

Subject: DOH Permit for the WEU 4 Well Pad, Tyler County

 512890 WEU4H1
 512891 WEU4H2
 512892 WEU4H3

 512893 WEU4H4
 512894 WEU4H5
 512895 WEU4H6

 516534 WEU4H7
 516535 WEU4H8
 516536 WEU4H9

 516537 WEU4H10
 516538 WEU4H11
 516539 WEU4H12

 516540 WEU4H13
 516600 WEU4H14
 516601 WEU4H15

Dear Mr. Martin,

This well site will be accessed from DOH Permit #06-2015-0241 issued to EQT Production Company for access to the State Road for a well site located off of Tyler County Route 58 SLS.

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

Very Truly Yours,

Gary K. Clayton P.E.

Regional Maintenance Engineer

Central Office Oil & Gas Coordinator

Cc: Nick Bumgardner

**EQT Production Company** 

CH, OM, D-6

File

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JUN 0 1 2016

# Anticipated Frac Additives Chemical Names and CAS numbers

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

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JUN 0 1 2016

WV Department@28/2016
Environmental Protection

# Anticipated Frac Additives Chemical Names and CAS numbers

4709502371

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

Da H Lanole

4709502371

1/4/14

Received
Office of Oil & Gas

Ju. : 4 1916

#### PROJECT INFORMATION

PROJECT NAME WEUG

TAX PARCEL
MCELROY AND CENTENVILLE DISTRICTS
TYLER COUNTY, NY
TAX MAP 15 PARCEL 22

SURFACE OWNER
DONNA J PETER
TOTAL PROPERTY AREA 113 47 ACRES
TAX MAP 16 PARCEL EZ

RICHARD A YVONNE METCALF TOTAL PROPERTY AREA 81 574 ACRES TM 16-17

DIL AND GAS ROYALTY OWNER
WACO GIL & GAS CO INC ET AL
WEST UNION DISTRICT
DODDRIDGE COUNTY WY
TOTAL PROPERTY AREA ISS & ACRES

#### LOCATION COORDINATES

NEU4 STIT ENTRANCE LATITUDE 39 359/29 LONGITUDE 50 616071 [NAD 83 NORTH] WELL RIG FOOTPRINT LATITUDE 39 365719 LONGITUDE 80 520708 (MAD 83 NORTH) WEU4 PUMP PAD LATITUDE BU 820689 INAD BU WORTH WELL FLOWERCK PIT LATITUDE 39 365318 LONGITUDE -60 821110 (NAD 83 NORTH)

WELL TRUCK PAD LATITUDE 19 364962 LONGITUDE -80 821587 (NAD 81 NORTH) WEU'S COMPLETION PIT MANIFOLD PAD LATITUDE 39 365408 LONGITUDE 80 624945 (NAD 83 NORTH)

WEU4 COMPLETION FUT LATITUDE 39 385864 LONGITUDE 60 825618 INAD 83 NORTHO

#### SITE DISTURBANCE COMPUTATIONS

ACCESS ROAD NO 1 & NO 2 = 6.014 ACRES STOCKMILE SITES 1-6 = 4.282 ACRES RIG FOOTPRINT = 325 ACRES MANAFOLD PAD & PLOMIACK PIT = 2.311 ACRES COMPLETION PIT = 3.331 ACRES TOTAL SITE DISTURBANCE = 19184 ACRES

ENTRANCE PERMIT FOR PRODUCTION COMPANY WILL OBTAIN AN ENTRANCE PERMIT (FORM WM - 100) FROM THE WEST VINEDIAL DEPARTMENT OF TRANSPORTATION DIVISION OF HIGHWAYS PRIOR TO COMMENCEMENT OF CONTRECTION ACTIVITIES.

MISS UTILITY STATEMENT
WAS STREET OF WIST URIGINA WAS NOTHER FOR THE LOCATING OF
UTILITIES FROME TO THIS PROJECT DESIGN. TURNET ALIGNOPEESS IN ADDITION. MISS UTILITY WILL BY CONTACTED FROME TO STREET OF THE
PROJECT.

FLOODPLAIN NOTE
THE PROPOSED LIMITS OF DISTURBANCE FOR THIS PROJECT IS LOCATED IN
FRANCISCO ZONE X FER THE FLOOD INSURANCE RATE MAY (FIRM) NUMBER
5409500300C, DATED MAY 3, 2010

#### ENVIRONMENTAL NOTES

ANTIGNATION OF THE AUTHOR AND PROGRED ON APRIL 20-20, 2013 BY POTESTA AND ASSOCIATE, INC.
TO REVIEW THE SITE YES MATERIA AND WITHARD THAT ALL MOST LIKELY WITHIN THE PROCLATORY
OF THE SITE YES MATERIAL THE PROCRATERS (ESSAC) AND ON THE MEST YESDAG.
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OF THE PRILID CHARACTER OF THE PROTECT AND ASSOCIATES, DO STRUMENTS THE RESIGNATION OF THE LANGUAGE HUTS OF PARTIES AND WITHING SPECIAL AND ASSOCIATES OF THE PROTECT AND ASSOCIATED AND ASSOCIATED AND ASSOCIATED ASSOCIATE

#### HORIZONTAL & VERTICAL CONTROL

COORDINATES AND ELEVATIONS USED FOR ALL LAYOUTS AND DESIGNS WERE BASED UPON MAPPING FURNISHED BY SMITH LAND SURVEYING

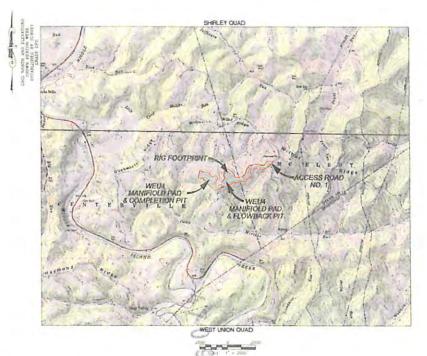
MISS Utility of West Virginia 1-800-245-4848 West Virginia State Law (Section XIV Chapter 24 C) Requires that you call two business days before you dig in the state of West Virginia ITS THE LAW

Received Office of Oil & G

JUN 1 4 2016

# WEU4 SITE PLAN **EQT PRODUCTION COMPANY**

SITUATE ON THE WATERS OF CAMP MISTAKE RUN IN MCELROY AND CENTERVILLE DISTRICTS. TYLER COUNTY, WEST VIRGINIA



			WELL F MY	IS MELTIL DEATIN	NS		
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11.7	5-2892	PROPOSED	h7 095-02280	SF Second	80 820e29	1.6371.45	395/44.48
11/4	5.7895	PROPOSED	67 095 0228	39 366578	60:070609	3/8507.4	15.95 14.9 68
1113	5/2894	PROPOSED	11.000	39 3664,81	80 820589	3(8543.4)	595/55 27
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10.7	5/6534	PROPUSED		39"366415	80 820544	2815 6	695.66.05
118	5.6055	PROPOSED		39.366948	80 820827	5/85// 57	1595090 56
in talks	5/6536	FWORDSED		19,566.96	80.870807	516497.58	1595095 95
100	5:6557	PHOPOSED		29 300572	80 8/0787	3 8483 38	1595/0-54
a pier	5:6538	PROPOSED		19 366854	80.820767	54469.38	(595/06.75
1112	5-8539	PROPOSED		39 366795 19	8C 62C747	3/8455-38	095117 (5
1913	5/8542	PROPOSED		19.1665660	80 620629	3(857) 40	395/44 48
His		PROPOSED		19 36619	80 87070R	5:8671:59	095177.91
14.5		PROPOSED		59 36668	83 870688	3164/3.39	1595/78 30

#### LIST OF DRAWINGS

2 NOTES

3 OVERALL SHEET INDEX & VOLUMES

4 - EXISTING UTILITY PLAN

5-7 ACCESS BOAD PLAN

10-11 FLOWBACK PIT NO 1 SECTIONS

14 TYPICAL SECTIONS

15 ACCESS ROAD NO I PROFILE

18-20 ACCESS ROAD NO 1 SECTIONS

21 - ACCESS ROAD NO 1 SECTIONS & ACCESS HOAD NO 2 PROFILE & SECTIONS

22 ACCESS ROAD COORDINATE LAYOUT

23 54 TOPSON STORAGE AREAS PROPURS & SECTIONS

25 SPOR STORAGE AREA PROPER & SECTIONS

SU SO CONSTRUCTION DETAILS

# APPROVED WVDEP OOG

PROPERTY OWNER	DISTURBED AREA
L B & SANDRA STONEKING	0 42 AC
RICHARD & YVONNE METCALF	2 25 AC
DONNA J PETER	20 08 AC
TOTAL	22.75 AC

JP3 6/7/1L

#### OPERATOR

EQT PRODUCTION COMPANY OPERATOR ID 306680 115 PROFESSIONAL PLACE P.O. BOX 280 BRIDGEPORT WY 26330 PHONE (304) 348 3870

#### ENGINEER

RKAK ENGINEERS 242 NORTH TORNADO WAY SUITE 1 KEYSER WV 26726 PHONE (304) 766 3370

### SURVEYOR

SMITH LAND SURVEYING INC 12 VANHORN DRIVE PO BOX 150 GLENVILLE WV 28351 FHONE (304) 462 5634

KLEPPER & KAHL,
TORNADO WAY, SI
WEST VIRGINIA, 28
8.3370 F. 3.4788







COVER SHEET
WEU4

DESIGNED BY HWH FILE NO JOB SHEET I OF 3. REV 08/25/2015

# WEU-4 AS-BUILT SITE PLAN **EQT PRODUCTION COMPANY**

PERMITTED WELLS: API# 47-095-02278, 47-095-002279, 47-095-02280, 47-095-02281, 47-095-02316, 47-095-02317, 47-095-02318 AND 47-095-02343 PROPOSED WELL NUMBERS: H6-WV512895, H8-WV516535, H9-WV516536, H11-WV516538, H13-WV516540, H14-WV516600 AND H15-WV516601

SITUATE ON WATERS OF CAMP MISTAKE RUN IN MCELROY AND CENTER DISTRICTS, TYLER COUNTY, WEST VIRGINIA

## PROJECT NAME WELL AS BUILT SITE PLAN

PROJECT INFORMATION TAX PARCEL
CENTERVILLE DISTRICT
MAP 16
McELROY DISTRICT
MAP 21

SURFACE OWNER

L B 4 SAMBA STORIKING
MEEROY DISTRICT
TYLER COUNTY, W.

10TAL PROPERTY AREA 19 441 ACRES

TYLER COUNTY, WV TOTAL PROPERTY AREA: 113.41 ACRES

RICHARD & YVONNE METCALF CENTERVILLE DISTRICT TYLER COUNTY WY TOTAL PROPERTY AREA 6157s ACRES

OIL AND GAS ROYALTY OWNER WADD OIL & GAS COMPANY INC. ETAL CENTERVILLE DISTRICT TYLER COUNTY WE TOTAL PROPERTY AREA. 1572 ACRES.

SITE LOCATION:

THE WILL 4 SITE IS NORTH OF CAMP INSTARE OF COUNTY ROUTE IN THE ENTRANCE TO THE SITE IS APPROXIMATELY 0.13 MLE SOUTH WEST OF COUNTY ROUTE 602 INTERSECTION.

#### LOCATION COORDINATES

WEU-4 CENTER OF WELL PAD LATITUDE 39 365539 LONGITUDE 50 820845 (NAD 63) LATITUDE 4 357 477 LONGITUDE 515 446 IUTM NAC 83 METERSI

WEU-4-FLOW CENTER OF FLOW BACK PIT LATITUDE: 19 36536 LONGITUDE: 40 821021 (NAD) 83 LATITUDE: 4.357 350 LONGITUDE: 515 433 (UTM NAD) 83 METERS

WEU 4 FLOW CENTER OF COMPLETION PIT LATITUDE 39 365901 LONGITUDE 80 825772 (NAD 83) LATITUDE 4 357 408 LONGITUDE 515 024 (UTM NAD 83 METERS)

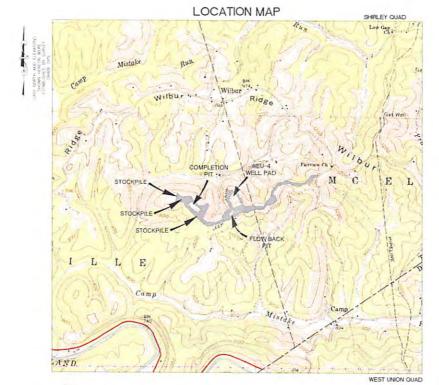
#### SITE DISTURBANCE COMPUTATIONS

TOTAL AS BUILT DISTURBANCE - 15 81 ACRES

#### GENERAL DESCRIPTION

THE WEU 4 PAD AND PITS ARE BEING CONSTRUCTED TO AID IN THE DEVELOPMENT OF INDIVIDUAL MARCELLUS SHALE GAS WELLS

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



Received Office of Oil & Gas JUN 1 4 2016

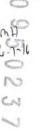


### LIST OF DRAWINGS

- 1-COVER SHEET
- 2-INDEX SHEET ) - WEU-4 ACCESS ROAD
- 5 WEU-4 ACOMPLETION PIT / STOCKPILE
- 6 ACCESS ROAD PROFILE
- 7 ACCESS ROAD PROFILE FLOW BACK HIT AND COMPLETION PLT PROFILES



LEGEND	
LIMITS OF DISTURBANCE	
COMPOST FILTER SOCK	
AS BUILT LOD	
EX ROAD EDGE OF GRAVEL/DIRT EX ROAD EDGE OF PAVEMENT	
EX ROAD CENTERLINE	
EX DITCHLINE	-
EX CULVERT	
EX FENCELINE	
EX GATE	-
EX OVERHEAD UTILITY	- 11 -
EX OVERHEAD UTILITY E. *	-
EX GUY WIRE	
EX TELEPHONE LINE	
EX GASLINE	
EX GASLINE BOW	
EX WATERLINE	
EX STRUCTURE	
EX PIPELINE MARKER	Ti-
REG FOOTFRINT	_
EDGE OF GRAVEL PAD EDGE OF BERM	
EX SUPER SILT FENCE	- 15
EN REINFORCED SILT FENCE	_
TOP BERM	CANDING:
GRAVEL	
RIP RAF	
ORIGINAL CROUND Z CUNTOURS	
ME BUILT 2 CONTOURS	
PHOTO NUMBER & LOCATION	(1)
AS BUILT WELL LOCATIONS	-
PROPOSED WELL LOCATIONS	4
BEQT ELEVATIONS	* 1000 Q
MATCHLINE	



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PLAN WEU-4 AS-BUILT SITE MEN'

DATE 03 02/2016 SCALE 1 = 1000 DESIGNED BY KES FILE NO 7701 SHEET 1 OF 7

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## WVDEP OOG ACCEPTED AS-BUILT 4/4/2016

## WEU-4 AS-BUILT SITE PLAN **EQT PRODUCTION COMPANY**

PERMITTED WELLS: API# 47-095-02278, 47-095-002279, 47-095-02280, 47-095-02281, 47-095-02316, 47-095-02317 AND 47-095-02318 PROPOSED WELL NUMBERS: H6-WV512894, H6-WV512895, H8-WV516535, H9-WV516536, H11-WV516538, H13-WV516540, H14-WV516600 AND H15-WV516601

SITUATE ON WATERS OF CAMP MISTAKE RUN IN MCELROY AND CENTER DISTRICTS. TYLER COUNTY, WEST VIRGINIA

#### PROJECT INFORMATION

PROJECT NAME WELL AND BUILT SITE PLAN

TAX PARCEL
CENTERVINE DISTRICT
MAP 18
MIELROY DISTRICT
WAP 21

SURFACE OWNER

L B & SANDRA BTONEPHO

MELROY DISTRICT

THER COUNTY, WY

TOTAL PROPERTY AREA 19 441 ACRES

DOMNA J PETER
MELROY & CENTERVILLE DISTRICT
THER COUNTY WY
TOTAL PROPERTY AND A 111 ALACHES

### OIL AND GAS ROYALTY OWNER

SITE LOCATION
THE WEU-4 STEIG NORTH OF CAMP MISTARE OFF COUNTY HOUTE ME THE STRIMMET OFF SOUTH WEST OF COUNTY HOUTE ME THE APPRICAMENT OF THE ESCUTH WEST OF COUNTY HOUTE AND COUNTY HOUTE HOW THE RESIDENCE.

### LOCATION COORDINATES

MU4 SITE ENTRAVOL LATITUDE 39 SERVI LOMORTUDE AS BROCH INAD EX LATITUDE 4 357 777 LORORTUDE THE MILLIOTM NAD BY MILLION

WEU-4FLOW CENTER OF FLOW BACK PIT LATITUDE 39 365991 LONGITUDE 80 821021 (NAD 83) LATITUDE 4 367 350 LONGITUDE 515 433 OFM NAD 83 METERS

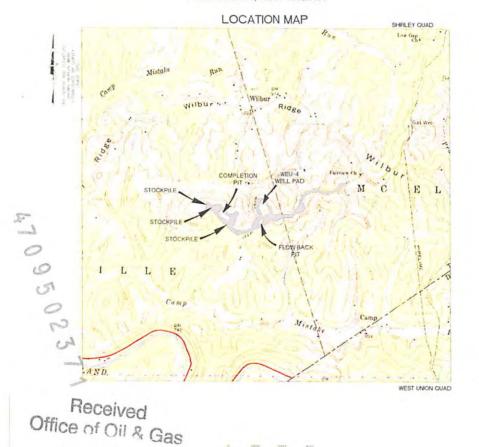
WEG-AFLOW CENTER OF COMPLETION PIT LATITUDE 39 165901 LONGITUDE 50 825772 (NAD 61) LATITUDE 4-357 406 LONGITUDE 5/5 024 (JTM NAD 63 METERS

#### SITE DISTURBANCE COMPUTATIONS

TOTAL AS BUILT DISTURBANCE - IN SEACHES

#### GENERAL DESCRIPTION

MiSS Littly of West virginia 1 -800-245-4848 West Virginia State Law Requires that you can two business



#### LIST OF DRAWINGS

1 COVERSION

Z INDEX MIRET

1. WEU A ACCESS ROAD 4 WEU 4 FLOWBACK HIT PAGE

5 WILL & ACOMPLETION PIT I STOCKPILE

LEGEND

# ACCESS BOAD FROM E







WEU-4 4S-BUILT SITE PLAN

DESIGNED BY KES SHEET 1 OF

DMH 4/4/16

DE PRECISE MARRIE



JUN 1 4 2016

