

#### west virginia department of environmental protection

Office of Oil and Gas 601 57th Street, S.E. Charleston, WV 25304 (304) 926-0450 fax: (304) 926-0452 Jim Justice , Governor Austin Caperton , Cabinet Secretary www.dep.wv.gov

Tuesday, May 30, 2017 WELL WORK PERMIT Horizontal 6A / New Drill

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

Re: Permit approval for 516192 47-061-01762-00-00

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: 516192

Farm Name: LAWSON, GORDON W. & SHELIA M.

U.S. WELL NUMBER: 47-061-01762-00-00

Horizontal 6A / New Drill

Date Issued: 5/30/2017

Promoting a healthy environment.

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

#### **CONDITIONS**

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

API Number:

## **PERMIT CONDITIONS47 0 6 1 0 1 7 6 2**

11. The operator shall provide to the Office of Oil and Gas the dates of each of the following within 30 days of their occurrence: completion of construction of the well pad, commencement of drilling, 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.

## 4706101762

API NO. 47- 061 - 01762

OPERATOR WELL NO. 516192

Well Pad Name: RVS14

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

1) Well Operator: EQT	Production Co	mpany	306686	Monongalia	Grant	Rivesville
			Operator ID	County	District	Quadrangle
2) Operator's Well Numb	ber: 516192		Well Pac	d Name: RVS1	4	
3) Farm Name/Surface O	wner: Gordon w	& Sheila L	awson Public Roa	nd Access: US-	19	
4) Elevation, current grou	ind: 1158.0	El	evation, proposed	post-construction	on: 1157.	0
5) Well Type (a) Gas	X	Oil _	Unde	erground Storag	ge	
Other	-					
(b)If Gas	Shallow	X	Deep	_		
6) Existing Pad: Yes or N	2 12 2 24 2 14 2 14 2 14	X		MO	K 2/13/	han
7) Proposed Target Forma		s). Antic	inated Thickness a			101 /
Marcellus, 7496', 136',2		.,, ruitie	ipated Thickness a	and Expected F1	cosurc(s).	
8) Proposed Total Vertica	l Depth: 7496					
9) Formation at Total Ver	tical Depth: N	larcellus	S L			
10) Proposed Total Measu	ured Depth: 1	4418				
11) Proposed Horizontal I	Leg Length: 5	979				
12) Approximate Fresh W	ater Strata Dep	ths:	110			
13) Method to Determine	Fresh Water De	epths: E	By offset wells			
14) Approximate Saltwate	er Depths: 135	5, 1435				
15) Approximate Coal Sea	am Depths: 18	9, 394,	462'			
16) Approximate Depth to	Possible Void	(coal mi	ne, karst, other):	462' (Pittsburg	h)	
17) Does Proposed well lo directly overlying or adjac			ns Yes	No	Affice C	CEIVED f Oil and Gas
(a) If Yes, provide Mine	Info: Name:					AR 3 0 2017
	Depth:				***	ment of
	Seam:				MA I	pepara rividuonor
	Owner:				Environ	(Heartes)

7 6 2 API NO. 47- 061 - 01762

OPERATOR WELL NO. 516192
Well Pad Name: RVS14

18)

### CASING AND TUBING PROGRAM

TYPE	Size (in)	New or Used	Grade	Weight per ft. (lb/ft)	FOOTAGE: For Drilling (ft)	INTERVALS: Left in Well (ft)	CEMENT: Fill-up (Cu. Ft.)/CTS
Conductor	26	New	A-500	85.6	90	90	110 ft^3 / CTS
Fresh Water	18 5/8	New	J-55	87.5	300	300	487 ft^3 / CTS
Coal	13 3/8	New	J-55	54.5	520	520	441 ft^3/CTS
Intermediate	9 5/8	New	A-500	40	2820	2820	1116 ft^3 / CTS
Production	5 1/2	New	P-110	20	14418	14418	500' above top producing zone
Tubing	2 3/8		J-55	4.7		May not be run, if run set 40' above top perf or 80° inclination.	
Liners						and to period of memanon	

MJK 2/13/2017

TYPE	Size (in)	Wellbore Diameter (in)	Wall Thickness (in)	Burst Pressure (psi)	Anticipated Max. Internal Pressure (psi)	Cement Type	Cement Yield (cu. ft./k)
Conductor	26	30	.312	884	707	Class A	1.18
Fresh Water	18 5/8	24	.435	2250	1800	See Variance	1.19
Coal	13 3/8	17 1/2	.38	2700	2160	See Variance	1.19
Intermediate	9 5/8	12 3/8	.395	3950	3160	See Variance	1.19
Production	5 1/2	8 1/2	.361	12640	10112	Class A/H	1.123/2.098
Tubing	2 3/8	NA	.19	7700			
Liners					T <sub>p</sub>		

### **PACKERS**

Kind:	
Sizes:	RECEIVED Office of Oil and Gas
Depths Set:	MAR 3 0 2017

WV Department of Environmental Protection

WW-6B
(10/14)

API NO. 47-061	01762
<b>OPERATOR WELL</b>	. NO. 516192
Well Pad Name:	RVS14

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 5308'. Kick off and drill curve. Drill the lateral in the Marcellus. Cement casing.

Mine Void Cement Plan:

-Run cement basket above potential mine void. If no cement is returned during the cement job, run 1" tubing to the top of the basket and grout cement to surface.

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, 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 250,000 gallons of water per stage. Sand sizes vary from 100 mesh to 20/40 mesh. Average approximately 250,000 pounds of sand per stage.

- 21) Total Area to be disturbed, including roads, stockpile area, pits, etc., (acres): 25.6
- 22) Area to be disturbed for well pad only, less access road (acres): 11.94
- 23) Describe centralizer placement for each casing string:
- Surface: Bow spring centralizers One centralizer at the shoe and one spaced every 500'.
- Mine Protection: Bow spring centralizers One centralizer at the shoe and one spaced every 500'.
- Intermediate: Bow spring centralizers— One centralizer at the shoe and one spaced every 500'.
- Production: One solid body centralizer spaced every joint from production casing shoe to KOP

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

Conductor Class A no addrives
Surface (Type 1 Cement) 0-3% Calcium Chlonde Used to speed the setting of cement slurnes
Mine Protection (Type 1 Cement) 0-3% Calcium Chlonde Used to speed the setting of cement slurnes
Intermediate (Type 1 Cement) 0-3% Calcium Chlonde Used to speed the setting of cement slurnes
Production

Load (Class A Cement) 0 2% CD-20 (dispersant makes coment leaser to mix). 15% SuperFL-300 (fluid loss) 15% SEC-10 (fluid loss) 50 50 POZ (extender)

Tail (Class H Cement) 0 2% Super CR-1 (Retarder) Lengthens thickering time 3% Super FL-200 (fluid loss) 2% SEC-10 (Fluid loss) .2% SuperFL-350 (fluid loss) Reduces amount of water lest to formation 60 % Carcuim Carbonate And solidary

#### 25) Proposed borehole conditioning procedures:

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

<sup>\*</sup>Note: Attach additional sheets as needed.

Well 516192(RVS14H1)

**EQT** Production

Rivesville Quad Monongalia County, WV

Azimuth 335 Vertical Section

Vote: Diagram is not to scale	Top Base			Casing and Cementing				Deepest Fresh Water	ert 110'
Formations	TVD TVD			Type	Conductor	Surface	Mine	Intermediate	Production
Conductor	90	71111	TITIE	Hole Size, In.	30	24	17 1/2	12 3/8	8 1/2
		41111	111111111111111111111111111111111111111	Casing Size, OD In.	26	18.625	13 3/8	9 5/8	5 1/2
Base Fresh Water	110	1111	1111	Casing Wall Thickness, In.	0.312	0.435	0.380	0.395	0.361
Surface Casing	300'	<b>⊿</b>		Depth, MD	90'	300'	520'	2,820'	14,418'
		111		Weight	85.6#	87.5#	54.5#	40#	20#
Mine Casing	520	<b>⊿</b> 111		Grade	A-500	J-55	J-55	A-500	P-110
				New or Used	New	New	New	New	New
Maxton	1281 - 1357	- 11	11	Burst (psi)	884	2,250	2,700	3,950	12.640
Big Lime	1598 - 1678	- 11		Cement Class	A	A / Type 1	A / Type 1	A / Type 1	A/H
Big Injun	1680 - 1833	- 11	11	Cement Yield	1.18	1.19	1.19	1.19	1.123 / 2.098
Weir	1911 - 1932	- 11	11	Top of Cement (Planned)	Surface	Surface	Surface	Surface	500' above top Producing Zone
Gantz	2219 - 2249	- 11	11	Top of Gement (Flamled)	Surface	Surface		Juliace	
Fifty foot	2269 - 2323	- 11	1.1	Method	Displacement	Displacement	Balanced/1" Grout	Displacement	Displacement
Thirty foot	2385 - 2429	- 11	11	Est. Volume (cu ft)	110	487	441	1,116	2,841
Gordon	2469 - 2495	- 11	11		1000				Calcium Carbonate, Fluid Loss
Forth Sand	2511 - 2542	- 11	11	The second second	100000	Calcium Chloride.	Sept. 15, 150		Extender, Dispersent, Viscosifi
Base Red Rock	2677	- 11	11	Possible Additives	N/A	LCM	Calcium Chloride	Calcium Chloride	Defoamer, POZ, Bonding Age
Bayard	2734 - 2770	11	11		10.00	LOW	The Carlot Activity		Retarder, Anti-Settling/Suspens
Intermediate Caving	2820	4	<b>A</b>						Agent
Speechley	3235 - 3336		1						
Balltown A	3370 - 3555								
Riley	3997 - 4074	- 1							
Benson	4660 - 4780	_ 1							
Alexander	5221 - 5256	- 1	KOP @ 5,308'						
Sonyea	6849 - 7036	- 1							
Middlesex	7036 - 7103								
Genesee	7103 - 7239	- 1	1						
Geneseo	7239 - 7270		1						
Tully	7270 - 7329		11						
Hamilton	7329 - 7400								
Marcellus	7400 - 7535		11						4
Production Casing	14418 MD	No. of Concession, Name of Street, or other party of the Concession, Name of Street, or other pa							
Onondaga	7535		The second second	NA CHARLES CONTRACTOR S				AND DESCRIPTION OF THE PARTY OF	
			The second second					7.400	TUD
		Land cu					Est. TD @	7,496'	TVD
roposed Well Work:			8,439' MD					14,418'	MD
rill and complete a new ho									
rill the vertical to an appro							V. 155.4		
ick off and drill curve. Dril	Il lateral in the Marcelli	is. Cement casing	2.		5,979	3	Lateral		

#### **EQT Production**

**Hydraulic Fracturing Monitoring Plan** 

Pad ID: RVS14

Monongalia County, WV

12/2/16

DEC 14

VVV Departinge 1 of 2 on Environmental Protection 06/02/2017

#### **Purpose**

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The purpose of this pad-specific Hydraulic Fracturing Monitoring Plan is to identify and notify conventional well operators near EQT hydraulic fracturing in Monongalia County, WV prior to hydraulic fracturing at the following EQT wells on RVS14 pad: 516192, 516193, 516194 & 516195

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

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

#### 1. Communications with Well Operators

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

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

EQT will recommend to these operators at a minimum to:

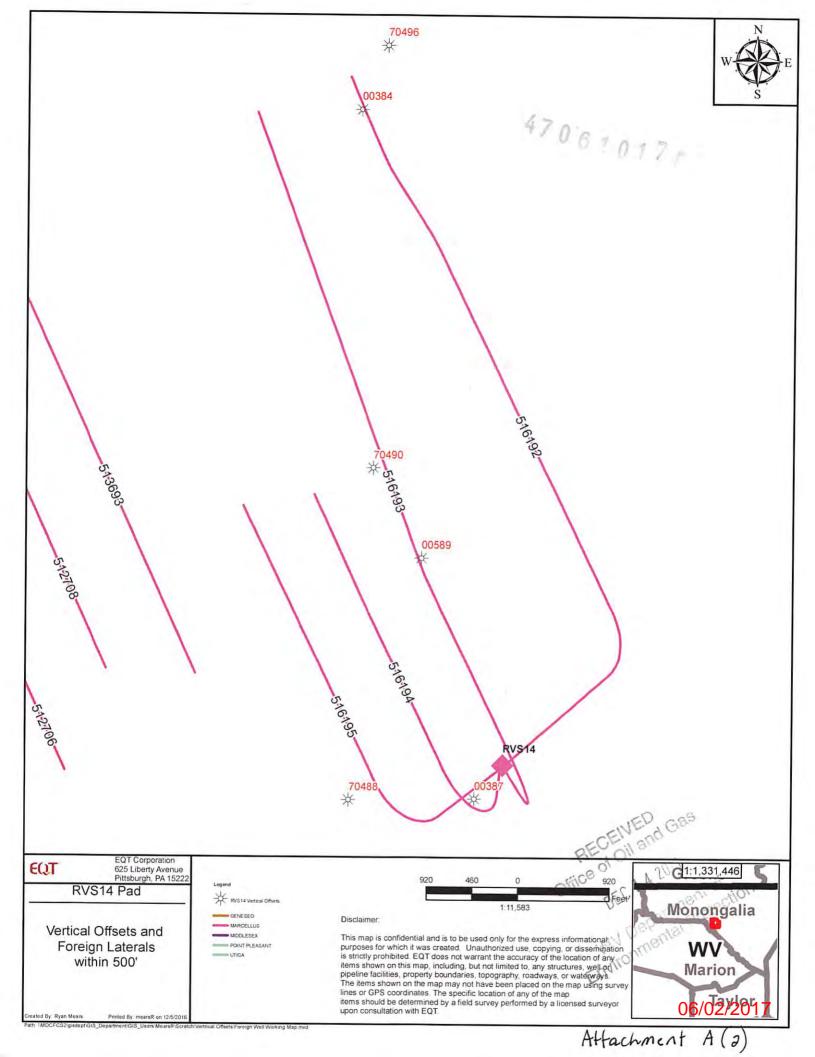
- Inspect their surface equipment prior to fracturing to establish integrity and establish pre-frac well conditions
- 2. Observe wells closely during and after fracturing and monitor for abnormal increases in water, gas or pressure
- 3. Inspect or install master valves or other necessary equipment for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

#### 2. Reporting

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

1_TD SPUD_DATE TD_FORM_NM Permit 0 5/30/1913 CHEMUNG 00384 0 12/31/1914 HAMPSHIRE 00387 5100 11/21/1980 DEVOINAN 00589 0 70498 0 70496 0							
ROJ_TO SP 0 1 5100 0							
PERMIT_DT PROJ_EM_INM PROJ_TD SPUD_DATE TD_FORM_INM 5/15/1913 5/15/1913 12/16/1914 0 1/21/1980 BENSON 5100 1/12/1980 DEVONIAN 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0	$\langle \cdot \rangle$	ŧ	£ :	_		
OPER_NAME CONSOLIDATED GAS SUPPLY CORPORATION CONSOLIDATED GAS SUPPLY CORPORATION PETROLEUM DEVELOPMENT CORPORATION HOPE NATURAL GAS CORPORATION UNKNOWN							
NGITUDE LSE_NAME -80.1048 N MITCHELL -80.1049 A RANETT -80.1057 BABE LESSIE -80.1054 FRENCH E BARRY -80.1054 A J TRICKETT 1							
ATITUDE 1C 39.6143 39.5952 39.6019 39.6044 39.6160							
1/37_2015 2/13/2015 2/13/2015 5/21/2015 2/2/2015 1/15/2015 1/20/2015							
HOLE_DIR							
D FNL_STAT GAS GAS GAS UNXWN UNXWN							
ELEVATION ELEV_RF_CD FNL_STAT HOLE_DIR LAST_ACT LATITUDE LONGITUDE LSE_NAME 11120 GR GAS V 2/13/7015 39.6613 080.1069 ARRICHELI 11100 GR GAS V 5/13/7015 39.6619 080.1067 BARBE LESS 1100 GR GAS V 5/13/7015 39.6619 080.1067 BARBE LESS UNXWN V 2/12/7015 39.6604 080.1067 BRICHE EAST UNXWN V 1/15/7015 39.6604 080.1094 FRENCH E.B. UNXWN V 1/15/7015 39.6604 080.1094 FRENCH E.B.							
UWI         COMP DATE         COUNTY_NM         CURR_OPER           4706100384         8/14/1913         MONONOSALA         EQT PRODUCTION COMPANY           4706100389         2/13/1915         MONONOSALA         EGT PRODUCTION COMPANY           4706100489         2/5/1980         MONONOSALIA         FETROLEUM DEVELOPMENT CORPORATION           4706170480         MONONOSALIA         HOPE NATURAL GAS CORPORATION           4706170496         MONONOSALIA         LINKNOWN							
COMP DATE COUNTY_NM CURR_OPER 8/14/1913 MONONGALIA EQT PRODU 2/13/1913 MONONGALIA EQT PRODU 2/13/1913 MONONGALIA PETROLEUI MONONGALIA HOPE NATU MONONGALIA CARNEGIE MONONGALIA UNKNOWN							
UWI CC 4706100384 4706100387 4706100589 4706170488 4706170496							

Office of Office



#### 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

470000000

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.

name !

Environmental Resources Specialist / Permitting

Promoting a healthy environment.

RECEIVED
Office of Oil and Gas

DEC 14 2016

WV Department of Environmental Protection 06/02/2017



#### 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	j		
REGULATIONS OF CEMENTING OIL	)		
AND GAS WELLS	)		

#### REPORT OF THE OFFICE

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

#### FINDINGS OF FACT

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

Promoting a healthy environment.

RECEIVED
Office of Oil and Gas

DEC 14 2016

WV Department of Environmental Protection

06/02/2017

#### **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 WEST VIRGINIA GEOLOGICAL PROGNOSIS

Horizontal Well 516192(RVS14H1) v 2016 5

**Drilling Objectives:** County:

Surface location

Landing Point

Toe location

Marcellus Monongalia

Quad: Rivesville Elevation:

Northing: Northing: Northing:

1170 KB 399820.04 401362.06 406747.75 335 Degrees

Easting: Easting: Easting:

1157 GL 1829846.48 1830955.18 1828371.92

TVD: 7496 5,979 Recommended LP to TD:

Recommended Azimuth Proposed Logging Suite:

@Intermediate Casing Point: The open hole logs need to consist of Gamma Ray, Neutron, Density, and Induction

CONTACT JEFF DEREUME PRIOR TO LOGGING (412.328.5054) @ Pilothole TD - Run OH logs for evaluation of uphole zones. An elog should be run for the first well on every horizontal well pad. Please have mudloggers rigged up on location by 6889' TVD.

Recommended Gas Tests:

1800, 2050, 2600, Intm Csg. Pt., 3400, 4900, 5250, KOP, (Gas test at any mine void) Gas test during any trip or significant downtime while drilling the lateral section

ESTIMATED FORMA	HUN	TOPS
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Top (TVD)	Base (TVD) Lithology	Comments	Top RR Base RR	
1	110			
27	29 Coal			
80		Previous contour mining in the Waynesburg, may encounter bench		
189	191 Coal		9000	
394	400 Coal			
462	470 Coal	Abandonded coal mine, some wells will encounter voids	107.5	
1281	1357 Sandstone	SW @ 1355,1435, ,		
1598	1678 Limestone			
1680	1833 Sandstone		500 ALC: 100 ACC 100 A	
1911	1932 Sandstone	Storage is not of concern	2670 2677 Ba	ise of Red
2219				
2219	2249 Silty Sand			
2269	2323 Silty Sand			
2385	2429 Silty Sand			
2469	2495 Silty Sand			
2511	2542 Silty Sand			
2607	2625 Silty Sand			
2734	2770 Silty Sand			
2820				
3235	3336 Silty Sand			
3370	3555 Silty Sand			
3997	4074 Silty Sand			
4660	4780 Silty Sand	Base of Offset Well Perforations at 5086' TVD		
5221	5256 Silty Sand			
5256	6849 Gray Shales and Silts			
6849	7036 Gray shale			
7036	7103 Shale	470000		
7103	7239 Gray shale interbedded	47.061.01	1/	
7239	7270 Black Shale			
7270	7329 Limestone			
7329	7400 Gray shale with some			
7400	7535 Black Shale			
	7472 Limestone			
7496		Start Lateral at 7496'	T	
7506	7509 Limestone			
7535	Limestone			
	2007			
	1 277 80 189 394 462 1281 1598 1680 1911 2219 2269 2385 2469 2511 2607 2734 2820 3235 3370 3997 4660 5221 5256 6849 7036 7103 7239 7270 7329 7400 7469 7506	1 110 27 29 Coal 80 85 Coal 189 191 Coal 394 400 Coal 462 470 Coal 1281 1357 Sandstone 1598 1678 Limestone 1680 1833 Sandstone 1911 1932 Sandstone 1911 2219 2219 2249 Silty Sand 2269 2323 Silty Sand 2385 2429 Silty Sand 2495 Silty Sand 2511 2542 Silty Sand 2607 2625 Silty Sand 2734 2770 Silty Sand 2820 3235 3336 Silty Sand 3370 3555 Silty Sand 3370 3555 Silty Sand 3370 3555 Silty Sand 4060 4780 Silty Sand 5221 5256 Silty Sand 5235 Silty Sand 5245 Silty Sand 5256 Silty San	10	1   110

D. Andrewson Co.		
Max Anticipated Rock Pressure	2593 PSI	
Target Thickness	136 feet	

#### Comments:

Note that this is a TVD prog for a horizontal well (azimuth of 335 degrees; target formation = Marcellus). All measurements taken from estimated KB elevation. Water and coal information estimated from surrounding well data.

Intermediate casing point is recommended beneath the Bayard to shut off any water production from the Upper Devonian sands. Intermediate casing should be cemented into the surface string, per WV regulations

The estimated landing point TVD is 7496", rig geologist may adjust landing point. After the well is landed, drill to reported bed dips/ geologists' recommendation. The geologic structure is unknown at this time

#### LATERAL DRILLING TOLERANCES

Deviate as little as possible to the left or right of the planned wellbore. Mapview - Lateral: DO NOT EXTEND beyond recommended wellbore to avoid leaseline. Mapview - TD;

#### DECOMMENDED CASING DOINTS

RECOMMENDED CAS	SING POINTS		ace without		200	at minimum depth
Fresh Water	CSG OD	18 5/8	CSG DEPTH		300	
		13 3/8	CSG DEPTH		520	50' below Pittsburgh mine void
Coal	CSG OD	13 3/6			2020	Beneath the Bayard formation
Intermediate 1:	CSG OD	9.5/8	CSG DEPTH		2820	Deneath the Dayard formation
Production:	CSG OD	5 1/2	CSG DEPTH	@ TD		

API Number	47 -	061	
API Number	4/-	001	

Operator's Well No. 516192

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

### FLUIDS/ CUTTINGS DISPOSAL & RECLAMATION PLAN

Operator Name EQT Production Company	OP Code 306686
Watershed (HUC 10) Stewart Run	Quadrangle Rivesville
Do you anticipate using more than 5,000 bbls of water to co	omplete the proposed well work? Yes V No
Will a pit be used? Yes No ✓	
If so, please describe anticipated pit waste:	
Will a synthetic liner be used in the pit? Yes	No ✓ If so, what ml.?
Proposed Disposal Method For Treated Pit Wastes	
Land Application	0044 0462 4027
Underground Injection (UIC Pe	rmit Number 0014, 8462, 4037
Off Site Disposal (Supply form	WW-9 for disposal location)
Other (Explain	
Yes, The cl Will closed loop system be used? If so, describe: are then pr	osed loop system will remove drill cuttings from the drilling fluid. The drill cuttings epared for transportation to an off-site disposal facility.
Drilling medium anticipated for this well (vertical and horiz	zontal)? 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, remo	ved offsite, etc. Landfill
-If left in pit and plan to solidify what medium wil	be used? (cement, lime, sawdust) N/A
-Landfill or offsite name/permit number? See Atta	ched List
Permittee shall provide written notice to the Office of Oil at West Virginia solid waste facility. The notice shall be provi where it was properly disposed.	nd Gas of any load of drill cuttings or associated waste rejected at any ded within 24 hours of rejection and the permittee shall also disclose
on August 1, 2005, by the Office of Oil and Gas of the Wes provisions of the permit are enforceable by law. Violation law or regulation can lead to enforcement action.  I certify under penalty of law that I have person application form and all attachments thereto and that, by	nd conditions of the GENERAL WATER POLLUTION PERMIT issued to Virginia Department of Environmental Protection. I understand that the insoft any term or condition of the general permit and/or other applicable mally examined and am familiar with the information submitted on this based on my inquiry of those individuals immediately responsible for its true, accurate, and complete. I am aware that there are significant satisfies of fine or imprisonment.
Subscribed and sworn before me this 12 day o	f_ Dec. , 20 66
Vanla les-	No Elly Publication of the Control o
My commission expires 8-24-73	OFFICIAL SEAL STATE OF WEST VIRGINIA NOTARY PUBLIC Pamela Sykes EQT Production PO By Ord 2/201 Bridgeport, WV 26330 My Commission Expires Aug. 24, 2022

Form WW-9

	e i i annuale y t		Vell No. 516192
EQT Production Co			
roposed Revegetation Trea	atment: Acres Disturbed 25.6	Prevegetation pl	4 <u>6.2</u>
Lime_3	Tons/acre or to correct to pH	6.5	
Fertilizer type Gr	anular 10-20-20		
Fertilizer amount_	1/3lbs/	acre	
Mulch 2	Tons/ac	re	
	Seed	Mixtures	
Т	emporary	Perma	nent
Seed Type	lbs/acre	Seed Type	lbs/acre
KY-31	40	Orchard Grass	15
Alsike Clover	5	Alsike Clover	5
Annual Rye	15		
rovided). If water from the creage, of the land applicat		ion (unless engineered plans includensions (L x W x D) of the pit, and	ling this info have been dimensions (L x W), and a
Maps(s) of road, location, p rovided). If water from the creage, of the land applicat hotocopied section of invo	pit will be land applied, include dime	ion (unless engineered plans includensions (L x W x D) of the pit, and	ling this info have been dimensions (L x W), and a
Maps(s) of road, location, provided). If water from the creage, of the land applicate hotocopied section of invo	pit will be land applied, include dimetion area.  Ived 7.5' topographic sheet.  aym J Kntousk.	ensions (L x W x D) of the pit, and	ling this info have been dimensions (L x W), and a
Maps(s) of road, location, provided). If water from the creage, of the land applicate hotocopied section of invo	pit will be land applied, include dimetion area.  Ived 7.5' topographic sheet.  aym J Kntousk.	ensions (L x W x D) of the pit, and	dimensions (L x W), and a
Maps(s) of road, location, provided). If water from the creage, of the land applicate hotocopied section of invo	pit will be land applied, include dimetion area.  Ived 7.5' topographic sheet.  aym J Kntousk.	ensions (L x W x D) of the pit, and	dimensions (L x W), and a
Maps(s) of road, location, provided). If water from the creage, of the land applicate hotocopied section of invo	pit will be land applied, include dimetion area.  Ived 7.5' topographic sheet.  aym J Kntousk.	ensions (L x W x D) of the pit, and	dimensions (L x W), and a
Maps(s) of road, location, provided). If water from the creage, of the land applicate hotocopied section of invo	pit will be land applied, include dimetion area.  Ived 7.5' topographic sheet.  aym J Kntousk.	ensions (L x W x D) of the pit, and	dimensions (L x W), and a
Maps(s) of road, location, p rovided). If water from the creage, of the land applicat hotocopied section of invo	pit will be land applied, include dimetion area.  Ived 7.5' topographic sheet.  aym J Kntousk.	ensions (L x W x D) of the pit, and	dimensions (L x W), and a
Maps(s) of road, location, provided). If water from the creage, of the land applicate hotocopied section of invo	pit will be land applied, include dimetion area.  Ived 7.5' topographic sheet.  aym J Kntousk.	ensions (L x W x D) of the pit, and	dimensions (L x W), and a
Maps(s) of road, location, provided). If water from the creage, of the land applicate hotocopied section of invo	pit will be land applied, include dimetion area.  Ived 7.5' topographic sheet.  aym J Kntousk.	ensions (L x W x D) of the pit, and	dimensions (L x W), and a

#### **WW-9 Attachment**

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

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

#### Additives to be used in drilling medium?

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

### **EQT Production Water plan**

### Offsite disposals for Marcellus wells



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

6706101762 Form WW-9 Note: See site plan of RVS 14 for completed Section of Rivesville 7.5' USGS grading and drainage construction including 1 inch = 300 feet Topographic Quadrangle erosion and sediment control details, etc. Detail Sketch for Proposed Wells 516188, 516189, 516190, 516191,516192, 516193, 516194, 516195, 516196, 1 inch = 150 feet 516197, 516198, 516199 3/28/2017 Architects Engineers Surveyors **RVS 14 WELL PAD** Architects Engineers 22502 Cranberry Square Morgantown, WV 26508 PHONE 304,777,2940 TOLL FREE 877,323,6603 FAX 570,323,9902 www.larsondesigngroup.com Well No. 516188, 516189, 516190,516191, 516192, BLG 516193, 516194, 516195, 516196, 516197, 516198, 7936-004 516199 Grant District, Monongalia County, WV <del>06</del>/02/2017

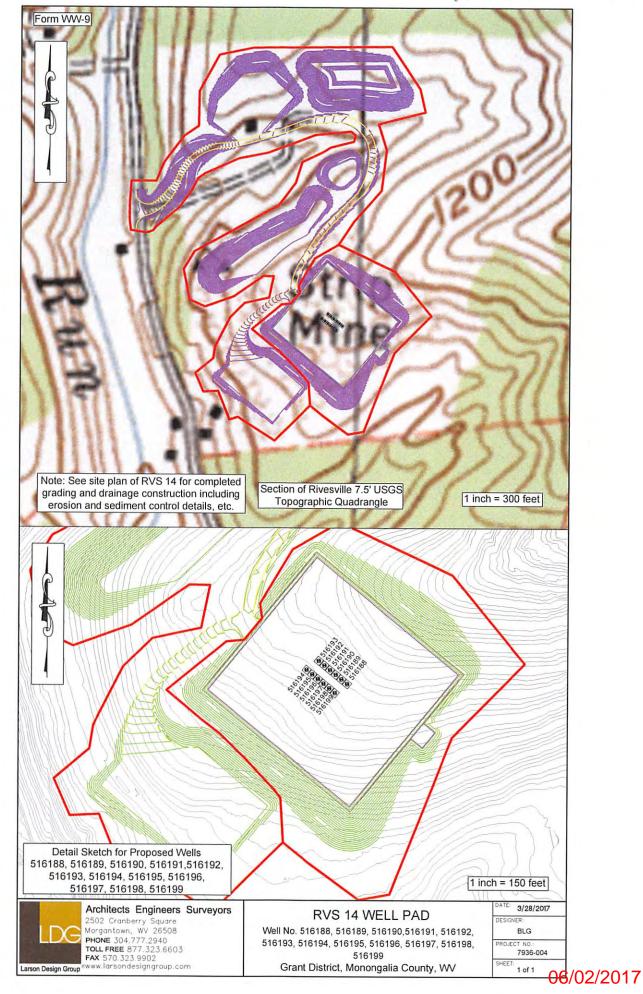


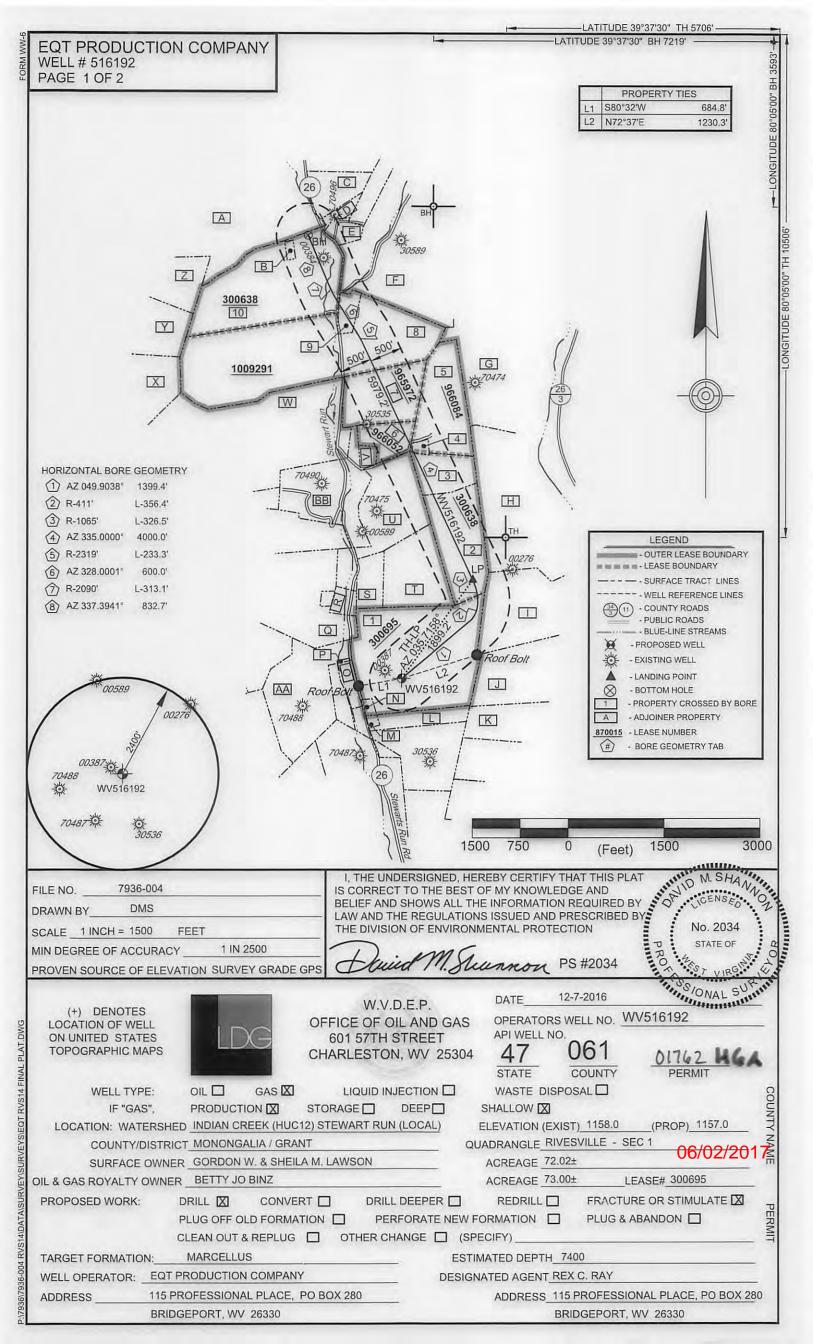
# Site Specific Safety Plan

# EQT RVS14 Unit Pad

<u>Core</u> <u>Monongalia County, WV</u>

516192	For Wells:
Date  Descritting uperusor  12-12-16	Date Prepared: October 13, 2016  Maynul Lu Tamb  WV Oil and Gas Inspector  Tus pcctor  Title  3/28/2017  Date
	Date

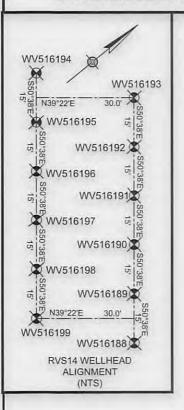




#### EQT PRODUCTION COMPANY WELL # 516192 PAGE 2 OF 2

UTM NAD83	TOPHOLE	N-4383330.32	E-576964.55
ZONE 17N (METERS)	LANDING PT	N-4383805.78	E-577294,52
(METERO)	BOT HOLE	N-4385433.51	E-576480.10
NAD27 SPC	TOPHOLE	N-399820.04	E-1829846.48
FEET NORTH	LANDING PT	N-401362.06	E-1830955.18
ZONE	BOT HOLE	N-406747.75	E-1828371.92
NAD27 GEO	TOPHOLE	N039.596169	W080.103820
LAT(N)	LANDING PT	N039.600423	W080.099923
LONG(W)	BOT HOLE	N039.615161	W080.109220





	SURFACE PROPERTIES CROSS	SED BY BC	DRE		
TAB	OWNER	DISTRICT	TAX MAP	PARCEL#	AREA±
1	GORDON WAYNE AND SHEILA M. LAWSON	GRANT	7-17	57	72.02
2	TIMOTHY ZAHARKO	GRANT	7-17	59	28.54
3	TIMOTHY ZAHARKO	GRANT	7-10	24	40.67
4	GREG AND LOUANN RADICIC	GRANT	7-10	24.1	1.17
5	TIMOTHY ZAHARKO	GRANT	7-10	24	40.67
6	EARL L. AND CHRISTINE FISHER BREEDLOVE	GRANT	7-10	23.1	9.362
7	HAROLD D. FISHER	GRANT	7-10	23	23.884
8	JAMES M. GOREMAN	GRANT	7-10	19	95.175
9	JAMES M. GOREMAN	GRANT	7-10	18	4
10	TAMMY LYNN CAMPBELL AND ARLIE EDWARD CAMPBELL II	GRANT	7-10	17	55.5

TAB	OWNER	DISTRICT	TAX MAP	PARCEL#	AREA±
A	VIRGIL L. WHETZEL, JR & LINDA WHETZEL	GRANT	7-10	14	62.43
В	CEMETERY	GRANT	7-10	17.01	120X330
C	TAMMY LYNN CAMPBELL AND ARLIE EDWARD CAMPBELL II	GRANT	7-10	12	37.67
D	VIRGIL L. WHETZEL, JR & LINDA WHETZEL	GRANT	7-10	15.3	2.454
E	JOSEPH M. PEROOTS AND JENNIFER L. FORGEN	GRANT	7-10	16.3	3.91
F	CURRENCE E. CLUTTER, ETAL	GRANT	7-10	31	146.18
G	ROBERT AND VIRGINIA RADCLIFF IRROVACABLE TRUST	GRANT	7-10	27	100.618
Н	ROBERT AND VIRGINIA RADCLIFF IRROVACABLE TRUST	GRANT	7-10	25	89
1	GORDON WAYNE AND SHEILA M. LAWSON	GRANT	7-17	60	52,323
J	GORDON LAWSON, ETAL	GRANT	7-17	63	92.682
K	GORDON LAWSON, ETAL	GRANT	7-17	63	92.682
L	GORDON WAYNE AND SHEILA M. LAWSON	GRANT	7-17	54.2	8
M	LEONARD DALE AND RHONDA LYNN FOX	GRANT	7-17	54.1	0.76
N	LEONARD DALE AND RHONDA LYNN FOX	GRANT	7-17	56	UNLISTE
0	ALFRED GLOVER, JR	GRANT	7-17	37	3.765
P	MERIT DEVELOPMENT, INC	GRANT	7-17	36.1	.18
Q	JIMMY L. AND RENITA D. SHISLER	GRANT	7-17	35	68.3362
R	JAMES L. ROGERS AND HOWARD WAYNE CORELY, JR	GRANT	7-17	35.2	3.521
S	JAMES L. AND SHEILA M. LAWSON	GRANT	7-17	58.1	8
T	GORDON W. AND SHEILA M. LAWSON	GRANT	7-17	58	24.5
U	TIMOTHY ZAHARKO	GRANT	7-10	22	27.76
V	JOHN LANDON FISHER	GRANT	7-10	23.2	2.12
W	TIMOTHY P. ZAHARKO	GRANT	7-10	20	102.19
X	WILLIAM H. AND LOUISE LEISTER	GRANT	7-10	5	61.146
Υ	WILLIAM ROY AND TAMMY LYNN RADCLIFF	GRANT	7-10	7	25
Z	TAMMY LYNN CAMPBELL AND ARLIE EDWARD CAMPBELL II	GRANT	7-10	8	26.4
AA	MERIT DEVELOPMENT, INC	GRANT	7-17	36	36,07
BB	WILLIAM CARTER AND REBECCA ROSE HARRIS	GRANT	7-10	21	85.64

LEASE#	MINERAL OWNERS	AREA
300695	BETTY JO BINZ	73±
300638	J.S. HARRIS HEIRS	55.5±
966084	DOROTHEA L. COKER	41.48±
966052	EARL L. BREEDLOVE, ETUX	9.362±
965972	HAROLD D. AND FRANCIS B. FISHER	24.018±
1009291	JAMES M. GOREMAN	98.18±
300638	J.S. HARRIS HEIRS	55.5±

FILE NO.	79	936-004		
DRAWN E	BY	DMS		
SCALE_	1 INCH =	1500	FEET	
MIN DEGI	REE OF A	CCURAC	CYY	1 IN 2500
PROVEN	SOURCE	OF ELEV	ATION	SURVEY GRADE GPS

LAW AND THE REGULATIONS ISSUED AND PRESCRIBED BY THE DIVISION OF ENVIRONMENTAL PROTECTION

No. 2034 STATE OF PS #2034

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



W.V.D.E.P. OFFICE OF OIL AND GAS 601 57TH STREET CHARLESTON, WV 25304 12-7-2016

OPERATORS WELL NO. WV516192 API WELL NO

01762 PERMIT

ON SHANN

WELL TYPE:

OIL -

GAS 🛛

LOCATION: WATERSHED INDIAN CREEK (HUC12) STEWART RUN (LOCAL)

LIQUID INJECTION

COUNTY STATE

IF "GAS",

PRODUCTION X

STORAGE

DEEP

WASTE DISPOSAL SHALLOW X

ELEVATION (EXIST) 1158.0

(PROP) 1157.0

COUNTY/DISTRICT MONONGALIA / GRANT

SURFACE OWNER GORDON W. & SHEILA M. LAWSON

QUADRANGLE RIVESVILLE - SEC 1 ACREAGE 72.02±

06/02/2017

PERMIT

OIL & GAS ROYALTY OWNER BETTY JO BINZ

ACREAGE 73.00±

LEASE#\_300695

PROPOSED WORK:

CONVERT DRILL X

DRILL DEEPER REDRILL FRACTURE OR STIMULATE

PLUG & ABANDON

PLUG OFF OLD FORMATION

PERFORATE NEW FORMATION

CLEAN OUT & REPLUG OTHER CHANGE (SPECIFY) MARCELLUS TARGET FORMATION:

WELL OPERATOR: EQT PRODUCTION COMPANY

115 PROFESSIONAL PLACE, PO BOX 280

BRIDGEPORT, WV 26330

ESTIMATED DEPTH 7400 DESIGNATED AGENT REX C. RAY

ADDRESS 115 PROFESSIONAL PLACE, PO BOX 280

BRIDGEPORT, WV 26330

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

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

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

Lease Name or Number

Grantor, Lessor, etc.

Grantee, Lessee, etc.

Royalty

Book/Page

See Attached

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

E300307

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

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

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

Well Operator: EQT Production Company

By: Victoria J Roark

Its: Permitting Supervisor

ase No.	Grantor, Lessor, etc.	Grantee, Lessee, etc. R	oyalty	Book/Page
300695	Raymond P. Gaston (current royalty owner)	**		
300033	A J Amett, et ux (original lessor)	Fayette County Gas Company		LB84/290
	Fayette County Gas Company	Hope Natural Gas Company		DB117/241
	Hope Natural Gas Company	CNG Transmission Corp		DB1128/240
	CNG Transmission Corp	Fastern States Oil & Gas Inc		AB43/313
	Eastern States Oil & Gas Inc	Equitable Production - Eastern States Oil &	Gas	CB13/14
	Equitable Production - Eastern States Oil & Gas	Equitable Production Company	Cas	CB13/14
	Equitable Production Company	EQT Production Company		CB13/14
300638	Tammy Lynn Campbell, et al (current royalty owner)	**		
	N E Michael, et ux (original lessor)	J S Harris		DB78/473
	J S Harris	Hope Natural Gas		DB81/243
	Hope Natural Gas	Consolidated Gas Supply Corp.		CB31/321
	Consolidated Gas Supply Corp.	Consolidated Gas Transmission Corp.		AB16/198
	Consolidated Gas Transmission Corp.	CNG Transmission Corp.		DB46/54
	CNG Transmission Corp.	Eastern States Oil & Gas Inc		DB1128/24
	Eastern States Oil & Gas Inc	Equitable Production - Eastern States Oil &	Gas	CB13/14
	Equitable Production - Eastern States Oil & Gas	Equitable Production Company		CB13/14
	Equitable Production Company	EQT Production Company		CB13/14
966084	Dorothea L. Coker (current royalty owner)	Cabot Oil and Gas Corp.	_	
	Dorothea L. Coker	Cabot Oil and Gas Corp.	ັ ,>	DB1353/47
	Cabot Oil and Gas Corp.	Hunt Marcellus. LLC	<i>∂</i>	DB111/267
	Hunt Marcellus. LLC	EQT Production Compnay	٠.	DB121/689
966052	Earl L. Breedlove, et ux (current royalty owner)	**		
	Earl L. Breedlove, et ux (original lessor)	Hunt Marcellus, LLC		DB1450/59
	Hunt Marcellus, LLC	EQT Production Company		DB121/689
965972	Harold D. Fisher, et ux (current royalty owner)	**		DD4 407145
	Harold D. Fisher, et ux (original lessor)	Hunt Marcellus, LLC		DB1437/15
	Hunt Marcellus, LLC	EQT Production Company		DB121/689
1009291	James M. Gorman (current royalty owner)	**		
100000	James M. Gorman (original lessor)	EQT Production Company		DB1526/07

<sup>\*\*</sup> We certify that we will pay a minimum one-eigth 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.

Office of Oil and Gas

DEC 1 4 2016



470610111

December 1, 2016

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

Re: RVS14 well pad, well numbers 516192; 516293; 516294; 516295 Grant District, Monongalia 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

RECEIVED Office of Oil and Gas

DEC 1 4 2016

WV Department of Environmental Procurion

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

	ce Certification:		API No. 47		
				Well No. 51619	92
			Well Pad N	Name: RVS14	
Notice has l	een given:				
	e provisions in West Virginia Code	§ 22-6A, the Operator has prov	vided the rec	juired parties w	ith the Notice Forms listed
	tract of land as follows:		_		
State:	WV	UTM NAD 83	Easting:	576964.55	
County:	Monongalia		Northing:	4383330.32	
District:	Grant	Public Road Acce		US-19	
Quadrangle:	Rivesville	Generally used fa	ırm name:	Gordon W. and S	heila M. Lawson
Watershed:	Stewart Run				
information r of giving the requirements Virginia Cod	ed the owners of the surface descri- equired by subsections (b) and (c), so surface owner notice of entry to su of subsection (b), section sixteen of e § 22-6A-11(b), the applicant shall thave been completed by the applicant	ection sixteen of this article; (ii urvey pursuant to subsection ( of this article were waived in tender proof of and certify to the	<ul> <li>i) that the re</li> <li>a), section to</li> <li>writing by</li> </ul>	quirement was ten of this artic the surface ow	deemed satisfied as a resul the six-a; or (iii) the notice oner; and Pursuant to Wes
Pursuant to	West Virginia Code § 22-6A, the Oprator has properly served the require	perator has attached proof to the	his Notice C	ertification	
	ECK ALL THAT APPLY	ta parties with the following.			OOG OFFICE USE ONLY
*PLEASE CH					
*PLEASE CH	ECK ALL THAT APPLY	■ NOTICE NOT REQUIR SEISMIC ACTIVITY WAS	CONDUC	TED	ONLY  □ RECEIVED/
*PLEASE CH	ECK ALL THAT APPLY FICE OF SEISMIC ACTIVITY or	■ NOTICE NOT REQUIF SEISMIC ACTIVITY WAS VEY or ■ NO PLAT SURV	CONDUC EY WAS CO RED BECA	TED ONDUCTED USE	ONLY  RECEIVED/ NOT REQUIRED
*PLEASE CH	ECK ALL THAT APPLY  FICE OF SEISMIC ACTIVITY or  TICE OF ENTRY FOR PLAT SURV	■ NOTICE NOT REQUIRESEISMIC ACTIVITY WAS VEY or ■ NO PLAT SURVI  NOTICE NOT REQUIRE NOTICE OF ENTRY FOR I	CONDUC EY WAS CO RED BECA PLAT SUR' BY SURFA	TED ONDUCTED USE VEY	ONLY  RECEIVED/ NOT REQUIRED  RECEIVED  RECEIVED/
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Required Attachments:

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

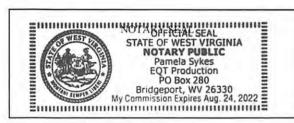
Environmental Protection

WW-6AC (1/12)

C	CN1 /		
Certification	of Notice is	hereby give	n:

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

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



Subscribed and sworn before me this 10 day of 2016.

Notary Public

My Commission Expires 8-09

#### Oil and Gas Privacy Notice:

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

Office of Oil and Gas

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API NO. 47- 061 -	
OPERATOR WELL NO.	516192
Well Pad Name: RVS14	

# 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.

D	
Date of Notice: [2-13-15] Date Permit Application Filed: [2-5] Notice of:	1346
☑ PERMIT FOR ANY ☐ CERTIFICATE OF APPLICATE OF APPLI	DOVAL FOR THE
WELL WORK CONSTRUCTION OF A	AN IMPOUNDMENT OR PIT
Delivery method pursuant to West Virginia Code § 22-6A-10(	(b)
☐ PERSONAL ☐ REGISTERED ☑ METHO	OD OF DELIVERY THAT REQUIRES A
	PT OR SIGNATURE CONFIRMATION
the surface of the tract on which the well is or is proposed to be local oil and gas leasehold being developed by the proposed well work, if described in the erosion and sediment control plan submitted pursual operator or lessee, in the event the tract of land on which the well promore coal seams; (4) The owners of record of the surface tract or trace well work, if the surface tract is to be used for the placement, construction impoundment or pit as described in section nine of this article; (5) A have a water well, spring or water supply source located within one to provide water for consumption by humans or domestic animals; and proposed well work activity is to take place. (c)(1) If more than three subsection (b) of this section hold interests in the lands, the applicant records of the sheriff required to be maintained pursuant to section e provision of this article to the contrary, notice to a lien holder is not a section of the section of the section that the contrary is a section of the section of the contrary.	resignature confirmation, copies of the application, the erosion and the well plat to each of the following persons: (1) The owners of record of the surface tract or tracts overlying the stream of the surface tract is to be used for roads or other land disturbance as not to subsection (c), section seven of this article; (3) The coal owner, oposed to be drilled is located [sic] is known to be underlain by one or composed to be drilled is located [sic] is known to be underlain by one or composed to the proposed uction, enlargement, alteration, repair, removal or abandonment of any any surface owner or water purveyor who is known to the applicant to thousand five hundred feet of the center of the well pad which is used to (6) The operator of any natural gas storage field within which the elements in common or other co-owners of interests described in at may serve the documents required upon the person described in the eight, article one, chapter eleven-a of this code. (2) Notwithstanding any notice to a landowner, unless the lien holder is the landowner. W. Va. revide the Well Site Safety Plan ("WSSP") to the surface owner and any
☐ Application Notice ☐ WSSP Notice ☐ E&S Plan Notice	☑ Well Plat Notice is hereby provided to:
☑ SURFACE OWNER(s)	☑ COAL OWNER OR LESSEE
Name: See Attached	Name: See Attached
Address:	Address:
Name:	COAL OPERATOR
Address:	
Address.	Name:Address:
☐ SURFACE OWNER(s) (Road and/or Other Disturbance)	ridatess.
Name: See Attached	SURFACE OWNER OF WATER WELL
	AND/OR WATER PURVEYOR(s)
Address:	
Man West	Name: See Attached
Name:	Address:
Address:	
	☐ OPERATOR OF ANY NATURAL GAS STORAGE FIELD
☑ SURFACE OWNER(s) (Impoundments or Pits)	Name: Office of Oil and Gas
Name: See Attached	Address:
Address:	Address: DEC 14 2016
	*Please attach additional forms if necessary
	11111
	W// Denartment of

#### Surface Owners:

Gordon W & Sheila M Lawson 37 Hidden Valley Rd Morgantown WV 26507

#### Surface Owners (road or other disturbance):

Gordon W & Sheila M Lawson 37 Hidden Valley Rd Morgantown WV 26507



#### Surface Owners (Pits or impoundments):

Gordon W & Sheila M Lawson 37 Hidden Valley Rd Morgantown WV 26507



47001010

#### **Coal Owner:**

Consol Mining Company 1000 Consol Energy Dr. Canonsburg PA 15317

CNX Gas Company 1000 Consol Energy Dr. Canonsburg PA 15317

Patriot Mining Co 2708 Cranberry Square Morgantown WV 26508

Murray American Energy Inc WV C/O Murray Energy Corp 1 Bridge St Monongah WV 26554

Murray American Energy Inc OH C/O Murray Energy Corporation 46226 National Rd St Clairsville OH 43950

#### **Owners of Water Wells**

Leonard D & Rhonda Fox 362 Stewart Run Rd Morgantown, WV 26501 4717

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Office of Oil and Gas

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(8-13)	

API NO. 47- <u>061</u>	
OPERATOR WELL NO.	516192
Well Pad Name: RVS14	

#### 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 57<sup>th</sup> 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 perimit 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 ball indeast one of the wells was permitted prior to the effective date of this article. (e) The secretary shall, by December 31, 2012, report to the Legislature on the noise, light, dust and volatile organic compounds generated by the drilling of horizontal wells as they relate tofthe well location restrictions regarding occupied dwelling structures pursuant to this section. Upon a finding, if any, by the secretary that the well location restrictions regarding occupied dwelling structures are inadequate or otherwise require alteration to address the items

06/02/2017

API NO. 47-061

OPERATOR WELL NO. 516192

Well Pad Name: RVS14

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

#### Water Well Testing:

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

#### Water Testing Laboratories:

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

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

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

#### **Written Comment:**

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

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

Such persons may request, at the time of submitting written comments, notice of the permit decision and a preparation qualified to test water. NOTE: YOU ARE NOT REQUIRED TO FILE ANY COMMENT.

WW-6A (8-13)

API NO. 47-061

OPERATOR WELL NO. 516192

Well Pad Name: RVS14

#### Time Limits and Methods for Filing Comments.

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

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

#### **Comment Requirements**

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

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

#### **Permit Denial or Condition**

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

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

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

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

RECEIVED
Office of Oil and Gas

DEC 14 2016

MAY Department of

Environment of 06/02/2017

WW-6A (8-13)

API NO. 47-061

OPERATOR WELL NO. 516192

Well Pad Name: RVS14

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.

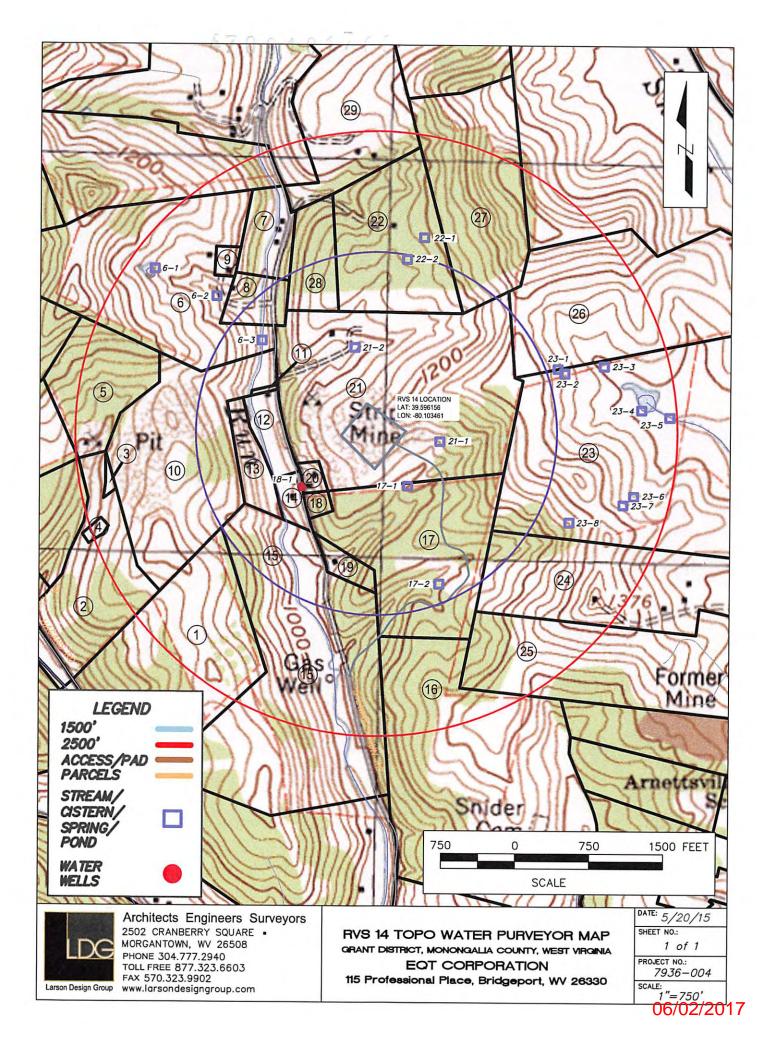
OFFICIAL SEAL
STATE OF WEST VIRGINIA
NOTARY PUBLIC
Pamela Sykes
EQT Production
PO Box 280
Bridgeport, WV 26330
My Commission Expires Aug. 24, 2022

Subscribed and sworn before me this 12 day of 1

2016

Notary Public

My Commission Expires



#### 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.

Date of Notic		Notice shall be pro	ovided at least TEN (10) days prior to filing a Date Permit Application Filed: 11/03/2016	permit application.
Delivery metl	nod pursuant	to West Virginia	Code § 22-6A-16(b)	
☐ HAND	(m)	CERTIFIED MA	II.	
DELIVE			IPT REQUESTED	
receipt reques drilling a hori of this subsect subsection ma and if available	ted or hand de zontal well: P ion as of the d y be waived in e, facsimile nu	ivery, give the sur rovided. That notice ate the notice was writing by the sur mber and electron	st ten days prior to filing a permit application, face owner notice of its intent to enter upon the given pursuant to subsection (a), section to provided to the surface owner: <i>Provided, how</i> face owner. The notice, if required, shall incline mail address of the operator and the operator.  CE OWNER(s):	ne surface owner's land for the purpose of n of this article satisfies the requirements never. That the notice requirements of this ude the name, address, telephone number.
Name: Gordon V	V. and Sheila M. Law	son	Name:	
Address: 37 Hi			Address:	
Morgantown WV 2				
State: County: District:	WV Monongalia Grant		UTM NAD 83 Easting: Northing: Public Road Access:	576964.55 4383330.32 US-19
District	District the		Generally used farm name:	Gordon W. and Sheila M. Lawson
Quadrangle:	Rivesville			Coldon W. and Chona M. Editori
	Stewart Run			CONTROL OF
Quadrangle: Watershed: This Notice Pursuant to V facsimile nun	Shall Includ Vest Virginia ber and electrizontal drilling	Code § 22-6A-166 onic mail address may be obtained	(b), this notice shall include the name, address of the operator and the operator's authorized from the Secretary, at the WV Department of 25304 (304-926-0450) or by visiting www.de	ress, telephone number, and if available, ed representative. Additional information f Environmental Protection headquarters,
Quadrangle: Watershed: This Notice Pursuant to V facsimile nun related to hor located at 601	Shall Includ Vest Virginia aber and electrizontal drilling 57 <sup>th</sup> Street, SE	Code § 22-6A-16 conic mail address may be obtained c, Charleston, WV	from the Secretary, at the WV Department of 25304 (304-926-0450) or by visiting www.de	ress, telephone number, and if available, ed representative. Additional information f Environmental Protection headquarters, ep.wv.gov/oil-and-gas/pages/default.aspx.
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Quadrangle: Watershed: This Notice Pursuant to V facsimile nun related to hor located at 601 Notice is her	Stewart Run  Shall Includ  Vest Virginia ber and electric and drilling  57 <sup>th</sup> Street, SE  reby given by  EQT Production	Code § 22-6A-16 conic mail address may be obtained c, Charleston, WV	from the Secretary, at the WV Department of 25304 (304-926-0450) or by visiting www.de	ress, telephone number, and if available, ed representative. Additional information f Environmental Protection headquarters, ep.wv.gov/oil-and-gas/pages/default.aspx.
Quadrangle: Watershed: This Notice Pursuant to V facsimile nun related to hor located at 601 Notice is her Well Operator	Shall Includ Vest Virginia aber and electrizontal drilling 57th Street, SE reby given by EQT Production 115 Profession	Code § 22-6A-16 ronic mail address may be obtained c, Charleston, WV v:	from the Secretary, at the WV Department of 25304 (304-926-0450) or by visiting www.de  Authorized Representative: Address: Bridgeport WV 26330	ress, telephone number, and if available, ed representative. Additional information f Environmental Protection headquarters, ep.wv.gov/oil-and-gas/pages/default.aspx.
Quadrangle: Watershed: This Notice Pursuant to V facsimile nun related to hor located at 601 Notice is her Well Operator Address:	Shall Includ Vest Virginia aber and electrizontal drilling 57th Street, SE reby given by EQT Production 115 Profession	Code § 22-6A-16 ronic mail address may be obtained c, Charleston, WV v:	Authorized Representative:  Address:  Bridgeport WV 26330  Telephone:	ress, telephone number, and if available, ed representative. Additional information f Environmental Protection headquarters, ep.wv.gov/oil-and-gas/pages/default.aspx.
Quadrangle: Watershed: This Notice Pursuant to V facsimile nun related to hor located at 601 Notice is her Well Operator Address: Bridgeport WV 26	Stewart Run  Shall Includ  Vest Virginia aber and electrizontal drilling  57th Street, SE  reby given by  EQT Production  115 Profession	Code § 22-6A-16 conic mail address may be obtained c, Charleston, WV v: on Company	from the Secretary, at the WV Department of 25304 (304-926-0450) or by visiting www.de  Authorized Representative: Address: Bridgeport WV 26330	ress, telephone number, and if available, ed representative. Additional information f Environmental Protection headquarters, ep.wv.gov/oil-and-gas/pages/default.aspx.  Victoria Roark  115 Professional Place PO Box 280

Oil and Gas Privacy Notice:

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

WW-6A5 (1/12)

Operator Well No. 516192

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

	Requirement: notice shall be provided to the common state of the c	no later than the filing date of permit application Filed:	application.
Delivery met	hod pursuant to West Virginia Code §	22-6A-16(c)	
CERTII	FIED MAIL	HAND	
	RN RECEIPT REQUESTED	DELIVERY	
eturn receipt he planned of required to be drilling of a l damages to the d) The notice of notice.	requested or hand delivery, give the sur- operation. The notice required by this a provided by subsection (b), section ten- norizontal well; and (3) A proposed sur- e surface affected by oil and gas operations are required by this section shall be given be provided to the SURFACE OWNE	face owner whose land will be used for subsection shall include: (1) A copy of this article to a surface owner whose face use and compensation agreement on to the extent the damages are come to the surface owner at the address like.	ication, an operator shall, by certified mail or the drilling of a horizontal well notice of of this code section; (2) The information se land will be used in conjunction with the nt containing an offer of compensation for spensable under article six-b of this chapter, sted in the records of the sheriff at the time
Name: Gordon N Address: 37 Hi Morgantown WV	eby given: /est Virginia Code δ 22-6A-16(c), notice	Name:Address:	well operator has developed a planned act of land as follows:
Name: Gordon M Address: 37 His Morgantown WV Notice is her Pursuant to W operation on	W & Sheila M Lawson  dden Valley Rd  26507	Name:	act of land as follows: 576964.55
Name: Gordon N Address: 37 Hi Morgantown WV Notice is her. Pursuant to W operation on State:	W & Sheila M Lawson  dden Valley Rd  26507  eby given:  /est Virginia Code § 22-6A-16(c), notice the surface owner's land for the purpose	is hereby given that the undersigned of drilling a horizontal well on the tra  UTM NAD 83  Northing:	act of land as follows: 576964.55 4383330.32
Name: Gordon N Address: 37 Hi Morgantown WV Notice is her Pursuant to W operation on State: County: District:	W & Sheila M Lawson  dden Valley Rd  26507  eby given:  /est Virginia Code § 22-6A-16(c), notice the surface owner's land for the purpose  wv	is hereby given that the undersigned of drilling a horizontal well on the tra  UTM NAD 83 Easting:  Public Road Access:	576964.55 4383330.32 US-19
Name: Gordon N Address: 37 Hi Morgantown WV Notice is her Pursuant to W operation on State: County: District:	W & Sheila M Lawson  dden Valley Rd  26507  eby given:  /est Virginia Code § 22-6A-16(c), notice the surface owner's land for the purpose  WV  Monongalia	is hereby given that the undersigned of drilling a horizontal well on the tra  UTM NAD 83  Northing:	576964.55 4383330.32 US-19
Name: Gordon Maddress: 37 His Morgantown WV  Notice is her Pursuant to Woperation on State: County: District: Quadrangle: Watershed:	W & Sheila M Lawson  dden Valley Rd  26507  eby given: /est Virginia Code § 22-6A-16(c), notice the surface owner's land for the purpose  WV  Monongalia  Grant  Rivesville  Stewart Run	is hereby given that the undersigned of drilling a horizontal well on the tra  UTM NAD 83 Easting:  Public Road Access:	576964.55 4383330.32 US-19
Name: Gordon Maddress: 37 His Morgantown WV  Notice is her Pursuant to Woperation on State: County: District: Quadrangle: Watershed:  This Notice Separation be provided for izontal we surface affects.	W & Sheila M Lawson  Idden Valley Rd  26507  Peby given:  Vest Virginia Code § 22-6A-16(c), notice the surface owner's land for the purpose  WV  Monongalia  Grant  Rivesville  Stewart Run  Shall Include:  Vest Virginia Code § 22-6A-16(c), this med by W. Va. Code § 22-6A-10(b) to a code by oil and gas operations to the exterplated to horizontal drilling may be oblocated at 601 57th Street, SE, Cha	Name:	576964.55 4383330.32 US-19
Name: Gordon Maddress: 37 His Morgantown WV  Notice is her Pursuant to Woperation on State: County: District: Quadrangle: Watershed:  Pursuant to Woo be provided norizontal we surface affect information in headquarters, gas/pages/def	W & Sheila M Lawson  Idden Valley Rd  26507  Peby given:  /est Virginia Code § 22-6A-16(c), notice the surface owner's land for the purpose  WV  Monongalia  Grant  Rivesville  Stewart Run  Shall Include:  Vest Virginia Code § 22-6A-16(c), this med by W. Va. Code § 22-6A-10(b) to a cell; and (3) A proposed surface use and cell; and (3) A proposed surface use and cell; and (3) A proposed surface use and cell to horizontal drilling may be obtained at 601 57th Street, SE, Characteristics  Cault.aspx.	Name:	act of land as follows:  576964.55  4383330.32  US-19  Gordon W. and Sheila M. Lawson  code section; (2) The information required used in conjunction with the drilling of a n offer of compensation for damages to the der article six-b of this chapter. Additional V Department of Environmental Protection ) or by visiting www.dep.wv.gov/oil-and-
Name: Gordon Maddress: 37 His Morgantown WV  Notice is here Pursuant to We peration on State: County: District: Quadrangle: Watershed:  This Notice Separate to We perovide no rizontal we surface affect information in headquarters,	W & Sheila M Lawson  Idden Valley Rd  26507  Peby given:  /est Virginia Code § 22-6A-16(c), notice the surface owner's land for the purpose  WV  Monongalia  Grant  Rivesville  Stewart Run  Shall Include:  Vest Virginia Code § 22-6A-16(c), this med by W. Va. Code § 22-6A-10(b) to a cell; and (3) A proposed surface use and cell; and (3) A proposed surface use and cell; and (3) A proposed surface use and cell to horizontal drilling may be obtained at 601 57th Street, SE, Characteristics  Cault.aspx.	is hereby given that the undersigned of drilling a horizontal well on the tra  UTM NAD 83  Public Road Access:  Generally used farm name:  otice shall include: (1)A copy of this surface owner whose land will be compensation agreement containing a ent the damages are compensable undained from the Secretary, at the Warleston, WV 25304 (304-926-0450)	act of land as follows:  576964.55  4383330.32  US-19  Gordon W. and Sheila M. Lawson  code section; (2) The information required used in conjunction with the drilling of a n offer of compensation for damages to the der article six-b of this chapter. Additional V Department of Environmental Protection or by visiting www.dep.wv.gov/oil-and-

Oil and Gas Privacy Notice:

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



#### WEST VIRGINIA DEPARTMENT OF TRANSPORTATION

**Division of Highways** 

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

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

Earl Ray Tomblin Governor

June 22, 2016

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

Subject: DOH Permit for the RVS 14 Pad Site, Monongalia County

516188 RVS14H1	516189 RVS14H2	516190 RVS14H3
516191 RVS14H4	516192 RVS14H5	516193 RVS14H6
516194 RVS14H7	516195 RVS14H8	516196 RVS14H9
516197 RVS14H10	516198 RVS14H11	516199 RVS14H12
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Dear Mr. Martin,

This well site will be accessed from Permit #04-2016-0482 issued to EQT Production Company for access to the State Road. The well site is located off of Monongalia County Route 26 SLS.

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

Very Truly Yours,

Gary K. Clayton, P.E.

Regional Maintenance Engineer Central Office O&G Coordinator

Cc: N

Nick Bumgardner

**EQT Production Company** 

CH, OM, D-4, File

Office of Oil and Gas

DEC 1 4 2016

WN Department of 06/02/2017

# Anticipated Frac Additives Chemical Names and CAS numbers

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

RECEIVED
Office of Oil and Gas
DEC 14 2016

WV Department of Protection 06/02/2017

#### PROJECT INFORMATION

PROJECT NAME: EQT RVS 14

TAY PARCEL

GRANT DISTRICT, MONONGALIA COUNTY, WV DISTRICT 7 MAP 17 PARCEL 57

GORDON WAYNE & SHEILA M LAWSON PID 7-17-57 TOTAL PROPERTY AREA: 72.02 ACRES TOTAL DISTURBED AREA: 25.60 ACRES



#### OPERATOR

FOT PRODUCTION COMPANY OPERATOR ID: 306686 P.O. BOX 280 BRIDGEPORT, WV 26630 PHONE: (304) 348-3870

#### ENGINEER

LARSON DESIGN GROUP 2502 CRANBERRY SQUARE MORGANTOWN, WV 26508 PHONE: (304) 777-2940



#### SHEET INDEX

COVER SHEET

2-3 GENERAL NOTES

OVERALL PLAN SHEET INDEX

SITE LAYOUT

ACCESS ROAD PROFILES

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11 IMPAIRED WATER AST PAD ACCESS ROAD CROSS SECTIONS

12 WELL PAD CROSS SECTIONS

13 IMPAIRED & FRESH WATER AST PADS CROSS SECTIONS

EXCESS MATERIAL PILE 2 CROSS SECTIONS 14

15 EXCESS MATERIAL PILE 1 & TOPSOIL PILE 1 CROSS SECTIONS

16-17 RECLAMATION PLAN

18-28 CONSTRUCTION DETAILS

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!!

CONSTRUCTION QUANTITIES 29

RESTRICTIONS NOTES 1 THERE ARE NO PERENNIAL STREAMS, WETLANDS, LAKES, PONDS, OR RESERVOIRS WITHIN 100 FEET OF THE WELL PAD LOD. 2. THERE ARE NO NATURALLY PRODUCING TROUT STREAMS WITHIN 300 FEET OF THE WELL PAD AND LOD.

3. THERE ARE NO GROUNDWATER INTAKE OR PUBLIC WATER SUPPLY FACILITIES WITHIN 1000 FEET OF THE WELL PAD AND LOD.

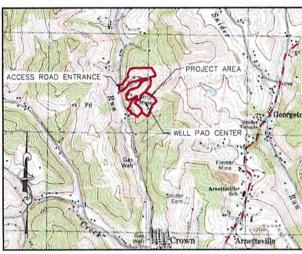
4. THERE ARE NO APPARENT EXISTING WATER WELLS OR DEVELOPED SPRINGS WITHIN 250 FEET OF THE WELL(S) BEING DRILLED.

5. THERE ARE NO OCCUPIED DWELLING STRUCTURES WITHIN 525 FEET OF THE CENTER OF THE WELL PAD.

5 THERE ARE NO AGRICULTURAL BUILDINGS LARGER THAN 2,500 SQUARE FEET WITHIN 625 FEET OF THE CENTER OF THE WELL PAD.

## EQT RVS 14 SITE PLAN

### **FOT PRODUCTION COMPANY**



RIVESVILLE QUADRANGLE

PREPOSED WELL NAME	WAN NORTH NAO 83	LAT & LONG
516188	N 399819.30 E 1798455.57	LAT 39 596147 LON -80.103449
516189	N 399828.81 E 1798443.97	LAT 39,595173 LON -80,103490
516190	N 399838.32 E 1798432.37	LAT 39.596199 LON -80.103532
51619)	N 399847.83 E 1798420.77	LAT 39.596225 LON -80.103573
515192	N 399857.35 £ 1798409 15	LAT 39.596251 LON -80.103614
518193	N 399866.86 E 1798397.59	LAT 39,596277 LON -80.103656
516194	N 399848.41 E 1798372.75	LAT 39.596226 LON -80.103743
516195	N 399838.90 E 1798384.35	LAT 39.596200 LON -80 103702
516196	N 399829.39 E 1798395.96	LAT 39.596174 LON -80.103661
516197	N 399819.88 E 1798407.53	LAT 39.596148 LON -80.103619
516198	N 399810.36 E 1798419.13	LAT 39.596122 LON -80.103578
516199	N 399800.85 E 1798430.74	LAT 39.596096 LON -80.103536
WELL PAD ELEVATION	1157,00	

#### LOCATION COORDINATES

ACCESS ROAD ENTRANCE

LATITUDE: 39.597378 LONGITUDE: -80.106480 (NAD 83) N 400273.37 E 1797604.29 (WV NORTH NAD 83)

CENTER OF WELL PAD

LATITUDE: 39.596157 LONGITUDE: -80.103550 (NAD 83) N 399823.17 E 1798427.16 (WV NORTH NAD 83)

CENTER OF FRESH WATER AST PAD

LATITUDE: 39.598605 LONGITUDE: -80.104818 (NAD 83) N 400717.10 E 1798075.64 (WV NORTH NAD 83)

CENTER OF IMPAIRED WATER AST PAD

LATITUDE: 39.595470 LONGITUDE: -80.104599 (NAD 83) N 399574.92 E 1798129.79 (WV NORTH NAD 83)

#### SITE DISTURBANCE COMPUTATIONS

WELL PAD LIMIT OF DISTURBANCE = 6.75 AC FRESH WATER AST PAD LIMIT OF DISTURBANCE = 2.84 AC IMPAIRED WATER AST PAD LIMIT OF DISTURBANCE = 2 35 AC WELL PAD ACCESS ROAD LIMIT OF DISTURBANCE = 12.59 AC AST PAD ACCESS ROAD LIMIT OF DISTURBANCE = 1.07 AC TOTAL SITE DISTURBANCE = 25.60 AC

#### ENTRANCE PERMIT

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

#### ENVIRONMENTAL NOTES

WEILAND DEUNEALIONS WERE PERFORMED BETWEEN APRIL 26 AND MAY 2, 2016 BY LARSON DESIGN GROUP TO REVIEW THE SITE FOR WATERS AND WEILANDS THAT ARE MOST LIKELY WITHIN THE REGULATORY PURVIEW OF THE U.S. ARMY CORPS OF ENGINEERS (USACE) AND/OR THE WEST VIRGINIA DEPARTMENT OF COMPS OF EMOINEERS (USALE) AND/OR THE WEST VIRGINIA BEFARMENT IN ENVIRONMENTAL PROTECTION (WVDEP). THE MAY 5, 2016 EDT RVS 14 JURISDICTIONAL STREAMS & WETLANDS MAPS WERE PREPARED BY LARSON DESIGN GROUP AND SUMMARIZE THE RESULTS OF THE FIELD DELINEATION. THE MAPS DO NOT, IN ANY WAY, REPRESENT A JURISDICTIONAL DETERMINATION OF MA'S DU NO! IN ANY WAY, REMESSENT A JUNEAU TIONAL DETERMINATION OF THE LANDWARD LIMITS OF WATERS AND WELLANDS WHICH MAY BE REGULATED BY THE USACE OR THE WYDER. IT IS STRONGLY RECOMMENDED THAT THE AFOREMENTONED AGENCIES BE CONSULTED IN AN EFFORT TO GAIN WRITTEN CONFIRMATION OF THE DELINEATION SHOWN ON THIS SWHIBIT PRIOR TO ENGAGING CONSTRUCTION ON THE PROPERTY DESCRIBED HERBIN. THE DEVELOPER SHALL OBTAIN THE APPROPRIATE PERMITS FROM THE FEDERAL AND/OR STATE REQULATORY AGENCIES PRIOR TO ANY PROPOSED IMPACTS TO WATERS OF THE U.S. INCLUDING WETLAND FILLS AND STREAM CROSSINGS

#### GEOTECHNICAL NOTE

A GEOTECHNICAL INVESTIGATION HAS NOT BEEN COMPLETED FOR THIS SITE DESIGN CONSEQUENTLY, THE DESIGN OF THE SITE IMPROVEMENTS DEPICTED ON THESE DRAWNOS WAS PREPARED BY LDG WINDOUT PALLED GEOTECHNICAL INFORMATION AND LDG DOES NOT GUARANTEE THE EFFICACY OF THE DESIGN.

ALTHOUGH A DETAILED GEOTECHNICAL INVESTIGATION WAS COMPLETED BY LARSON DESIGN GROUP ON JUNE 18 AND 19, 2015 AND A REPORT WAS PREPARED ON JULY 22, 2015 CHANCES TO THE SITE DESIGN NECESSITATE THE COMPLETION OF ADDITIONAL GEOTECHNICAL BORINGS AND FREPARATION OF A REVISED GEOTECHNICAL REPORT PROT TO CONSTRUCTION, THE OWNER ASSUMES ALL RISK IN THE USE OF THESE DRAWINGS TO CONSTRUCTION IMPROVEMENTS ON

#### SOURCE OF MAPPING DATA

THE CONTOURS DEPICTED IN THE PLANS WERE COMPILED TO NATIONAL MAP THE CONTIDUES DEFICIED IN THE PLANS WERE COMMITTED IN ATTEMAL MAP ACCURACY STANDARDS BY KUCERA INTERNATIONAL INC., WILLOUGHBY, OHIO, USING PHOTOGRAMMETRIC METHODS FROM AERIAL PHOTOGRAPHY TAKEN ON APRIL 7, 2014. CONTOURS WHICH ARE IN WOODED OR DENSE VEGETATION AREAS ARE APPROXIMATIONS ONLY. THE PROPERTY BOUNDARIES SHOWN IN THE PLANS WERE LOCATED BY LARSON DESIGN GROUP.

#### GENERAL DESCRIPTION

THE ACCESS ROAD(S), WELL PAD, AND AST PADS ARE BEING CONSTRUCTED TO AID IN THE DEVELOPMENT OF INDIVIDUAL SHALE GAS WELLS

ECT WILL NOTIFY MISS UTILITY OF WEST VIRGINIA FOR THE LOCATING OF UTILITIES PRIOR TO THIS PROJECT DESIGN: TICKET #1611044612. IN ADDITION, MISS UTILITY WILL BE CONTACTED BY THE CONTRACTOR PRIOR TO THE START OF CONSTRUCTION FOR THIS PROJECT.



/9/2017	WYDEP COMMENT RESPONSE	JWD RA
/3/2017	FINAL SITE DESIGN	BLG RA
5/2016	6 FINAL STE DESCN	BLG RA
/12/201	6 EQT COMMENTS	BLG RA
5/6/2016	FINAL DRAFT FOR REVIEW	BLC RA
14/2018	8 RVS 14 UPDATED SITE LAYOUT	BLC RA
DATE	COMMENTS	

Architects Engineers Design

TE T VIRGINIA

WELL RVS 14 F RVS TOT

EQT Corporation 115 PROFESSIONAL PL BRIDGEPORT, WV 26330 PHONE 304,848,0000

1 OF 29 PRO ECT NO

7936-004

