

#### west virginia department of environmental protection

Office of Oil and Gas 601 57th Street, S.E. Charleston, WV 25304 (304) 926-0450 fax: (304) 926-0452

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

Wednesday, October 14, 2020 WELL WORK PERMIT Horizontal 6A / New Drill

EQT PRODUCTION COMPANY 625 LIBERTY AVE., SUITE 1700 PITTSBURGH, PA 15222

Permit approval for ELLIOTT 17H Re:

47-049-02506-00-00

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: ELLIOTT 17H

Farm Name: CONSOLIDATION COAL CO

U.S. WELL NUMBER:

47-049-02506-00-00

Date Issued: 10/14/2020

Horizontal 6A New Drill

Promoting a healthy environment.

API Number: 4704902506

### **PERMIT CONDITIONS**

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

#### **CONDITIONS**

- 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: 4704902506

## **PERMIT CONDITIONS**

11. The operator shall provide to the Office of Oil and Gas the dates of each of the following within 30 days of their occurrence: completion of construction of the well pad, commencement of drilling, cessation of drilling, completion of any other permitted well work, and completion of the well. Such notice shall be provided by sending an email to DEPOOGNotify@wv.gov.



#### west virginia department of environmental protection

Office of Oil and Gas 601 57th Street, S.E. Charleston, WV 25304 (304) 926-0450 Fax: (304) 926-0452

Austin Caperton, Cabinet Secretary dep.wv.gov

#### ORDER ISSUED UNDER WEST VIRGINIA CODE, CHAPTER 22, ARTICLE 6A

**EQT Production Company** TO: 625 Liberty Ave., Suite 1700

Pittsburgh, PA 15222

DATE: July 30, 2020 ORDER NO.: 2020-W-3

#### INTRODUCTION

This Order (hereinafter "Order") is issued by the Office of Oil and Gas (hereinafter "OOG"), by and through its Chief, pursuant to the authority of W. Va. Code §§ 22-1-1, 22-6-1 and 22-6A-1 et seq. to EQT Production Company (hereinafter "EQT" or "Operator"), collectively the "Parties."

#### FINDINGS OF THE CHIEF

In support of this Order, the Chief hereby finds the following:

- 1. OOG, an office within the West Virginia Department of Environmental Protection, is the agency with the duty and authority to execute and enforce W. Va. Code §22-6-1 and §22-6A-1 et seq., and the rules and regulations promulgated thereunder.
- 2. EOT is a "person" as defined by W. Va. Code §22-6-1(n), with a corporate address as 625 Liberty Ave., Suite 1700, Pittsburgh, PA 15222.
- 3. On June 17, 2020 EQT submitted a well work permit application identified as API# 47-049-02498. The proposed well is to be located on the Elliot Pad in the Mannington District of Marion County, West Virginia.
- 4. On June 17, 2020 EQT requested a waiver for Wetlands 1 and 2 as outlined in Attachment 1, from well location restriction requirements in W. Va. Code §22-6A-12(b) for the well work permit application identified as API# 47-049-02498.

#### **CONCLUSIONS OF LAW**

- 1. West Virginia Code §22-1-6(d) requires, in part, that "in addition to other powers, duties and responsibilities granted and assigned to the secretary by this chapter, the secretary is authorized and empowered to...(3) Enter private lands to make surveys and inspections for environmental protection purposes; to investigate for violations of statutes or rules which the Office of Oil and Gas is charged with enforcing; to serve and execute warrants and processes; to make arrests; issue orders, which for the purposes of this chapter include consent agreements; and to otherwise enforce the statutes or rules which the Office of Oil and Gas is charged with enforcing."
- 2. West Virginia Code §22-6A-2(a)(6) requires, in part, that "Concomitant with the broad powers to condition the issuance of well work permits, the secretary should also have broad authority to waive certain minimum requirements of this article when, in his or her discretion, such waiver is appropriate: *Provided*, That the secretary shall submit a written report of the number of waivers granted to the Legislature commencing January 1, 2013, and each year thereafter."
- 3. West Virginia Code §22-6A-12(b) requires, in part, that "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 Office of Oil and Gas 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 Office of Oil and Gas 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."

Order No. 2020-W-3

#### **ORDER**

West Virginia Code §22-6A-12(b) requires, in part, that "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. The Office of Oil and Gas grants the request for a waiver for Wetlands 1 and 2 from well location restriction requirements in W. Va. Code §22-6A-12(b) for the well work permit application identified as API# 47-049-02498. The Office of Oil and Gas hereby **ORDERS** that EQT shall meet the following site construction and operational requirements for the Elliot Well Pad:

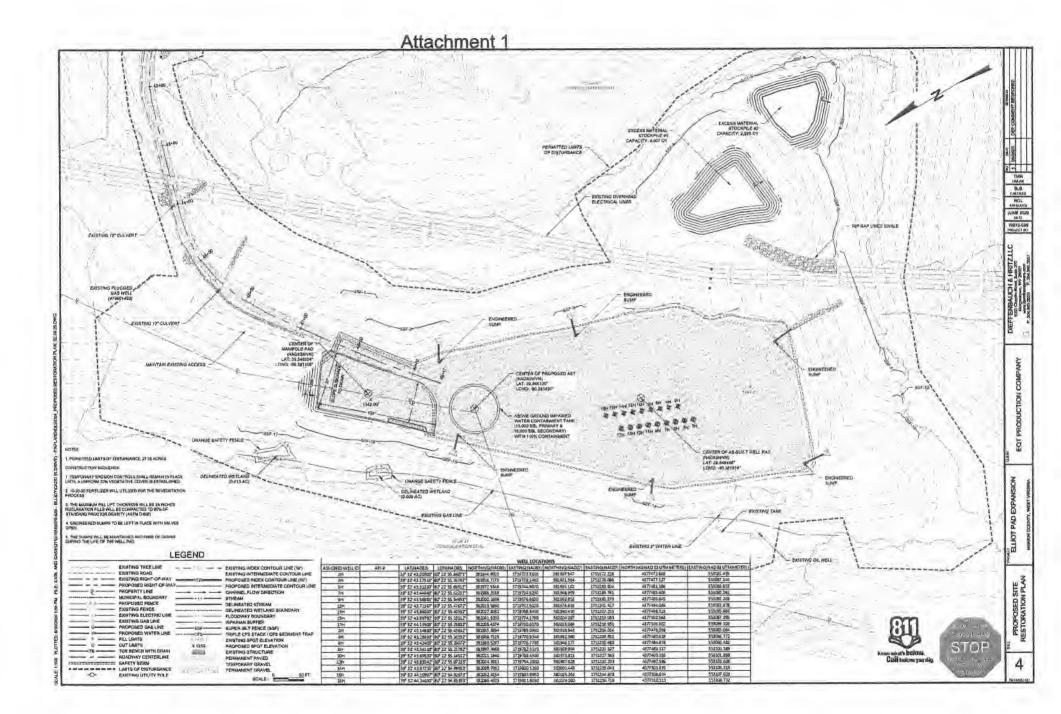
- a. A berm shall be constructed around the perimeter of the pad to contain any potential spills and storm water runoff. Berm is to be at least twenty-four inches (24") in height;
- b. Erosion control blankets shall be installed on all slopes and down gradient locations of the pad as erosion and sediment controlling BMPs;
- c. Wetlands 1 and 2 shall be protected by a layer of Super Silt Fence. The manifold pad will be graded so that no runoff will not leave the pad. This along with temporary and permanent vegetative cover will prevent sediment from reaching the wetlands
- d. Disturbed areas not used for operations shall be seeded and mulched per the seeding tables in the WVDEP-OOG Erosion and Sediment Control Manual;
- e. Drill cuttings and associated drilling mud shall be disposed of in a permitted landfill;
- f. Waste generated by the flowback treatment systems shall be sent to offsite disposal at a permitted landfill;
- g. Weekly site inspections shall be conducted to monitor and maintain the integrity of the BMP storm water controls;
- h. Weekly storm water and spill prevention inspections shall be conducted focusing on storm water and spill prevention BMPs and maintenance of these BMPs;
- i. Inspections of the storm water and spill prevention measures shall be conducted after any major storm event defined as a half inch (½") rain within any twenty-four (24) hour period;
- j. Pad inspections shall be conducted no less than once a week to identify and mitigate potential deficiencies;
- k. All records from inspections shall be maintained on site for the life of the project and be available upon request.

#### IN THE NAME OF THE STATE OF WEST VIRGINIA:

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

By: James Martin Digitally signed by James Martin Date: 2020.07.30 10:04:36 -04:00'

JAMES A. MARTIN, CHIEF



API NO. 47-OPERATOR WELL NO. WHO ... 5 0 6 Well Pad Name: Elliott

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

1) Well Opera	tor: EQT Pro	duction Company	306686	Marion	Mannington	Glover Gap
		N 1.	Operator ID	County	District	Quadrangle
2) Operator's	Well Number:	17H	Well	Pad Name: Elli	ott	
3) Farm Name	/Surface Owne	r: Consolidation Coal C	ompany Public F	Road Access: C	R 5	
4) Elevation, c	urrent ground:	1,343' (pad built) E	levation, propos	ed post-constru	ction: 1,343'	
5) Well Type	(a) Gas X Other	Oil	U	nderground Sto	rage	
		Shallow X Horizontal X	Deep	-		Spw 8/13/2020
6) Existing Page	d: Yes or No	/es		_		0/15/2020
	arget Formatior 7,770', 101', 259	n(s), Depth(s), Antio 03 psi	cipated Thicknes	ss and Expected	l Pressure(s):	
8) Proposed To	otal Vertical De	epth: 7,770'				
9) Formation a	it Total Vertica	l Depth: Marcellus	5			
10) Proposed	Гotal Measured	Depth: 14,215'				
11) Proposed I	Horizontal Leg	Length: 4,781'				
12) Approxima	ate Fresh Water	r Strata Depths:	202', 287'			
13) Method to	Determine Free	sh Water Depths:	Offset Wells - 4	7-049-02251, 4	7-049-00878	
14) Approxima	ate Saltwater D	epths: 1,797', 1,89	5', 2412'			
15) Approxima	ate Coal Seam I	Depths: 435'-437',	870'-875', 967'-	975'		
		ssible Void (coal m		1233		Office of Chand Gas
17) Does Prop	osed well locati	ion contain coal sea	ms			AUG 2 7 2020
directly overly	ing or adjacent	to an active mine?	Yes	1	No X	WV Fragmusers of Environmental Protection
(a) If Yes, pr	ovide Mine Info	o: Name:	lame:			
		Depth:				
		Seam:				
		Owner:				

API NO. 47-			
OPERATOR WELL NO	17H 5	50	6
Well Pad Name: Elliott	sea, other	-	

### 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	40	40	60 ft^3 / CTS
Fresh Water	13 3/8	New	J-55	54.5	1025	1025	900 ft^3 / CTS
Coal							
Intermediate	9 5/8	New	A-500	40	2485	2485	1000 ft^3 / CTS
Production	5 1/2	New	P-110	20	14215	14215	500' above intermediate casing
Tubing							
Liners							

5DW 5/13/2020

ТҮРЕ	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	0.312	1050	18	Class A	1.18
Fresh Water	13 3/8	17 1/2	0.380	2730	2184	Class A / Type 1	1.13 - 1.19
Coal							
Intermediate	9 5/8	12 3/8	0.395	3950	3160	Class A / Type 1	1.13 - 1.19
Production	5 1/2	8 1/2	0.361	14360	11488	Class A/H	1.04 - 2.098
Tubing							
Liners							

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### **PACKERS**

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Kind:	WV Department of Environmental Protection
Sizes:	
Depths Set:	

API NO. 47	4	70	4	·	C	5	۵	B
OPERATOR							_	
Well Pad I	Nam	ne: Ell	iott					

19)	Describe j	proposed	well v	vork,	including	the g	drilling	and p	lugging	back o	of any	pilot h	ıole:
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Drill and complete a new horizontal well in the Marcellus Formation. Drill the vertical, kick off and drill curve. Drill the lateral in the Marcellus. Cement casing.

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

Hydraulic fracturing is completed in accordance with state regulations using water recycled from previously fractured wells and obtained from freshwater sources. This water is mixed with sand and a small percentage (less than 0.1%) of chemicals (including 15% Hydrochloric acid, friction reducer, biocide, and scale inhibitor), referred to in the industry as a "slickwater" completion. Maximum anticipated internal casing pressure is expected to be approximately 10,000 psi, maximum anticipated treating rates are expected to average approximately 100 bpm. Stage lengths vary from 150 to 300 feet. Average approximately 350,000 gallons of water per stage. Sand sizes vary from 100 mesh to 20/40 mesh. Average approximately 200,000-600,000 pounds of proppant per stage.

- 21) Total Area to be disturbed, including roads, stockpile area, pits, etc., (acres): 27.35 Acres
- 22) Area to be disturbed for well pad only, less access road (acres): 10.47 Acres
- 23) Describe centralizer placement for each casing string:
- Surface: 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 additives

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Surface: Calcium Chloride. Used to speed the setting of cement slurries

Production: Calcium Carbonate, Fluid Loss, Extender, Dispersent, Viscosifier, Defoamer, POZ, Bonding Agent, Retarder, Anti-Settling/Suspension Agent

Anti-Settling/Suspension Agent

WV Department of Environmental Protection

#### 25) Proposed borehole conditioning procedures:

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

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

Production: Perform a cleanup cycle by pumping 3-8 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.



west virginia department of environmental protection

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

March 18, 2014

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

Re: Cement Variance Request

Dear Sir or Madam,

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

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

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

1

James Peterson

Environmental Resources Specialist / Permitting

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#### west virginia department of environmental protection

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

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

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

#### REPORT OF THE OFFICE

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

#### FINDINGS OF FACT

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

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#### CONCLUSIONS OF LAW

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

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

#### ORDER

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

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

IN THE NAME OF THE STATE OF WEST VIRGINIA

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

James Martin, Chief Office of Oil and Gas

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> > AUG 2 7 2020

WV Dapartment of Environmental Protection



EQT PRODUCTION COMPANY
400 Woodcliff Drive | Canonsburg, PA 15317
P: 724-746-9073 | www.eqt.com

August 13, 2020

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

Re: Casing on Elliott 17H

Dear Mr. Brewer,

The 13-3/8" surface casing will be set at 1,025' KB, 50' below the deepest workable coal seam and 738' below the deepest fresh water. The 9-5/8" intermediate string will be set at 2,485' KB, 50' below the base of the Big Injun formation.

If you have any questions, please do not hesitate to contact me at 724-746-9073.

Sincerely,

John Zavatchan

Project Specialist - Permitting

Enc.

Office of Oil and Gas

AUG 27 2020

WV Department of Environmental Protection

#### WEST VIRGINIA GEOLOGICAL PROGNOSIS

Horizontal Well ELLIOT (GLO187) v 2017.4

Enertia # #N/A

TVD: 7770

**Drilling Objectives:** County:

MARCELLUS

Quad:

Marion Glover Gap

**Elevation:** Recommended Azimuth 1355 KB

Degrees

1342 GL

ESTIMATED FORMATION TOPS	fr	om wells 4704902251, 4704900878		
Formation	Top (TVD)	Base (TVD) Lithology	Comments	Top RR Base RR
Fresh Water Zone	- 1	287	FW @ 202,287	No redrock listed in offse
Coal	435	437 Coal		
Sewickley	870	875 Coal		1
Pittsburgh	967	975 Coal		II.
Big Lime	2182	2308 Limestone	SW @ 1797,1895,2412,	
Big Injun	2308	2435 Sandstone		
Int. esg pt	2485			
Berea	2583	3007 Sandstone	Gas shows @ 2412,2932,3026,3085,3164,3360,4755, ,	
Gantz	3007	3026 Silty Sand	Outside of Storage	
50ft	3114	3128 Silty Sand		
Bayard	3254	3624 Silty Sand		
Alexander	5742	6135 Silty Sand		
Elks	6135	7166 Gray Shales and Silts		
Sonyea	7166	7373 Gray shale		
Middlesex	7373	7437 Shale		
Genesee	7437	7545 with black shale		
Geneseo	7545	7582 Black Shale		
Tully	7582	7613 Limestone		
Hamilton	7613	7719 calcareous shales		
Marcellus	7719	7820 Black Shale		
Purcell	7785	7787 Limestone		
-Lateral Zone	7770			
Cherry Valley	7801	7803 Limestone		
Onondaga	7820	Limestone		

Target Thickness	101 feet	
Max Anticipated Rock Pressure	2593 PSI	

Comments:

Note that this is a TVD prog for a horizontal well (azimuth of 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 Big Injun to shut off any water production from the Upper Devonian sands. Intermediate casing should be cemented into the surface string, per wy regulations.

Office of Cit and Gas

LATERAL DRILLING TOLERANCES

Deviate as little as possible to the left or right of the planned wellbore. Mapview - Lateral: Mapview - TD: DO NOT EXTEND beyond recommended wellbore to avoid leaseline. AUG 2 7 2020

RECOMMENDED CASING POINTS

Fresh Water/Coal CSG OD 13 3/8 CSG DEPTH: 1025 CSG OD 9 5/8 CSG DEPTH: 2485 Intermediate 1: CSG DEPTH: CSG OD 5 1/2 @ TD Production:

WV Department of Environment and Protection Beneath theBig Injun formation

Wellbore Diagram **EQT Production** Elliot 17H County: Well: Marion Pad: **Elliot** State: West Virginia 1355' KB Elevation: 1342' GL Conductor @ 40' 26", 85.6#, A-500, cement to surface w/ Class A Surface 1,025' 13-3/8", 54.5#, J-55, cement to surface w/ Class A/Type I Intermediate **@** 2,485' 9-5/8", 40#, A-500, cement to surface w/ Class A/Type I RECEIVED
Office of Oil and Gas AUG 27 2020 WV Department of Environmental Protection 14,215' MD / 7,770' TVD Production 5-1/2", 20#, P-110, cement to 500' inside 9-5/8" w/ Class A/H Formation: Marcellus **NOT TO SCALE** 

#### **EQT Production**

**Hydraulic Fracturing Monitoring Plan** 

Pad ID: Elliott

**County: Marion** 

June 11, 2020

Office of Oil and Gas

AUG 27 2020

WV Department of Environmental Protection

Page 1 of 2

#### **Purpose**

The purpose of this pad-specific Hydraulic Fracturing Monitoring Plan is to identify and notify conventional well operators near EQT hydraulic fracturing in Marion County, WV prior to hydraulic fracturing at the following EQT wells on the Elliott pad: 1H, 3H, 5H, 7H, 9H, 11H, 13H, 15H and 17H.

Due to the requirements under 35CSR8 5.11, the permittee is required to review the area surrounding the proposed well pad so as to identify and evaluate potential conduits for unintended fracture propagation.

A report is required to be submitted along with a well work permit application.

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

#### 1. Communications with Well Operators

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

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

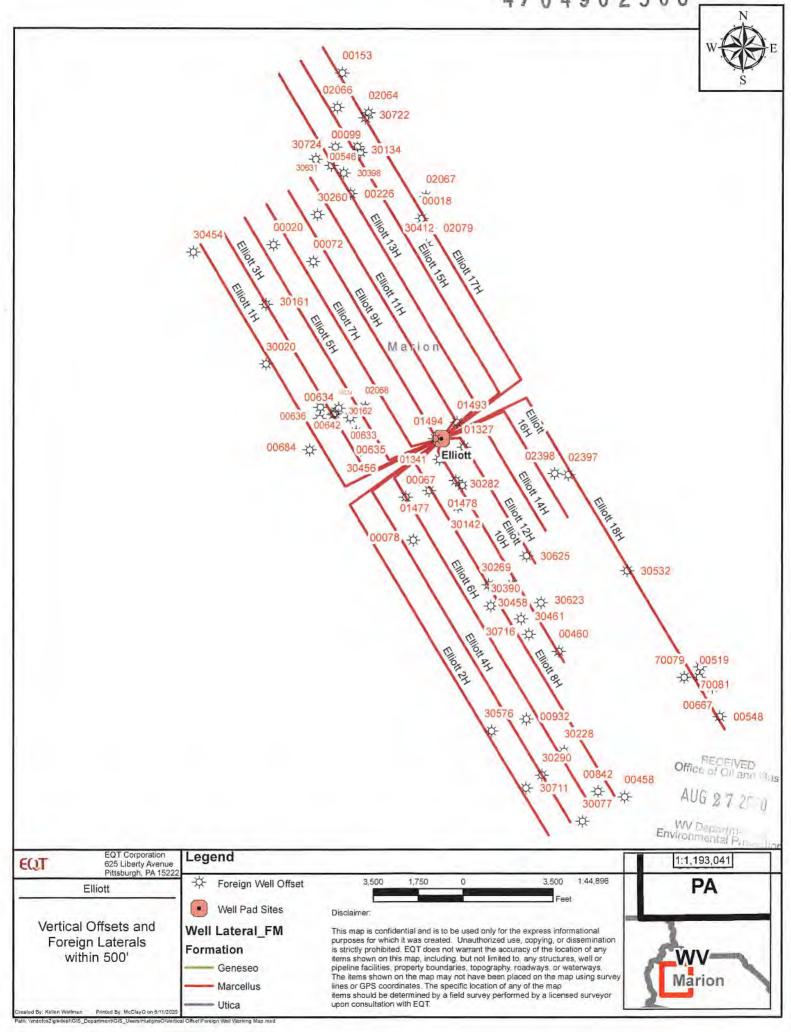
EQT will recommend to these operators at a minimum to:

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

# Office of Oil and Gas AUG 27 2020

#### 2. Reporting

EQT will provide information relating to the hydraulic fracturing schedule, communication with other communication with t



WellID	Wei	llStatus	date	FmatTD	Permit	RemarksPRO	Operator	Longitude	Latitude	TargetFm	DatumEleva 1	TotalDepth-SS	Total Depth
470490001	L8 UNI	K	12/27/1930		00018		S N ELLIOTT	_	-80.3848	39.5687	1185.0000	-1981.0000	3166.0000
470490002			9/26/1933		00020		ESHENBAUGH OIL & GAS		-80.4053	39.5660	1088.0000	-2212.0000	
470490006			1/14/1937		00067		S N ELLIOTT		-80.3872	39.5391	990.0000	-1822.0000	
470490007 470490007			11/6/1937 11/30/1937		00072 00078		ESHENBAUGH OIL & GAS		-80.3998	39.5642	1271.0000	-2183.0000	
470490007			12/8/1941		00099		S N ELLIOTT PENNZOIL		-80.3862 -80.3932	39.5345 39.5758	1197.0000 1206.0000	-2197.0000 -2414.0000	
470490015			2/13/1947		00153		W R COREY		-80.3957	39.5842	1043.0000	-1992.0000	
470490022	26 DRY		9/17/1951		00226		MONROE & LAUGHLIN		-80.3946	39.5714	1117.0000	-1904.0000	
470490045			8/1/1993		00458		PENNZOIL		-80.3572	39.5070	1359.0000	-879.0000	2238.0000
470490046			7/10/1925		00460	4SD	PENNZOIL		-80.3662	39.5226	1104.0000	-2029.0000	
470490051			2/13/1996		00519		PENNZOIL		-80.3468	39.5197	1240.0000	-840.0000	
470490054 470490054			2/25/1918 4/1/1995		00546 00548	30F BNJ	PENNZOIL PENNZOIL		-80.3994 -80.3440	39.5751	1360.0000	-1745.0000	
470490063			2/22/1937		00633	DIAT	CONSOL		-80.3948	39.5155 39.5476	1248.0000 1037.0000	-881.0000 -1846.0000	
470490063			2, 22, 250,		00634		CONSOL		-80.3971	39.5479	1009.0000		101008.0000
470490063	S UNI	K			00635		CONSOL		-80.3940	39.5461	1074.0000		101073.0000
470490063					00636		CONSOL		-80.3990	39.5475	1023.0000	-99999.0000	101022.0000
470490064					00642		CONSOL		-80.3989	39.5487	1037.0000		101036.0000
470490066			1/1/1990		00667		G L & R O BEATY		-80.3450	39.5186	1300.0000	-1755.0000	
470490068 470490084			9/17/1991		00684 00842		CONSOL ROSS & WHARTON		-80.4004	39.5442	1278.0000		101277.0000
470490093			3/1//1331		00932		CLOWSER		-80.3609 -80.3707	39.5076 39.5154	1151.0000 1009.0000	-885.0000	2036.0000 101008.0000
470490132			10/4/2001		01327	5SDRLY	RJAL		-80.3791	39.5444	1102.0000	-3908.0000	
470490134	11 UNI		10/12/2001		01341	GDN5SD	RJAL		-80.3825	39.5431	1090.0000	-2270.0000	
470490147			3/25/2004		01477	50F30FGDN	FALCON HOLDINGS		-80.3840	39.5398	1177.0000	-2184.0000	3361.0000
470490147			3/16/2004		01478		FALCON HOLDINGS		-80.3794	39.5403	1097.0000	-2093.0000	
470490149			6/14/2004		01493	50F	FALCON HOLDINGS		-80.3801	39.5470	1330.0000	-2101.0000	
470490149 470490206			4/28/2004		01494 02064	30F/GDN/4SD	FALCON HOLDINGS CONSOLIDATION COAL		-80.3831	39.5453	1311.0000	-2039.0000	
470490206					02066		CONSOLIDATION COAL		-80.3921 -80.3964	39.5800 39.5806	1118.0000 1281.0000		101117.0000 101280.0000
470490206					02067		CONSOLIDATION COAL		-80.3842	39.5710	1196.0000		101195.0000
470490206	58 UNI	K			02068		CONSOLIDATION COAL		-80.3927	39.5487	1117.0000		101116.0000
470490207	79 UNI				02079		CONSOLIDATION COAL		-80.3837	39.5677	1234.0000	-99999.0000	101233.0000
470490239			5/14/2015		02397		CONSOL ENERGY		-80.3648	39.5414	1193.0000	-106.0000	
470490239			5/18/2015		02398		CONSOL ENERGY		-80.3666	39.5416	1113.0000	-581.0000	
470493002 470493007					30020 30077		COLUTIVATION		-80.4064	39.5533	1088.0000	-2212.0000	
470493007					30134		SOUTH PENN MANUFACTURERS L & H		-80.3631 -80.3936	39.5044 39.5764	1209.0000 1.0000	-898.0000 -3314.0000	
470493014					30142		OPER IN MIN.OWN		-80.3800	39.5381	1167.0000	-2012.0000	
470493016					30161		ESHENBAUGH O&G		-80.4064	39.5597	1035.0000	-1737.0000	
470493016	52 OIL				30162		ESHENBAUGH O&G		-80.3969	39.5481	1036.0000	-1849.0000	
470493022					30224		WILLIAM MOSES		-80.3964	39.5486	1222.0000	-1773.0000	
470493022			6/3/1907		30228		SOUTH PENN		-80.3655	39.5119	1485.0000	-1687.0000	
470493026 470493026			6/23/1919 5/31/1920		30260 30269		MANUFACTURERS L & H SOUTH PENN		-80.3992	39.5692	1364.0000	-2083.0000	
470493028			3/11/1914		30282		HOPE NAT GAS		-80.3758 -80.3803	39.5297 39.5408	1304.0000 1148.0000	-1790.0000 -2106.0000	
470493029			11/14/1918		30290		SOUTH PENN		-80.3686	39.5095	1099.0000	-1676.0000	
470493039			10/30/1926		30390		SOUTH PENN		-80.3756	39.5275	1103.0000	-1777.0000	
470493039	98 GAS	S	9/8/1917		30398		HOPE NAT GAS		-80.3956	39.5736	1218.0000	-2040.0000	3258.0000
470493041			3/25/1927		30412		CARNEGIE NAT GAS		-80.3842	39.5658	1178.0000	-1858.0000	
470493045					30454		INTERSTATE P&S		-80.4164	39.5653	1074.0000	-1934.0000	
470493045 470493045					30456 30458		INTERSTATE P&S INTERSTATE P&S		-80.3933 -80.3725	39.5442 39.5297	1006.0000 1053.0000	-1842.0000 -1778.0000	
470493046					30461		INTERSTATE P&S		-80.3725 -80.3714	39.5297 39.5261	1176.0000	-1759.0000	
470493053			4/9/1897		30532		RAAD SUPPLY		-80.3567	39.5311	1153.0000	-1721.0000	
470493057	76 OIL		10/5/1894		30576		RAAD SUPPLY		-80.3756	39.5142	1273.0000	-1744.0000	3017.0000
470493062			8/13/1894		30623		OPER IN MIN.OWN		-80.3686	39.5278	972.0000	-1770.0000	
470493062			9/10/1894		30625		RAAD SUPPLY		-80.3706	39.5328	1071.0000	-1789.0000	
470493063 470493071			5/22/1918		30631 30711		RAAD SUPPLY		-80.3972	39.5744	1044.0000	-1979.0000	
470493071			8/25/1894 7/17/1894		30711		RAAD SUPPLY RAAD SUPPLY		-80.3708 -80.3703	39.5081 39.5244	1.0000 1.0000	-3056.0000 -1984.0000	
470493072	22 5 SUN		7/31/1909		30722		OPER IN MIN.OWN		-80.3925	39.5794	0.0000		99999.0000
470493072		Office AUG	7/19/1918		30724		OPER IN MIN.OWN		-80.3967	39.5764	1365.0000	-1781.0000	
470497007	79 3 OIL	fice F			70079		BURT OIL		-80.3489	39.5197	1.0000	-2630.0000	
470497008	81 <u>\$</u>	, %⊉			70081		HARTMAN OIL		-80.3467	39.5208	1.0000	-2983.0000	2984.0000
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Commission number 1359968 Member, Pennsylvania Association of Notaries

API Number 47 -Operator's Well No. Elliott 17H

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

FEUIDS/ CUTTINGS DISPOSAL & RECLAMATION PLAN
Operator Name EQT Production Company OP Code 306686
Watershed (HUC 10) Tributary of Dents Run Quadrangle Glover Gap
Do you anticipate using more than 5,000 bbls of water to complete the proposed well work? Yes Vo
Will a pit be used? Yes No _✓
If so, please describe anticipated pit waste: N/A
Will a synthetic liner be used in the pit? Yes No If so, what ml.? N/A
Proposed Disposal Method For Treated Pit Wastes:
Land Application #1/3/2020
Underground Injection (UIC Permit Number 0014, 8462, 4037  Reuse (at API Number various
Off Site Disposal (Supply form WW-9 for disposal location)
Other (Explain_
Ver The alread loop quaters will conside dell authors from the dellies Build. The dell authors are
Will closed loop system be used? If so, describe:  Yes, The closed loop system will remove drill cuttings from the drilling fluid. The drill cuttings are then prepared for transportation to an off-site disposal facility.
Drilling medium anticipated for this well (vertical and horizontal)? Air, freshwater, oil based, etc. See Attached
-If oil based, what type? Synthetic, petroleum, etc. Synthetic Mud
Additives to be used in drilling medium? See Attached
Drill cuttings disposal method? Leave in pit, landfill, removed offsite, etc. Landfill
-If left in pit and plan to solidify what medium will be used? (cement, lime, sawdust) N/A
-Landfill or offsite name/permit number? See Attached List
Permittee shall provide written notice to the Office of Oil and Gas of any load of drill cuttings or associated waste rejected at any West Virginia solid waste facility. The notice shall be provided within 24 hours of rejection and the permittee shall also disclose where it was properly disposed.
I certify that I understand and agree to the terms and conditions of the GENERAL WATER POLLUTION PERMIT issued on August 1, 2005, by the Office of Oil and Gas of the West Virginia Department of Environmental Protection. I understand that the provisions of the permit are enforceable by law. Violations of any term or condition of the general permit and/or other applicable law or regulation can lead to enforcement action.  I certify under penalty of law that I have personally examined and am familiar with the information submitted on this application form and all attachments thereto and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine or imprisonment.  RECEIVED Office or Diversity and Company Official Signature  AUG 2 7 2021
Company Official Title Project Specialist - Permitting WV Department of Environmental Project Specialist - Permitting
DI. M. Lands
Subscribed and sworn before me this 20 day of 400st , 20 20
Notary Public
My commission expires  Octo bu 25, 2023  Commonwealth of Pennsylvania - Notary S  Olivia Pishioneri, Notary Public  Allegheny County  My commission expires October 25, 20

I i 3	Tons/acre or to corre	6.5	
		ct to pH	
Fertilizer type Gra		_	
Fertilizer amount_		lbs/acre	
Mulch 2		_Tons/acre	
		Seed Mixtures	
T	emporary	Perma	nent
Seed Type	lbs/acre	Seed Type	lbs/acre
KY-31	40	Orchard Grass	15
Alsike Clover	1.27	A1 '1 O1	
Alsike Clovel	5	Alsike Clover	5
Attach: Maps(s) of road, location, piorovided). If water from the acreage, of the land applicat	t and proposed area for land pit will be land applied, inco	d application (unless engineered plans included limensions (L x W x D) of the pit, and	ling this info have been
Attach: Maps(s) of road, location, piprovided). If water from the acreage, of the land applicate Photocopied section of involutional properties of the land applicate Photocopied section of involutional properties of the land applicate Photocopied section of involutional properties of the land approved by:	t and proposed area for land pit will be land applied, incon area  ved 7.5' topographic sheet.	d application (unless engineered plans included dimensions (L x W x D) of the pit, and	ding this info have been dimensions (L x W), an
Annual Rye  Attach: Maps(s) of road, location, pi provided). If water from the acreage, of the land applicat Photocopied section of invol	t and proposed area for land pit will be land applied, incon area  ved 7.5' topographic sheet.	d application (unless engineered plans included dimensions (L x W x D) of the pit, and a constant and a constant a consta	ding this info have been dimensions (L x W), and ably possible,
Annual Rye  Attach: Maps(s) of road, location, pi provided). If water from the acreage, of the land applicat Photocopied section of invol	t and proposed area for land pit will be land applied, incon area  ved 7.5' topographic sheet.	d application (unless engineered plans included dimensions (L x W x D) of the pit, and	ding this info have been dimensions (L x W), and ably possible,
Annual Rye  Attach: Maps(s) of road, location, pi provided). If water from the acreage, of the land applicat Photocopied section of invol	t and proposed area for land pit will be land applied, incon area  ved 7.5' topographic sheet.	d application (unless engineered plans included dimensions (L x W x D) of the pit, and a constant and a constant a consta	ding this info have been dimensions (L x W), and ably possible,
Annual Rye  Attach: Maps(s) of road, location, pi provided). If water from the acreage, of the land applicat Photocopied section of invol	t and proposed area for land pit will be land applied, incon area  ved 7.5' topographic sheet.	d application (unless engineered plans included dimensions (L x W x D) of the pit, and a constant and a constant a consta	ding this info have been dimensions (L x W), and ably possible,
Annual Rye  Attach: Maps(s) of road, location, pi provided). If water from the acreage, of the land applicat Photocopied section of invol	t and proposed area for land pit will be land applied, incon area  ved 7.5' topographic sheet.	d application (unless engineered plans included dimensions (L x W x D) of the pit, and a constant and a constant a consta	ding this info have been dimensions (L x W), and ably possible,  Manual.
Annual Rye  Attach: Maps(s) of road, location, pi provided). If water from the acreage, of the land applicat Photocopied section of invol	t and proposed area for land pit will be land applied, incon area  ved 7.5' topographic sheet.	d application (unless engineered plans included dimensions (L x W x D) of the pit, and a constant and a constant a consta	ding this info have been dimensions (L x W), and ably possible,

#### **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 synthetic mud.

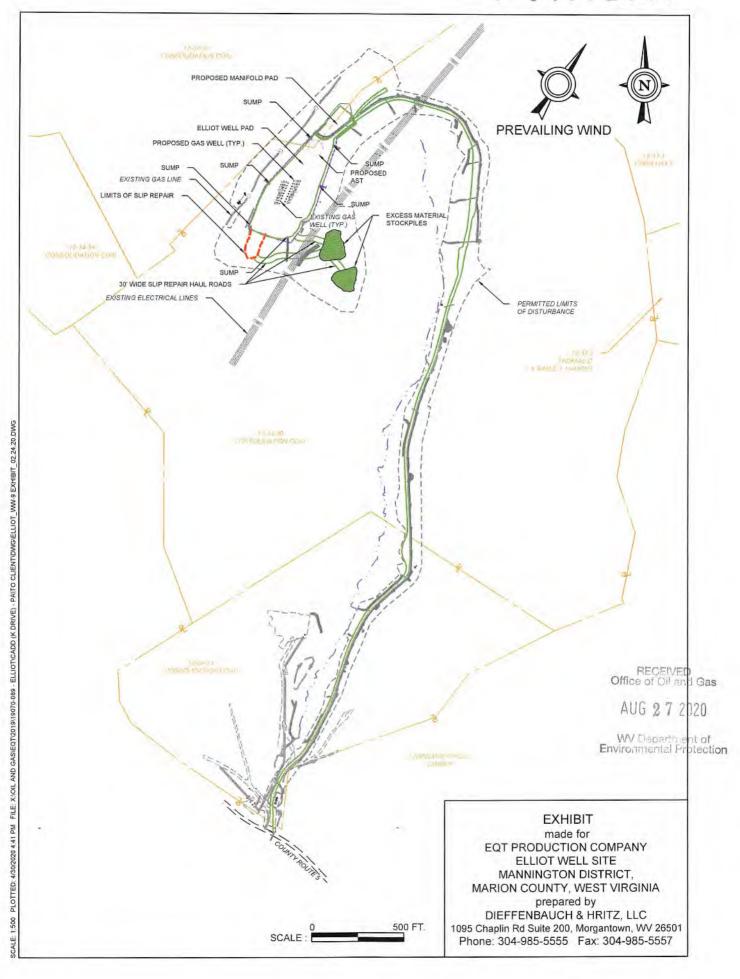
#### Additives to be used in drilling medium?

- 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.
- Synthetic mud synthetic base oil, emulsifier, salt, lime, viscosifer, alkalinity control, filtration control, deflocculates, biodegradable oil lubricant, defoaming, carbonates.

RECEIVED Office of Oil and Gas

AUG 27 2020

WV Department of Environmental Protection



			roduction Water Plan sals for Unconventiona	l Wells					
Facility Name	Address	Address 2	City	State	Zip	Phone	County	State	Permit Number
CWS Trucking Inc.	P.O. Box 391		Williamstown	wv	26187	740-516-3586	Noble	ОН	3390
Broad Street Energy LLC	37 West Broad Street	Suite 1100	Columbus	ОН	43215	740-516-5381	Washingotn	ОН	8462
LAD Liquid Assets Disposal Inc.	226 Rankin Road		Washington	PA	15301	724-350-2760	Ohio	wv	USEPA WV 0014
Triad Energy	PO Box 430		Reno	ОН	45773	740-516-6021	Noble	ОН	4037
				ļ		740-374-2940			
T.: C	14077			<del>  </del>	45044				
Tri County Waste Water Management, Inc.	1487 Toms Run Road		Holbrook	PA	15341	724-627-7178	Greene	PA	TC-1009
				<del> </del>	┼	724-499-5647			
King Excavating Co. Advance Waste Services	101 River Park Drive		New Castle	PA	16101		Lawrence	PA	PAR000029132
King Excavating Co. Advance waste services	101 RIVEL PAIR DITVE	<del></del>	New Castle	IFA -	10101		Lawrence	IFA	PAR000029132
Waste Management - Meadowfill Landfill	Rt. 2, Box 68 Dawson Drive		Bridgeport	wv	16330	304-326-6027	Harrison	wv	SWF-1032-98
	, con os 2000000 2000		- Inageport	<del>                                     </del>	10350	30 1 320 0027	Tiuri Ison		Approval #100785WV
				1					7.pp. 6 va. #260 / 65 v v
Waste Management - Northwestern Landfill	512 E. Dry Road		Parkersburg	wv	26104	304-428-0602	Wood	wv	SWF-1025 WV-0109400
APEX Landfill	11 County Road 78	PO Box 57	Amsterdam	ОН	43903	740-543-4389	Jefferson	ОН	06-08438
Advanced Disposal - Chestnut Valley Landfill	1184 McClellandtown Road		McClellandtown	PA	15458	724-437-7336	Fayette	PA	100419
Westmoreland Sanitary Landfill	901 Tyrol Boulevard		Belle Vernon	PA	15012	724-929-7694	Westmoreland	PA	100277
				<u> </u>	<u> </u>				
Austin Master Services	801 North 1st Street		Martins Ferry	ОН	43935	740-609-3800	Belmont	ОН	2014-541
	77505 0 15 14 14 1 0 1			<del> </del>					
Belmont Solids Control	77505 Cadiz-New Athers Road		Cadiz	ОН	43907	740-942-1739	Harrison	ОН	2015-511
Disserting Passage	2111 Presser Dal		Delene	-	4574.4	740 404 0443		011	
Diversified Resources	3111 Braun Rd.	-	Belpre	ОН	45714	740-401-0413	vvasnington	ОН	
			<del> </del>	╁		1			34-031-27177
		Į.	Coshocton	он	43812	740-610-1512		он	34-031-27177
Buckeye Brine	23986 Airport Road		Cosnocion	١٠	13012	724-591-4393	Coshocton	011	34-031-27241
				<del>†</del> —		<b> </b>	Cosnocion		34 031 27241
Central Environmental Services	28333 West Belpre Pike		Coolville	ОН	45723	304-488-0701	Athens	ОН	
	· ·			1					
Nuverra - Nichols	10555 Veto Road		Belpre	ОН	45714	330-232-5041	Washington	он	34-119-2-8776
		1	A1 t - L	ОН	43767	330-232-5041	Muskingum	ОН	34-167-2-3862
Nuverra - Goff	9350 East Pike Road		Norwich	JOH	.0.0.	330 E3E 304E			
Nuverra - Goff	9350 East Pike Road		Norwich	Un_	1.07.07	330 232 3042	g.		
Nuverra - Goff Nuverra - Wolf	9350 East Pike Road 5480 State Route 5		Newton Falls	ОН	44444	330-232-5041		ОН	34-155-2-1893
Nuverra - Wolf	5480 State Route 5		Newton Falls	ОН	44444	330-232-5041	Trumbull	ОН	34-155-2-1893
							Trumbull		34-155-2-1893 34-155-2-3795
Nuverra - Wolf	5480 State Route 5		Newton Falls	ОН	44444	330-232-5041	Trumbull Trumbull	ОН	

					740-374-2940			
		Reno	ОН	45773	412-443-4397		ОН	
FQ Helen	199 Bowersock Road				740-236-2135	Washington		34-167-2-9577
							_	
					740-374-2940	•	1	
500	lagran et et al	Dexter City	ОН	45727	412-443-4397	l	ОН	34-121-24037
FQ Dexter	38505 Marietta Rd.			1	740-236-2135	Noble		34-121-24086
			-	1	740-374-2940			
		Ellenboro	lwv	26346	412-443-4397		wv	
FQ Ritchie	122 Lonesome Pine Rd	Lilenboro	***	20340	740-236-2135	Ritchie	***	47-085-09721
- Q Mene	122 CONCOUNT THE NO		_	<del>                                     </del>	740-230-2133	Michie		47-085-05721
				1				34-105-2-3619
			١	4===0	740-374-2940		<b> </b>	34-105-2-3652
		Portland	ОН	45770	412-443-4397	1	ОН	34-105-2-3637
FQ Mills	53610 TS Rd 706				740-236-2135	Meigs		34-105-2-3651
Datta Fatanasiana OU	745 North 2nd Charact	Cambridge	ОН	43725	614-477-1368		он	
Petta Enterprises - OH	745 North 3rd Street			- <del> </del>		Guernsey		Ohio Chiefs Order 25-019
Petta Enterprises - WV	38 Technology Dr.	Tridelphia	- wv	26059	740-255-5727	Ohio	wv	
•				1				
Deep Rock Disposal	2341 OH-821	Marietta	ОН	45750	304-629-0176	Washington	ОН	34-167-2-9766
							***	
•								

4704902506

Office of Oil and Gas
AUG 2 7 2020

MV Department of Environmental Protection



# SITE SAFETY AND ENVIRONMENTAL PLAN

Elliot (GLO 187) Well Pad wells 1H, 3H, 5H, 7H, 9H, 11H, 13H, 15H, 17H

Marion County, WV

Prepared By: Scott M. Held, CSP, EQT Corporation- Senior Safety Coordinator
Approved By: Scott M. Held, CSP, EQT Corporation- Senior Safety Coordinator

Created Date: 22-Apr-20

John Zavatehan

**Project Specialist** 

**EQT Production Company** 

Sam Ward

Oil and Gas Inspector West Virginia DEP

SDW

6/15/2020

Office of Oil and G

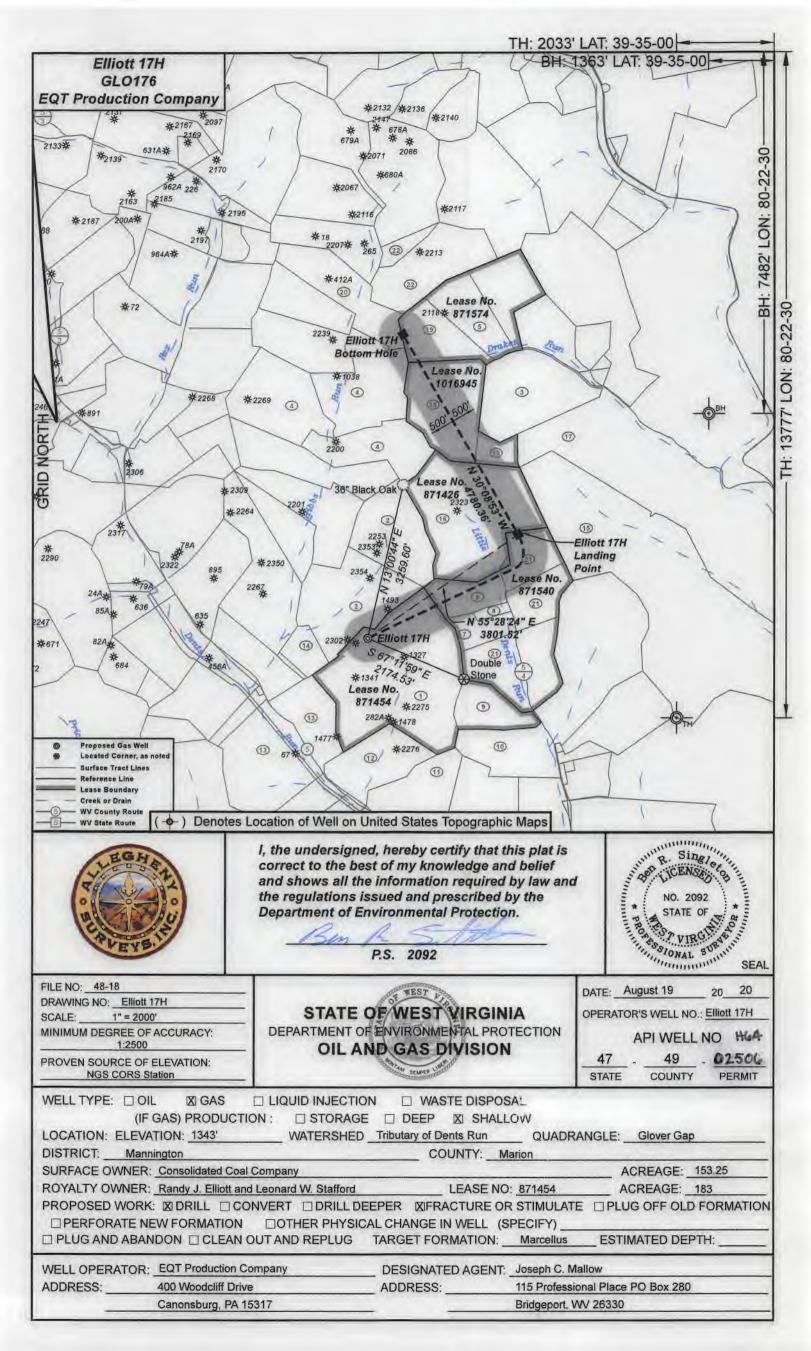
AUG 27 2020

WV Department of Environmental Protection

Topo Quad: Glover Gap 1" = 1000' Scale: Marion December 17, 2019 County: Date: District: Mannington - 12 Project No: 48-18-M-18 Water **ELLIOTT PAD** No Potential Water Sources within 2500' Atha Dom 2500 Centenary NAD 27, North Zone LEGEND N:381937.27 Red Symbol - Declined Sampling E:1751215.33 Blue Symbol - Requested Sampling / Unable to Contact Access Road WGS 84 Well LAT:39.545371 Spring Pond LONG:-80.382026 Building ELEV:1,343 SURVEYING AND MAPPING SERVICES PERFORMED BY: PREPARED FOR: ALLEGHENY SURVEYS, INC. **EQT Production Company** 1-800-482-8606

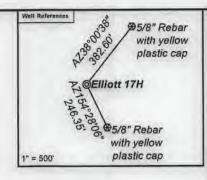
237 Birch River Road Birch River, WV 26610 PH: (304) 649-8606 FAX: (304) 649-8608

2400 Ansys Drive, Suite 200 Canonsburg, PA 15317

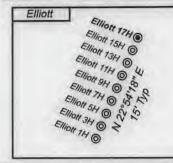


#### Elliott 17H **GLO176 EQT Production Company**

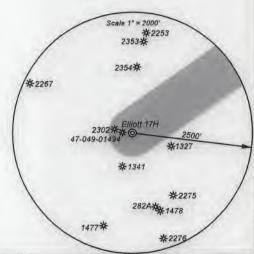
Tract I.D.	Tax Map No.	Parcel No.	County	District	Surface Tract Owner	Acres
1	34	40	Marion	Mannington	Consolidation Coal Company	153.25
2	34	37	Marion	Mannington	Consolidation Coal Company	133.37
3	32	10	Marion	Mannington	Anna M. Mike, et al.	73.51
4	36	21	Marion	Mannington	Consolidation Coal Company	169,49
5	32	13.1	Marion	Mannington	Willis E. Anderson	33.40
6	34	49	Marion	Mannington	Donnis M. & Lisa A. Hayes	24.78
7	34	47	Marion	Mannington	Edward F, Price	23.00
В	34	48	Marion	Mannington	Edward F. Price	3.00
9	34	40.1	Marion	Mannington	Raymond F. & Betty J. Fluharty	29.75
10	34	45	Marion	Mannington	City of Mannington	42.50
11	34	41	Marion	Mannington	Consolidation Coal Company	47.00
12	34	39	Marion	Mannington	Consolidation Coal Company	42.75
13	34	33	Marion	Mannington	Consolidation Coal Company	134.00
14	34	38	Marion	Mannington	Consolidation Coal Company	17.00
15	33	28	Marion	Mannington	Mildred H. Prichard Heirs	379.5
16	32	11	Marion	Mannington	Consolidation Coal Company	116,0
17	32	9	Marion	Mannington	Michael L. & Bette J. Higgs	155.18
18	32	12	Marion	Mannington	James K. & Rose K. Haugh	76.21
19	32	13	Marion	Mannington	Susanne A. & Charles W. Given	33,40
20	36	24	Marion	Mannington	CNX Land LLC	47.68
21	33	1	Marion	Mannington	Thomas D. & Aimee J. Haught	106.8
22	31	39	Marion	Mannington	CNX Land LLC	57.25



Notes:
Elliott 17H coordinates are
NAD 27 N: 382,018.08 E: 1,751,218.93
NAD 27 Lai: 39.545509 Long: -80.382209
NAD 83 UTM N: 4,377,506.80 E: 553,099.10 NAD 83 UTM N: 4,377,506.80 E: 553,099.10 Ellicit 17H Landing Point coordinates are NAD 27 N: 384,172.75 E: 1,754,350.86 NAD 27 Lat: 39.551509 Long: 80.371177 NAD 83 UTM N: 4,378,179.17 E: 554,042.37 Ellicit 17H Bottom Hole coordinates are NAD 27 N: 388,306.47 E: 1,751,949.99 NAD 27 Lat: 39.562793 Long: 80.379835 NAD 83 UTM N: 4,379,426.37 E: 553,289.94 West Virginia Coordinate system of 1927 (North Zone) based upon Differential GPS Measurements. Plat orientation, corner and well ties are based upon the grid north meridian. Well location references are based upon the grid north meridian. UTM coordinates are NAD83, Zone 17, Meters.



Lease No.	Owner	Acres
871540	Country Roads Minerals, LLC, et al.	89.75
871426	John D. Haskins, III	117
1016945	Ferrari VI OG, LLC., Bradley W. Thomas, Robert F. Horner and Jacob G. Ford, et al.	78.21
871574	Robert L. Gunter, Jr., et al.	100.209





I, the undersigned, hereby certify that this plat is correct to the best of my knowledge and belief and shows all the information required by law and the regulations issued and prescribed by the Department of Environmental Protection.

P.S. 2092

NO. 2092
STATE OF VIRGINIA SEAL

FILE NO: 48-18	WEST b
DRAWING NO: Elliott 17H  SCALE: 1" = 2000'	STATE OF WEST VIRGINIA
MINIMUM DEGREE OF ACCURACY: 1:2500	DEPARTMENT OF ENVIRONMENTAL PROTECTION OIL AND GAS DIVISION
PROVEN SOURCE OF ELEVATION: NGS CORS Station	The sense with the

DATE: August 19 OPERATOR'S WELL NO .: Elliott 17H API WELL NO 02506 49

NGS CORS Station	- I SEE	THE LIBRORY	STATE	COUNTY	PERMIT	
WELL TYPE: □ OIL ☒ GAS (IF GAS) PRODUC		WASTE DISPOSAL				
LOCATION: ELEVATION: 1343'	WATERSHED Tributary	of Dents Run	QUADRANGLE:	Glover Gap		
DISTRICT: Mannington		COUNTY: Mario	on			
SURFACE OWNER: Consolidated Co	al Company			ACREAGE: _	153.25	
ROYALTY OWNER: Randy J. Elliott a	and Leonard W. Stafford	LEASE NO: E	371454	ACREAGE: _	183	
PROPOSED WORK: ☑ DRILL ☐ C				UG OFF OLD	FORMATION	
☐ PLUG AND ABANDON ☐ CLEAN	OUT AND REPLUG TARGET	FORMATION:	Marcellus EST	TIMATED DEP	TH:	
WELL OPERATOR: EQT Production	Company DESIG	NATED AGENT: _Jo	oseph C. Mallow			
ADDRESS: 400 Woodcliff Dr	ive ADDRE	ESS: 1º				
Canonsburg, PA	15317	В	ridgeport, WV 2633	0		

W	W	-6A	. 1
(5	/13	()	

Operator's Well No.	Elliott 17H
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#### INFORMATION SUPPLIED UNDER WEST VIRGINIA CODE Chapter 22, Article 6A, Section 5(a)(5) IN LIEU OF FILING LEASE(S) AND OTHER CONTINUING CONTRACT(S)

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

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

Lease Name	or
Number	

Grantor, Lessor, etc.

Grantee, Lessee, etc.

Royalty

Book/Page

See Attached

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

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

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

Office of Oil and Gas

AUG 27 2020

 County Floodplain Coordinator
 Environment of Environment of Environment at any Office of Oil and Gas permit in no way overrides, replaces, or explaces, or explaces. 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:

Its:

Managing Director - Permitting and Civil

I ease No	Grantor, Lessor, etc.		Grantee, Lessee, etc.	Royalty	Book/Page	<del></del>
Lease No.	Granter, 20000; ever			At least 1/8th per West Virginia Code Section 22-6-8.		
<u>871454</u>	Randy J. Elliott and Leonard W. Stafford	183 ac		Code Section 22-0-0.	DR 1213/441	* Covers 40 acres
	Randy J. Elliott, a married man dealing in his sole/sep. property		EQT Production Company		DR 971/747	* Covers 143 acres
	Randy J. Elliott and Leonard W. Stafford		RJAL, Inc.		DR 993/64	004613 140 00100
	RJAL, Inc.		Falcon Holdings, LLC		AB 32/183	
	Falcon Holdings, LLC		Gallatin Fuels, Inc.		AB 32/800	
	Gallatin Fuels, Inc.		Leatherwood Inc.		DR 1035/63	
	RJAL, Inc.		Leatherwood Inc.		AB 42/174	
	Leatherwood Inc.		CNX Gas Company LLC		AB 42/355	
	CNX Gas Company LLC		Noble Energy		AB 53/166	
	Noble Energy		HG Energy II Appalachia, LLC		AB 56/389	
	HG Energy II Appalachia, LLC		EQT Production Company		AB 20/309	
				At least 1/8th per West Virginia		
074540	Country Books Minerale 11 C of al	89.75 ac		Code Section 22-6-8.		
<u>871540</u>	Country Roads Minerals, LLC, et al.	202	American Shale Development, Inc.,			
			(50%) and Republic Energy		DD 4440/07	
	Byron W. Davis, a married man dealing with his sole and sep. property		Ventures, LLC, (50%)		DR 1148/27	
	American Shale Development, Inc.		Republic Partners VIII, LLC		AB 47/469	
	Republic Energy Ventures, LLC, Republic Partners VIII, LLC, et al		EQT Production Company		AB 51/525	
	Trans Energy, Inc. and American Shale Development, Inc.		EQT Production Company		DR 1228/1	
074496	John D. Haskins, III	117 ac		At least 1/8th per West Virginia Code Section 22-6-8.		
<u>871426</u>	John D. Haskins, III, married, dealing in his sole and separate property		EQT Production Company		DR 1254/532	
1016945	C Lud F Usuna 9 Jacob C Ford at al	78.21 ac		At least 1/8th per West Virginia Code Section 22-6-8.		
1010343						
	Ferrari VI OG, LLC, Bradley W. Thomas, a married man dealing in his sole and separate property, Robert F. Homer, a married man dealing in his sole and separate, and Jacob G.					
	Ford, a married man dealing in his sole and separate property		EQT Production Company		DR 1203/339	
074574	Robert L. Gunter, Jr., et al.	100.209 ac		At least 1/8th per West Virginia Code Section 22-6-8.		
<u>871574</u>	Robert L. Gunter, Jr., a married man dealing in his sole and separate property		Republic Energy Ventures, LLC		DR 1167/87	
	Republic Energy Ventures, LLC, Republic Partners VIII, LLC, et al		EQT Production Company		AB 51/525	
	Trabs Energy, Inc. and American Shale Development, Inc.		EQT Production Company		DR 1228/1	
	3					
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	စ်ချို့ သို့ စီကူ ကျွန်ုင်					
	Office of Cil and Gas AUG 2 7 2020 WV Department of Protection					
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August 26, 2020

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

Re: Elliott 17H Gas Well Mannington District, Marion County

Dear Mr. Brewer,

EQT Production Company is applying for a new well work permit for the well referenced above. Upon information and belief, the 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,

John Zavatchan

Project Specialist - Permitting

Office of Oil and Gas

AUG 27 2020

WV Department of Environmental Protection Date of Notice Certification: 08/26/2020

# 47049025 06

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

API No. 47-

			Operator's	Well No. 17H	
		•	Well Pad N	lame:Elliott	
Notice has been pursuant to the	e provisions in West Virginia Code § tract of land as follows:	22-6A, the Operator has provi	ided the req	uired parties w	ith the Notice Forms listed
State:	West Virginia		Easting:	553099.10	
County:	Marion		Northing:	4377506.80	
District:	Mannington	Public Road Acce		CR 5	
Quadrangle:	Glover Gap	Generally used far	rm name:	Consolidation Coal	Company
Watershed:	Tributary of Dents Run	<del></del>			
prescribed by it has provide information re of giving the requirements Virginia Code	West Virginia Code § 22-6A-7(b), ethe secretary, shall be verified and shed the owners of the surface describequired by subsections (b) and (c), sec surface owner notice of entry to surface owner notice of entry to surface of subsection (b), section sixteen of e § 22-6A-11(b), the applicant shall te have been completed by the applicant	nall contain the following informed in subdivisions (1), (2) are ction sixteen of this article; (ii) tryey pursuant to subsection (as fithis article were waived in the center proof of and certify to the	rmation: (14), subsection (14), subsection (14), section (15), writing by	<ol> <li>A certification</li> <li>section (b), section</li> <li>quirement was</li> <li>ten of this artice</li> <li>the surface ow</li> </ol>	on from the operator that (1) tion ten of this article, the deemed satisfied as a result cle six-a; or (iii) the notice ther; and Pursuant to West
that the Ope	West Virginia Code § 22-6A, the Operator has properly served the required ECK ALL THAT APPLY	erator has attached proof to the disparties with the following:	is Notice C	Certification	OOG OFFICE USE ONLY
☐ 1. NO	TICE OF SEISMIC ACTIVITY or	■ NOTICE NOT REQUIR SEISMIC ACTIVITY WAS			RECEIVED/ NOT REQUIRED
☐ 2. NO	TICE OF ENTRY FOR PLAT SURV	TEY or 🔳 NO PLAT SURVI	EY WAS C	ONDUCTED	RECEIVED
■ 3. NO	TICE OF INTENT TO DRILL or	NOTICE NOT REQUIR NOTICE OF ENTRY FOR IT WAS CONDUCTED or			RECEIVED/ NOT REQUIRED
		☐ WRITTEN WAIVER I (PLEASE ATTACH)		CE OWNER	
■ 4. NO	TICE OF PLANNED OPERATION				RECEIVED
■ 5. PU	BLIC NOTICE				RECEIVED
■ 6. NO	TICE OF APPLICATION				RECEIVED

Required Attachments:

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

Office of Oil and Gas

AUG 27 2020

#### Certification of Notice is hereby given:

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

Well Operator: EQT Production Company

John Zavatchan

By: Project Specialist - Permitting Its:

Telephone: 724-746-9073 Address: 400 Woodcliff Drive

Canonsburg, PA 15317

412-395-2974 Facsimile:

izavatchan@eqt.com Email:

Commonwealth of Pennsylvania - Notary Seal Olivia Pishioneri, Notary Public **Allegheny County** 

My commission expires October 25, 2023 Commission number 1359968

Member, Pennsylvania Association of Notaries

Subscribed and sworn before me this

My Commission Expires

Oil and Gas Privacy Notice:

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

Office of the unit Gas

Environme del emilio on



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Noti	ce Time Requireme	ent: notice shall be provided	no later than the filing date of permit application.
	e of Notice: 8/25/2020 ce of:	_ Date Permit Application	n Filed: 8/26/2020
<b>7</b>	PERMIT FOR AN' WELL WORK	_	TE OF APPROVAL FOR THE CTION OF AN IMPOUNDMENT OR PIT
Deli	very method pursu	ant to West Virginia Code	§ 22-6A-10(b)
	PERSONAL SERVICE	REGISTERED MAIL	METHOD OF DELIVERY THAT REQUIRES A RECEIPT OR SIGNATURE CONFIRMATION
certi regis sedin the soil a descooper more well important provents substractory conditions and the soil and	ficate of approval for stered mail or by any ment control plan req surface of the tract on and gas leasehold beir ribed in the erosion a ator or lessee, in the e coal seams; (4) The work, if the surface bundment or pit as de a water well, spring ride water for consum losed well work active section (b) of this sec rds of the sheriff requision of this article to e R & 35-8-5.7.a rec	the construction of an impourmethod of delivery that required by section seven of this which the well is or is proposed developed by the proposed and sediment control plan subsevent the tract of land on whitowers of record of the surfact is to be used for the place scribed in section nine of this or water supply source located aption by humans or domestic ity is to take place. (c)(1) If not the hold interests in the landal uired to be maintained pursuant the contrary, notice to a lient puties, in part, that the operator	the filing date of the application, the applicant for a permit for any well work or for a sundment or pit as required by this article shall deliver, by personal service or by tres a receipt or signature confirmation, copies of the application, the erosion and article, and the well plat to each of the following persons: (1) The owners of record of sed to be located; (2) The owners of record of the surface tract or tracts overlying the well work, if the surface tract is to be used for roads or other land disturbance as mitted pursuant to subsection (c), section seven of this article; (3) The coal owner, ch the well proposed to be drilled is located [sic] is known to be underlain by one or use tract or tracts overlying the oil and gas leasehold being developed by the proposed ement, construction, enlargement, alteration, repair, removal or abandonment of any as article; (5) Any surface owner or water purveyor who is known to the applicant to be did within one thousand five hundred feet of the center of the well pad which is used to animals; and (6) The operator of any natural gas storage field within which the more than three tenants in common or other co-owners of interests described in set, the applicant may serve the documents required upon the person described in the into section eight, article one, chapter eleven-a of this code. (2) Notwithstanding any holder is not notice to a landowner, unless the lien holder is the landowner. W. Va. or shall also provide the Well Site Safety Plan ("WSSP") to the surface owner and any water testing as provided in section 15 of this rule.
	Application Notice  URFACE OWNER(		Plan Notice ☐ Well Plat Notice is hereby provided to: ☐ COAL OWNER OR LESSEE
	ne: Consolidation Coal Co		Name: See AttachedList
Ado	iress: 46226 National Ro		Address:
	St. Clairsville, OH	43950	COAL OPERATOR
	ne:		Name:
Add	dress:		Address:
∏S	URFACE OWNER	(s) (Road and/or Other Distu	urbance)
	ne: Consolidation Coal Co		☐ SURFACE OWNER OF WATER WELL
Ad	dress: 46226 National Ro		AND/OR WATER PURVEYOR(s)
	St. Clairsville, Ol-		Name:
			Address:
Ad	dress:		OPERATOR OF ANY NATURAL GAS STORAGE FIELD
	LIREACE OWNER	(s) (Impoundments or Pits)	Name:
			Address:
Ad	dress:		
			*Please attach additional forms if necessary Office of Cil and Gas

AUG 27 2020

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 Additional information related to horizontal drilling may be obtained from the Secretary, at the W. Separation related to horizontal drilling may be obtained from the Secretary, at the W. Separation related to horizontal drilling may be obtained from the Secretary, at the W. Separation related to horizontal drilling may be obtained from the Secretary, at the W. Separation related to horizontal drilling may be obtained from the Secretary, at the W. Separation related to horizontal drilling may be obtained from the Secretary, at the W. Separation related to horizontal drilling may be obtained from the Secretary, at the W. Separation related to horizontal drilling may be obtained from the Secretary, at the W. Separation related to horizontal drilling may be obtained from the Secretary, at the W. Separation related to horizontal drilling may be obtained from the Secretary, at the W. Separation related to horizontal drilling may be obtained from the Secretary, at the W. Separation related to horizontal drilling may be obtained from the Secretary related from the Secretary related to horizontal drilling may be obtained from the Secretary related to horizontal drilling may be obtained from the Secretary related to horizontal drilling may be obtained from the Secretary related to horizontal drilling may be obtained from the Secretary related to horizontal drilling may be obtained from the Secretary related to horizontal drilling may be obtained from the Secretary related to horizontal drilling may be obtained from the Secretary related to horizontal drilling may be obtained from the Secretary related to horizontal drilling may be obtained from the Secretary related to horizontal drilling may be obtained from the Secretary related to horizontal drilling may be obtained from the Secretary related to horizontal drilling may be obtained from the Secretary related to horizontal drilling may be obtained from the Secretary related to horizontal drilling may be obtained from the Secretary related to horizontal drilling may be and-gas/pages/default.aspx.

### Well Location Restrictions

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

Well Pad Name: Elliott

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

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Office of Chinad Gas

AUG 27 2020

W Department of Environment

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

Time Limits and Methods for Filing Comments.

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

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

Comment Requirements

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

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

Permit Denial or Condition

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

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

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

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



WW-6A (8-13)



Notice is hereby given by:

Well Operator: EQT Production Company

Telephone: 724-746-9073 Email: jzavatchan@eqt.com Address: 400 Woodcliff Drive

Canonsburg, PA 15317

Facsimile: 412-395-2974

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.

Commonwealth of Pennsylvania - Notary Seal Olivia Pishioneri, Notary Public **Allegheny County** My commission expires October 25, 2023 Commission number 1359968

Member, Pennsylvania Association of Notaries

Subscribed and sworn before me this

My Commission Expires

Office of Cit and Gas

AUG 2 7 2020

WV Department of Environmental Protection

Topo Quad: Glover Gap 1" = 1000' Scale: Marion December 17, 2019 County: Date: District: Mannington - 12 Project No: 48-18-M-18 Water **ELLIOTT PAD** No Potential Water Sources within 2500' 2500 entenary NAD 27, North Zone LEGEND N:381937.27 Red Symbol - Declined Sampling E:1751215.33 Blue Symbol - Requested Sampling / Unable to Contact Access Road WGS 84 Well LAT:39.545371 Spring Pond LONG:-80.382026 Building ELEV:1,343 Office of Oil and Sar SURVEYING AND MAPPING SERVICES PERFORMED BY: PREPARED FOR: **EQT Production Company** ALLEGHENY SURVEYS, INC.

1-800-482-8606 237 Birch River Road Birch River, WV 26610 PH: (304) 649-8606 FAX: (304) 649-8608

2400 Ansys Drive, Suite 200 V Department of Canonsburg, PA 153 17 ironmental Protection

#### **Elliott Well Site**

#### **Surface Owner (All Disturbance)**

Consolidation Coal Company 46226 National Road St. Clairsville, OH 43950

#### **Coal Owners**

Randy Elliott 560 Carolina Avenue Chester, WV 26034

Leonard Stafford 200 Park Drive Mannington, WV 26582

Murray Energy Corporation 46226 National Rd W St. Clairsville, OH 43950

No Water Supply Owners within 1,500'

4704902506

RECEIVED
Office of Cil and Gas

AUG 27 2020

WV Department of Environmental Protection

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

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

Notice Time Requirement: Notice shall be parte of Notice: 04/20/2020			Date Permit	Application Filed: 08/25/2020	рении аррисанов.
Delivery meth	od pursuant t	o West Virgin	ia Code § 22-6A	A-16(b)	
☐ HAND		CERTIFIED N	MAII.		
DELIVE			CEIPT REQUES	STED	
receipt reques drilling a hori of this subsect subsection ma and if availabl	ted or hand delizontal well: Pricion as of the day be waived in e, facsimile number	ivery, give the covided. That rate the notice wariting by the mber and elect	surface owner no notice given purs as provided to the surface owner. ronic mail address	otice of its intent to enter upon the uant to subsection (a), section to the surface owner: <i>Provided, how</i> The notice, if required, shall include of the operator and the operator	an operator shall, by certified mail return ne surface owner's land for the purpose of en of this article satisfies the requirements of this article satisfies the requirements of this ude the name, address, telephone number, or's authorized representative.
Notice is her	reby provided	I to the SUR	FACE OWNE	R(s): Name:	
Name: Consolida				Address:	
Address: 46228	irsville, OH 43950			Addiess.	
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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 of Gas DEP's Chief Privacy Officer at depprivacyofficer@wv.gov.

Operator Well No. Elliott 17H

4704902506

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

Notice Time I Date of Notic	Requirement: notice shall be pro	vided no later than the filing dermit Application Filed: 08/26/3	ate of permit a	pplication.
Delivery metl	ood pursuant to West Virginia (	Code § 22-6A-16(c)		
CERTIF	IED MAIL	☐ HAND		
	N RECEIPT REQUESTED	DELIVERY		
			and the second	of a second shall be postified mail
return receipt the planned of required to be drilling of a languages to the (d) The notice of notice.	requested or hand delivery, give peration. The notice required by provided by subsection (b), sectionizontal well; and (3) A propose surface affected by oil and gas as required by this section shall be	the surface owner whose land y this subsection shall include on ten of this article to a surface sed surface use and compensa operations to the extent the dar e given to the surface owner at	will be used for e: (1) A copy of ce owner whose tion agreement nages are compo	ation, an operator shall, by certified mail the drilling of a horizontal well notice of of this code section; (2) The information land will be used in conjunction with the containing an offer of compensation for ensable under article six-b of this chapter, and in the records of the sheriff at the time
Notice is her	by provided to the SURFACE	OWNER(s)		
Cat the address	s listed in the records of the sheri	If at the time of notice):  Name:		
(at the addres				
Name: Consolida	ation Coal Company			
Name: Consolid. Address: 4622 St Cla	ation Coal Company  National Road  irsville, OH 43950	Address		vell operator has developed a planned
Name: Consolid. Address: 4622 St. Cla  Notice is her Pursuant to Woperation on	ation Coal Company i National Road irsville, OH 43950  eby given: /est Virginia Code § 22-6A-16(c) the surface owner's land for the p	Address: , notice is hereby given that th ourpose of drilling a horizontal	e undersigned w	vell operator has developed a planned et of land as follows:
Name: Consolid. Address: 4622 St. Cla  Notice is her Pursuant to W operation on State:	eby given:  Vest Virginia Code § 22-6A-16(c) West Virginia	Address:	e undersigned w	et of land as follows:
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The Office of Oil and Gas processes your personal information, such as name, address and telephone number, as part of our regulatory duties. Your personal information may be disclosed to other State agencies or third parties in the normal course of business or as needed to comply with statutory or regulatory requirements, including Freedom of Information Act requests. Our office will appropriately secure your personal information. If you have any questions about our use or your personal information, please contact DEP's Chief Privacy Officer at depprivacyofficer@wv.gov.

Office of Land Gas

AUG 2 7 2020

Environmental Fratection



### WEST VIRGINIA DEPARTMENT OF TRANSPORTATION Division of Highways

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

Byrd E. White, III
Secretary of Transportation/
Commissioner of Highways

May 19, 2020

Jimmy Wriston, P. E.
Deputy Secretary/
Deputy Commissioner

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 Elliott Pad, Marion County

Elliot 1H Elliot 3H Elliot 5H Elliot 7H Elliot 9H Elliot 11H Elliot 13H Elliot 15H

Dear Mr. Martin,

This well site will be accessed from a DOH permit #04-2020-0295 which has been issued to EQT Production Company for access to the State Road for a well site located off Marion County Route 5 SLS.

This operator is in compliance with §22-6A-20 of the WV Code. 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 October 1, 2018.

Very Truly Yours,

Gary K. Clayton, P.E.

Regional Maintenance Engineer Central Office O&G Coordinator

Lay K. Clayton

RECEIVED
Office of Cilland Gas

AUG 27 2020

WV Department of Environmental Protection

Cc: John Zavatchan

**EQT Production Company** 

CH, OM, D-4

File

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

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

# EROSION & SEDIMENT CONTROL PLAN

APPROVED
WVDEP OOG

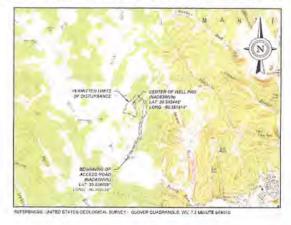
MARION COUNTY, WEST VIRGINIA

FOR

### **EQT PRODUCTION COMPANY**

DISTURBANCE BREAKDOWN						
ACCESS ROAD	WELLPAD	SHIERPLES	TOTAL DISTURBANCE			
1147 AC	304) AC	54) oc	22.35 AC			

	LANDOWNE	DISTURBANCE BREAK	NWO	
LANGOWNER	O STURBANCE FROM ACCESS ROAD	DISTURBANCE FROM WELLPAD	DISTURBANCE FROM	TOTAL DATERBANCE
12-34-37 CORSIGIDATION COAL	\$ 16 AC	1.3140	N/A	149AC
17 34 39 CONSCLIDATION COAL	3 86 AC	N/A	5/9	3.68AC
12- 44-40 CONSTITUTATION COAL	9,50 At	9.14AC	1.41AC	21.85 AC
BINKEDWE	GHAL	NIA	N/A	0.13AC





PROJECT NO. 19070-089 JUNE 2020

### DIEFFENBAUCH & HRITZ, LLC

		Day soul management	WELL LOCAT	TIONS			
ASSESSED WELLER API	MATERIAL CONTRADES	NORTHING NAMES	EAST NOTINGEN AGES	NUMBER OF STREET	ENSTRUGINATE OF	NORTHWISHAD BY US MIMETERS I	EASTINGWAD 83 LITER METERS
381	310 32 AT PRIOR (87 72 15 9407)	581544 9003	3719733 3500	381907.547	1751172 228	411/4/18 RSB	503085435
311	397 32 43.175 MF (80) 22 55.76291	59,064,7175	1739759-1480	381921.464	1751176.086	43/74/2327	503087,144
501	19 52 45 31/30 W/ 22 S169511	Br1977 5346	1739744.9870	181905-182	1751183.904	5177481 Total	2230000 N 163
70	30' 37' 41.4843" 80 27 55.67231	381586.3518	1719750(8250	381948,990	1751185.741	437 MRS 606	553090561
9H	IP 32 44 9895" Bit 22 55,5490	972000 2689	(218676-6636	981962 816	1751195.579	4177489 615	56 9032 269
118	\$17 \$2 43 12367 BUT 12 35,476.72	38201.19860	1719792.5020	38197F 633	1751701-417	437 /494 (164	56,8093,978
13e	39° 82' 41' 86080" 180" 28' 55' 80'892	38,30,77,603.)	17.19768.3400	181050-050	1751207-255	437749@375	553095 686
150	39° 37' 43,99702° 80' 32' 35 33112'	382031.6203	1719774 1700	182004,267	3751213.041	£377603 563	551097,395
flei	39' 87 84 18505" 88' 37 16.25817"	962355.4374	1719780.0170	382018,064	1751218-941	L6775CH-1072	95,0099 153
(H	39' 32 45 140907 30' 22' 35 43657	381300.8954	1715/65.0960	82918 544	17512041004	4377479.395	51/8095/064
44	19" 12 43 3869H" 80" 32 50 6663	3819697175	17197/09340	001932307	1751209.851	4377450 633	953090 772
68	39" 32" 43,42405" 81" 22" 55 2:3072	361363.5260	1719776,7790	383946 377	1751215.689	437748A.873	553098-461
84	18 37 4 2 50 18 60 32 00 31702	981997-5168	17 (9787-6130	383759.994	1751221 527	437.78/9-117	553100.189
109	39° 32° 43.59630° 50° 22° 55.14512°	38301.1 1640	1715788.4500	183973-811	1751727.365	4371493.355	553:01:00m
28	197 32 41 81547 WV 2E 55 5775F	562024.9611	1719794 2680	381997.628	3751233.701	4377417.596	553103.600
HH	19 32 43 97255 807 22 54 9993	382038-7982	1719600.1360	382001-445	1751239 041	4377501 835	553145.345
lder	97 32 44 10 M7 (80 27 54 92578	393575114	17 1980 5 0650	382015-264	1751241.878	4327506 074	553107.021
1811	39 JZ 44 24080 BX7 27 94 819371	48 WK 6 43 75	1710631-8090	182029 day	1751750.716	GTT FOR MAN	DATE:00:737



SDW 8/15/2020

	INDEX	
DRAWING NO.	fnse	
1	TITLE SHEET	
2	AS-BUILT SITE PLAN	
3	PROPOSED SITE PLAN	
- 6	PROPOSED RESTORATION PLAN	
5-8	AS-BUILT ACCESS ROAD PROFILE	
9-10	EASTYPICAL SECTIONS	
11.12	FAR OFTANS	





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THAR DRAWN BLB EFECKED RCL

RCL APPROVED JUNE 2020 DATE 19070-089 ANDERT NO.

IEFFENBAUCH & HRITZ, LL 1055 Chapter Road Suite 200 Multiparton, WY 25241 Weye dataStroples on Sen P. 204 365, 5452 F. 204 365, 5357

DUCTION COMPANY

AD EXPANSION

SHEET

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