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west virginia department of environmental protection

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

Austin Caperton, Cabinet Secretary  
[www.dep.wv.gov](http://www.dep.wv.gov)

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

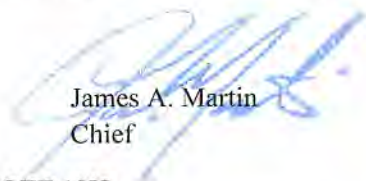
EQT PRODUCTION COMPANY  
625 LIBERTY AVE., SUITE 1700  
PITTSBURGH, PA 15222

Re: Permit approval for ELLIOTT 13H  
47-049-02504-00-00

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 13H  
Farm Name: CONSOLIDATION COAL CO.  
U.S. WELL NUMBER: 47-049-02504-00-00  
Horizontal 6A New Drill  
Date Issued: 10/14/2020

Promoting a healthy environment.

## 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

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

## PERMIT CONDITIONS

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](mailto:DEPOOGNotify@wv.gov).



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west virginia department of environmental protection

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Office of Oil and Gas  
601 57<sup>th</sup> 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**

TO: EQT Production Company  
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. EQT 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**

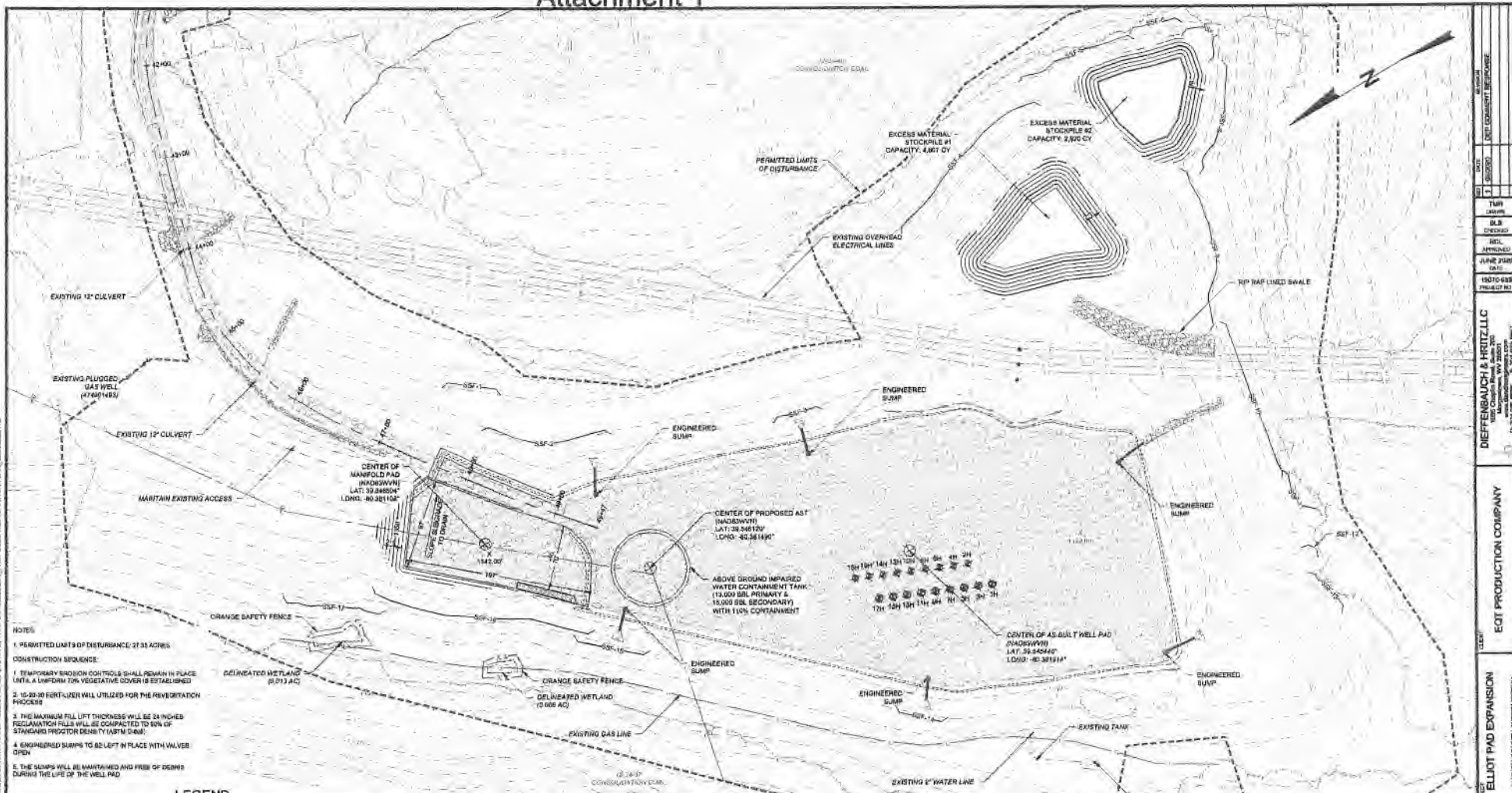
West Virginia Code §22-6A-12(b) requires, in part, that “no well pad may be prepared or well drilled within one hundred feet measured horizontally from any perennial stream, natural or artificial lake, pond or reservoir, or a wetland. The Office of Oil and Gas grants the request for a waiver for Wetlands 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.





# Attachment 1



SCALE: 1"=50' (ADJUSTED) PROPOSED 1:50' PLAN FILE: A-02 AND A-03 (ADJUSTED TO FIT SHEET) DATE: 02/11/2025 PROJECT: ELLIOT PAD EXPANSION RESTORATION PLAN (SHEETS 01-05)

- NOTES**
1. PERMITTED LIMITS OF DISTURBANCE: 21.31 ACRES
  2. CONSTRUCTION SEQUENCE:
    - A. TEMPORARY EROSION CONTROLS SHALL REMAIN IN PLACE UNTIL A UNIFORM 70% VEGETATIVE COVER IS ESTABLISHED
    - B. 10-20-20 FERTILIZER WILL UTILIZED FOR THE REVEGETATION PROCESS
    - C. THE MAXIMUM FILL LIFT THICKNESS WILL BE 24 INCHES REVEGETATION FILL WILL BE COMPACTED TO 90% OF STANDARD PROCTOR DENSITY (ASTM D1556)
    - D. ENGINEERED BUMPS TO BE LEFT IN PLACE WITH VALVES OPEN
    - E. THE BUMPS WILL BE MAINTAINED AND FREE OF DEBRIS DURING THE LIFE OF THE WELL PAD

**LEGEND**

---	EXISTING TREE LINE	---	EXISTING UNDER CONTOUR LINE (10')
---	EXISTING ROAD	---	EXISTING INTERMEDIATE CONTOUR LINE
---	EXISTING RIGHT-OF-WAY	---	PROPOSED INDEX CONTOUR LINE (10')
---	PROPOSED RIGHT-OF-WAY	---	PROPOSED INTERMEDIATE CONTOUR LINE
---	PROPERTY LINE	---	CHANNEL FLOW DIRECTION
---	MUNICIPAL BOUNDARY	---	STREAM
---	PROPOSED FENCE	---	DELIMITED WETLAND
---	EXISTING FENCE	---	DELIMITED WETLAND BOUNDARY
---	EXISTING ELECTRICAL LINE	---	FLOODWAY BOUNDARY
---	EXISTING GAS LINE	---	RIPARIAN BUFFER
---	PROPOSED GAS LINE	---	SLURRY BILT FENCE (SAP)
---	PROPOSED WATER LINE	---	TRIPLE CFS STACK / CFS SEDIMENT TRAP
---	FILL LIMITS	---	EXISTING SPOT ELEVATION
---	TOE BENCH WITH DRAIN	---	EXISTING STRUCTURE
---	ROADWAY CENTERLINE	---	PERMANENT PAVED
---	SAFETY BERM	---	TEMPORARY GRAVEL
---	LIMITS OF DISTURBANCE	---	PERMANENT GRAVEL
---	EXISTING UTILITY POLE	---	

**WELL LOCATIONS**

ASSIGNED WELL ID	APL #	LAT (NAD83)	LONG (NAD83)	NORTH (NAD83) (FEET)	EASTING (NAD83) (FEET)	EASTING (NAD83) (METERS)	NORTH (NAD83) (METERS)	NORTH (NAD83) (METERS)	EASTING (UTM) (METERS)	EASTING (UTM) (METERS)
1H	19	38° 32' 43.1080"	82° 22' 55.3600"	38164.860	1719193.8300	1679073.47	1719172.216	4377471.868	551065.415	551065.415
2H	19	38° 32' 43.1120"	82° 22' 55.7670"	38164.860	1719193.8300	1679073.47	1719172.216	4377471.868	551065.415	551065.415
3H	19	38° 32' 43.1120"	82° 22' 55.7670"	38164.860	1719193.8300	1679073.47	1719172.216	4377471.868	551065.415	551065.415
4H	19	38° 32' 43.1120"	82° 22' 55.7670"	38164.860	1719193.8300	1679073.47	1719172.216	4377471.868	551065.415	551065.415
5H	19	38° 32' 43.1120"	82° 22' 55.7670"	38164.860	1719193.8300	1679073.47	1719172.216	4377471.868	551065.415	551065.415
6H	19	38° 32' 43.1120"	82° 22' 55.7670"	38164.860	1719193.8300	1679073.47	1719172.216	4377471.868	551065.415	551065.415
7H	19	38° 32' 43.1120"	82° 22' 55.7670"	38164.860	1719193.8300	1679073.47	1719172.216	4377471.868	551065.415	551065.415
8H	19	38° 32' 43.1120"	82° 22' 55.7670"	38164.860	1719193.8300	1679073.47	1719172.216	4377471.868	551065.415	551065.415
9H	19	38° 32' 43.1120"	82° 22' 55.7670"	38164.860	1719193.8300	1679073.47	1719172.216	4377471.868	551065.415	551065.415
10H	19	38° 32' 43.1120"	82° 22' 55.7670"	38164.860	1719193.8300	1679073.47	1719172.216	4377471.868	551065.415	551065.415
11H	19	38° 32' 43.1120"	82° 22' 55.7670"	38164.860	1719193.8300	1679073.47	1719172.216	4377471.868	551065.415	551065.415
12H	19	38° 32' 43.1120"	82° 22' 55.7670"	38164.860	1719193.8300	1679073.47	1719172.216	4377471.868	551065.415	551065.415
13H	19	38° 32' 43.1120"	82° 22' 55.7670"	38164.860	1719193.8300	1679073.47	1719172.216	4377471.868	551065.415	551065.415
14H	19	38° 32' 43.1120"	82° 22' 55.7670"	38164.860	1719193.8300	1679073.47	1719172.216	4377471.868	551065.415	551065.415
15H	19	38° 32' 43.1120"	82° 22' 55.7670"	38164.860	1719193.8300	1679073.47	1719172.216	4377471.868	551065.415	551065.415
16H	19	38° 32' 43.1120"	82° 22' 55.7670"	38164.860	1719193.8300	1679073.47	1719172.216	4377471.868	551065.415	551065.415
17H	19	38° 32' 43.1120"	82° 22' 55.7670"	38164.860	1719193.8300	1679073.47	1719172.216	4377471.868	551065.415	551065.415
18H	19	38° 32' 43.1120"	82° 22' 55.7670"	38164.860	1719193.8300	1679073.47	1719172.216	4377471.868	551065.415	551065.415
19H	19	38° 32' 43.1120"	82° 22' 55.7670"	38164.860	1719193.8300	1679073.47	1719172.216	4377471.868	551065.415	551065.415
20H	19	38° 32' 43.1120"	82° 22' 55.7670"	38164.860	1719193.8300	1679073.47	1719172.216	4377471.868	551065.415	551065.415
21H	19	38° 32' 43.1120"	82° 22' 55.7670"	38164.860	1719193.8300	1679073.47	1719172.216	4377471.868	551065.415	551065.415
22H	19	38° 32' 43.1120"	82° 22' 55.7670"	38164.860	1719193.8300	1679073.47	1719172.216	4377471.868	551065.415	551065.415
23H	19	38° 32' 43.1120"	82° 22' 55.7670"	38164.860	1719193.8300	1679073.47	1719172.216	4377471.868	551065.415	551065.415
24H	19	38° 32' 43.1120"	82° 22' 55.7670"	38164.860	1719193.8300	1679073.47	1719172.216	4377471.868	551065.415	551065.415
25H	19	38° 32' 43.1120"	82° 22' 55.7670"	38164.860	1719193.8300	1679073.47	1719172.216	4377471.868	551065.415	551065.415
26H	19	38° 32' 43.1120"	82° 22' 55.7670"	38164.860	1719193.8300	1679073.47	1719172.216	4377471.868	551065.415	551065.415
27H	19	38° 32' 43.1120"	82° 22' 55.7670"	38164.860	1719193.8300	1679073.47	1719172.216	4377471.868	551065.415	551065.415
28H	19	38° 32' 43.1120"	82° 22' 55.7670"	38164.860	1719193.8300	1679073.47	1719172.216	4377471.868	551065.415	551065.415
29H	19	38° 32' 43.1120"	82° 22' 55.7670"	38164.860	1719193.8300	1679073.47	1719172.216	4377471.868	551065.415	551065.415
30H	19	38° 32' 43.1120"	82° 22' 55.7670"	38164.860	1719193.8300	1679073.47	1719172.216	4377471.868	551065.415	551065.415



PROJECT: ELLIOT PAD EXPANSION RESTORATION PLAN  
 SHEET: 4  
 DRAWN BY: [Name]  
 CHECKED BY: [Name]  
 DATE: [Date]  
 SCALE: 1"=50'  
 PROJECT LOCATION: [Address]  
 CLIENT: EOT PRODUCTION COMPANY  
 DESIGNER: DIEFFENBACH & HRTZ LLC  
 PROJECT NO: 19070-008  
 DATE: [Date]



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

1) Well Operator: EQT Production Company 306686 Marion Mannington Glover Gap  
Operator ID County District Quadrangle

2) Operator's Well Number: 13H Well Pad Name: Elliott

3) Farm Name/Surface Owner: Consolidation Coal Company Public Road Access: CR 5

4) Elevation, current ground: 1,343' (pad built) Elevation, proposed post-construction: 1,343'

5) Well Type (a) Gas  Oil  Underground Storage   
Other

(b) If Gas Shallow  Deep   
Horizontal

*SDW  
8/13/2020*

6) Existing Pad: Yes or No Yes

7) Proposed Target Formation(s), Depth(s), Anticipated Thickness and Expected Pressure(s):  
Marcellus, 7,770', 101', 2593 psi

8) Proposed Total Vertical Depth: 7,770'

9) Formation at Total Vertical Depth: Marcellus

10) Proposed Total Measured Depth: 13,472'

11) Proposed Horizontal Leg Length: 4,997'

12) Approximate Fresh Water Strata Depths: 202', 287'

13) Method to Determine Fresh Water Depths: Offset Wells - 47-049-02251, 47-049-00878

14) Approximate Saltwater Depths: 1,797', 1,895', 2412'

15) Approximate Coal Seam Depths: 435'-437', 870'-875', 967'-975'

16) Approximate Depth to Possible Void (coal mine, karst, other): N/A

17) Does Proposed well location contain coal seams directly overlying or adjacent to an active mine? Yes  No

(a) If Yes, provide Mine Info: Name: \_\_\_\_\_  
Depth: \_\_\_\_\_  
Seam: \_\_\_\_\_  
Owner: \_\_\_\_\_

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18)

**CASING AND TUBING PROGRAM**

<b>TYPE</b>	<b>Size (in)</b>	<b>New or Used</b>	<b>Grade</b>	<b>Weight per ft. (lb/ft)</b>	<b>FOOTAGE: For Drilling (ft)</b>	<b>INTERVALS: Left in Well (ft)</b>	<b>CEMENT: Fill-up (Cu. Ft.)/CTS</b>
Conductor	26	New	A-500	85.6	40	40	60 ft <sup>3</sup> / CTS
Fresh Water	13 3/8	New	J-55	54.5	1025	1025	900 ft <sup>3</sup> / CTS
Coal							
Intermediate	9 5/8	New	A-500	40	2485	2485	1000 ft <sup>3</sup> / CTS
Production	5 1/2	New	P-110	20	13472	13472	500' above intermediate casing
Tubing							
Liners							

*8/13/2020  
SPW*

<b>TYPE</b>	<b>Size (in)</b>	<b>Wellbore Diameter (in)</b>	<b>Wall Thickness (in)</b>	<b>Burst Pressure (psi)</b>	<b>Anticipated Max. Internal Pressure (psi)</b>	<b>Cement Type</b>	<b>Cement Yield (cu. ft./k)</b>
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							

**PACKERS**

Kind:				
Sizes:				
Depths Set:				

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Environmental Protection

19) Describe proposed well work, including the drilling and plugging back of any pilot hole:

Drill and complete a new horizontal well in the Marcellus Formation. Drill the vertical, 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  
Surface: Calcium Chloride. Used to speed the setting of cement slurries  
Intermediate: 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

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.

REC'D  
Office of Oil and Gas

AUG 27 2020

\*Note: Attach additional sheets as needed.



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west virginia department of environmental protection

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Office of Oil and Gas  
601 57<sup>th</sup> Street, SE  
Charleston, WV 25304  
(304) 926-0450  
(304) 926-0452 fax

Earl Ray Tomblin, Governor  
Randy C. Huffman, Cabinet Secretary  
dep.wv.gov

March 18, 2014

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

Re: Cement Variance Request

Dear Sir or Madam,

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

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

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

Sincerely,

James Peterson  
Environmental Resources Specialist / Permitting

Promoting a healthy environment.

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west virginia department of environmental protection

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Office of Oil and Gas  
601 57<sup>th</sup> 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
  
- 2.) Laboratory testing results indicate that the blend listed in Fact No.1 will achieve a 500 psi compressive strength within 6 hours and a 2,435 psi compressive strength within 24 hours.

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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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EQT PRODUCTION COMPANY  
400 Woodcliff Drive | Canonsburg, PA 15317  
P: 724-746-9073 | [www.eqt.com](http://www.eqt.com)

4704902504

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 13H

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,

A handwritten signature in blue ink, appearing to read 'J. Zavatchan'.

John Zavatchan  
Project Specialist - Permitting

Enc.

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4704902504

**WEST VIRGINIA GEOLOGICAL PROGNOSIS**

Horizontal Well  
ELLIOT (GLO187)

v 2017.4  
Enertia # #N/A

**Drilling Objectives:** MARCELLUS  
**County:** Marion  
**Quad:** Glover Gap  
**Elevation:** 1355 KB 1342 GL  
**Recommended Azimuth** Degrees

**TVD:** 7770

**ESTIMATED FORMATION TOPS** from wells 4704902251, 4704900878

Formation	Top (TVD)	Base (TVD)	Lithology	Comments	Top RR	Base RR
Fresh Water Zone	1	287		FW @ 202,287, ...		
Coal	435	437	Coal			
Sewickley	870	875	Coal			
Pittsburgh	967	975	Coal			
Big Lime	2182	2308	Limestone	SW @ 1797,1895,2412.		
Big Injun	2308	2435	Sandstone			
Int. csg 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			
Genesee	7545	7582	Black Shale			
Tully	7582	7613	Limestone			
Hamilton	7613	7719	calcareous shales			
Marcellus	7719	7820	Black Shale			
Purcell	7785	7787	Limestone			
<b>-Lateral Zone</b>	<b>7770</b>					
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 WV regulations.

**LATERAL DRILLING TOLERANCES**

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

**RECOMMENDED CASING POINTS**

<b>Fresh Water/Coal</b>	CSG OD	13 3/8	CSG DEPTH:	1025	50' below Pittsburgh
<b>Intermediate 1:</b>	CSG OD	9 5/8	CSG DEPTH:	2485	Beneath the Big Injun formation
<b>Production:</b>	CSG OD	5 1/2	CSG DEPTH:	@ TD	

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**EQT Production**

**Wellbore Diagram** 4304902504

Well: Elliot 13H

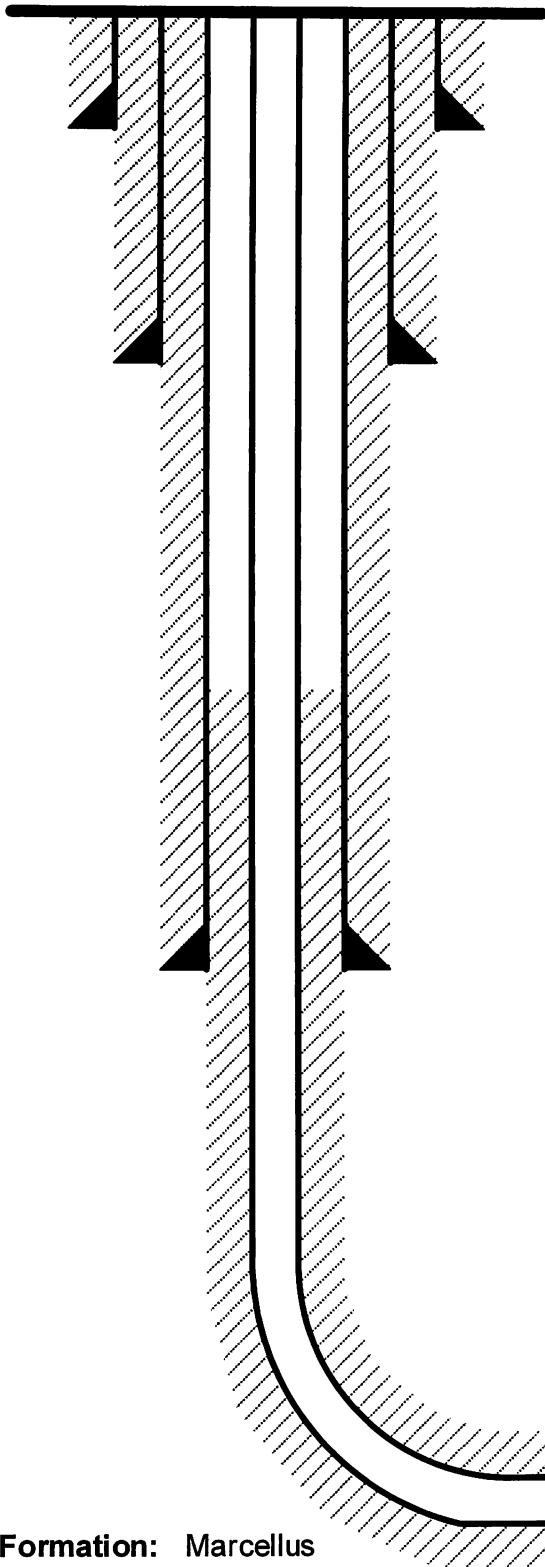
County: Marion

West Virginia

Pad: Elliot

State: West Virginia

Elevation: 1342' GL 1355' KB



**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

**Production @ 13,472' MD / 7,770' TVD**

5-1/2", 20#, P-110, cement to 500' inside 9-5/8" w/ Class A/H

**Formation: Marcellus**

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**NOT TO SCALE**

EQT Production  
Hydraulic Fracturing Monitoring Plan  
Pad ID: Elliott  
County: Marion

June 11, 2020

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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.

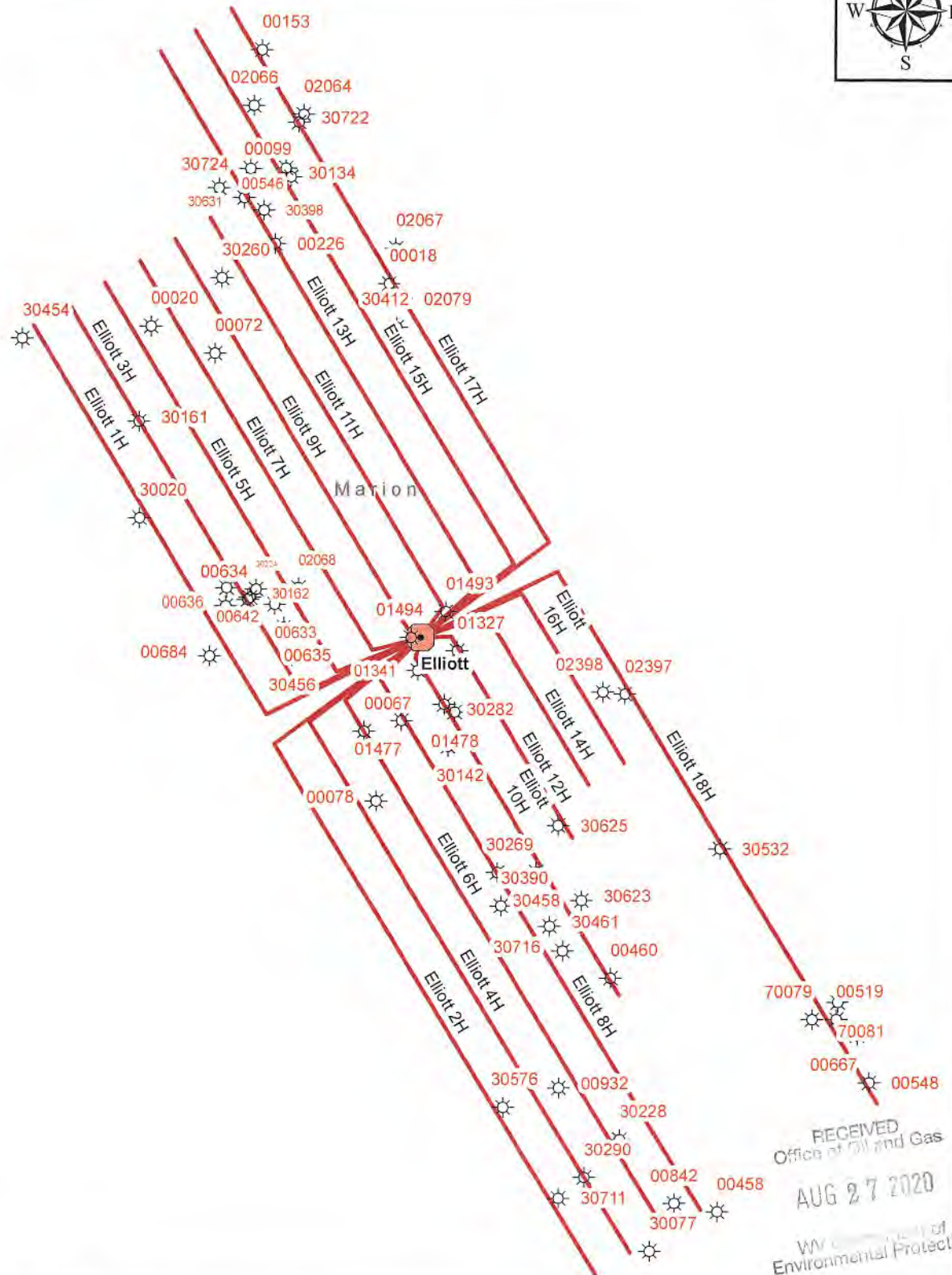
EQT will recommend to these operators at a minimum to:

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

### 2. Reporting

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

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EQT

EQT Corporation  
625 Liberty Avenue  
Pittsburgh, PA 15222

Elliott

Vertical Offsets and  
Foreign Laterals  
within 500'

Legend

- Foreign Well Offset
- Well Pad Sites

Well Lateral\_FM  
Formation

- Geneseo
- Marcellus
- Utica

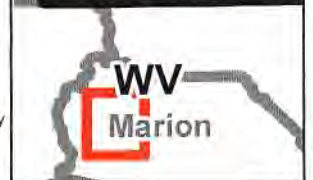


Disclaimer:

This map is confidential and is to be used only for the express informational purposes for which it was created. Unauthorized use, copying, or dissemination is strictly prohibited. EQT does not warrant the accuracy of the location of any items shown on this map, including, but not limited to, any structures, well or pipeline facilities, property boundaries, topography, roadways, or waterways. The items shown on the map may not have been placed on the map using survey lines or GPS coordinates. The specific location of any of the map items should be determined by a field survey performed by a licensed surveyor upon consultation with EQT.

1:1,193,041

PA



WellID	WellStatus	date	FmatRD	Permit	RemarksPRO	Operator	Longitude	Latitude	TargetFm	DatumEleva	TotalDepth-SS	Total Depth
4704900018	UNK	12/27/1930		00018		S N ELLIOTT	-80.3848	39.5687	1185.0000	-1981.0000	3166.0000	
4704900020	UNK	9/26/1933		00020		ESHENBAUGH OIL & GAS	-80.4053	39.5660	1088.0000	-2212.0000	3300.0000	
4704900067	GAS-P	1/14/1937		00067		S N ELLIOTT	-80.3872	39.5391	990.0000	-1822.0000	2812.0000	
4704900072	GAS-P	11/6/1937		00072		ESHENBAUGH OIL & GAS	-80.3998	39.5342	1271.0000	-2183.0000	3454.0000	
4704900078	GAS-P	11/30/1937		00078		S N ELLIOTT	-80.3862	39.5345	1197.0000	-2197.0000	3394.0000	
4704900099	DRY	12/8/1941		00099		PENNZOIL	-80.3932	39.5758	1206.0000	-2414.0000	3620.0000	
4704900153	GAS-P	2/13/1947		00153		W R COREY	-80.3957	39.5842	1043.0000	-1992.0000	3025.0000	
4704900026	DRY	9/17/1951		00226		MONROE & LAUGHLIN	-80.3946	39.5714	1117.0000	-1904.0000	3021.0000	
4704900048	UNK	8/1/1993		00458		PENNZOIL	-80.3572	39.5070	1359.0000	-879.0000	2238.0000	
4704900058	GAS	7/10/1925		00460	4SD	PENNZOIL	-80.3662	39.5276	1104.0000	-2029.0000	3133.0000	
4704900059	UNK	2/13/1996		00519		PENNZOIL	-80.3468	39.5197	1240.0000	-840.0000	2080.0000	
4704900546	OIL	2/25/1918		00546	30F	PENNZOIL	-80.3994	39.5751	1360.0000	-1745.0000	3105.0000	
4704900548	OIL	4/1/1995		00548	BNJ	PENNZOIL	-80.3440	39.5155	1248.0000	-881.0000	2129.0000	
4704900633	DRY	2/22/1937		00633		CONSOL	-80.3948	39.5476	1037.0000	-1846.0000	2883.0000	
4704900634	UNK			00634		CONSOL	-80.3971	39.5479	1009.0000	-9999.0000	101008.0000	
4704900635	UNK			00635		CONSOL	-80.3940	39.5461	1074.0000	-9999.0000	101073.0000	
4704900636	UNK			00636		CONSOL	-80.3990	39.5475	1023.0000	-9999.0000	101022.0000	
4704900642	UNK			00642		CONSOL	-80.3989	39.5487	1037.0000	-9999.0000	101036.0000	
4704900667	GAS	1/1/1990		00667		G L & R O BEATY	-80.3450	39.5186	1300.0000	-1755.0000	3055.0000	
4704900684	UNK			00684		CONSOL	-80.4004	39.5442	1278.0000	-9999.0000	101277.0000	
4704900842	UNK	9/17/1991		00842		ROSS & WHARTON	-80.3609	39.5076	1151.0000	-885.0000	2036.0000	
4704900932	UNK			00932		CLOWSER	-80.3707	39.5154	1009.0000	-9999.0000	101008.0000	
4704901327	UNK	10/4/2001		01327	5SDRLY	R J A L	-80.3791	39.5444	1102.0000	-3908.0000	5010.0000	
4704901341	UNK	10/12/2001		01341	GDNS5D	R J A L	-80.3825	39.5431	1090.0000	-2270.0000	3360.0000	
4704901477	GAS	3/25/2004		01477	50F30F5DN	FALCON HOLDINGS	-80.3840	39.5398	1177.0000	-2184.0000	3361.0000	
4704901478	GAS	3/16/2004		01478	50F309F/GDN/4	FALCON HOLDINGS	-80.3794	39.5403	1097.0000	-2093.0000	3190.0000	
4704901493	P&A	6/14/2004		01493	50F	FALCON HOLDINGS	-80.3801	39.5470	1330.0000	-2101.0000	3431.0000	
4704901494	UNK	4/28/2004		01494	30F/GDN/4SD	FALCON HOLDINGS	-80.3831	39.5453	1311.0000	-2039.0000	3450.0000	
4704902064	UNK			02064		CONSOLIDATION COAL	-80.3921	39.5800	1118.0000	-9999.0000	101117.0000	
4704902066	UNK			02066		CONSOLIDATION COAL	-80.3964	39.5806	1281.0000	-9999.0000	101280.0000	
4704902067	UNK			02067		CONSOLIDATION COAL	-80.3842	39.5710	1196.0000	-9999.0000	101195.0000	
4704902068	UNK			02068		CONSOLIDATION COAL	-80.3927	39.5487	1117.0000	-9999.0000	101116.0000	
4704902079	UNK			02079		CONSOLIDATION COAL	-80.3837	39.5677	1234.0000	-9999.0000	101233.0000	
4704902397	UNK	5/14/2015		02397		CONSOL ENERGY	-80.3648	39.5416	1193.0000	-106.0000	1299.0000	
4704902398	D&A	5/18/2015		02398		CONSOL ENERGY	-80.3666	39.5416	1113.0000	-581.0000	1694.0000	
4704930020	GAS			30020			-80.4064	39.5533	1088.0000	-2212.0000	3300.0000	
4704930077	OIL GS			30077		SOUTH PENN	-80.3631	39.5044	1209.0000	-898.0000	2107.0000	
4704930134	O&G			30134		MANUFACTURERS L & H	-80.3936	39.5764	1.0000	-3314.0000	3315.0000	
4704930142	UNK			30142		OPER IN MINLOWN	-80.3800	39.5381	1167.0000	-2012.0000	3179.0000	
4704930161	OIL			30161		ESHENBAUGH O&G	-80.4064	39.5597	1035.0000	-1737.0000	2772.0000	
4704930162	OIL			30162		ESHENBAUGH O&G	-80.3969	39.5481	1036.0000	-1849.0000	2885.0000	
4704930224	UNK			30224		WILLIAM MOSES	-80.3964	39.5486	1222.0000	-1773.0000	2995.0000	
4704930228	OIL GS	6/3/1907		30228		SOUTH PENN	-80.3655	39.5119	1485.0000	-1687.0000	3172.0000	
4704930260	GAS	6/23/1919		30260		MANUFACTURERS L & H	-80.3992	39.5692	1364.0000	-2083.0000	3447.0000	
4704930269	OIL	5/31/1920		30269		SOUTH PENN	-80.3758	39.5297	1304.0000	-1790.0000	3094.0000	
4704930282	GAS	3/11/1914		30282		HOPE NAT GAS	-80.3803	39.5408	1148.0000	-2106.0000	3254.0000	
4704930290	OIL GS	11/14/1918		30290		SOUTH PENN	-80.3686	39.5095	1099.0000	-1676.0000	2775.0000	
4704930390	OIL GS	10/30/1926		30390		SOUTH PENN	-80.3756	39.5275	1103.0000	-1777.0000	2880.0000	
4704930398	GAS	9/8/1917		30398		HOPE NAT GAS	-80.3956	39.5736	1218.0000	-2040.0000	3258.0000	
4704930412	OIL GS	3/25/1927		30412		CARNEGIE NAT GAS	-80.3842	39.5658	1178.0000	-1858.0000	3036.0000	
4704930454	O&G			30454		INTERSTATE P&S	-80.4164	39.5653	1074.0000	-1934.0000	3008.0000	
4704930456	OIL			30456		INTERSTATE P&S	-80.3933	39.5442	1066.0000	-1842.0000	2848.0000	
4704930458	OIL GS			30458		INTERSTATE P&S	-80.3725	39.5297	1053.0000	-1778.0000	2831.0000	
4704930461	OIL GS			30461		INTERSTATE P&S	-80.3714	39.5261	1176.0000	-1759.0000	2935.0000	
4704930532	OIL GS	4/9/1897		30532		RAAD SUPPLY	-80.3567	39.5311	1153.0000	-1721.0000	2874.0000	
4704930576	OIL	10/5/1894		30576		RAAD SUPPLY	-80.3756	39.5142	1273.0000	-1744.0000	3017.0000	
4704930623	OIL GS	8/13/1894		30623		OPER IN MINLOWN	-80.3686	39.5278	972.0000	-1770.0000	2742.0000	
4704930625	OIL	9/10/1894		30625		RAAD SUPPLY	-80.3706	39.5328	1071.0000	-1789.0000	2860.0000	
4704930631	OIL GS	5/22/1918		30631		RAAD SUPPLY	-80.3972	39.5744	1044.0000	-1979.0000	3023.0000	
4704930711	OIL GS	8/25/1894		30711		RAAD SUPPLY	-80.3708	39.5081	1.0000	-3056.0000	3057.0000	
4704930716	OIL	7/17/1894		30716		RAAD SUPPLY	-80.3703	39.5244	1.0000	-1984.0000	1985.0000	
4704930722	UNK	7/31/1909		30722		OPER IN MINLOWN	-80.3925	39.5794	0.0000	-9999.0000	9999.0000	
4704930724	OIL	3/24		30724		OPER IN MINLOWN	-80.3967	39.5764	1365.0000	-1781.0000	3146.0000	
4704970079	OIL	7/19/1918		70079		BURT OIL	-80.3489	39.5197	1.0000	-2630.0000	2631.0000	
4704970081	OIL			70081		HARTMAN OIL	-80.3467	39.5208	1.0000	-2983.0000	2984.0000	

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WW-9  
(4/16)

4704902504

API Number 47 - \_\_\_\_\_  
Operator's Well No. Elliott 13H

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

FLUIDS/ CUTTINGS DISPOSAL & RECLAMATION PLAN

Operator Name EQT Production Company OP Code 306686

Watershed (HUC 10) 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  No

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
- 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 \_\_\_\_\_)

*SPO  
8/13/2020*

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.

Company Official Signature [Signature]

Company Official (Typed Name) John Zavatchan

Company Official Title Project Specialist - Permitting

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Subscribed and sworn before me this 26<sup>th</sup> day of August, 2020

WV Department of  
Environmental Protection

[Signature] Notary Public

My commission expires October 25, 2023

Commonwealth of Pennsylvania - Notary Seal  
Olivia Pishoneri, Notary Public  
Allegheny County  
My commission expires October 25, 2023  
Commission number 1359968  
Member, Pennsylvania Association of Notaries



EQT Production Company

Proposed Revegetation Treatment: Acres Disturbed No additional disturbance Prevegetation pH \_\_\_\_\_

Lime 3 Tons/acre or to correct to pH 6.5

Fertilizer type Granular 10-20-20

Fertilizer amount 1/3 lbs/acre

Mulch 2 Tons/acre

Seed Mixtures

Temporary		Permanent	
Seed Type	lbs/acre	Seed Type	lbs/acre
KY-31	40	Orchard Grass	15
Alsike Clover	5	Alsike Clover	5
Annual Rye	15		

Attach:

Maps(s) of road, location, pit and proposed area for land application (unless engineered plans including this info have been provided). If water from the pit will be land applied, include dimensions (L x W x D) of the pit, and dimensions (L x W), and area in acreage, of the land application area

Photocopied section of involved 7.5' topographic sheet.

Plan Approved by: S. D. Wanda

Comments: Pre-seed/mulch all disturbed areas as soon as reasonably possible, per regulation. Upgrade E&S as necessary per WV DEP E&S Manual.

Title: COG

Date: 8/13/2020

Field Reviewed? ( X ) Yes ( ) No

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## 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?

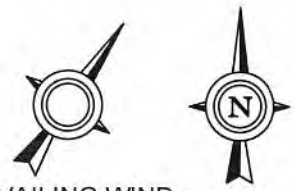
- Air - biodegradable oil lubricant, detergent, defoaming, water.
- Water based mud – Barite, viscosifer, alkalinity control, lime, filtration control, deflocculates, biodegradable oil lubricant, defoaming, walnut shell, salt, x-cide, carbonates.
- Synthetic mud – synthetic base oil, emulsifier, salt,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

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SCALE: 1:500 PLOTTED: 4/30/2020 4:41 PM FILE: X:\OIL AND GAS\EQT\2019\19070.089 - ELLIOT\CAOD (K DRIVE) - PAITO CLIENT\DWG\ELLIOT\_WW-9 EXHIBIT\_02.24.20.DWG

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**EXHIBIT**  
made for  
**EQT PRODUCTION COMPANY**  
**ELLIOT WELL SITE**  
**MANNINGTON DISTRICT,**  
**MARION COUNTY, WEST VIRGINIA**  
prepared by  
**DIEFFENBAUCH & HRITZ, LLC**  
1095 Chaplin Rd Suite 200, Morgantown, WV 26501  
Phone: 304-985-5555 Fax: 304-985-5557

**EQT Production Water Plan**

**Offsite Disposals for Unconventional 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	OH	3390
Broad Street Energy LLC	37 West Broad Street	Suite 1100	Columbus	OH	43215	740-516-5381	Washington	OH	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	OH	45773	740-516-6021 740-374-2940	Noble	OH	4037
Tri County Waste Water Management, Inc.	1487 Toms Run Road		Holbrook	PA	15341	724-627-7178 724-499-5647	Greene	PA	TC-1009
King Excavating Co. Advance Waste Services	101 River Park Drive		New Castle	PA	16101		Lawrence	PA	PAR000029132
Waste Management - Meadowfill Landfill	Rt. 2, Box 68 Dawson Drive		Bridgeport	WV	16330	304-326-6027	Harrison	WV	SWF-1032-98 Approval #100785WV
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	OH	43903	740-543-4389	Jefferson	OH	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
Austin Master Services	801 North 1st Street		Martins Ferry	OH	43935	740-609-3800	Belmont	OH	2014-541
Belmont Solids Control	77505 Cadiz-New Athers Road		Cadiz	OH	43907	740-942-1739	Harrison	OH	2015-511
Diversified Resources	3111 Braun Rd.		Belpre	OH	45714	740-401-0413	Washington	OH	
Buckeye Brine	23986 Airport Road		Coshocton	OH	43812	740-610-1512 724-591-4393	Coshocton	OH	34-031-27177 34-031-27178 34-031-27241
Central Environmental Services	28333 West Belpre Pike		Coolville	OH	45723	304-488-0701	Athens	OH	
Nuverra - Nichols	10555 Veto Road		Belpre	OH	45714	330-232-5041	Washington	OH	34-119-2-8776
Nuverra - Goff	9350 East Pike Road		Norwich	OH	43767	330-232-5041	Muskingum	OH	34-167-2-3862
Nuverra - Wolf	5480 State Route 5		Newton Falls	OH	44444	330-232-5041	Trumbull	OH	34-155-2-1893
Nuverra - Pander	5310 State Route 5		Newton Falls	OH	44444	330-232-5041	Trumbull	OH	34-155-2-3795
Nuverra - AnnaRock	3549 Warner Road		Fowler	OH	44418	330-232-5041	Trumbull	OH	34-155-2-2403

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FQ Helen	199 Bowersock Road		Reno	OH	45773	740-374-2940 412-443-4397 740-236-2135	Washington	OH	34-167-2-9577
FQ Dexter	38505 Marietta Rd.		Dexter City	OH	45727	740-374-2940 412-443-4397 740-236-2135	Noble	OH	34-121-24037 34-121-24086
FQ Ritchie	122 Lonesome Pine Rd		Ellenboro	WV	26346	740-374-2940 412-443-4397 740-236-2135	Ritchie	WV	47-085-09721
FQ Mills	53610 TS Rd 706		Portland	OH	45770	740-374-2940 412-443-4397 740-236-2135	Meigs	OH	34-105-2-3619 34-105-2-3652 34-105-2-3637 34-105-2-3651
Petta Enterprises - OH	745 North 3rd Street		Cambridge	OH	43725	614-477-1368	Guernsey	OH	Ohio Chiefs Order 25-019
Petta Enterprises - WV	38 Technology Dr.		Tridelpia	WV	26059	740-255-5727	Ohio	WV	
Deep Rock Disposal	2341 OH-821		Marietta	OH	45750	304-629-0176	Washington	OH	34-167-2-9766

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# 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 Zavatchan**  
Project Specialist

**EQT Production Company**

\_\_\_\_\_  
**Sam Ward**  
Oil and Gas Inspector  
West Virginia DEP

SDW  
8/15/2020

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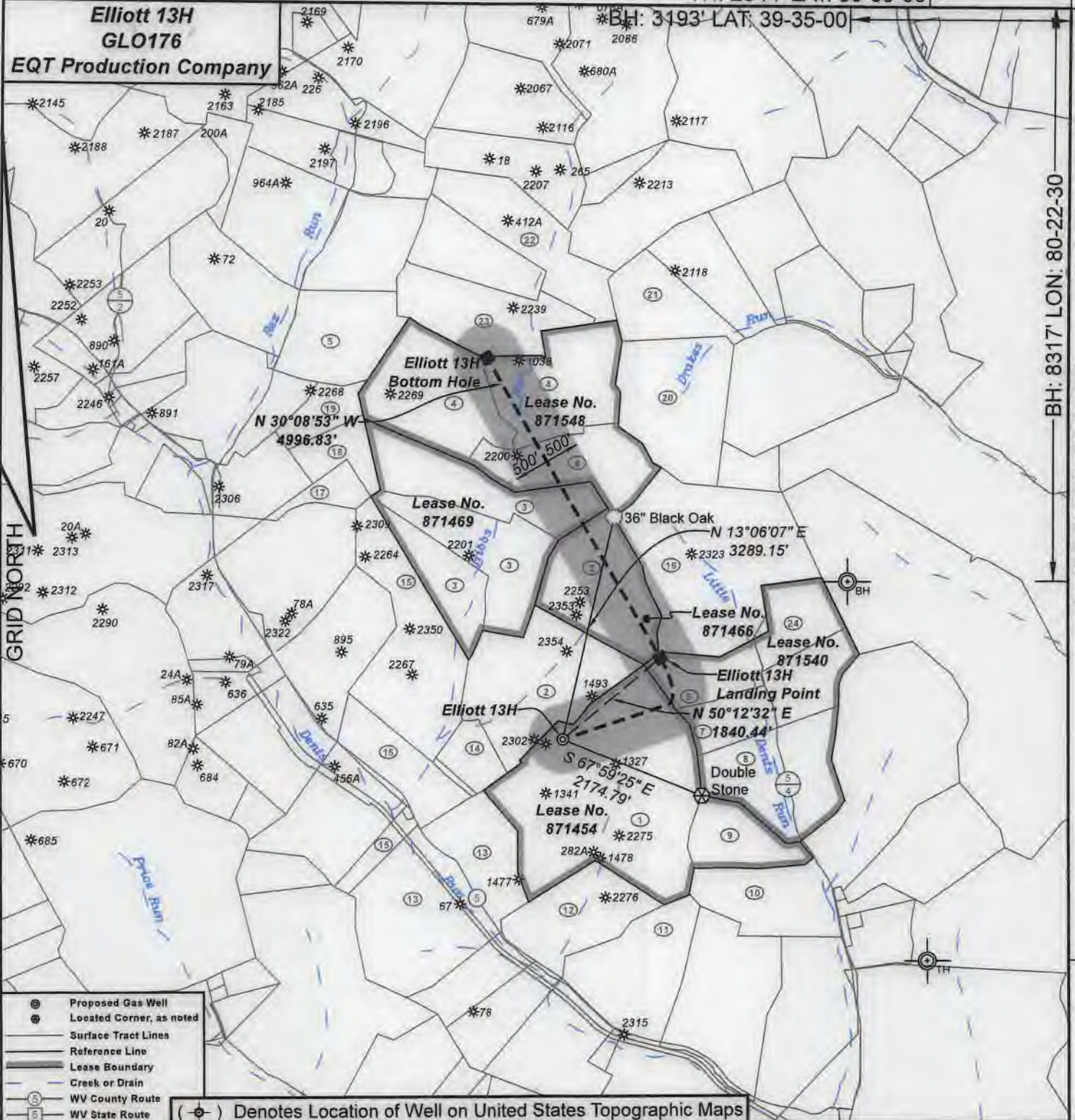


TH: 2044' LAT: 39-35-00

BH: 3193' LAT: 39-35-00

BH: 8317' LON: 80-22-30

TH: 13805' LON: 80-22-30



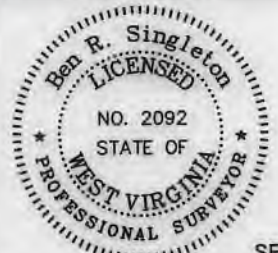
- ⊙ Proposed Gas Well
- ⊙ Located Corner, as noted
- Surface Tract Lines
- Reference Line
- Lease Boundary
- Creek or Drain
- Ⓢ WV County Route
- Ⓢ WV State Route

(⊙) Denotes Location of Well on United States Topographic Maps



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.

*Ben R. Singleton*  
 P.S. 2092



SEAL

FILE NO: 48-18  
 DRAWING NO: Elliott 13H  
 SCALE: 1" = 2000'  
 MINIMUM DEGREE OF ACCURACY: 1:2500  
 PROVEN SOURCE OF ELEVATION: NGS CORS Station

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

DATE: August 19 20 20  
 OPERATOR'S WELL NO.: Elliott 13H  
 API WELL NO HGA  
 47 - 49 - 02504  
 STATE COUNTY PERMIT

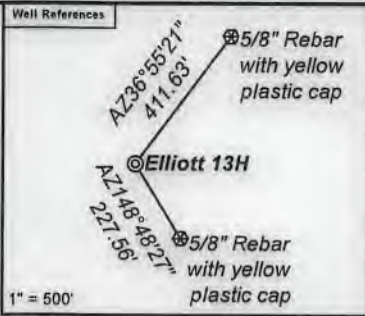
WELL TYPE:  OIL  GAS  LIQUID INJECTION  WASTE DISPOSAL  
 (IF GAS) PRODUCTION:  STORAGE  DEEP  SHALLOW  
 LOCATION: ELEVATION: 1343' WATERSHED Tributary of Dents Run QUADRANGLE: Glover Gap  
 DISTRICT: Mannington COUNTY: Marion  
 SURFACE OWNER: Consolidated Coal Company ACREAGE: 153.25  
 ROYALTY OWNER: Randy J. Elliott and Leonard W. Stafford LEASE NO: 871454 ACREAGE: 183  
 PROPOSED WORK:  DRILL  CONVERT  DRILL DEEPER  FRACTURE OR STIMULATE  PLUG OFF OLD FORMATION  
 PERFORATE NEW FORMATION  OTHER PHYSICAL CHANGE IN WELL (SPECIFY)  
 PLUG AND ABANDON  CLEAN OUT AND REPLUG TARGET FORMATION: Marcellus ESTIMATED DEPTH:

WELL OPERATOR: EQT Production Company DESIGNATED AGENT: Joseph C. Mallow  
 ADDRESS: 400 Woodcliff Drive ADDRESS: 115 Professional Place PO Box 280  
 Canonsburg, PA 15317 Bridgeport, WV 26330

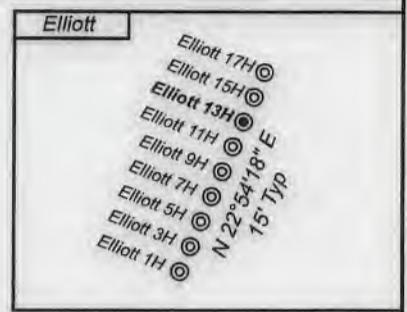


**Elliott 13H  
GLO176  
EQT Production Company**

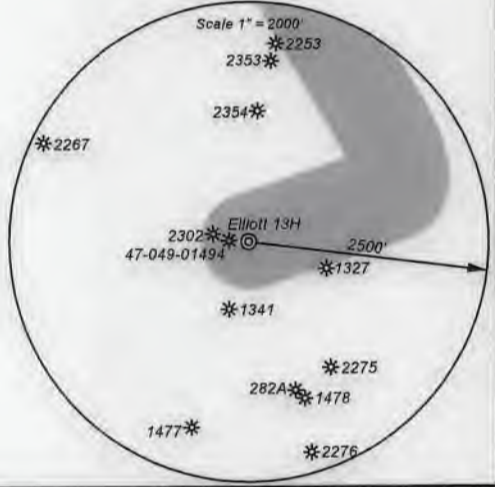
Tract I.D.	Tax Map No.	Parcel No.	County	District	Surface Tract Owner	Acres
1	34	40	Marion	Mannington	Consolidation Coal Company	153.25
2	34	37	Marion	Mannington	Consolidation Coal Company	133.37
3	36	20	Marion	Mannington	Consolidation Coal Company	131.10
4	36	21	Marion	Mannington	Consolidation Coal Company	169.49
5	36	11	Marion	Mannington	Fredrick E. & Deborah S. Lilley	46.25
6	34	49	Marion	Mannington	Dennis M. & Lisa A. Hayes	24.78
7	34	47	Marion	Mannington	Edward F. Price	23.00
8	33	1	Marion	Mannington	Thomas D. & Aimee J. Haught	106.82
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	34	36	Marion	Mannington	Consolidation Coal Company	120.00
16	32	11	Marion	Mannington	Consolidation Coal Company	116.00
17	36	14	Marion	Mannington	Mark A. & Carrie A. Hendershot	11.04
18	36	13	Marion	Mannington	Mark A. & Carrie A. Hendershot	16.20
19	36	12	Marion	Mannington	Mark A. & Carrie A. Hendershot	15.20
20	32	12	Marion	Mannington	James K. & Rose K. Haigh	76.21
21	32	13	Marion	Mannington	Susanne A. & Charles W. Giken	33.40
22	36	24	Marion	Mannington	CNX Land LLC	47.98
23	36	22	Marion	Mannington	Consolidation Coal Company	50.87
24	33	1	Marion	Mannington	Thomas D. & Aimee J. Haught	106.82



**Notes:**  
 Elliott 13H coordinates are  
 NAD 27 N: 381,990.45 E: 1,751,207.25  
 NAD 27 Lat: 39.545433 Long: -80.382249  
 NAD 83 UTM N: 4,377,498.32 E: 553,095.69  
 Elliott 13H Landing Point coordinates are  
 NAD 27 N: 383,168.32 E: 1,752,621.42  
 NAD 27 Lat: 39.548705 Long: -80.377276  
 NAD 83 UTM N: 4,377,864.37 E: 553,520.56  
 Elliott 13H Bottom Hole coordinates are  
 NAD 27 N: 387,489.22 E: 1,750,111.83  
 NAD 27 Lat: 39.560500 Long: -80.386326  
 NAD 83 UTM N: 4,379,168.04 E: 552,734.06  
 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.

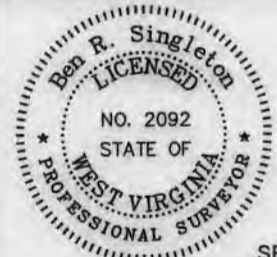


Lease No.	Owner	Acres
871540	Country Roads Minerals, LLC, et al.	89.75
871466	Lee and Hall Royalties	53.63
871469	Newton S. Beatty Families Trust, Philip A. Prichard, Trustee, et al.	131.1
871548	West Virginia University Foundation, Inc., et al.	169.49



*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.*

*Ben R. Singleton*  
 P.S. 2092



FILE NO: 48-18  
 DRAWING NO: Elliott 13H  
 SCALE: 1" = 2000'  
 MINIMUM DEGREE OF ACCURACY: 1:2500  
 PROVEN SOURCE OF ELEVATION: NGS CORS Station



DATE: August 19 20 20  
 OPERATOR'S WELL NO.: Elliott 13H  
 API WELL NO  
 47 - 49 - 02504  
 STATE COUNTY PERMIT

WELL TYPE:  OIL  GAS  LIQUID INJECTION  WASTE DISPOSAL  
 (IF GAS) PRODUCTION:  STORAGE  DEEP  SHALLOW  
 LOCATION: ELEVATION: 1343' WATERSHED Tributary of Dents Run QUADRANGLE: Glover Gap  
 DISTRICT: Mannington COUNTY: Marion  
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 PROPOSED WORK:  DRILL  CONVERT  DRILL DEEPER  FRACTURE OR STIMULATE  PLUG OFF OLD FORMATION  
 PERFORATE NEW FORMATION  OTHER PHYSICAL CHANGE IN WELL (SPECIFY) \_\_\_\_\_  
 PLUG AND ABANDON  CLEAN OUT AND REPLUG TARGET FORMATION: Marcellus ESTIMATED DEPTH: \_\_\_\_\_

WELL OPERATOR: EQT Production Company DESIGNATED AGENT: Joseph C. Mallow  
 ADDRESS: 400 Woodcliff Drive ADDRESS: 115 Professional Place PO Box 280  
 Canonsburg, PA 15317 Bridgeport, WV 26330

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

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

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

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

See Attached

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

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

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

Well Operator: EQT Production Company  
 By: Joseph C. Mallow  
 Its: Managing Director - Permitting and Civil

Lease No.	Grantor, Lessor, etc.	Grantee, Lessee, etc.	Royalty	Book/Page
<b>871454</b>	<b>Randy J. Elliott and Leonard W. Stafford</b> Randy J. Elliott, a married man dealing in his sole/sep. property Randy J. Elliott and Leonard W. Stafford RJAL, Inc. Falcon Holdings, LLC Gallatin Fuels, Inc. RJAL, Inc. Leatherwood Inc. CNX Gas Company LLC Noble Energy HG Energy II Appalachia, LLC	183 ac EQT Production Company RJAL, Inc. Falcon Holdings, LLC Gallatin Fuels, Inc. Leatherwood Inc. Leatherwood Inc. CNX Gas Company LLC Noble Energy HG Energy II Appalachia, LLC EQT Production Company	At least 1/8th per West Virginia Code Section 22-6-8.	DR 1213/441 DR 971/747 DR 993/64 AB 32/183 AB 32/800 DR 1035/63 AB 42/174 AB 42/355 AB 53/166 AB 56/389
<b>871540</b>	<b>Country Roads Minerals, LLC, et al.</b> Byron W. Davis, a married man dealing with his sole and sep. property American Shale Development, Inc. Republic Energy Ventures, LLC, Republic Partners VIII, LLC, et al Trans Energy, Inc. and American Shale Development, Inc.	89.75 ac American Shale Development, Inc., (50%) and Republic Energy Ventures, LLC, (50%) Republic Partners VIII, LLC EQT Production Company EQT Production Company	At least 1/8th per West Virginia Code Section 22-6-8.	DR 1148/27 AB 47/469 AB 51/525 DR 1228/1
<b>871466</b>	<b>Lee and Hall Royalties</b> Lee and Hall Royalties, a Partnership	53.63 ac EQT Production Company	At least 1/8th per West Virginia Code Section 22-6-8.	DR 1253/31
<b>871469</b>	<b>Newton S. Beatty Families Trust, Philip A. Prichard, Trustee, et al.</b> Philip A. Prichard, acting as Att-in-Fact for Jackson T. Beatty and Rebecca Beatty, h/w, et al, (referred to as the "Lida Cochrane Heirs") American Shale Development, Inc. Republic Energy Ventures, LLC, Republic Partners VIII, LLC, et al Trans Energy, Inc. and American Shale Development, Inc.	131.1 ac American Shale Development, Inc., (50%) and Republic Energy Ventures, LLC, (50%) Republic Partners VIII, LLC EQT Production Company EQT Production Company	At least 1/8th per West Virginia Code Section 22-6-8.	DR 1129/821 AB 47/469 AB 51/525 DR 1228/1

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**871548** West Virginia University Foundation, Inc., et al.

169.49 ac

At least 1/8th per West Virginia  
Code Section 22-6-8.

West Virginia University Foundation, Inc., for the benefit of West Virginia  
University  
American Shale Development, Inc.  
Republic Energy Ventures, LLC, Republic Partners VIII, LLC, et al  
Trans Energy, Inc. and American Shale Development, Inc.

American Shale Development, Inc.,  
(50%) and Republic Energy  
Ventures, LLC, (50%)  
Republic Partners VIII, LLC  
EQT Production Company  
EQT Production Company

DR 1159/217

AB 47/469

AB 51/525

DR 1228/1

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EQT PRODUCTION COMPANY  
400 Woodcliff Drive | Canonsburg, PA 15317  
P: 724-746-9073 | [www.eqt.com](http://www.eqt.com)

4704902504

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 13H 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,

A handwritten signature in blue ink, appearing to read 'John Zavatchan'.

John Zavatchan  
Project Specialist - Permitting

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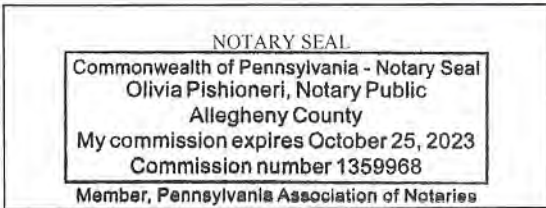
WW-6AC  
(1/12)

**Certification of Notice is hereby given:**

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

Well Operator: EQT Production Company  
By: John Zavatchan  
Its: Project Specialist - Permitting  
Telephone: 724-746-9073

Address: 400 Woodcliff Drive  
Canonsburg, PA 15317  
Facsimile: 412-395-2974  
Email: jzavatchan@eqt.com



Subscribed and sworn before me this 26<sup>th</sup> day of August, 2020  
[Signature] Notary Public  
My Commission Expires October 25, 2023

**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](mailto:depprivacyofficer@wv.gov).

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Environmental Protection

WW-6A  
(9-13)

API NO. 47- 4704902504  
OPERATOR WELL NO. 13H  
Well Pad Name: Elliott

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

**Notice Time Requirement:** notice shall be provided no later than the **filing date of permit application.**

**Date of Notice:** 8/25/2020 **Date Permit Application Filed:** 8/26/2020

**Notice of:**

- PERMIT FOR ANY WELL WORK
- CERTIFICATE OF APPROVAL FOR THE CONSTRUCTION OF AN IMPOUNDMENT OR PIT

**Delivery method pursuant to West Virginia Code § 22-6A-10(b)**

- PERSONAL SERVICE
- REGISTERED MAIL
- METHOD OF DELIVERY THAT REQUIRES A RECEIPT OR SIGNATURE CONFIRMATION

Pursuant to W. Va. Code § 22-6A-10(b) no later than the filing date of the application, the applicant for a permit for any well work or for a certificate of approval for the construction of an impoundment or pit as required by this article shall deliver, by personal service or by registered mail or by any method of delivery that requires a receipt or signature confirmation, copies of the application, the erosion and sediment control plan required by section seven of this article, and the well plat to each of the following persons: (1) The owners of record of the surface of the tract on which the well is or is proposed to be located; (2) The owners of record of the surface tract or tracts overlying the oil and gas leasehold being developed by the proposed well work, if the surface tract is to be used for roads or other land disturbance as described in the erosion and sediment control plan submitted pursuant to subsection (c), section seven of this article; (3) The coal owner, operator or lessee, in the event the tract of land on which the well proposed to be drilled is located [sic] is known to be underlain by one or more coal seams; (4) The owners of record of the surface tract or tracts overlying the oil and gas leasehold being developed by the proposed well work, if the surface tract is to be used for the placement, construction, enlargement, alteration, repair, removal or abandonment of any impoundment or pit as described in section nine of this article; (5) Any surface owner or water purveyor who is known to the applicant to have a water well, spring or water supply source located within one thousand five hundred feet of the center of the well pad which is used to provide water for consumption by humans or domestic animals; and (6) The operator of any natural gas storage field within which the proposed well work activity is to take place. (c)(1) If more than three tenants in common or other co-owners of interests described in subsection (b) of this section hold interests in the lands, the applicant may serve the documents required upon the person described in the records of the sheriff required to be maintained pursuant to section eight, article one, chapter eleven-a of this code. (2) Notwithstanding any provision of this article to the contrary, notice to a lien holder is not notice to a landowner, unless the lien holder is the landowner. W. Va. Code R. § 35-8-5.7.a requires, in part, that the operator shall also provide the Well Site Safety Plan ("WSSP") 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.

Application Notice  WSSP Notice  E&S Plan Notice  Well Plat Notice is hereby provided to:

SURFACE OWNER(s)

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

Name: \_\_\_\_\_  
Address: \_\_\_\_\_

SURFACE OWNER(s) (Road and/or Other Disturbance)

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

Name: \_\_\_\_\_  
Address: \_\_\_\_\_

SURFACE OWNER(s) (Impoundments or Pits)

Name: \_\_\_\_\_  
Address: \_\_\_\_\_

COAL OWNER OR LESSEE

Name: See Attached List  
Address: \_\_\_\_\_

COAL OPERATOR

Name: \_\_\_\_\_  
Address: \_\_\_\_\_

SURFACE OWNER OF WATER WELL AND/OR WATER PURVEYOR(s)

Name: \_\_\_\_\_  
Address: \_\_\_\_\_

OPERATOR OF ANY NATURAL GAS STORAGE FIELD

Name: \_\_\_\_\_  
Address: \_\_\_\_\_

\*Please attach additional forms if necessary

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4704902504

WW-6A  
(8-13)

API NO. 47- \_\_\_\_\_  
OPERATOR WELL NO. 13H \_\_\_\_\_  
Well Pad Name: Elliott \_\_\_\_\_

**Notice is hereby given:**

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

**This Notice Shall Include:**

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

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

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

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

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

**Well Location Restrictions**

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

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API NO. 47- \_\_\_\_\_  
OPERATOR WELL NO. 13H \_\_\_\_\_  
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  
(304) 926-0450

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.**

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API NO. 47- \_\_\_\_\_ - \_\_\_\_\_  
OPERATOR WELL NO. 13H \_\_\_\_\_  
Well Pad Name: Elliott \_\_\_\_\_

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

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

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

**Comment Requirements**

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

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

**Permit Denial or Condition**

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

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

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

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

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API NO. 47- **4704902504**  
OPERATOR WELL NO. 13H  
Well Pad Name: Elliott

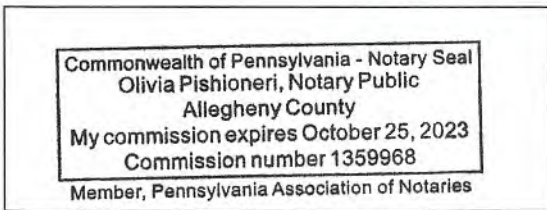
**Notice is hereby given by:**

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](mailto:depprivacyofficer@wv.gov).



Subscribed and sworn before me this 26<sup>th</sup> day of August, 2020.  
Olivia Pishioneri Notary Public  
My Commission Expires October 25, 2023

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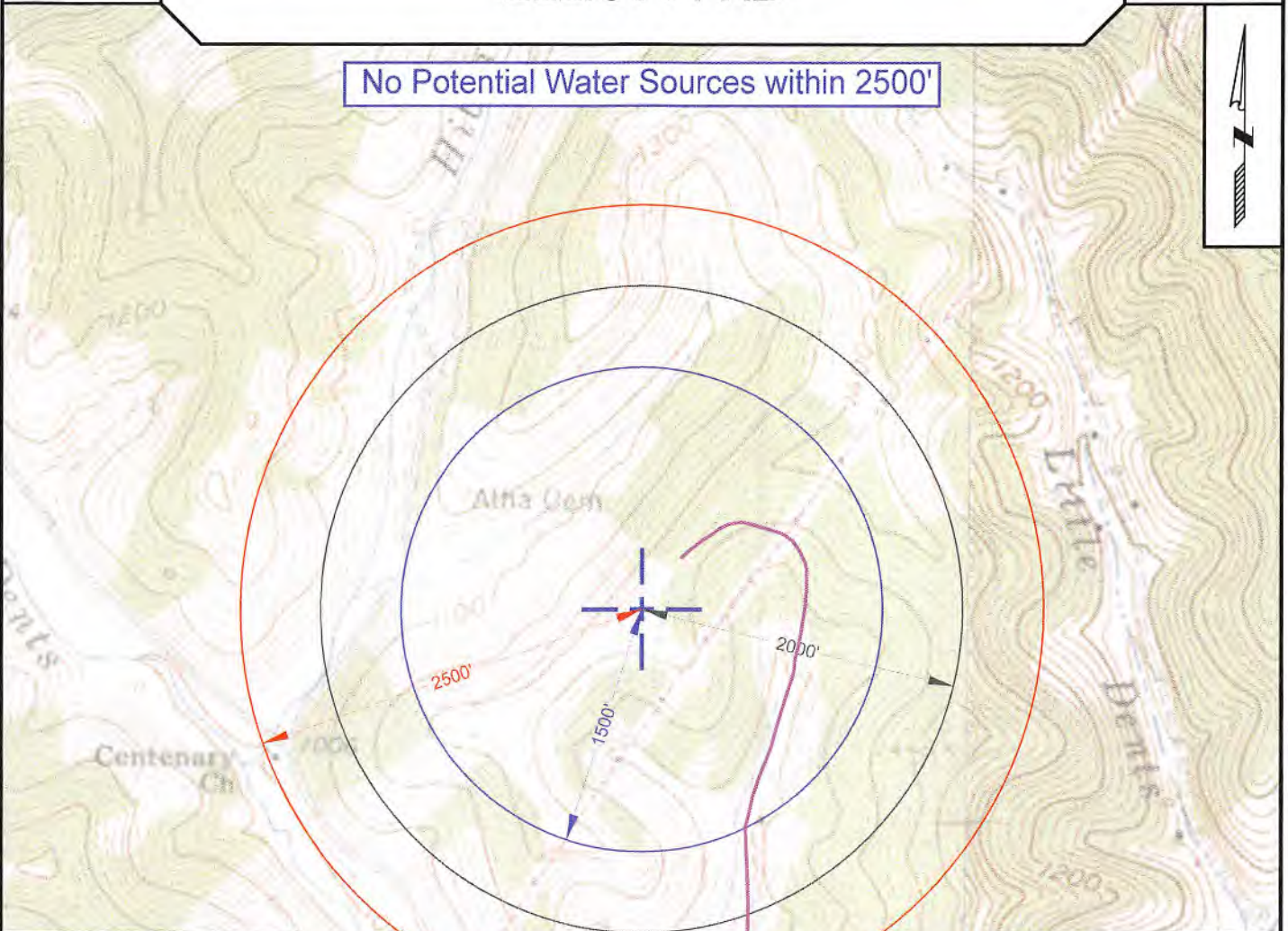


Topo Quad: Glover Gap Scale: 1" = 1000'  
 County: Marion Date: December 17, 2019  
 District: Mannington - 12 Project No: 48-18-M-18

Water

# ELLIOTT PAD

No Potential Water Sources within 2500'



## LEGEND

- Red Symbol - Declined Sampling
- Blue Symbol - Requested Sampling / Unable to Contact
- Access Road
- Well
- Spring
- Pond
- Building

**NAD 27, North Zone**  
**N:381937.27**  
**E:1751215.33**

**WGS 84**  
**LAT:39.545371**  
**LONG:-80.382026**  
**ELEV:1,343**



SURVEYING AND MAPPING SERVICES PERFORMED BY:

### ALLEGHENY SURVEYS, INC.

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

PREPARED FOR:

### EQT Production Company

2400 Ansys Drive, Suite 200  
 Canonsburg, PA 15317

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**Elliott Well Site**

4704902504

**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'**

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**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 provided at least **TEN (10)** days prior to filing a permit application.

**Date of Notice:** 04/20/2020      **Date Permit Application Filed:** 08/26/2020

**Delivery method pursuant to West Virginia Code § 22-6A-16(b)**

HAND DELIVERY       CERTIFIED MAIL  
RETURN RECEIPT REQUESTED

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

**Notice is hereby provided to the SURFACE OWNER(s):**

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

Name: \_\_\_\_\_  
Address: \_\_\_\_\_

**Notice is hereby given:**

Pursuant to West Virginia Code § 22-6A-16(b), notice is hereby given that the undersigned well operator has an intent to enter upon the surface owner's land for the purpose of drilling a horizontal well on the tract of land as follows:

State: <u>West Virginia</u>	UTM NAD 83	Easting: <u>553,095.69</u>
County: <u>Marion</u>		Northing: <u>4,377,498.32</u>
District: <u>Mannington</u>	Public Road Access: <u>CR 5</u>	
Quadrangle: <u>Glover Gap</u>	Generally used farm name: <u>Elliott</u>	
Watershed: <u>Tributary of Dents Run</u>		

**This Notice Shall Include:**

Pursuant to West Virginia Code § 22-6A-16(b), this notice shall include the name, address, telephone number, and if available, facsimile number and electronic mail address of the operator and the operator's authorized representative. Additional information related to horizontal drilling may be obtained from the Secretary, at the WV Department of Environmental Protection headquarters, located at 601 57<sup>th</sup> Street, SE, Charleston, WV 25304 (304-926-0450) or by visiting [www.dep.wv.gov/oil-and-gas/pages/default.aspx](http://www.dep.wv.gov/oil-and-gas/pages/default.aspx).

**Notice is hereby given by:**

Well Operator: EQT Production Company  
Address: 400 Woodcliff Drive  
Canonsburg, PA 15317  
Telephone: 724-746-9073  
Email: jzavatchan@eqt.com  
Facsimile: 412-395-2974

Authorized Representative: John Zavatchan  
Address: 400 Woodcliff Drive  
Canonsburg, PA 15317  
Telephone: 724-746-9073  
Email: jzavatchan@eqt.com  
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](mailto:depprivacyofficer@wv.gov).

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

**Notice Time Requirement:** notice shall be provided no later than the **filing date of permit application.**

**Date of Notice:** 08/25/2020      **Date Permit Application Filed:** 08/26/2020

**Delivery method pursuant to West Virginia Code § 22-6A-16(c)**

- CERTIFIED MAIL                       HAND  
RETURN RECEIPT REQUESTED              DELIVERY

Pursuant to W. Va. Code § 22-6A-16(c), no later than the date for filing the permit application, an operator shall, by certified mail return receipt requested or hand delivery, give the surface owner whose land will be used for the drilling of a horizontal well notice of the planned operation. The notice required by this subsection shall include: (1) A copy of this code section; (2) The information required to be provided by subsection (b), section ten of this article to a surface owner whose land will be used in conjunction with the drilling of a horizontal well; and (3) A proposed surface use and compensation agreement containing an offer of compensation for damages to the surface affected by oil and gas operations to the extent the damages are compensable under article six-b of this chapter. (d) The notices required by this section shall be given to the surface owner at the address listed in the records of the sheriff at the time of notice.

**Notice is hereby provided to the SURFACE OWNER(s)**

(at the address listed in the records of the sheriff at the time of notice):

Name: Consolidation Coal Company                      Name: \_\_\_\_\_  
Address: 46226 National Road                      Address: \_\_\_\_\_  
St. Clairsville, OH 43950                      \_\_\_\_\_

**Notice is hereby given:**

Pursuant to West Virginia Code § 22-6A-16(c), notice is hereby given that the undersigned well operator has developed a planned operation on the surface owner's land for the purpose of drilling a horizontal well on the tract of land as follows:

State:	<u>West Virginia</u>	UTM NAD 83	Easting:	<u>553095.69</u>
County:	<u>Marion</u>		Northing:	<u>4377498.32</u>
District:	<u>Mannington</u>	Public Road Access:		<u>CR 5</u>
Quadrangle:	<u>Glover Gap</u>	Generally used farm name:		<u>Consolidation Coal Company</u>
Watershed:	<u>Tributary of Dents Run</u>			

**This Notice Shall Include:**

Pursuant to West Virginia Code § 22-6A-16(c), this notice shall include: (1) A copy of this code section; (2) The information required to be provided by **W. Va. Code § 22-6A-10(b)** to a surface owner whose land will be used in conjunction with the drilling of a horizontal well; and (3) A proposed surface use and compensation agreement containing an offer of compensation for damages to the surface affected by oil and gas operations to the extent the damages are compensable under article six-b of this chapter. Additional information related to horizontal drilling may be obtained from the Secretary, at the WV Department of Environmental Protection headquarters, located at 601 57<sup>th</sup> Street, SE, Charleston, WV 25304 (304-926-0450) or by visiting [www.dep.wv.gov/oil-and-gas/pages/default.aspx](http://www.dep.wv.gov/oil-and-gas/pages/default.aspx).

Well Operator:	<u>EQT Production Company</u>	Address:	<u>400 Woodcliff Drive</u>
Telephone:	<u>724-746-9073</u>		<u>Canonsburg, PA 15317</u>
Email:	<u>jzavatchan@eqt.com</u>	Facsimile:	<u>412-395-2974</u>

**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](mailto:depprivacyofficer@wv.gov).

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WEST VIRGINIA DEPARTMENT OF TRANSPORTATION

Division of Highways

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

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	Elliot 17H

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

Cc: John Zavatchan  
EQT Production Company  
CH, OM, D-4  
File

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

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

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# EROSION & SEDIMENT CONTROL PLAN

## ELLIOT PAD EXPANSION

### MARION COUNTY, WEST VIRGINIA

## FOR

# EQT PRODUCTION COMPANY

APPROVED  
WVDEP OOG

7/30/2020

DISTURBANCE BREAKDOWN			
ACCESS ROAD	WELL PAD	SETBACKS	TOTAL DISTURBANCE
22.47 AC	30.47 AC	2.41 AC	55.35 AC

LANDOWNER DISTURBANCE BREAKDOWN				
LANDOWNER	DISTURBANCE FROM ACCESS ROAD	DISTURBANCE FROM WELL PAD	DISTURBANCE FROM SETBACKS	TOTAL DISTURBANCE
12-30-37 CONSOLIDATION COAL	1.36 AC	2.24 AC	5.78 AC	2.49 AC
12-34-39 CONSOLIDATION COAL	2.88 AC	N/A	N/A	2.88 AC
12-36-40 CONSOLIDATION COAL	8.30 AC	9.34 AC	3.41 AC	11.85 AC
MEADOWS	0.15 AC	N/A	N/A	0.15 AC



REFERENCE: UNITED STATES GEOLOGICAL SURVEY - GLOVER QUADRANGLE, E. W. 7.5 MINUTE SERIES



PROJECT NO. 19070-089  
JUNE 2020

## DIEFFENBAUCH & HRTIZ, LLC



SDW  
8/13/2020

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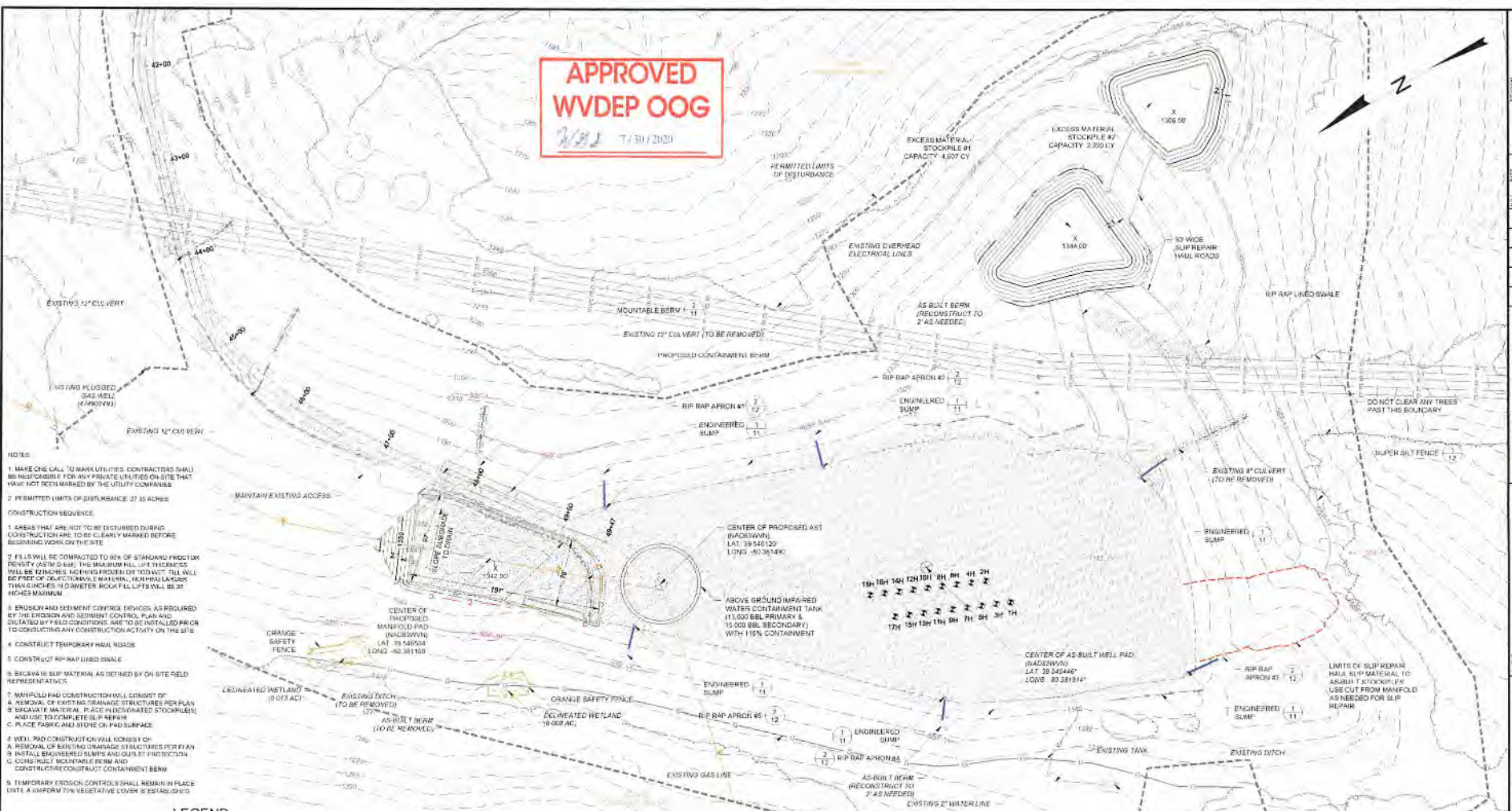
ASSIGNED WELL ID	API#	WELL LOCATIONS							
		LATITUDE (NAD83)	LONGITUDE (NAD83)	NORTHING (NAD83)	EASTING (NAD83)	NORTHING (NAD83)	EASTING (NAD83)	NORTHING (NAD83)	EASTING (NAD83)
14	39 22 43 0805	39 22 43.0805	80 22 45.8037	38794.9061	121253.2106	38797.2471	121212.228	38797.2471	121212.228
15	39 22 43 1752	39 22 43.1752	80 22 46.7679	38795.7175	121220.1269	38797.1264	121212.066	38797.1264	121212.066
16	39 22 43 3225	39 22 43.3225	80 22 46.6911	38792.2485	121224.3978	38795.3643	121212.984	38795.3643	121212.984
17	39 22 43 3382	39 22 43.3382	80 22 46.6231	38786.3533	121222.0294	38788.999	121189.751	38788.999	121189.751
18	39 22 43 3805	39 22 43.3805	80 22 46.5494	38780.1689	121220.6642	38786.836	121185.578	38786.836	121185.578
19	39 22 43 4286	39 22 43.4286	80 22 46.4757	38783.7898	121217.4028	38787.613	121202.417	38787.613	121202.417
20	39 22 43 4808	39 22 43.4808	80 22 46.4020	38787.2827	121220.1458	38792.458	121197.297	38792.458	121197.297
21	39 22 43 5070	39 22 43.5070	80 22 46.3283	38781.0001	121217.1795	38784.267	121212.099	38784.267	121212.099
22	39 22 43 5307	39 22 43.5307	80 22 46.2546	38785.4374	121220.0103	38788.084	121212.841	38788.084	121212.841
23	39 22 43 5480	39 22 43.5480	80 22 46.1809	38779.2528	121217.0440	38781.543	121208.024	38781.543	121208.024
24	39 22 43 5694	39 22 43.5694	80 22 46.1072	38783.7125	121219.9380	38785.365	121209.851	38785.365	121209.851
25	39 22 43 5908	39 22 43.5908	80 22 46.0335	38788.1501	121216.7780	38789.187	121212.689	38789.187	121212.689
26	39 22 43 6122	39 22 43.6122	80 22 45.9598	38792.5876	121219.6280	38796.009	121213.531	38796.009	121213.531
27	39 22 43 6336	39 22 43.6336	80 22 45.8861	38797.0251	121216.4780	38802.831	121210.381	38802.831	121210.381
28	39 22 43 6550	39 22 43.6550	80 22 45.8124	38814.6501	121213.3280	38821.672	121207.232	38821.672	121207.232
29	39 22 43 6764	39 22 43.6764	80 22 45.7387	38819.0876	121210.1780	38825.504	121204.082	38825.504	121204.082
30	39 22 43 6978	39 22 43.6978	80 22 45.6650	38823.5251	121207.0280	38830.336	121200.932	38830.336	121200.932
31	39 22 43 7192	39 22 43.7192	80 22 45.5913	38827.9626	121203.8780	38835.168	121197.782	38835.168	121197.782
32	39 22 43 7406	39 22 43.7406	80 22 45.5176	38832.3951	121200.7280	38839.605	121194.632	38839.605	121194.632
33	39 22 43 7620	39 22 43.7620	80 22 45.4439	38836.8326	121197.5780	38844.437	121191.482	38844.437	121191.482
34	39 22 43 7834	39 22 43.7834	80 22 45.3702	38841.2651	121194.4280	38849.269	121188.332	38849.269	121188.332
35	39 22 43 8048	39 22 43.8048	80 22 45.2965	38845.6976	121191.2780	38854.101	121185.182	38854.101	121185.182
36	39 22 43 8262	39 22 43.8262	80 22 45.2228	38850.1301	121188.1280	38858.933	121182.032	38858.933	121182.032
37	39 22 43 8476	39 22 43.8476	80 22 45.1491	38854.5626	121184.9780	38863.765	121178.882	38863.765	121178.882
38	39 22 43 8690	39 22 43.8690	80 22 45.0754	38859.0001	121181.8280	38868.597	121175.732	38868.597	121175.732
39	39 22 43 8904	39 22 43.8904	80 22 45.0017	38863.4326	121178.6780	38873.429	121172.582	38873.429	121172.582
40	39 22 43 9118	39 22 43.9118	80 22 44.9280	38867.8651	121175.5280	38878.261	121169.432	38878.261	121169.432
41	39 22 43 9332	39 22 43.9332	80 22 44.8543	38872.2976	121172.3780	38883.093	121166.282	38883.093	121166.282
42	39 22 43 9546	39 22 43.9546	80 22 44.7806	38876.7301	121169.2280	38887.925	121163.132	38887.925	121163.132
43	39 22 43 9760	39 22 43.9760	80 22 44.7069	38881.1626	121166.0780	38892.757	121159.982	38892.757	121159.982
44	39 22 43 9974	39 22 43.9974	80 22 44.6332	38885.5951	121162.9280	38897.589	121156.832	38897.589	121156.832
45	39 22 44 0188	39 22 44.0188	80 22 44.5595	38890.0276	121159.7780	38902.421	121153.682	38902.421	121153.682
46	39 22 44 0402	39 22 44.0402	80 22 44.4858	38894.4601	121156.6280	38907.253	121150.532	38907.253	121150.532
47	39 22 44 0616	39 22 44.0616	80 22 44.4121	38898.8926	121153.4780	38912.085	121147.382	38912.085	121147.382
48	39 22 44 0830	39 22 44.0830	80 22 44.3384	38903.3251	121150.3280	38916.917	121144.232	38916.917	121144.232
49	39 22 44 1044	39 22 44.1044	80 22 44.2647	38907.7576	121147.1780	38921.749	121141.082	38921.749	121141.082
50	39 22 44 1258	39 22 44.1258	80 22 44.1910	38912.1901	121144.0280	38926.581	121137.932	38926.581	121137.932

DRAWING NO.	TITLE
1	TITLE SHEET
2	AS-BUILT SITE PLAN
3	PROPOSED SITE PLAN
4	PROPOSED RESTORATION PLAN
5-8	AS-BUILT ACCESS ROAD PROFILE
9-10	EAS TYPICAL SECTIONS
11-12	EAS DETAILS



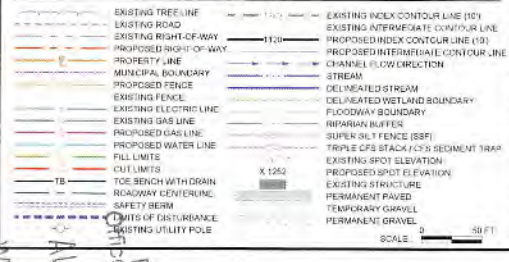


**APPROVED WVDEP OOG**  
 7/31/2020



- NOTES**
1. MAKE ONE CALL TO WALK UTILITIES. CONTRACTORS SHALL BE RESPONSIBLE FOR ANY PRIVATE UTILITIES ON SITE THAT HAVE NOT BEEN MARKED BY THE UTILITY COMPANIES.
  2. PERMITTED LIMITS OF DISTURBANCE 27.35 ACRES.
  3. AREAS THAT ARE NOT TO BE DISTURBED DURING CONSTRUCTION ARE TO BE CLEARLY MARKED BEFORE BEGINNING WORK ON THE SITE.
  4. FILL WILL BE CONSTRUCTED TO 80% OF STORMWATER PROTECTION DENSITY (ASTM D 1557). THE MAXIMUM FILL HEIGHT SHALL BE 12 INCHES AND THE PROPOSED FILL SHALL BE FREE OF ROCKS OR LIMESTONE. ROCKS SHALL BE MORE THAN 6 INCHES TO 18 INCHES IN DIAMETER SHALL BE 1% OF THE FILL VOLUME.
  5. EROSION AND SEDIMENT CONTROL MEASURES AS REQUIRED BY THE EROSION AND SEDIMENT CONTROL PLAN AND DICTATED BY FIELD CONDITIONS ARE TO BE INSTALLED PRIOR TO CONSTRUCTING ANY CONSTRUCTION ACTIVITY ON THE SITE.
  6. CONSTRUCT TEMPORARY HWY ROADS.
  7. CONSTRUCT RP RAP LINED SWALE.
  8. BACKFILL SLIP MATERIAL AS DEFINED BY ON SITE FIELD REPRESENTATIVES.
  9. MANFOLD PAD CONSTRUCTION SHALL CONSIST OF:
    - A. REMOVAL OF EXISTING DRAINAGE STRUCTURES PER PLAN B.
    - B. SINKHOLE MATERIAL, PLACE INSULATED STOCKPILE(S) AND USE TO COMPLETE SLIP REPAIR.
    - C. PLACE FABRIC AND STONE ON PAD SURFACE.
  10. WELL PAD CONSTRUCTION SHALL CONSIST OF:
    - A. REMOVAL OF EXISTING DRAINAGE STRUCTURES PER PLAN B.
    - B. INSTALL ENGINEERED SLUMPS AND OUTLET PROTECTION.
    - C. CONSTRUCT INDESTRUCTIBLE BERM AND CONSTRUCTURE CONTAINMENT BERM.
  11. TEMPORARY EROSION CONTROL SHALL REMAIN IN PLACE UNTIL A UNIFORM 70% VEGETATIVE COVER IS ESTABLISHED.

**LEGEND**



ASSIGNED WELL ID	API #	LAT (NAD83)	LONG (NAD83)	NORTH QUAD	EAST (NAD83)	NORTHING (NAD83)	EASTING (NAD83)	NORTHING (4050 UTM METERS)	EASTING (4050 UTM METERS)
3H		39 52 43.0320	80 22 55.8407	80344 9000	179733 3131	381907 547	175122 228	437492 886	53085 435
3M		39 52 43.1713	80 22 55.7679	80338 9175	179739 3480	381911 824	175118 066	437477 127	53087 344
3N		39 52 43.3120	80 22 55.6761	80772 5346	179704 5870	381915 192	175118 904	437481 306	53088 953
3P		39 52 43.4540	80 22 55.6223	80339 5128	179730 6230	381944 999	175118 941	437485 606	53090 563
3Q		39 52 43.5950	80 22 55.5421	80333 5059	179736 6610	381950 815	175118 579	437489 816	53092 219
3R		39 52 43.7350	80 22 55.4702	80333 5060	179732 7020	381976 633	175120 417	437494 684	53093 878
3S		39 52 43.8760	80 22 55.4282	80327 5043	179738 7400	381980 450	175120 255	437498 528	53095 481
3T		39 52 44.0170	80 22 55.3312	80341 6200	179774 7790	382006 267	175123 093	437502 369	53097 305
3U		39 52 44.1580	80 22 55.2820	80335 6374	179780 8170	382018 084	175124 091	437506 810	53099 120
3V		39 52 44.2990	80 22 55.1830	80335 6504	179786 8560	381918 543	175124 014	437497 399	53100 864
3W		39 52 44.4400	80 22 55.0850	80339 7125	179770 8940	381921 380	175120 851	437492 636	53098 772
3X		39 52 44.5810	80 22 54.9870	80380 5187	179776 9320	381946 177	175123 669	437494 978	53099 461
3Y		39 52 44.7220	80 22 54.8900	80197 3488	179782 9710	381950 994	175122 527	437489 117	53100 189
3Z		39 52 44.8630	80 22 54.7920	80311 8460	179788 1010	381970 811	175122 365	437493 336	53101 866
1A		39 52 44.9540	80 22 55.0720	80324 9611	179794 1030	381982 628	175123 203	437497 196	53103 066
2A		39 52 45.0450	80 22 54.9650	80338 7981	179800 1040	382001 445	175123 041	437501 875	53103 425
1B		39 52 44.9050	80 22 54.9267	80252 6134	179805 9830	382013 283	175124 878	437506 074	53107 093
2B		39 52 45.0460	80 22 54.8820	80286 4645	179811 9230	382025 080	175125 716	437510 215	53108 792

*SDE  
8/13/2020*



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Revision	
No.	Date
MWW	Drawn
ZTF	Checked
VJA	Approved
11/6/2019	Date
19070-489	Project No.
DIEFFENBAUGH & HRTZ 7006 Chapel Hill, Suite 200 Manassas, VA 20101 P: 541.865.6555 F: 541.865.5557	
Client	EQT PRODUCTION COMPANY
Project	ELLIOT AST Pad Mapping
Page	1 of 1

**FIGURE 2. STREAM & WETLAND INVESTIGATION MAP**

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 WV Department of Environmental Protection  
 Marion County, Virginia

**LIMITS OF INVESTIGATION**  
 0.0213 AC

**Legend**

- Data Point
- Culvert
- Limits of Investigation
- Delineated Water Features
- PEM Wetland
- Non-Jurisdictional Features
- Waterway
- 10' Contour Line

Absolute Scale: 1:720  
 Text Scale: 1 inch = 60 feet

0 30 60 Feet

NOTE: TOPOGRAPHIC DATA FROM WV GIS  
 TECH CENTER: IMAGERY FROM NATIONAL AGRICULTURE IMAGERY PROGRAM 2015