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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 1H  
47-049-02499-00-00

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 1H  
Farm Name: CONSOLIDATED COAL COM  
U.S. WELL NUMBER: 47-049-02499-00-00  
Horizontal 6A New Drill  
Date Issued: 10/14/2020

## 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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(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.”

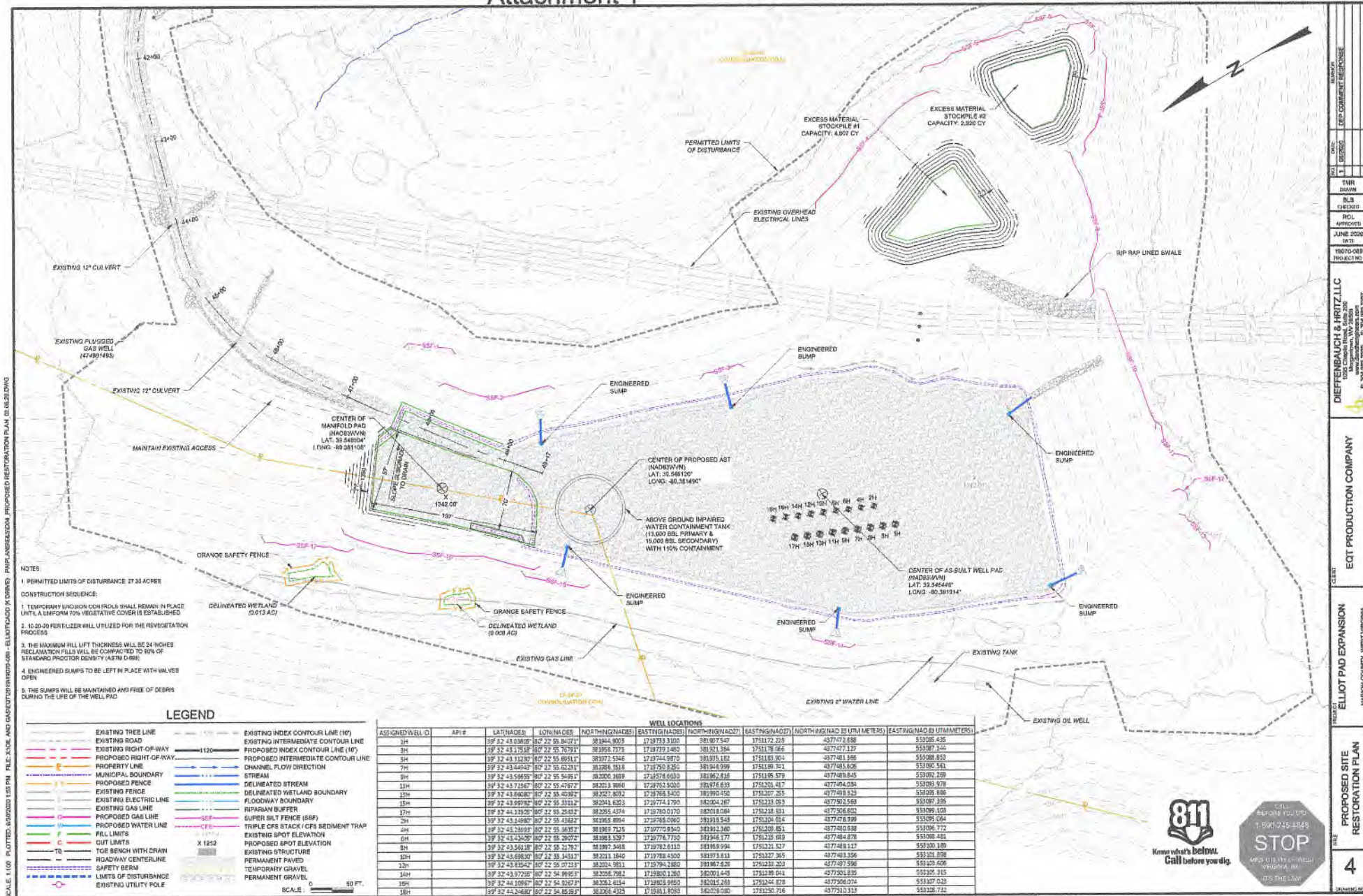
## ORDER

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



- NOTES**
1. PERMITTED LIMITS OF DISTURBANCE: 27.33 ACRE
  - CONSTRUCTION SEQUENCE:
    1. TEMPORARY EROSION CONTROLS SHALL REMAIN IN PLACE UNTIL A UNIFORM 70% VEGETATIVE COVER IS ESTABLISHED
    2. 10-20-20 FERTILIZER WILL UTILIZED FOR THE REVEGETATION PROCESS
    3. THE MAXIMUM FILL LIFT THICKNESS WILL BE 24 INCHES RECLAMATION FILL WILL BE COMPACTED TO 90% OF STANDARD PROCTOR DENSITY (ASTM D-698)
    4. ENGINEERED SUMPS TO BE LEFT IN PLACE WITH VALVES OPEN
    5. THE SUMPS WILL BE MAINTAINED AND FREE OF DEBRIS DURING THE LIFE OF THE WELL PAD

### LEGEND

—	EXISTING TREE LINE	---	EXISTING INDEX CONTOUR LINE (10')
---	EXISTING ROAD	---	EXISTING INTERMEDIATE CONTOUR LINE
---	PROPOSED RIGHT-OF-WAY	---	PROPOSED INDEX CONTOUR LINE (10')
---	PROPERTY LINE	---	PROPOSED INTERMEDIATE CONTOUR LINE
---	MUNICIPAL BOUNDARY	---	DIAMOND FLOW DIRECTION
---	PROPOSED FENCE	---	DELIMITED STREAM
---	EXISTING FENCE	---	DELIMITED WETLAND BOUNDARY
---	EXISTING ELECTRIC LINE	---	FLOODWAY BOUNDARY
---	EXISTING GAS LINE	---	RIP-RAP BUFFER
---	PROPOSED GAS LINE	---	SUPER BILT FENCE (S&P)
---	PROPOSED WATER LINE	---	TRIPLE CFS STACK / CFS SEDIMENT TRAP
---	FILL LIMITS	---	EXISTING SPOT ELEVATION
---	CUT LIMITS	---	PROPOSED SPOT ELEVATION
---	YOE BENCH WITH DRAIN	---	EXISTING STRUCTURE
---	ROADWAY CENTERLINE	---	PERMANENT PAVED
---	SAFETY BERM	---	TEMPORARY GRAVEL
---	LIMITS OF DISTURBANCE	---	PERMANENT GRAVEL
---	EXISTING UTILITY POLE	---	

ASSIGNED WELL ID	API #	LAT (NAD83)	LONG (NAD83)	NORTHING (NAD83)	EASTING (NAD83)	EASTING (NAD83) IN METERS	EASTING (NAD83) IN METERS
1H	39 32 43 03897	39 22 55 24071	38184.903	1719733.310	38197.542	1719172.224	437472.838
3H	39 32 43 17518	39 22 55 76791	38195.673	1719739.140	38191.354	1719178.064	437477.127
5H	39 32 43 11231	39 22 55 89511	38197.534	1719744.987	38193.182	1719183.304	437481.395
7H	39 32 43 44947	39 22 55 02211	38196.518	1719750.250	38194.999	1719189.341	437485.606
9H	39 32 43 59833	39 22 55 54911	38200.869	1719756.610	38196.216	1719195.579	437489.845
11H	39 32 43 12487	39 22 55 47812	38203.886	1719762.930	38197.633	1719201.417	437494.034
13H	39 32 43 66080	39 22 55 40312	38207.892	1719768.140	38199.450	1719207.255	437498.233
15H	39 32 43 99792	39 22 55 33112	38211.832	1719774.190	38200.267	1719213.093	437502.565
17H	39 32 43 13926	39 22 55 25812	38205.434	1719780.070	38201.084	1719218.931	437506.802
19H	39 32 43 16987	39 22 55 18612	38199.854	1719785.890	38199.216	1719224.769	437511.039
21H	39 32 43 18917	39 22 55 11412	38199.715	1719791.930	38199.130	1719230.607	437515.286
23H	39 32 43 23057	39 22 55 04212	38198.537	1719797.770	38194.177	1719236.445	437519.533
25H	39 32 43 26118	39 22 55 21712	38197.348	1719803.610	38195.994	1719242.283	437523.780
27H	39 32 43 69830	39 22 55 14512	38201.160	1719812.450	38197.811	1719251.121	437528.027
29H	39 32 43 85642	39 22 55 07312	38204.911	1719821.290	38198.628	1719259.960	437532.274
31H	39 32 43 97238	39 22 54 99912	38208.792	1719830.130	38200.445	1719268.801	437536.521
33H	39 32 44 10977	39 22 54 92712	38213.454	1719840.970	38201.263	1719277.640	437540.768
35H	39 32 44 24687	39 22 54 85512	38216.425	1719851.810	38202.080	1719286.479	437545.015

Know what's below. Call before you dig.

STOP  
APR 01 11 50 AM  
1.800.245.4242  
IT'S THE LAW

PROJECT NO: 2020-001 SHEET NO: 1 DATE: 06/20/2020 PROJECT: ELLIOT PAD EXPANSION RESTORATION PLAN	CLIENT: EQT PRODUCTION COMPANY ADDRESS: MARIION COUNTY, WEST VIRGINIA	DESIGNER: DIEFFENBAUGH & HIRTZ, LLC ADDRESS: 1000 UNIVERSITY AVENUE, SUITE 2000, WASHINGTON, DC 20004 PHONE: 202.331.2000	REVISIONS: <table border="1" style="width: 100%; border-collapse: collapse;"> <tr><th>NO.</th><th>DATE</th><th>DESCRIPTION</th></tr> <tr><td>1</td><td></td><td>ISSUE FOR PERMIT</td></tr> <tr><td>2</td><td></td><td>REVISED</td></tr> <tr><td>3</td><td></td><td>REVISED</td></tr> <tr><td>4</td><td></td><td>REVISED</td></tr> <tr><td>5</td><td></td><td>REVISED</td></tr> <tr><td>6</td><td></td><td>REVISED</td></tr> <tr><td>7</td><td></td><td>REVISED</td></tr> <tr><td>8</td><td></td><td>REVISED</td></tr> <tr><td>9</td><td></td><td>REVISED</td></tr> <tr><td>10</td><td></td><td>REVISED</td></tr> <tr><td>11</td><td></td><td>REVISED</td></tr> <tr><td>12</td><td></td><td>REVISED</td></tr> <tr><td>13</td><td></td><td>REVISED</td></tr> <tr><td>14</td><td></td><td>REVISED</td></tr> <tr><td>15</td><td></td><td>REVISED</td></tr> <tr><td>16</td><td></td><td>REVISED</td></tr> <tr><td>17</td><td></td><td>REVISED</td></tr> <tr><td>18</td><td></td><td>REVISED</td></tr> <tr><td>19</td><td></td><td>REVISED</td></tr> <tr><td>20</td><td></td><td>REVISED</td></tr> <tr><td>21</td><td></td><td>REVISED</td></tr> <tr><td>22</td><td></td><td>REVISED</td></tr> <tr><td>23</td><td></td><td>REVISED</td></tr> <tr><td>24</td><td></td><td>REVISED</td></tr> <tr><td>25</td><td></td><td>REVISED</td></tr> <tr><td>26</td><td></td><td>REVISED</td></tr> <tr><td>27</td><td></td><td>REVISED</td></tr> <tr><td>28</td><td></td><td>REVISED</td></tr> <tr><td>29</td><td></td><td>REVISED</td></tr> <tr><td>30</td><td></td><td>REVISED</td></tr> <tr><td>31</td><td></td><td>REVISED</td></tr> <tr><td>32</td><td></td><td>REVISED</td></tr> <tr><td>33</td><td></td><td>REVISED</td></tr> <tr><td>34</td><td></td><td>REVISED</td></tr> <tr><td>35</td><td></td><td>REVISED</td></tr> <tr><td>36</td><td></td><td>REVISED</td></tr> <tr><td>37</td><td></td><td>REVISED</td></tr> <tr><td>38</td><td></td><td>REVISED</td></tr> <tr><td>39</td><td></td><td>REVISED</td></tr> <tr><td>40</td><td></td><td>REVISED</td></tr> <tr><td>41</td><td></td><td>REVISED</td></tr> <tr><td>42</td><td></td><td>REVISED</td></tr> <tr><td>43</td><td></td><td>REVISED</td></tr> <tr><td>44</td><td></td><td>REVISED</td></tr> <tr><td>45</td><td></td><td>REVISED</td></tr> <tr><td>46</td><td></td><td>REVISED</td></tr> <tr><td>47</td><td></td><td>REVISED</td></tr> <tr><td>48</td><td></td><td>REVISED</td></tr> <tr><td>49</td><td></td><td>REVISED</td></tr> <tr><td>50</td><td></td><td>REVISED</td></tr> </table>	NO.	DATE	DESCRIPTION	1		ISSUE FOR PERMIT	2		REVISED	3		REVISED	4		REVISED	5		REVISED	6		REVISED	7		REVISED	8		REVISED	9		REVISED	10		REVISED	11		REVISED	12		REVISED	13		REVISED	14		REVISED	15		REVISED	16		REVISED	17		REVISED	18		REVISED	19		REVISED	20		REVISED	21		REVISED	22		REVISED	23		REVISED	24		REVISED	25		REVISED	26		REVISED	27		REVISED	28		REVISED	29		REVISED	30		REVISED	31		REVISED	32		REVISED	33		REVISED	34		REVISED	35		REVISED	36		REVISED	37		REVISED	38		REVISED	39		REVISED	40		REVISED	41		REVISED	42		REVISED	43		REVISED	44		REVISED	45		REVISED	46		REVISED	47		REVISED	48		REVISED	49		REVISED	50		REVISED	SCALE: 1"=100' DATE: 06/20/2020 DRAWN BY: JLD CHECKED BY: JLD APPROVED BY: JLD DATE: 06/20/2020 PROJECT: ELLIOT PAD EXPANSION RESTORATION PLAN
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WW-6B  
(04/15)

4704902499

API NO. 47- \_\_\_\_\_  
OPERATOR WELL NO. <sup>1H</sup> \_\_\_\_\_  
Well Pad Name: Elliott

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: 1H 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 X Oil \_\_\_\_\_ Underground Storage \_\_\_\_\_

Other \_\_\_\_\_

(b) If Gas Shallow X Deep \_\_\_\_\_

Horizontal X \_\_\_\_\_

*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: 11,849'

11) Proposed Horizontal Leg Length: 2,405'

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', 2,412'

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 X

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

Depth: \_\_\_\_\_

Seam: \_\_\_\_\_

Owner: \_\_\_\_\_

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18)

**CASING AND TUBING PROGRAM**

<b>TYPE</b>	<u>Size (in)</u>	<u>New or Used</u>	<u>Grade</u>	<u>Weight per ft. (lb/ft)</u>	<u>FOOTAGE: For Drilling (ft)</u>	<u>INTERVALS: Left in Well (ft)</u>	<u>CEMENT: Fill-up (Cu. Ft.)/CTS</u>
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	11857	11857	500' above intermediate casing
Tubing							
Liners							

*8/13/2020*

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

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25) Proposed borehole conditioning procedures:

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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.

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\*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**

<b>IN THE MATTER OF A VARIANCE FROM ) 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 )</b>	<b>ORDER NO. 2014 - 17</b>
--	----------------------------

**REPORT OF THE OFFICE**

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

**FINDINGS OF FACT**

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

Promoting a healthy environment.

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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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Environmental Protection

4704802499



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

August 13, 2020

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

Re: Casing on Elliott 1H

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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**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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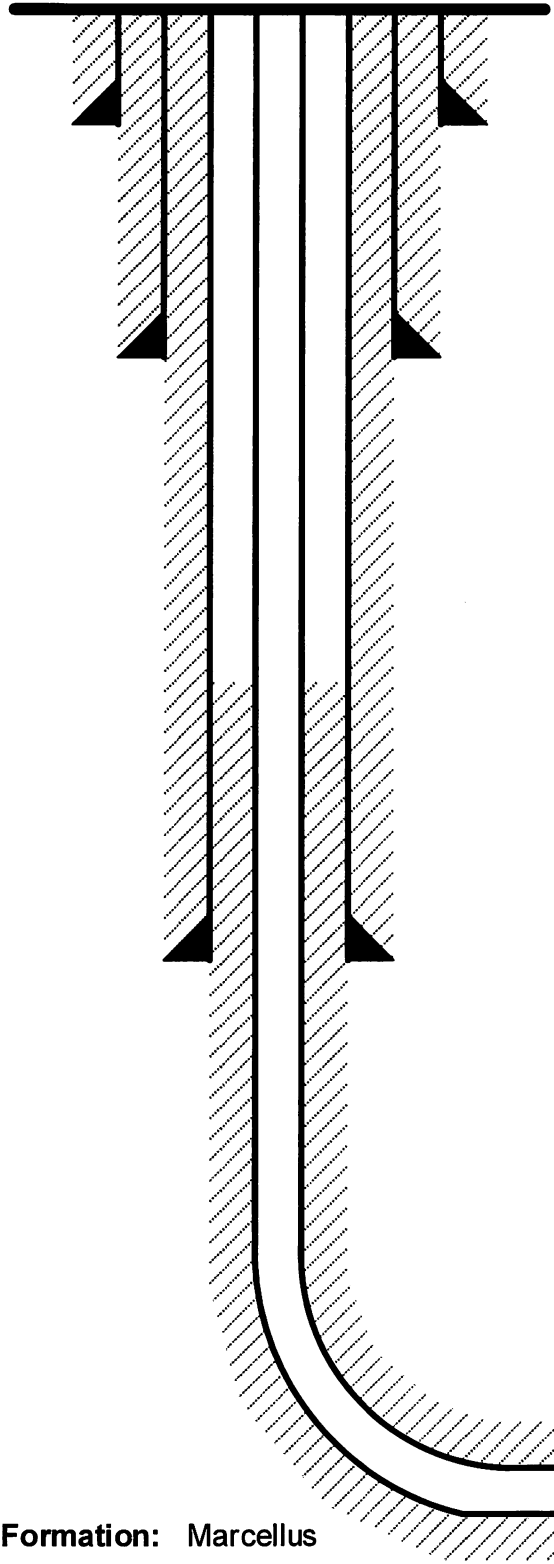


**EQT Production**

**Wellbore Diagram**

Well: Elliot 1H  
Pad: Elliot  
Elevation: 1342' GL 1355' KB

County: Marion  
State: West Virginia



**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 @ 11,857' 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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EQT Production  
Hydraulic Fracturing Monitoring Plan  
Pad ID: Elliott  
County: Marion

June 11, 2020

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## 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.

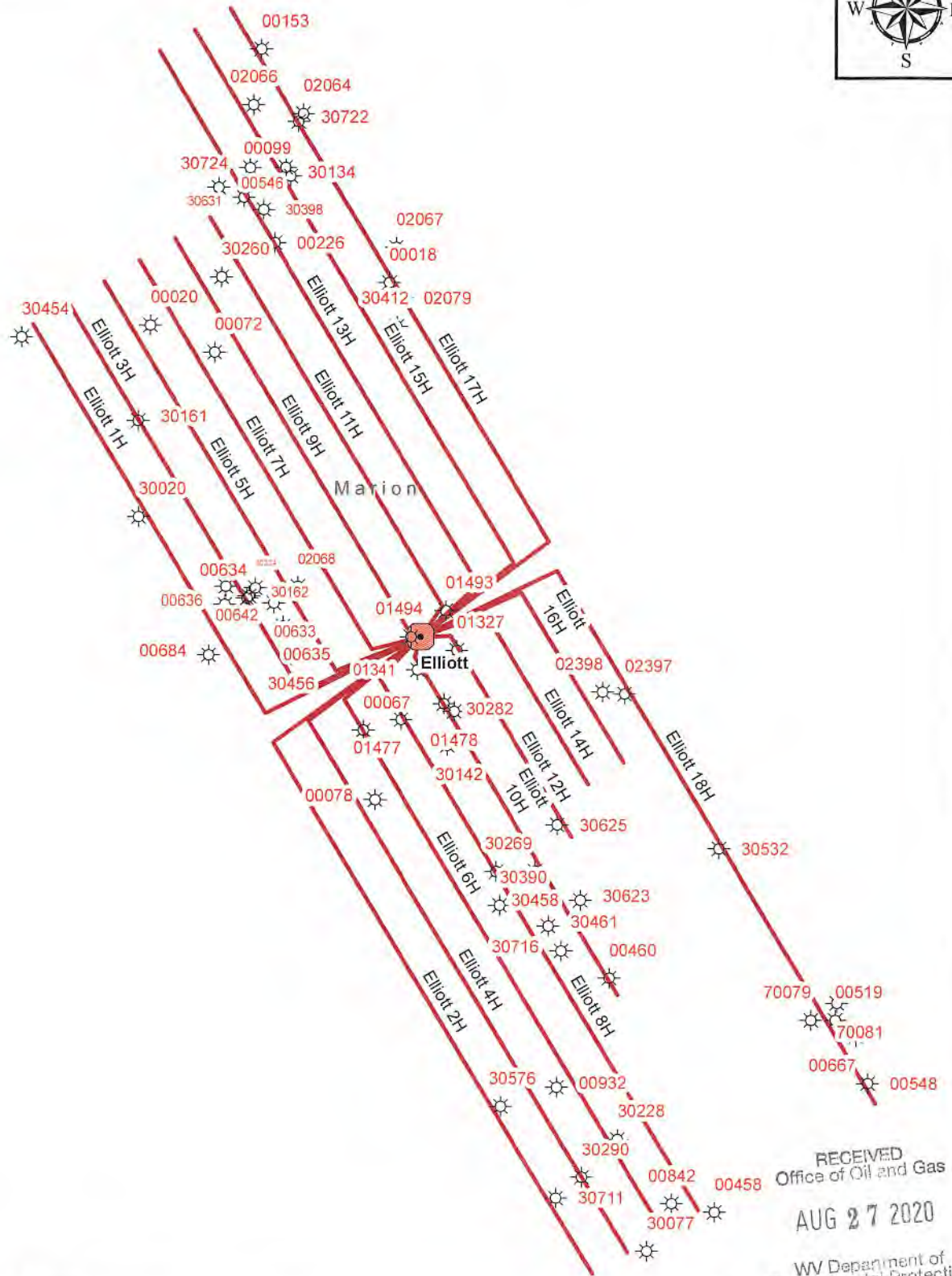
EQT will recommend to these operators at a minimum to:

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

**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



Elliott  
Vertical Offsets and  
Foreign Laterals  
within 500'

WellID	WellStatus	date	FmatTD	Permit	Remarks-PRO	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	3900.0000
4704900027	GAS-P	1/14/1937		00027		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	39.5642		1271.0000	-2183.0000	3454.0000
4704900078	GAS-P	11/30/1937		00078		S N ELLIOTT	-80.3862	39.5345		1197.0000	-2187.0000	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 CONEY	-80.3957	39.5842		1043.0000	-1992.0000	3035.0000
4704900226	DRY	9/17/1951		00226		MONROE & LAUGHLIN	-80.3946	39.5714		1147.0000	-1904.0000	3021.0000
4704900458	UNK	8/1/1993		00458	4SD	PENNZOIL	-80.3572	39.5070		1359.0000	-879.0000	2238.0000
4704900460	GAS	7/10/1925		00460		PENNZOIL	-80.3662	39.5226		1104.0000	-2029.0000	3133.0000
4704900519	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		1043.0000	-1745.0000	3105.0000
4704900548	OIL	4/1/1995		00548	BNJ	PENNZOIL	-80.3440	39.5155		1368.0000	-881.0000	2129.0000
4704900633	UNK	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
4704900937	UNK	10/4/2001		00937	5SDRLY	R J A L	-80.3791	39.5444		1102.0000	-3908.0000	5010.0000
4704901341	UNK	10/12/2001		01341	GDN5SD	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	3350.0000
4704902064	UNK			02064		CONSOLIDATION COAL	-80.3921	39.5806		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	D&A	5/14/2015		02397		CONSOL ENERGY	-80.3648	39.5414		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		CONSOL ENERGY	-80.4064	39.5533		1088.0000	-2212.0000	3900.0000
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 MIN.OWN	-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		INTERSTATE P&S	-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	39.5492		1006.0000	-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			30532		RAAD SUPPLY	-80.3567	39.5311		1153.0000	-1721.0000	2874.0000
4704930576	OIL	4/9/1897		30576		RAAD SUPPLY	-80.3756	39.5142		1273.0000	-1744.0000	3017.0000
4704930623	OIL GS	8/13/1894		30623		OPER IN MIN.OWN	-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 MIN.OWN	-80.3925	39.5794		0.0000	-9999.0000	9999.0000
4704930724	OIL	7/19/1918		30724		OPER IN MIN.OWN	-80.3967	39.5764		1365.0000	-1781.0000	3146.0000
4704970079	OIL			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)

4704902499

API Number 47 - \_\_\_\_\_ - \_\_\_\_\_  
Operator's Well No. Elliott 1H

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 \_\_\_\_\_)

*SOW  
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 21<sup>st</sup> day of August, 2020

[Signature] Notary Public

My commission expires October 25, 2023

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

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: [Signature]

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: BOB Inspector

Date: 8/13/2020

Field Reviewed? (  ) Yes (  ) No

## 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?

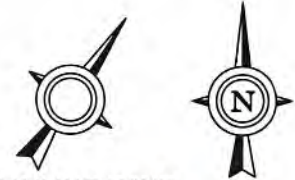
- Air - biodegradable oil lubricant, detergent, defoaming, water.
- Water based mud – Barite, viscosifer, alkalinity control, lime, filtration control, deflocculates, biodegradable oil lubricant, defoaming, walnut shell, salt, x-cide, carbonates.
- Synthetic mud – synthetic base oil, emulsifier, salt,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

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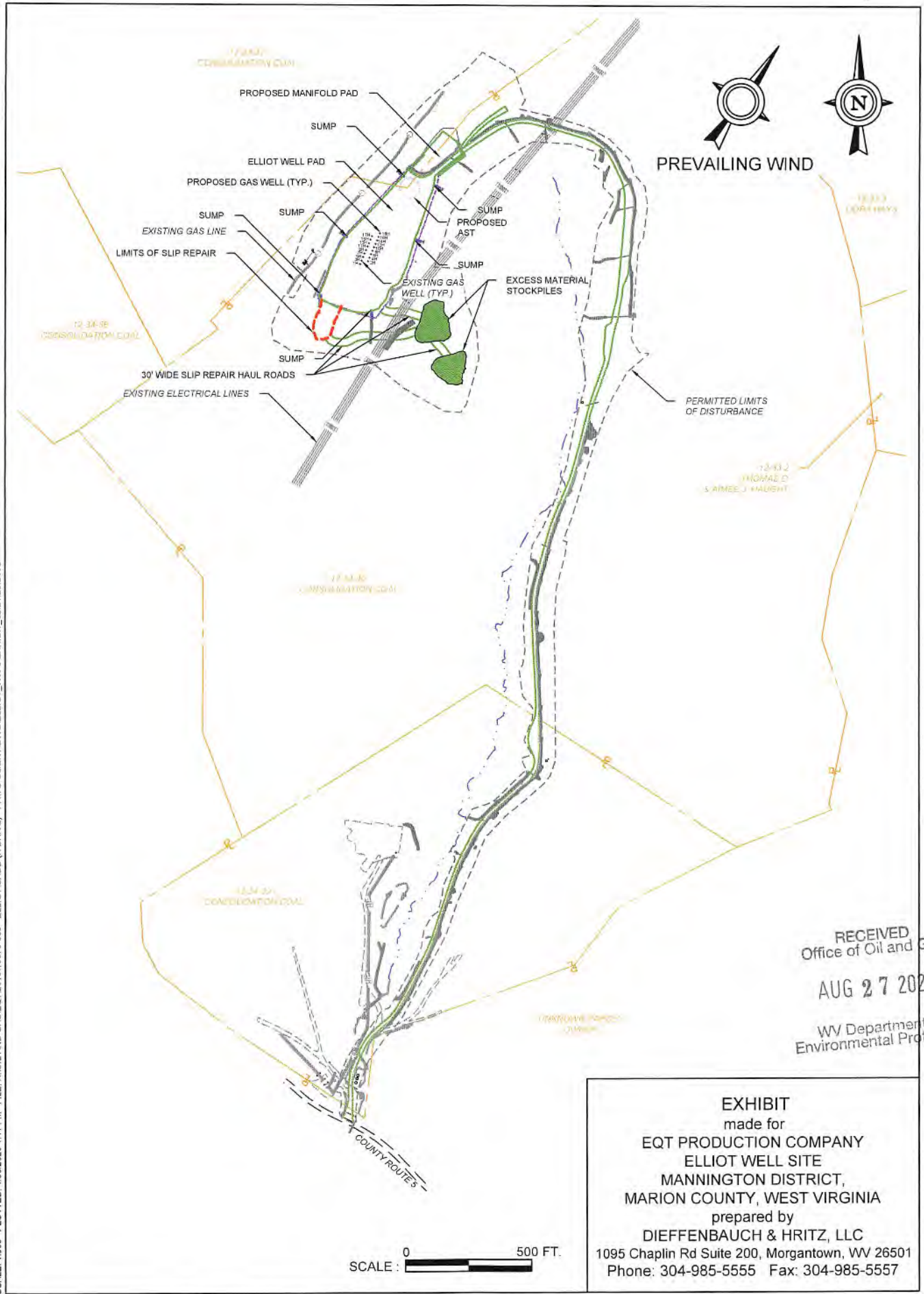
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PREVAILING WIND



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 Athens 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 D-1	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

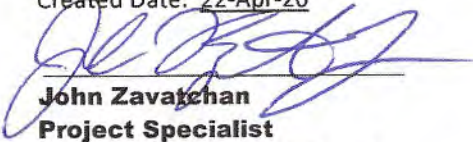
Elliot (GLO 187) Well Pad  
Wells 1H, 3H, 5H, 7H, 9H, 11H, 13H, 15H, 17H

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

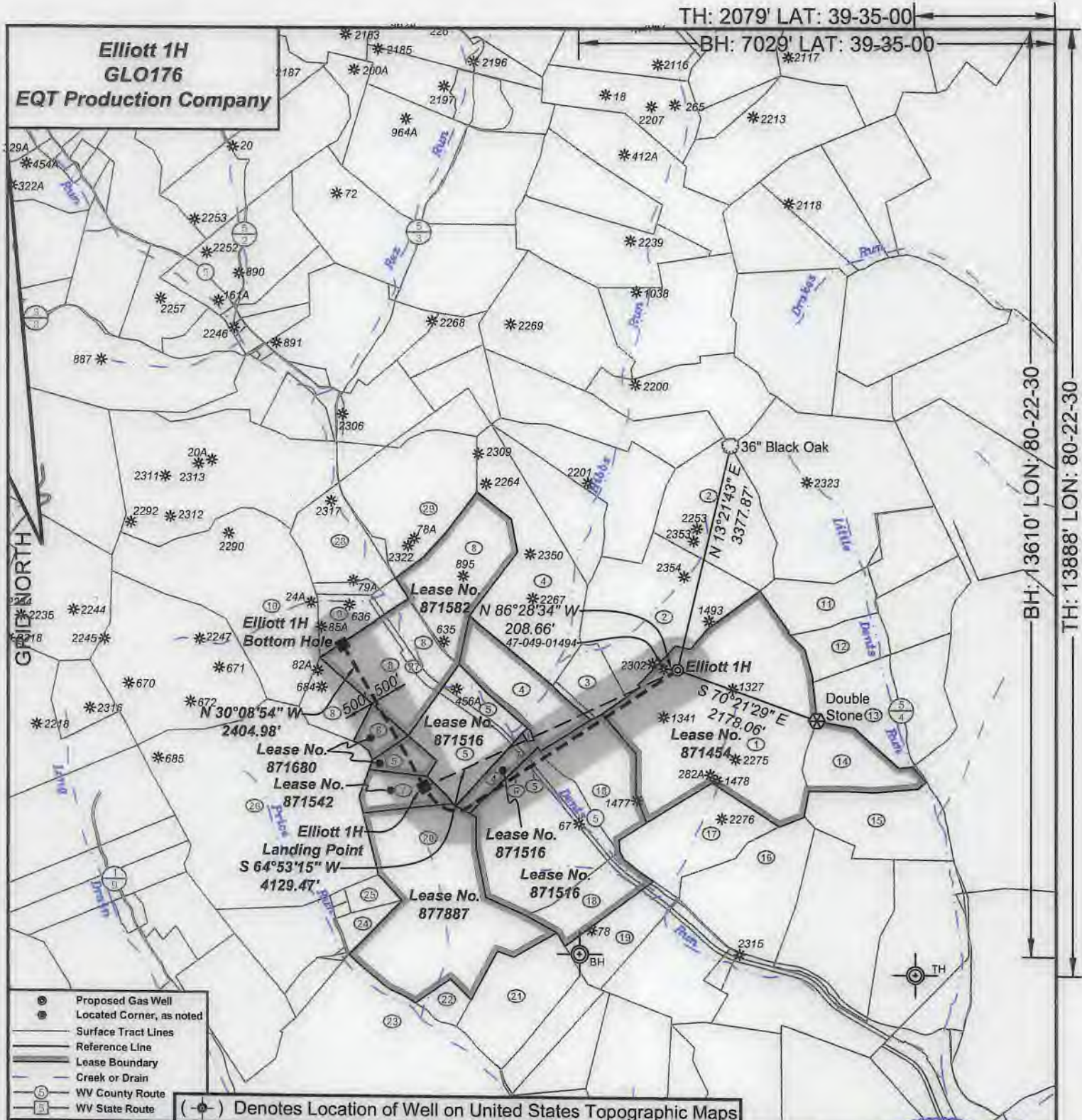
SDW  
8/15/2020

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- 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.*

*Dwayne A. Hall*  
P.S. 2089SU



FILE NO: 48-18  
DRAWING NO: Elliott 1H  
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

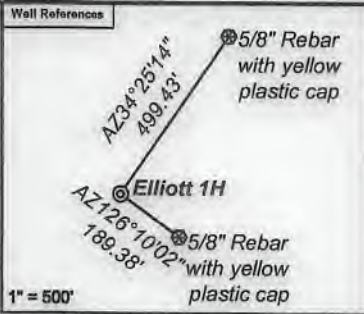
DATE: October 7 20 20  
OPERATOR'S WELL NO.: Elliott 1H  
API WELL NO  
47 - 049 - 02499  
STATE COUNTY PERMIT

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:

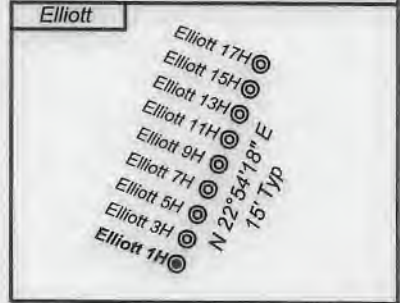
WELL OPERATOR: EQT Production Company DESIGNATED AGENT: Joseph C. Mallow  
ADDRESS: 400 Woodcliff Drive ADDRESS: 115 Professional Place PO Box 280  
Canonsburg, PA 15317 Bridgeport, WV 26330

**Elliott 1H  
GLO176  
EQT Production Company**

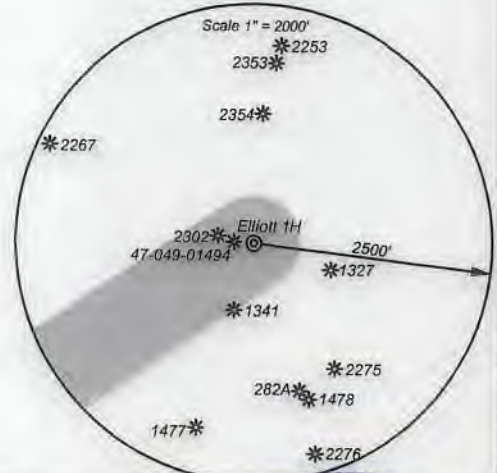
Tract I.D.	Tax Map No.	Parcel No.	County	District	Surface Tract Owner	Acres
1	34	40	Marion	Mannington	Consolidation Coal Company	153.25
2	34	37	Marion	Mannington	Consolidation Coal Company	133.37
3	34	38	Marion	Mannington	Consolidation Coal Company	17.00
4	34	36	Marion	Mannington	Consolidation Coal Company	120.00
5	34	34	Marion	Mannington	Consolidation Coal Company	48.85
6	34	52	Marion	Mannington	CSX Transportation	12.62
7	34	35	Marion	Mannington	Consolidation Coal Company	16.00
8	36	19	Marion	Mannington	Consolidation Coal Company	123.50
9	36	18	Marion	Mannington	CNX Land LLC	18.50
10	37	30	Marion	Mannington	Consolidation Coal Company	107.00
11	34	49	Marion	Mannington	Dennis M. & Lisa A. Hayes	24.78
12	34	47	Marion	Mannington	Edward F. Price	23.00
13	33	1	Marion	Mannington	Thomas D. & Almee J. Haught	108.82
14	34	40.1	Marion	Mannington	Raymond F. & Betty J. Fluharty	20.75
15	34	45	Marion	Mannington	City of Mannington	42.50
16	34	41	Marion	Mannington	Consolidation Coal Company	47.00
17	34	30	Marion	Mannington	Consolidation Coal Company	42.75
18	34	33	Marion	Mannington	Consolidation Coal Company	134.00
19	34	32	Marion	Mannington	Consolidation Coal Company	22.25
20	35	9	Marion	Mannington	The Harrison County Coal Company	125.75
21	34	1	Marion	Mannington	Carol J. Murphy	52.00
22	35	9.1	Marion	Mannington	CNX Land LLC	2.00
23	35	8	Marion	Mannington	Dennis R. & Donna M. Carl	88.58
24	35	10.1	Marion	Mannington	CNX Land LLC	5.40
25	35	10.6	Marion	Mannington	Keith R. & Sandra D. Pigott	1.00
26	35	11	Marion	Mannington	CNX Land LLC	195.19
27	36	19.1	Marion	Mannington	CSX Transportation	4.00
28	36	17	Marion	Mannington	Consolidation Coal Company	35.00
29	30	16	Marion	Mannington	Consolidation Coal Company	60.11



**Notes:**  
 Elliott 1H coordinates are  
 NAD 27 N: 381,907.55 E: 1,751,172.23  
 NAD 27 Lat: 39.545205 Long: -80.382371  
 NAD 83 UTM N: 4,377,472.89 E: 553,085.44  
 Elliott 1H Landing Point coordinates are  
 NAD 27 N: 380,155.02 E: 1,747,433.09  
 NAD 27 Lat: 39.540292 Long: -80.395567  
 NAD 83 UTM N: 4,376,919.95 E: 551,955.14  
 Elliott 1H Bottom Hole coordinates are  
 NAD 27 N: 382,234.70 E: 1,746,225.20  
 NAD 27 Lat: 39.545968 Long: -80.399924  
 NAD 83 UTM N: 4,377,547.42 E: 551,576.59  
 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
871516	Lee and Hall Royalties, a partnership, et al.	160.1
877887	Kennis D. Baker, Jr., Clark C. Baker and Pamela B. Arena, et al.	42.75
871542	AMP IV, LP, et al.	16
871680	Venable Royalty, LTD, V14, LP, JVO, LLC	16.25
871582	Geneva L. Straight, et al.	110



*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.*

*Dwayne A. Hall*  
 P.S. 2089SU



FILE NO: 48-18  
 DRAWING NO: Elliott 1H  
 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: October 7 20 20  
 OPERATOR'S WELL NO.: Elliott 1H  
 API WELL NO  
 47 - 049 - 02499  
 STATE COUNTY PERMIT

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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



<b>Lease No.</b>	<b>Grantor, Lessor, etc.</b>	<b>Grantee, Lessee, etc.</b>	<b>Royalty</b>	<b>Book/Page</b>
<b><u>871454</u></b>	<b><u>Randy J. Elliott and Leonard W. Stafford</u></b>		at least 1/8th per WV Code 22-6-8	
	Randy J. Elliott, a married man dealing in his sole/sep. property	EQT Production Company		DR 1213/441
	Randy J. Elliott and Leonard W. Stafford	RJAL, Inc.		DR 971/747
	RJAL, Inc.	Falcon Holdings, LLC		DR 993/64
	Falcon Holdings, LLC	Gallatin Fuels, Inc.		AB 32/183
	Gallatin Fuels, Inc.	Leatherwood Inc.		AB 32/800
	RJAL, Inc.	Leatherwood Inc.		DR 1035/63
	Leatherwood Inc.	CNX Gas Company LLC		AB 42/174
	CNX Gas Company LLC	Noble Energy		AB 42/355
	Noble Energy	HG Energy II Appalachia, LLC		AB 53/166
	HG Energy II Appalachia, LLC	EQT Production Company		AB 56/389
<b><u>871516</u></b>	<b><u>Lee and Hall Royalties, a partnership, et al.</u></b>		at least 1/8th per WV Code 22-6-8	
	Reita J. Hall, widow	American Shale Development, Inc., 50%, and Republic Energy Ventures, LLC, 50%		DR 1132/908
	American Shale Development, Inc.	Republic Partners VIII, LLC		AB 47/469
	Republic Energy Ventures, LLC, Republic Partners VIII, LLC, et al	EQT Production Company		AB 51/525
	Trans Energy, Inc. and American Shale Development, Inc.	EQT Production Company		DR 1228/1
<b><u>877887</u></b>	<b><u>Kennis D. Baker, Jr., Clark C. Baker and Pamela B. Arena, et al.</u></b>		at least 1/8th per WV Code 22-6-8	
	Baker Hill LLC	Republic Energy Ventures, LLC		DR 1201/998
	Republic Energy Ventures, LLC	EQT Production Company		AB 52/744
<b><u>871542</u></b>	<b><u>AMP IV, LP, et al.</u></b>		at least 1/8th per WV Code 22-6-8	
	Lloyd Lyndon Tetrick aka Lloyd L. Tetrick aka Lloyd Tetrick, married but dealing in his sole and separate property	American Shale Development, Inc., 50%, and Republic Energy Ventures, LLC, 50%		DR 1149/73
	American Shale Development, Inc.	Republic Partners VIII, LLC		AB 47/469
	Republic Energy Ventures, LLC, Republic Partners VIII, LLC, et al	EQT Production Company		AB 51/525
	Trans Energy, Inc. and American Shale Development, Inc.	EQT Production Company		DR 1228/1

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4704902499

**871680**

**Venable Royalty, LTD, V14, LP, JVO, LLC**

at least 1/8th per  
WV Code 22-6-8

MM-Marcellus II, L.P.

Trans Energy, Inc., (50%) and  
Republic Energy Ventures, LLC,  
(50%)

DR 1086/498

Trans Energy, Inc.

American Shale Development, Inc.

AB 43/420

American Shale Development, Inc.

Republic Partners VIII, LLC

AB 47/469

Republic Energy Ventures, LLC, Republic Partners VIII, LLC, et al

EQT Production Company

AB 51/525

Trans Energy, Inc. and American Shale Development, Inc.

EQT Production Company

DR 1228/1

**871582**

**Geneva L. Straight, et al**

at least 1/8th per  
WV Code 22-6-8

Geneva L. Straight, widow

EQT Production Company

DR 1231/1084

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4704902499



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

August 20, 2020

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

Re: Elliott 1H 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 'J. Zavatchan'.

John Zavatchan  
Project Specialist - Permitting

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

**Date of Notice Certification:** 08/26/2020

**API No. 47-** \_\_\_\_\_  
**Operator's Well No.** <sup>1H</sup> \_\_\_\_\_  
**Well Pad Name:** Elliott

**Notice has been given:**

Pursuant to the provisions in West Virginia Code § 22-6A, the Operator has provided the required parties with the Notice Forms listed below for the tract of land as follows:

State:	<u>West Virginia</u>	UTM NAD 83	Easting:	<u>553085.44</u>
County:	<u>Marion</u>		Northing:	<u>4377472.89</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>			

Pursuant to West Virginia Code § 22-6A-7(b), every permit application filed under this section shall be on a form as may be prescribed by the secretary, shall be verified and shall contain the following information: (14) A certification from the operator that (i) it has provided the owners of the surface described in subdivisions (1), (2) and (4), subsection (b), section ten of this article, the information required by subsections (b) and (c), section sixteen of this article; (ii) that the requirement was deemed satisfied as a result of giving the surface owner notice of entry to survey pursuant to subsection (a), section ten of this article six-a; or (iii) the notice requirements of subsection (b), section sixteen of this article were waived in writing by the surface owner; and Pursuant to West Virginia Code § 22-6A-11(b), the applicant shall tender proof of and certify to the secretary that the notice requirements of section ten of this article have been completed by the applicant.

<p>Pursuant to West Virginia Code § 22-6A, the Operator has attached proof to this Notice Certification that the Operator has properly served the required parties with the following:</p> <p>*PLEASE CHECK ALL THAT APPLY</p> <p><input type="checkbox"/> 1. NOTICE OF SEISMIC ACTIVITY or <input checked="" type="checkbox"/> NOTICE NOT REQUIRED BECAUSE NO SEISMIC ACTIVITY WAS CONDUCTED</p> <p><input type="checkbox"/> 2. NOTICE OF ENTRY FOR PLAT SURVEY or <input checked="" type="checkbox"/> NO PLAT SURVEY WAS CONDUCTED</p> <p><input checked="" type="checkbox"/> 3. NOTICE OF INTENT TO DRILL or <input type="checkbox"/> NOTICE NOT REQUIRED BECAUSE NOTICE OF ENTRY FOR PLAT SURVEY WAS CONDUCTED or</p> <p style="padding-left: 100px;"><input type="checkbox"/> WRITTEN WAIVER BY SURFACE OWNER (PLEASE ATTACH)</p> <p><input checked="" type="checkbox"/> 4. NOTICE OF PLANNED OPERATION</p> <p><input checked="" type="checkbox"/> 5. PUBLIC NOTICE</p> <p><input checked="" type="checkbox"/> 6. NOTICE OF APPLICATION</p>	<p><b>OOG OFFICE USE ONLY</b></p> <p><input type="checkbox"/> RECEIVED/ NOT REQUIRED</p> <p><input type="checkbox"/> RECEIVED</p> <p><input checked="" type="checkbox"/> RECEIVED/ NOT REQUIRED</p> <p><input checked="" type="checkbox"/> RECEIVED</p> <p><input checked="" type="checkbox"/> RECEIVED</p> <p><input checked="" type="checkbox"/> RECEIVED</p>
--	---

**Required Attachments:**

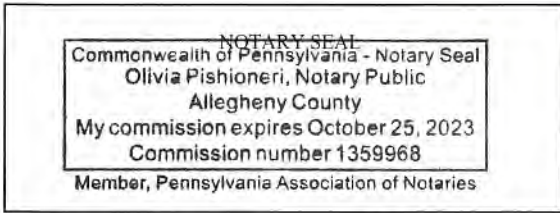
The Operator shall attach to this Notice Certification Form all Notice Forms and Certifications of Notice that have been provided to the required parties and/or any associated written waivers. For the Public Notice, the operator shall attach a copy of the Class II Legal Advertisement with publication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

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**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:	<u>EQT Production Company</u>	Address:	<u>400 Woodcliff Drive</u>
By:	<u>John Zavatchan</u>		<u>Canonsburg, PA 15317</u>
Its:	<u>Project Specialist - Permitting</u>	Facsimile:	<u>412-395-2974</u>
Telephone:	<u>724-746-9073</u>	Email:	<u>jzavatchan@eqt.com</u>



Subscribed and sworn before me this 20<sup>th</sup> day of August, 2020  
Olivia Pishioneri 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 [deprivacyofficer@wv.gov](mailto:deprivacyofficer@wv.gov).

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WW-6A  
(9-13)

API NO. 47-  
OPERATOR WEL NO. 1704902499  
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:** 6/25/2020    **Date Permit Application Filed:** 6/26/2020

**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 AttachedList  
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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**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/and-gas/pages/default.aspx](http://www.dep.wv.gov/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 one 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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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

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



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

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

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

**Comment Requirements**

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

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

**Permit Denial or Condition**

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

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

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

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

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(8-13)

API NO. 47- 4704902499  
OPERATOR WELL NO. 1H  
Well Pad Name: Elliott

**Notice is hereby given by:**

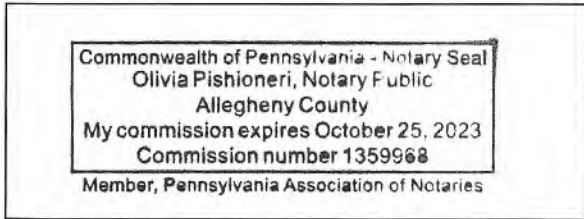
Well Operator: EQT Production Company  
Telephone: 724-746-9073  
Email: jzavatchan@eqt.com



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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**Elliott Well Site**

**Surface Owner (All Disturbance)**

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

**Coal Owners**

Randy Elliott  
560 Carolina Avenue  
Chester, WV 26034

Leonard Stafford  
200 Park Drive  
Mannington, WV 26582

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

**No Water Supply Owners within 1,500'**







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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4704902499

## 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	STOCKPILES	TOTAL DISTURBANCE
12.47 AC	30.47 AC	3.41 AC	46.35 AC

LANDOWNER DISTURBANCE BREAKDOWN				
LANDOWNER	DISTURBANCE FROM ACCESS ROAD	DISTURBANCE FROM WELL PAD	DISTURBANCE FROM STOCKPILES	TOTAL DISTURBANCE
12-34-37 CONSOLIDATION COAL	1.45 AC	1.33 AC	N/A	2.88 AC
12-34-39 CONSOLIDATION COAL	2.81 AC	N/A	N/A	2.81 AC
12-34-40 CONSOLIDATION COAL	0.30 AC	0.14 AC	3.41 AC	3.85 AC
UNOWNED	0.13 AC	N/A	N/A	0.13 AC

REFERENCES: UNITED STATES GEOLOGICAL SURVEY - GLOVER QUADRANGLE, E. 1/4, 7.5 MINUTE SERIES



PROJECT NO. 19070-089  
JUNE 2020

**DIEFFENBAUCH & HRITZ, LLC**

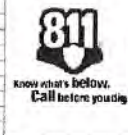
*SDCW*  
*8/13/2020*



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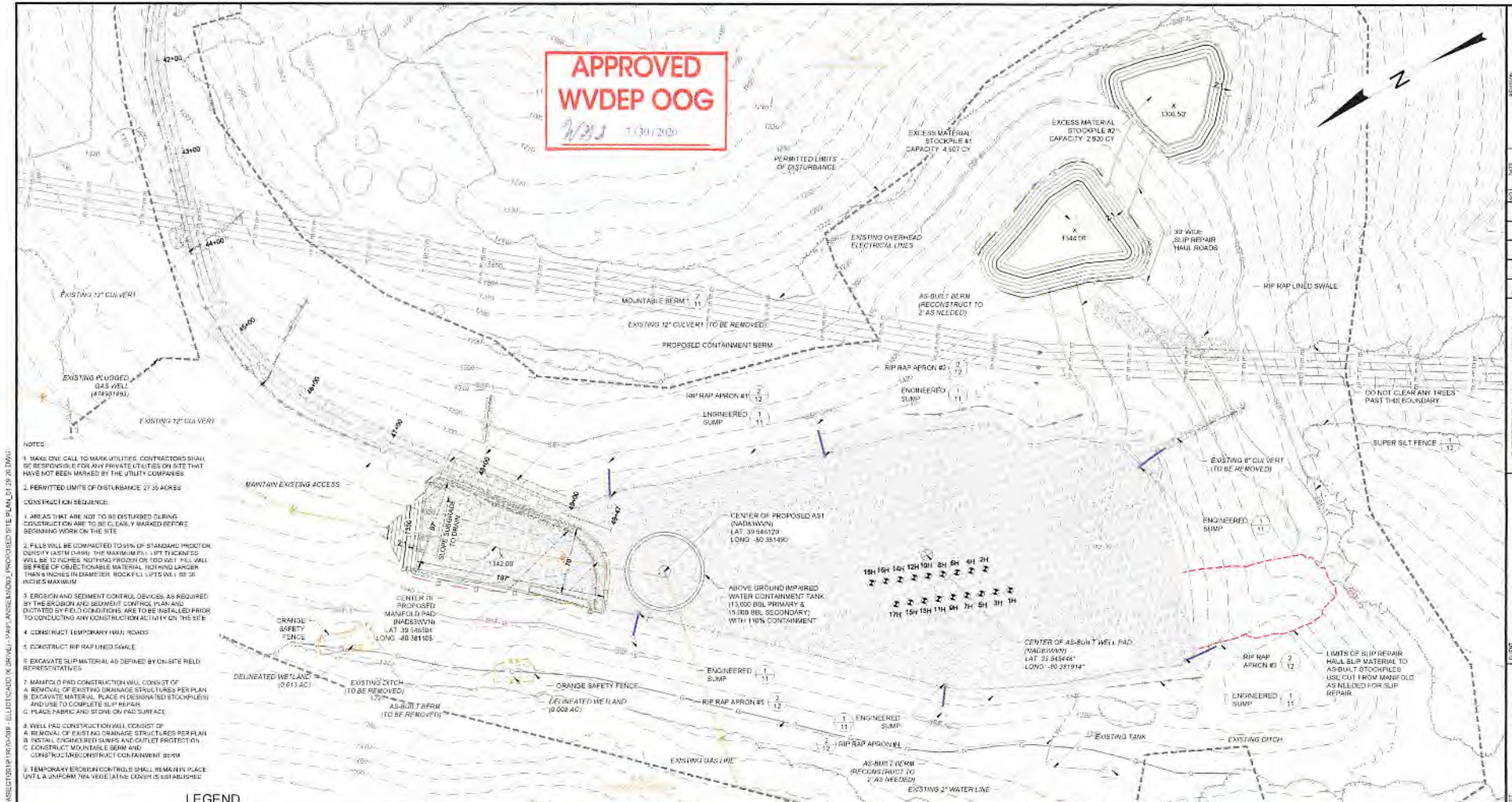
ASSIGNED WELLID	API#	WELL LOCATIONS							
		LAT(NAD83)	LONG(WGS84)	NORTH(ENGLAND)	EAST(ENGLAND)	NORTH(ENGLAND)	EAST(ENGLAND)	NORTH(ENGLAND)	EAST(ENGLAND)
01H	39 22 43.8000	80 27 55.8071	38 354.9003	27 0759.3100	38 507.507	27 511.22.28	43 752.8689	50 200.458	
02H	39 22 43.1250	80 25 55.7070	38 398.7175	27 0781.1480	38 091.704	27 511.18.06	43 747.1277	50 200.144	
03H	39 22 43.5125	80 27 55.0911	38 312.2346	27 0758.9129	38 755.182	27 511.03.04	43 751.306	50 200.413	
04H	39 22 43.4043	80 22 55.0231	38 386.5518	27 0757.8700	38 765.999	27 511.09.24	43 748.040	50 200.513	
05H	39 22 43.5850	80 22 55.1261	38 340.2429	27 0757.6640	38 586.116	27 511.05.29	43 749.945	50 200.260	
06H	39 22 43.2162	80 22 55.1372	38 201.1860	27 0757.5020	38 091.603	27 511.04.17	43 744.184	50 200.976	
07H	39 22 43.6000	80 21 55.0200	38 202.1802	27 0758.3400	38 092.450	27 511.07.05	43 748.311	50 200.688	
08H	39 22 43.5975	80 22 55.1311	38 201.6563	27 0757.1790	38 004.267	27 511.05.09	43 743.563	50 200.136	
09H	39 22 44.1300	80 22 55.1482	38 200.4114	27 0758.0113	38 001.084	27 511.05.04	43 743.802	50 200.173	
10H	39 22 43.1800	80 22 55.1361	38 100.9504	27 0758.0780	38 753.543	27 511.04.14	43 747.805	50 200.094	
11H	39 22 43.2800	80 22 55.1632	38 189.1223	27 0757.1223	38 742.262	27 511.09.04	43 746.944	50 200.177	
12H	39 22 43.4400	80 22 55.1802	38 183.5270	27 0757.1710	38 741.171	27 511.09.09	43 748.879	50 200.181	
13H	39 22 43.5018	80 22 55.1752	38 192.3480	27 0757.1110	38 753.494	27 511.09.12	43 748.112	50 200.185	
14H	39 22 43.0600	80 22 55.1452	38 211.5810	27 0758.0440	38 073.811	27 511.02.06	43 749.154	50 200.188	
15H	39 22 43.8142	80 22 55.0771	38 004.9811	27 0759.2493	38 387.628	27 511.21.00	43 747.566	50 200.000	
16H	39 22 43.5753	80 22 54.9953	38 076.7562	27 0758.1100	38 001.445	27 511.05.04	43 750.835	50 200.313	
17H	39 22 43.2043	80 22 54.8311	38 262.2104	27 0758.1660	38 001.204	27 511.04.08	43 746.974	50 200.022	
18H	39 22 44.2480	80 22 54.8191	38 006.6325	27 0758.1800	38 004.080	27 511.04.10	43 751.031	50 200.110	

INDEX	
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
9-11	E&S TYPICAL SECTIONS
11-12	E&S DETAILS



DATE: \_\_\_\_\_  
TMR: \_\_\_\_\_  
DLS: \_\_\_\_\_  
RCL: \_\_\_\_\_  
DATE: JUNE 2020  
PROJECT NO.: 19070-089  
PROJECT NAME: ELLIOT PAD EXPANSION  
MARION COUNTY, WEST VIRGINIA  
EQT PRODUCTION COMPANY  
DIEFFENBAUCH & HRITZ, LLC  
18196  
STATE OF WEST VIRGINIA  
REGISTERED PROFESSIONAL ENGINEER  
TITLE SHEET  
1

**APPROVED WVDEP OOG**  
7/30/2020



- NOTES**
1. MAKE ONE CALL TO MARK 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 IS 35 ACRES.
  3. CONSTRUCTION SEQUENCE:
    - a. AREAS THAT ARE NOT TO BE DISTURBED DURING CONSTRUCTION ARE TO BE CLEARLY MARKED BEFORE BEGINNING WORK ON THE SITE.
    - b. FILLS WILL BE COMPACTED TO 95% OF STANDARD PROCTOR DENSITY (ASTM D1557). THE MAXIMUM FILL LIFT THICKNESS WILL BE 12 INCHES. NOTHING PROTRUDING OVER 100 MM FILL WILL BE FREE OF OBJECTABLE MATERIAL. NOTHING LARGER THAN 4 INCHES IN DIAMETER. ROCK FILL LIFTS WILL BE 36 INCHES MAXIMUM.
    - c. EROSION AND SEDIMENT CONTROL DEVICES, 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.
    - d. CONSTRUCT TEMPORARY HAUL ROADS.
    - e. EXCAVATE SLIP MATERIAL AS DEFINED BY ON-SITE FIELD RECONSTITUTIONS.
    - f. MANHOLE PAD CONSTRUCTION WILL CONSIST OF:
      - i. REMOVAL OF EXISTING DRAINAGE STRUCTURES PER PLAN.
      - ii. EXCAVATE MATERIAL, PLACE EXCAVATED STOCKPILES IN ORDER TO COMPLETE SLIP REPAIR.
      - iii. PLACE FABRIC AND STONE ON PAD SURFACE.
    - g. WELL PAD CONSTRUCTION WILL CONSIST OF:
      - i. REMOVAL OF EXISTING DRAINAGE STRUCTURES PER PLAN.
      - ii. INSTALL ENGINEERED SLUMPS AND OUTLET PROTECT ON.
      - iii. CONSTRUCT MOUNTAIN BERM AND CONSTRUCT ENGINEERED CONTAINMENT BERM.
    - h. TEMPORARY EROSION CONTROL SHALL REMAIN IN PLACE UNTIL A UNIFORM TERN VEGETATIVE COVER IS ESTABLISHED.

**LEGEND**

- EXISTING TREE LINE
- EXISTING ROAD
- EXISTING RIGHT-OF-WAY
- PROPOSED RIGHT-OF-WAY
- PROPERTY LINE
- MUNICIPAL BOUNDARY
- PROPOSED FENCE
- EXISTING ELECTRIC LINE
- EXISTING GAS LINE
- PROPOSED WATER LINE
- FILL LIMITS
- CUT LIMITS
- TOE BENCH WITH DRAIN
- EXISTING CENTERLINE
- SAFETY BERM
- LIMITS OF DISTURBANCE
- EXISTING UTILITY POLE
- EXISTING INDEX CONTOUR LINE (10')
- EXISTING INTERMEDIATE CONTOUR LINE
- PROPOSED INDEX CONTOUR LINE (10')
- PROPOSED INTERMEDIATE CONTOUR LINE
- CHANGE FLOW DIRECTION
- STREAM
- DELINEATED STREAM
- DELINEATED WETLAND BOUNDARY
- FLUDDARY BOUNDARY
- RIPARIAN BUFFER
- SUPER SILT FENCE (SSF)
- TRIPLE CFS STACK / CFS SEDIMENT TRAP
- PROPOSED SPOT ELEVATION
- EXISTING STRUCTURE
- PERMANENT PAVED
- TEMPORARY GRAVEL
- PERMANENT GRAVEL

ASSIGNED WELL ID	#	LAT(NAD83)	LONG(WAD83)	NORTHING(NAD83)	EASTING(EAD83)	NORTHING(NAD83)	EASTING(EAD83)
3H	39	43.02809	80.22 55.94071	80194.920	179731.310	80292.247	179172.226
3M	39	43.12538	80.22 55.78799	80198.715	179739.340	80292.384	179178.096
3P	39	43.11207	80.22 55.69511	80197.316	179736.870	80195.582	179163.904
3R	39	43.44463	80.22 55.62235	80198.858	179760.620	80298.999	179189.241
3S	39	43.15887	80.22 55.59511	80200.889	179736.750	80292.826	179169.379
3T	39	43.73567	80.22 55.42672	80203.980	179762.520	80295.813	179120.417
3U	39	43.88880	80.22 55.40880	80207.802	179768.300	80299.630	179120.283
3V	39	43.98740	80.22 55.33121	80209.625	179774.170	80304.267	179121.593
3W	39	43.19589	80.22 55.23824	80205.824	179780.020	80308.084	179128.995
3X	39	43.18847	80.22 55.43824	80195.854	179765.680	80195.582	179120.014
3Y	39	43.28880	80.22 55.30321	80189.712	179760.150	80188.580	179120.851
3Z	39	43.43020	80.22 55.24072	80183.528	179776.720	80186.477	179125.689
3AA	39	43.15189	80.22 55.21729	80182.348	179782.610	80189.994	179121.527
3AB	39	43.88880	80.22 55.34824	80201.290	179788.400	80295.813	179127.865
3AC	39	43.83847	80.22 55.17231	80204.811	179795.330	80285.628	179123.253
3AD	39	43.47292	80.22 54.99581	80208.792	179806.120	80201.443	179129.081
3AE	39	44.10267	80.22 54.92673	80205.814	179805.960	80201.253	179126.978
3AF	39	44.24487	80.22 54.85194	80206.425	179811.830	80202.087	179129.715

SPW  
8/13/2020



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**DIFFENBAUGH & HIRTZ LLC**  
1600 Chatham Road, Suite 200  
Martinsburg, WV 26151  
www.diffenbaugh.com  
P. 304.265.2222 F. 304.265.9957

**EQT PRODUCTION COMPANY**

**ELLIOTT PAD EXPANSION**

**PROPOSED SITE PLAN**

**3**



Revision	
No.	Date
MWW Drawn	
ZTF Checked	
VJA Approved	
Date	11/6/2019
Project No.	19070-089
Client	EQT PRODUCTION COMPANY
Project	1 of 1

DIEFFENBAUGH & HOLTZ  
 1000 E. Main St.  
 Morgantown, WV 26501  
 P: 304.283.5355 F: 304.283.5957

**FIGURE 2. STREAM & WETLAND INVESTIGATION MAP**  
 LIMITS OF INVESTIGATION TOTALS 90 AC  
**Legend**  
 Data Point  
 Culvert  
 Limits of Investigation  
 Delineated Water Features  
 PEM Wetland  
 Non-Jurisdictional Features  
 Waterway  
 10' Contour Line  
 Absolute Scale: 1:720  
 Total Scale: 1 inch = 60 feet  
 0 30 60 Feet  
 NOTE: TOPOGRAPHIC DATA FROM WV GIS  
 TECH CENTER: IMAGE RY FROM NATIONAL AGRICULTURE IMAGERY PROGRAM 2016

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 Elliott A. Padgett  
 Marion County, Virginia