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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

Harold D. Ward, Cabinet Secretary  
[www.dep.wv.gov](http://www.dep.wv.gov)

Thursday, December 4, 2025  
**WELL WORK PERMIT**  
Horizontal 6A / Fracture

EQT PRODUCTION COMPANY  
2200 ENERGY DRIVE

CANONSBURG , PA 15317

Re:      Permit approval for BIG 177 H15  
47-103-03191-00-00

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.

H. Jason Harmon  
Acting Chief

Operator's Well Number: BIG 177 H15  
Farm Name: COASTAL FOREST RESOURCES CO. D/B/A COASTAL T~~H~~  
U.S. WELL NUMBER: 47-103-03191-00-00  
Horizontal 6A Fracture  
Date Issued: 12/4/2025

# 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. 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. Also, 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.
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.

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

1) Well Operator: EQT Production Company 306686 Wetzel Grant Big Run  
Operator ID County District Quadrangle

2) Operator's Well Number: H15 Well Pad Name: BIG177

3) Farm Name/Surface Owner: Coastal Forest Resources Co. Public Road Access: Rt 19

4) Elevation, current ground: 811' Elevation, proposed post-construction: 811'

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

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

6) Existing Pad: Yes or No Yes

7) Proposed Target Formation(s), Depth(s), Anticipated Thickness and Expected Pressure(s):  
Marcellus, 6,849', 51', 2,620 PSI

8) Proposed Total Vertical Depth: As Drilled: 6,881'

9) Formation at Total Vertical Depth: Marcellus

10) Proposed Total Measured Depth: As Drilled: 15,382'

11) Proposed Horizontal Leg Length: As Drilled: 7,407'

12) Approximate Fresh Water Strata Depths: 185, 295, 495, 645

13) Method to Determine Fresh Water Depths: Wells Drilled - see attached WR-35

14) Approximate Saltwater Depths: 1150, 1465

15) Approximate Coal Seam Depths: 115, 168, 446, 510

16) Approximate Depth to Possible Void (coal mine, karst, other): none anticipated

17) Does Proposed well location contain coal seams directly overlying or adjacent to an active mine? Yes \_\_\_\_\_ No  RECEIVED  
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(a) If Yes, provide Mine Info: Name: \_\_\_\_\_ NOV 03 2025

Depth: \_\_\_\_\_ WV Department of  
Environmental Protection

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

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

18)

CASING AND TUBING PROGRAM

<u>TYPE</u>	<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	A500	85.6	80'	80' ✓	196 / CTS
Fresh Water	13 3/8	New	J-55	54.5	768'	768' ✓	864 / CTS
Coal							
Intermediate	9 5/8	New	A500	40	2731'	2731' ✓	1187 / CTS ✓
Production	5 1/2	New	P-110	20	15,367'	15,367' ✓	3514 / 362
Tubing							
Liners							

<u>TYPE</u>	<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	1000	18	Class A	1.18
Fresh Water	13 3/8	17 1/2	0.380	2730	2184	Class A	1.13
Coal							
Intermediate	9 5/8	12 3/8	0.352	3520	2816	Class H	1.02
Production	5 1/2	8 3/4 & 8 1/2	0.361	14360	11488	Class A	1.09
Tubing							
Liners							

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

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

Complete a horizontal well in the Marcellus Formation previously drilled.

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): NA - site built

22) Area to be disturbed for well pad only, less access road (acres): NA - site built

23) Describe centralizer placement for each casing string:

Completed  
Conductor: None  
Surface: On shoe track and every 500' to surface  
Intermediate: On shoe track and every 500' to surface  
Production: On shoe track and every joint to 2,008'

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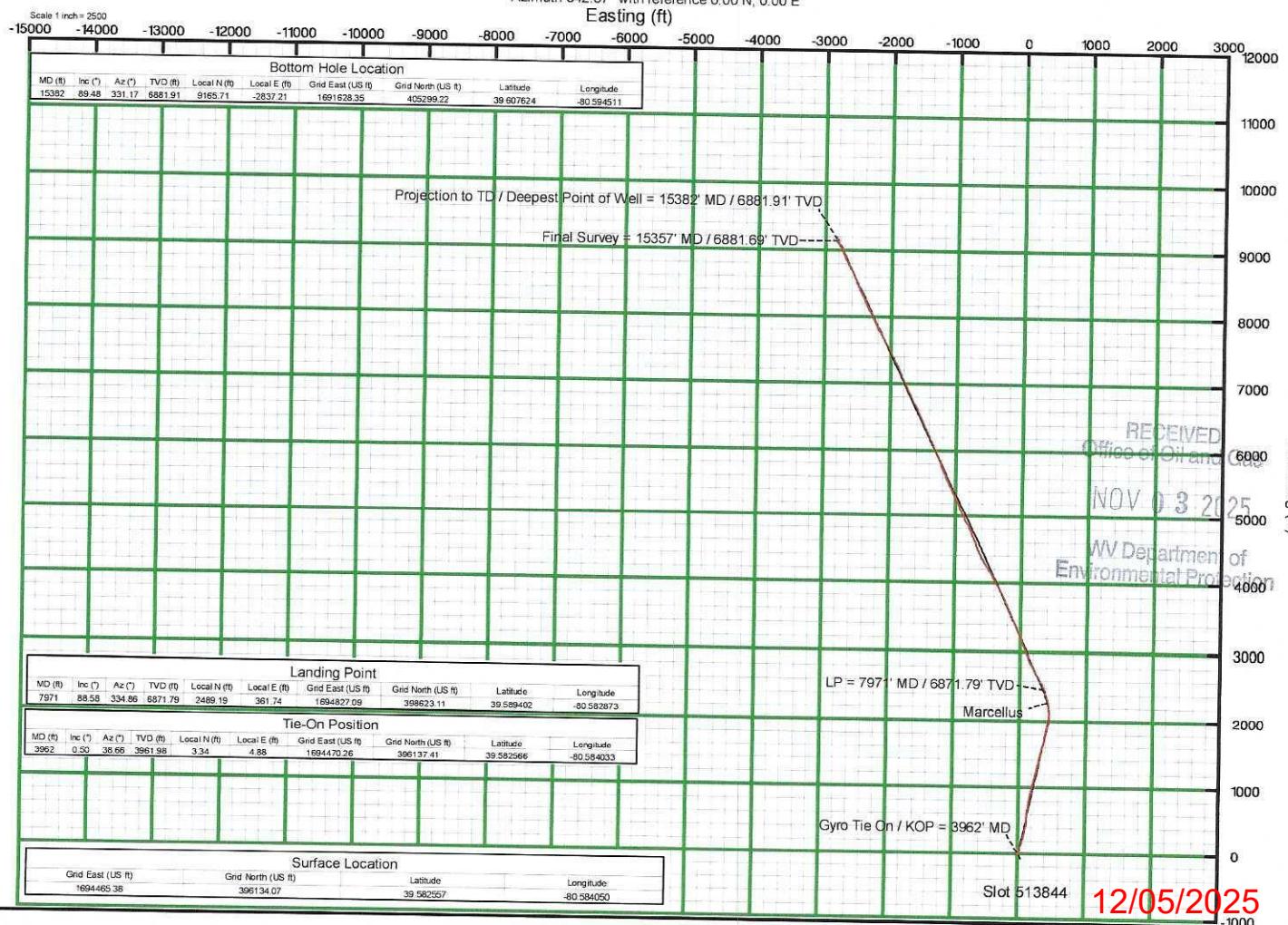
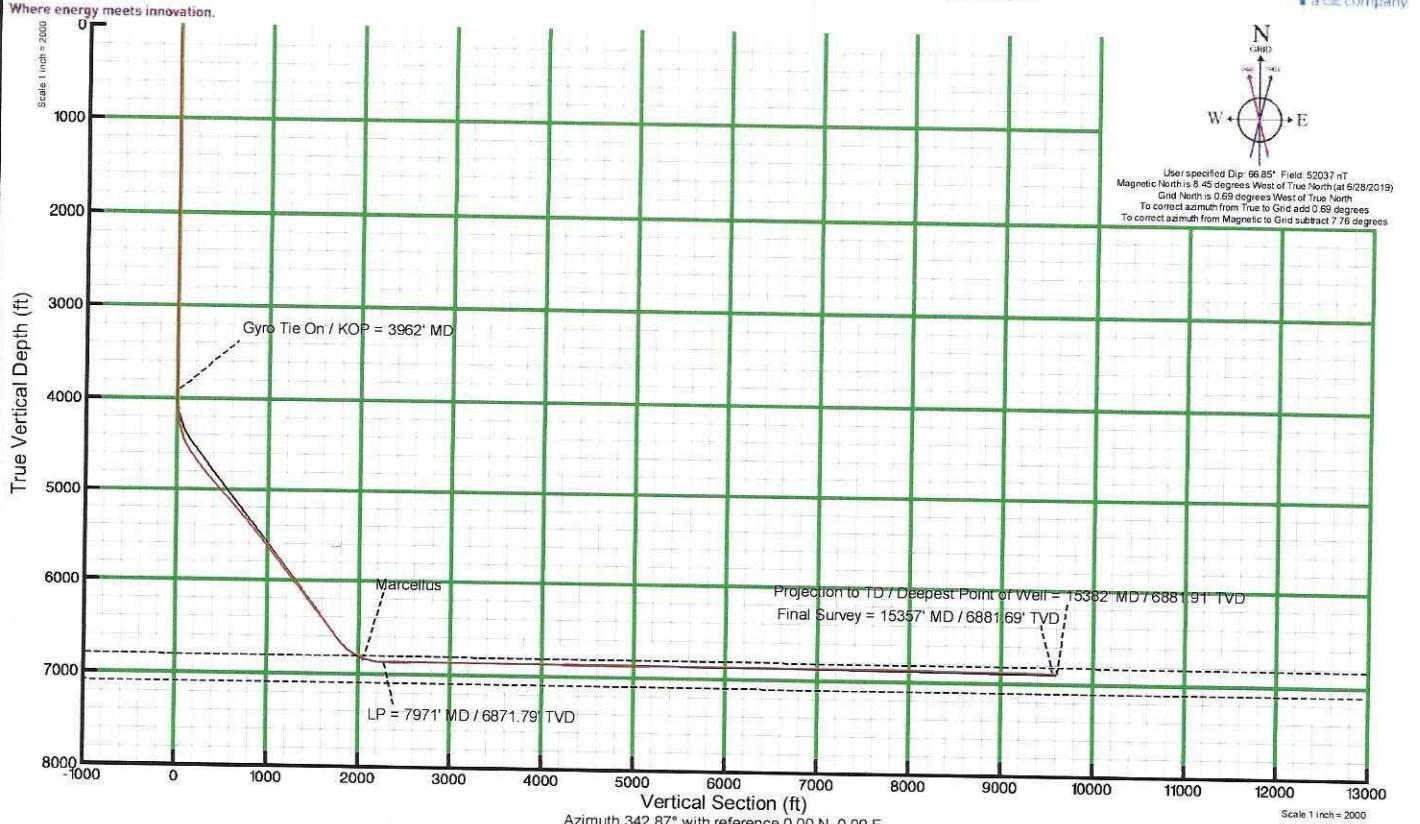
24) Describe all cement additives associated with each cement type:

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. If applicable: Gas Migration Control Additive, Cement Retarder  
Production: Calcium Carbonate, Fluid Loss, Extender, Dispersant, Viscosifier, Defoamer, POZ, Bonding Agent, Retarder, Anti-Settling/Suspension Agent

25) Proposed borehole conditioning procedures:

Completed  
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.

\*Note: Attach additional sheets as needed.



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) Willey Fork of North Fork Fishing Creek Quadrangle Big Run

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.?

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 \_\_\_\_\_)

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

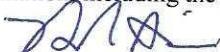
-If left in pit and plan to solidify what medium will be used? (cement, lime, sawdust) N/A

-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 

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Company Official (Typed Name) Branden Weimer

Company Official Title Regional Manager - Permitting

NOV 03 2025

Subscribed and sworn before me this 31st day of October, 2025

WV Department of  
Environmental Protection  
Commonwealth of Pennsylvania - Notary Seal  
Kristen Brooks, Notary Public  
Fayette County  
My commission expires February 17, 2029  
Commission number 1285524

Kristen Brooks  
Notary Public  
My commission expires February 17, 2029

Member, Pennsylvania Notary Publics of Notaries  
12/05/2025

**EQT Production Company**

Proposed Revegetation Treatment: Acres Disturbed No additional Prevegetation pH 5.2  
 Lime 3 Tons/acre or to correct to pH 6.5  
 Fertilizer type Granular 10-20-20  
 Fertilizer amount 500 lbs/acre  
 Mulch 2 Tons/acre

**Seed Mixtures****Temporary**

Seed Type	lbs/acre
KY-31	40
Alsike Clover	5
Annual Rye	15

**Permanent**

Seed Type	lbs/acre
Orchard Grass	15
Alsike Clover	5

## 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: Stephen Mccoy

Digitally signed by Stephen Mccoy  
Date: 2025.10.23 11:17:48 -04'00'

Comments: \_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

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NOV 03 2025

WV Department of  
Environmental Protection

Title: \_\_\_\_\_

Date: \_\_\_\_\_

Field Reviewed? (      ) Yes (      ) No



## EMERGENCY RESPONSE PLAN (ERP)

## (SITE SAFETY AND ENVIRONMENTAL PLAN)

## EQT BIG 177 Well Pad

Grant  
Wetzel County, WV

Prepared By: Scott M. Held, CSP, Senior EHS Coordinator

Approved By: Scott M. Held, CSP, Senior EHS Coordinator

Created Date: 20-Feb-25

## RECORD OF REVISION AND CHANGES

Plan Administrator:  
Scott M. Held, CSP  
Senior EHS Coordinator

Approver:  
Michael Lauderbaugh  
Vice President of EHS

Stephen  
Mccoy

Digitally signed by  
Stephen Mccoy  
Date: 2025.10.23  
11:13:34 -04'00'

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WV Department of  
Environmental Protection

Topo Quad: Big Run 7.5'

Scale: 1" = 1000'

County: Wetzel

Date: January 30, 2025

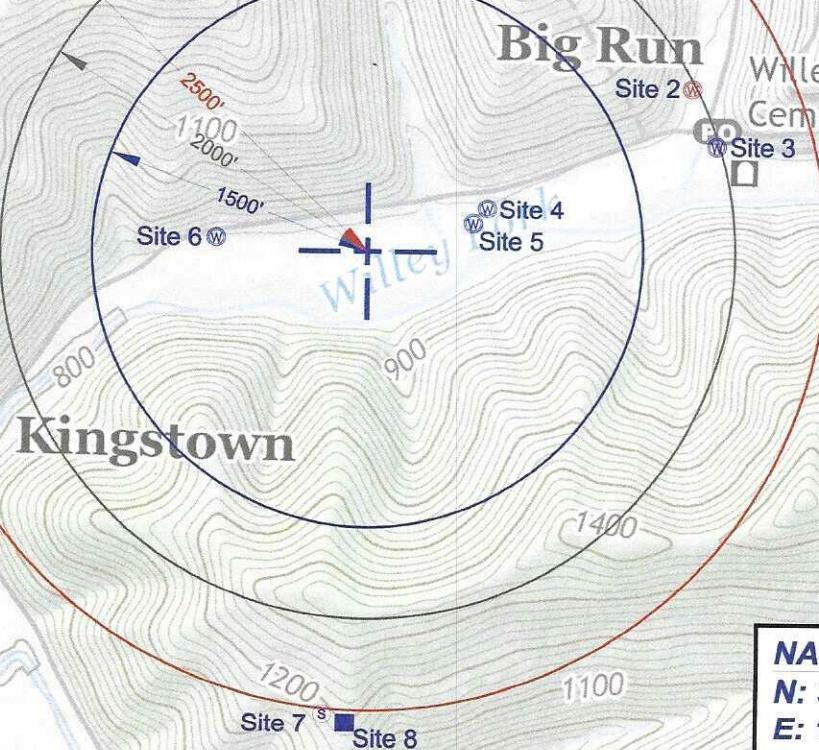
District: Grant

Project No: 352-18-M-23

Water

## Big 177 Well Pad

5 Potential Water Sources within 2500'



### LEGEND

Red Symbol - Declined Sampling  
Blue Symbol - Requested Sampling / Unable to Contact

- Well
- S Spring
- ▲ Pond
- Building

NAD 83, North Zone  
N: 396,164.37  
E: 1,662,986.24

WGS 84  
LAT: 39.582620  
LONG: -80.584005  
ELEV: 811'



SURVEYING AND MAPPING SERVICES PERFORMED BY:

**ALLEGHENY SURVEYS, INC.**

1-800-482-8606

237 Birch River Road

Birch River, WV 26610

PH: (304) 649-8606

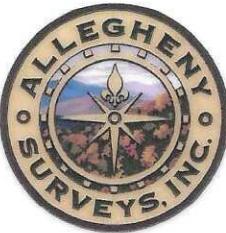
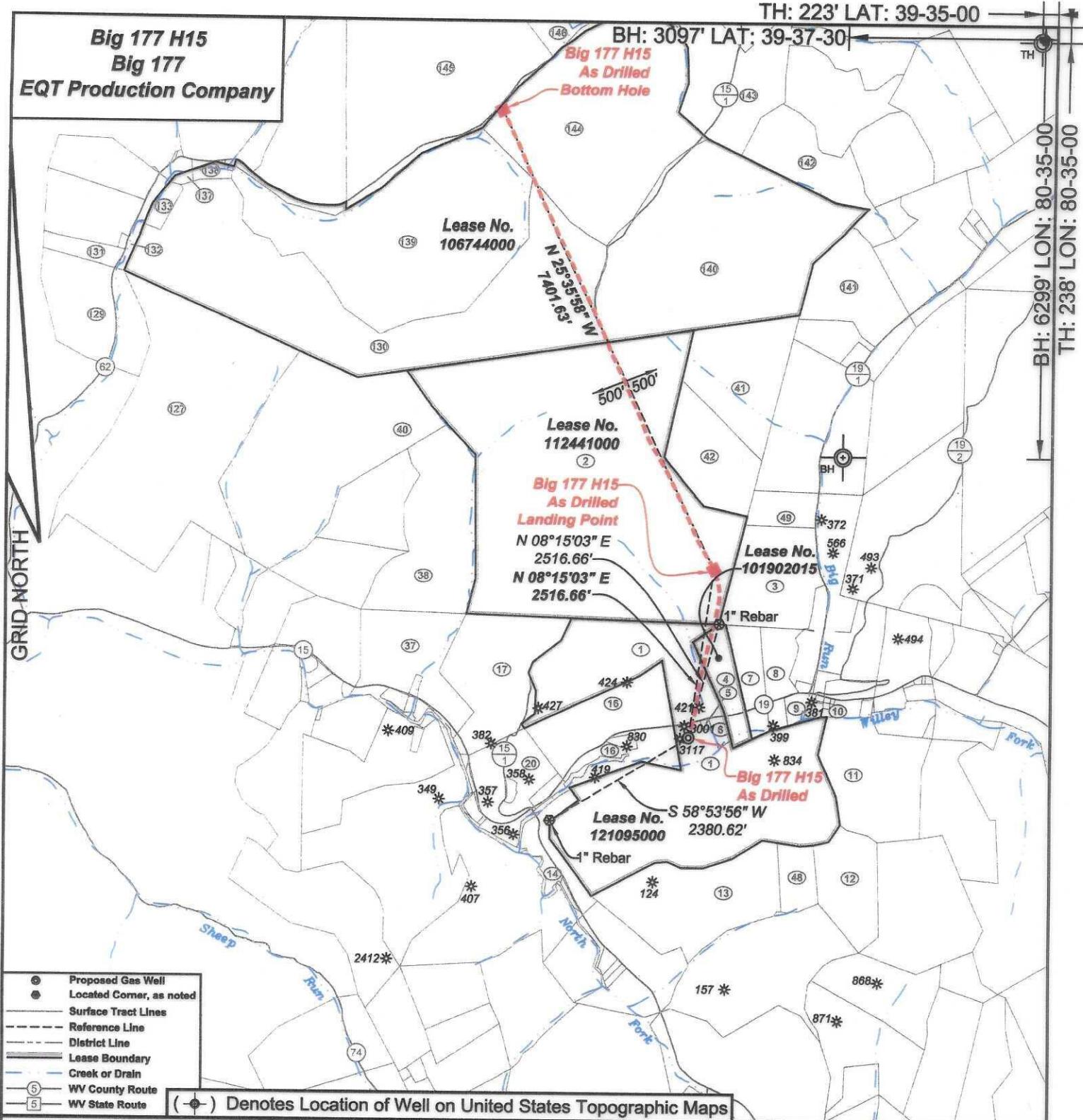
FAX: (304) 649-8608

PREPARED FOR:

**EQT Production Company**

400 Woodcliff Drive  
Canonsburg, PA 15317

12/05/2025



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

P.S. 2092



FILE NO: 352-23  
DRAWING NO: Big 177 H15  
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 10 20 25  
OPERATOR'S WELL NO.: Big 177 H15  
API WELL NO  
47 - 103 - 03191  
STATE COUNTY PERMIT

WELL TYPE:  OIL  GAS  LIQUID INJECTION  WASTE DISPOSAL  
(IF GAS) PRODUCTION:  STORAGE  DEEP  SHALLOW  
LOCATION: ELEVATION: 810.5' WATERSHED Willey Fork of North Fork Fishing Creek QUADRANGLE: Big Run  
DISTRICT: Grant COUNTY: Wetzel  
SURFACE OWNER: Coastal Forest Resources Company ACREAGE: 217.19  
ROYALTY OWNER: Coastal Forest Resources Company, et al. LEASE NO: 121095000 ACREAGE: 300  
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: 6849'

WELL OPERATOR: EQT Production Company  
ADDRESS: 2200 Energy Drive  
Canonsburg, PA 15317

DESIGNATED AGENT: Joseph C. Mallow  
ADDRESS: 427 Midstate Drive  
Clarksburg, WV 26301

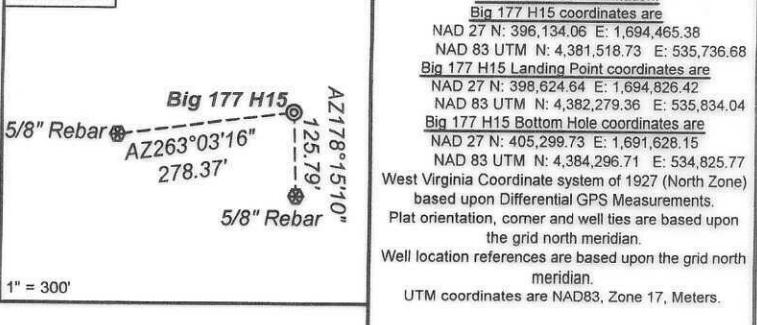
# Big 177 H15

## Big 177

EQT Production Company

Tract I.D.	Tax Map No.	Parcel No.	County	District	Surface Tract Owner	Acres
1	13	6	Wetzel	Grant	Coastal Forest Resources Company	217.19
2	8	18	Wetzel	Grant	Coastal Forest Resources Company	337
3	8	23.2	Wetzel	Grant	James L. Dulaney	43.19
4	8	35	Wetzel	Grant	John D. Parks	15.5
5	8	66	Wetzel	Grant	EQM Gathering OPO LLC	0.418
6	8	65	Wetzel	Grant	Ikey Joe & Tina M. Willey	2.15
7	8	36	Wetzel	Grant	James L. & Karen Dulaney	14.1
8	8	37	Wetzel	Grant	James L. & Karen Dulaney	14.1
9	8	43	Wetzel	Grant	Judy K Ut	3.25
10	8	45	Wetzel	Grant	Dale K. Dulaney	9.828
11	13	7	Wetzel	Grant	Mansel Lee McDiffitt, et al.	51.8
12	13	15	Wetzel	Grant	Robert Scott & Alfred Bryan Cole	27.75
13	13	13	Wetzel	Grant	Linda L. Dunn	67.5
14	13	12	Wetzel	Grant	Leslie Lydick & Susan Miracle	15.02
16	13	6.1	Wetzel	Grant	Coastal Forest Resources Company	55.06
17	8	34	Wetzel	Grant	Hallie M. & Paul E Hardbarger	54.01
20	13	4	Wetzel	Grant	Jeffrey L. & Beth Willey	26.8
37	7	34	Wetzel	Grant	Kenneth E Wildman Life Estate	44.6
38	8	17	Wetzel	Grant	Kenneth E Wildman Life Estate	67
40	7	10	Wetzel	Grant	Coastal Forest Resources Company	120
41	8	10	Wetzel	Grant	Mark W. Minor, et al.	48.1
42	8	19	Wetzel	Grant	Phillip Brent & Kimberly Shreve	46.45
48	13	14	Wetzel	Grant	Linda L. Dunn	12.5
49	8	23	Wetzel	Grant	Dale K. Dulaney	43.19
127	7	9	Wetzel	Grant	Coastal Forest Resources Company	170.88
129	7	5	Wetzel	Grant	Christopher M. Morgan, et al.	74
130	7	3	Wetzel	Grant	Coastal Forest Resources Company	178
131	7	60	Wetzel	Grant	Cody Norris	10
132	7	2.2	Wetzel	Grant	Cody Norris	2.43
133	7	3.1	Wetzel	Grant	Edward L. Dulaney, et al.	4
137	2	15	Wetzel	Grant	Teora L. & Sandra J. Dulaney	1.023
138	2	16	Wetzel	Grant	Teora L. & Sandra J. Dulaney	3.187
139	7	3.2	Wetzel	Grant	Coastal Forest Resources Company	156.98
140	8	1	Wetzel	Grant	Danny & Dustin Stockslager	170
141	8	12	Wetzel	Grant	Shirley A. Titus	41.9
142	3	24	Wetzel	Grant	Coastal Forest Resources Company	35.89
143	3	14	Wetzel	Grant	Owen E & Saloma D. Schmucker	70.5
144	3	23	Wetzel	Grant	Coastal Forest Resources Company	167.75
145	3	13	Wetzel	Grant	Edward L. Dulaney	164.75
146	3	5	Wetzel	Grant	Coastal Forest Resources Company	179

### Well References



### As Drilled Well Information:

#### Big 177 H15 coordinates are:

NAD 27 N: 396,134.06 E: 1,694,465.38

NAD 83 UTM N: 4,381,518.73 E: 535,736.68

#### Big 177 H15 Landing Point coordinates are:

NAD 27 N: 398,624.64 E: 1,694,826.42

NAD 83 UTM N: 4,382,279.36 E: 535,834.04

#### Big 177 H15 Bottom Hole coordinates are:

NAD 27 N: 405,299.73 E: 1,691,628.15

NAD 83 UTM N: 4,384,296.71 E: 534,825.77

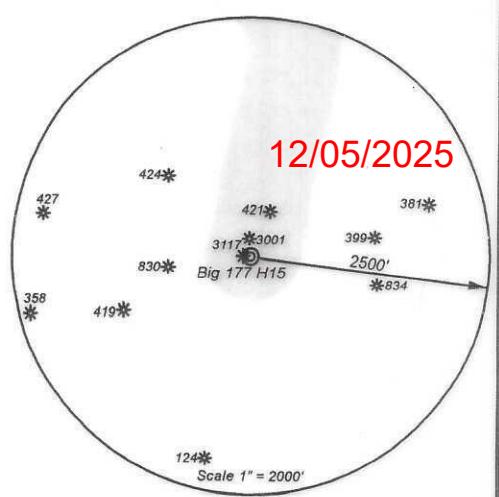
West Virginia Coordinate system of 1927 (North Zone) based upon Differential GPS Measurements.

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
121095000	Coastal Forest Resources Company, et al.	300
101902015	ET Blue Grass, LLC., et al.	16
112441000	EQT Production Company	300
106744000	Shiben Estates, Inc., et al.	1030



**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 list				

**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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Office of Oil and Gas

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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:	<u>EQT Production Company</u>
By:	<u>Branden Weimer</u>
Its:	<u>Regional Manager - Permitting</u>

Lease No.	Grantor, Lessor, etc.	Acres	Grantee, Lessee, etc.	Royalty	Book/Page
<u>121095000</u>	<u>Coastal Forest Resources Company, et al.</u> James V. Higgins The Philadelphia Company of West Virginia Pittsburgh and West Virginia Gas Company Equitable Gas Company Equitans, Inc. Equitable Gas Company, LLC, et al. Equitans, L.P.	300 ac	The Philadelphia Company of West Virginia Pittsburgh and West Virginia Gas Company Equitable Gas Company Equitans, Inc. Equitable Gas Company LLC Equitans, L.P. EQT Production Company	"at least 1/8th per WV Code 22-6-8"	DB 60/414 OG 22A/352 DB 187/321 OG 71A/453 Corp. Book 13/213 Misc 105/908 OG 131A/81
<u>101902015</u>	<u>ET Blue Grass, LLC., et al.</u> Julia Wiley, widow and Hursel Wiley Equitable Gas Company Equitans, Inc. Equitable Gas Company, LLC, et al. Equitans, L.P.	16 ac	Equitable Gas Company Equitans, Inc. Equitable Gas Company LLC Equitans, L.P. EQT Production Company	"at least 1/8th per WV Code 22-6-8"	OG 48A/147 OG 71A/453 Corp. Book 13/213 Misc 105/908 OG 131A/81
<u>112441000</u>	<u>EQT Production Company</u> J.B. Hicks The Philadelphia Company of West Virginia Pittsburgh and West Virginia Gas Company Equitable Gas Company Equitans, Inc. Equitable Gas Company, LLC, et al. Equitans, L.P. Equitable Production Company	300 ac	The Philadelphia Company of West Virginia Pittsburgh and West Virginia Gas Company Equitable Gas Company Equitans, Inc. Equitable Gas Company LLC Equitans, L.P. Equitable Production - Easter States, Inc. EQT Production Company	"at least 1/8th per WV Code 22-6-8"	DB 47/441 OG 22A/352 DB 187/321 OG 71A/453 Corp. Book 13/213 Misc 105/908 OG 379A/106 Corp. Book 13/14
<u>106744000</u>	<u>Shiben Estates, Inc., et al.</u> Shiben Estates, Inc.	1030 ac	EQT Production Company	"at least 1/8th per WV Code 22-6-8"	OG 182A/84

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E Q T P R O D U C T I O N C O M P A N Y  
2200 Energy Drive | Canonsburg, PA 15317

October 23, 2025

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

Re: BIG177 H15  
Grant District, Wetzel County, WV

Dear Mr. Brewer,

EQT Production Company is applying for a 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 black ink, appearing to read 'Branden Weimer'.

Branden Weimer  
Regional Manager - Permitting

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**Horizontal Natural Gas Well Work Permit  
Application Notice By Publication**

**Notice is hereby given:**

Pursuant to West Virginia Code 22-6A-10(e) prior to filing an application for a permit for a horizontal well the applicant shall publish in the county in which the well is located or is proposed to be located a Class II legal advertisement.

**Paper:** Wetzel Chronicle

**Public Notice Date:** 10/15/25 & 10/22/25

The following applicant intends to apply for a horizontal natural well work permit which disturbs three acres or more of surface excluding pipelines, gathering lines and roads **or** utilizes more than two hundred ten thousand gallons of water in any thirty day period.

**Applicant:** EQT Production Company

**Well Number:** BIG177 H2, H7, and H15

**Address:** 2200 Energy Drive, Canonsburg, PA 15317

**Business Conducted:** Natural gas production.

**Location –**

State:	<u>West Virginia</u>	County:	<u>Wetzel</u>
District:	<u>Grant</u>	Quadrangle:	<u>Big Run</u>
UTM Coordinate NAD83 Northing: <u>H2 - 4381511.07; H7 - 4381509.38; H15 - 4381518.73</u>			
UTM coordinate NAD83 Easting: <u>H2 - 535727.88; H7 - 535736.86; H15 - 535736.68</u>			
Watershed: <u>Willey Fork of North Fork Fishing Creek</u>			

**Coordinate Conversion:**

To convert the coordinates above into longitude and latitude, visit: [http://tagis.dep.wv.gov/convert/llutm\\_conus.php](http://tagis.dep.wv.gov/convert/llutm_conus.php)

**Electronic notification:**

To receive an email when applications have been received or issued by the Office of Oil and Gas, visit <http://www.dep.wv.gov/insidedep/Pages/DEPMailingLists.aspx> to sign up.

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**Reviewing Applications:**

Copies of the proposed permit application may be reviewed at the WV Department of Environmental Protection headquarters, located at 601 57<sup>th</sup> Street, SE Charleston, WV 25304 (304-926-0450). Full copies or scans of the proposed permit application will cost \$15, whether mailed or obtained at DEP headquarters. Copies may be requested by calling the office or by sending an email to [DEP.comments@wv.gov](mailto:DEP.comments@wv.gov).

WV Department of  
Environmental Protection

**Submitting Comments:**

Comments may be submitted online at <https://apps.dep.wv.gov/oog/comments/comments.cfm>, or by letter to Permit Review, Office of Oil and Gas, 601 57<sup>th</sup> Street, SE Charleston, WV 25304. Please reference the county, well number, and operator when using this option.

Regardless of format for comment submissions, they must be received no later than thirty days after the permit application is received by the Office of Oil and Gas.

For information related to horizontal drilling visit: [www.dep.wv.gov/oil-and-gas/pages/default.aspx](http://www.dep.wv.gov/oil-and-gas/pages/default.aspx)

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

Date of Notice Certification: 10/31/25

API No. 47- 103 - 03191  
Operator's Well No. H15  
Well Pad Name: BIG177

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: West Virginia  
County: Wetzel  
District: Grant  
Quadrangle: Big Run  
Watershed: Willey Fork of North Fork Fishing Creek

UTM NAD 83      Easting: 535736.68  
Northing: 4381518.73  
Public Road Access: Rt 19/Willey Fork Rd.  
Generally used farm name: BIG177

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: (i) 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.

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:

\*PLEASE CHECK ALL THAT APPLY

1. NOTICE OF SEISMIC ACTIVITY or  NOTICE NOT REQUIRED BECAUSE NO SEISMIC ACTIVITY WAS CONDUCTED

2. NOTICE OF ENTRY FOR PLAT SURVEY or  NO PLAT SURVEY WAS CONDUCTED

3. NOTICE OF INTENT TO DRILL or  NOTICE NOT REQUIRED BECAUSE NOTICE OF ENTRY FOR PLAT SURVEY WAS CONDUCTED or  
 WRITTEN WAIVER BY SURFACE OWNER (PLEASE ATTACH)

4. NOTICE OF PLANNED OPERATION

5. PUBLIC NOTICE

6. NOTICE OF APPLICATION

OOG OFFICE USE ONLY

RECEIVED/NOT REQUIRED  
 RECEIVED  
 RECEIVED/NOT REQUIRED  
 RECEIVED  
 RECEIVED  
 RECEIVED

Required Attachments:

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

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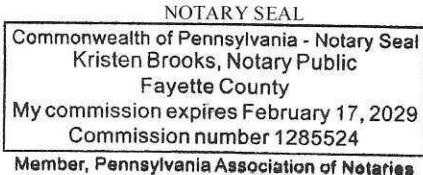
WV Department of Environmental Protection  
12/05/2025

**Certification of Notice is hereby given:**

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

Well Operator: EQT Production Company  
By: Branden Weimer TW  
Its: Regional Manager - Permitting  
Telephone: 844-378-5263

Address: 2200 Energy Drive  
Canonsburg, PA 15317  
Facsimile: \_\_\_\_\_  
Email: \_\_\_\_\_



Subscribed and sworn before me this 31<sup>st</sup> day of October, 2025  
Kristen Brooks Notary Public  
My Commission Expires February 17, 2029

**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 of your personal information, please contact DEP's Chief Privacy Officer at [depprivacyofficer@wv.gov](mailto:depprivacyofficer@wv.gov).

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

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

**Date of Notice:** 10/23/2025 **Date Permit Application Filed:** 11/3/25

**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: see attached

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

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

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

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

Name: see attached

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

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

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

SURFACE OWNER(s) (Impoundments or Pits)

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

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

COAL OWNER OR LESSEE

Name: see attached

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

COAL OPERATOR

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

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

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

Name: see attached

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

WV Department of  
Environmental Protection

OPERATOR OF ANY NATURAL GAS STORAGE FIELD

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

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

\*Please attach additional forms if necessary

**Notice is hereby given:**

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

**This Notice Shall Include:**

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

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

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

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

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

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WV Department of Environmental Protection

**Well Location Restrictions**

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

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

#### **Water Well Testing:**

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

#### **Water Testing Laboratories:**

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

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

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

#### **Written Comment:**

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

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

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

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12/05/2025

### **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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WV Department of  
Environmental Protection

WW-6A  
(8-13)

API NO. 47-103 - 03191

OPERATOR WELL NO. H15

Well Pad Name: BIG177

**Notice is hereby given by:**

Well Operator: EQT Production Company



Telephone: 844-378-5263

Email: branden.weimer@eqt.com

Address: 2200 Energy Drive

Canonsburg, PA 15317

Facsimile: \_\_\_\_\_

**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).

Commonwealth of Pennsylvania - Notary Seal  
Kristen Brooks, Notary Public  
Fayette County  
My commission expires February 17, 2029  
Commission number 1285524  
Member, Pennsylvania Association of Notaries

Subscribed and sworn before me this 31<sup>st</sup> day of October, 2025



\_\_\_\_\_  
Kristen Brooks Notary Public

My Commission Expires February 17, 2029

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Office of Oil and Gas

NOV 03 2025

WV Department of  
Environmental Protection

12/05/2025

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

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

**Notice Time Requirement:** Notice shall be provided at least **TEN (10)** days prior to filing a permit application.

**Date of Notice:** 10/23/2025

**Date Permit Application Filed:** 11/3/25

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

**HAND**  **CERTIFIED MAIL**  
**DELIVERY** **RETURN RECEIPT REQUESTED**

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

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

Name: Coastal Forest Resources Co.  
Address: PO Box 1023  
Havana, FL 32333

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

**Notice is hereby given:**

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

State: West Virginia  
County: Wetzel  
District: Grant  
Quadrangle: Big Run  
Watershed: Willey Fork of North Fork Fishing Creek

UTM NAD 83      Easting: 535736.68  
Northing: 4381518.73  
Public Road Access: Rt 19  
Generally used farm name: BIG177

**This Notice Shall Include:**

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

**Notice is hereby given by:**

Well Operator: EQT Production Company  
Address: 2200 Energy Drive  
Canonsburg, PA 15317  
Telephone: 844-378-5263  
Email: kristen.brooks@eqt.com  
Facsimile: \_\_\_\_\_

Authorized Representative: Branden Weimer  
Address: 2200 Energy Drive  
Canonsburg, PA 15317  
Telephone: 844-378-5263  
Email: branden.weimer@eqt.com  
Facsimile: \_\_\_\_\_

NOV 03 2025

**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).

12/05/2025

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

**Notice Time Requirement:** notice shall be provided no later than the **filing date of permit application**.  
**Date of Notice:** 10/23/2025      **Date Permit Application Filed:** 11/3/25

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

**CERTIFIED MAIL**  
RETURN RECEIPT REQUESTED       **HAND**  
DELIVERY

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

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

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

Name: Coastal Forest Resources Co.  
Address: PO Box 1023  
Havana, FL 32333

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

**Notice is hereby given:**

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

State: West Virginia  
County: Wetzel  
District: Grant  
Quadrangle: Big Run  
Watershed: Willey Fork of North Fork Fishing Creek

UTM NAD 83      Easting: 535736.68  
Northing: 4381518.73  
Public Road Access: RT 19/Willey Fork Rd  
Generally used farm name: BIG177

**This Notice Shall Include:**

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

Well Operator: EQT Production Company  
Telephone: 844-378-5263  
Email: kristen.brooks@eqt.com

Address: 2200 Energy Drive  
Canonsburg, PA 15317  
Facsimile: \_\_\_\_\_

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WV Department of  
Environmental Protection

**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).

WW-6RW  
(1-12)

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Office of Oil and Gas

MAY 30 2017

EQT PRODUCTION COMPANY

PO BOX 280  
BRIDGEPORT, WV 26330-0280

API NO. 47-  
OPERATOR WELL NO. H15-513844  
Well Pad Name: BIG 177

WV Department of  
Environmental Protection

STATE OF WEST VIRGINIA  
DEPARTMENT OF ENVIRONMENTAL PROTECTION, OFFICE OF OIL AND GAS  
**WELL LOCATION RESTRICTION WAIVER**

The well operator, EQT Production Company is applying for a permit from the State of West Virginia to conduct oil or gas well work. Please be advised that well work permits are valid for twenty-four (24) months.

**Well Location Restrictions**

Pursuant to West Virginia Code § 22-6A-12(a), Wells may not be drilled within two hundred fifty feet measured horizontally from any existing water well or developed spring used for human or domestic animal consumption. The center of well pads may not be located within six hundred twenty-five feet of an occupied dwelling structure, or a building two thousand five hundred square feet or larger used to house or shelter dairy cattle or poultry husbandry. This limitation is applicable to those wells, developed springs, dwellings or agricultural buildings that existed on the date a notice to the surface owner of planned entry for surveying or staking as provided in section ten of this article or a notice of intent to drill a horizontal well as provided in subsection (b), section sixteen of this article was provided, whichever occurs first, and to any dwelling under construction prior to that date. This limitation may be waived by written consent of the surface owner transmitted to the department and recorded in the real property records maintained by the clerk of the county commission for the county in which such property is located. Furthermore, the well operator may be granted a variance by the secretary from these distance restrictions upon submission of a plan which identifies the sufficient measures, facilities or practices to be employed during well site construction, drilling and operations. The variance, if granted, shall include terms and conditions the department requires to ensure the safety and protection of affected persons and property. The terms and conditions may include insurance, bonding and indemnification, as well as technical requirements.

**WAIVER**

I, \_\_\_\_\_, hereby state that I have read the Instructions to Persons Named on Page WW-6A and the associated provisions listed above, and that I have received copies of a Notice of Application, an Application for a Well Work Permit on Form WW-6A and attachments consisting of pages one (1) through \_\_\_\_\_, including the erosion and sediment control plan, if required, and the well plat, all for proposed well work on the tract of land as follows:

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Office of Oil and Gas

NOV 03 2025

WV Department of  
Environmental Protection

State: West Virginia  
County: Wetzel  
District: Grant  
Quadrangle: Big Run 7.5"  
Watershed: Willey Fork

UTM NAD 83 Easting:  
UTM NAD 83 Northing:  
Public Road Access:  
Generally used farm name:

CR 19 / Willey Fork Road

Carol S Haugst  
ME (ZEL) County 02-30-31 PM  
Instrument No 154554  
Date Recorded 12/03/2013

**WELL SITE RESTRICTIONS BEING WAIVED**

\*Please check all that apply

EXISTING WATER WELLS  
 DEVELOPED SPRINGS  
 DWELLINGS  
 AGRICULTURAL BUILDINGS

**FOR EXECUTION BY A NATURAL PERSON**

Signature: Ikey Joe Willey  
Print Name: Ikey Joe Willey

Date: 7-31-2013

**FOR EXECUTION BY A CORPORATION**

Company: \_\_\_\_\_

By: \_\_\_\_\_

Its: \_\_\_\_\_

Signature: \_\_\_\_\_

Date: \_\_\_\_\_

Well Operator: EQT Production Company  
By: John W. Damato  
Its: Attorney-In-Fact

Signature: John W. Damato  
Telephone: \_\_\_\_\_

OFFICIAL SEAL  
COMMISSIONER FOR WEST VIRGINIA  
NOTARY SEAL  
Bryson J. Karp  
Weston, WV  
My Commission Expires January 1, 2021

Subscribed and sworn before me this 31 day of July 2013

Bryson J. Karp  
My Commission Expires Jan 1 2021

Notary Public

**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).

12/05/2025





WEST VIRGINIA  
DEPARTMENT OF TRANSPORTATION

Michael J. DeMers  
Deputy Secretary of Transportation

1900 Kanawha Boulevard East • Building Five • Room 109  
Charleston, West Virginia 25305-0440 • (304) 558-0444

Stephen T. Rumbaugh, P.E.  
Secretary of Transportation  
Commissioner of Highways

August 11, 2025

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 BIG 177 Well Pad, Wetzel County  
BIG 177 H2 Well Site BIG 177 H7 Well Site BIG 177 H15 Well Site**

Dear Mr. Martin,

This well site will be accessed from a DOH permit #06-2013-0292 which has been issued to EQT Production Company for access to the State Road for a well site located off Wetzel County Route 19 SLS MP 0.44.

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 March 6, 2023. This letter is valid for permitting purposes for one year from the date of this letter.

Very Truly Yours,

A handwritten signature in blue ink that reads "Lacy D. Pratt".

Lacy D. Pratt  
Central Office O&G Coordinator

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Office of Oil and Gas

NOV 03 2025

WV Department of  
Environmental Protection

Cc: Kristen Brooks  
EQT Production Company  
OM, D-6  
File

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

<u>Material</u>	<u>Ingredient</u>	<u>CAS Number</u>
<b>Sand (Proppant)</b>	<b>Silica Substrate</b>	<b>14808-60-7</b>
<b>Water</b>	<b>Water</b>	<b>7732-18-5</b>
<b>Hydrochloric Acid (HCl)</b>	<b>Hydrogen Chloride</b>	<b>7647-01-0</b>
<b>Friction Reducer</b>	<b>Copolymer of 2-propenamide</b> Petroleum Distillate Oleic Acid Diethanolamide Alcohols, C12-16, ethoxylated Ammonium chloride ((NH4)Cl)	<b>Proprietary</b> 64742-47-8 93-83-4 68551-12-2 12125-02-9
<b>Biocide</b>	<b>Glutaraldehyde</b> Alkyl dimethyl benzyl ammonium chloride Didecyl dimethyl ammonium chloride Non-hazardous substances	<b>111-30-8</b> 68391-01-5 7173-51-5 Proprietary
<b>Scale Control</b>	<b>Bis(HexaMethylene Triamine Penta(Methylene Phosphonic Acid)(BHMT)</b> Non-hazardous substances	<b>34690-00-1</b> Proprietary
<b>Acid Chelating Agent</b>	<b>Ferriplex 66</b> Citric Acid Acetic Acid	<b>77-92-9</b> 64-19-7
<b>Corrosion Inhibitor</b>	<b>PLEXHIB 166</b> Methanol Alcohols, C14-15, ethoxylated	<b>67-56-1</b> 68951-67-7

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WV Department of  
Environmental Protection

OPERATOR: EQT Production Company WELL NO: H15

PAD NAME: BIG177

REVIEWED BY: Branden Weimer SIGNATURE: Branden Weimer

## WELL RESTRICTIONS CHECKLIST

### HORIZONTAL 6A WELL

#### Well Restrictions

At Least 100 Feet from Pad and LOD (including any E&S Control Feature) to any Perennial Stream, Lake, Pond, Reservoir or Wetland; OR

DEP Waiver and Permit Conditions

At Least 300 Feet from Pad and LOD (including any E&S Control Feature) to any Naturally Producing Trout Stream; OR

DEP Waiver and Permit Conditions

At Least 1000 Feet from Pad and LOD (including any E&S Control Feature) to any Groundwater Intake or Public Water Supply; OR

DEP Waiver and Permit Conditions

At Least 250 Feet from an Existing Water Well or Developed Spring to Well Being Drilled; OR

Surface Owner Waiver and Recorded with County Clerk, OR

DEP Variance and Permit Conditions

At Least 625 Feet from an Occupied Dwelling Structure to Center of the Pad; OR

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Surface Owner Waiver and Recorded with County Clerk, OR

DEP Variance and Permit Conditions

At Least 625 Feet from Agricultural Buildings Larger than 2500 Square Feet to the Center of the Pad; OR

Surface Owner Waiver and Recorded with County Clerk, OR

DEP Variance and Permit Conditions

WV Department of  
Environmental Protection

# WEST VIRGINIA 811

THREE WORKING DAYS PRIOR TO EXCAVATION, THE CONTRACTOR MUST CONTACT THE WV ONE CALL SYSTEM, INC., 1-800-242-1776 WV ONE CALL #2528288210

## OWNER



EQT PRODUCTION COMPANY  
2200 ENERGY DRIVE  
CANONSBURG, PA 15317

# BIG 177 PAD MAJOR MODIFICATION BURTON DISTRICT, WETZEL COUNTY, WV OCTOBER 2025

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NOV 03 2025  
WV Department of  
Environmental Protection

PLANS PREPARED BY:

BOORD BENCHEK & ASSOC., INC.

ENGINEERING, SURVEYING, CONSTRUCTION AND MINING SERVICES  
SOUTHPOINTE, PA 15317 PHONE: 724-746-1055



SHEET INDEX  
 1. TITLE SHEET  
 2. E&S CONTROL LAYOUT  
 3. E&S CONTROL AND SITE PLAN  
 4. CROSS-SECTIONS  
 5-7. DETAILS  
 8. RECLAMATION PLAN

TOTAL DISTURBED AREA: 7.26 AC.

ANDREW BENCHEK  
P.E.



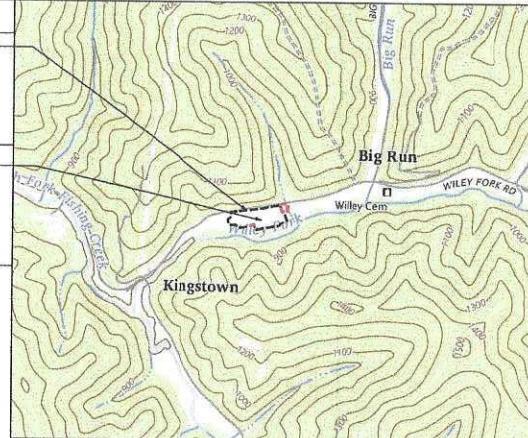
PERMITTED PROJECT BOUNDARY : 6.89 ACRES  
ADDITIONAL PROJECT BOUNDARY: 0.37 ACRES  
TOTAL: 7.26 ACRES

PROPERTY OWNER DISTURBANCE : 7.26 ACRES  
COASTAL FOREST RESOURCES CO  
(TAX MAP AND PARCEL NUMBER 4-13-6-1) 3.49 ACRES  
COASTAL FOREST RESOURCES CO  
(TAX MAP AND PARCEL NUMBER 4-13-6) 3.44 ACRES  
EQT GATHERING  
(TAX MAP AND PARCEL NUMBER 4-8-66) 0.33 ACRES

## COORDINATES

SITE ENTRANCE  
(NAD 83)  
LAT: 39° 34' 58.87"  
LON: -80° 35' 06.97"  
LAT: 39.58302°  
LON: -80.58527°

CENTER OF WELLS  
(NAD 83)  
LAT: 39° 34' 57.40"  
LON: -80° 35' 02.04"  
LAT: 39.58261°  
LON: -80.58389°



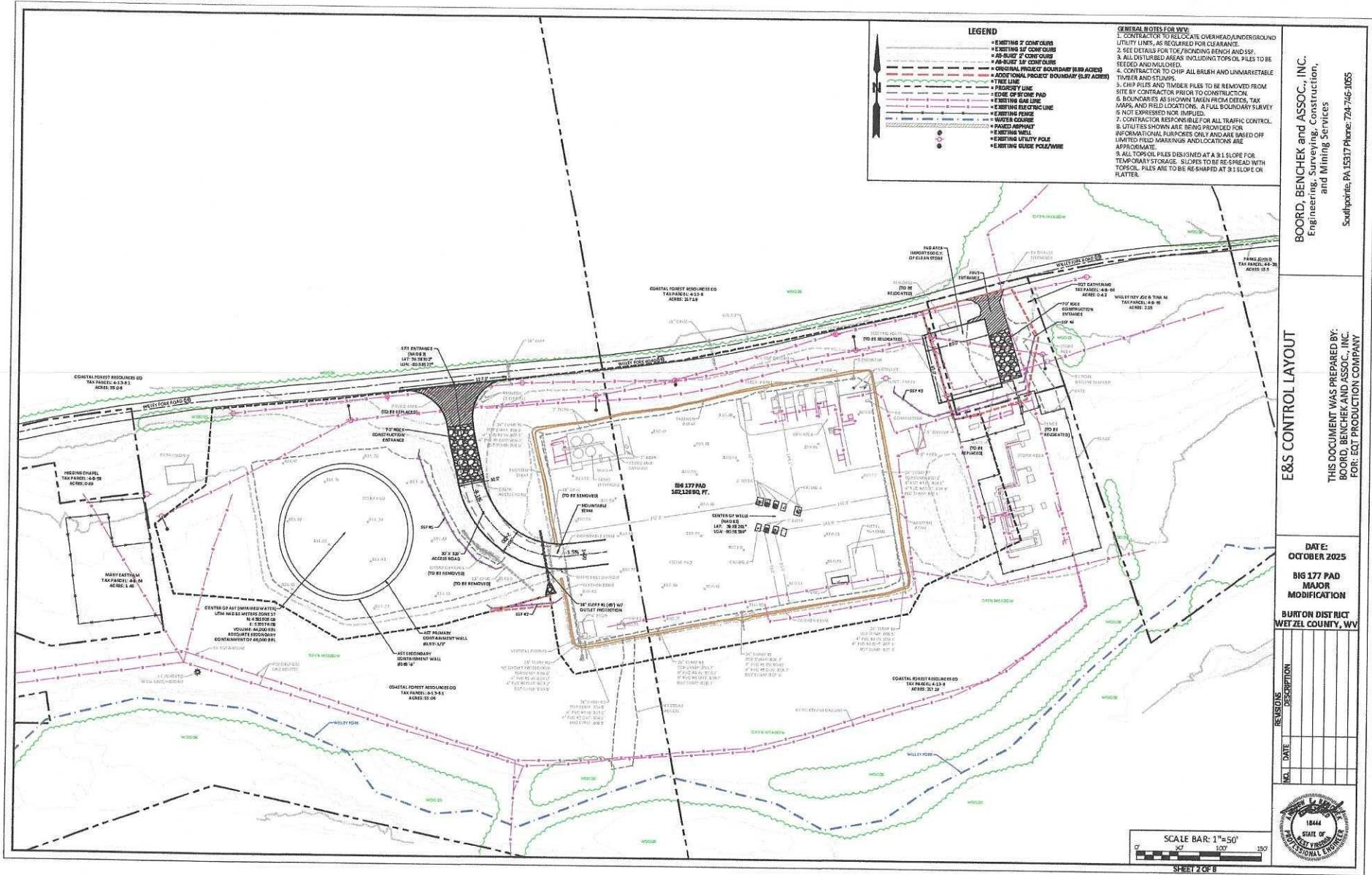
1" = 1,000'  
0 1,000' 2,000' 3,000'

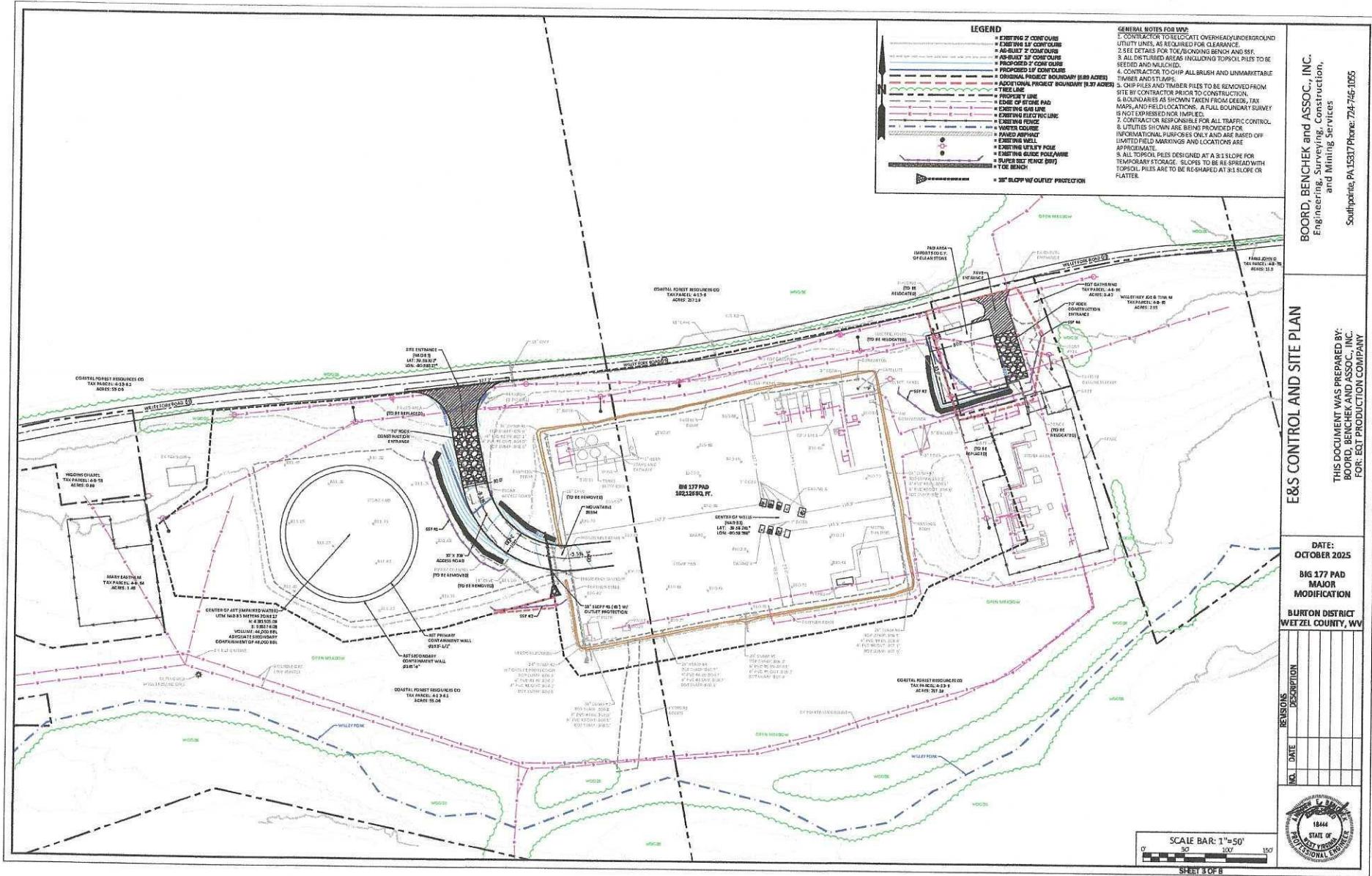
IN ACCORDANCE WITH WV 35 CSR 8  
THE FOLLOWING EROSION & SEDIMENT CONTROL PLAN HAS BEEN  
DESIGNED IN ACCORDANCE WITH BEST MANAGEMENT PRACTICES  
ESTABLISHED BY THE CHIEF AND PROVIDED IN THE OFFICE'S EROSION AND  
SEDIMENT CONTROL FIELD MANUAL. A GENERAL CONSTRUCTION  
SEQUENCE, DESCRIPTION OF STABILIZATION METHODS, AND DETAILS &  
SPECIFICATIONS FOR EROSION & SEDIMENT BEST MANAGEMENT  
PRACTICES HAVE BEEN INCLUDED IN THE PROVIDED DETAIL SHEETS.

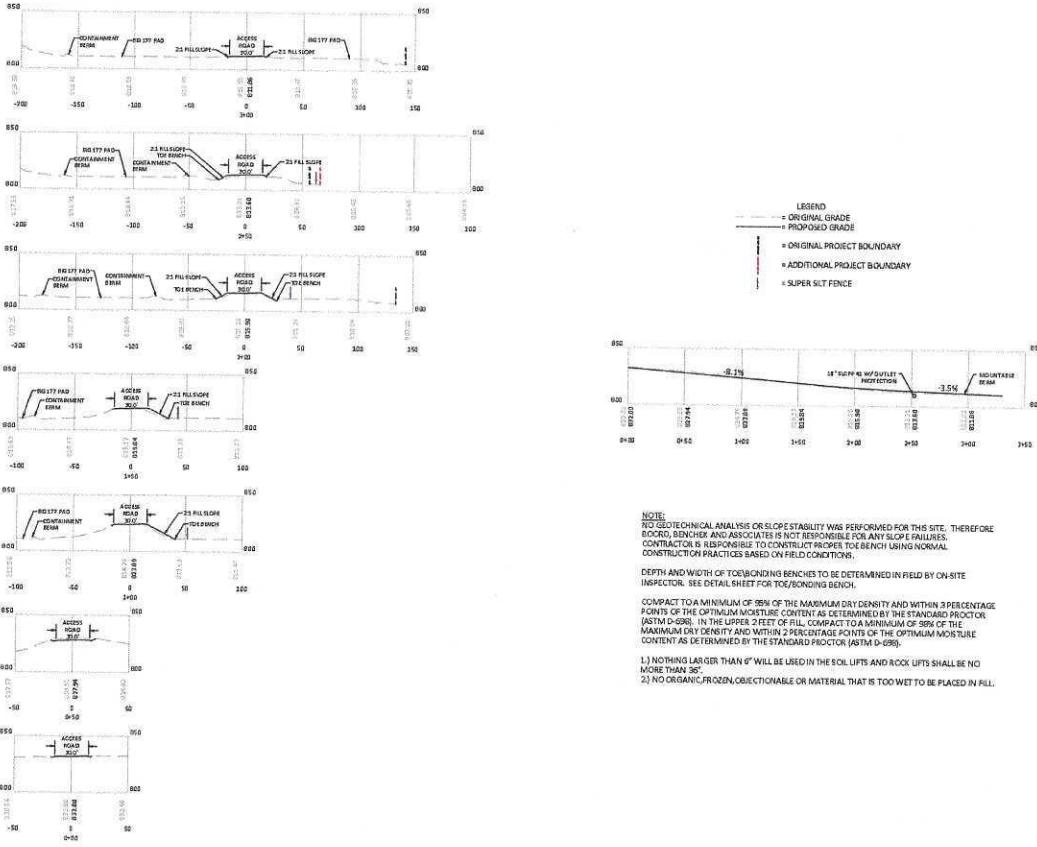
REVISIONS		
NO.	DATE	DESCRIPTION

TITLE SHEET  
BIG 177 PAD  
MAJOR MODIFICATION  
BURTON DISTRICT, WETZEL COUNTY, WV

SHEET  
1  
OF  
8







NOTE:  
NO GEOTECHNICAL ANALYSIS OR SOIL-SITE STABILITY WAS PERFORMED FOR THIS SITE. THEREFORE BOARD, BENCHER AND ASSOCIATES IS NOT RESPONSIBLE FOR ANY ALONE FAILURES. CONTRACTOR IS RESPONSIBLE TO CONSTRUCT PROPER TOE/BONDING BENCH USING NORMAL CONSTRUCTION PRACTICES BASED ON FIELD CONDITIONS.

DEPTH AND WIDTH OF TOE/BONDING BENCHES TO BE DETERMINED IN FIELD BY ON-SITE INSPECTOR. SEE DETAIL SHEET FOR TOE/BONDING BENCH.

COMPACT TO A MINIMUM OF 98% OF THE MAXIMUM DRY DENSITY AND WITHIN 2% PERCENTAGE POINTS OF THE OPTIMUM MOISTURE CONTENT AS DETERMINED BY THE STANDARD PROCTOR (ASTM D-693) ON THE SOILS AND ROCKS IN THE FILL. COMPACT TO A MINIMUM OF 98% OF THE MAXIMUM DRY DENSITY AND WITHIN 2% PERCENTAGE POINTS OF THE OPTIMUM MOISTURE CONTENT AS DETERMINED BY THE STANDARD PROCTOR (ASTM D-698).

1) NOTHING LARGER THAN 6" WILL BE USED IN THE SOIL UFTS AND ROCK UFTS SHALL BE NO MORE THAN 36".  
2) NO ORGANIC, FROZEN, OBjectionable OR MATERIAL THAT IS TOO WET TO BE PLACED IN FILL.

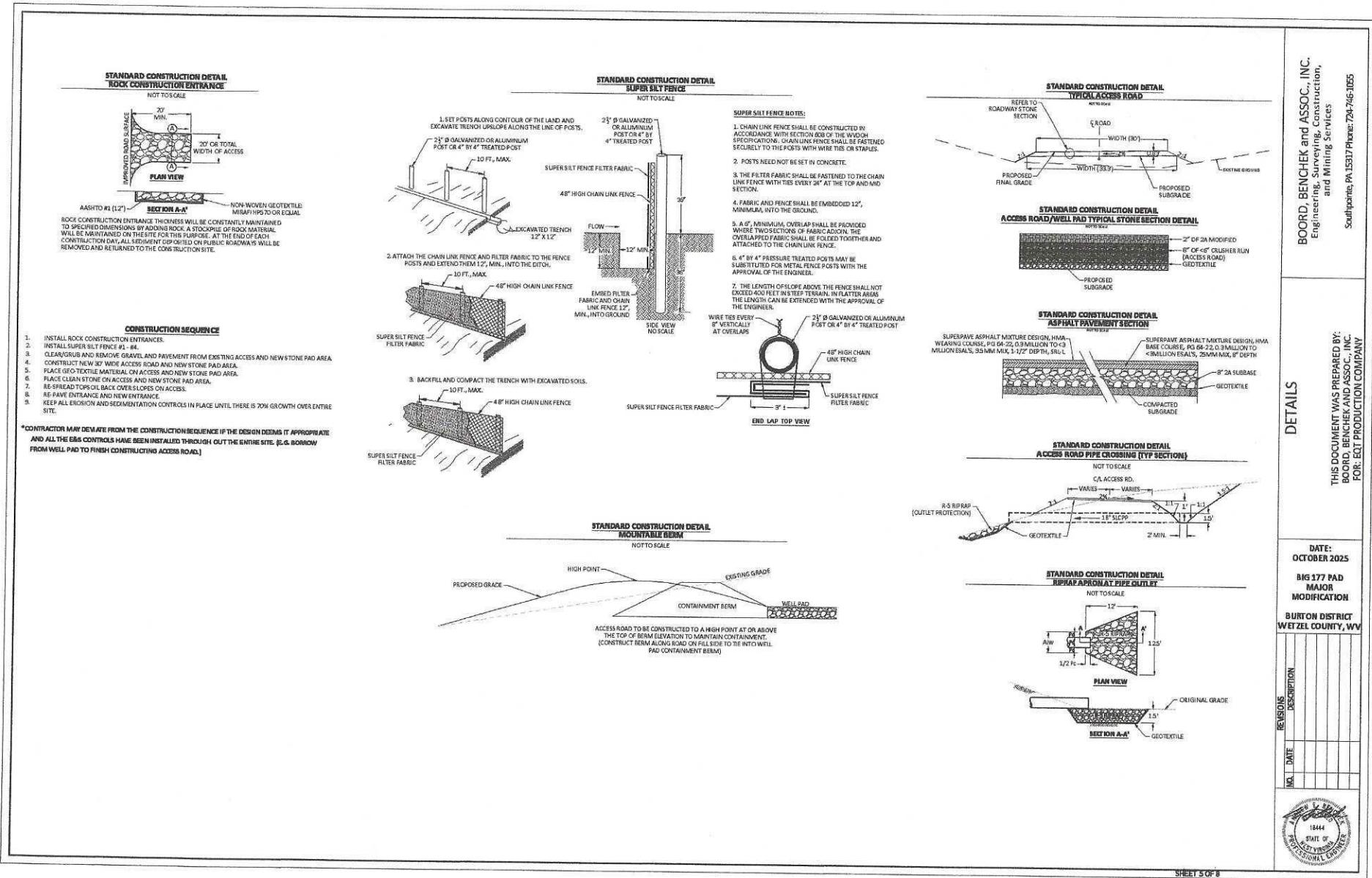
BOARD, BENCHER and ASSOC., INC.  
Engineering, Surveying, Construction,  
and Mining Services  
Southpoint, PA 13317 Phone: 724-465-1055

CROSS-SECTIONS  
THIS DOCUMENT WAS PREPARED BY:  
BOARD, BENCHER AND ASSOC., INC.  
FOR: EQT PRODUCTION COMPANY

DATE:  
OCTOBER 2005  
BIG 177 PAD  
MAJOR  
MODIFICATION  
BURTON DISTRICT  
WETZEL COUNTY, WV

NO.	REVISIONS	DATE	DESCRIPTION





Southpointe, PA 15317 Phone: 724-746-1055  
and Mining Services

THIS DOCUMENT WAS PREPARED BY:  
BOORD, BENCHEK AND ASSOC., INC.  
FOR: EOT PRODUCTION COMPANY

BOORD, BENCHEK and ASSOC. INC.

---

**DETAILS**

DATE:  
OCTOBER 2025

**BIG 377 PAD  
MAJOR  
MODIFICATION**

BURTON DISTRICT  
WETZEL COUNTY, WV

010

## STREETS OF

**STANDARD CONSTRUCTION DETAIL**  
**TOE/BONDING BENCH TYPICAL**

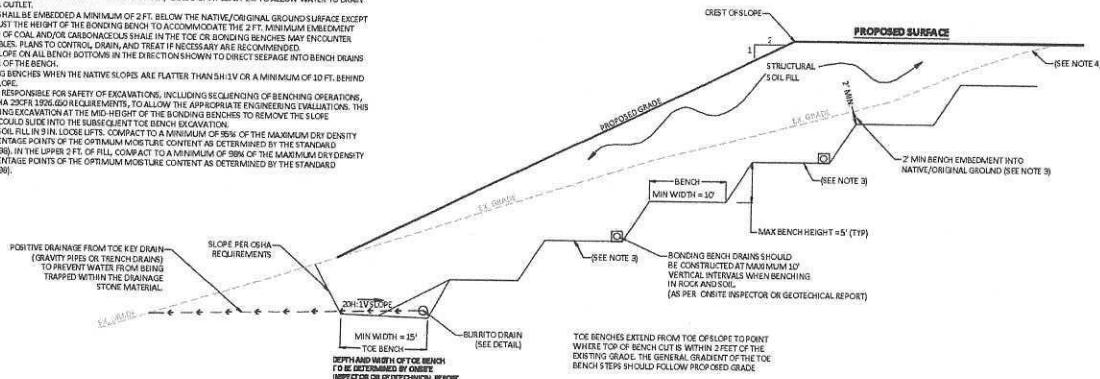
NOT TO SCALE

NOTE: GEOTECHNICAL TOE BONDING BENCH REQUIREMENTS MAY CHANGE, SUBJECT TO FUTURE GEOTECHNICAL INVESTIGATION AND RECOMMENDATIONS.

NOTE: NO GEOTECHNICAL ANALYSIS OR SLOPE STABILITY HAS BEEN PERFORMED FOR THIS SITE; THEREFORE, BOARD, BENCHK AND ASSOCIATES IS NOT RESPONSIBLE FOR ANY SLOPE FAILURES. CONTRACTOR IS RESPONSIBLE TO CONSTRUCT PROPER TOE BENCH USING NORMAL CONSTRUCTION PRACTICES BASED ON FIELD CONDITIONS.

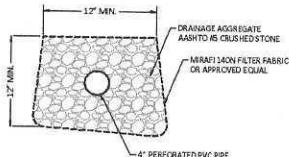
**TOE / BONDING BENCH NOTES**

- TOE BENCHES SHALL BE CONSTRUCTED IN COMPETENT ROCK TO THE MINIMUM DEPTH REQUIRED. ADDITIONAL DEPTHS MAY BE REQUIRED IN FIELD DEPENDING UPON THE STABILITY OF SURFACE MATERIAL. AT THE REQUEST OF THE FIELD ENGINEER, PERFORM TEST PITS AND PROFILING OF THE BENCH SUBGRADE TO EVALUATE THE SURFACE CONDITONS. REMOVE SURFACE MATERIAL TO THE MINIMUM DEPTH OF THE TOE BENCH AS REQUESTED BY THE ENGINEER. PROVIDE A HORIZONTAL ALONG THE LENGTH OF THE TOE BENCH EDGE OF AT LEAST 2' TO ALLOW WATER TO DRAIN TO LOW POINTS FOR OUTLET.
- PROVIDE A DRAINAGE SYSTEM EMBODDED A MINIMUM OF 2' BELOW THE NATIVE/ORIGINAL GROUND SURFACE EXCEPT WHERE NOTED. ADJUST THE HEIGHT OF THE BONDING BENCH TO ACCOMMODATE THE DRAINAGE SYSTEM. THE EMBODIMENT DEPTH EXCAVATION OF COAL AND/OR CARBONACEOUS SHALE IN THE TOE OR BONDING BENCHES MAY ENCOUNTER PERIODIC WATER. PLACEMENT OF CONTROL DRAIN, AND TREAT IF NECESSARY AS RECOMMENDED.
- PROVIDE A DRAINAGE SYSTEM ALONG BENCH BOTTOMS IN THE DIRECTION SHOWN TO DIRECT SEEPAGE INTO BENCH DRAINS PLACED AT THE REAR OF THE BENCH.
- TERMINATE BONDING BENCHES WHEN THE NATIVE SLOPES ARE FLATTER THAN 5H:1V OR A MINIMUM OF 10 FT. BEHIND THE BENCHES.
- THE CONTRACTOR IS RESPONSIBLE FOR SAFETY OF EXCAVATIONS, INCLUDING SCAFFOLDING OF BONDING OPERATIONS, AND SLOPES PER OSHA 29CFR 1926.652 REQUIREMENTS, TO ALLOW THE APPROPRIATE ENGINEERING EVALUATIONS. THIS MAY REQUIRE CONTRACTOR TO CONTRACT WITH AN INDEPENDENT BENCHER TO REMOVE THE SLOPE OVERBURDEN THAT COULD SLIDE INTO THE SURFACE/TOE BENCH EXCAVATION.
- PLACE STRUCTURAL SOIL FILL IN 3 IN. LOOSE LIFTS, COMPACT TO A MINIMUM OF 95% OF THE MAXIMUM DRY DENSITY PROCTOR (ASTM D-698). IN THE UPPER 2 FT. OF FILL, COMPACT TO A MINIMUM OF 98% OF THE MAXIMUM DRY DENSITY PROCTOR (ASTM D-698). IN THE LOWER 2 FT. OF FILL, COMPACT TO A MINIMUM OF 98% OF THE MAXIMUM DRY DENSITY AND WITHIN 2 PERCENTAGE POINTS OF THE OPTIMUM MOISTURE CONTENT AS DETERMINED BY THE STANDARD PROCTOR (ASTM D-698).



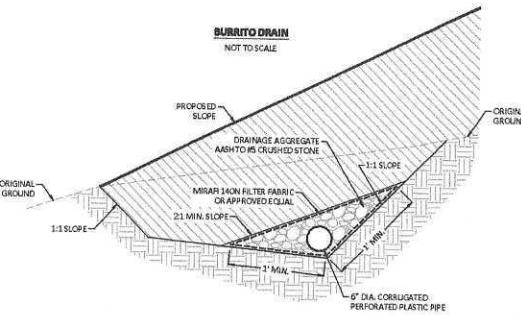
**BONDING BENCH DRAIN**

NOT TO SCALE



**BURRITO DRAIN**

NOT TO SCALE



BOARD, BENCHK and ASSOC., INC.  
Engineering, Surveying, Construction,  
and Mining Services  
Southpointe, PA 15317 Phone: 724-746-3055

**DETAILS**

THIS DOCUMENT WAS PREPARED BY:  
BOARD, BENCHK and ASSOC., INC.  
FOR: E&T PRODUCTION COMPANY

DATE:  
OCTOBER 2025  
BIG 177 PAD  
MAJOR  
MODIFICATION

BURTON DISTRICT  
WETZEL COUNTY, WV

NO.	DATE	DESCRIPTION



Table 4. Permanent Seeding Mixtures Suitable for Establishment in WV.				
Species/Mixture	Seeding Rate (lbs/acre)	Soil Drainage Preference	pH Range	
Crownvetch/	10 - 15	Well - Mod. Well	5.0 - 7.5	
Tall Fescue	30	Well - Mod. Well	5.0 - 7.5	
Crownvetch/	10 - 15	Well - Mod. Well	5.0 - 7.5	
Perennial Ryegrass	20	Well - Mod. Well	5.0 - 7.5	
Flatpea or Perennial Pea/	20	Well - Mod. Well	4.0 - 8.0	
Tall Fescue	15	Well - Mod. Well	4.0 - 8.0	
Ladino Clover	30	Well - Mod. Well	4.5 - 7.5	
Seiraea Lespedeza/	25	Well - Mod. Well	4.5 - 7.5	
Tall Fescue	2	Well - Mod. Well	4.5 - 7.5	
Tall Fescue/	40	Well - Mod. Well	5.0 - 7.5	
Ladino Clover/	3	Well - Mod. Well	5.0 - 7.5	
Redtop	3	Well - Mod. Well	5.0 - 7.5	
Crownvetch	10	Well - Mod. Well	5.0 - 7.5	
Tall Fescue/	20	Well - Mod. Well	5.0 - 7.5	
Redtop	3	Well - Mod. Well	5.0 - 7.5	
Tall Fescue/	40	Well - Mod. Well	5.0 - 7.5	
Birdsfoot Trefoil/	10	Well - Mod. Well	5.0 - 7.5	
Redtop	3	Well - Mod. Well	5.0 - 7.5	
Seiraea Lespedeza/	25	Well - Mod. Well	4.5 - 7.5	
Tall Fescue/	30	Well - Mod. Well	4.5 - 7.5	
Redtop	3	Well - Mod. Well	4.5 - 7.5	
Redtop/	30	Well - Mod. Well	5.0 - 7.5	
Tall Fescue	3	Well - Mod. Well	5.0 - 7.5	
Creeping Red	50	Well - Mod. Well	5.0 - 7.5	
Tall Fescue	50	Well - Poorly	4.5 - 7.5	
Perennial Ryegrass/	10	Well - Poorly	5.0 - 8.0	
Tall Fescue/	15	Well - Poorly	5.0 - 8.0	
Lathico Flatpea *	20	Well - Poorly	5.0 - 8.0	

Table IV-4-1 TAKEN FROM NATURAL RESOURCES CONSERVATION SERVICE MANUAL CRITICAL AREA PLANTING

Table 4b. Mixtures in the Table Below are More Wildlife and Farm Friendly				
Species	Seeding Rate (lbs/acre)	Cultivation Required	Drainage	pH Range
KY Bluegrass	20	Yes	Well - Mod. Well	5.5 - 7.5
Redtop	3	Yes	Well - Mod. Well	5.5 - 7.5
Ladino Clover in Birdsfoot Trefoil	2,10	Yes	Well - Mod. Well	5.5 - 7.5
Tall Fescue	5	Yes	Well - Mod. Well	4.5 - 8.0
Redtop	5	Yes	Well - Mod. Well	4.5 - 8.0
Flatpea or Perennial Pea	8	Yes	Well - Poorly	5.5 - 7.5
Creeping Red	10	Yes	Well - Mod. Well	5.5 - 7.5
Ladino Clover	3	Yes	Well - Mod. Well	5.5 - 7.5
Creeping Red	9	Yes	Well - Mod. Well	5.5 - 7.5
Ladino Clover	2	Yes	Well - Mod. Well	4.5 - 7.5
Orchardgrass	20	Yes	Well - Mod. Well	5.5 - 7.5
Creeping Red Fescue	20	Yes	Well - Mod. Well	5.5 - 7.5
Perennial Ryegrass	19	Yes	Well - Mod. Well	5.5 - 7.5
Orchardgrass or Kentucky Bluegrass	20	Yes	Well - Mod. Well	4.0 - 7.5
Birdsfoot Trefoil	12	Yes	Well - Mod. Well	5.5 - 7.5
Redtop	15	Yes	Well - Mod. Well	5.5 - 7.5
Orchardgrass	25	Yes	Well - Mod. Well	5.5 - 7.5
Lathico Flat Pea	19	Yes	Well - Mod. Well	5.5 - 7.5
Perennial Ryegrass	20	Yes	Well - Mod. Well	5.5 - 7.5
Lambs Fescue	30	Yes	Well - Mod. Well	5.5 - 7.5
Orchardgrass	20	Yes	Well - Mod. Well	5.5 - 7.5

Notes: Species listed in bold are suitable for use in prairie strip seeding. Those in italics are suitable for use in other areas.

1. GENERAL ORGANIC MULCHES

THE APPLICATION OF STRAW, HAY, OR OTHER PULPABLE MATERIALS TO THE SOIL SURFACE IS THE LARGEST SOURCE OF STRAW MADE FROM WHEAT, CR. OATS, OR OTHER PULPABLE MULCH. THE USE OF CR. IS A PERMANENT, BUT NOT ENFORCEABLE, CROP TO DISCOURAGE INVASIVE SPECIES. MULCH MUST BE APPLIED TO ALL TEMPORARY AND PERMANENT SEDDING ON ALL DISTURBED AREAS, DEPENDING ON SITE CONDITIONS IN CRITICAL AREAS. THE USE OF CR. IS A PERMANENT, BUT NOT ENFORCEABLE, CROP TO DISCOURAGE INVASIVE SPECIES. MULCHES MAY BE USED IF DEEMED NECESSARY. EXAMPLES INCLUDE LUTE MULCH, AND SOIL STABILIZATION BLANKETS OR EROSION CONTROL MATTINGS.

2. GENERAL FIBER MULCHES

AREAS THAT HAVE BEEN TEMPORARILY OR PERMANENTLY SEDDED SHOULD BE MULCHED IMMEDIATELY FOLLOWING SEDDING. MULCH CONSERVES DRASABLE SOIL PROPERTIES, REDUCE SOIL MOISTURE LOSSES, PREVENT CRUSTING, AND SEALING OF THE SOIL SURFACE, AND PROVIDE A HABITAT FOR SEEDLING GROWTH. MULCHES CAN ACCUMULATE AND HINDER SEED GERMINATION.

3. AREAS THAT CANNOT BE SEED

AREAS THAT CANNOT BE SEED DUE TO THE NATURE OF THE SOIL SHOULD BE MULCHED TO PROVIDE SOME PROTECTION TO THE SOIL SURFACE. AN ORGANIC MULCH, STRAW, OR HAY, SHOULD BE USED AND THE AREA THEN SEDDED AS SOON AS WEATHER OR SEASONAL CONDITIONS PERMIT. DO NOT USE FIBER MULCH (CELLULOSE & HEDROSE) ALONE FOR THIS. THE DRY SUMMER MONTHS CAN CAUSE THE FIBER MULCH TO DRY OUT AND CRACK. THE MULCH DURING THESE MONTHS, AND FIBER MULCH MAY BE USED TO TACK (ANCHOR) THE STRAW MULCH. FIBER MULCH IS WELL-SUITED FOR STEEP SLOPES, CRITICAL AREAS, AND AREAS SUSCEPTIBLE TO WIND.

4. WOOD CELLULOSE FIBER MULCH

IS USED IN HYDROSEEDING OPERATIONS AND APPLIED AS PART OF THE SLURRY. IT CREATS THE BEST TENDED SOIL CONDITIONS WHEN APPLIED OVER TOP OF (AS A SEPARATE OPERATION) NEWLY SEDDED AREAS. FIBER MULCH DOES NOT ALONE PROVIDE SUFFICIENT PROTECTION ON HIGHLY ERODIBLE SOILS, OR DURING LESS THAN 12 MONTHS OF PROTECTION. FIBER MULCH SHOULD NOT BE USED ALONE DURING THE DRY SUMMER MONTHS, AND FIBER MULCH MAY BE USED TO TACK (ANCHOR) THE MULCH DURING THESE MONTHS, AND FIBER MULCH IS WELL-SUITED FOR STEEP SLOPES, CRITICAL AREAS, AND AREAS SUSCEPTIBLE TO WIND.

5. Mulch Materials Rates and Uses

Material	Minimum Rate per Acre	Coverage	Remarks
Hay or Straw	2 to 3 Tons	Cover 75% to 100% of Surface	Subject to Wind Blowing or Washing unless tied down
Wood Fiber	100 to 150 lbs	100% of Surface	
Pulp Fiber	1000 to 1500 lbs	Cover all Disturbed Areas	For Hydroseeding
Wood-Celulose			
Perennial Pea			

Table IV-5. Lime and Fertilizer Application Table

Material	Rate (Lb/Acre)	Application	Rate (Lb/Acre)	Application
Above 6.0	2	Proper	10-20-20	Proper
5.0 to 6.0	3	Proper		
Below 5.0	5	Proper		

The pH rates are determined with a probe pH meter. If the pH reading is not within the range, add lime or sulfur to bring the pH into the range. Add lime or sulfur to bring the pH into the range.

Table IV-6. Mulch Materials Rates and Uses

Material	Minimum Rate per Acre	Coverage	Remarks
Hay or Straw	2 to 3 Tons	Cover 75% to 100% of Surface	Subject to Wind Blowing or Washing unless tied down
Wood Fiber	100 to 150 lbs	100% of Surface	
Pulp Fiber	1000 to 1500 lbs	Cover all Disturbed Areas	For Hydroseeding

Table IV-7. Recommended Seeding Dates for Permanent and Temporary Cover unless otherwise specified

Planting Dates	Suitability
March 1 - April 15 and August 1 - October 1	Best seeding periods
April 15 - August 1	HIGH RISK - moisture stress likely
October 1 - Dec. 1	HIGH RISK - Freeze damage to young seedlings
Dec. 1 - March 1	Good seeding period. Dormant seeding.

Table 2. Acceptable fertilization recommendation in absence of a soil test.

Species	N (lb/acre)	P2O5 (lb/acre)	K2O (lb/acre)	Example Rec. (per acre)
Cool Season Grass	40	80	80	400 lbs. 10-20-20
CS Grass & Legume	30	60	60	300 lbs. 10-20-20
Temporary Cover	40	40	40	200 lbs. 10-19-19

Table 3. Temporary cover suitable for establishment in West Virginia.

Species	Seeding Rate (lbs/acre)	Cultivation Required	Drainage	pH Range
Annual Ryegrass	40	3/1 - 6/15 or 8/15 - 9/15	Well - Poorly	5.5 - 7.5
Field Bromegrass	40	3/1 - 6/15 or 8/15 - 9/15	Well - Mod. Well	8.0 - 7.0
Spring Oats	96	3/1 - 6/15	Well - Poorly	5.5 - 7.5
Sudangrass	40	5/15 - 8/15	Well - Poorly	5.5 - 7.5
Winter Rye	188	8/15 - 10/15	Well - Poorly	5.5 - 7.5
Winter Wheat	180	8/15 - 11/15	Well - Mod. Well	5.5 - 7.0
Japanese Millet	30	6/15 - 8/15	Well	4.5 - 7.0
Redtop	5	3/1 - 6/15	Well	4.0 - 7.5
Annual Ryegrass	26	3/1 - 6/15	Well - Poorly	5.5 - 7.5
Spring Oats	64	3/1 - 6/15	Well - Poorly	5.5 - 7.5

NOTE: THESE RATES SHOULD BE INCREASED BY 50% IF PLANTED APRIL 15 - AUGUST 1 AND OCTOBER 1 - MARCH 1.

Table IV-4-2 TAKEN FROM NATURAL RESOURCES CONSERVATION SERVICE MANUAL CRITICAL AREA PLANTING

Table IV-4-3 TAKEN FROM NATURAL RESOURCES CONSERVATION SERVICE MANUAL CRITICAL AREA PLANTING

Table IV-4-4 TAKEN FROM NATURAL RESOURCES CONSERVATION SERVICE MANUAL CRITICAL AREA PLANTING

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