



west virginia department of environmental protection

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

Harold D. Ward, Cabinet Secretary
www.dep.wv.gov

Monday, November 17, 2025
PERMIT MODIFICATION APPROVAL
Horizontal 6A / New Drill

EQT PRODUCTION COMPANY
2200 ENERGY DRIVE

CANONSBURG , PA 15317

Re: Permit Modification Approval for BIG 177 110H
47-103-03728-00-00

Lateral extended

EQT PRODUCTION COMPANY

The Office of Oil and Gas has reviewed the attached permit modification for the above referenced permit. The attached modification has been approved and well work may begin. Please be reminded that the oil and gas inspector is to be notified twenty-four (24) hours before permitted well work is commenced.

If there are any questions, please feel free to contact me at (304) 926- 0450.

A handwritten signature in black ink that reads "H. Jason Harmon".

H. Jason Harmon
Acting Chief

Operator's Well Number: BIG 177 110H
Farm Name: COASTAL FOREST RESOURCES COMPANY
U.S. WELL NUMBER: 47-103-03728-00-00
Horizontal 6A New Drill
Date Modification Issued: 11/17/2025

Promoting a healthy environment.

11/28/2025

WW-6B
(04/15)

API NO. 47- 103 - 03728
OPERATOR WELL NO. 110H
Well Pad Name: BIG177

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: 110H 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 X Oil _____ Underground Storage _____
Other _____
(b) If Gas Shallow X Deep _____
Horizontal X _____
- 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: 6,849'
- 9) Formation at Total Vertical Depth: Marcellus
- 10) Proposed Total Measured Depth: 15,357'
- 11) Proposed Horizontal Leg Length: 8,168'
- 12) Approximate Fresh Water Strata Depths: 147', 173', 283', 483', 633'
- 13) Method to Determine Fresh Water Depths: Offset wells
- 14) Approximate Saltwater Depths: 1,338', 1,330', 1,401', 1,453'
- 15) Approximate Coal Seam Depths: 103', 156', 434', 498'
- 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 X
- (a) If Yes, provide Mine Info: Name: _____
Depth: _____
Seam: _____
Owner: _____

Page 1 of 3
Digitally signed by Stephen
Mccoy
Date: 2025.10.09 07:53:20 -04'00'

11/28/2025

WW-6B
(04/15)

API NO. 47- 103 - 03728
OPERATOR WELL NO. 110H
Well Pad Name: BIG177

18)

CASING AND TUBING PROGRAM

TYPE	Size (in)	New or Used	Grade	Weight per ft. (lb/ft)	FOOTAGE: For Drilling (ft)	INTERVALS: Left in Well (ft)	CEMENT: Fill-up (Cu. Ft.)/CTS
Conductor	26	New	A252	85.6	93	93	95 ft^3 / CTS
Fresh Water	13 3/8	New	J-55	54.5	768	768	725 ft^3 / CTS
Coal							
Intermediate	9 5/8	New	J-55	36	2011	2011	750 ft^3 / CTS
Production	5 1/2	New	P-110	20	15357	15357	500' above intermediate casing
Tubing							
Liners							

TYPE	Size (in)	Wellbore Diameter (in)	Wall Thickness (in)	Burst Pressure (psi)	Anticipated Max. Internal Pressure (psi)	Cement Type	Cement Yield (cu. ft./k)
Conductor	26	30	0.312	1000	18	Class A/L	1.04 - 1.20
Fresh Water	13 3/8	17 1/2	0.380	2730	2184	Class A/L	1.04 - 1.20
Coal							
Intermediate	9 5/8	12 3/8 - 12 1/4	0.352	3520	2816	Class A/H/L	1.04 - 1.20
Production	5 1/2	8 3/4 - 8 1/2	0.361	14360	11488	Class A/H/L	1.04 - 2.10
Tubing							
Liners							

PACKERS

Kind:				
Sizes:				
Depths Set:				

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

Drill and complete a new horizontal well in the Marcellus Formation. Drill the vertical, kick off and drill curve. Drill the lateral in the Marcellus. Cement casing.

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

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

21) Total Area to be disturbed, including roads, stockpile area, pits, etc., (acres): 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:

- Surface: Bow spring centralizers – One centralizer at the shoe and one spaced every 500'.
- Intermediate: Bow spring centralizers– One centralizer at the shoe and one spaced every 500'.
- Production: One solid body centralizer spaced every other joint from production casing shoe to landing point. One solid body centralizer spaced every joint from landing point to planned top of cement.

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, Dispersent, Viscosifier, Defoamer, POZ, Bonding Agent, Retarder, Anti-Settling/Suspension Agent

25) Proposed borehole conditioning procedures:

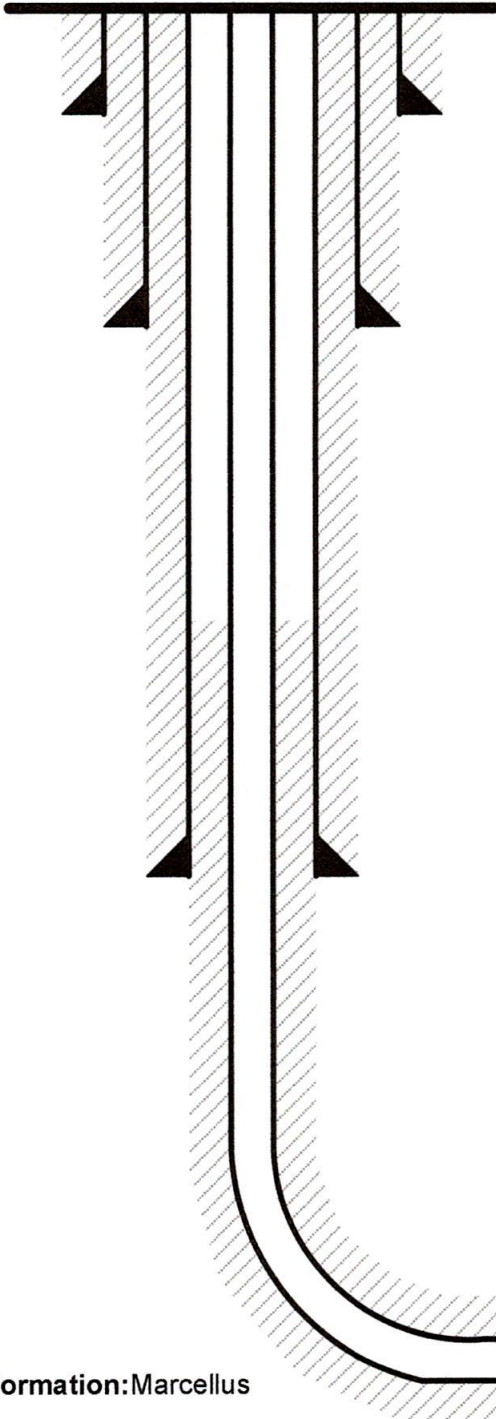
Surface: Circulate hole clean while rotating & reciprocating the drill string until cuttings diminish at surface.
Intermediate: Circulate hole clean while rotating & reciprocating the drill string until cuttings diminish at surface.
Production: Perform a cleanup cycle by pumping 3-8 bottoms up or until the shakers are clean. Check volume of cuttings coming across the shakers every 15 minutes.

*Note: Attach additional sheets as needed.

EQT Production**Wellbore Diagram**

Well: BIG177 110H
Pad: BIG177
Elevation: 811' GL 824' KB

County: Wetzel
State: West Virginia



Conductor @ 93'

26", 85.6#, A252, cement to surface w/ Class A/L

Surface @ 768'

13-3/8", 54.5#, J-55, cement to surface w/ Class A/L

Intermediate @ 2,011'

9-5/8", 36#, J-55, cement to surface w/ Class A/H/L

Production @ 15,357' MD / 6,849' TVD

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

Formation: Marcellus

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NOT TO SCALE

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

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

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

Lease Name or Number	Grantor, Lessor, etc.	Grantee, Lessee, etc.	Royalty	Book/Page
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See attached list

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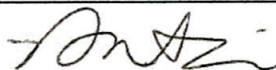
Acknowledgement of Possible Permitting/Approval
In Addition to the Office of Oil and Gas

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

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

Well Operator: EQT Production Company
By: Branden Weimer
Its: Regional Manager - Permitting



Lease No.	Grantor, Lessor, etc.	Acres	Grantee, Lessee, etc.	Royalty	Book/Page
				"at least 1/8th per WV Code 22-6-8"	
<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 Equitrans, Inc. Equitable Gas Company, LLC, et al. Equitrans, L.P.	300 ac	The Philadelphia Company of West Virginia Pittsburgh and West Virginia Gas Company Equitable Gas Company Equitrans, Inc. Equitable Gas Company LLC Equitrans, L.P. EQT Production Company		DB 60/414 OG 22A/352 DB 187/321 OG 71A/453 Corp. Book 13/213 Misc 105/908 OG 131A/81
				"at least 1/8th per WV Code 22-6-8"	
<u>175061000</u>	<u>OXY USA, Inc., et al.</u> BRC Appalachian Minerals I, LLC BRC Appalachian Minerals I, LLC BRC Minerals LP BRC Working Interest Company, LLC Chesapeake Appalachia, L.L.C. Chesapeake Appalachia, L.L.C. Statoil USA Onshore Properties, Inc. SWN Exchange Titleholder, LLC SWN Production Company, LLC Statoil USA Onshore Properties, Inc. Antero Exchange Properties, LLC Antero Resources Corporation	124.671 ac of 31,151.581 ac	BRC Working Interest Company, LLC BRC Working Interest Company, LLC Chesapeake Appalachia, L.L.C. Statoil USA Onshore Properties, Inc. SWN Production Company, LLC SWN Exchange Titleholder, LLC SWN Production Company, LLC Antero Exchange Properties, LLC Antero Exchange Properties, LLC Antero Resources Corporation EQT Production Company		OG 102A/505 OG 103A/320 OG 103A/470 OG 120A/109 OG 157A/540 OG 158A/801 Corp. Book 13/296 OG 177A/533 OG 177A/738 Corp. Book 13/311 OG 227A/932
<u>107220000</u>	<u>Stone Hill Minerals Holdings, LLC</u> Nampeco Corporation Pittsburgh and West Virginia Gas Company Equitable Gas Company Equitrans, Inc. Equitable Gas Company, LLC, et al. Equitrans, L.P.	70.30 ac	Pittsburgh & West Virginia Gas Company Equitable Gas Company Equitrans, Inc. Equitable Gas Company LLC Equitrans, L.P. Equitable Production- Eastern States, Inc.	"at least 1/8th per WV Code 22-6-8"	OG 31A/167 DB 187/321 OG 71A/453 Corp. Book 13/213 Misc 105/908 OG 379A/106

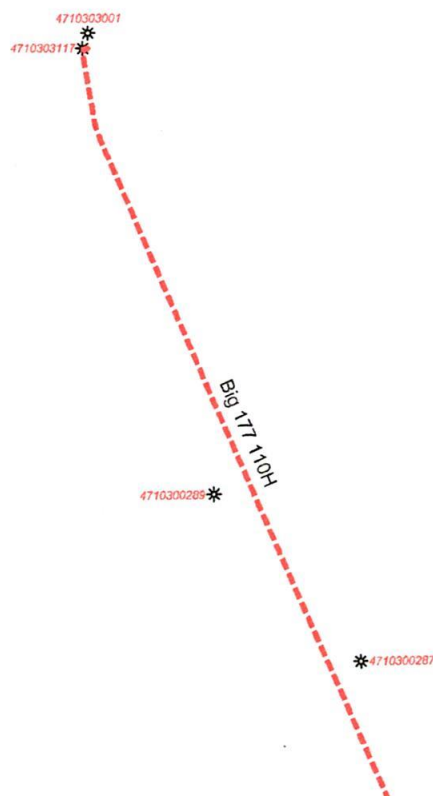
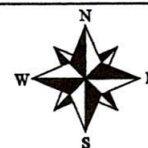
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<u>Lease No.</u>	<u>Grantor, Lessor, etc.</u>	<u>Acres</u>	<u>Grantee, Lessee, etc.</u>	<u>Royalty</u>	<u>Book/Page</u>
	Equitable Production- Eastern States, Inc. Chesapeake Appalachia, LLC		EQT Production Company EQT Production Company		CB 13/14 OG 167A/706
<u>116952004</u>	<u>Elkhorn Minerals IV, LLC, et al.</u> Mary C. Prout	98.7 ac	EQT Production Company	"at least 1/8th per WV Code 22-6-8"	OG 233A/297
<u>223567000</u>	<u>Shiben Estates, Inc.</u> Shiben Estates, Inc.	100 ac	EQT Production Company	"at least 1/8th per WV Code 22-6-8"	OG 305A/741
<u>140893000</u>	<u>Stone Hill Minerals, LLC.</u> Stone Hill Minerals, LLC. TH Exploration, LLC	155.75 of 1,588.27 ac	TH Exploration, LLC EQT Production Company	"at least 1/8th per WV Code 22-6-8"	OG 240A/628 OG 258A/333

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BIG177 110H Area of Review							
API	Status	Current Operator	Latitude	Longitude	Spud Date	Elevation	TOT Depth
103-03117	App Withdrawn	EQT Prod					
103-03001	App Withdrawn	EQT Prod					
103-00289	Plugged 8/12/2013	EQT Prod	39.568208	-80.578742	4/9/1943	958	2866
103-00287	Plugged 6/7/2000	Equitrans LP	39.562825	-80.572579	1/16/1943	1250	3372

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EQT Corporation
625 Liberty Avenue
Pittsburgh, PA 15222

Big 177

Vertical Offsets and
Foreign Laterals
within 500 Feet

Legend

Well Lateral_FM

Formation

— Genesee

— Marcellus

— Utica



Big 177_Offset_Wells

2000 1000 0 2000



Scale: 1 Inch = 2000 Feet

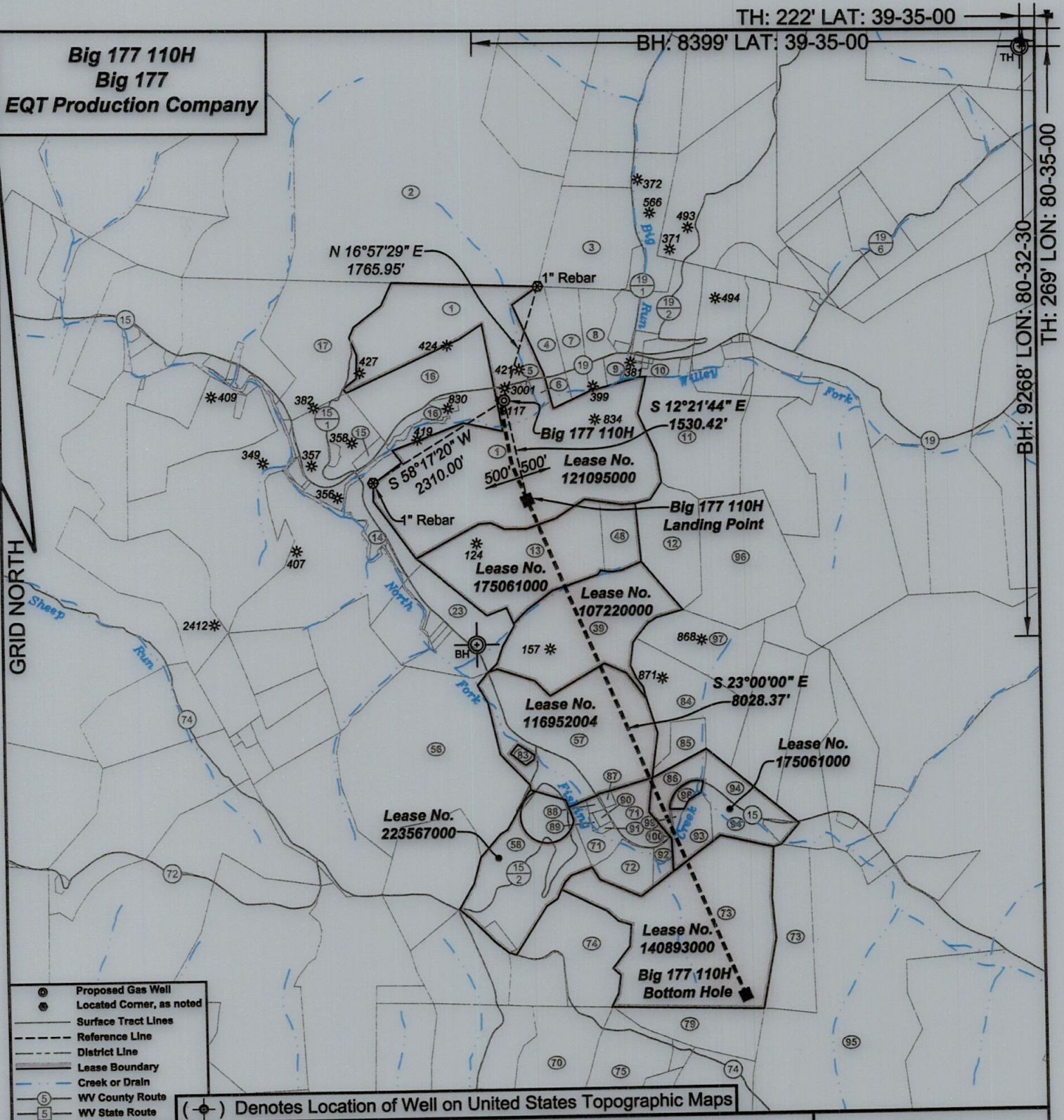
Disclaimer:
This map is confidential and is to be used only for the express informational purposes for which it was created. Unauthorized use, copying, or dissemination is strictly prohibited. EQT does not warrant the accuracy of the location of any items shown on this map, including, but not limited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

1 Inch = 116,000 Feet



11/28/2025

Big 177 110H
Big 177
EQT Production Company



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

() Denotes Location of Well on United States Topographic Maps



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

Ben R. Singleton
P.S. 2092



SEAL

FILE NO: 352-23
DRAWING NO: Big 177 110H
SCALE: 1" = 1000'
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

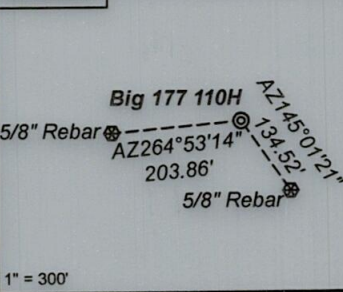
DATE: October 15 20 25
OPERATOR'S WELL NO.: Big 177 110H
API WELL NO
47 - 103 -
STATE COUNTY PERMIT

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 DESIGNATED AGENT: Joseph C. Mallow
ADDRESS: 2200 Energy Drive ADDRESS: 427 Midstate Drive
Canonsburg, PA 15317 Clarksburg, WV 26301

Big 177 110H
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. Utt	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
15	13	4.3	Wetzel	Grant	Jeffrey L. & Beth Willey	3.35
16	13	6.1	Wetzel	Grant	Coastal Forest Resources Company	55.06
17	8	34	Wetzel	Grant	Hallie M. & Paul E. Hardbarger	54.01
23	13	23	Wetzel	Grant	Kenneth L. & Nadine R. Coen	26.51
39	13	24	Wetzel	Grant	Kenneth Morris	70.3
48	13	14	Wetzel	Grant	Linda L. Dunn	12.5
56	13	30	Wetzel	Grant	Coastal Forest Resources Company	113.8
57	13	31	Wetzel	Grant	Annette M. Riley	98.7
58	13	38	Wetzel	Grant	Coastal Forest Resources Company	58
70	18	8	Wetzel	Grant	Marybeth & Terry L. Henthorn	39.4
71	13	52	Wetzel	Grant	Carl L. & Patsy R. Barr	22.593
72	13	52.6	Wetzel	Grant	Jerry White, et al.	11.42
73	13	48	Wetzel	Grant	Coastal Forest Resources Company	155.8
74	18	5	Wetzel	Grant	Theodore McCoy, et al.	39
75	18	9	Wetzel	Grant	Linda B. Elow	38.6
79	18	36	Wetzel	Grant	Theodore McCoy, et al.	40
83	13	31.1	Wetzel	Grant	Randall K. Mayfield	1.3
84	13	32	Wetzel	Grant	William Morrison, et al.	40
85	13	33	Wetzel	Grant	William Morrison, et al.	5.7
86	13	40	Wetzel	Grant	William Morrison, et al.	9.6
87	13	52.2	Wetzel	Grant	Richard Morgan	0.88
88	13	52.1	Wetzel	Grant	Joyce L. Morgan	1.05
89	13	52.5	Wetzel	Grant	Carl L. & Patsy R. Barr	0.462
90	13	52.4	Wetzel	Grant	Carl L. & Patsy R. Barr	1
91	13	52.3	Wetzel	Grant	Carl L. & Patsy R. Barr	0.593
92	13	47	Wetzel	Grant	James L. & Daisy M. Yoho	3.76
93	13	42.2	Wetzel	Grant	James L. & Daisy M. Yoho	10.41
94	13	42	Wetzel	Grant	Charles W. & Serra R. Lemley	30.89
95	18	12	Wetzel	Grant	Molly S. Delaney, et al.	377.05
96	13	16	Wetzel	Grant	William Morrison, et al.	55
97	13	25	Wetzel	Grant	William Morrison, et al.	30.7
98	13	40.1	Wetzel	Grant	James L. & Daisy M. Yoho	2
99	13	41	Wetzel	Grant	James L. & Daisy M. Yoho	1.1207
100	13	41.1	Wetzel	Grant	James L. & Daisy M. Yoho	0.166

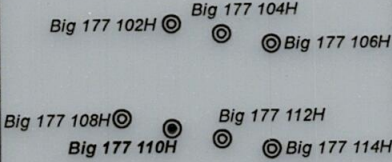
Well References



Notes:

Big 177 110H coordinates are
NAD 27 N: 396,118.56 E: 1,694,392.10
NAD 27 Lat: 39.582513 Long: -80.584310
NAD 83 UTM N: 4,381,513.64 E: 535,714.43
Big 177 110H Landing Point coordinates are
NAD 27 N: 394,623.63 E: 1,694,719.81
NAD 27 Lat: 39.578419 Long: -80.583083
NAD 83 UTM N: 4,389,565.04 E: 541,506.54
Big 177 110H Bottom Hole coordinates are
NAD 27 N: 387,233.46 E: 1,697,856.98
NAD 27 Lat: 39.558234 Long: -80.571641
NAD 83 UTM N: 4,378,824.33 E: 536,815.14
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.

Big 177



Lease No.	Owner	Acres
121095000	Coastal Forest Resources Company, et al.	300
175061000	OXY USA, Inc., et al.	124.671 of 31,151.581
107220000	Stone Hill Minerals Holdings, LLC	70.30
116952004	Elkhorn Minerals IV, LLC, et al.	98.7
223567000	Shiben Estates, Inc.	100
104727000	Three Rivers Royalty II, LLC, et al.	2
140893000	Stone Hill Minerals, LLC.	155.75 of 1,588.27

