



---

west virginia department of environmental protection

---

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)

Monday, April 5, 2021  
PERMIT MODIFICATION APPROVAL  
Horizontal 6A / New Drill

EQT PRODUCTION COMPANY  
625 LIBERTY AVE., SUITE 1700

PITTSBURGH, PA 15222

Re: Permit Modification Approval for PRINE 3H  
47-103-03355-00-00

**Lateral Extension**

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.

James A. Martin  
Chief

Operator's Well Number: PRINE 3H  
Farm Name: HOWARD M HENDERSON  
U.S. WELL NUMBER: 47-103-03355-00-00  
Horizontal 6A New Drill  
Date Modification Issued: 4/5/2021

Promoting a healthy environment.

06/25/2021



March 8, 2021

Via FedEx Overnight

West Virginia Department of Environmental Protection  
Office of Oil and Gas  
601 57<sup>th</sup> Street, S.E.  
Charleston, WV 25304

RE: Well Work Permit Modification Application  
Prine 3H Well  
Permit Number 47-103-03355-00-00  
Center District  
Wetzel County, WV

RECEIVED  
Office of Oil and Gas  
MAR 09 2021  
WV Department of  
Environmental Protection

WVDEP Recipient,

Attached please find following information to modify the existing Well Work Permit for this well:

- Corrected Page 1 of form WW-6B, adding a **previously unidentified coal seam**
- Completed Form WW-6B and supporting documents, approved by the Oil and Gas Inspector
- Revised Well Bore Diagram
- Well Location Plat
- Completed Form WW-6A1 and supporting documentation
- Revised Offset Well Map and Data for the previously provided Hydraulic Fracturing Monitoring Plan

EQT is proposing to extend the lateral from the previously permitted length. This well has been drilled vertically to a total measured depth of 6,992'.

Oil and Gas Inspector Bryan Harris confirmed via phone conversation that the revised page 1 of form WW-6B did not need re-signed to add a coal seam. Both the signed page and the revised page have been included with this submittal.

EQT Production trusts that if any portion of the submitted documentation is found to be inadequate for processing the permit, notification will be made to our Permitting department at your earliest convenience. It is EQT Production's intent to cooperate fully to provide any additional requested documentation and clarification in a timely manner such that permitting proceeds in a predictable and logical manner.

Best Regards,

John Zavatchan  
Project Specialist – Permitting  
[jzavatchan@eqt.com](mailto:jzavatchan@eqt.com)  
724-746-9073

06/25/2021

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 Center Littleton  
Operator ID County District Quadrangle

2) Operator's Well Number: 3H Well Pad Name: Prine

3) Farm Name/Surface Owner: Howard M. Henderson Public Road Access: CR 8/7

4) Elevation, current ground: 1,335' (built) Elevation, proposed post-construction: 1,335'

5) Well Type (a) Gas  Oil  Underground Storage

Other \_\_\_\_\_

(b) If Gas Shallow  Deep

Horizontal

6) Existing Pad: Yes or No Yes *DWAH 2/24/21*

7) Proposed Target Formation(s), Depth(s), Anticipated Thickness and Expected Pressure(s):  
Marcellus, 7,489', 48', 2,620'

8) Proposed Total Vertical Depth: 7,489'

9) Formation at Total Vertical Depth: Marcellus

10) Proposed Total Measured Depth: 22,920'

11) Proposed Horizontal Leg Length: 14,910'

12) Approximate Fresh Water Strata Depths: 143'

13) Method to Determine Fresh Water Depths: Offset Wells - 47-103-02572, 47-103-02349, 47-103-02189, 47-103-02244

14) Approximate Saltwater Depths: 1,976', 2,110'

15) Approximate Coal Seam Depths: 842'-845', 1,071'-1,075', 1,180'-1,185'

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

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

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

RECEIVED  
Office of Oil and Gas

MAR 09 2021

WV Department of  
Environmental Protection

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 Center Littleton  
Operator ID County District Quadrangle

2) Operator's Well Number: 3H Well Pad Name: Prine

3) Farm Name/Surface Owner: Howard M. Henderson Public Road Access: CR 8/7

4) Elevation, current ground: 1,335' (built) Elevation, proposed post-construction: 1,335'

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, 7,489', 48', 2,620'

8) Proposed Total Vertical Depth: 7,489'

9) Formation at Total Vertical Depth: Marcellus

10) Proposed Total Measured Depth: 22,920'

11) Proposed Horizontal Leg Length: 14,910'

12) Approximate Fresh Water Strata Depths: 143'

13) Method to Determine Fresh Water Depths: Offset Wells - 47-103-02572, 47-103-02349, 47-103-02189, 47-103-02244

14) Approximate Saltwater Depths: 1,976', 2,110'

15) Approximate Coal Seam Depths: 602'-613', 842'-845', 1,071'-1,075', 1,180'-1,185'

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

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

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

Received  
3/30/2021

18) **CASING AND TUBING PROGRAM**

| <b>TYPE</b>  | <u>Size (in)</u> | <u>New or Used</u> | <u>Grade</u> | <u>Weight per ft. (lb/ft)</u> | <u>FOOTAGE: For Drilling (ft)</u> | <u>INTERVALS: Left in Well (ft)</u> | <u>CEMENT: Fill-up (Cu. Ft.)/CTS</u> |
|--------------|------------------|--------------------|--------------|-------------------------------|-----------------------------------|-------------------------------------|--------------------------------------|
| Conductor    | 26               | New                | A-500        | 85.6                          | 40                                | 40                                  | 98 ft^3 / CTS                        |
| Fresh Water  | 13 3/8           | New                | J-55         | 54.5                          | 1304                              | 1304                                | 1196 ft^3 / CTS                      |
| Coal         |                  |                    |              |                               |                                   |                                     |                                      |
| Intermediate | 9 5/8            | New                | P-110        | 40                            | 2879                              | 2879                                | 1091 ft^3 / CTS                      |
| Production   | 5 1/2            | New                | P-110        | 20                            | 22920                             | 22920                               | 500' above intermediate casing       |
| Tubing       |                  |                    |              |                               |                                   |                                     |                                      |
| Liners       |                  |                    |              |                               |                                   |                                     |                                      |

*DWAH 2/24/21*

| <b>TYPE</b>  | <u>Size (in)</u> | <u>Wellbore Diameter (in)</u> | <u>Wall Thickness (in)</u> | <u>Burst Pressure (psi)</u> | <u>Anticipated Max. Internal Pressure (psi)</u> | <u>Cement Type</u> | <u>Cement Yield (cu. ft./k)</u> |
|--------------|------------------|-------------------------------|----------------------------|-----------------------------|---|--------------------|---------------------------------|
| Conductor    | 26               | 30                            | 0.312                      | 1050                        | 18  | Class A            | 1.18                            |
| Fresh Water  | 13 3/8           | 17 1/2                        | 0.380                      | 2730                        | 2184  | Class A            | 1.13                            |
| Coal         |                  |                               |                            |                             |   |                    |                                 |
| Intermediate | 9 5/8            | 12 3/8                        | 0.395                      | 7900                        | 6320  | Class A            | 1.18                            |
| Production   | 5 1/2            | 8 1/2                         | 0.361                      | 14360                       | 11488   | Class A/H          | 1.04 - 2.098                    |
| Tubing       |                  |                               |                            |                             |   |                    |                                 |
| Liners       |                  |                               |                            |                             |   |                    |                                 |

**PACKERS**

|             |  |  |  |  |
|-------------|--|--|--|--|
| Kind:       |  |  |  |  |
| Sizes:      |  |  |  |  |
| Depths Set: |  |  |  |  |

RECEIVED  
Office of Oil and Gas

MAR 09 2021

WV Department of  
Environmental Protection

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

This well has been vertically drilled to a TMD of 6,992'. Continue drilling and complete a new horizontal well in the Marcellus Formation. Finish drilling the curve. Drill the lateral in the Marcellus. Cement casing.

*DMAH 2/24/21*

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): Site Built

22) Area to be disturbed for well pad only, less access road (acres): 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 joint from production casing shoe to KOP

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

Conductor: Class A no additives  
 Surface: Calcium Chloride. Used to speed the setting of cement slurries  
 Intermediate: Calcium Chloride. Used to speed the setting of cement slurries.  
 Production: Calcium Carbonate, Fluid Loss, Extender, Dispersent, Viscosifier, Defoamer, POZ, Bonding Agent, Retarder, Anti-Settling/Suspension Agent

RECEIVED  
Office of Oil and Gas

MAR 09 2021

WV Department of  
Environmental Protection

25) Proposed borehole conditioning procedures:

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

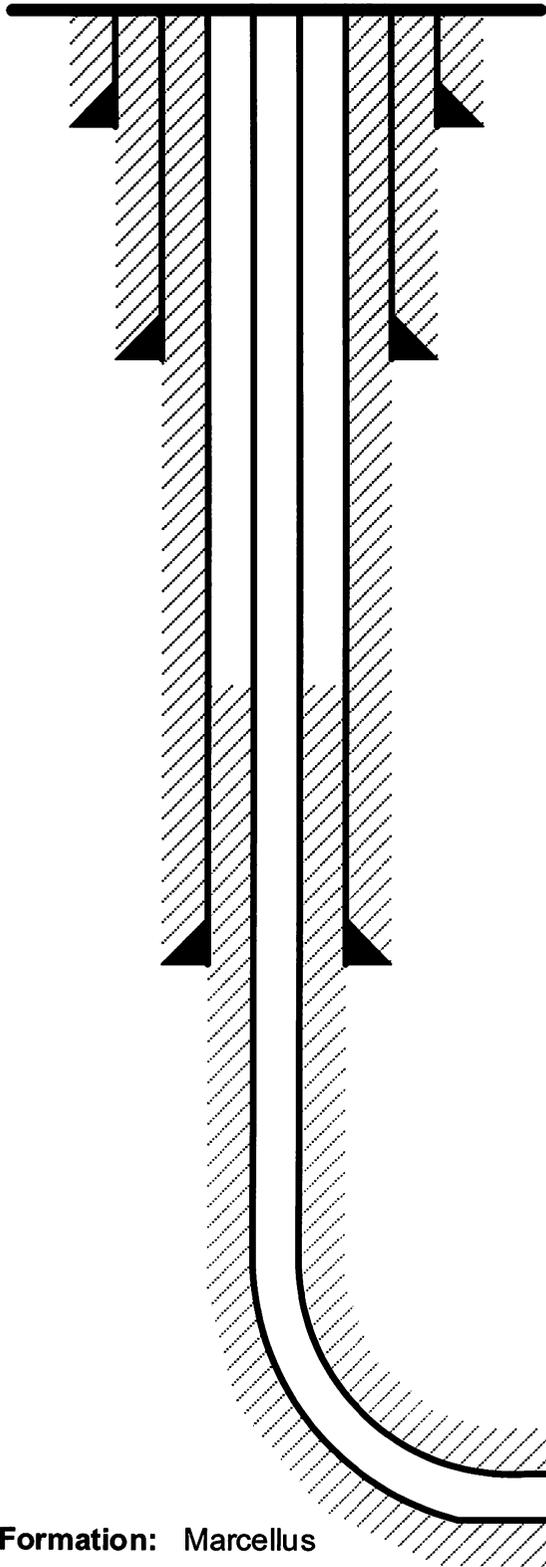
\*Note: Attach additional sheets as needed.

**EQT Production**

**Wellbore Diagram**

Well: Prine 3H  
Pad: Prine  
Elevation: 1336' GL 1349' KB

County: Wetzel  
State: West Virginia



**Conductor @ 40'**

26", 85.6#, A-500, cement to surface w/ Class A

**Surface @ 1,304'**

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

**Intermediate @ 2,879'**

9-5/8", 40#, P-110, cement to surface w/ Class A

**Production @ 22,920' MD / 7,489' TVD**

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

Formation: Marcellus

RECEIVED  
Office of Oil and Gas

MAR 09 2021

WV Department of  
Environmental Protection

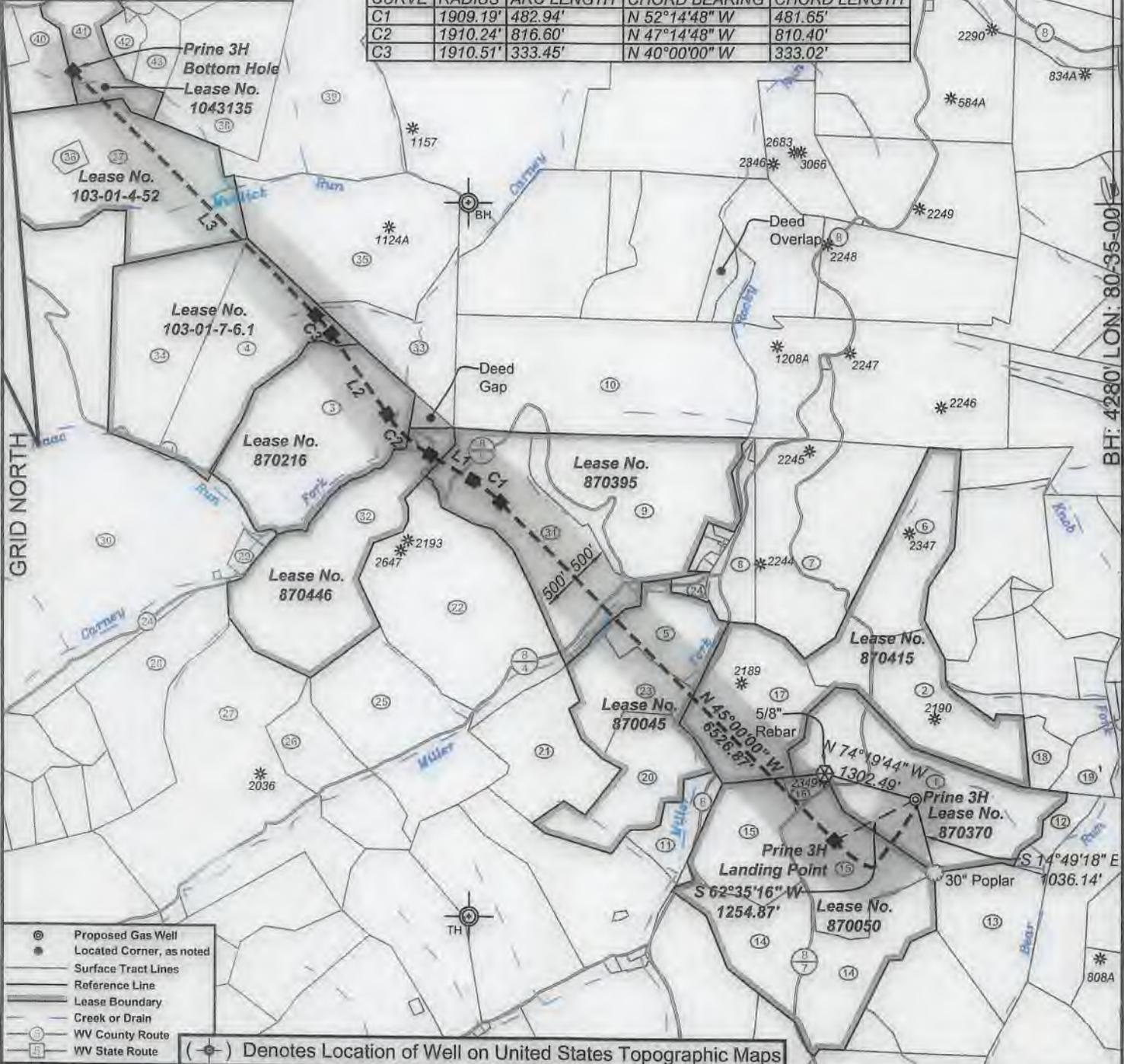
*DMDH 2/24/21*

NO 06/25/2021

TH: 9021' LAT: 39-42-30  
 BH: 9029' LAT: 39-42-30

**Prine 3H  
 LIT53  
 EQT Production Company**

| LINE | BEARING       | DISTANCE | CURVE | RADIUS   | ARC LENGTH | CHORD BEARING | CHORD LENGTH |
|------|---------------|----------|-------|----------|------------|---------------|--------------|
| L1   | N 59°29'35" W | 680.30'  | C1    | 1909.19' | 482.94'    | N 52°14'48" W | 481.65'      |
| L2   | N 35°00'00" W | 1344.86' | C2    | 1910.24' | 816.60'    | N 47°14'48" W | 810.40'      |
| L3   | N 44°59'50" W | 4725.17' | C3    | 1910.51' | 333.45'    | N 40°00'00" W | 333.02'      |

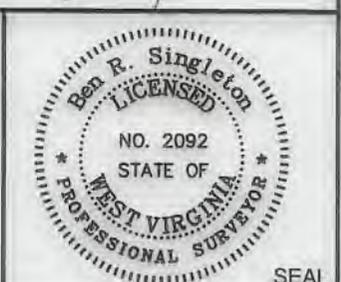


BH: 4280' LON: 80-35-00  
 TH: 14064' LON: 80-32-30



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

*Ben R. Singleton*  
 P.S. 2092



FILE NO: 289-16  
 DRAWING NO: Prine 3H  
 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**

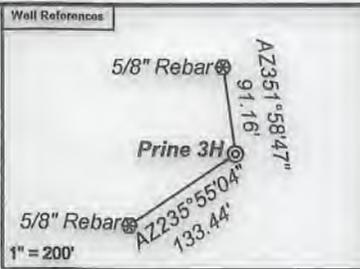
DATE: February 25 20 21  
 OPERATOR'S WELL NO.: Prine 3H  
 API WELL NO: 47 - 103 - 03355  
 STATE COUNTY PERMIT

WELL TYPE:  OIL  GAS  LIQUID INJECTION  WASTE DISPOSAL  
 (IF GAS) PRODUCTION:  STORAGE  DEEP  SHALLOW  
 LOCATION: ELEVATION: 1335' WATERSHED Tributary of Bear Run QUADRANGLE: Littleton  
 DISTRICT: Center COUNTY: Wetzel  
 SURFACE OWNER: Howard M. Henderson ACREAGE: 06/25/2021  
 ROYALTY OWNER: Jamie Joe Prine, et al LEASE NO: 870370 ACREAGE: 111  
 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: 7,489'

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

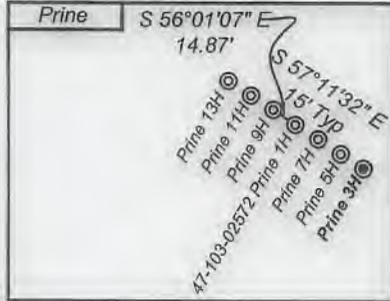
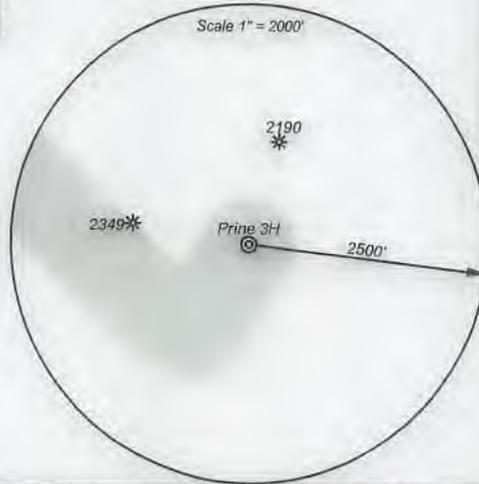
**Prine 3H  
LIT53  
EQT Production Company**

| Tract I.D. | Tax Map No. | Parcel No. | County | District | Surface Tract Owner              | Acres  |
|------------|-------------|------------|--------|----------|----------------------------------|--------|
| 1          | 8           | 43         | Wetzel | Center   | Howard M. Henderson              | 112.00 |
| 2          | 8           | 44         | Wetzel | Center   | William D. Henderson             | 65.00  |
| 3          | 7           | 7          | Wetzel | Center   | Charles D. Wood                  | 108.27 |
| 4          | 7           | 8.1        | Wetzel | Center   | Rickey A. & Carol A. Yeater      | 140.00 |
| 5          | 8           | 40.1       | Wetzel | Center   | Robert E. Dorsey, Sr.            | 38.00  |
| 6          | 8           | 29         | Wetzel | Center   | Howard M. & William D. Henderson | 67.00  |
| 7          | 8           | 28         | Wetzel | Center   | Matthew J. Rice                  | 108.00 |
| 8          | 8           | 24         | Wetzel | Center   | Charles P. & Franny P. Wade      | 19.44  |
| 9          | 8           | 17         | Wetzel | Center   | Evan H. & Janet L. Backinger     | 91.00  |
| 10         | 8           | 7          | Wetzel | Center   | EQT Production Company           | 150.00 |
| 11         | 11          | 5.1        | Wetzel | Center   | Robert E. Dorsey, Sr.            | 20.00  |
| 12         | 11          | 9          | Wetzel | Center   | Howard M. Henderson              | 10.10  |
| 13         | 11          | 8          | Wetzel | Center   | James B. & Margie L. Montgomery  | 52.00  |
| 14         | 11          | 8.1        | Wetzel | Center   | Larry L. & Lois J. Deem          | 64.50  |
| 15         | 11          | 6          | Wetzel | Center   | Ray S. & Timmy R. Sapp           | 90.00  |
| 16         | 11          | 6.2        | Wetzel | Center   | Roger L. & Sandra K. Wade        | 4.00   |
| 17         | 8           | 42         | Wetzel | Center   | Jeffrey P. & Howard M. Henderson | 67.00  |
| 18         | 8           | 55         | Wetzel | Center   | Ashley Murphy, et al.            | 9.43   |
| 19         | 8           | 47         | Wetzel | Center   | Howard M. Henderson              | 14.75  |
| 20         | 8           | 30         | Wetzel | Center   | Robert E. Dorsey, Sr.            | 56.00  |
| 21         | 8           | 38         | Wetzel | Center   | Lawrence D. Taylor, et al.       | 46.50  |
| 22         | 8           | 37         | Wetzel | Center   | Robert Dorsey, Sr.               | 129.75 |
| 23         | 8           | 40         | Wetzel | Center   | Robert E. Dorsey, Sr.            | 34.00  |
| 24         | 8           | 21         | Wetzel | Center   | Charles P. & Franny P. Wade      | 3.00   |
| 25         | 8           | 38.1       | Wetzel | Center   | Lawrence D. Taylor, et al.       | 82.00  |
| 26         | 7           | 30         | Wetzel | Center   | Lawrence D. Taylor, et al.       | 35.00  |
| 27         | 7           | 38.1       | Wetzel | Center   | John E. & Carol S. Bell          | 125.48 |
| 28         | 7           | 28         | Wetzel | Center   | Tammy R. Waggoner                | 50.00  |
| 29         | 7           | 19.1       | Wetzel | Center   | Patrick & Jolene Henderson       | 2.41   |
| 30         | 7           | 19         | Wetzel | Center   | Patricia E. Musgrave, et al.     | 197.50 |
| 31         | 8           | 16         | Wetzel | Center   | Evan H. & Janet L. Backinger     | 79.30  |
| 32         | 8           | 36         | Wetzel | Center   | Kenneth J. Hollobaugh            | 87.00  |
| 33         | 8           | 6          | Wetzel | Center   | David Wood                       | 44.00  |
| 34         | 7           | 6          | Wetzel | Center   | Wallace J. Dolron                | 182.21 |
| 35         | 5           | 22         | Wetzel | Center   | Mike Ross Inc                    | 102.75 |
| 36         | 4           | 52.1       | Wetzel | Center   | Gregory Neil Musgrave            | 3.28   |
| 37         | 4           | 52         | Wetzel | Center   | Gregory Neil Musgrave, et al.    | 127.72 |
| 38         | 5           | 21         | Wetzel | Center   | Susan Miller                     | 69.25  |
| 39         | 5           | 14         | Wetzel | Center   | Benjamin E. Yarber               | 224.00 |
| 40         | 4           | 35.1       | Wetzel | Center   | Steve Long                       | 35.77  |
| 41         | 4           | 35         | Wetzel | Center   | Steve Long                       | 34.25  |
| 42         | 4           | 35.8       | Wetzel | Center   | Robert L. Long                   | 9.00   |
| 43         | 4           | 35.7       | Wetzel | Center   | Robert L. Long & Termy Wayman    | 13.00  |



**Notes:**  
 Prine 3H coordinates are  
 NAD 27 N: 427,845.30 E: 1,697,758.02  
 NAD 83 UTM N: 4,391,196.72 E: 536,578.91  
 Prine 3H Landing Point coordinates are  
 NAD 27 N: 427,267.57 E: 1,696,644.05  
 NAD 27 Lat: 39.668100 Long: -80.577646  
 NAD 83 UTM N: 4,391,015.03 E: 536,242.46  
 Prine 3H Bottom Hole coordinates are  
 NAD 27 N: 437,771.26 E: 1,686,140.37  
 NAD 27 Lat: 39.696583 Long: -80.615419  
 NAD 83 UTM N: 4,394,161.55 E: 532,989.03  
 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  |
|-----------|-------------------------------|--------|
| 870050    | Green Dot Farm, et al.        | 195    |
| 870415    | Howard Henderson, et al.      | 189    |
| 870045    | Green Dot Farm, Inc., et al.  | 125    |
| 870395    | Brian R. Morgan, et al.       | 170    |
| 870216    | Gore-Morris Trust, et al.     | 108.43 |
| 870446    | Kenneth Joe Hollobaugh        | 87     |
| 01-7-6.1  | Green Dot Farm, Inc.          | 149.00 |
| 01-4-52   | Gregory Neil Musgrave, et al. | 127.72 |
| 1043135   | Mary Gallo, et al.            | 34.25  |

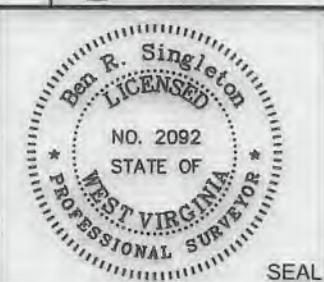


- ⊙ Proposed Gas Well
- Located Corner, as noted
- Surface Tract Lines
- Reference Line
- Lease Boundary
- Creek or Drain
- Ⓢ WV County Route
- Ⓢ WV State Route



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

*Ben R. Singleton*  
 P.S. 2092



FILE NO: 289-16  
 DRAWING NO: Prine 3H  
 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: February 25 20 21  
 OPERATOR'S WELL NO.: Prine 3H  
 API WELL NO **M&D**  
 47 - 103 - 03355  
 STATE COUNTY PERMIT

WELL TYPE:  OIL  GAS  LIQUID INJECTION  WASTE DISPOSAL  
 (IF GAS) PRODUCTION:  STORAGE  DEEP  SHALLOW  
 LOCATION: ELEVATION: 1335' WATERSHED Tributary of Bear Run QUADRANGLE: Littleton  
 DISTRICT: Center COUNTY: Wetzel  
 SURFACE OWNER: Howard M. Henderson ACREAGE: **06/25/2021**  
 ROYALTY OWNER: Jamie Joe Prine, et al LEASE NO: 870370 ACREAGE: 111  
 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: 7,489'

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

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

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

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

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

See Attached

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

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

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

RECEIVED  
Office of Oil and Gas  
**MAR 09 2021**  
WV Department of  
Environmental Protection

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: John Zavatchan *John F. Zavatchan Jr.*  
 Its: Project Specialist - Permitting

| Lease No.            | Grantor, Lessor, etc.                   | Grantee, Lessee, etc.               | Royalty                                | Book/Page                |
|----------------------|---|-------------------------------------|--|--------------------------|
| <b><u>870370</u></b> | <b><u>Jamie Joe Prine, et al</u></b>    |                                     | "at least 1/8th per<br>WV Code 22-6-8" |                          |
|                      | Lloyd Joe Prine and Betty M. Prine, h/w | Drilling Appalachian Corporation    |  | OG 85A/380               |
|                      | Drilling Appalachian Corporation        | Grenadier Energy Partners, LLC      |  | OG 124A/9 &<br>136A/538  |
|                      | Drilling Appalachian Corporation        | Statoil USA Onshore Properties Inc. |  | OG 138A/54               |
|                      | Grenadier Energy Partners, LLC          | Statoil USA Onshore Properties Inc. |  | OG 138A/1                |
|                      | Statoil USA Onshore Properties Inc.     | EQT Production Company              | OG 175A/707                            |                          |
| <b><u>870050</u></b> | <b><u>Green Dot Farm, et al</u></b>     |                                     | "at least 1/8th per<br>WV Code 22-6-8" |                          |
|                      | Green Dot Farm, Inc.                    | Drilling Appalachian Corporation    |  | OG 103A/253              |
|                      | Drilling Appalachian Corporation        | Grenadier Energy Partners, LLC      |  | OG 106A/11 &<br>135A/344 |
|                      | Drilling Appalachian Corporation        | Statoil USA Onshore Properties Inc. |  | OG 138A/54               |
|                      | Grenadier Energy Partners, LLC          | Statoil USA Onshore Properties Inc. |  | OG 138A/1                |
|                      | Statoil USA Onshore Properties Inc.     | EQT Production Company              | OG 175A/707                            |                          |
| <b><u>870415</u></b> | <b><u>Howard Henderson, et al.</u></b>  |                                     | "at least 1/8th per<br>WV Code 22-6-8" |                          |
|                      | Maxine Henderson                        | Drilling Appalachian Corporation    |  | OG 85A/306               |
|                      | Drilling Appalachian Corporation        | Grenadier Energy Partners, LLC      |  | OG 124A/9 &<br>136A/538  |
|                      | Drilling Appalachian Corporation        | Statoil USA Onshore Properties Inc. |  | OG 138A/54               |
|                      | Grenadier Energy Partners, LLC          | Statoil USA Onshore Properties Inc. |  | OG 138A/1                |
|                      | Statoil USA Onshore Properties Inc.     | EQT Production Company              | OG 175A/707                            |                          |

RECEIVED  
Office of Oil and Gas  
MAR 09 2021  
WV Department of  
Environmental Protection

**870045**

**Green Dot Farm, Inc., et al**

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

Green Dot Farm, Inc.  
Drilling Appalachian Corporation  
Drilling Appalachian Corporation  
Grenadier Energy Partners, LLC  
Statoil USA Onshore Properties Inc.

Drilling Appalachian Corporation  
Grenadier Energy Partners, LLC  
Statoil USA Onshore Properties Inc.  
Statoil USA Onshore Properties Inc.  
EQT Production Company

OG 103A/265  
OG 106A/11 &  
135A/344  
OG 138A/54  
OG 138A/1  
OG 175A/707

**870395**

**Brian R. Morgan, et al.**

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

Teaunna Morgan  
Drilling Appalachian Corporation  
Drilling Appalachian Corporation  
Grenadier Energy Partners, LLC  
Statoil USA Onshore Properties Inc.

Drilling Appalachian Corporation  
Grenadier Energy Partners, LLC  
Statoil USA Onshore Properties Inc.  
Statoil USA Onshore Properties Inc.  
EQT Production Company

OG 109A/909  
OG 110A/821 &  
135A/356  
OG 138A/54  
OG 138A/1  
OG 175A/707

**870216**

**Gore-Morris Trust, et al**

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

Gore-Morris Trust, J P Morgan Chase Bank, N.A., Trustee  
Drilling Appalachian Corporation  
Drilling Appalachian Corporation  
Grenadier Energy Partners, LLC  
Statoil USA Onshore Properties Inc.

Drilling Appalachian Corporation  
Grenadier Energy Partners, LLC  
Statoil USA Onshore Properties Inc.  
Statoil USA Onshore Properties Inc.  
EQT Production Company

OG 109A/183  
OG 110A/821 &  
135A/356  
OG 138A/54  
OG 138A/1  
OG 175A/707

**870446**

**Kenneth Joe Hollobaugh**

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

Kenneth Joe Hollobaugh, a married man dealing in his sole and  
separate property

Drilling Appalachian Corporation  
Drilling Appalachian Corporation  
Grenadier Energy Partners, LLC  
Statoil USA Onshore Properties Inc.

Drilling Appalachian Corporation  
Grenadier Energy Partners, LLC  
Statoil USA Onshore Properties Inc.  
Statoil USA Onshore Properties Inc.  
EQT Production Company

OG 107A/556  
OG 108A/762 &  
135A/347  
OG 138A/54  
OG 138A/1  
OG 175A/707

RECEIVED  
Office of Oil and Gas

MAR 09 2021

WV Department of  
Environmental Protection

**1043135**

**Mary Gallo, et al.**

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

Mary Gallo, aka Mary M. Gallo and Ernest B. Gallo, her husband

EQT Production Company

OG 249A/144

**01-7-6.1**

**Green Dot Farm, Inc.**

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

Green Dot Farm, Inc.

Antero Resources Corporation  
See attached Letter

OG 189A/930

**01-4-52**

**Gregory Neil Musgrave, et al.**

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

Gregory Neil Musgrave, single  
Columbia Natural Resources, LLC  
Chesapeake Appalachia, L.L.C.  
Chesapeake Appalachia, L.L.C.  
Statoil USA Onshore Properties Inc.

Columbia Natural Resources, LLC  
Chesapeake Appalachia, L.L.C.  
Statoil USA Onshore Properties Inc.  
SWN Production Company, LLC  
SWN Exchange Titleholder LLC

OG 85A/38  
WV SOS  
OG 97A/578  
OG 157A/540  
OG 158A/801

SWN Exchange Titleholder LLC

SWN Production Company, LLC

Corp. Book 12/296

SWN Production Company, LLC  
Statoil USA Onshore Properties Inc.

Antero Exchange Properties LLC  
Antero Exchange Properties LLC

OG 177A/533  
OG 177A/738

Antero Exchange Properties LLC

Antero Resources Corporation

Corp. Book 13/311

See attached Letter

RECEIVED  
Office of Oil and Gas

MAR 09 2021

WV Department of  
Environmental Protection



February 8, 2021

Jared Hurst  
Antero Resources Corporation  
1615 Wynkoop Street  
Denver, CO 90202

RE: **Permission to Permit and Drill**

Wetzel County, West Virginia

Dear Mr. Hurst,

EQT Production Company ("**EQT**") hereby requests permission from Antero Resources Corporation ("**Antero**") to proceed with EQT's plans to drill one or more horizontal wells in, under, and through certain properties subject to oil and gas interests owned or controlled by Antero located in Wetzel County, West Virginia, as more particularly described on Exhibit A to this letter agreement (the "**O&G Interests**"), and insofar and only insofar as such O&G Interests are located within the Units (as defined below) and further insofar and only insofar as to the Target Rights (the "**Properties**"), pursuant to the terms and conditions of this letter agreement. Antero and EQT are currently parties to an Acreage Trade Agreement dated December 8, 2020 (as amended from time-to-time, the "**Trade Agreement**"), which includes the Properties. The closing of the Trade Agreement is scheduled to occur on or before June 17, 2021, subject to the term of the Trade Agreement. EQT desires to drill the Properties for EQT's units more particularly described on Exhibit B to this letter agreement (the "**Units**") prior to the Closing contemplated by the Trade Agreement. Capitalized terms not otherwise defined herein shall have the meanings ascribed to them in the Trade Agreement.

In order to generate mutual goodwill between EQT and Antero, and for one hundred dollars (\$100.00) and other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, Antero hereby grants EQT the right to apply for and obtain all applicable governmental permits for the drilling of one or more wellbore laterals in, under, and through the Properties (collectively, "**Wells**") and to drill, complete and produce such Wells.

In the event that the Trade Agreement is terminated pursuant to its terms (or is not terminated but fails to Close with respect to all or any portion of the Properties), then EQT and Antero shall enter into one (1) or more mutually-agreed joint operating agreements (with each contract area covering a Unit) with respect to the Properties (or the portions thereof for which Closing failed to occur), effective as of the date hereof.

EQT hereby agrees to release, protect, indemnify, defend and hold harmless Antero from and against any claims, expenses, damages, injuries, claims or obligations or liabilities (including reasonable attorneys' fees) that may be brought by any third party against Antero or its Affiliates to the extent arising out of EQT's drilling or other operations pursuant to this letter agreement and that arise on or after the date of this letter agreement through the Expiration Date (as defined

US 7690672

RECEIVED  
Office of Oil and Gas

MAR 09 2021

WV Department of  
Environmental Protection

06/25/2021

below). This paragraph shall survive (a) the Closing and the assignment or lease, as applicable, related to the Properties, (b) the the execution of a mutually-agreed joint operating agreement with respect to any Properties, or (c) any termination of all or any part of this letter agreement.

Nothing in this letter agreement will diminish any current or future rights of Antero in the Properties or other properties. This letter agreement and the rights and obligations of EQT and Antero hereunder will terminate (on a Property-by-Property basis) upon the earlier of (I) the execution of a mutually-agreed joint operating agreement with respect to such Property or (II) if and when Antero and EQT consummate the Closing of the Trade Agreement with respect to such Property ("**Expiration Date**").

If the above meets your approval, please execute in the space provided below and return one signed copy to the letterhead address. Should you have any questions, please contact Jarred Detweiler at (412) 660-6276.

*[Signature Pages Follow.]*

RECEIVED  
Office of Oil and Gas  
MAR 09 2021  
WV Department of  
Environmental Protection

06/25/2021

Sincerely,

**EQT PRODUCTION COMPANY**

By: DocuSigned by:  
Corey Peck  
B89B4AB4E0CB48A...  
Name: Corey Peck  
Title: Managing Director – Land ops

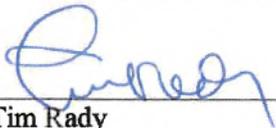
*Signature Page to Letter Agreement*

RECEIVED  
Office of Oil and Gas  
MAR 09 2021  
WV Department of  
Environmental Protection

06/25/2021

AGREED TO AND ACCEPTED:

**ANTERO RESOURCES CORPORATION**

By:   
Name: Tim Rady  
Title: Vice President - Land

*Signature Page to Letter Agreement*

RECEIVED  
Office of Oil and Gas  
MAR 09 2021  
WV Department of  
Environmental Protection

06/25/2021

**EXHIBIT A  
PROPERTIES**

| Lessors/Grantor   | Lessee/Grantee                   | Lease/Deed Date | Gross Acres | State | County | District | Vol  | Pg  | Parcels                |
|---|----------------------------------|-----------------|-------------|-------|--------|----------|------|-----|------------------------|
| Long, Ronald M., a married man acting in his own right  | Columbia Natural Resources Llc   | 6/29/2005       | 131.000     | WV    | Wetzel | Center   | 85A  | 76  | P/O 01-5-21<br>01-4-52 |
| Wiegand, Eileen, a married woman acting in her own right  | Columbia Natural Resources Llc   | 6/29/2005       | 91.706      | WV    | Wetzel | Center   | 85A  | 78  | P/O 01-5-21<br>01-4-52 |
| Anderson, Noel, a married woman acting in her own right   | Columbia Natural Resources Llc   | 6/29/2005       | 91.706      | WV    | Wetzel | Center   | 85A  | 80  | P/O 01-5-21<br>01-4-52 |
| Musgrave, Ila Mae, a married woman acting in her own right  | Columbia Natural Resources Llc   | 6/29/2005       | 91.706      | WV    | Wetzel | Center   | 85A  | 82  | P/O 01-5-21<br>01-4-52 |
| Blake, Paul J., widower   | Columbia Natural Resources Llc   | 7/6/2005        | 91.706      | WV    | Wetzel | Center   | 85A  | 36  | P/O 01-5-21<br>01-4-52 |
| Chapin, Mary Lynn, a married woman acting in her own right  | Columbia Natural Resources Llc   | 7/6/2005        | 91.706      | WV    | Wetzel | Center   | 85A  | 142 | P/O 01-5-21<br>01-4-52 |
| Musgrave, Gregory Neil, single  | Columbia Natural Resources Llc   | 7/21/2005       | 127.720     | WV    | Wetzel | Center   | 85A  | 38  | P/O 01-5-21<br>01-4-52 |
| Wykert, Diann Louise, a married woman acting in her own right   | Columbia Natural Resources Llc   | 7/21/2005       | 127.720     | WV    | Wetzel | Center   | 85A  | 40  | P/O 01-5-21<br>01-4-52 |
| Musgrave, Charles Fred, a married man acting in his own right   | Columbia Natural Resources Llc   | 7/21/2005       | 89.873      | WV    | Wetzel | Center   | 85A  | 89  | P/O 01-5-21<br>01-4-52 |
| Robert Keith Miller Estate by Susan Miller, acting as Executrix and Susan Miller, individually, a widow | Chesapeake Appalachia Llc        | 11/16/2013      | 69.250      | WV    | Wetzel | Center   | 146A | 585 | P/O 01-5-21<br>01-4-52 |
| Green Dot Farm, Inc.  | Antero Resources Corporation     | 4/7/2017        | 149.000     | WV    | Wetzel | Center   | 189A | 930 | 01-7-6.1               |
| BRC Appalachian Minerals 1 LLC  | BRC Working Interest Company LLC | 8/27/2009       | 7.300       | WV    | Wetzel | Church   | 102A | 505 | 02-14-38               |

RECEIVED  
 Office of Oil and Gas  
**MAR 09 2021**  
 WV Department of  
 Environmental Protection  
**06/25/2021**

|                                |                                  |           |        |    |        |             |      |     |                    |
|--------------------------------|----------------------------------|-----------|--------|----|--------|-------------|------|-----|--------------------|
| BRC Appalachian Minerals I LLC | BRC Working Interest Company LLC | 8/27/2009 | 7.300  | WV | Wetzel | Church      | 102A | 505 | 02-18-5            |
| BRC Appalachian Minerals I LLC | BRC Working Interest Company LLC | 8/27/2009 | 1.800  | WV | Wetzel | Church      | 102A | 505 | 02-9-7             |
| BRC Appalachian Minerals I LLC | BRC Working Interest Company LLC | 8/27/2009 | 35.750 | WV | Wetzel | Clay        | 102A | 505 | 03-6-27            |
| BRC Appalachian Minerals I LLC | BRC Working Interest Company LLC | 8/27/2009 | 0.352  | WV | Wetzel | Clay        | 102A | 505 | 03-6-28            |
| BRC Appalachian Minerals I LLC | BRC Working Interest Company LLC | 8/27/2009 | 7.470  | WV | Wetzel | Clay/Center | 102A | 505 | 03-6-29            |
| BRC Appalachian Minerals I LLC | BRC Working Interest Company LLC | 8/27/2009 | 0.729  | WV | Wetzel | Clay/Center | 102A | 505 | 03-6-29.1          |
| BRC Appalachian Minerals I LLC | BRC Working Interest Company LLC | 8/27/2009 | 1.569  | WV | Wetzel | Clay        | 102A | 505 | 03-6-29.2          |
| BRC Appalachian Minerals I LLC | BRC Working Interest Company LLC | 8/27/2009 | 62.500 | WV | Wetzel | Center      | 102A | 505 | 01-12-7, 02-12-7.1 |

RECEIVED  
Office of Oil and Gas

MAR 09 2021

WV Department of  
Environmental Protection

06/25/2021

**EXHIBIT B  
UNITS**

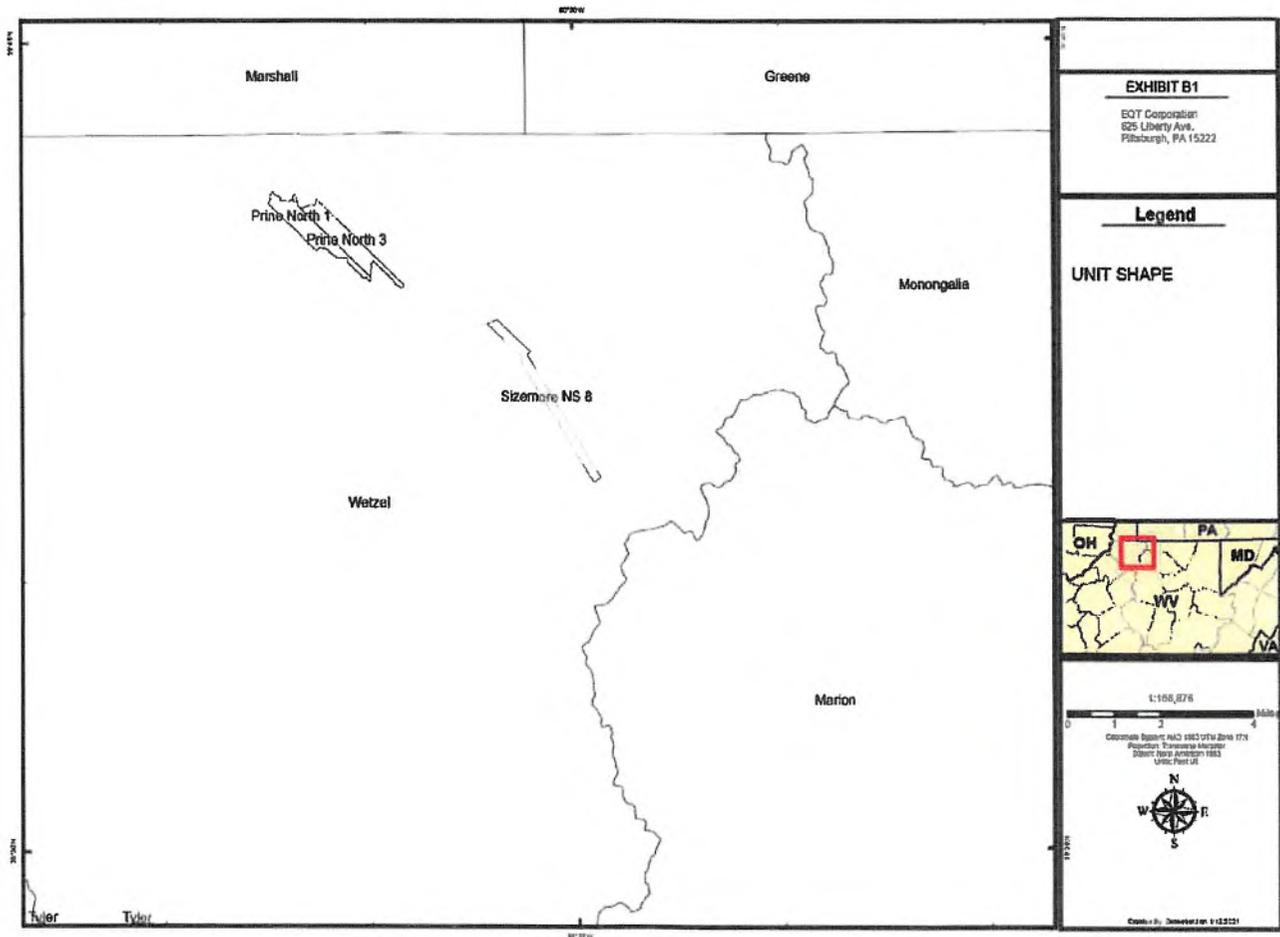
| <b>Unit Name(s)</b> | <b>Legal Description</b>                        |
|---------------------|---|
| Prine North 1       | <i>As depicted in the attached Exhibit B-1.</i> |
| Prine North 3       |   |
| Sizemore NS 8       |   |
|                     |   |
|                     |   |
|                     |   |
|                     |   |
|                     |   |

RECEIVED  
Office of Oil and Gas

MAR 09 2021

WV Department of  
Environmental Protection  
**06/25/2021**

# EXHIBIT B-1



RECEIVED  
Office of Oil and Gas

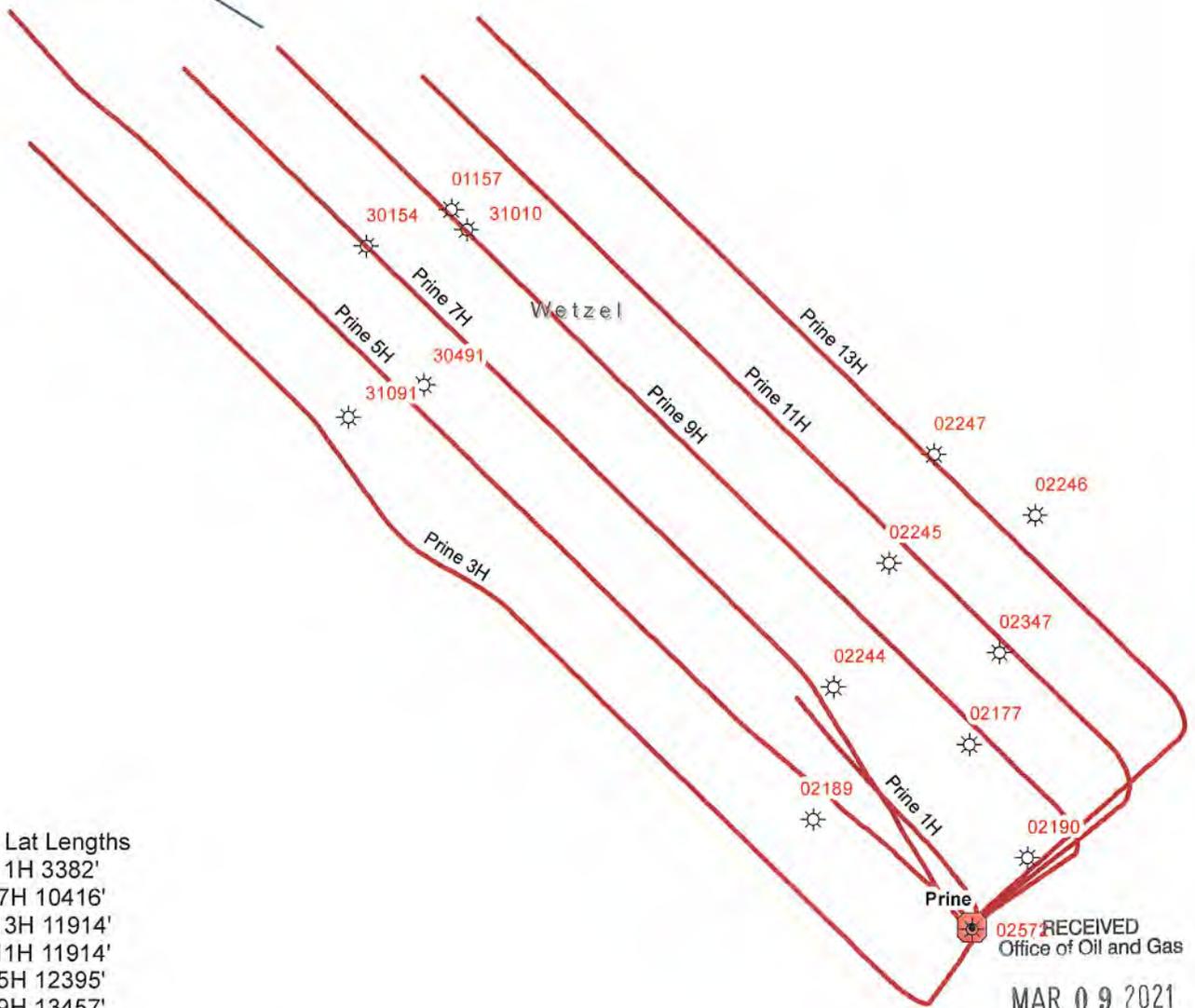
MAR 09 2021

WV Department of  
Environmental Protection

06/25/2021



471030320501



Planned Lat Lengths  
 Prine 1H 3382'  
 Prine 7H 10416'  
 Prine 13H 11914'  
 Prine 11H 11914'  
 Prine 5H 12395'  
 Prine 9H 13457'  
 Prine 3H 14905'

RECEIVED  
 Office of Oil and Gas

MAR 09 2021

WV Department of Environmental Protection

**EQT**  
 EQT Corporation  
 625 Liberty Avenue  
 Pittsburgh, PA 15222

**Legend**

- Foreign Well Offset
- Foreign Horizontals
- Well Pad Sites

**Well Lateral\_FM Formation**

- Genesee
- Marcellus
- Utica



**Disclaimer:**

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



Prine - North

**Vertical Offsets and Foreign Laterals within 500'**

06/25/2021

| WellID     | WellStatus | date       | FmatTD            | Permit | RemarksPRO   | Operator                  | Longitude | Latitude | DatumEleva | TotalDepth-SS | Total Depth |
|------------|------------|------------|-------------------|--------|--------------|---------------------------|-----------|----------|------------|---------------|-------------|
| 4710301157 | UNK        | 12/17/1923 |                   | 01157  |              | W M BISSETT               | -80.5968  | 39.6943  | 1268.0000  | -1938.0000    | 3206.0000   |
| 4710302177 | UNK        | 6/28/2006  |                   | 02177  | BNJ          | D A C                     | -80.5739  | 39.6760  | 1473.0000  | -2226.0000    | 3699.0000   |
| 4710302189 | GAS        | 8/30/2006  |                   | 02189  | BNJ/GDN      | D A C                     | -80.5808  | 39.6735  | 0.0000     | -3605.0000    | 3605.0000   |
| 4710302190 | GAS        | 9/8/2006   |                   | 02190  | BNJ/GDN      | D A C                     | -80.5713  | 39.6721  | 0.0000     | -3500.0000    | 3500.0000   |
| 4710302244 | GAS        | 7/9/2007   |                   | 02244  | BNJGDN55DBYD | D A C                     | -80.5799  | 39.6780  | 1361.0000  | -2282.0000    | 3643.0000   |
| 4710302245 | GAS        | 8/4/2007   |                   | 02245  | BNJ/GDN      | D A C                     | -80.5775  | 39.6822  | 1386.0000  | -2149.0000    | 3535.0000   |
| 4710302246 | GAS        | 7/16/2007  |                   | 02246  | BNJ/GDN      | D A C                     | -80.5710  | 39.6838  | 1439.0000  | -2269.0000    | 3708.0000   |
| 4710302247 | GAS        | 7/21/2007  |                   | 02247  | BNJ/GDN      | D A C                     | -80.5755  | 39.6859  | 1534.0000  | -2152.0000    | 3686.0000   |
| 4710302347 | GAS        | 5/15/2008  |                   | 02347  | BNJGDN       | D A C                     | -80.5726  | 39.6791  | 1361.0000  | -2315.0000    | 3676.0000   |
| 4710302572 | GAS        | 7/29/2010  |                   | 02572  |              | GRENADIER ENERGY PARTNERS | -80.5738  | 39.6697  | 1332.0000  | -5168.0000    | 6500.0000   |
| 4710330154 | OIL        |            |                   | 30154  |              | OPER IN MIN.OWN           | -80.6006  | 39.6930  | 1173.0000  | -1944.0000    | 3117.0000   |
| 4710330491 | OIL GS     | 8/10/1917  |                   | 30491  |              | JENNINGS BRTHRS           | -80.5981  | 39.6883  | 972.0000   | -1954.0000    | 2926.0000   |
| 4710331010 | GAS        | 8/15/1934  | LOWER HURON SHALE | 31010  |              | CARNEGIE NAT GAS          | -80.5961  | 39.6936  | 1260.0000  | -1946.0000    | 3206.0000   |
| 4710331091 | UNK        |            | LOWER HURON SHALE | 31091  |              | OPER IN MIN.OWN           | -80.6014  | 39.6872  | 1200.0000  | -1945.0000    | 3145.0000   |

Foreign Horizontal

| WellID       | DatumEleva | Deviated | WellStatus | Name                  | Spuddate   | Operator       |
|--------------|------------|----------|------------|-----------------------|------------|----------------|
| 471030320501 | 1411.0000  | 1        | GAS        | 210H DURIG DANIEL WTZ | 11/18/2017 | SWN PRODUCTION |

**RECEIVED**  
 Office of Oil and Gas  
**MAR 09 2021**  
 WV Department of  
 Environmental Protection