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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)

Wednesday, June 22, 2022  
PERMIT MODIFICATION APPROVAL  
Horizontal 6A / New Drill

ANTERO RESOURCES CORPORATION  
1615 WYNKOOP STREET

DENVER, CO 80202

Re: Permit Modification Approval for PHAETON UNIT 1H  
47-095-02786-00-00

**Extended Lateral Length**

ANTERO RESOURCES CORPORATION

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: PHAETON UNIT 1H  
Farm Name: ELDON J & RUTH A HELMAN  
U.S. WELL NUMBER: 47-095-02786-00-00  
Horizontal 6A New Drill  
Date Modification Issued: 6/22/2022

Promoting a healthy environment.

06/24/2022

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

1) Well Operator: Antero Resources Corporation 494507062 095 - Tyler Ellsworth Middlebourne 7.5'  
Operator ID County District Quadrangle

2) Operator's Well Number: Phaeton Unit 1H MOD Well Pad Name: Eldon Pad

3) Farm Name/Surface Owner: Eldon J. & Ruth A Helman Public Road Access: Allen Run Rd

4) Elevation, current ground: 880' as built Elevation, proposed post-construction: \_\_\_\_\_

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 Shale: 6400' TVD, Anticipated Thickness- 55 feet, Associated Pressure- 2850#

8) Proposed Total Vertical Depth: 6400' TVD

9) Formation at Total Vertical Depth: Marcellus

10) Proposed Total Measured Depth: 25000'

11) Proposed Horizontal Leg Length: 17662'

12) Approximate Fresh Water Strata Depths: 156'

13) Method to Determine Fresh Water Depths: 47095009120000 Offset well records. Depths have been adjusted according to surface elevations.

14) Approximate Saltwater Depths: 1676'

15) Approximate Coal Seam Depths: None Anticipated

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

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

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Office of Oil and Gas  
JUN 06 2022  
WV Department of  
Environmental Protection

WW-6B  
(04/15)

API NO. 47- 095 - 02788  
 OPERATOR WELL NO. Phaeton Unit 1H MOD  
 Well Pad Name: Eldon Pad

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	20"	New	H-40	79#	80'	80'	CTS, 77 Cu. Ft.
Fresh Water	13-3/8"	New	J/K-55	54.5#	300'	300'	CTS, 313Cu. Ft.
Coal	9-5/8"	New	J-/K55	36#	2500'	2500'	CTS, 1018 Cu. Ft.
Intermediate							
Production	5-1/2"	New	P-110CY	20#	25000'	25000'	CTS, 5372 Cu. Ft.
Tubing	2-3/8"	New	N-80	4.7#			
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	20"	24"	0.375"	2250	50	Class A	~1.18
Fresh Water	13-3/8"	17-1/2"	0.38"	2730	1000	Class A	~1.18
Coal	9-5/8"	12-1/4"	0.352"	3520	1500	Class A	~1.18
Intermediate							
Production	5-1/2"	8-3/4" & 8-1/2"	0.415"	14,360	2500	Class G/H	~1.8
Tubing	2-3/8"	4.778"	0.19"	11,200			
Liners							

**PACKERS**

Kind:	N/A			
Sizes:	N/A			
Depths Set:	N/A			

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Office of Oil and Gas

JUN 06 2022

WV Department of  
Environmental Protection

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

Drill a new horizontal shallow well into the Marcellus Shale.

\*Antero will be air drilling the fresh water string which makes it difficult to determine when fresh water is encountered. Therefore, we have built in a buffer for the casing setting depth which helps to ensure that all fresh water zones are covered.

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

Antero plans to pump Slickwater into the Marcellus Shale formation in order to ready the well for production. The fluid will be comprised of approximately 99 percent water and sand, with less than 1 percent special-purpose additives as shown in the attached "List of Anticipated Additives Used for Fracturing or Stimulating Well."

Anticipated Max Pressure - 9300 lbs  
Anticipated Max Rate - 80 bpm

21) Total Area to be disturbed, including roads, stockpile area, pits, etc., (acres): 35.04 acres

22) Area to be disturbed for well pad only, less access road (acres): 12.65 acres

23) Describe centralizer placement for each casing string:

Conductor: no centralizers  
Surface Casing: one centralizer 10' above the float shoe, one on the insert float collar and one every 4th joint spaced up the hole to surface.  
Intermediate Casing: one centralizer above float joint, one centralizer 5' above float collar and one every 4th collar to surface.  
Production Casing: one centralizer at shoe joint and one every 3 joints to top of cement in intermediate casing.

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

Conductor: no additives, Class A cement.  
Surface: Class A cement with 2-3% calcium chloride and 1/4 lb of flake  
Intermediate: Class A cement with 1/4 lb of flake, 5 gallons of clay treat  
Production: Lead cement- 50/50 Class H/Poz + 1.5% salt + 1% C-45 + 0.5% C-16a + 0.2% C-12 + 0.45% C-20 + 0.05% C-51  
Production: Tail cement- Class H + 45 PPS Calcium Carbonate + 1.0% FL-160 + 0.2% ACGB-47 + 0.05% ACSA-51 + 0.2% ACR-20

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25) Proposed borehole conditioning procedures:

Conductor: blowhole clean with air, run casing, 10 bbls fresh water.  
Surface: blowhole clean with air, trip to conductor shoe, trip to bottom, blowhole clean with air, trip out, run casing, circulate pipe capacity + 40 bbls fresh water followed by 25 bbls bentonite mud, 10 bbls fresh water spacer.  
Intermediate: blowhole clean with air, trip to surface casing shoe, trip to bottom, blowhole clean with air, trip out, run casing, circulate 40 bbls brine water followed by 10 bbls fresh water and 25 bbls bentonite mud, pump 10 bbls fresh water.  
Production: circulate with 14 lb/gal NaCl mud, trip to middle of lateral, circulate, pump high viscosity sweep, trip to base of curve, pump high viscosity sweep, trip to top of curve, trip to bottom, circulate, pump high viscosity sweep, trip out, run casing, circulate 10 bbls fresh water, pump 48 bbls barite pill, pump 10 bbls fresh water followed by 48 bbls mud flush and 10 bbls water.

\*Note: Attach additional sheets as needed.

*Handwritten signature and date: 6-3-22*

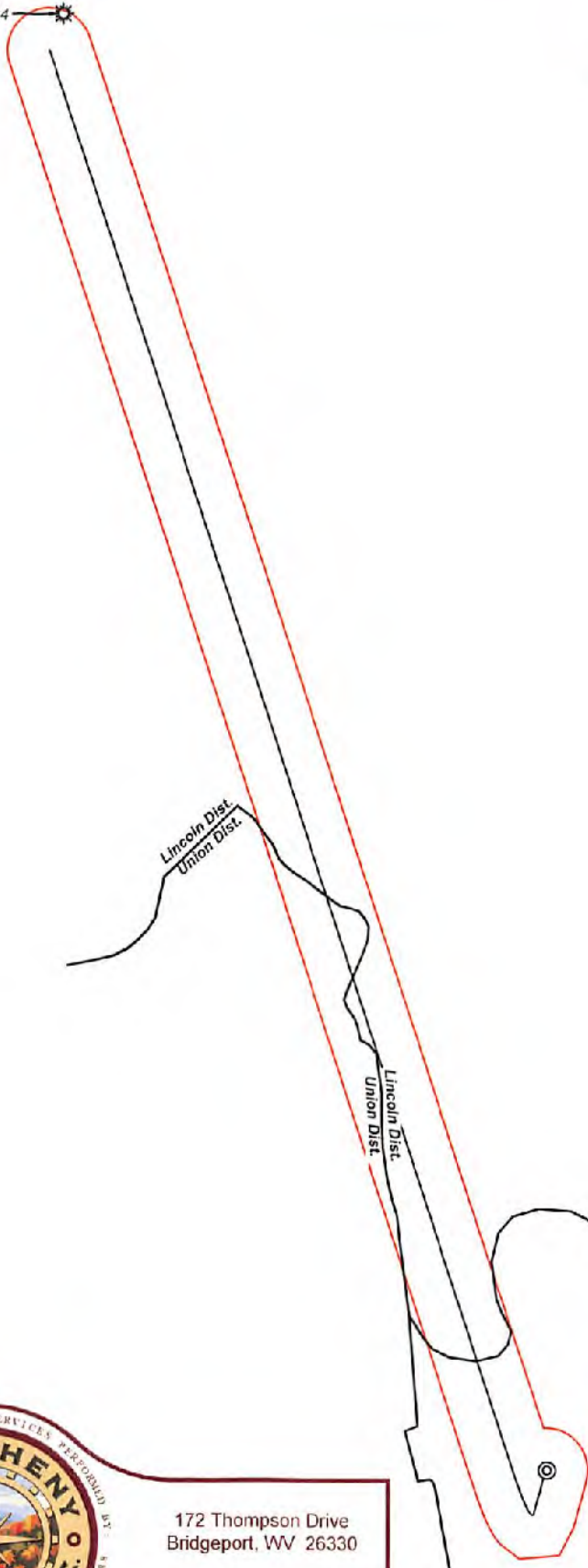
**LEGEND**

- ⊙ Proposed gas well
- ⊛ Existing Well, as noted
- ⊛ Digitized Well, as noted



The orientation of this survey is Grid North, and its coordinate base is the West Virginia Coordinate System of 1927, North Zone

47-095-00814



Lincoln Dist.  
Union Dist.

Lincoln Dist.  
Union Dist.

Elisworth Dist.



Bridgeport Office  
Phone: (304) 848-5035  
Fax: (304) 848-5037

172 Thompson Drive  
Bridgeport, WV 26330

PARTY CHIEF: C. Lynch	DRAWN BY: J. Smith
RESEARCH: J. Miller	PREPARED: April 22, 2022
SURVEYED: Dec. 2016	PROJECT NO: 294-54-U-18
FIELD CREW: C.L., K.M.	DRAWING NO: Phaston 1H Well Exhibit

Sheet 1 of 1



Scale: 1 inch = 2000 feet

06/24/2022



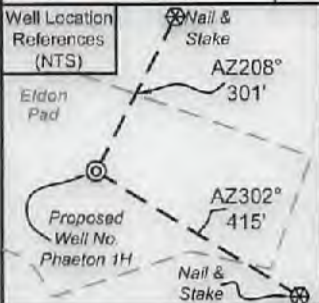
UWI (APINum)	Well Name	Well Number	Operator	Hist Oper	TD	Perforated Interval (shallowest, deepest)	Perforated Formation(s)	Producible Formation(s) not perf'd
47095008140000	GRIMM DAN	1	HAUGHT GLENN L	L & M PETROLEUM	3,581		Gordon	Weir, Alexander, Berea

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**Antero Resources**  
**Well No. Phaeton 1H**  
**BHL MOD**  
 Antero Resources Corporation

Page 1 of 2 47-095-0814

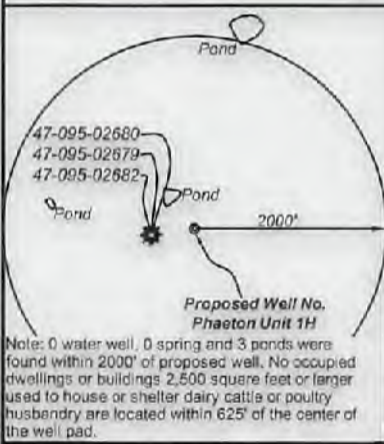


I, the undersigned, hereby certify that this plat is correct to the best of my knowledge and belief and shows all the information required by law and the rules issued and prescribed by the Department of Environmental Protection.

Bradley D. Miller, P.S. 2167

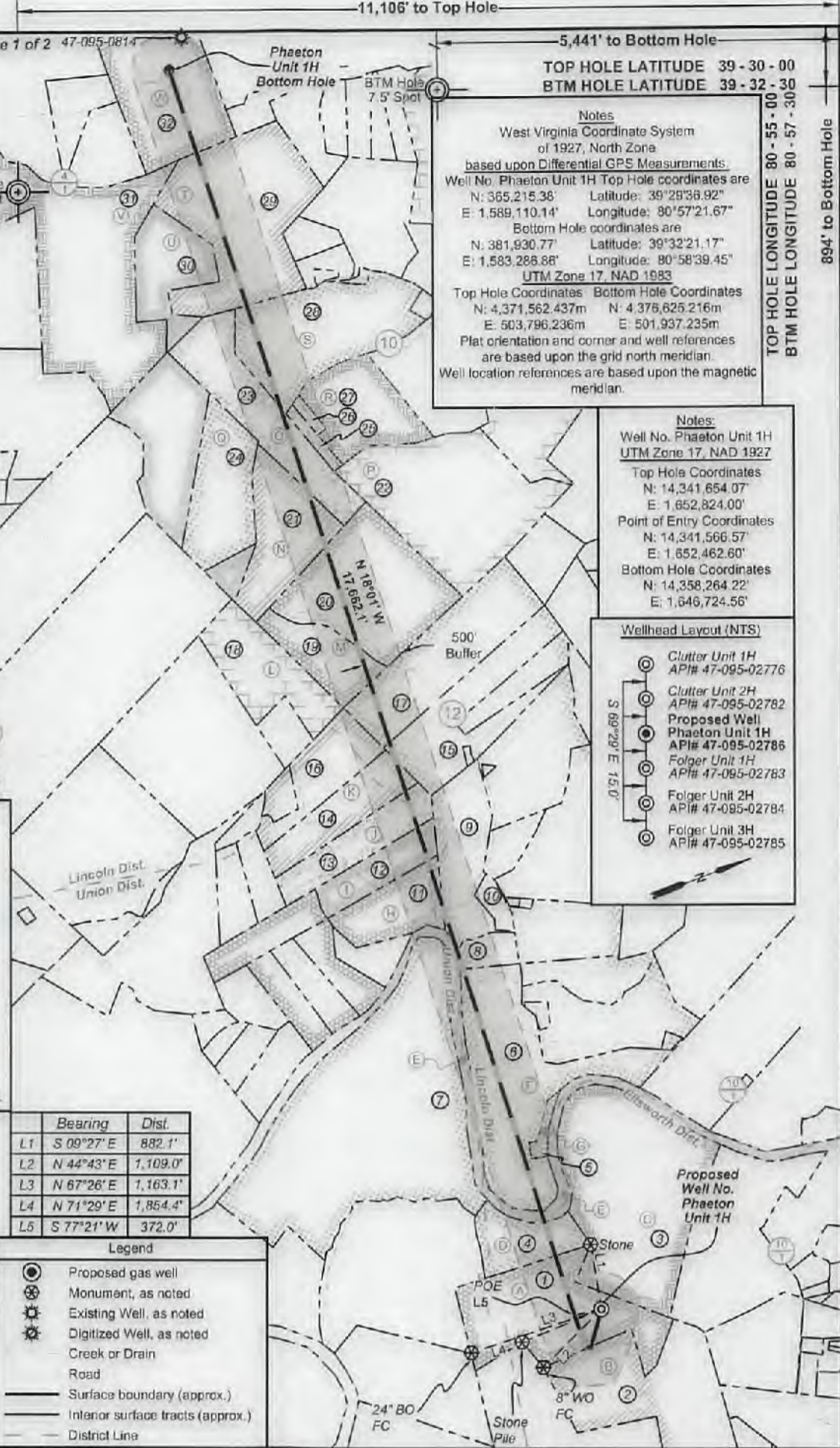


SEAL



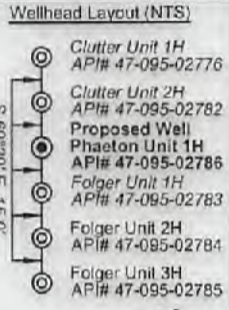
	Bearing	Dist.
L1	S 09°27' E	882.1'
L2	N 44°43' E	1,109.0'
L3	N 67°26' E	1,163.1'
L4	N 71°29' E	1,854.4'
L5	S 77°21' W	372.0'

- Legend**
- ⊙ Proposed gas well
  - ⊗ Monument, as noted
  - ⊙ Existing Well, as noted
  - ⊙ Digitized Well, as noted
  - Creek or Drain
  - Road
  - Surface boundary (approx.)
  - Interior surface tracts (approx.)
  - District Line



**Notes**  
 West Virginia Coordinate System of 1927, North Zone  
 based upon Differential GPS Measurements:  
 Well No. Phaeton Unit 1H Top Hole coordinates are  
 N: 365,215.38' Latitude: 39°29'36.92"  
 E: 1,589,110.14' Longitude: 80°57'21.67"  
 Bottom Hole coordinates are  
 N: 381,930.77' Latitude: 39°32'21.17"  
 E: 1,583,286.88' Longitude: 80°58'39.45"  
**UTM Zone 17, NAD 1983**  
 Top Hole Coordinates Bottom Hole Coordinates  
 N: 4,371,562.437m N: 4,376,625.216m  
 E: 503,796.236m E: 501,937.235m  
 Plat orientation and corner and well references are based upon the grid north meridian.  
 Well location references are based upon the magnetic meridian.

**Notes:**  
 Well No. Phaeton Unit 1H  
**UTM Zone 17, NAD 1927**  
 Top Hole Coordinates  
 N: 14,341,654.07'  
 E: 1,652,824.00'  
 Point of Entry Coordinates  
 N: 14,341,566.57'  
 E: 1,652,462.60'  
 Bottom Hole Coordinates  
 N: 14,358,264.22'  
 E: 1,646,724.56'



FILE NO: 294-54-E-18  
 DRAWING NO: Phaeton Unit 1H Well Plat  
 SCALE: 1" = 2000'  
 MINIMUM DEGREE OF ACCURACY: Submeter  
 PROVEN SOURCE OF ELEVATION: WVDOT, Harrisville, WV

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

DATE: May 18 20 22  
 OPERATOR'S WELL NO. Phaeton Unit 1H  
 API WELL NO. **M40**  
 47 - 095 - 02786  
 STATE COUNTY PERMIT

WELL TYPE:  OIL  GAS  LIQUID INJECTION  WASTE DISPOSAL  
 (IF GAS) PRODUCTION:  STORAGE  DEEP  SHALLOW

LOCATION: ELEVATION: As-Built 880' WATERSHED: Middle Island Creek QUADRANGLE: Btm Hole: Paden City  
 District: Union, Lincoln Outlet: Middle Island Creek Top Hole: Middlebourne

DISTRICT: Union, Lincoln COUNTY: Tyler

SURFACE OWNER: Ruth A. Helman William P. Ingram; William J. Goodfellow, et ux (2); Erik D. Grimm; Richard Keith McCollum; Charles M. Jr. & Crystal R. Young; Myrtle Liva Tucker; Mary Ann Devine; David S. Clough; Alan B. Clough, et ux; Karen Moore Hwilka; ACREAGE: 61.83 34.3; 406.69; 78.49; 18.30; 25.0; 56.06; 100; 38.65; 48.55;

ROYALTY OWNER: Eldon J. & Ruth A. Helman; Carol J. Cox; Norma R. Spencer; WVDNR; LEASE NO: ACREAGE: 62.5; 84.3; 86.607

PROPOSED WORK:  DRILL  CONVERT  DRILL DEEPER  FRACTURE OR STIMULATE  PLUG OFF OLD FORMATION  
 PERFORATE NEW FORMATION  OTHER PHYSICAL CHANGE IN WELL (SPECIFY) BHL MOD

PLUG AND ABANDON  CLEAN OUT AND REPLUG TARGET FORMATION: Marcellus Shale ESTIMATED DEPTH: 25,000' MD 6,400' TVD

WELL OPERATOR: Antero Resources Corporation DESIGNATED AGENT: Dianna Stamper - CT Corporation System  
 ADDRESS: 1615 Wynkoop Street ADDRESS: 5400 D Big Tyler Road  
 Denver, CO 80202 Charleston, WV 25313

06/24/2022





ID	TM/Par	Owner	Bk/Pg	Acres
1	19-1	Eldon J. & Ruth A. Helman	383/761	61.83
2	19-42	Carol J. Cox	334/298	142.00
3	13-10	Eldon J. & Ruth A. Helman	383/761	96.82
4	6-1.1	Eldon J. & Ruth A. Helman	383/761	21.00
5	15-19	Bennie H. & Karen Kile	263/40	1.00
6	15-18	B.F. Kile	174/412	70.00
7	6-1	Eldon J. & Ruth A. Helman	383/761	169.00
8	15-12	Roger & Claudia Weekly	317/317	7.66
9	15-10	Doris E. Haught	364/544	55.71
10	15-10.2	April A. & Christopher D. Ramsey	364/541	4.67
11	6-6.9	David S. Clough	351/712	24.54
12	6-6.8	Alan B. & Traci L. Clough	354/306	18.30
13	6-6.6	Richard Keith McCollum	362/348	25.05
14	6-6.5	Crystal R. & Charles M. Young, Jr.	345/211	25.65
15	15-4	Ivan W. & Karen L. Makely	337/639	41.29
16	6-6.4	Crystal R. & Charles M. Young, Jr.	368/773	25.35
17	15-2	Stephen E. Surface, et al	365/302	54.00
18	15-1	S.P. & Otto Woodburn Estate	97/423	33.74
19	12-55	John A. & Matthew J. May	432/101	25.00
20	12-55.1	Nathaniel V. & Tamele Frum	428/804	75.00
21	12-49	Estella J. & William J. Goodfellow, Jr.	286/20	38.65
22	12-50	William P. Ingram	605/159	88.00
23	12-43	Estella J. & William J. Goodfellow, Jr.	178/489	43.18
24	12-46	Keith V. & Barbara L. Frum	280/358	40.89
25	12-47	Estella & William J. Goodfellow, Jr.	166/356	3.46
26	12-48.1	Estella & William J. Goodfellow, Jr.	333/223	1.91
27	12-48	William Michael & Mary Ann Wells	314/416	34.62
28	12-44	William P. Ingram	455/477	62.50
29	12-22	William & Joanne Ingram	140/502	84.30
30	12-21	Keith V. & Barbara L. Frum	280/358	77.30
31	11-10	James Arthur & Dorothy J. Shreves	183/420	128.55
32	7-40	Brett Grimm, et al	342/538	86.60

Leases	
A	Eldon J. & Ruth A. Helman
B	Carol J. Cox
C	Ruth H. Wells
D	Norma R. Spencer
E	WVDNR
F	Mary Ann Devine
G	Benjamin Michael Kile
H	David S. Clough
I	Alan B. Clough, et ux
J	Richard Keith McCollum
K	Charles M. Jr. & Crystal R. Young
L	Flora Patterson Woodburn
M	Karen Moore Hwilka
N	William J. Goodfellow, et ux
O	William J. Goodfellow, et ux
P	William P. Ingram
Q	Keith V. Frum, et ux
R	William Michael Wells, et ux
S	Myrtle Liva Tucker
T	William P. Ingram
U	William P. Ingram
V	James Arthur Shreves, et ux
W	Erik D. Grimm

FILE NO: 294-54-E-18

DRAWING NO: Phaeton Unit 1H Well Plat

SCALE: 1" = 2000'

MINIMUM DEGREE OF ACCURACY:  
Submeter

PROVEN SOURCE OF ELEVATION:  
WVDOT, Harrisville, WV

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

DATE: May 18 20 22

OPERATOR'S WELL NO. Phaeton Unit 1H

API WELL NO **MOD**

47 - 095 - 02786  
 STATE COUNTY PERMIT

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Outlet Ellsworth Top Hole: Middleboure

DISTRICT: Union, Lincoln COUNTY: Tyler **06/24/2022**

SURFACE OWNER: Eldon J. & Ruth A. Helman William P. Ingram; William J. Goodfellow, et ux (2); Erik D. Grimm; Richard Keith McCollum; Charles M. Jr. & Crystal R. Young; Liva Tucker; ACREAGE: 81.83 34.3; 406.69; 78.49; 18.30; 25.0; 56.06; 100; 38.65; 48.55;

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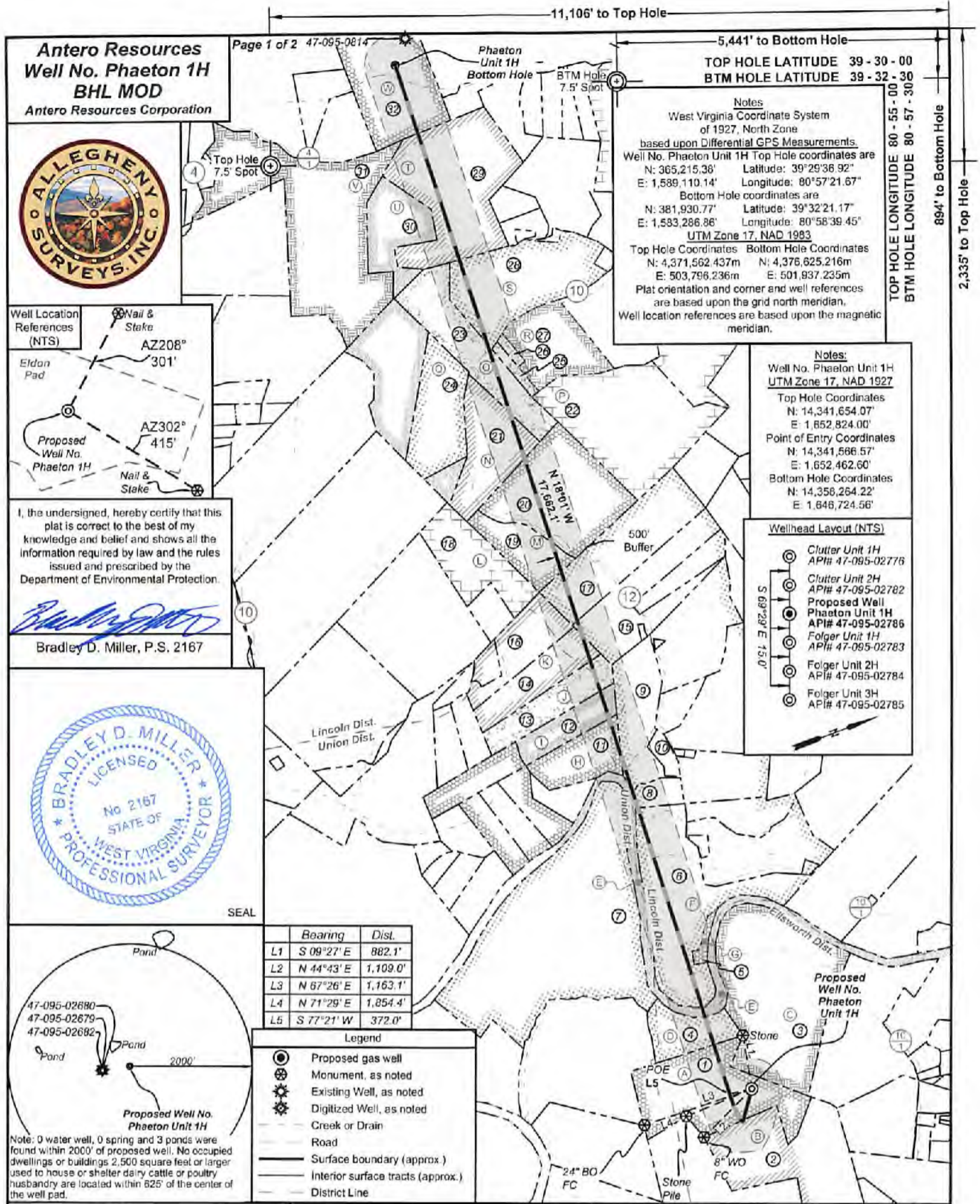
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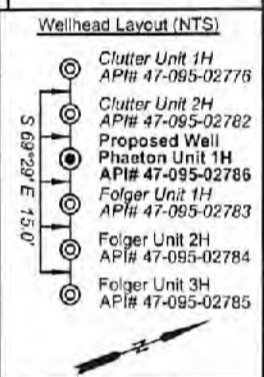
TOP HOLE LATITUDE 39 - 30 - 00  
 BTM HOLE LATITUDE 39 - 32 - 30  
 TOP HOLE LONGITUDE 80 - 55 - 00  
 BTM HOLE LONGITUDE 80 - 57 - 30  
 894' to Bottom Hole  
 2,335' to Top Hole



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 rules issued and prescribed by the Department of Environmental Protection.

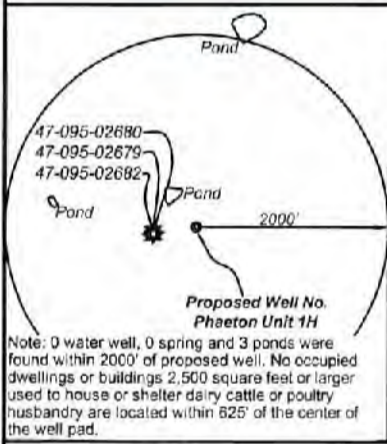
*Bradley D. Miller*  
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 COUNTY: Tyler **06/24/2022**  
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2	19-42	Carol J. Cox	334/298	142.00
3	13-10	Eldon J. & Ruth A. Helman	383/761	96.82
4	6-1,1	Eldon J. & Ruth A. Helman	383/761	21.00
5	15-19	Bennie H. & Karen Kile	263/40	1.00
6	15-18	B.F. Kila	174/412	70.00
7	6-1	Eldon J. & Ruth A. Helman	383/761	169.00
8	15-12	Roger & Claudia Weekly	317/317	7.66
9	15-10	Doris E. Haught	364/544	55.71
10	15-10,2	April A. & Christopher D. Ramsey	364/541	4.67
11	6-6,9	David S. Clough	351/712	24.54
12	6-6,8	Alan B. & Traci L. Clough	354/306	18.30
13	6-6,6	Richard Keith McCollum	362/348	25.05
14	6-6,5	Crystal R. & Charles M. Young, Jr.	345/211	25.65
15	15-4	Ivan W. & Karen L. Makely	337/639	41.29
16	6-6,4	Crystal R. & Charles M. Young, Jr.	368/773	25.35
17	15-2	Stephen E. Surface, et al	385/302	54.00
18	15-1	S.P. & Otto Woodburn Estate	97/423	33.74
19	12-55	John A. & Matthew J. May	432/101	25.00
20	12-55,1	Nathaniel V. & Tamela Frum	428/604	75.00
21	12-49	Estella J. & William J. Goodfellow, Jr.	286/20	38.65
22	12-50	William P. Ingram	605/159	88.00
23	12-43	Estella J. & William J. Goodfellow, Jr.	178/489	43.18
24	12-46	Keith V. & Barbara L. Frum	280/358	40.89
25	12-47	Estella & William J. Goodfellow, Jr.	166/356	3.46
26	12-48,1	Estella & William J. Goodfellow, Jr.	333/223	1.91
27	12-48	William Michael & Mary Ann Wells	314/416	34.62
28	12-44	William P. Ingram	455/477	62.50
29	12-22	William & Joanne Ingram	140/502	84.30
30	12-21	Keith V. & Barbara L. Frum	280/358	77.30
31	11-10	James Arthur & Dorothy J. Shreves	183/420	128.55
32	7-40	Brett Grimm, et al	342/538	86.60

Leases	
A	Eldon J. & Ruth A. Helman
B	Carol J. Cox
C	Ruth H. Wells
D	Norma R. Spencer
E	WVDNR
F	Mary Ann Devine
G	Benjamin Michael Kile
H	David S. Clough
I	Alan B. Clough, et ux
J	Richard Keith McCollum
K	Charles M. Jr. & Crystal R. Young
L	Flora Patterson Woodburn
M	Karen Moore Hwilka
N	William J. Goodfellow, et ux
O	William J. Goodfellow, et ux
P	William P. Ingram
Q	Keith V. Frum, et ux
R	William Michael Wells, et ux
S	Myrtle Liva Tucker
T	William P. Ingram
U	William P. Ingram
V	James Arthur Shreves, et ux
W	Erik D. Grimm

FILE NO: 294-54-E-18  
 DRAWING NO: Phaeton Unit 1H Well Plat  
 SCALE: 1" = 2000'  
 MINIMUM DEGREE OF ACCURACY:  
 Submeter  
 PROVEN SOURCE OF ELEVATION:  
 WVDOT, Harrisville, WV

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

DATE: May 18 20 22  
 OPERATOR'S WELL NO. Phaeton Unit 1H  
 API WELL NO **Mod**  
 47 - 095 - 02786  
 STATE COUNTY PERMIT

WELL TYPE:  OIL  GAS  LIQUID INJECTION  WASTE DISPOSAL  
 (IF GAS) PRODUCTION:  STORAGE  DEEP  SHALLOW

LOCATION: ELEVATION: As-Built 880' WATERSHED: Outlet Middle Island Creek QUADRANGLE: Top Hole: Middlebourne Btm Hole: Paden City  
 District: Union, Lincoln Ellsworth, 06/24/2022

DISTRICT: Union, Lincoln COUNTY: Tyler  
 SURFACE OWNER: Eldon J. & Ruth A. Helman William P. Ingram; William J. Goodfellow, et ux (2); Erik D. Grimm; 34.3; 406.69; 78.49;  
 Richard Keith McCollum; Charles M. Jr. & Crystal R. Young; Liva Tucker; 18.30; 25.0; 56.06;  
 Mary Ann Devine; David S. Clough; Alan B. Clough, et ux; Karen Moore Hwilka; 100; 38.65; 48.55;  
 ROYALTY OWNER: Eldon J. & Ruth A. Helman; Carol J. Cox; Norma R. Spencer; WVDNR; LEASE NO: ACREAGE: 62.5; 84.3; 86.607

PROPOSED WORK:  DRILL  CONVERT  DRILL DEEPER  FRACTURE OR STIMULATE  PLUG OFF OLD FORMATION  
 PERFORATE NEW FORMATION  OTHER PHYSICAL CHANGE IN WELL (SPECIFY) BHL MOD

PLUG AND ABANDON  CLEAN OUT AND REPLUG TARGET FORMATION: Marcellus Shale ESTIMATED DEPTH: 6,400' TVD 25,000' MD

WELL OPERATOR: Antero Resources Corporation DESIGNATED AGENT: Dianna Stamper - CT Corporation System  
 ADDRESS: 1615 Wynkoop Street ADDRESS: 5400 D Big Tyler Road  
 Denver, CO 80202 Charleston, WV 25313



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:

Grantor, lessor, etc.	Grantee, lessee, etc.	Royalty	Book/Page
<u>A: Eldon J. &amp; Ruth A. Helman Lease</u> Eldon J. Helman, et ux	Antero Resources Corporation	1/8+	0427/0610
<u>B: Carol J. Cox Lease</u> Carol J. Cox	Antero Resources Corporation	1/8+	0559/0691
<u>A: Eldon J. &amp; Ruth A. Helman Lease</u> Eldon J. Helman, et ux	Antero Resources Corporation	1/8+	0427/0610
<u>D: Norma R Spencer Lease</u> Norma R Spencer	Antero Resources Corporation	1/8+	564/428
<u>E: WVDNR Lease</u> WVDNR	Antero Resources Corporation	1/8+	175/713
<u>F: Mary Ann Devine Lease</u> Mary Ann Devine	Antero Resources Corporation	1/8+	21/88
<u>H: David S Clough Lease</u> David S Clough Antero Resources Appalachian Corporation	Antero Resources Appalachian Corporation Antero Resources Corporation	1/8+ Name Change	421/490 557/430
<u>I: Alan B Clough et ux Lease</u> Alan B Clough et ux Antero Resources Appalachian Corporation	Antero Resources Appalachian Corporation Antero Resources Corporation	1/8+ Name Change	421/488 557/430
<u>J: Richard Keith McCollum Lease</u> Richard Keith McCollum Antero Resources Appalachian Corporation	Antero Resources Appalachian Corporation Antero Resources Corporation	1/8+ Name Change	422/488 557/430
<u>K: Charles M Jr &amp; Crystal R Young Lease</u> Charles M Jr & Crystal R Young	Antero Resources Corporation	1/8+	162/395
<u>M: Karen Moore Hwilka Lease</u> Karen Moore Hwilka	Antero Resources Corporation	1/8+	140/773
<u>N: William J Goodfellow et ux Lease</u> William J Goodfellow et ux	Antero Resources Corporation	1/8+	598/619
<u>O: William J Goodfellow et ux Lease</u> William J Goodfellow et ux	Antero Resources Corporation	1/8+	598/619
<u>S: Myrtle Liva Tucker Lease</u> Myrtle Liva Tucker	Antero Resources Corporation	1/8+	148/170
<u>T: William P Ingram Lease</u> William P Ingram	Antero Resources Corporation	1/8+	148/145

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Grantor, lessor, etc.	Grantee, lessee, etc.	Royalty	Book/Page
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\*Partial Assignments to Antero Resources Corporation include 100% rights to extract, produce and market the oil and gas from the Marcellus and any other formations completed with this well.

06/24/2022



**INFORMATION SUPPLIED UNDER WEST VIRGINIA CODE  
Chapter 22, Article 6A, Section 5(a)(5)  
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Lease Name or Number	Grantor, Lessor, etc.	Grantee, Lessee, etc.	Royalty	Book/Page
W: <u>Eric D. Grimm Lease</u>	Eric D. Grimm	<i>Antero Resources Corporation</i>	1/8+	0564/0428

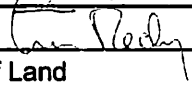
\*Partial Assignments to Antero Resources Corporation include 100% rights to extract, produce and market the oil and gas from the Marcellus and any other formations completed with this well.

**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: Antero Resources Corporation  
 By: Tim Rady   
 Its: Senior VP of Land