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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)

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

ANTERO RESOURCES CORPORATION  
1615 WYNKOOP STREET

DENVER, CO 80202

Re: Permit Modification Approval for PECHORA 1H  
47-095-02724-00-00

**Lateral Extension**

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: PECHORA 1H  
Farm Name: ROGER D. BLIZZARD & RUTH E. SPENCER  
U.S. WELL NUMBER: 47-095-02724-00-00  
Horizontal 6A New Drill  
Date Modification Issued: 4/5/2021

Promoting a healthy environment.

04/09/2021



Antero Resources  
1615 Wynkoop Street  
Denver, CO 80202  
Office 303.357.7310  
Fax 303.357.7315

March 19, 2021

West Virginia Department of Environmental Protection  
Office of Oil and Gas  
Attn: Ms. Laura Adkins  
601 57<sup>th</sup> Street  
Charleston, WV 25304

RECEIVED  
Office of Oil and Gas

MAR 22 2021

WV Department of  
Environmental Protection

Ms. Laura Adkins:

Antero Resources Corporation (Antero) would like to submit the following permit modifications for the following approved wells on the existing Blizzard Pad: Pechora Unit 1H (API # 47-095-02724).

Attached you will find the following documents:

- REVISED Form WW-6B, which shows the updated POE & Measured Depth
- REVISED Form WW-6A1, which shows the new leases we will be drilling into
- REVISED Mylar Plat, which shows the new Lateral Length & Estimated Measured Depth
- AOR & As-Built Design

If you have any questions please feel free to contact me at (303) 357-7223.

Thank you in advance for your consideration.

Sincerely,

A handwritten signature in black ink, appearing to read "Megan Griffith", with a long horizontal line extending to the right.

Megan Griffith  
Permitting Agent  
Antero Resources Corporation

Enclosures

04/09/2021

WW-6B  
(04/15)

API NO. 47-095 - 02724  
OPERATOR WELL NO. Pechora Unit 1H  
Well Pad Name: Blizzard Pad

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

1) Well Operator: Antero Resources Corpora 494507062 095 - Tyler Ellsworth Porters Falls 7.5'  
Operator ID County District Quadrangle

2) Operator's Well Number: Pechora Unit 1H Well Pad Name: Blizzard Pad

3) Farm Name/Surface Owner: Roger D. Blizzard & Ruth E. Spencer Public Road Access: US Route 34

4) Elevation, current ground: 1004' Elevation, proposed post-construction: \_\_\_\_\_

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

DMH  
3-26-21

7) Proposed Target Formation(s), Depth(s), Anticipated Thickness and Expected Pressure(s):  
Marcellus Shale: 7000' TVD, Anticipated Thickness- 55 feet, Associated Pressure- 2850#

8) Proposed Total Vertical Depth: 7000' TVD

9) Formation at Total Vertical Depth: Marcellus

10) Proposed Total Measured Depth: 26700'

11) Proposed Horizontal Leg Length: 16475'

12) Approximate Fresh Water Strata Depths: 16'

13) Method to Determine Fresh Water Depths: 47-095-02274

14) Approximate Saltwater Depths: 1430', 1813'

15) Approximate Coal Seam Depths: None Identified

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: \_\_\_\_\_

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MAR 29 2021 Page 1 of 3

WV Department of  
Environmental Protection

04/09/2021



WW-6B  
(04/15)

API NO. 47-095 - 02724

OPERATOR WELL NO. Pechora Unit 1H

Well Pad Name: Blizzard Pad

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	20"	New	H-40	94#	80	80	CTS, 77 Cu. Ft.
Fresh Water	13-3/8"	New	J-55	54.5#	300	300	CTS, 417 Cu. Ft.
Coal	9-5/8"	New	J-55	36#	2500	2500	CTS, 1018 Cu. Ft.
Intermediate							
Production	5-1/2"	New	P-110	23#	26700	26700	6934 Cu. Ft
Tubing	2-3/8"	New	N-80	4.7#			
Liners							

*DmH*  
*3-26-21*

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	20"	24"	0.438"	1530	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"	12,630	2500	Lead-H/POZ & Tail-H	H/POZ-1.44 & 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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MAR 29 2021

Page 2 of 3

WV Department of  
Environmental Protection

04/09/2021

WW-6B  
(10/14)

API NO. 47-095 - 02724  
OPERATOR WELL NO. Pechora Unit 1H  
Well Pad Name: Blizzard Pad

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

Drill a new vertical shallow well into the Marcellus Shale.

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

DMH  
3-26-21

21) Total Area to be disturbed, including roads, stockpile area, pits, etc., (acres): Existing 26.80 acres

22) Area to be disturbed for well pad only, less access road (acres): Existing 9.52 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

25) Proposed borehole conditioning procedures:

\*Note: Attach additional sheets as needed.

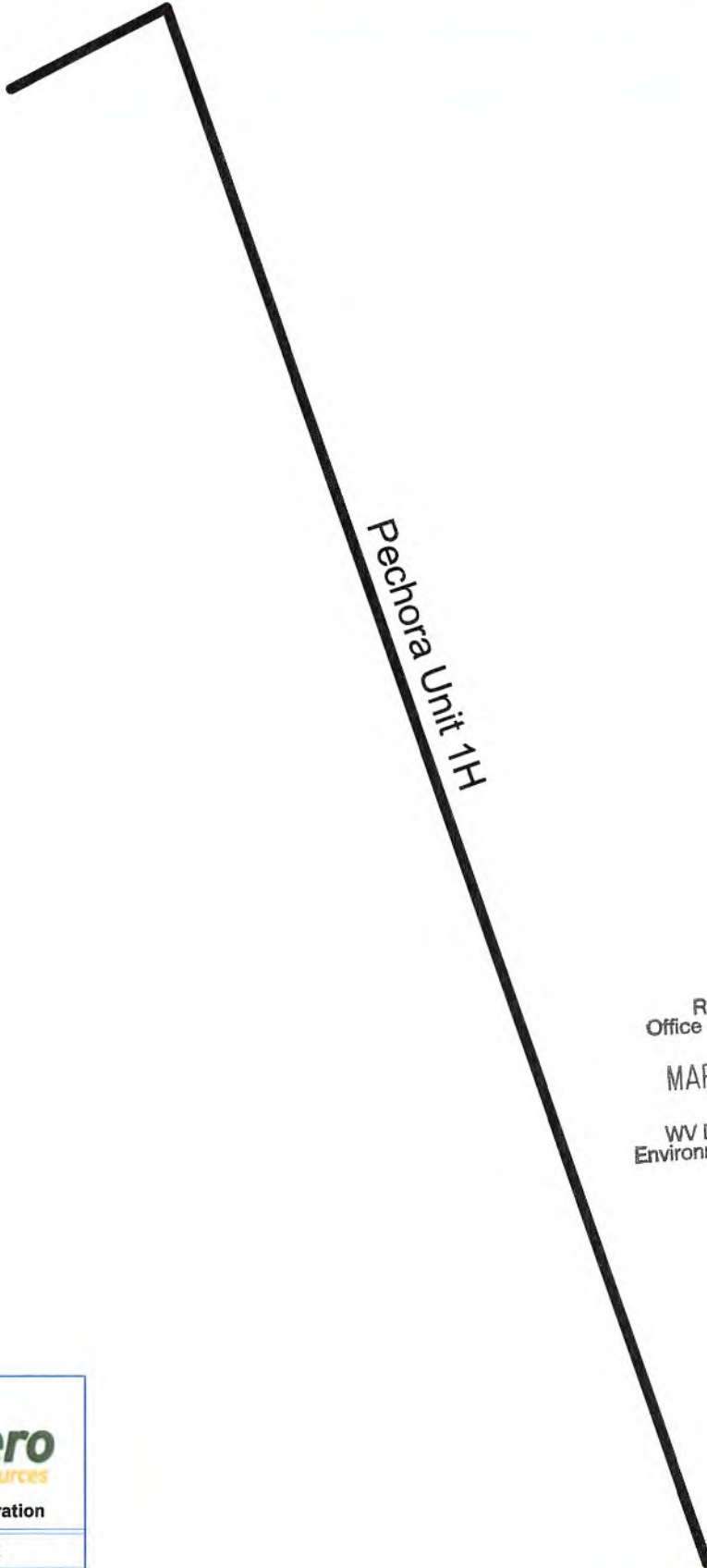
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WV Department of  
Environmental Protection

04/09/2021

PERMIT MODIFICATION API # 47-095-02724



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Office of Oil and Gas  
MAR 22 2021  
WV Department of  
Environmental Protection

47095021380000

04/09/2021



Antero Resources Corporation

Pechora Unit 1H - AOR



WELL SYMBOLS  
Gas Well

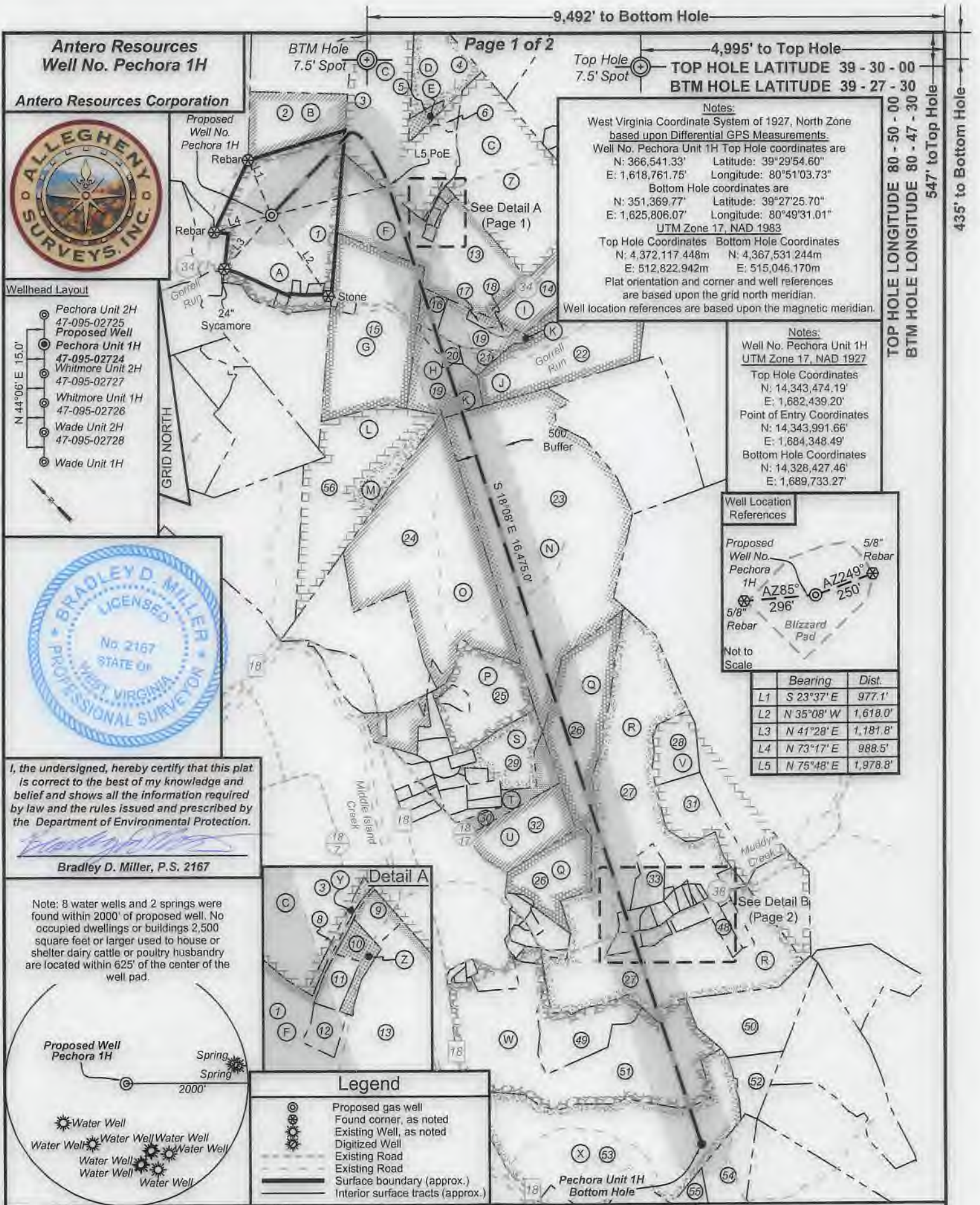
January 21, 2020

UWI (APINum)	Well Name	Well Number	Operator	Hist Oper	TD	Perforated Interval (shallowest, deepest)	Perforated Formation(s)	Producible Formation(s) not perf'd
47095021980000	MADDIE MAE	3	JAY-BEE OIL & GAS	JAY-BEE OIL & GAS	14,810	6999 - 14776	Marcellus	Marcellus

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 Office of Oil and Gas  
**MAR 29 2021**  
 WV Department of  
 Environmental Protection

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**Antero Resources**  
Well No. **Pechora 1H**

**Antero Resources Corporation**

**Wellhead Layout**

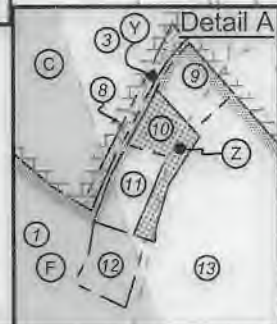
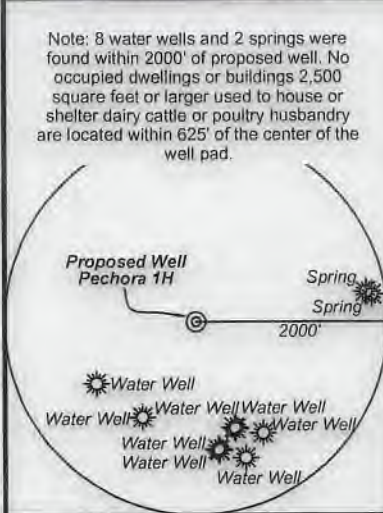
- Pechora Unit 2H  
47-095-02725  
Proposed Well
- Pechora Unit 1H  
47-095-02724  
Whitmore Unit 2H  
47-095-02727
- Whitmore Unit 1H  
47-095-02726
- Wade Unit 2H  
47-095-02728
- Wade Unit 1H



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*

**Bradley D. Miller, P.S. 2167**



**Legend**

- Proposed gas well
- Found corner, as noted
- Existing Well, as noted
- Digitized Well
- Existing Road
- Existing Road
- Surface boundary (approx.)
- Interior surface tracts (approx.)

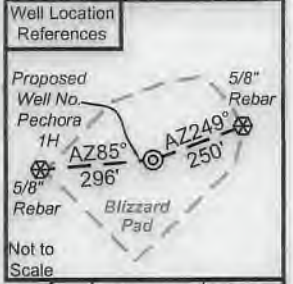
9,492' to Bottom Hole

4,995' to Top Hole

TOP HOLE LATITUDE 39 - 30 - 00  
BTM HOLE LATITUDE 39 - 27 - 30

Notes:  
West Virginia Coordinate System of 1927, North Zone based upon Differential GPS Measurements.  
Well No. Pechora Unit 1H Top Hole coordinates are  
N: 366,541.33' Latitude: 39°29'54.60"  
E: 1,618,761.75' Longitude: 80°51'03.73"  
Bottom Hole coordinates are  
N: 351,369.77' Latitude: 39°27'25.70"  
E: 1,625,806.07' Longitude: 80°49'31.01"  
UTM Zone 17, NAD 1983  
Top Hole Coordinates Bottom Hole Coordinates  
N: 4,372,117.448m N: 4,367,531.244m  
E: 512,822.942m E: 515,046.170m  
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. Pechora Unit 1H  
UTM Zone 17, NAD 1927  
Top Hole Coordinates  
N: 14,343,474.19'  
E: 1,682,439.20'  
Point of Entry Coordinates  
N: 14,343,991.66'  
E: 1,684,348.49'  
Bottom Hole Coordinates  
N: 14,328,427.46'  
E: 1,689,733.27'



	Bearing	Dist.
L1	S 23°37' E	977.1'
L2	N 35°08' W	1,618.0'
L3	N 41°28' E	1,181.8'
L4	N 73°17' E	988.5'
L5	N 75°48' E	1,978.8'

FILE NO: 121-54-E-19  
DRAWING NO: Pechora 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: March 17 2021  
OPERATOR'S WELL NO. Pechora 1H  
API WELL NO **46A**  
47 - 095 - 02724  
STATE COUNTY PERMIT

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

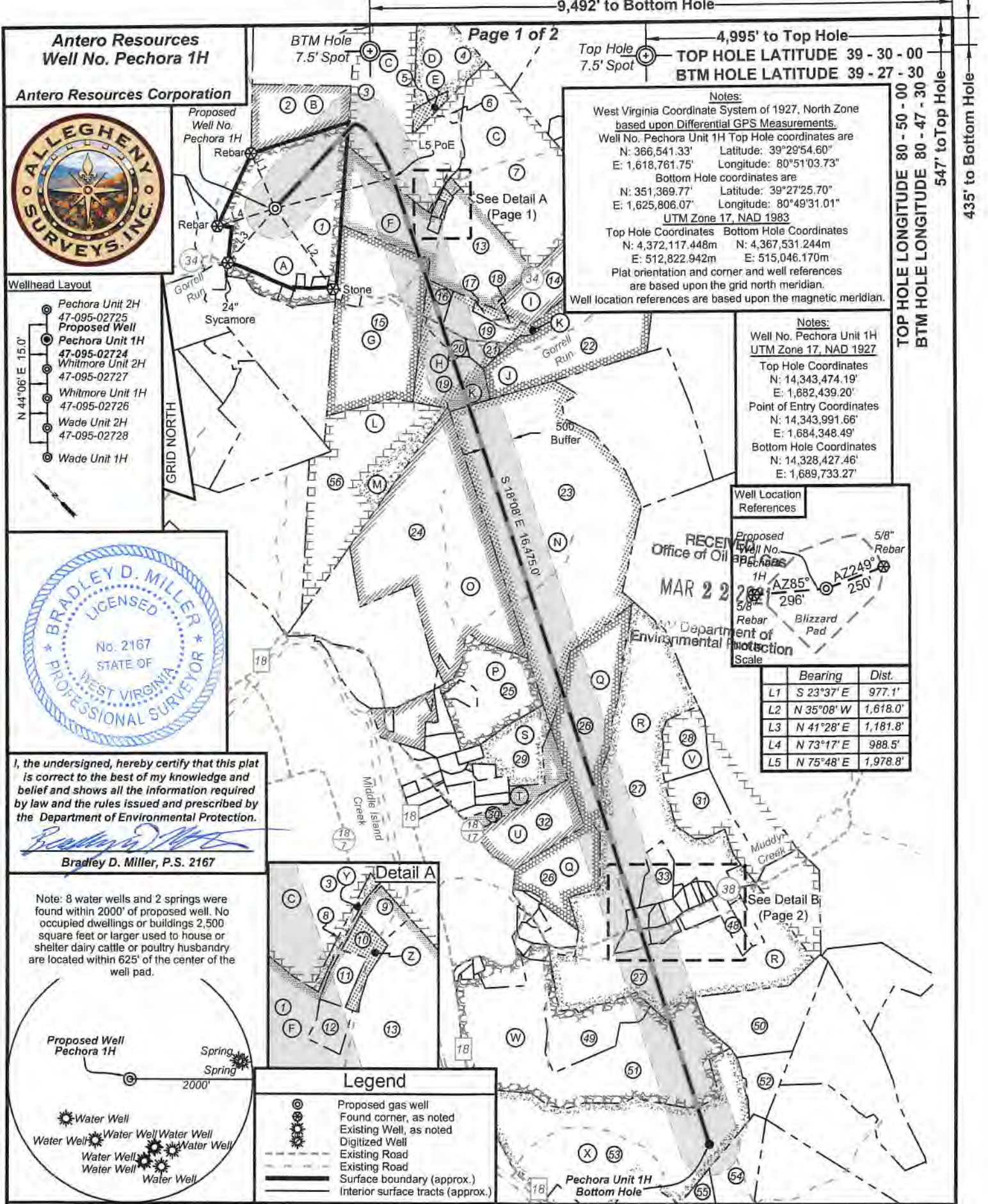
LOCATION: ELEVATION: As-Built 1,004' WATERSHED: Outlet Middle Island Creek QUADRANGLE: Shirley  
DISTRICT: Ellsworth COUNTY: Tyler 04/09/2021

SURFACE OWNER: Roger D. Blizzard Ronald L. Hoover, et ux; Anthony B. Parr; Kendra K. Wyke; Keith C. & Phyllis J. Smith; Alfred Lonzo Eddy; Roberta L. Schickler; Marjorie R. Asher Longston, et vir;  
ROYALTY OWNER: Heritage Resources-Marcellus Minerals (2), LLC; Helen E. Boggs; William S. Nash, et al; LEASE NO: ACREAGE: 102.62 79.919; 99.998; 51.50; 6.338; 222; 271; 168.175

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: 26,700' MD 7,000' TVD

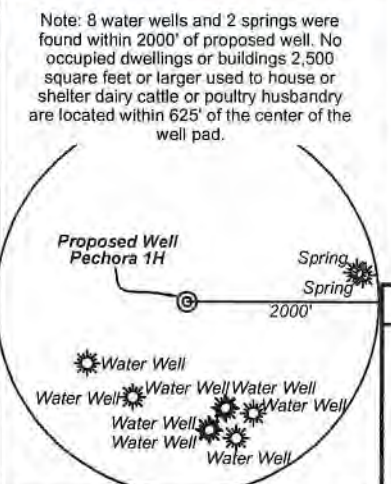
WELL OPERATOR: Antero Resources Corporation DESIGNATED AGENT: Dianna Stamper - CT Corporation System  
ADDRESS: 1615 Wynkoop Street ADDRESS: 5400 D Big Tyler Road  
Denver, CO 80202 Charleston, WV 25313





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*  
 Bradley D. Miller, P.S. 2167



FILE NO: 121-54-E-19  
 DRAWING NO: Pechora 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: March 17 2021  
 OPERATOR'S WELL NO. Pechora 1H  
 API WELL NO. **MOB**  
 47 - 095 - 02724  
 STATE COUNTY PERMIT

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

LOCATION: ELEVATION: As-Built 1,004' WATERSHED: Outlet Middle Island Creek QUADRANGLE: Shirley  
 DISTRICT: Ellsworth COUNTY: Tyler 04/09/2021

SURFACE OWNER: Roger D. Blizzard Ronald L. Hoover, et ux; Anthony B. Parr; Kendra K. Wyke; Keith C. & Phyllis J. Smith; Alfred Lonzo Eddy; Roberta L. Schickler; Marjorie R. Asher Longston, et vir; ACREAGE: 102.62 79,919; 99,998; 51,50; 6,338; 222;  
 ROYALTY OWNER: Heritage Resources-Marcellus Minerals (2), LLC; Helen E. Boggs; William S. Nash, et al; LEASE NO: \_\_\_\_\_ ACREAGE: 271; 168.175

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 ADDRESS: 1615 Wynkoop Street ADDRESS: 5400 D Big Tyler Road  
Denver, CO 80202 Charleston, WV 25313



**Antero Resources  
Well No. Pechora 1H**

Antero Resources Corporation



ID	TM/Par	Owner	DB/PG	Acres
1	15-33	Roger D. Blizzard & Ruth E. Spencer	340/170	102.62
2	15-31	Roger D. Blizzard & Ruth E. Spencer	342/782	25.00
3	15-38	Rodney A. & Candis L. Nash	351/701	85.48
4	16-23	Joseph L. Sitko	314/462	29.70
5	16-23.1	Bruce Winkelmann	334/195	3.30
6	16-44.1	Carl Straight	543/598	3.70
7	16-44	Robert A. Pyles, et al	335/482	87.82
8	16-60	Rodney & Candis Nash	378/815	0.56
9	16-54	David M. & Amanda B. Trimble	447/110	1.00
10	16-59	Rodney & Candis Nash	378/818	1.10
11	16-56	Rodney & Candis Nash	247/73	1.00
12	16-57	Rodney & Candis Nash	252/446	1.00
13	15-32	William S. & Opal Marie Nash	335/188	78.58
14	22-3	Harold L. & Deborah C. Hollaway	287/669	22.95
15	21-13	Alfred Lonzo Eddy	337/650	98.58
16	22-1.2	Earl David & Joyce Ann Giles	336/447	5.39
17	22-1.3	Ronald Hartline & Jamie Barnhart	591/741	2.02
18	22-2	Ronald Hartline & Jamie Barnhart	591/741	1.50
19	22-1	Robert I. Reed & Floyd W. Reed	321/763	42.32
20	22-1.4	David E. & Joyce A. Giles	546/764	4.76
21	22-1.1	Robert I. Reed & Floyd W. Reed	278/661	4.49
22	22-4	Stephen H. & Barbara J. Dunthorn	216/40	59.71
23	22-41	Anthony B. Parr	342/763	222.00
24	22-42	Sharon Christenson, et al	635/420	144.26
25	22-43	Loretta Louise Baker	253/131	38.97
26	28-9	David & Cheryl L. Barrick	263/606	87.53
27	28-31	Victor A. & Lorraine B. Weekley	AR49/717	226.25
28	22-37	B.W. Weekley	107/562	15.78
29	22-47	Tom J. & Jean A. Gump	628/629	24.66
30	28-7	Randall L. & Kathryn M. Wise	442/85	9.00
31	28-32	B.W. Weekley	107/562	33.31
32	28-8	Robert L. & Carolee J. Daniell	WB 43/267	30.00
33	28-31.7	Kordell Stewart & Katelyn Gogan	640/473	9.62
34	28-31.14	Ray Howe	363/416	0.51
35	28-31.18	Lorraine Weekley	AR49-717	0.08
36	28-31.16	William Morgan	374/472	0.50
37	28-31.12	William Morgan	374/472	1.00
38	28-31.15	James & Peggy Morgan	525/214	0.81
39	28-31.19	James & Peggy Morgan	377/10	0.14
40	28-31.9	James & Peggy Morgan	525/214	1.38
41	28-31.11	Ray Howe	356/678	1.27
42	28-31.13	Ray Howe	361/436	2.06
43	28-31.5	Kordell Stewart & Katelyn Gogan	640/473	1.75
44	28-31.6	Kordell Stewart & Katelyn Gogan	640/473	3.00
45	28-31.4	Victor & Lorraine Weekley	AR 49/717	3.64
46	28-31.8	Victor & Lorraine Weekley	AR 49/717	2.78
47	28-31.10	Danny Swiger & Peggy Smith	356/675	4.00
48	28-31.3	David Lantz & Rita Parr	618/689	5.00
49	28-30	Keith C. Smith	WB 35/228	30.13
50	5-9	Keith A. Riegelsberger	376/828	43.23
51	28-29	Keith C. Smith	WB 35/228	167.03
52	5-8	James L. & James C. Fitzpatrick	199/171	13.11
53	28-28	Ronald & Linda Hoover	184/383	136.22
54	5-5	Earnley Owens et al	WB 33/418	75.00
55	5-4	William D. Jr. & Saturina M. Morrison	341/35	52.78
56	21-53	Haessly Land & Timber, LLC	337/101A	89.88

Leases	
A	Heritage Resources, Marcellus Minerals, LLC
B	Jerry R. Brown
C	Helen E. Boggs
D	Joseph L. Sitko, et ux
E	Bruce Winkelmann
F	William S. Nash, et al
G	Alfred Lonzo Eddy
H	Roberta L. Schickler
I	Ridgetop Capital II, LP
J	Ridgetop Capital II, LP
K	Majorie R. Asher Longston, et vir
L	Haessly Land & Timber Co., LLC
M	OPEN
N	Anthony B. Parr
O	E. Lorna Howard Testamentary Trust
P	Loretta L. Baker
Q	Heritage Resources - Marcellus Minerals, LLC
R	Kendra K. Wyke
S	Rebecca Lynn Gebhardt
T	Randall L. Wise, et ux
U	Carolee J. Daniell
V	Richard L. White II
W	Keith C. & Phyllis J. Smith
X	Ronald L. Hoover, et ux
Y	OPEN
Z	Randy Nash, et ux

FILE NO: 121-54-E-19  
DRAWING NO: Pechora 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: March 10 2021  
OPERATOR'S WELL NO. Pechora 1H  
API WELL NO **Mod**  
47 - 095 - 02724  
STATE COUNTY PERMIT

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

LOCATION: ELEVATION: As-Built 1,004' WATERSHED: Outlet Middle Island Creek QUADRANGLE: Shirley

DISTRICT: Ellsworth COUNTY: Tyler **04/09/2021**

SURFACE OWNER: Roger D. Blizzard & Ruth E. Spencer; Ronald L. Hoover, et ux; Anthony B. Parr; Kendra K. Wyke; Keith C. & Phyllis J. Smith; ACREAGE: 102.62  
80,168, 177, 79,919; 99,998; 51.50; 6,338; 222;

ROYALTY OWNER: Heritage Resources-Marcellus Minerals (2), LLC; Helen E. Boggs; William S. Nash, et al; LEASE NO: \_\_\_\_\_ ACREAGE: 271; 168.175

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: 7,000' TVD  
26,700' MD

WELL OPERATOR: Antero Resources Corporation DESIGNATED AGENT: Dianna Stamper - CT Corporation System  
ADDRESS: 1615 Wynkoop Street ADDRESS: 5400 D Big Tyler Road  
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6	16-44.1	Carl Straight	543/598	3.70
7	16-44	Robert A. Pyles, et al	335/482	87.82
8	16-60	Rodney & Candis Nash	378/815	0.56
9	16-54	David M. & Amanda B. Trimble	447/110	1.00
10	16-59	Rodney & Candis Nash	378/818	1.10
11	16-56	Rodney & Candis Nash	247/73	1.00
12	16-57	Rodney & Candis Nash	252/446	1.00
13	15-32	William S. & Opal Marie Nash	335/188	78.58
14	22-3	Harold L. & Deborah C. Hollaway	287/669	22.95
15	21-13	Alfred Lonzo Eddy	337/650	98.58
16	22-1.2	Earl David & Joyce Ann Giles	336/447	5.39
17	22-1.3	Ronald Hartline & Jamie Barnhart	591/741	2.02
18	22-2	Ronald Hartline & Jamie Barnhart	591/741	1.50
19	22-1	Robert I. Reed & Floyd W. Reed	321/763	42.32
20	22-1.4	David E. & Joyce A. Giles	546/764	4.76
21	22-1.1	Robert I. Reed & Floyd W. Reed	278/661	4.49
22	22-4	Stephen H. & Barbara J. Dunthorn	216/40	59.71
23	22-41	Anthony B. Parr	342/763	222.00
24	22-42	Sharon Christenson, et al	635/420	144.26
25	22-43	Loretta Louise Baker	253/131	38.97
26	28-9	David & Cheryl L. Barrick	263/606	87.53
27	28-31	Victor A. & Lorraine B. Weekley	AR49/717	226.25
28	22-37	B.W. Weekley	107/562	15.78
29	22-47	Tom J. & Jean A. Gump	628/629	24.66
30	28-7	Randall L. & Kathryn M. Wise	442/85	9.00
31	28-32	B.W. Weekley	107/562	33.31
32	28-8	Robert L. & Carolee J. Daniell	WB 43/267	30.00
33	28-31.7	Kordell Stewart & Katelyn Gogan	640/473	9.62
34	28-31.14	Ray Howe	363/416	0.51
35	28-31.18	Lorraine Weekley	AR49-717	0.08
36	28-31.16	William Morgan	374/472	0.50
37	28-31.12	William Morgan	374/472	1.00
38	28-31.15	James & Peggy Morgan	525/214	0.81
39	28-31.19	James & Peggy Morgan	377/10	0.14
40	28-31.9	James & Peggy Morgan	525/214	1.38
41	28-31.11	Ray Howe	356/678	1.27
42	28-31.13	Ray Howe	361/436	2.06
43	28-31.5	Kordell Stewart & Katelyn Gogan	640/473	1.75
44	28-31.6	Kordell Stewart & Katelyn Gogan	640/473	3.00
45	28-31.4	Victor & Lorraine Weekley	AR 49/717	3.64
46	28-31.8	Victor & Lorraine Weekley	AR 49/717	2.78
47	28-31.10	Danny Swiger & Peggy Smith	356/675	4.00
48	28-31.3	David Lantz & Rita Parr	618/689	5.00
49	28-30	Keith C. Smith	WB 35/228	30.13
50	5-9	Keith A. Riegelsberger	376/828	43.23
51	28-29	Keith C. Smith	WB 35/228	167.03
52	5-8	James L. & James C. Fitzpatrick	199/171	13.11
53	28-28	Ronald & Linda Hoover	184/383	136.22
54	5-5	Earnley Owens et al	WB 33/418	75.00
55	5-4	William D. Jr. & Saturina M. Morrison	341/35	52.78
56	21-53	Haessly Land & Timber, LLC	337/101A	89.88

Leases	
A	Heritage Resources, Marcellus Minerals, LLC
B	Jerry R. Brown
C	Helen E. Boggs
D	Joseph L. Sitko, et ux
E	Bruce Winkelmann
F	William S. Nash, et al
G	Alfred Lonzo Eddy
H	Roberta L. Schickler
I	Ridgetop Capital II, LP
J	Ridgetop Capital II, LP
K	Majorie R. Asher Longston, et vir
L	Haessly Land & Timber Co., LLC
M	OPEN
N	Anthony B. Parr
O	E. Lorna Howard Testamentary Trust
P	Loretta L. Baker
Q	Heritage Resources - Marcellus Minerals, LLC
R	Kendra K. Wyke
S	Rebecca Lynn Gebhardt
T	Randall L. Wise, et ux
U	Carolee J. Daniell
V	Richard L. White II
W	Keith C. & Phyllis J. Smith
X	Ronald L. Hoover, et ux
Y	OPEN
Z	Randy Nash, et ux

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FILE NO: 121-54-E-19  
DRAWING NO: Pechora 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: March 10 2021  
OPERATOR'S WELL NO. Pechora 1H  
API WELL NO. MOD  
47 - 095 - 02724  
STATE COUNTY PERMIT

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

LOCATION: ELEVATION: As-Built 1,004' WATERSHED: Outlet Middle Island Creek QUADRANGLE: Shirley

DISTRICT: Ellsworth COUNTY: Tyler 04/09/2021

SURFACE OWNER: Roger D. Blizzard & Ruth E. Spencer Ronald L. Hoover, et ux; Anthony B. Parr; Kendra K. Wyke; Keith C. & Phyllis J. Smith; Alfred Lonzo Eddy; Roberta L. Schickler; Marjorie R. Asher Longston, et vir; ACREAGE: 102.62 79,919; 99,998; 51,50; 6,338; 222;

ROYALTY OWNER: Heritage Resources-Marcellus Minerals (2), LLC; Helen E. Boggs; William S. Nash, et al; LEASE NO: \_\_\_\_\_ ACREAGE: 271; 168.175

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: 26,700' MD 7,000' 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



WW-6A1

Operator's Well Number Pechora Unit 1H

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>Heritage Resources Marcellus Minerals Lease</u> Heritage Resources Marcellus Minerals	Antero Resources Corporation	1/8+	0627/0134
<u>Helen E. Boggs Lease</u> Helen E. Boggs Energy Production Inc.	Energy Production Inc. Antero Resources Corporation	1/8+ Assignment	0429/0656 0465/0312
<u>William S. Nash et al Lease</u> William S. Nash et al Statoil USA Onshore Properties EQT Production Company	Statoil USA Onshore Properties EQT Production Company Antero Resources Corporation	1/8 Assignment Assignment	0463/0515 0539/0239 0663/0001
<u>Alfred Lonzo Eddy</u> Alfred Lonzo Eddy Statoil USA Onshore Properties EQT Production Company	Statoil USA Onshore Properties EQT Production Company Antero Resources Corporation	Assignment Assignment Assignment	0406/0147 0539/0239 0663/0001
<u>Roberta L. Shickler Lease</u> Roberta L. Shickler	Antero Resources Corporation	1/8	0059/0073
<u>Marjorie R. Asher Longston et vir Lease</u> Marjorie R. Asher Longston et vir Petroedge Energy LLC EQT Production Company	Petroedge Energy LLC EQT Production Company Antero Resources Corporation	1/8 Assignment Assignment	0387/0212 0539/0239 0663/0001
<u>Anthony B. Parr Lease</u> Anthony B. Parr	Antero Resources Corporation	1/8+	0031/0723
<u>Heritage Resources Marcellus Minerals Lease</u> Heritage Resources Marcellus Minerals	Antero Resources Corporation	1/8+	0627/0134
<u>Kendra K. Wyke Lease</u> Kendra K. Wyke	Antero Resources Corporation	1/8+	0044/0694
<u>Keith C. &amp; Phyllis J. Smith</u> Keith C. & Phyllis J. Smith	Antero Resources Corporation	1/8+	0547/0461

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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.

04/09/2021



WW-6A1  
(5/13)

Operator's Well No. Pechora Unit 1H

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- (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  
Ronald L. Hoover et ux Lease

Ronald L. Hoover et ux

Antero Resources Corporation

1/8+

0072/0183

\*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.

\*Co-tenancy utilization – At least 7 mineral owners in tract. At least 75% of the royalty owners have executed a lease on the tract. The interests of the remaining co-tenants were acquired pursuant to the Co-tenancy Modernization and Majority Protection Act

Well Operator: Antero Resources Corporation

By: Tim Rady

Its: VP of Land

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Page 1 of 1

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04/09/2021