



west virginia department of environmental protection

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

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

Monday, September 11, 2023
PERMIT MODIFICATION APPROVAL
Horizontal 6A / New Drill

ANTERO RESOURCES CORPORATION
1615 WYNKOOP STREET

DENVER, CO 80202

Re: Permit Modification Approval for VIEWER UNIT 1H
47-103-03589-00-00

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.

A blue ink signature of James A. Martin, written in a cursive style.

James A. Martin
Chief

Operator's Well Number: VIEWER UNIT 1H
Farm Name: ANTERO RESOURCES CORP
U.S. WELL NUMBER: 47-103-03589-00-00
Horizontal 6A New Drill
Date Modification Issued: 09/11/2023

Promoting a healthy environment.

09/15/2023

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

1) Well Operator: Antero Resources Corporation 494507062 103 - Wetzel Green Pine Grove 7.5'
Operator ID County District Quadrangle

2) Operator's Well Number: Viewer Unit 1H MOD ✓ Well Pad Name: Furbee Pad ✓

3) Farm Name/Surface Owner: Antero Resources Corp. Public Road Access: CR 50

4) Elevation, current ground: As-built 1211' 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 ✓

7) Proposed Target Formation(s), Depth(s), Anticipated Thickness and Expected Pressure(s):
Marcellus Shale: 7500' TVD, Anticipated Thickness- 55 feet, Associated Pressure- 2850#

8) Proposed Total Vertical Depth: 7500' TVD ✓

9) Formation at Total Vertical Depth: Marcellus ✓

10) Proposed Total Measured Depth: 25500' MD ✓

11) Proposed Horizontal Leg Length: 15570' *Open to modification at a later date ✓

12) Approximate Fresh Water Strata Depths: 575' ✓

13) Method to Determine Fresh Water Depths: 47103308970000 Offset well records. Depths have been adjusted according to surface elevations.

14) Approximate Saltwater Depths: 2284' ✓

15) Approximate Coal Seam Depths: 973' ✓

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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Environmental Protection

[Signature]
8-31-23

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	J-55	91.59#	100'	100' ✓	CTS, 96 Cu. Ft.
Fresh Water	13-3/8"	New	J-55	54.5#	625'	625' ✓	CTS, 651 Cu. Ft.
Coal	9-5/8"	New	J-55	36#	3100'	3100' ✓	CTS, 1262 Cu. Ft.
Intermediate							
Production	5-1/2"	New	P110-ICY	23#	25500'	25500' ✓	CTS, 5498 Cu. Ft.
Tubing	2-3/8"	New	N-80	4.7#			
Liners							

TYPE	Size (in)	Wellbore Diameter (in)	Wall Thickness (in)	Burst Pressure (psi)	Anticipated Max. Internal Pressure (psi)	Cement Type	Cement Yield (cu. ft./k)
Conductor	20"	24"	0.375"	2250	50	Class A/L ✓	~1.18
Fresh Water	13-3/8"	17-1/2"	0.38"	2730	1000	Class A/L	~1.18
Coal	9-5/8"	12-1/4"	0.352"	3520	1500	Class A/L	~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			RECEIVED Office of Oil and Gas
Sizes:	N/A			SEP 01 2023
Depths Set:	N/A			WV Department of Environmental Protection

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8-31-23

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): 33.19 acres

22) Area to be disturbed for well pad only, less access road (acres): 13.86 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.

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

Conductor: no additives, Class A/L cement.
Surface: Class A/L cement with 2-3% calcium chloride and 1/4 lb of flake
Intermediate: Class A/L 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 G/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:

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.

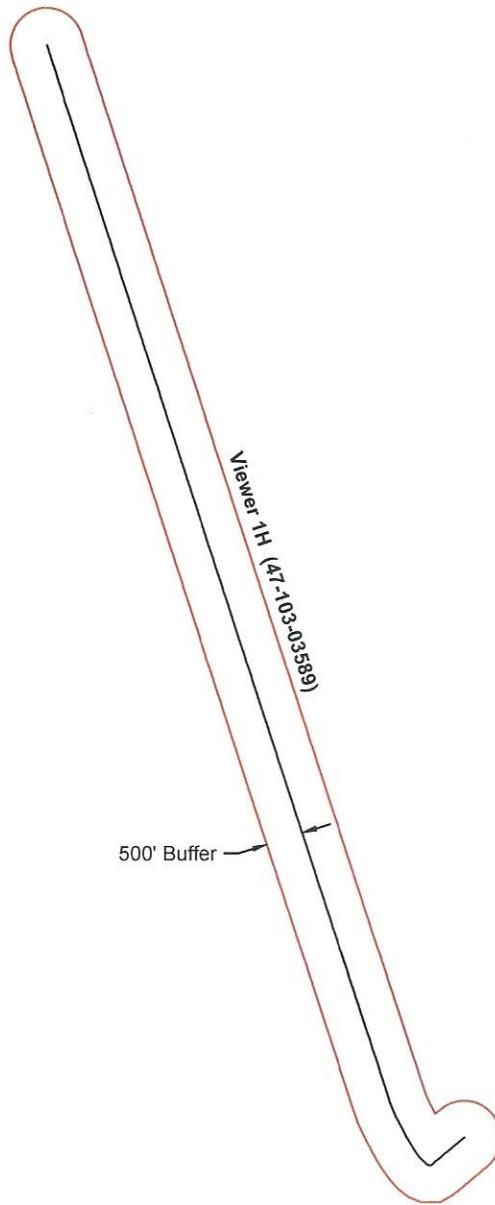
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LEGEND

- Proposed gas well
- ✱ Existing Well, as noted
- ✱ Digitized Well, as noted



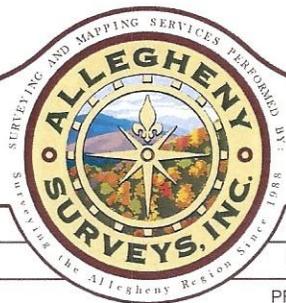
The orientation of this survey is Grid North, and its coordinate base is the West Virginia Coordinate System of 1927, North Zone



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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: August 17, 2023
SURVEYED: Dec. 2016	PROJECT NO: 27-34-G-18
FIELD CREW: C.L., K.M.	Sheet 1 of 1 DRAWING NO: Viewer 1H BHL MOD AOR



Scale: 1 inch = 2500 feet

09/15/2023

Antero Resources
Well No. Viewer 1H
BHL MOD
 Antero Resources Corporation

Page 1 of 4

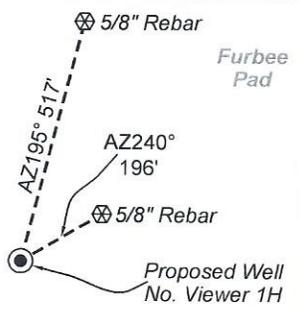
527' to Bottom Hole
 6,418' to Top Hole
 TOP HOLE LATITUDE 39 - 35 - 00
 BTM HOLE LATITUDE 39 - 37 - 30



Notes
 West Virginia Coordinate System of 1927, North Zone based upon Differential GPS Measurements.
 Well No. Viewer Unit 1H Top Hole coordinates are
 N: 387,226.65' Latitude: 39°33'23.88"
 E: 1,652,894.21' Longitude: 80°43'51.95"
 Bottom Hole coordinates are
 N: 402,063.75' Latitude: 39°35'49.74"
 E: 1,647,243.78' Longitude: 80°45'06.72"
 UTM Zone 17, NAD 1983
 Top Hole Coordinates Bottom Hole Coordinates
 N: 4,378,593.248m N: 4,383,084.710m
 E: 523,116.633m E: 521,319.877m
 Plat orientation and corner and well references are based upon the grid north meridian.
 Well location references are based upon the magnetic meridian.

TOP HOLE LONGITUDE 80 - 42 - 30
 BTM HOLE LONGITUDE 80 - 45 - 00
 9,726' to Top Hole
 10,144' to Bottom Hole

Well Location References (NTS)

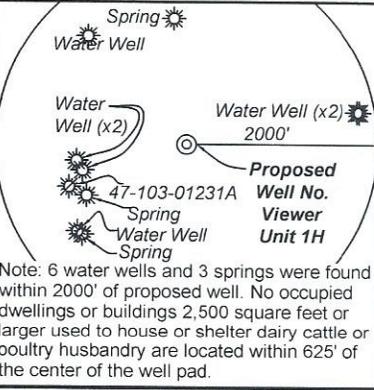
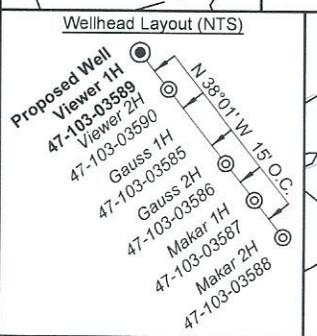
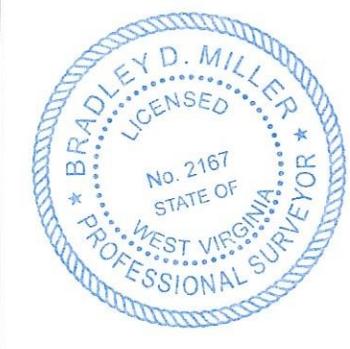


I, the undersigned, hereby certify that this plat is correct to the best of my knowledge and belief and shows all the information required by law and the rules issued and prescribed by the Department of Environmental Protection.

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

Notes:
 Well No. Viewer Unit 1H UTM Zone 17, NAD 1927
 Top Hole Coordinates
 N: 14,364,719.16'
 E: 1,716,210.22'
 Point of Entry Coordinates
 N: 14,364,745.79'
 E: 1,715,404.97'
 Bottom Hole Coordinates
 N: 14,379,454.93'
 E: 1,710,314.87'

Bearing	Dist.
L1 S 68°23' W	1,895.6'
L2 N 88°40' W	1,981.4'
L3 N 83°00' E	1,612.6'
L4 N 87°59' E	1,634.8'
L5 N 87°09' W	806.0'



Legend

- Proposed gas well
- Monument, as noted
- Existing Well, as noted
- Digitized Well, as noted
- Creek or Drain
- Road
- Railroad Right-of-Way
- Surface boundary (approx.)
- Interior surface tracts (approx.)

FILE NO: 27-34-G-18
 DRAWING NO: Viewer Unit 1H BHL MOD
 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

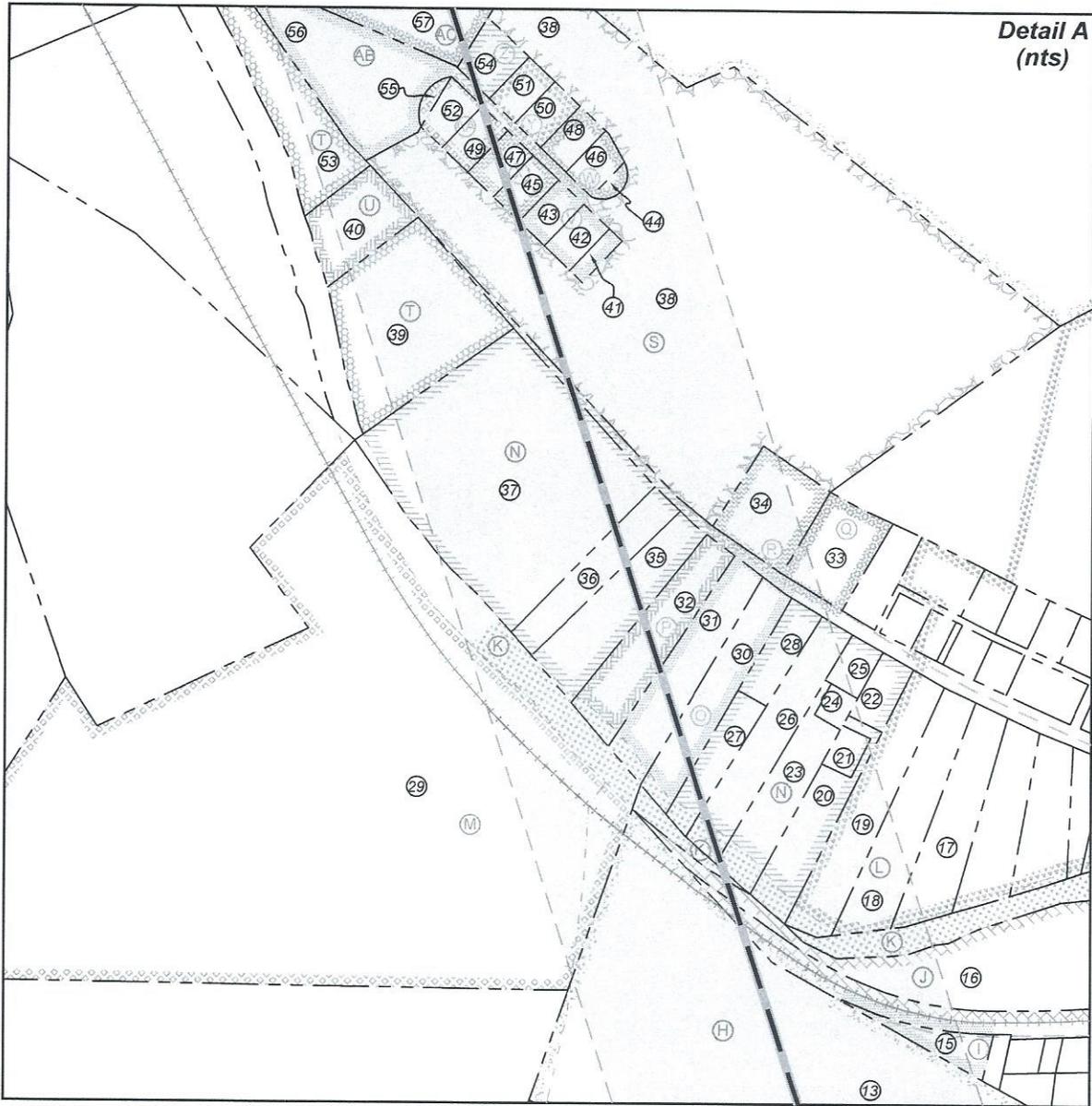
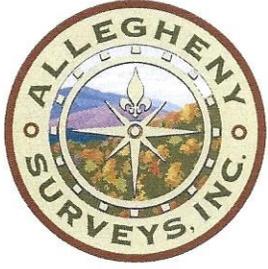
DATE: August 16 2023
 OPERATOR'S WELL NO. Viewer Unit 1H
 API WELL NO
 47 - 103 - 03589
 STATE COUNTY PERMIT

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

LOCATION: ELEVATION: As-Built 1,211' WATERSHED: Fishing Creek QUADRANGLE: Pine Grove
 DISTRICT: Green COUNTY: West Virginia
 SURFACE OWNER: Antero Resources Corp. ACREAGE: 58.1
 ROYALTY OWNER: James Allen Sell LEASE NO: ACREAGE: 58.1

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: 7,500' TVD
 25,500' MD

WELL OPERATOR: Antero Resources Corporation DESIGNATED AGENT: Kevin Ellis
 ADDRESS: 1615 Wynkoop Street ADDRESS: 535 White Oaks Blvd.
 Denver, CO 80202 Bridgeport, WV 26330



FILE NO: 27-34-G-18
 DRAWING NO: Viewer Unit 1H BHL MOD
 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

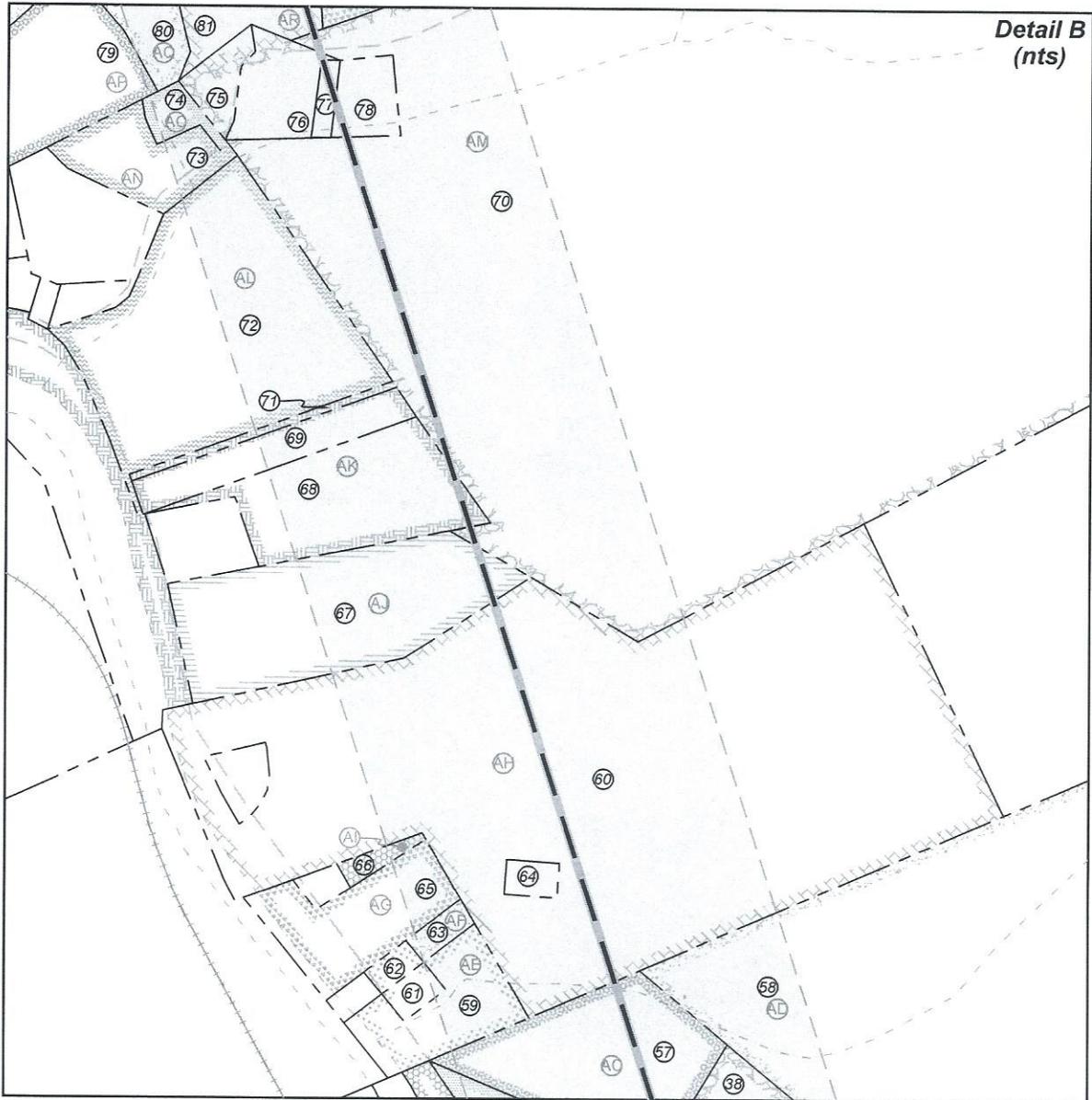
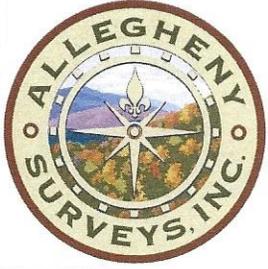
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 API WELL NO
 47 — 103 — 03589
 STATE COUNTY PERMIT

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

LOCATION: ELEVATION: As-Built 1,211' WATERSHED: Fishing Creek QUADRANGLE: Pine Grove
 DISTRICT: Green COUNTY: Wetzel
 SURFACE OWNER: Antero Resources Corp. ACREAGE: 58.1
 ROYALTY OWNER: James Allen Sell LEASE NO: _____ ACREAGE: 58.1
 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: 25,500' MD

WELL OPERATOR: Antero Resources Corporation DESIGNATED AGENT: Kevin Ellis
 ADDRESS: 1615 Wynkoop Street ADDRESS: 535 White Oaks Blvd.
 Denver, CO 80202 Bridgeport, WV 26330

09/15/2023



FILE NO: 27-34-G-18
 DRAWING NO: Viewer Unit 1H BHL MOD
 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: August 16 2023
 OPERATOR'S WELL NO. Viewer Unit 1H
 API WELL NO
 47 — 103 — 03589
 STATE COUNTY PERMIT

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

LOCATION: ELEVATION: As-Built 1,211' WATERSHED: Fishing Creek QUADRANGLE: Pine Grove
 DISTRICT: Green COUNTY: Wayne
 SURFACE OWNER: Antero Resources Corp. ACREAGE: 58.1
 ROYALTY OWNER: James Allen Sell LEASE NO: _____ ACREAGE: 58.1

PROPOSED WORK: DRILL CONVERT DRILL DEEPER FRACTURE OR STIMULATE PLUG OFF OLD FORMATION
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 ADDRESS: 1615 Wynkoop Street ADDRESS: 535 White Oaks Blvd.
Denver, CO 80202 Bridgeport, WV 26330

09/15/2023



Leases	
A	James Allen Sell
B	William R. Stalnaker
C	George Neason Myers, et ux
D	Antero Minerals, LLC
E	John Ronald Harter, et ux
F	Dean H. Bucher
G	Dean H. Bucher
H	Dean H. Bucher
I	Kenneth Calvin Willard
J	Ruby Lynn Price
K	WVDNR
L	Shiben Estates, Inc.
M	Coastal Forest Resources Co.
N	Nola Jean Parks
O	Howard D. Bucher, et ux
P	Dean H. Bucher
Q	Kimberly K. McCale
R	Bryan J. Lemasters, et ux

Leases	
S	Michael Paul Melott, et ux
T	Betty C. Long
U	Gary R. Partridge, et ux
V	Teresa R. Brown
W	Jack E. Dakan, et ux
X	William J. Hupp, et ux
Y	Joseph L. Cain, et ux
Z	Katina D. Swiger
AA	Bonnie Jean Brown
AB	Roger L. Harrison, et ux
AC	Roger Dean Long, et ux
AD	Chesapeake Appalachia, LLC
AE	Timothy L. McDiffitt, et ux
AF	Daniel S. Brown
AG	Judy Smith
AH	Margaret Lancaster, et vir
AI	Margaret Lancaster

Leases	
AJ	Rocky G. Miracle, et ux
AK	H. Dorn Higginbotham, et ux
AL	H. Dorn Higginbotham, et ux
AM	Shiben Estates Inc.
AN	Donald Ardell Howell
AO	Samuel R. Haught, et ux
AP	Lloyd Lee King
AQ	Carolyn Jacobs Hampson
AR	Lillian Priscilla Grimm
AS	Barbara Anne Amos King
AT	Valerie Preat
AU	P&P Fujimo LLC
AV	Maria Delia Estrada
AW	Nancy B. Hatfield, et al
AX	Nancy B. Hatfield, et al
AY	Nancy B. Hatfield, et al
AZ	Nancy B. Hatfield, et al

ID	TM-Par	Owner	Bk/Pg	Acres
1	17-12	Antero Resources Corp.	483/888	58.10
2	17-60	Ross Bucher	411/765	79.00
3	17-57	Steven C. & Bertie G. Blinkman	388/243	20.60
4	17-1	Antero Resources Corp	483/888	15.35
5	13-69.1	Donald L. Mason	410/759	14.00
6	13-69	Donald L. Mason	410/759	69.61
7	13-69.4	David P. & Jami D. Morris	450/428	1.46
8	13-69.2	Carol S. Bishop	344/568	1.25
9	13-69.3	David P. & Jami D. Morris	364/9	1.25
10	13-68	John Ronald & Johnna Shay Harter	437/867	14.62
11	13-68.1	Charles M. Haught	315/642	3.44
12	13-43	John R. & Johnna S. Harter	437/867	46.25
13	13-90	Coastal Forest Resources Co.	444/105	36.13
14	13-91	Coastal Forest Resources Co.	444/105	3.47
15	28-42	George Keck	71/258	0.50
16	28-25	Sara Larrimore, et al	AP107/99	4.50
17	28-20	Thelma L. Brideman	MS10/131	1.82
18	28-19	Ricky L. & Cindy S. Wade	420/441	2.07
19	28-18	Ronald S. Anderson	417/63	2.14
20	28-17.2	Darel L. & Joyce A. Ueltschy	424/365	1.33
21	28-17.1	Darel L. & Joyce A. Ueltschy	424/365	0.25
22	28-17	Sharyn D. Utt	360/348	0.49
23	28-15	Nathan D. & Jacqueline Johnson	404/399	1.46
24	28-16	Nathan D. & Jacqueline Johnson	404/399	0.20
25	28-15.1	Christopher David Thomas	365/112	0.35
26	28-14	Benjamin F. & Ruth Kocher	242/14	1.83
27	28-13	Benjamin F. & Ruth Kocher	221/369	0.83
28	28-12	Benjamin F. Kocher	202/264	0.67
29	13-28	Coastal Forest Resources Co.	444/105	46.2
30	28-11	Howard D. & Clara Mae Bucher	285/483	1.62
31	28-10	Dale & Clara M. Bucher	198/265	1.78
32	28-9	Cecil E. McDiffitt	308/298	1.85
33	28-2.6	Phillip Bassett	440/61	---
34	28-1	Bryan J. & Christina D. Lemasters	315/335	---
35	28-8	John C. & Wilma Jean Brown	212/387	1.85
36	28-7.1	Gloria D. & Eugene Mason, Jr.	261/373	1.24
37	28-7	William C. & Blanchie Kocher	196/423	8.35
38	13-19.1	Michael Paul & Tamatha Lynn Melott	379/128	23.95
39	13-20	Betty Long	191/288	6.94
40	13-20.1	Gary R. & Angela E. Partridge	451/425	1.39
41	13A-29	Alyson P. Weber	439/352	0.18
42	13A-22	Alyson P. Weber	439/352	0.37
43	13A-21	Alyson P. Weber	439/352	0.37
44	13A-28	Jack E. & Constance D. Dakan	354/503	0.10
45	13A-20	William J. & Veima S. Hupp	300/343	0.37

ID	TM-Par	Owner	Bk/Pg	Acres
46	13A-27	Jack E. & Constance D. Dakan	268/88	0.34
47	13A-19	William J. & Veima S. Hupp	300/343	0.37
48	13A-26	Jack E. & Constance D. Dakan	273/171	0.37
49	13A-18	Bonnie Jean Brown	362/553	0.37
50	13A-25	Joseph L. & Roberta E. Cain	378/385	0.37
51	13A-24	Joseph L. & Roberta E. Cain	378/385	0.37
52	13A-17	Bonnie Jean Brown	318/576	0.38
53	13-20	Betty Long	191/288	6.94
54	13A-23.1	Katrina D. Swiger	388/273	0.54
55	13A-30	Bonnie Jean Brown	362/553	0.11
56	13-19.3	Roger L. & Sarah M. Harrison	455/399	3.00
57	13-19.2	Roger D. & Kimmie L. Long	313/183	4.99
58	13-13	Linda M. Headley	385/209	85.5
59	13-12.3	Timothy L. & Tammy D. McDiffitt	441/68	2.24
60	13-6	Margaret Lancaster	333/440	39.39
61	13-12.2	Timothy L. & Tammy D. McDiffitt	441/68	0.34
62	13-12.1	Timothy L. & Tammy D. McDiffitt	441/68	0.27
63	13-12.4	Bradley Keith & Daniel Scott Brown	440/781	0.48
64	13-5	Cochran Cemetery	---/---	0.35
65	13-12	Judy Smith	341/320	2.71
66	13-14	Phillip Dale Haught	465/207	0.32
67	13-4	Rocky G. & Vicki S. Miracle	325/11	6.89
68	8-36.6	Kevin R. & Ronald L. Hall	360/124	4.25
69	8-38.7	Robert & Carolyn Kocher	269/420	1.86
70	8-28	Nancy B. Hatfield	474/48/1	449.48
71	8-38.10	Robert P. & Carolyn J. Kocher	484/459	0.36
72	8-38.2	H. Dorn Higginbotham & Janet L. Higginbotham	286/386	10.32
73	8-40	Ronald M. Jackson	487/60	1.74
74	8-40.1	Teresa D. Post	464/331	0.57
75	8-28.2	Theresa A. Ice	347/368	0.85
76	8-28.3	Theresa Ann Ice	368/549	1.72
77	8-28.4	Debra K. Fluharty	451/394	0.27
78	8-28.1	Debra K. Fluharty	342/680	0.89
79	8-39	John F. King	25/264	4.5
80	8-30	Michael L. & Erin M. Greathouse	363/91	76
81	8-33	Lloyd L. King	319/55	20.35
82	8-34	Peter S. & Marietta A. Florea	420/915	42
83	8-31	Valerie Preat	416/599	32.5
84	8-48	James D. Highley Jr.	472/167	41.00
85	8-21	BP Mineral Holdings II LLC	425/427	43.5
86	8-22	John D. & Connie J. Morgan	417/944	40
87	8-12	John D. & Connie J. Morgan	417/944	13.60
88	8-10	Andrea Wade	420/853	35.50
89	8-11	Andrea Wade	420/853	13.50

FILE NO: 27-34-G-18
 DRAWING NO: Viewer Unit 1H BHL MOD
 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: August 16 2023
 OPERATOR'S WELL NO. Viewer Unit 1H
 API WELL NO
 47 — 103 — 03589
 STATE COUNTY PERMIT

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

LOCATION: ELEVATION: As-Built 1,211' WATERSHED: Fishing Creek QUADRANGLE: Pine Grove
 DISTRICT: Green COUNTY: Wetzel
 SURFACE OWNER: Antero Resources Corp. ACREAGE: 58.1
 ROYALTY OWNER: James Allen Sell LEASE NO: ACREAGE: 58.1

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: 7,500' TVD
 25,500' MD

WELL OPERATOR: Antero Resources Corporation DESIGNATED AGENT: Kevin Ellis
 ADDRESS: 1615 Wynkoop Street ADDRESS: 535 White Oaks Blvd.
 Denver, CO 80202 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:

Grantor, lessor, etc.	Grantee, lessee, etc.	Royalty	Book/Page
<u>A: James Allen Sell Lease</u> James Allen Sell	Antero Resources Corporation	1/8+	258A/0467
<u>B: William R. Stalnaker Lease</u> William R. Stalnaker	Antero Resources Corporation	1/8+	179A/0069
<u>D: Antero Minerals, LLC Lease</u> Antero Minerals, LLC	Antero Resources Corporation	1/8+	250A/0795
<u>E: John Ronald Harter, et ux Lease</u> John Ronald Harter, et ux	Antero Resources Corporation	1/8+	266A/0078
<u>H: Dean H. Bucher Lease</u> Dean H. Bucher	Antero Resources Corporation	1/8+	262A/0198
<u>G: Dean H. Bucher Lease</u> Dean H. Bucher	Antero Resources Corporation	1/8+	262A/0198
<u>H: Dean H. Bucher Lease</u> Dean H. Bucher	Antero Resources Corporation	1/8+	262A/0198
<u>J: Ruby Lynn Price Lease</u> Ruby Lynn Price	Antero Resources Corporation	1/8+	219A/0206
<u>K: WVDNR Lease</u> WVDNR	Antero Resources Corporation	1/8+	323A/0541
<u>N: Nola Jean Parks Lease</u> Nola Jean Parks	Antero Resources Corporation	1/8+	195A/0750
<u>O: Howard D. Bucher, et ux Lease</u> Howard D. Bucher, et ux	Antero Resources Corporation	1/8+	287A/0559
<u>P: Dean H. Bucher Lease</u> Dean H. Bucher	Antero Resources Corporation	1/8+	262A/0198
<u>N: Nola Jean Parks Lease</u> Nola Jean Parks	Antero Resources Corporation	1/8+	195A/0750
<u>S: Michael Paul Melott, et ux Lease</u> Michael Paul Melott, et ux	Antero Resources Corporation	1/8+	236A/0488
<u>V: Teresa R. Brown Lease</u> Teresa R. Brown	Antero Resources Corporation	1/8+	311A/0479
<u>X: William J. Hupp, et ux Lease</u> William J. Hupp, et ux	Antero Resources Corporation	1/8+	210A/0564
<u>AA: Bonnie Jean Brown Lease</u> Bonnie Jean Brown	Antero Resources Corporation	1/8+	310A/0650

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 WV Department of
 Environmental Protection

09/15/2023

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Grantor, lessor, etc.	Grantee, lessee, etc.	Royalty	Book/Page
<u>Z: Katina D. Swiger Lease</u> Katina D. Swiger	Antero Resources Corporation	1/8+	310A/0647
<u>AC: Roger Dean Long, et ux Lease</u> Roger Dean Long, et ux	Antero Resources Corporation	1/8+	278A/0026
<u>AH: Margaret Lancaster, et vir Lease</u> Margaret Lancaster, et vir	Antero Resources Corporation	1/8+	192A/0758
<u>AJ: Rocky G. Miracle, et ux Lease</u> Rocky G. Miracle, et ux	Antero Resources Corporation	1/8+	193A/0753
<u>AM: Shiben Estates Inc. Lease</u> Shiben Estates Inc.	Antero Resources Corporation	1/8+	312A/0021
<u>AK: H. Dorn Higginbotham, et ux Lease</u> H. Dorn Higginbotham, et ux	Antero Resources Corporation	1/8+	274A/0792
<u>AM: Shiben Estates Inc. Lease</u> Shiben Estates Inc.	Antero Resources Corporation	1/8+	312A/0021
<u>AR: Lillian Priscilla Grimm Lease</u> Lillian Priscilla Grimm	Antero Resources Corporation	1/8+	259A/0485
<u>AT: Valerie Preat Lease</u> Valerie Preat	Antero Resources Corporation	1/8+	264A/0049
<u>AQ: Carolyn Jacobs Hampson Lease</u> Carolyn Jacobs Hampson	Antero Resources Corporation	1/8+	196A/0766
<u>AV: Maria Delia Estrada Lease</u> Maria Delia Estrada	Antero Resources Corporation	1/8+	262A/0087

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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.

*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

09/15/2023

**INFORMATION SUPPLIED UNDER WEST VIRGINIA CODE
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Lease Name or Number	Grantor, Lessor, etc.	Grantee, Lessee, etc.	Royalty	Book/Page
<u>AY: Nancy B. Hatfield, et al Lease</u>				
	Nancy B. Hatfield, et al	Antero Resources Corporation	1/8+	298A/0727

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*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

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

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

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

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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 Vice President of Land



August 23, 2023

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

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

Mr. Brewer:

Antero Resources Corporation (Antero) would like to submit the following permit modifications for approved well on the existing Furbee Pad: Viewer Unit 1H (47-103-03589) and Viewer Unit 2H (47-103-03590) Expedited.

Attached you will find the following:

- AOR
- Revised Form WW-6B
- Revised Form WW-6A1
- Revised Mylar Plat

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AUG 29 2023

WV Department of
Environmental Protection

If you have any questions please feel free to contact me at (303) 357-6959.

Thank you in advance for your consideration.

Sincerely,

A handwritten signature in black ink that reads "S Gaspar".

Stefan Gaspar
Permitting Agent
Antero Resources Corporation

CK# 4622672
Amit \$7500
Date 8/22/23

Enclosures

09/15/2023