



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

Thursday, August 4, 2022
PERMIT MODIFICATION APPROVAL
Horizontal 6A / New Drill

ANTERO RESOURCES CORPORATION
1615 WYNKOOP STREET

DENVER, CO 80202

Re: Permit Modification Approval for CLUTTER UNIT 2H
47-095-02782-00-00

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.

A handwritten signature in blue ink, appearing to read "James A. Martin".

James A. Martin
Chief

Operator's Well Number: CLUTTER UNIT 2H
Farm Name: ELDON J & RUTH A HELMAN
U.S. WELL NUMBER: 47-095-02782-00-00
Horizontal 6A New Drill
Date Modification Issued: 8/4/2022

Promoting a healthy environment.

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: Clutter Unit 2H 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: 26,200'

11) Proposed Horizontal Leg Length: 17,658.3'

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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WV Department of
Environmental Protection

Steve M. By
7/21/22

WW-6B
(04/15)

API NO. 47- 095 - 02782
 OPERATOR WELL NO. Clutter Unit 2H MOD
 Well Pad Name: Eldon 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	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#	26200'	26200'	CTS, 5685 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	~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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Page 2 of 3

SM

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

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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Page 3 of 3

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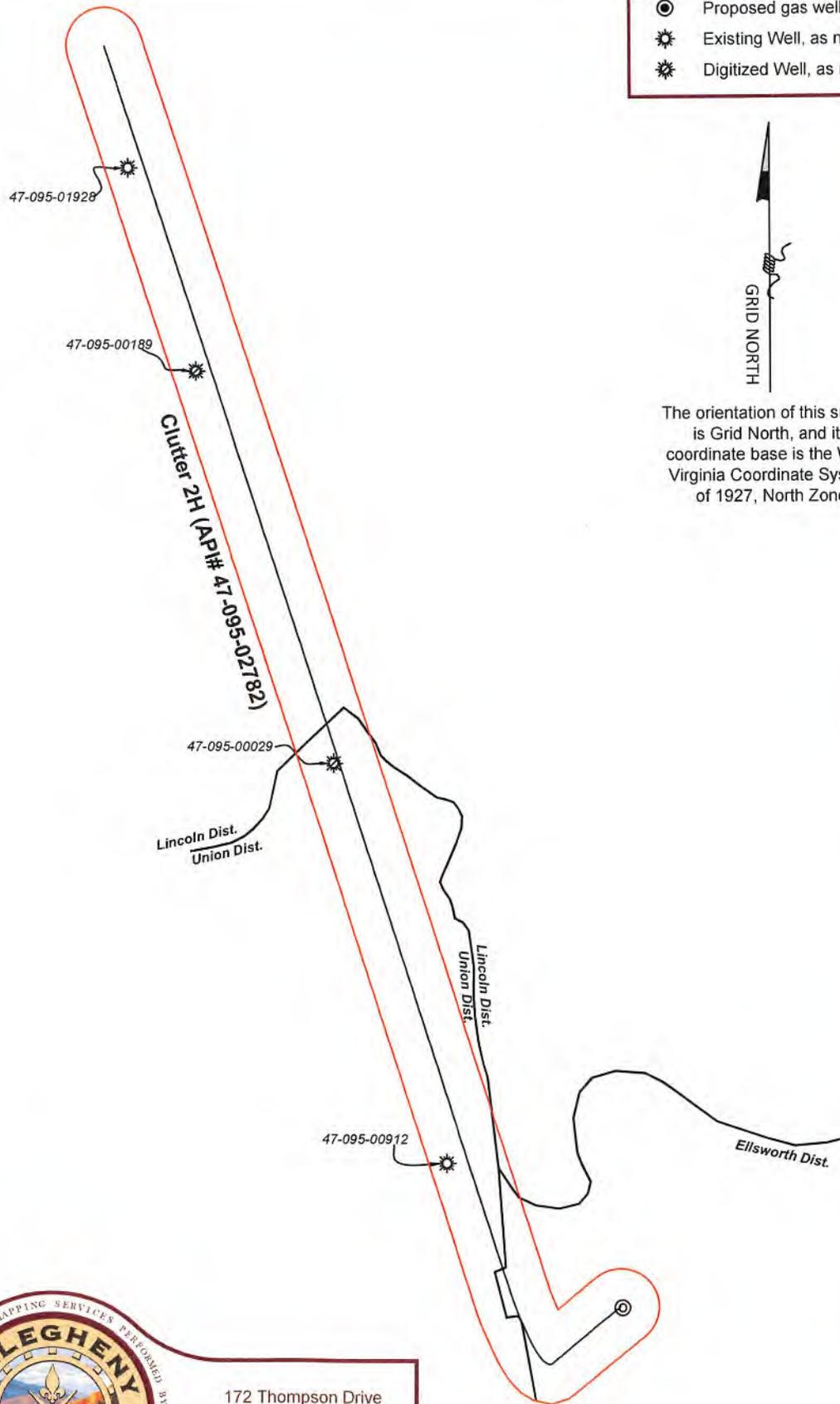
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LEGEND

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



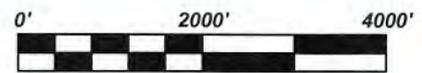
The orientation of this survey is Grid North, and its coordinate base is the West Virginia Coordinate System of 1927, North Zone



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JUL 18 2022
WV Department of
Environmental Protection



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: 268-54-E-21	
FIELD CREW: C.L., K.M.	Sheet 1 of 1	DRAWING NO: Clutter 2H Well Exhibit	



Scale: 1 inch = 2000 feet

UWI (APINum)	Well Name	Well Number	Operator	Hist Oper	TD	Perforated Interval (shallowest, deepest)	Perforated Formation(s)	Producible Formation(s) not perf'd
47095009120000	HICKMAN CHARLES	1	LAUDERMAN OIL & GAS	LAUDERMAN OIL & GAS	4,558	4068 - 4342	Huron	Gordon, Weir, Alexander, Berea
47095000290000	ELI J WELLS & SONS	1			1,869		Big Injun	Gordon, Weir, Alexander, Berea
47095001890000	CATH FOURNIER/LECHIEN	1	GENERAL OIL CO INC	GENERAL OIL CO INC	1,800		Big Injun	Gordon, Weir, Alexander, Berea
47095019280000	SHREVES	703	ANTERO RESOURCES CORPORATION	TRIAD RESOURCES INC	6,328	6135 - 6203	Marcellus	

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[

11,120' to Top Hole

6,185' to Bottom Hole

Page 1 of 2

Antero Resources
Well No. Clutter 2H
BHL MOD
Antero Resources Corporation

TOP HOLE LATITUDE 39 - 30 - 00
BTM HOLE LATITUDE 39 - 32 - 30



Notes
West Virginia Coordinate System of 1927, North Zone based upon Differential GPS Measurements. Well No. Clutter Unit 2H Top Hole coordinates are N: 365,220.64' Longitude: 80°57'21.85" E: 1,589,096.09' Longitude: 80°58'48.95" UTM Zone 17, NAD 1983

Bottom Hole coordinates are N: 381,706.88' Longitude: 80°57'21.85" E: 1,582,539.02' Longitude: 80°58'48.95" UTM Zone 17, NAD 1983

Top Hole Coordinates Bottom Hole Coordinates
N: 4,371,563.968m N: 4,376,553.196m
E: 503,791.929m E: 501,710.540m

Plat orientation and corner well references are based upon the grid north meridian. Well location references are based upon the magnetic meridian.

TOP HOLE LONGITUDE 80 - 55 - 00
BTM HOLE LONGITUDE 80 - 57 - 30

1,130' to Bottom Hole

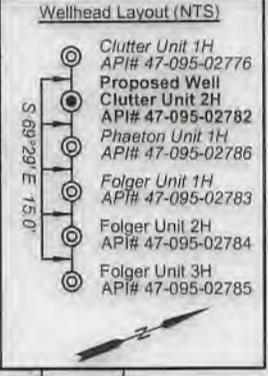
2,330' to Top Hole



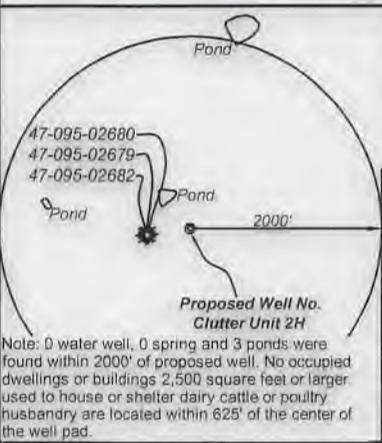
I, the undersigned, hereby certify that this plat is correct to the best of my knowledge and belief and shows all the information required by law and the rules issued and prescribed by the Department of Environmental Protection.

Bradley D. Miller, P.S. 2167

Notes:
Well No. Clutter Unit 2H UTM Zone 17, NAD 1927
Top Hole Coordinates N: 14,341,659.10' E: 1,652,809.87'
Point of Entry Coordinates N: 14,341,334.47' E: 1,651,719.06'
Bottom Hole Coordinates N: 14,358,027.96' E: 1,645,980.81'



	Bearing	Dist.
L1	S 08°36' E	874.7'
L2	N 44°00' E	1,103.0'
L3	N 66°55' E	1,152.2'
L4	N 71°11' E	1,842.7'
L5	S 74°23' W	1,138.5'



- 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

FILE NO: 268-54-E-21
DRAWING NO: Clutter Unit 2H 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: July 8 2022
OPERATOR'S WELL NO. Clutter Unit 2H
API WELL NO. 47 - 095 - 02782
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 COUNTY: Tyler

SURFACE OWNER: Ruth A. Helman ACREAGE: 61.83

ROYALTY OWNER: Eldon J. & Ruth A. Helman; Lora Keller Thomas; WVDNR; Norma R. Spencer. LEASE NO: ACREAGE: 128.55; 31.25; 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; 26,200' 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



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	10-10	Lora K. Thomas	201/359	307.05
4	6-2	Eldon J. & Ruth A. Helman	383/761	83.13
5	13-10	Eldon J. & Ruth A. Helman	383/761	96.82
6	6-1.1	Eldon J. & Ruth A. Helman	383/761	21.00
7	15-18	B.F. Kile	174/412	70.00
8	6-1	Eldon J. & Ruth A. Helman	383/761	169.00
9	6-6.11	David S. Clough	351/752	12.40
10	6-6.10	Jeffrey M. & Jill S. Mennillo	368/770	9.90
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 J. Young, Jr.	345/211	25.65
15	6-6	Crystal R. & Charles J. Young, Jr.	368/773	5.06
16	6-6.4	Crystal R. & Charles J. Young, Jr.	368/773	25.35
17	15-3	Dena Grimes	W35/150	11.00
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	Nathaniel V. & Tamela Frum	428/604	75.00
21	14-1	Edward E. & Connie Howell	361/829	158.74
22	12-49	Estella J. & William J. Goodfellow, Jr.	286/20	38.65
23	12-21	Keith V. & Barbara L. Frum	280 / 358	77.30
24	12-46	Keith V. & Barbara L. Frum	280/358	40.89
25	12-43	Estella J. & William J. Goodfellow, Jr.	178/489	43.18
26	11-10	James Arthur & Dorothy J. Shreves	183/420	128.55
27	12-22	William & Joanne Ingram	140/502	84.30
28	11-9	Christian & Anna Forrester Estate	85/575	18.25
29	7-40	Brett Grimm, et al	342/538	86.60
30	11-8	Christian & Anna Forrester Estate	98/118	13.00
31	11-7	Robert L. Sherman	369/843	99.56

Leases	
A	Eldon J. & Ruth A. Helman
B	Carol J. Cox
C	Lora Keller Thomas
D	Gary C. & Maryjane Richards
E	Ruth H. Wells
F	Norma R. Spencer
G	Mary Ann Devine
H	WVDNR
I	David S. Clough
J	Jeffrey M. Mennillo, et ux
K	Alan B. Clough, et ux
L	Richard Keith McCollum
M	Charles M. Jr. & Crystal R. Young
N	Dena Raye Grimes
O	Flora Patterson Woodburn
P	Karen Moore Hwilka
Q	William J. Goodfellow, et ux
R	Margaret Conaway-Torok
S	William P. Ingram
T	Keith V. Frum, et ux
U	William J. Goodfellow, et ux
V	James Arthur Shreves, et ux
W	Heritage Resources Marcellus Minerals, LLC
X	William P. Ingram
Y	James H. Williamson
Z	Erik D. Grimm
AA	Robert L. Sherman

FILE NO: 268-54-E-21
 DRAWING NO: Clutter Unit 2H 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: July 8 20 22
 OPERATOR'S WELL NO. Clutter Unit 2H
 API WELL NO. **1110**
 47 - 095 - 02782
 STATE COUNTY PERMIT

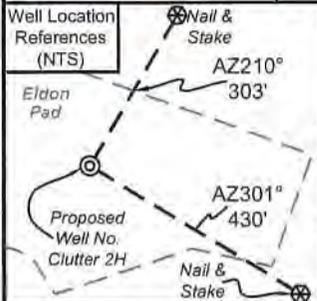
WELL TYPE: OIL GAS LIQUID INJECTION WASTE DISPOSAL
 (IF GAS) PRODUCTION: STORAGE DEEP SHALLOW

LOCATION: ELEVATION: As-Built 880' WATERSHED: Middle Island Creek QUADRANGLE: Btm Hole: Paden City Outlet: Middle Island Creek Top Hole: Middleboure
 DISTRICT: Union, Lincoln COUNTY: Tyler 186.008; 61.83; 78.49; 38.65; 18.30;
 SURFACE OWNER: Ruth A. Helman William P. Ingram (2); James Arthur Shreves, et ux; Heritage Resources Marcellus Minerals, LLC; Karen Moore Hwilka; Keith V. Frum, et ux; William J. Goodfellow, et ux; Erik D. Grimm; James H. Williamson; Richard Keith McCollum; Charles M., Jr. & Crystal R. Young; Flora Patterson Woodburn; ACREAGE: 61.83 7.0; 25.05; 56.06; 34.3;
 ROYALTY OWNER: Eldon J. & Ruth A. Helman; Lora Keller Thomas; WVDNR; Norma R. Spencer; LEASE NO: _____ ACREAGE: 128.55; 31.25; 86.607 9.9; 33.74; 100; 40.89; 190; 48.55; 84.3; 77.3;

PROPOSED WORK: DRILL CONVERT DRILL DEEPER FRACTURE OR STIMULATE PLUG OFF OLD FORMATION
 PERFORATE NEW FORMATION OTHER PHYSICAL CHANGE IN WELL (SPECIFY) BHL MOD
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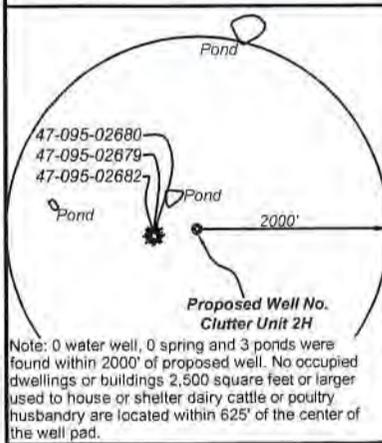
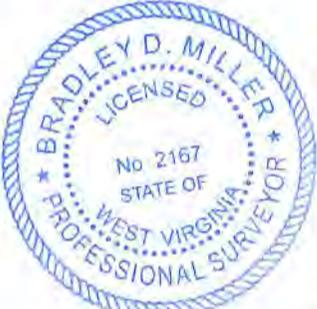
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Antero Resources
Well No. Clutter 2H
BHL MOD
 Antero Resources Corporation



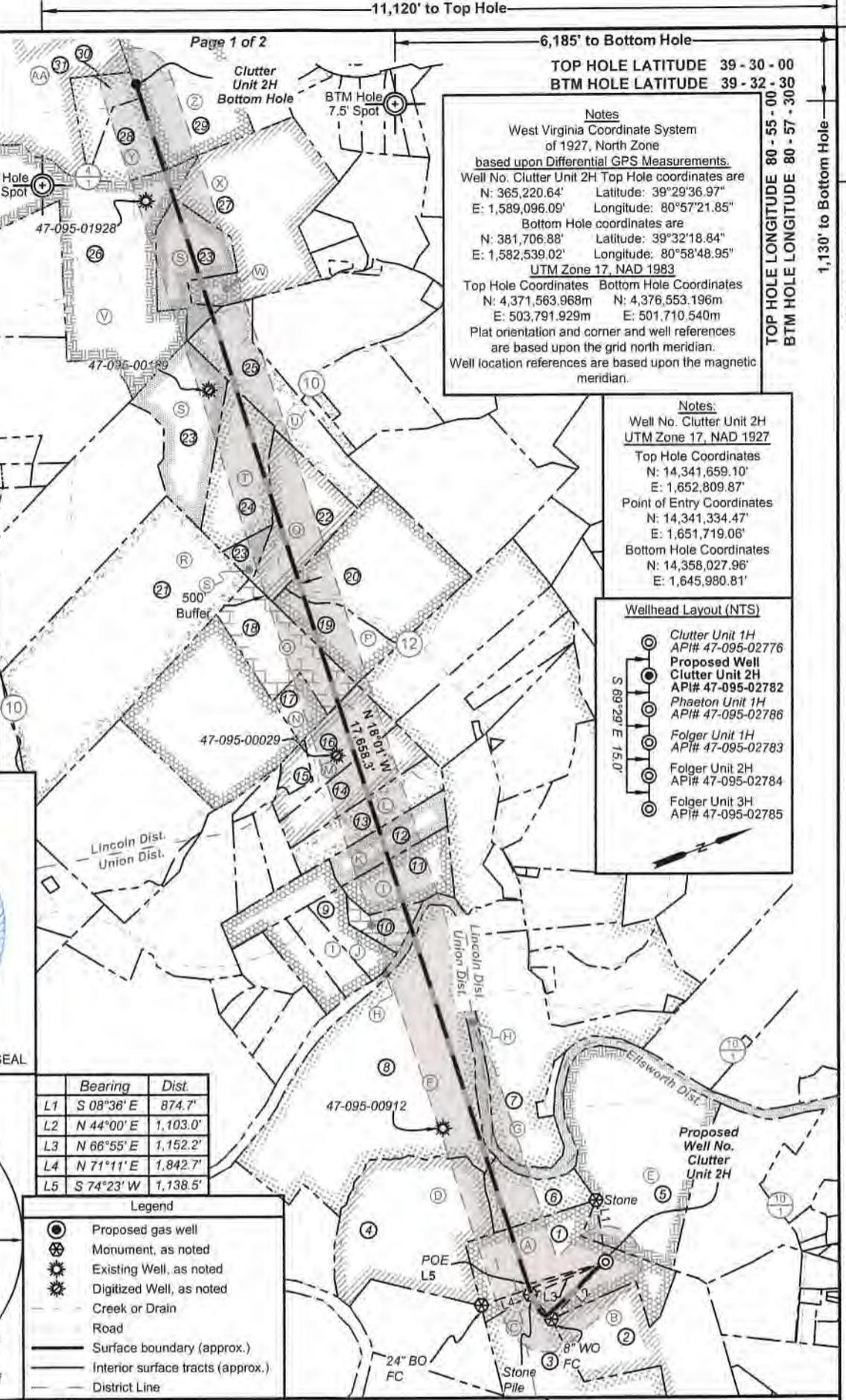
I, the undersigned, hereby certify that this plat is correct to the best of my knowledge and belief and shows all the information required by law and the rules issued and prescribed by the Department of Environmental Protection.

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



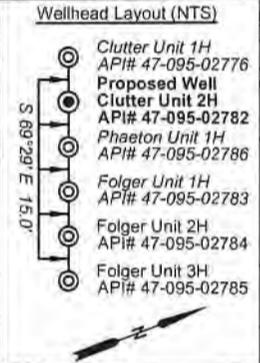
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 SURFACE OWNER: Ruth A. Helman Karen Moore Hwilka; Keith V. Frum, et ux; William J. Goodfellow, et ux; Erik D. Grimm; James H. Williamson; 7.0; 25.05; 56.06; 34.3;
 ROYALTY OWNER: Eldon J. & Ruth A. Helman; Lora Keller Thomas; WVDNR; Norma R. Spencer; Jeffrey M. Mennillo, et ux; David S. Clough; William J. Goodfellow, et ux (2); Alan B. Clough, et ux ACREAGE: 61.83 9.9; 33.74; 100; 40.89;
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 Denver, CO 80202 Charleston, WV 25313



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13	6-6.6	Richard Keith McCollum	362/348	25.05
14	6-6.5	Crystal R. & Charles J. Young, Jr.	345/211	25.65
15	6-6	Crystal R. & Charles J. Young, Jr.	368/773	5.06
16	6-6.4	Crystal R. & Charles J. Young, Jr.	368/773	25.35
17	15-3	Dena Grimes	W35/150	11.00
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	Nathaniel V. & Tamela Frum	428/604	75.00
21	14-1	Edward E. & Connie Howell	361/829	158.74
22	12-49	Estella J. & William J. Goodfellow, Jr.	286/20	38.65
23	12-21	Keith V. & Barbara L. Frum	280 / 358	77.30
24	12-46	Keith V. & Barbara L. Frum	280/358	40.89
25	12-43	Estella J. & William J. Goodfellow, Jr.	178/489	43.18
26	11-10	James Arthur & Dorothy J. Shreves	183/420	128.55
27	12-22	William & Joanne Ingram	140/502	84.30
28	11-9	Christian & Anna Forrester Estate	85/575	18.25
29	7-40	Brett Grimm, et al	342/538	86.60
30	11-8	Christian & Anna Forrester Estate	98/118	13.00
31	11-7	Robert L. Sherman	369/843	99.56

Leases	
A	Eldon J. & Ruth A. Helman
B	Carol J. Cox
C	Lora Keller Thomas
D	Gary C. & Maryjane Richards
E	Ruth H. Wells
F	Norma R. Spencer
G	Mary Ann Devine
H	WVDNR
I	David S. Clough
J	Jeffrey M. Mennillo, et ux
K	Alan B. Clough, et ux
L	Richard Keith McCollum
M	Charles M. Jr. & Crystal R. Young
N	Dena Raye Grimes
O	Flora Patterson Woodburn
P	Karen Moore Hwilka
Q	William J. Goodfellow, et ux
R	Margaret Conaway-Torok
S	William P. Ingram
T	Keith V. Frum, et ux
U	William J. Goodfellow, et ux
V	James Arthur Shreves, et ux
W	Heritage Resources Marcellus Minerals, LLC
X	William P. Ingram
Y	James H. Williamson
Z	Erik D. Grimm
AA	Robert L. Sherman

FILE NO: 268-54-E-21
 DRAWING NO: Clutter Unit 2H Well Plat
 SCALE: 1" = 2000'
 MINIMUM DEGREE OF ACCURACY:
Submeter
 PROVEN SOURCE OF ELEVATION:
WVDOT, Harrisville, WV



DATE: July 8 2022
 OPERATOR'S WELL NO. Clutter Unit 2H
 API WELL NO
47 - 095 - 02782
 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: Middleboure Btm Hole: Paden City
 DISTRICT: Union, Lincoln COUNTY: Tyler
 SURFACE OWNER: Eldon J. & Ruth A. Helman ACREAGE: 61.83
 ROYALTY OWNER: Eldon J. & Ruth A. Helman; Lora Keller Thomas; WVDNR; Norma R. Spencer; LEASE NO: _____ ACREAGE: 186.008; 61.83; 78.49; 38.65; 18.30; 7.0; 25.05; 56.06; 34.3; 9.9; 33.74; 100; 40.89; 190; 48.55; 84.3; 77.3;
 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: 26,200' 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. and Ruth A. Helman Lease</u> Eldon J. and Ruth A. Helman	Antero Resources Corporation	1/8+	0427/0610
<u>C: Lora Keller Thomas Lease</u> Lora Keller Thomas	Antero Resources Corporation	1/8+	0062/0581
<u>A: Eldon J. and Ruth A. Helman Lease</u> Eldon J. and Ruth A. Helman	Antero Resources Corporation	1/8+	0427/0610
<u>F: Norma R. Spencer Lease</u> Norma R. Spencer, Trustee of the Allan P. Spencer Living Trust	Antero Resources Corporation	1/8+	0564/0428
<u>H: WVDNR Lease</u> WVDNR	Antero Resources Corporation	1/8+	0175/0713
<u>J: Jeffrey M. Mennillo, et ux Lease</u> Jeffrey M. and Jill S. Mennillo Antero Resources Appalachian Corporation	Antero Resources Appalachian Corporation Antero Resources Corporation	1/8+ Name Change	0427/0753 0557/0430
<u>I: David S. Clough Lease</u> David S. Clough Antero Resources Appalachian Corporation	Antero Resources Appalachian Corporation Antero Resources Corporation	1/8+ Name Change	0421/0490 0557/0430
<u>K: Alan B. Clough, et ux Lease</u> Alan B. and Traci L. Clough Antero Resources Appalachian Corporation	Antero Resources Appalachian Corporation Antero Resources Corporation	1/8+ Name Change	0421/0488 0557/0430
<u>L: Richard Keith McCollum Lease</u> Richard Keith McCollum Antero Resources Appalachian Corporation	Antero Resources Appalachian Corporation Antero Resources Corporation	1/8+ Name Change	0422/0488 0557/0430
<u>M: Charles M. Jr & Crystal R. Young Lease</u> Charles M. Young Jr. and Crystal R. Young	Antero Resources Corporation	1/8+	0162/0395
<u>O: Flora Patterson Woodburn Lease</u> Flora Patterson Woodburn	Antero Resources Corporation	1/8+	0012/0585
<u>P: Karen Moore Hwilka Lease</u> Karen Moore Hwilka	Antero Resources Corporation	1/8+	0140/0773
<u>Q: William J. Goodfellow, et ux Lease</u> William J. Goodfellow and Estella Goodfellow	Antero Resources Corporation	1/8+	0598/0919

RECEIVED
Office of Oil and Gas

AUG 4 2022

WV Department of
Environmental Protection

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Grantor, lessor, etc.	Grantee, lessee, etc.	Royalty	Book/Page
<u>T: Keith V. Frum, et ux Lease</u> Keith V. and Barbara L. Frum	Antero Resources Corporation	1/8+	0148/0151
<u>U: William J. Goodfellow, et ux Lease</u> William J. Goodfellow and Estella Goodfellow	Antero Resources Corporation	1/8+	0598/0919
<u>S: William P. Ingram Lease</u> William P. Ingram	Antero Resources Corporation	1/8+	0148/0145
<u>W: Heritage Resources Marcellus Minerals, LLC Lease</u> Heritage Resources Marcellus Minerals, LLC	Antero Resources Corporation	1/8+	0134/0541
<u>S: William P. Ingram Lease</u> William P. Ingram	Antero Resources Corporation	1/8+	0148/0145
<u>X: William P. Ingram Lease</u> William P. Ingram	Antero Resources Corporation	1/8+	0148/0145
<u>V: James Arthur Shreves, et ux Lease</u> James Arthur Shreves, et ux Triad Energy Corporation Triad Hunter, LLC Blue Ridge Mountain Resources Eclipse Resources I, LP SWN Production Company, LLC	Triad Energy Corporation Triad Hunter, LLC Blue Ridge Mountain Resources Eclipse Resources I, LP SWN Production Company, LLC Antero Resources Corporation	1/8 Assignment Assignment Assignment Name Change 1/8	0349/0648 0371/0605 0104/0354 0104/0357 WVSOS 0349/0648
<u>Y: James H. Williamson Lease</u> James H. Williamson	Antero Resources Corporation	1/8+	0155/0424

*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.

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Environmental Protection

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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 Number	Grantor, Lessor, etc.	Grantee, Lessee, etc.	Royalty	Book/Page
<u>Z: Eric D. Grimm Lease</u>	Eric D. Grimm	Antero Resources Corporation	1/8+	0134/0069

*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: VP of Land

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Office of Oil and Gas

JUL 18 2022