



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, June 26, 2023
PERMIT MODIFICATION APPROVAL
Horizontal 6A / New Drill

ANTERO RESOURCES CORPORATION
1615 WYNKOOP STREET

DENVER, CO 80202

Re: Permit Modification Approval for RINGNUS UNIT 1H
47-095-02862-00-00

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, Chief, is written over a white background.

James A. Martin
Chief

Operator's Well Number: RINGNUS UNIT 1H
Farm Name: DAVID E BOWYER
U.S. WELL NUMBER: 47-095-02862-00-00
Horizontal 6A New Drill
Date Modification Issued: 06/26/2023

Promoting a healthy environment.

06/30/2023

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

1) Well Operator: Antero Resources Corporation 494507062 095 - Tyler Lincoln Paden City 7.5'
Operator ID County District Quadrangle

2) Operator's Well Number: Ringnus Unit 1H MOD Well Pad Name: Dry Run Pad

3) Farm Name/Surface Owner: David E. Bowyer Public Road Access: Dry Run Road

4) Elevation, current ground: _____ Elevation, proposed post-construction: 1007'

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: 6700' TVD, Anticipated Thickness- 55 feet, Associated Pressure- 2850#

8) Proposed Total Vertical Depth: 6700' TVD

9) Formation at Total Vertical Depth: Marcellus

10) Proposed Total Measured Depth: 27,300' MD

11) Proposed Horizontal Leg Length: 18,300.3'

12) Approximate Fresh Water Strata Depths: 375', 520'

13) Method to Determine Fresh Water Depths: 47095002750000 Offset well records. Depths have been adjusted according to surface elevations.

14) Approximate Saltwater Depths: 1653'

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: _____

RECEIVED
Office of Oil and Gas

JUN 21 2023

WV Department of
Environmental Protection

Steve M. King
6-16-23

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	H-40	79#	100'	100' ✓	CTS, 96 Cu. Ft.
Fresh Water	13-3/8"	New	J/K-55	54.5#	570'	570' ✓	CTS, 594 Cu. Ft.
Coal	9-5/8"	New	J-/K55	36#	2500'	2500' ✓	CTS, 1018 Cu. Ft.
Intermediate							
Production	5-1/2"	New	P-110CY	20#	27300'	27300' ✓	CTS, 5951 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				
Sizes:	N/A				
Depths Set:	N/A				

RECEIVED
 Office of Oil and Gas
 JUN 21 2023
 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): 22.85 acres

22) Area to be disturbed for well pad only, less access road (acres): 9.70 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/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

RECEIVED
Office of Oil and Gas
JUN 21 2023

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.

WV Department of
Environmental Protection

*Note: Attach additional sheets as needed.

06/30/2023

UWI (API Num)	Well Name	Well Number	Operator	Historical Operator	TD	Perforated Interval (shallowest, deepest)	Perforated Formation(s)	Producible Formation(s) not perf'd
47095004880000	EARL GRIMES	1	BONNETTS PROD CO	DENHOLM CORP	3,234	2210 - 2652	Berea, Fifth	Weir, Benson, Alexander

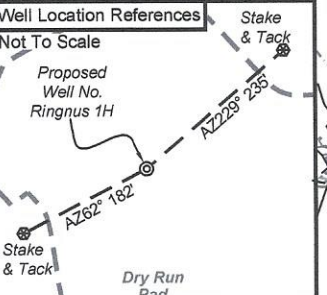
RECEIVED
Office of Oil and Gas

JUN 14 2023

WV Department of
Environmental Protection

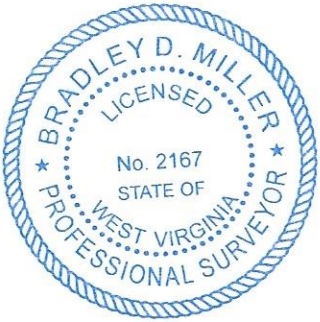
Antero Resources
Well No. Ringnus 1H
BHL MOD
 Antero Resources Corporation

PAGE 1 of 2

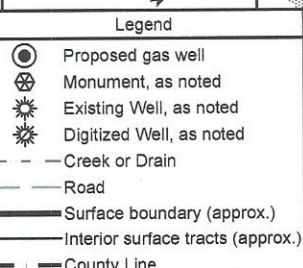
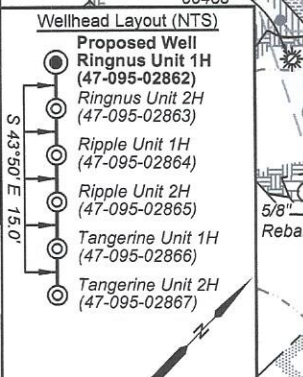
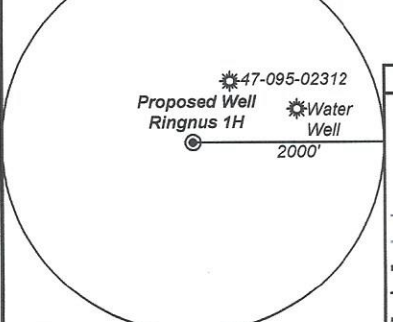


I, the undersigned, hereby certify that this plat is correct to the best of my knowledge and belief and shows all the information required by law and the rules issued and prescribed by the Department of Environmental Protection.

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



Note: 1 water well were found within 2000' of proposed well. No occupied dwellings or buildings 2,500 square feet or larger used to house or shelter dairy cattle or poultry husbandry are located within 625' of the center of the well pad.



10,419' to Top Hole

5,263' to Bottom 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. Ringnus Unit 1H Top Hole coordinates are
 N: 386,252.66' Latitude: 39°33'06.84"
 E: 1,601,880.05' Longitude: 80°54'43.01"
 Bottom Hole coordinates are
 N: 402,661.91' Latitude: 39°35'48.01"
 E: 1,595,544.85' Longitude: 80°56'07.23"
 UTM Zone 17, NAD 1983
 Top Hole Coordinates Bottom Hole Coordinates
 N: 4,378,036.638m N: 4,383,003.555m
 E: 507,579.787m E: 505,566.404m
 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. Ringnus Unit 1H UTM Zone 17, NAD 1927
 Top Hole Coordinates
 N: 14,362,894.34'
 E: 1,665,236.68'
 Point of Entry Coordinates
 N: 14,361,892.60'
 E: 1,664,586.64'
 Bottom Hole Coordinates
 N: 14,379,189.99'
 E: 1,658,630.66'

TOP HOLE LONGITUDE 80 - 52 - 30
 HOLE LONGITUDE 80 - 55 - 00
 10,319' to Bottom Hole

11,449' to Top Hole

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

FILE NO: 20-54-L-18
 DRAWING NO: Ringnus 1H Well Plat
 SCALE: 1" = 2000'
 MINIMUM DEGREE OF ACCURACY: Submeter
 PROVEN SOURCE OF ELEVATION: WVDOT, Harrisville, WV

DATE: June 7 2023
 OPERATOR'S WELL NO. Ringnus 1H
 API WELL NO
 47 - 95 - 02862
 STATE COUNTY PERMIT

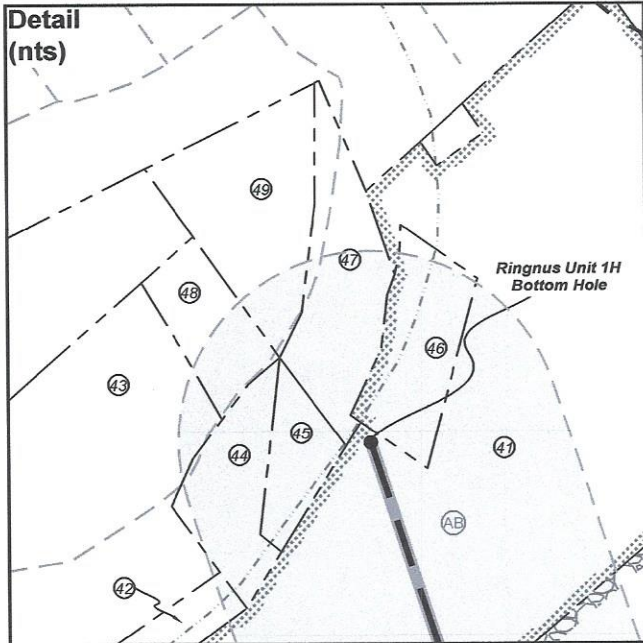
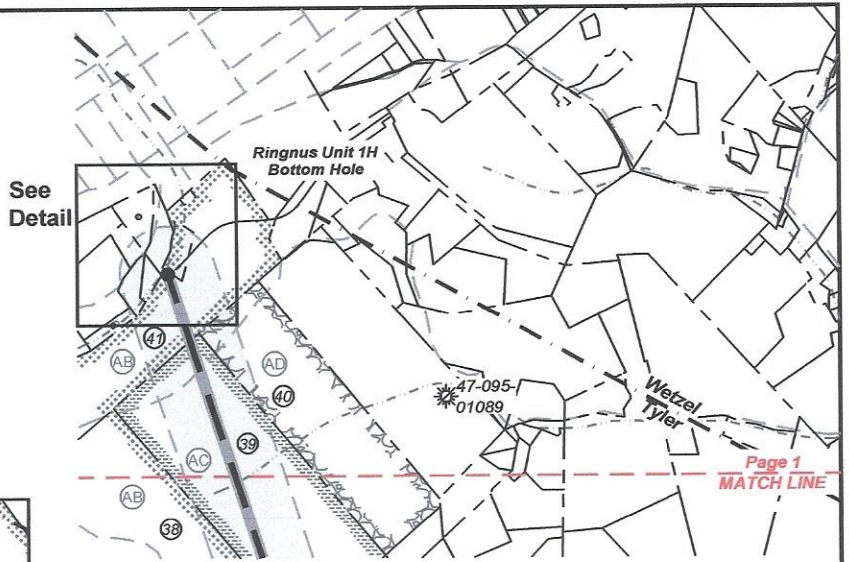
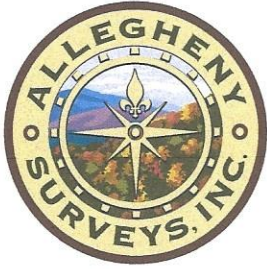
WELL TYPE: OIL GAS LIQUID INJECTION WASTE DISPOSAL
 (IF GAS) PRODUCTION: STORAGE DEEP SHALLOW

LOCATION: ELEVATION: As-Built 1,007' WATERSHED: Outlet Middle Island Creek QUADRANGLE: Paden City 3.5;
 DISTRICT: Lincoln COUNTY: Tyler 93.167; 74.47; 40; 59;
 SURFACE OWNER: David E. Bowyer ACREAGE: 65.703 29.99; 190; 190.043;
 ROYALTY OWNER: Timothy L. VanCamp; Tamara M. Reynolds; Martha Hayes, et vir, David Mooney Carmichael; LEASE NO: ACREAGE: 59.5; 9.40; 200; 95.4;
 PROPOSED WORK: DRILL CONVERT DRILL DEEPER FRACTURE OR STIMULATE PLUG OFF OLD FORMATION
 PERFORATE NEW FORMATION OTHER PHYSICAL CHANGE IN WELL (SPECIFY) BHL MOD 6,700' TVD
 PLUG AND ABANDON CLEAN OUT AND REPLUG TARGET FORMATION: Marcellus Shale ESTIMATED DEPTH: 27,300' 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

	Bearing	Dist.
L1	N 63°15' E	970.4'
L2	S 48°51' E	2,524.3'
L3	S 68°26' W	1,100.3'
L4	N 79°04' W	1,258.3'
L5	S 33°56' W	1,194.6'

06/30/2023



Leases	
A	Timothy L. Vancamp
B	Tamara M. Reynolds
C	Blanch B. Bailey, et ux
D	Martha Hayes, et vir
E	David Mooney Carmichael
F	Betty K. Lucas
G	BRC Appalachian Minerals I LLC
H	Earl Grimes, et ux
I	J. Maurice Carlisle
J	BRC Appalachian Minerals I, LLC
K	Janet L. Heintzman
L	BRC Appalachian Minerals I, LLC
M	Robert F. Scardina, et ux
N	Robert F. Scardina, et ux
O	Jane Ann Miller

Leases	
P	BRC Appalachian Minerals I, LLC
Q	Richard L. Clark
R	Drilling Appalachian Corporation
S	Ralph & Stella Judge
T	Richard Tuttle, et ex
U	Richard Tuttle, et ex
V	Waco Oil & Gas Co Inc.
W	Brandon P. & Katie E. Mason
X	Mary Loretta Smith
Y	Clifton C. Lough, et ux
Z	Lee & Hall Royalties
AA	BRC Appalachian Minerals I, LLC
AB	Henry P. Snyder, et al
AC	Gary Holmes, et ux
AD	Bounty Minerals, LLC

ID	TM-Par	Owner	Bk/Pg	Acres
1	9-19	David E. Bowyer	OR16/22	85.79
2	9-31.1	David E. Bowyer	OR16/22	38.04
3	9-31	David E. Bowyer	OR16/22	31.45
4	9-30	Ervin Leslie & Betty M Bassett	309/391	19.57
5	9-28	Constance Heintzman	WB43/505	104.50
6	9-27	Robert Livio Bolner	226/593	59.00
7	9-24	Ethan A. & Marsha L. Riffle	299/26	82.00
8	9-17	Ethan A. & Marsha L. Riffle	323/649	90.04
9	9-17.1	James E. VanCamp & Barbie J. Palmer	318/485	4.90
10	9-16	Donald Grimes	547/631	118.21
11	9-6.1	Larry G. & Joyce Ann Kaprich	326/874	40.51
12	9-4	Brandon Scott Grimes	637/841	20.00
13	9-5	Chad & Janet L. Heintzman	330/527	64.35
14	9-3	Donald Grimes	547/631	67.00
15	5-18	Melvin S. Stern, et al	222/185	43.50
16	5-12	Robert F. Scardina and Rita K. Scardina	320/646	25.00
17	5-13	Robert F. Scardina and Rita K. Scardina	320/646	46.00
18	5-16	Kenneth W. & Susan D. Paden	215/390	11.11
19	5-14	Kenneth W. & Susan D. Paden	215/390	55.22
20	5-9.4	Neil R. Stebbins	366/436	51.48
21	5-9	Sally Anderson	368/92	25.89
22	5-9.2	Bryan Scott & Eleanor A. Campbell	350/334	1.23
23	5-6	Stephen D. & Pamela Lynn Hayes	368/92	2.11
24	5-4	Ralph D. & Sophia Judge	306/681	60.77
25	5-9.1	Stephen D. Hayes	333/313	1.28

ID	TM-Par	Owner	Bk/Pg	Acres
26	5-9.3	Franklin G. & Nancy M. Broughman	351/143	8.92
27	5-5	Ralph David & Sophia Viola Judge	212/572	3.58
28	5-3	Warren P. Judge	345/89	4.10
29	5-8	Franklin & Nancy Broughman	338/292	33.17
30	5-2.1	John Goode	OR28/720	27.52
31	5-1	Richard Lee & Linda Tuttle	362/43	88.00
32	4-69	Richard Lee & Linda Tuttle	362/43	87.47
33	5-35	Ethel & Timothy Brown	AR45/28	8.50
34	5-36	Brandon P. Mason and Katie E. Mason	396/464	56.86
35	5-38	Clegg Family Irrevocable Trust	361/387	3.5
36	4-68	Clifton C. & Allyson B. Lough	354/569	9.00
37	5-37	Clegg Family Irrevocable Trust	369/576	19.80
38	1-7	Floyd O. & Alice M. Bungard	270/220	86.83
39	1-8	Gary & Marsha L. Holmes	372/325	95.40
40	2-1	Lloyd Wayne & Lottie Cross	188/383	50.00
41	15-12	Mike Ross Inc.	459/59	69.45
42	1-9	Anna & Ashley Efav	OR80/548	2.27
43	1-15	G.R. & Patti R. Casteel	412/395	11.44
44	1-11.1	Lloyd Lewis & Edward Robert	256/596	2.00
45	1-11	Lloyd Sr. & Mary M. Lewis	285/447	1.35
46	1-27	Lloyd Lewis	295/505	2.50
47	1-12	Mary Ellen Lewis	308/96	2.21
48	1-14	Glen R & Patti R Casteel Life Estate	412/398	2.16
49	1-13	Thomas & Jennifer Winegardner	OR144/329	3.74

FILE NO: 20-54-L-18
 DRAWING NO: Ringnus 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: June 7 2023
 OPERATOR'S WELL NO. Ringnus 1H
 API WELL NO
47 - 95 - 02862
 STATE COUNTY PERMIT

WELL TYPE: OIL GAS LIQUID INJECTION WASTE DISPOSAL
 (IF GAS) PRODUCTION: STORAGE DEEP SHALLOW
 LOCATION: ELEVATION: As-Built 1,007' WATERSHED: Outlet Middle Island Creek QUADRANGLE: Paden City
 DISTRICT: Lincoln
 SURFACE OWNER: David E. Bowyer
 ROYALTY OWNER: Timothy L. Vancamp; Tamara M. Reynolds; Martha Hayes, et vir; David Mooney Carmichael;
 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: 27,300' 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

RECEIVED
 Office of Oil and Gas
 JUN 14 2023
 COUNTY: Tyler
 ACRES: 06/38/2023
 DEPARTMENT OF ENVIRONMENTAL PROTECTION



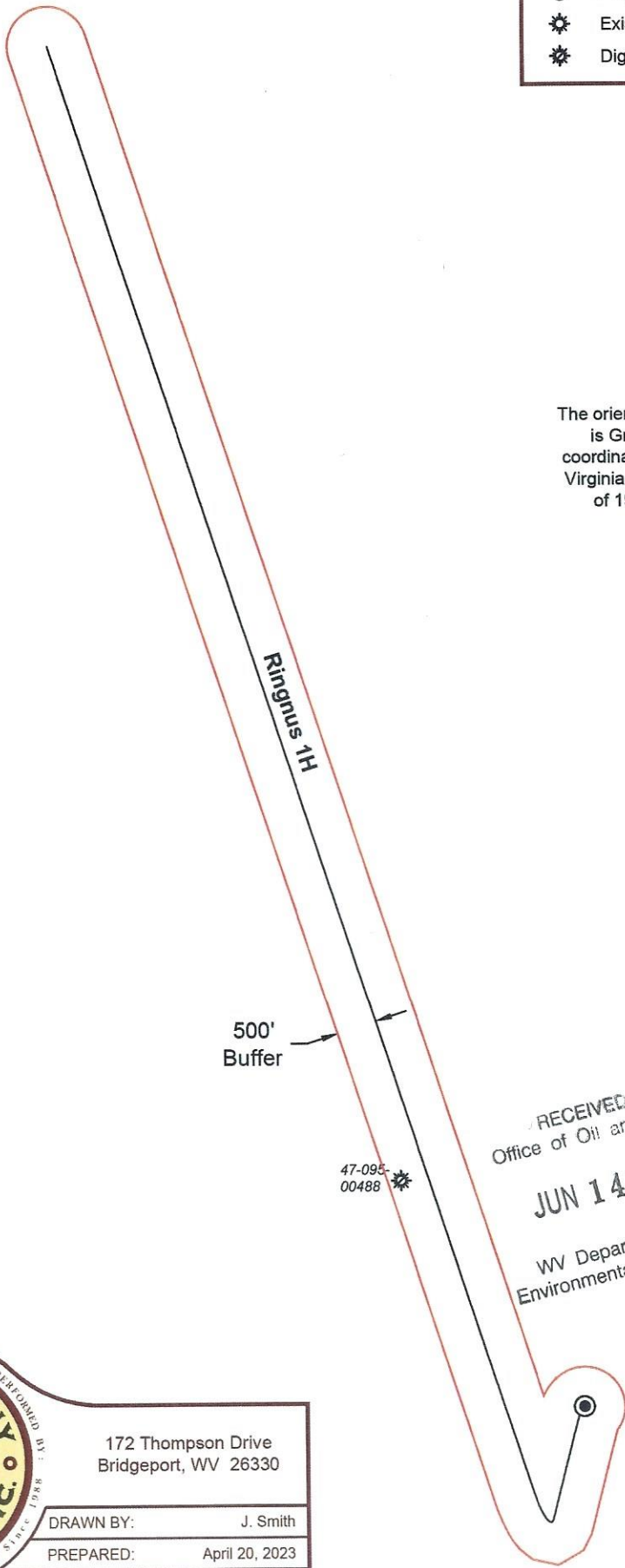
Scale: 1 inch = 2000 feet

LEGEND

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



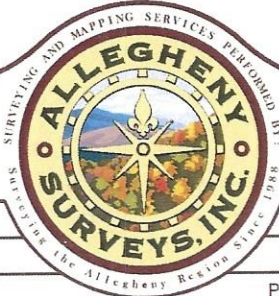
The orientation of this survey is Grid North, and its coordinate base is the West Virginia Coordinate System of 1927, North Zone



RECEIVED
Office of Oil and Gas

JUN 14 2023

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 20, 2023
SURVEYED: Dec. 2016	PROJECT NO: 20-54-L-18
FIELD CREW: C.L., K.M.	DRAWING NO: Ringnus 1H BHL MOD AOR

Sheet 1 of 1

06/30/2023

WW-6A1

Operator's Well Number

Ringnus Unit 1H MOD

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
A: Timothy L. VanCamp Lease			
Timothy L. VanCamp	Chesapeake Appalachia LLC	1/8	354/704
Chesapeake Appalachia LLC	Statoil USA Onshore Properties Inc.	Assignment	423/152
Statoil USA Onshore Properties Inc.	EQT Production Company	Assignment	539/239
EQT Production Company	Antero Resources Corporation	Assignment	134/172
B: Tamara M. Reynolds Lease			
Tamara M. Reynolds	Antero Resources Corporation	1/8+	616/634
D: Martha A. Hayes et vir Lease			
Martha A. Hayes et vir	Antero Resources Corporation	1/8	522/457
E: David Mooney Carmichael Lease			
David Mooney Carmichael	Triad Hunter LLC	1/8	668/587
Triad Hunter LLC	Antero Resources Corporation	Assignment	56/718
A: Timothy L. Vancamp Lease			
Timothy L. VanCamp	Chesapeake Appalachia LLC	1/8	354/704
Chesapeake Appalachia LLC	Statoil USA Onshore Properties Inc.	Assignment	423/152
Statoil USA Onshore Properties Inc.	EQT Production Company	Assignment	539/239
EQT Production Company	Antero Resources Corporation	Assignment	134/172
F: Betty K. Lucas Lease			
Betty K. Lucas	Antero Resources Corporation	1/8+	665/798
G: BRC Appalachian Minerals I LLC Lease			
BRC Appalachian Minerals I LLC	BRC Working Interest Company LLC	1/8	369/300
BRC Working Interest Company LLC	Chesapeake Appalachia, LLC	Assignment	369/784
Chesapeake Appalachia, LLC	Statoil USA Onshore Properties Inc	Assignment	378/764
Statoil USA Onshore Properties Inc	SWN Exchange Titleholder LLC	Assignment	470/668
SWN Exchange Titleholder LLC	SWN Production Company LLC	Merger	9/404
SWN Production Company LLC	Antero Exchange Properties	Assignment	544/242
Antero Exchange Properties	Antero Resources Corporation	Merger	525/315
H: Earl Grimes, et ux Lease			
Earl Grimes, et ux	John Richmond	1/8	210/296
John Richmond	Jack Holden	Assignment	212/315
Jack Holden	Nancy J. Holden	Assignment	390/758
Nancy J. Holden	Triad Hunter LLC	Assignment	402/569
Triad Hunter LLC	Antero Resources Corporation	Assignment	56/718
I: J. Maurice Carlisle Lease			
J. Maurice Carlisle	Antero Resources Corporation	1/8+	229/723

RECEIVED
Office of Oil and Gas
June 14 2023
1/8+ Department of
Environmental Protection

06/30/2023

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
J: BRC Appalachian Minerals I, LLC Lease			
BRC Appalachian Minerals I LLC	BRC Working Interest Company LLC	1/8	369/300
BRC Working Interest Company LLC	Chesapeake Appalachia, LLC	Assignment	369/784
Chesapeake Appalachia, LLC	Statoil USA Onshore Properties Inc	Assignment	378/764
Statoil USA Onshore Properties Inc	SWN Exchange Titleholder LLC	Assignment	470/668
SWN Exchange Titleholder LLC	SWN Production Company LLC	Merger	9/404
SWN Production Company LLC	Antero Exchange Properties	Assignment	544/242
Antero Exchange Properties	Antero Resources Corporation	Merger	525/315
K: Janet L. Heintzman Lease			
Janet L. Heintzman	Antero Resources Corporation	1/8+	235/414
L: BRC Appalachian Minerals I, LLC Lease			
BRC Appalachian Minerals I LLC	BRC Working Interest Company LLC	1/8	369/300
BRC Working Interest Company LLC	Chesapeake Appalachia, LLC	Assignment	369/784
Chesapeake Appalachia, LLC	Statoil USA Onshore Properties Inc	Assignment	378/764
Statoil USA Onshore Properties Inc	SWN Exchange Titleholder LLC	Assignment	470/668
SWN Exchange Titleholder LLC	SWN Production Company LLC	Merger	9/404
SWN Production Company LLC	Antero Exchange Properties	Assignment	544/242
Antero Exchange Properties	Antero Resources Corporation	Merger	525/315
M: Robert F. Scardina, et ux Lease			
Robert F. Scardina, et ux	Antero Resources Corporation	1/8+	235/654
O: Jane Ann Miller Lease			
Jane Ann Miller	Antero Resources Corporation	1/8+	11/400
P: BRC Appalachian Minerals I, LLC Lease			
BRC Appalachian Minerals I LLC	BRC Working Interest Company LLC	1/8	369/300
BRC Working Interest Company LLC	Chesapeake Appalachia, LLC	Assignment	369/784
Chesapeake Appalachia, LLC	Statoil USA Onshore Properties Inc	Assignment	378/764
Statoil USA Onshore Properties Inc	SWN Exchange Titleholder LLC	Assignment	470/668
SWN Exchange Titleholder LLC	SWN Production Company LLC	Merger	9/404
SWN Production Company LLC	Antero Exchange Properties	Assignment	544/242
Antero Exchange Properties	Antero Resources Corporation	Merger	525/315
S: Ralph & Stella Judge Lease			
Ralph & Stella Judge	John Richmond	1/8	216/170
John Richmond	Carter Jones Lumber Company	Assignment	217/248
Carter Jones Lumber Company	Applied Mechanics Corporation	Assignment	258/132
Applied Mechanics Corporation	Triad Hunter LLC	Assignment	385/566
Triad Hunter LLC	Antero Resources Corporation	Assignment	56/718
T: Richard Tuttle, et ex Lease			
Richard Tuttle, et ex	Antero Resources Corporation	1/8+	211/512
W: Brandon P. & Katie E. Mason Lease			
Brandon P. & Katie E. Mason	Antero Resources Corporation	1/8+	182/307

RECEIVED
Office of Oil and Gas

JUN 14 2023

WV Department of
Environmental Protection

06/30/2023

WW-6A1

Operator's Well Number Ringnus Unit 1H MOD

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>X: Mary Loretta Smith Lease</u> Mary Loretta Smith	Antero Resources Corporation	1/8+	256/630
<u>Y: Clifton C. Lough, et ux Lease</u> Clifton C. Lough, et ux	Antero Resources Corporation	1/8+	243/552
<u>AA: BRC Appalachian Minerals I, LLC Lease</u> BRC Appalachian Minerals I LLC BRC Working Interest Company LLC Chesapeake Appalachia, LLC Statoil USA Onshore Properties Inc SWN Exchange Titleholder LLC SWN Production Company LLC Antero Exchange Properties	BRC Working Interest Company LLC Chesapeake Appalachia, LLC Statoil USA Onshore Properties Inc SWN Exchange Titleholder LLC SWN Production Company LLC Antero Exchange Properties Antero Resources Corporation	1/8 Assignment Assignment Assignment Merger Assignment Merger	369/300 369/784 378/764 470/668 9/404 544/242 525/315
<u>AC: Gary Holmes, et ux Lease</u> Gary Holmes, et ux	Antero Resources Corporation	1/8+	211/503

*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.

RECEIVED
Office of Oil and Gas
JUN 14 2023
WV Department of
Environmental Protection

06/30/2023

WW-6A1
(5/13)

Operator's Well No. Ringnus Unit 1H MOD

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

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

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

Lease Name or Number	Grantor, Lessor, etc.	Grantee, Lessee, etc.	Royalty	Book/Page
/ AB Henry P. Snyder, et al	Henry P. Snyder, et al	Charles L. Stout	1/8	282/338
	Charles L. Stout	Applied Mechanics Corporation	Assignment	385/100
	Applied Mechanics Corporation	Triad Hunter LLC	Assignment	385/566
	Triad Hunter LLC	Antero Resources Corporation	Assignment	56/718

**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: Jared Hurst Department of Environmental Protection
Its: Vice President of Land

Page 4 of 4

06/30/2023



June 13th, 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 Dry Run Pad: Ringnus Unit 1H (47-095-02862) Expedited.

Attached you will find the following:

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



If you have any questions please feel free to contact me at (303) 357-7373.

Thank you in advance for your consideration.

Sincerely,

A handwritten signature in black ink that reads "Carly Marvel".

Carly Marvel
Permitting Agent
Antero Resources Corporation

CK# 4020654
\$ 7,500.00
6/13/23
Expedited

Enclosures

06/30/2023