



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, October 16, 2023
PERMIT MODIFICATION APPROVAL
Horizontal 6A / New Drill

ANTERO RESOURCES CORPORATION
1615 WYNKOOP STREET

DENVER, CO 80202

Re: Permit Modification Approval for Allender Unit 1H
47-085-10496-00-00

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: Allender Unit 1H
Farm Name: Pierce, Elmer W.
U.S. WELL NUMBER: 47-085-10496-00-00
Horizontal 6A New Drill
Date Modification Issued: 10/16/2023

Promoting a healthy environment.

10/20/2023

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

1) Well Operator: Antero Resources Corporation 494507062 085-Ritchie Union Oxford 7.5'
Operator ID County District Quadrangle

2) Operator's Well Number: Allender Unit 1H MOD Well Pad Name: Cashew Pad

3) Farm Name/Surface Owner: Elmer W. Pierce Public Road Access: Sugar Run Road

4) Elevation, current ground: _____ Elevation, proposed post-construction: 1019'

5) Well Type (a) Gas _____ Oil X 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: 6900' TVD, Anticipated Thickness- 55 feet, Associated Pressure- 2800#

8) Proposed Total Vertical Depth: 6900' TVD

9) Formation at Total Vertical Depth: Marcellus

10) Proposed Total Measured Depth: 24000' MD

11) Proposed Horizontal Leg Length: 13964.5'

12) Approximate Fresh Water Strata Depths: 53', 236'

13) Method to Determine Fresh Water Depths: 47-085-07654, 47-085-10419

14) Approximate Saltwater Depths: 1709', 1847'

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

RECEIVED
Office of Oil and Gas

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

OCT 11 2023
WV Department of
Environmental Protection

10/10/2023

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#	100	100 ✓	CTS, 96 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#	24000	24000 ✓	CTS, 6191 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"	0.438"	1530	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"	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			

RECEIVED
 Office of Oil and Gas
 OCT 16 2023
 WV Department of
 Environmental Protection

 10/13/23

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

Drill, perforate, fracture a new vertical shallow well and complete 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

21) Total Area to be disturbed, including roads, stockpile area, pits, etc., (acres): 33.75 acres

22) Area to be disturbed for well pad only, less access road (acres): 14.29 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.

RECEIVED
Office of Oil and Gas

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 H + 45 PPS Calcium Carbonate + 1.0% FL-160 + 0.2% ACGB-47 + 0.05% ACSA-51 + 0.2% ACR-20

OCT 11 2023
WV Department of Environmental Protection

25) Proposed borehole conditioning procedures:

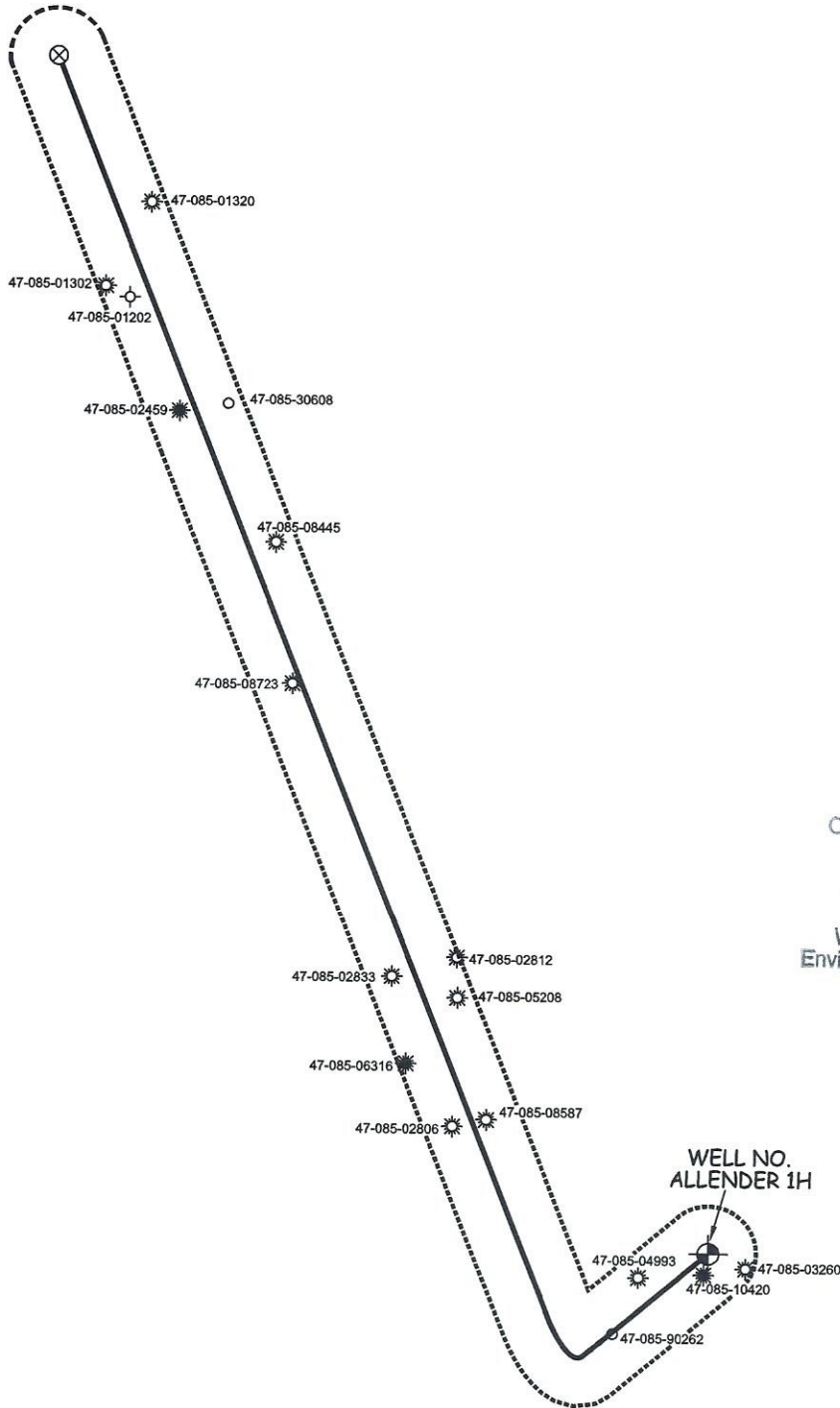
Conductor: blowhole clean with air, run casing, 10 bbls fresh water.
Surface: blowhole clean with air, trip to conductor shoe, trip to bottom, blowhole clean with air, trip out, run casing, circulate pipe capacity + 40 bbls fresh water followed by 25 bbls bentonite mud, 10 bbls fresh water spacer.
Intermediate: 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.

oa 10/10/23

10/20/2023

CASHEW PAD ANTERO RESOURCES CORPORATION



RECEIVED
Office of Oil and Gas
OCT 11 2023
WV Department of
Environmental Protection

WILLOW LAND SURVEYING, PLLC
P.O. BOX 17, PENNSBORO, WV 26415
(304) 659-1717

JOB #: 22-005WA

SCALE : 1-INCH = 2000-FEET



DATE: 09/07/23

DRAWN BY: T.B.S.

FILE: ALLENDER1HAOR.DWG

10/20/2023

UWI (API Num)	Well Name	Well Number	Operator	Historical Operator	TD	Perforated Interval (shallowest, deepest)	Perforated Formation(s)	Productible Formation(s) not perf'd
47085104200000	ELKICK UNIT	ZH	ANTERO RESOURCES CORP	ANTERO RESOURCES CORP	20,068			
47085049300000	SMITH	2	BETA HELIX ENERGY LLC	CHASE PETROLEUM CO	5,185	6974 - 21077#	Marcellus	Weir, Berea
47085082600000	R L WEBSTER	3	R & R OIL & GAS LLC	OIL STATES SALES	2,013	4554 - 4952	Baltown, Benson, Alexander Big Injun	Weir, Berea
47085902620000								
47085028060000	EARL PIERCE	1	R & R OIL & GAS LLC	OIL STATES SALES	2,144		Sourb	Weir, Berea, Benson, Alexander
47085068160000	ZINN FELIX HEIRS	1	RITCHE PETROLEUM CORP INC	SHALE SERVICE	5,290	3348 - 4420	Lower Huron, Angola	Weir, Berea, Benson, Alexander
47085028330000	FELIX ZINN HRS	3	RITCHE PETROLEUM CORP INC	STRICKLIN C A	2,137		Bk Injun	Weir, Berea, Benson, Alexander
47085087230000	NICHOLSON	1	KEY OIL CO	KEY OIL CO	5,142	3678 - 4963	Riley, Benson, Alexander Big Lime, Big Injun	Weir, Berea
47085024550000	C D ALLENDER	1	TERW ENERGY	STRICKLIN C A	2,095			Weir, Berea
47085012070000	PRUNTY LEE	1	MOSSOR OIL & GAS	MOSSOR OIL & GAS	2,032			Weir, Berea, Benson, Alexander
47085018020000	L PRUNTY	1	EMPIRE OIL & GAS CO	GRIBBLE W D	2,090			Weir, Berea
47085013200000	A D & C ZINN	1	GRIBBLE W D	GRIBBLE W D	2,104			Weir, Berea, Benson, Alexander
47085306060000	F O PRUNTY	1	GOODWIN EARL S	GOODWIN EARL S				
47085084450000	PRUNTY EMMA F ET AL	5	KEY OIL CO	KEY OIL CO	5,320	3308 - 5144	Warren, Speechley, Baltown, Riley, Benson, Alexander	Weir, Berea
47085028120000	E M MARTIN	1	RUDDER OIL & GAS	RUDDER OIL & GAS	2,241		Bk Injun	Weir, Berea, Benson, Alexander
47085052060000	REED HATTIE O ET AL	1	BETA HELIX ENERGY LLC	CHASE PETROLEUM CO	5,466	4340 - 5265	Riley, Benson, Alexander, Java	Weir, Berea
47085085870000	PIERCE	5	KEY OIL CO	KEY OIL CO	5,383	3408 - 5242	Warren, Speechley, Baltown, Riley, Benson, Alexander	Weir, Berea

RECEIVED
Office of Oil and Gas
OCT 11 2023
WV Department of
Environmental Protection

10/20/2023

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
<u>R. F. Kiester, et al Lease:</u>			
R. F. Kiester, et al	G. L. Yaste	1/8	105/504
G. L. Yaste	D. L. Y., Inc	Assignment	112/302
D. L. Y., Inc	Betty Jean Stalnaker & Rosalee Roberts	Assignment	132/565
Betty Jean Stalnaker & Rosalee Roberts	R & S Gas Company	Assignment	147/548
R & S Gas Company	BET-RO Inc	Assignment	147/554
BET-RO Inc	Roberts Energy Corporation	Assignment	240/36
Roberts Energy Corporation	Antero Resources Corporation	Assignment	329/138
<u>Della M. Shepler, et al Lease:</u>			
Della M. Shepler, et al	Alton Skinner	1/8	132/345
Alton Skinner	Crystal G. Skinner and Desari S. Garrett	Assignment	216/391
Crystal G. Skinner and Desari S. Garrett	D C Petroleum, Inc.	Assignment	247/245
D C Petroleum, Inc.	Antero Resources Appalachian Corporation	Assignment	254/789
Antero Resources Appalachian Corporation	Antero Resources Corporation	Name Change	15/705
<u>James Beck, et al Lease</u>			
James Beck, et al	George L. Yaste dba Oil State Sales Company	1/8	100/516
George L. Yaste dba Oil State Sales Company	D.L.Y. Inc.	Assignment	112/302
D.L.Y. Inc.	Betty Jean Stalnaker & Rosalee Roberts dba	Assignment	132/565
Betty Jean Stalnaker & Rosalee Roberts dba	R. & S. Gas Company		
R. & S. Gas Company	R. & S. Gas Company, a partnership	Assignment	147/548
R. & S. Gas Company, a partnership	BET-RO Inc	Assignment	147/554
BET-RO Inc	Roberts Energy Corporation	Assignment	240/36
Roberts Energy Corporation	Antero Resources Corporation	Assignment	329/138
<u>Earl Pierce, et ux Lease:</u>			
Earl Pierce, et ux	Harrold Haddox	1/8	100/205
Harrold Haddox	George L. Yaste dba Oil State Sales Company	Assignment	100/510
George L. Yaste dba Oil State Sales Company	D.L.Y. Inc.	Assignment	112/302
D.L.Y. Inc.	Betty Jean Stalnaker & Rosalee Roberts dba	Assignment	132/565
Betty Jean Stalnaker & Rosalee Roberts dba	R. & S. Gas Company		
R. & S. Gas Company	BET-RO Inc	Assignment	147/554
BET-RO Inc	Roberts Energy Corporation	Assignment	240/36
Roberts Energy Corporation	Antero Resources Corporation	Assignment	302/741
<u>AMP Fund, III, LP. Lease:</u>			
AMP Fund, III, LP	Antero Resources Corporation	1/8+	335/569
<u>Felix Zinn, et al Lease:</u>			
Felix Zinn, et al	C. A. Stricklin	1/8	97/353
C. A. Stricklin	Big A Oil Company	Assignment	152/591
Big A Oil Company	Lamar Oil & Gas Company	Assignment	196/320
Lamar Oil & Gas Company	Antero Resources Appalachian Corporation	Assignment	255/649
Antero Resources Appalachian Corporation	Antero Resources Corporation	Name Change	15/705

RECEIVED
Office of Oil and Gas

OCT 11 2023

WV Department of
Environmental Protection

10/20/2023

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
<u>Elizabeth Hart Lease:</u>			
Elizabeth Hart	John M. Walton	1/8	108/384
John M. Walton	Allstate Securities, INC	Assignment	118/377
Allstate Securities, INC	B & L Oil Company	Assignment	121/491
B & L Oil Company	Waco Oil and Gas Company Inc	Assignment	181/614
Waco Oil and Gas Company Inc	Ashland Inc	Assignment	221/1
Ashland Inc	Ashland Exploration INC	Assignment	222/169
Ashland Exploration INC	Blazer Energy Corporation	Assignment	225/170
Blazer Energy Corporation	Eastern State Oil & Gas Inc	Name Change	5/778
Eastern State Oil & Gas Inc	Equitable Production Company	Name Change	6/443
Equitable Production Company	EQT Production Company	Name Change	6/443
EQT Production Company	Antero Resources Appalachian Corporation	Assignment	264/477
Antero Resources Appalachian Corporation	Antero Resources Corporation	Name Change	15/705
<u>Charles E. Nicholson Lease:</u>			
Charles E. Nicholson	Key Oil Company	1/8	230/274
Key Oil Company	Antero Resources Appalachian Corporation	Assignment	258/509
Antero Resources Appalachian Corporation	Antero Resources Corporation	Name Change	15/705
<u>Wilson F. Allender, et al Lease:</u>			
Wilson F. Allender, et al	Alton Skinner	1/8	131/652
Alton Skinner	Crystal G. Skinner and Desari S. Garrett	Assignment	216/391
Crystal G. Skinner and Desari S. Garrett	D C Petroleum, Inc.	Assignment	247/245
D C Petroleum, Inc.	Antero Resources Appalachian Corporation	Assignment	254/789
Antero Resources Appalachian Corporation	Antero Resources Corporation	Name Change	15/705
<u>C.O. Wise, et al Lease:</u>			
C. O. Wise, et al	W. D. Gribble	1/8	79/209
W. D. Gribble	Carolyn E. Farr	Will	3/97
Carolyn E. Farr	Carolyn E. Farr trust by its trustee Clarence E Sigley	Deed	220/233
Carolyn E. Farr trust by its trustee Clarence E Sigley	Antero Resources Appalachian Corporation	Assignment	223/509
Antero Resources Appalachian Corporation	Antero Resources Corporation	Name Change	15/705
<u>Tracy C. Knight, et ux Lease:</u>			
Tracy C. Knight, et ux	Antero Resources Corporation	1/8+	332/648
<u>C.O. Wise, et al Lease:</u>			
C. O. Wise, et al	W. D. Gribble	1/8	79/209
W. D. Gribble	Carolyn E. Farr	Will	3/97
Carolyn E. Farr	Carolyn E. Farr trust by its trustee Clarence E Sigley	Deed	220/233
Carolyn E. Farr trust by its trustee Clarence E Sigley	Antero Resources Appalachian Corporation	Assignment	223/509
Antero Resources Appalachian Corporation	Antero Resources Corporation	Name Change	15/705

RECEIVED
Office of Oil and Gas

OCT 11 2023

WV Department of
Environmental Protection

10/20/2023

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
✓ Archie D. Zinn, et ux Lease:			
Archie D. Zinn, et ux	Alton Skinner	1/8	132/394
Alton Skinner	Crystal G. Skinner and Desari S. Garrett	Assignment	216/391
Crystal G. Skinner and Desari S. Garrett	DC Petroleum and Chase Petroleum	Assignment	247/245
DC Petroleum and Chase Petroleum	Antero Resources Corporation	Assignment	254/133
✓ Jack Cuthrie, et al Lease:			
Jack Guthrie, et al	Antero Resources Appalachian Corporation	1/8+	259/779
Antero Resources Appalachian Corporation	Antero Resources Corporation	Name Change	15/705

***Cotenancy Utilization** - Antero is utilizing the Co-tenancy Modernization and Majority Protection Act to proceed with development of certain royalty owners' interests in this tract.

***Pooling/Unitization** – Antero has filed a horizontal well unitization application with the West Virginia Oil and Gas Conservation Commission that seeks to pool certain owners in this tract

RECEIVED
 Office of Oil and Gas
 OCT 11 2023
 WV Department of
 Environmental Protection

*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.

10/20/2023

**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:

Lease Name or Number	Grantor, Lessor, etc.	Grantee, Lessee, etc.	Royalty	Book/Page
<u>Eloise Stanley Miracle, et al Lease</u>				
	Eloise Stanley Miracle, et al	Alton Skinner	1/8	132/717
	Alton Skinner	Alton L. Skinner, II, Crystal G. Skinner and Desari S. Garrett	Will	216/391
	Alton L. Skinner, II, Crystal G. Skinner and Desari S. Garrett	DC Petroleum	Assignment	170/583
	DC Petroleum	Antero Resources Appalachian Corporation	Assignment	254/133
	Antero Resources Appalachian Corporation	Antero Resources Corporation	Name Change	15/705

**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

RECEIVED
Office of Oil and Gas

OCT 11 2023

WV Department of
Environmental Protection

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

LATITUDE 39°12'30"

6,890'

LATITUDE 39°12'30" 2,179' TO BOTTOM HOLE

Antero Resources Corporation Well No. Allender 1H

Union District - Ritchie County	
9-9.1	Naomi Cunningham
9-14	John Louke
9-15	Marvin Osborne
9-15.1	Marvin Osborne
9-16	Marvin Osborne
9-18	Jack Guthrie Trust
9-19	Twila Evtits
9-20	Twila Evtits
9-20.1	Mark Morrison
9-20.2	Brian Bonner
9-21	Stephanie Knight
9-22	Stephanie Knight
9-23	Marvin Osborne
14-3.3	Mary Harms
14-4	Stephanie Knight
14-4.1	Stephanie Knight
14-11	Nathaniel Hendricks
14-11.6	Nathaniel Hendricks
14-11.7	Nathaniel Hendricks
14-11.8	Nathaniel Hendricks
14-17	Ralph Thacker
14-20	David Weekley
15-1	Timothy Alexander
15-1.1	Ralph Thacker
15-2	Ralph Thacker
15-3	Larry Gander
15-4	Stout Valley Trust
15-5	Larry Gander
15-6	Ralph Thacker
15-7	Stephanie Knight
15-8	Stephanie Knight
21-1	Ralph Thacker
21-2	Brian Fork Trust
21-3	Dallas Smith Et Al
21-4	Larry Gander
21-4.1	Joseph Bianchini
21-4.2	Marie Bianchini
21-4.3	Joseph Bianchini
21-5	James Beck Et Al
21-6	WF Smith
21-6.1	Lols Gander
21-7	Eimer Pierce
21-7.1	Larry Gander
21-7.2	Larry Gander
21-8.4	Brian Vansant
21-10	James Beck
21-10.1	Harvey Shepler
21-10.2	James Beck

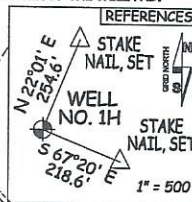
Southwest District - Doddridge County	
1-1	Jeffrey Polan
4-2	Cevasco Family Trust
4-10	James Webb
4-11	Juanita Leggett
4-14	Juanita Leggett
4-16	James Webb
4-18	James Webb
4-19.3	CNG Transmission Corp.
4-19.4	CNG Transmission Corp.
4-19.5	Dana Hurst
4-19.7	James Webb
4-19.8	James Webb
4-19.9	James Webb
4-21	Anthony Ayers
4-22	Reed Zinn
4-24	I L Morris
4-25	Tina Osborne
4-25.1	Stanley Chipps
4-28.3	Alfred Farley
4-31	Vicki Moore
4-31.2	Bradley Davis
4-34	Carl Ravin
8-1	Richard Brown
8-3	Randall Russell
8-4	John Gray Hrs
8-5	Larry Gander
12-1	David Ball

NOTES:
 1H BOTTOM HOLE
 WELL 1H TOP HOLE INFORMATION:
 N: 247,711ft E: 1,615,103ft
 LAT: 39°10'19.66" LON: 80°51'27.49"
 BOTTOM HOLE INFORMATION:
 N: 260,191ft E: 1,608,191ft
 LAT: 39°12'21.95" LON: 80°52'57.68"
 WEST VIRGINIA COORDINATE SYSTEM OF 1927 NORTH ZONE.
 ZONE WAS DERIVED FROM MEASUREMENTS TAKEN WITH TRIMBLE GEOXT SUBMETER MAPPING GRADE GPS UNIT. PLAT ORIENTATION, CORNER, AND WELL REFERENCE TIE LINES ARE BASED ON GRID NORTH.

(NAD) 83 (UTM) ZONE 17 COORDS:
 WELL 1H TOP HOLE INFORMATION:
 N: 4,335,897m E: 512,312m
 BOTTOM HOLE INFORMATION:
 N: 4,339,664m E: 510,144m

(NAD) 27 (UTM) ZONE 17 COORDS:
 WELL 1H TOP HOLE INFORMATION:
 N: 14,224,641ft E: 1,680,764ft
 POINT OF ENTRY INFORMATION:
 N: 14,223,944ft E: 1,679,099ft
 BOTTOM HOLE INFORMATION:
 N: 14,236,999ft E: 1,673,648ft

NOTE
 NO OCCUPIED DWELLINGS OR BUILDINGS TWO THOUSAND FIVE HUNDRED (2,500) SQUARE FEET OR LARGER USED TO HOUSE OR SHELTER DAIRY CATTLE OR POULTRY HUSBANDRY ARE LOCATED WITHIN SIX HUNDRED TWENTY-FIVE (625) FEET OF THE CENTER OF THE WELL PAD.

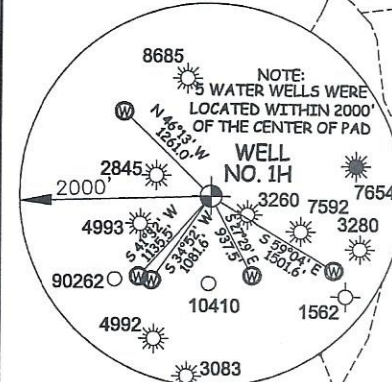


WV NORTH ZONE GRID NORTH

815' TO BOTTOM HOLE LONGITUDE 80°52'30"

13,188'

LONGITUDE 80°50'00"



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 PERSCRIBED BY THE DEPARTMENT OF ENVIRONMENTAL PROTECTION.



STATE OF WEST VIRGINIA, DIVISION OF ENVIRONMENTAL PROTECTION, OFFICE OF OIL AND GAS

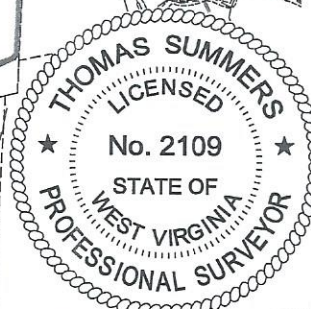
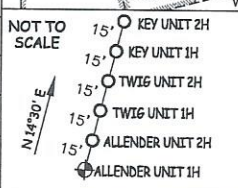
WILLOW LAND SURVEYING PLLC
 220 MASONIC AVE. PENNSBORO WEST VIRGINIA 26415

JOB # 12-121WA
 DRAWING # ALLENDER1HS
 SCALE 1" = 2000'
 MINIMUM DEGREE OF ACCURACY SUBMETER
 PROVEN SOURCE OF ELEV. SUBMETER MAPPING GRADE GPS

LEGEND
 - - - Surface Owner Boundary Lines +/-
 - - - Adjoining Surface Tracts +/-
 ⊕ Found monument, as noted
 THOMAS SUMMERS P.S. 2109

STATE OF WEST VIRGINIA DEPARTMENT OF ENERGY DIVISION OF OIL AND GAS

DATE 09/07/23
 OPERATOR'S WELL # ALLENDER 1H



WELL TYPE: OIL ___ GAS X LIQUID INJECTION ___ WASTE DISPOSAL ___ 47 - 085 - 10496
 (IF "GAS") PRODUCTION X STORAGE ___ DEEP ___ SHALLOW X STATE COUNTY PERMIT
 LOCATION: ELEVATION 1,019' -AS-BUILT WATERSHED SOUTH FORK HUGHES RIVER
 QUADRANGLE OXFORD 7.5' DISTRICT UNION COUNTY RITCHIE
 SURFACE OWNER ELMER W. PIERCE ACREAGE 67.78 ACRES +/- 10/20/2023
 OIL & GAS ROYALTY OWNER R. F. KIESTER ET AL LEASE ACREAGE 70 AC +/-

PROPOSED WORK: DRILL ___ CONVERT ___ DRILL DEEPER X REDRILL ___ FRACTURE OR STIMULATE X
 PLUG OFF OLD FORMATION ___ PERFORATE NEW FORMATION X OTHER PHYSICAL CHANGE IN WELL
 (SPECIFY) MOD-BHL PLUG & ABANDON CLEAN OUT & REPLUG
 TARGET FORMATION MARCELLUS ESTIMATED DEPTH 6,900' TVD 24,000' MD
 WELL OPERATOR ANTERO RESOURCES CORP. DESIGNATED AGENT KEVIN ELLIS
 ADDRESS 1615 WYNKOOP ST. ADDRESS 535 WHITE OAK BLVD.
 DENVER, CO 80202 BRIDGEPORT, WV 26330

COUNTY NAME PERMIT



October 9th, 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 modification for approved wells on the Cashew Pad. We are requesting to extend the horizontal lateral length which will change the bottom hole location of the Allender Unit 1H & Allender Unit 2H.

Attached you will find the following documents:

- REVISED Form WW-6B, which shows the revised MD and Production Casing/Cement program
- REVISED Form WW-6A1, which shows the leases we will be drilling into
- REVISED Mylar Plat, which shows the new bottom hole location

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". The signature is written in a cursive, flowing style.

Carly Marvel
Permitting Agent
Antero Resources Corporation

Enclosures

RECEIVED
Office Of Oil and Gas

OCT 10 2023

WV Department of
Environmental Protection

CK# 402468
Amt \$ 7500
Date 10/15/23

10/20/2023