

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

Tuesday, October 21, 2025 PERMIT MODIFICATION APPROVAL Horizontal 6A / New Drill

ANTERO RESOURCES CORPORATION 1615 WYNKOOP STREET

DENVER, CO 80202

Re:

Permit Modification Approval for Sapinero Unit 4H

47-095-02945-00-00

Extended lateral

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.

H. Jason Harmon Acting Chief

Operator's Well Number: Sapinero Unit 4H

Farm Name: EQT Production Co.

U.S. WELL NUMBER: 47-095-02945-00-00

Horizontal 6A New Drill

Date Modification Issued: 10/21/2025

Promoting a healthy environment.

API NO. 47- 095 - 0	02945	
OPERATOR WELL	NO. Sapinero Ur	nit 4H MOD
Well Pad Name:	Delta Pad	

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

1) Well Operato	or: Antero	Resources	Corporat	494507062	095 - Tyler	Ellsworth	Porter Falls 7.5'
, <u>-</u>			<u></u>	Operator ID	County	District	Quadrangle
2) Operator's W	Vell Number	r: Sapinero	Unit 4H M	Mell Pad	Name: Delta	Pad	
3) Farm Name/	Surface Ow	ner: EQT Pro	oduction Cor	npany Public Road	d Access: CR	44	
4) Elevation, cu	irrent groun	d: 1100'	Ele	evation, proposed j	ost-construction	on: 1078'	
5) Well Type	(a) Gas Other	X	_ Oil	Unde	rground Storag		
	(b)If Gas	Shallow Horizontal	X	Deep			
6) Existing Pad	: Yes or No	Yes					
, 1	· ·			ipated Thickness ar ss- 55 feet, Associa		` /	
8) Proposed To	tal Vertical	Depth: 730	00' TVD				
9) Formation at			Marcellus				
10) Proposed T	otal Measur	red Depth:	16600' M	D			
11) Proposed H	orizontal Le	eg Length:	7006' *(Open to modificat	ion at a later d	ate	
12) Approximat	te Fresh Wa	iter Strata De	epths:	672'			
13) Method to I 14) Approxima				7095020320000 Offset well	records. Depths have	been adjusted a	ccording to surface elevations.
15) Approximat	te Coal Sear	m Depths: 7	' 87'				
16) Approxima	te Depth to	Possible Voi	d (coal mi	ne, karst, other): 1	None Anticipat	ed	
17) Does Propo directly overlying				rns Yes	No	X	
(a) If Yes, pro	vide Mine I	Info: Name	»: 				
		Depth	ı:				
		Seam	:				
		Owne	er:				

PI NO. 47- 095 - 02

OPERATOR WELL NO. Sapinero Unit 4H MOD

Well Pad Name: Delta Pad

18) <u>CASING AND TUBING PROGRAM</u>

ТҮРЕ	Size (in)	New or Used	<u>Grade</u>	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	94#	100'	100'	CTS, 96 Cu. Ft.
Fresh Water	13-3/8"	New	J-55	54.5#	722'	722'	CTS, 752 Cu. Ft.
Coal	9-5/8"	New	J-55	36#	3000'	3000'	CTS, 1221 Cu. Ft.
Intermediate							
Production	5-1/2"	New	P110-ICY	23#	16600'	16600'	CTS, 3255 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		

OPERATOR WELL NO. Sapinero Unit 4H MOD

Well Pad Name: Delta Pad

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): 46.20 acres

22) Area to be disturbed for well pad only, less access road (acres): 13.43 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

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.

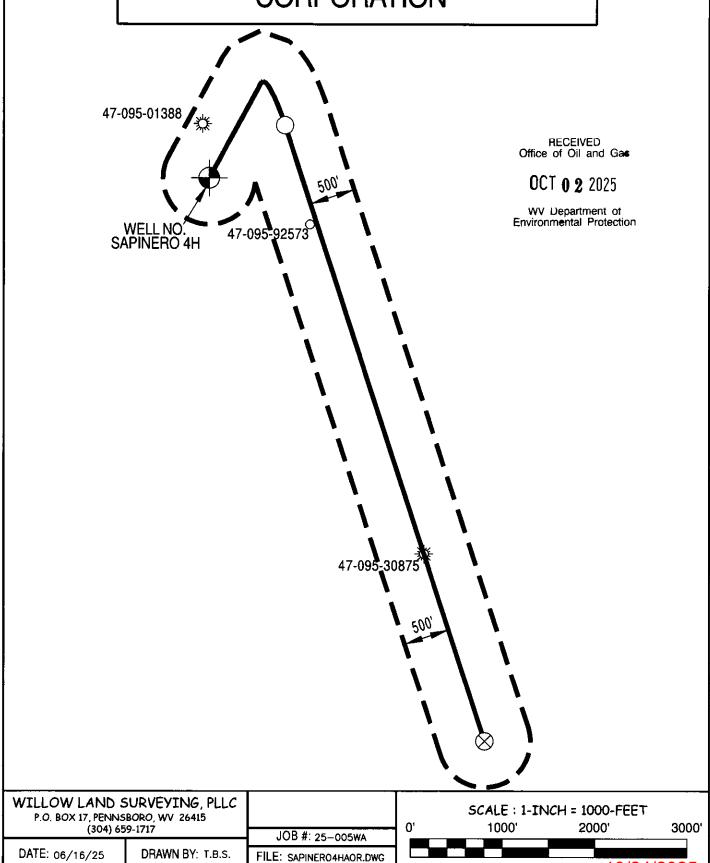
Stephen

Mccoy

Digitally signed by Stephen
Mccoy

Date: 2025.10.02 22:34:55

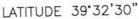




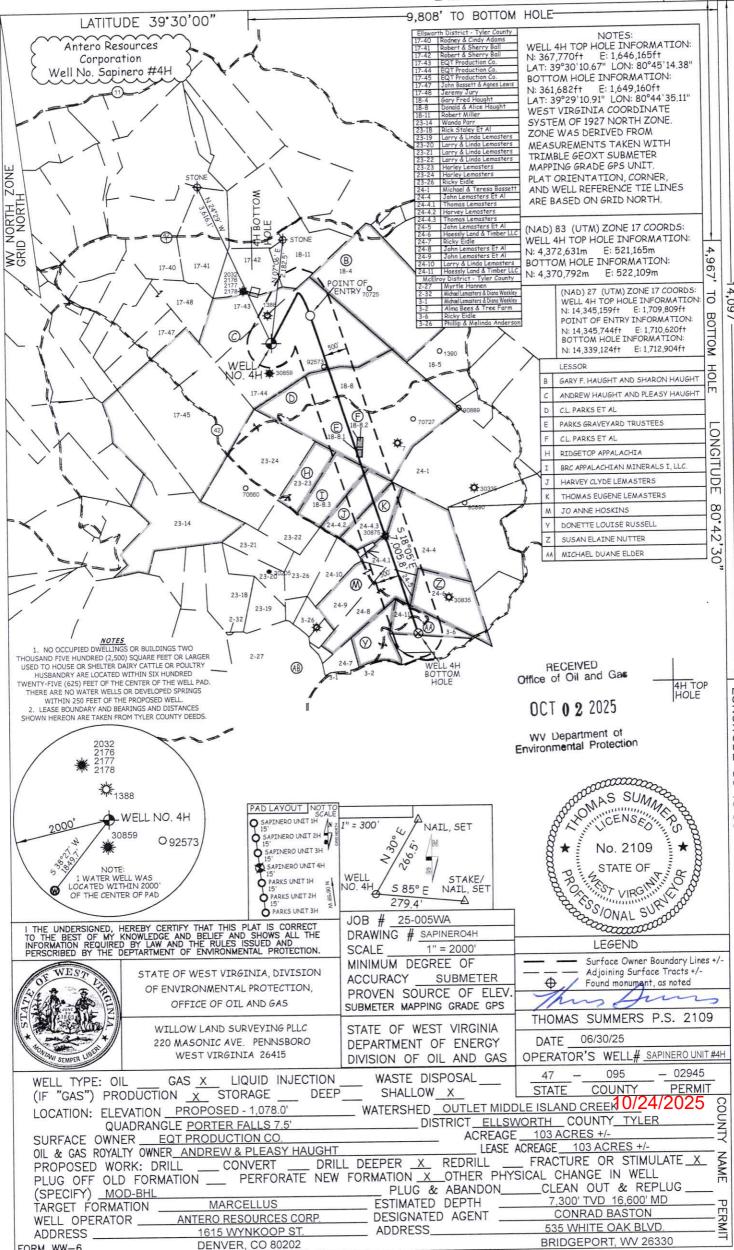
UWI (APINum)	Well Name	Well Number	Operator	Historical Operator	TD	Perforated Interval (shallowest, deepest)	Perforated Formation(s)	Producible Formation(s) not perf'd
47095013880000	HAUGHT ANDREW & PLEASY	1326	PERKINS OIL & GAS	MANUFACT LIGHT &HEAT	2,747		Gordon	Weir, Benson, Alexander
47095925730000					1	PRINTED TO THE PRINTE		Weir, Benson, Alexander
77-7-7-7-7-7-7-7-7-7-7-7-7-7-7-7-7-7-7-7	ELIJAH LEMASTERS	1636	MANUFACT LIGHT &HEAT	MANUFACT LIGHT &HEAT	2,704	2689 - 2699	Gordon	Weir, Benson, Alexander

WV Department of Environmental Protection

Office of Oil and Gas



1,128 NOTES:
WELL 4H TOP HOLE INFORMATION:
N: 367,770ft E: 1,646,165ft
LAT: 39°30'10.67" LON: 80°45'14.38"
BOTTOM HOLE INFORMATION:
N: 361,682ft E: 1,649,160ft
LAT: 39°29'10.91" LON: 80°44'35.11"
WEST VIRGINIA COORDINATE
EVELTEM OF 1927 NORTH ZONE NOTES: 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 4H TOP HOLE INFORMATION: E: 521,165m N: 4 372 631m BOTTOM HOLE INFORMATION E: 522,109m N: 4.370.792m (NAD) 27 (UTM) ZONE 17 COORDS: WELL 4H TOP HOLE INFORMATION: N: 14,345,159ft E: 1,709,809ft 7 ,097 POINT OF ENTRY INFORMATION: N: 14,345,744ft E: 1,710,620ft BOTTOM HOLE INFORMATION: MOL N: 14,339,124ft E: 1,712,904ft LESSOR GARY F. HAUGHT AND SHARON HAUGHT ANDREW HAUGHT AND PLEASY HAUGHT C C.L. PARKS ET AL D PARKS GRAVEYARD TRUSTEES ONG C.L. PARKS ET AL RIDGETOP APPALACHIA I BRC APPALACHIAN MINERALS I, LLC HARVEY CLYDE LEMASTERS DE J THOMAS EUGENE LEMASTERS 80. JO ANNE HOSKINS M DONETTE LOUISE RUSSELL 42 SUSAN ELAINE NUTTER Z AA MICHAEL DUANE ELDER RECEIVED Office of Oil and Gas 4H TOP HOLE LONGITUDE OCT 0 2 2025 WV Department of Environmental Protection No. 21 STATE OF VIRGINITION OF STATE OF VIRGINITION OF STATE OF VIRGINITION OF STATE OF VIRGINITION OF STATE Surface Owner Boundary Lines +/-Adjoining Surface Tracts +/-Φ Found monument, as noted An THOMAS SUMMERS P.S. 2109 06/30/25 OPERATOR'S WELL# SAPINERO UNIT #4H 095 02945 47 COUNTY PERMIT STATE COL



FORM WW-6

Operator's Well Number

Sapinero Unit 4H MOD

OCT 0 2 2025

Environmental Protection

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
S. A. J			
C: Andrew Haught and Pleasy Haught Lease	Andrew Haught & Pleasy Haught	1/8	0039/0292
Andrew Haught & Pleasy Haught	E.H. Jennings & Bros.	Assignment	0043/0110
E.H. Jennings & Bros.	Tri-State Gas Company	Assignment	0080/0048
Tri-State Gas Company	The Manufacturers Light & Heat Company	Assignment	0167/0423
The Manufacturers Light & Heat Company		Assignment	0201/0316
Hundred Gas Company	Hundred Gas Company Carl D. Perkins	Assignment	0225/0574
Carl D. Perkins		Assignment	0390/0066
Perkins Oil & Gas	Perkins Oil & Gas	Assignment	0556/0132
Stone Energy Corporation	Stone Energy Corporation	Assignment	0322/0216
EQT Production Company	Antero Resources Corporation	Assignment	0322,0220
D: C.L. Parks et al Lease	CDV 545 Alb to MONINGEROUS What	- 10	0000/0311
C.L. Parks et al	The Manufacturers Light & Heat Company	1/8	0098/0311
The Manufacturers Light & Heat Company	Union Gasoline & Oil Company	Assignment	0103/0313
Union Gasoline & Oil Company	The Preston Oil Company	Assignment	0130/0139
The Preston Oil Company	The Manufacturers Light & Heat Company	Assignment	0133/0471
The Manufacturers Light & Heat Company	Clarence Haught, et ux	Assignment	0158/0584
Clarence Haught, et ux	Hazel G. Haught	Assignment	032A/0146
Hazel G. Haught	Lee I. Haught, et al Office of Oil and Gas	Assignment	0057/0078
Lee I. Haught, et al	J. A. & M. Oil & Gas Company	Assignment	066A/0628
J. A. & M. Oil & Gas Company	Harvey J. Haught Heirs	Assignment	0289/0065
Harvey J. Haught Heirs	Perkins Oil & Gas, Inc. OCT 0 2 2025	Assignment	0326/0820
Perkins Oil & Gas, Inc.	Stone Energy Corporation	Assignment	0390/0066
Stone Energy Corporation	EQT Production Company WV Department of	Assignment	0556/0132
EQT Production Company	Antero Resources Corporation Environmental Protection	Assignment	0662/0686
E: Parks Graveyard Trustees Lease			
Parks Graveyard Trustees	Antero Resources Corporation	1/8	Pooled Tract
D: C.L. Parks et al Lease		. 10	0000/0211
C.L. Parks et al	The Manufacturers Light & Heat Company	1/8	0098/0311
The Manufacturers Light & Heat Company	Union Gasoline & Oil Company	Assignment	0103/0313
Union Gasoline & Oil Company	The Preston Oil Company	Assignment	0130/0139
The Preston Oil Company	The Manufacturers Light & Heat Company	Assignment	0133/0471
The Manufacturers Light & Heat Company	Clarence Haught, et ux	Assignment	0158/0584
Clarence Haught, et ux	Hazel G. Haught	Assignment	032A/0146
Hazel G. Haught	Lee I. Haught, et al	Assignment	0057/0078
Lee I. Haught, et al	J. A. & M. Oil & Gas Company	Assignment	066A/0628
J. A. & M. Oil & Gas Company	Harvey J. Haught Heirs	Assignment	0289/0065
Harvey J. Haught Heirs	Perkins Oil & Gas, Inc.	Assignment	0326/0820
Perkins Oil & Gas, Inc.	Stone Energy Corporation	Assignment	0390/0066
Stone Energy Corporation	EQT Production Company	Assignment	0556/0132
EQT Production Company	Antero Resources Corporation	Assignment	0662/0686
I: BRC Appalachian Minerals I, LLC Lease			
BRC Appalachian Minerals I, LLC	BRC Working Interest Company, LLC	1/8	0369/0300
BRC Working Interest Company, LLC	Chesapeake Appalachia, LLC	Assignment	0369/0784
Chesapeake Appalachia, LLC	Statoil USA Onshore Properties Inc.	Assignment	0423/0165
Statoil USA Onshore Properties Inc.	EQT Production Company	Assignment	0539/0239
EQT Production Company	Antero Resources Corporation	Assignment	10/24/20 PSE2/0727
Ed outstan sampanj	45 00 14 00 00 00 00 00 00 00 00 00 00 00 00 00	550	10/24/2025

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: Harvey Clyde Lemasters Lease Harvey Clyde Lemasters	Antero Resources Corporation	1/8+	0334/0341
K: Thomas Eugene Lemasters Lease Thomas Eugene Lemasters	Antero Resources Corporation	1/8+	0331/0783
M: Jo Anne Haskins Lease Jo Anne Haskins	Antero Resources Corporation	1/8+	0252/0669

RECEIVED
Office of Oil and Gas

OCT 0 2 2025

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.

^{*}Co-tenancy 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.

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
AA: Michael Duane Elder Lease				
	Michael Duane Elder	Antero Resources Corporation	1/8+	0346/0198
				RECEIVED Office of Oil and Ga

OCT 0 2 2025

WV Department of Environmental Protection

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

*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.

- 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:	Senior Vice President of Land	

Page 1 of 1