



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, December 18, 2025
PERMIT MODIFICATION APPROVAL
Horizontal 6A / New Drill

ANTERO RESOURCES CORPORATION
1615 WYNKOOP STREET

DENVER, CO 80202

Re: Permit Modification Approval for LODGE UNIT 1H
47-103-03790-00-00

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.

A handwritten signature in black ink, reading 'H. Jason Harmon'.

H. Jason Harmon
Acting Chief

Operator's Well Number: LODGE UNIT 1H
Farm Name: WILLIAM WADE FLETCHER
U.S. WELL NUMBER: 47-103-03790-00-00
Horizontal 6A New Drill
Date Modification Issued: 12-18-2025

Promoting a healthy environment.

12/19/2025

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

- 1) Well Operator: Antero Resources Corporation 494507062 103 - Wetzel Green Pine Grove 7.5'
Operator ID County District Quadrangle
- 2) Operator's Well Number: Lodge Unit 1H MOD Well Pad Name: Harbour Pad
- 3) Farm Name/Surface Owner: William Wade Fletcher Public Road Access: Ashland Ridge Road
- 4) Elevation, current ground: 1420' Elevation, proposed post-construction: 1410'
- 5) Well Type (a) Gas X Oil _____ Underground Storage _____
Other _____
(b) If Gas Shallow X Deep _____
Horizontal X
- 6) Existing Pad: Yes or No Yes
- 7) Proposed Target Formation(s), Depth(s), Anticipated Thickness and Expected Pressure(s):
Marcellus Shale: 7800' TVD, Anticipated Thickness- 55 feet, Associated Pressure- 2800#
- 8) Proposed Total Vertical Depth: 7800' TVD
- 9) Formation at Total Vertical Depth: Marcellus
- 10) Proposed Total Measured Depth: 20,600' MD
- 11) Proposed Horizontal Leg Length: 11,063'
- 12) Approximate Fresh Water Strata Depths: 368'
- 13) Method to Determine Fresh Water Depths: From 47103027260000
- 14) Approximate Saltwater Depths: 1638'
- 15) Approximate Coal Seam Depths: N/A
- 16) Approximate Depth to Possible Void (coal mine, karst, other): N/A
- 17) Does Proposed well location contain coal seams directly overlying or adjacent to an active mine? Yes _____ No X
- (a) If Yes, provide Mine Info: Name: _____
Depth: _____
Seam: _____
Owner: _____

18)

CASING AND TUBING PROGRAM

TYPE	<u>Size (in)</u>	<u>New or Used</u>	<u>Grade</u>	<u>Weight per ft. (lb/ft)</u>	<u>FOOTAGE: For Drilling (ft)</u>	<u>INTERVALS: Left in Well (ft)</u>	<u>CEMENT: Fill-up (Cu. Ft.)/CTS</u>
Conductor	20"	New	H-40	94#	100'	100'	CTS, 96 Cu. Ft.
Fresh Water	13-3/8"	New	J-55	54.5#	418'	418'	CTS, 436 Cu. Ft.
Coal	9-5/8"	New	J-55	36#	3200'	3200'	CTS, 1303 Cu. Ft.
Intermediate							
Production	5-1/2"	New	P-110	23#	20,600'	20,600'	4263 Cu. Ft
Tubing	2-3/8"	New	N-80	4.7#			
Liners							

TYPE	<u>Size (in)</u>	<u>Wellbore Diameter (in)</u>	<u>Wall Thickness (in)</u>	<u>Burst Pressure (psi)</u>	<u>Anticipated Max. Internal Pressure (psi)</u>	<u>Cement Type</u>	<u>Cement Yield (cu. ft./k)</u>
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			

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): 28.34 acres

22) Area to be disturbed for well pad only, less access road (acres): 13.21 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:

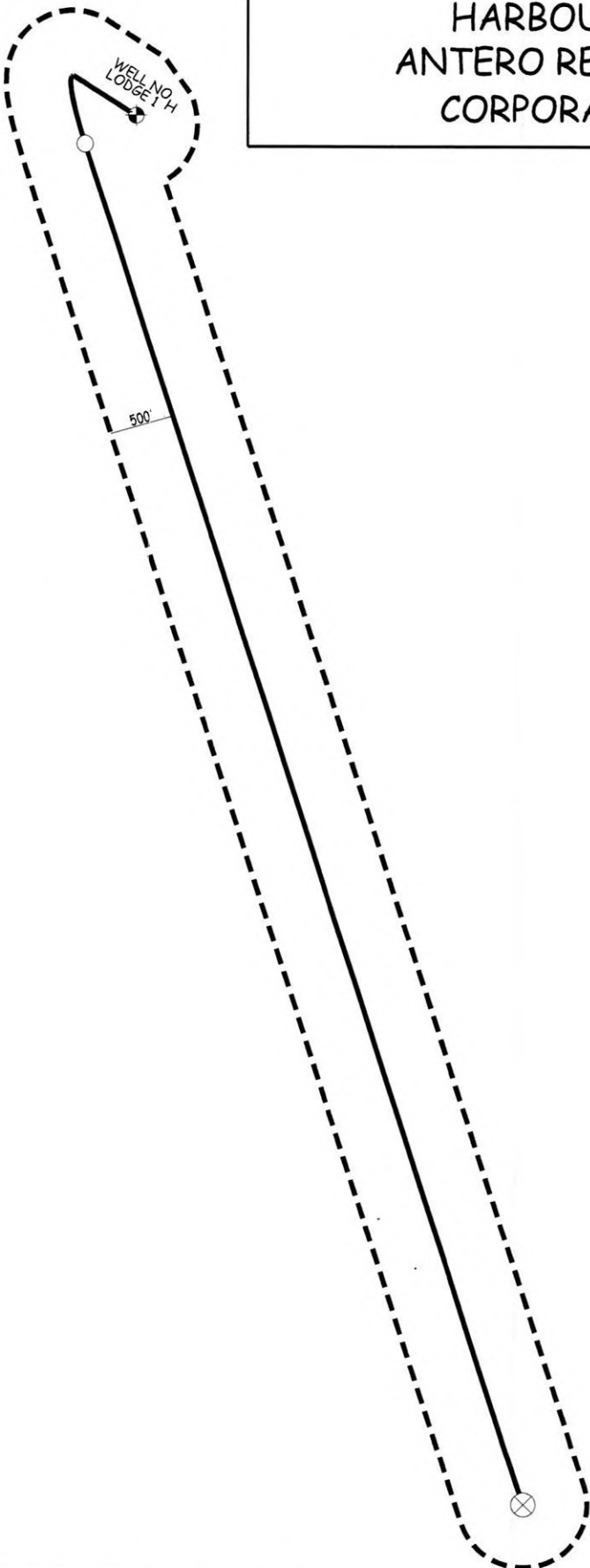
Conductor: no additives, Class A/L cement.
Surface: Class A/L cement with 2-3% calcium chloride and 1/4 lb of flake
Intermediate: Class A/L cement with 1/4 lb of flake, 5 gallons of clay treat
Production: Lead cement- 50/50 Class H/Poz + 1.5% salt + 1% C-45 + 0.5% C-16a + 0.2% C-12 + 0.45% C-20 + 0.05% C-51
Production: Tail cement- Class 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.

HARBOUR PAD
ANTERO RESOURCES
CORPORATION



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

JOB #: 25-018WA

FILE: LODGE1HAOR.DWG

DATE: 12/4/25

DRAWN BY: D.L.P.

SCALE : 1-INCH = 1000-FEET

0' 1000' 2000' 3000'



12/19/2025

LATITUDE 39°37'30"

9,361'

LATITUDE 39°35'00"

6,178' TO BOTTOM HOLE

Antero Resources
Corporation
Well No. Lodge #1H

A	WILLIAM W. FLETCHER, SR.
B	WILLIAM W. FLETCHER, SR.
C1	STONE HILL MINERALS HOLDINGS, LLC.
C2	STONE HILL MINERALS HOLDINGS, LLC.
D	DEAN H. BUCHER
F1	STONE HILL MINERALS HOLDINGS, LLC.
F2	STONE HILL MINERALS HOLDINGS, LLC.
G	BOUNTY MINERALS LLC.
H	WILMA MARIE MORRIS
I	WILMA M. MORRIS
L	BRC APPALACHIAN MINERALS I, LLC.
N	JUNIOR L. ROBINSON
O	WILDA N. AND ROBERT L. YEAGER
P1	BRC APPALACHIAN MINERALS I, LLC.
P2	BRC APPALACHIAN MINERALS I, LLC.
R	RONALD I. HALL AND R. KEVIN HALL, AS JTWROS
S	BOUNTY MINERALS, LLC.
T	BRC APPALACHIAN MINERALS I, LLC.
U1	ANTERO MINERALS, LLC.
U2	ANTERO MINERALS, LLC.
V	BLACK GOLD GROUP, LTD.
W	STONE HILL MINERALS HOLDINGS, LLC.
X	STONE HILL MINERALS HOLDINGS, LLC.
Y	JUNIOR L. ROBINSON

NOTES:

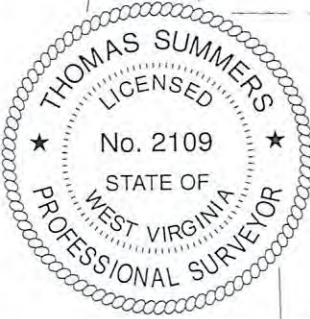
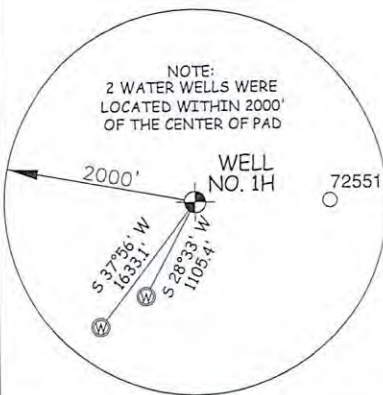
WELL 1H TOP HOLE INFORMATION:
N: 406,233ft E: 1,661,947ft
LAT: 39°36'32.93" LON: 80°41'59.61"
BOTTOM HOLE INFORMATION:
N: 395,560ft E: 1,664,992ft
LAT: 39°34'47.85" LON: 80°41'18.90"
WEST VIRGINIA COORDINATE
SYSTEM OF 1927 NORTH ZONE.
ZONE WAS DERIVED FROM
MEASUREMENTS TAKEN WITH
TRIMBLE GEOXT SUBMETER
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: 4,384,430m E: 525,778m
BOTTOM HOLE INFORMATION:
N: 4,381,194m E: 526,760m

(NAD) 27 (UTM) ZONE 17 COORDS:
WELL 1H TOP HOLE INFORMATION:
N: 14,383,867ft E: 1,724,942ft
POINT OF ENTRY INFORMATION:
N: 14,383,711ft E: 1,724,574ft
BOTTOM HOLE INFORMATION:
N: 14,373,250ft E: 1,728,163ft

WV NORTH ZONE
GRID NORTH

LONGITUDE 80°40'00"



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

4-26	RICHARD KERNAN	9-10	WILMA MORRIS	9-40.1	RONALD HALL
4-27	WILLIAM FLETCHER	9-11	DAVID MORRIS	9-40.2	GARY HEADLEY
4-28	TERRY LONG	9-11.1	WILMA MORRIS	9-49	RONALD HALL
4-37	HARRISON CEMETERY	9-12	ROBERT MORRIS CEMETERY	9-50	RONALD HALL
4-38	WILLIAM FLETCHER	9-12.1	TAMMY DAUGHERTY	9-59	RONALD HALL
4-39	WILLIAM FLETCHER	9-12.2	NANCY REXROAD	9-64	NATHAN JOHNSON
4-40	WILLIAM FLETCHER	9-13	WILMA MORRIS	10-6	NANCY REXROAD
4-41	RAYMOND HEILMAN	9-24	NATHAN JOHNSON	10-10	WILDA YEAGER
4-42	RAYMOND HEILMAN	9-25	WILMA MORRIS	10-12	KEVIN YEAGER
4-49	WILLIAM FLETCHER	9-26	NANCY REXROAD	10-13	WILDA YEAGER
4-50	WILLIAM FLETCHER	9-27	TRIXIE ROBINSON	10-14	CLIFFORD BRIGGS
4-51	WILMA MORRIS	9-35	TRIXIE ROBINSON	10-18	RONALD HALL
4-52	RAYMOND HEILMAN	9-36	GREGORY MORGAN	10-21	RONALD HALL
4-54	RAYMOND HEILMAN	9-37	ROBERT YEAGER	14-4	HARRY PALMER
5-57	DAVID MORRIS	9-38	COASTAL FOREST RESOURCES CO.	14-10	SANDRA FORTNEY
9-4	RAYMON HEILMAN	9-39	ROBERT YEAGER		GRANT DISTRICT
		9-40	RONALD HALL	6-8	FREEDA BROWN

JOB # 25-018WA

DRAWING # LODGE1HR

SCALE 1" = 2000'

MINIMUM DEGREE OF

ACCURACY SUBMETER

PROVEN SOURCE OF ELEV.

SUBMETER MAPPING GRADE GPS

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

LEGEND

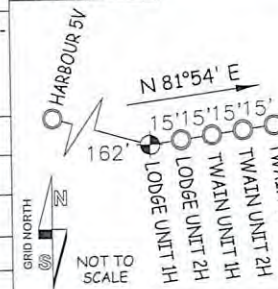
- — — Surface Owner Boundary Lines +/-
- - - Adjoining Surface Tracts +/-
- ⊕ Found monument, as noted

Thomas Summers
THOMAS SUMMERS P.S. 2109

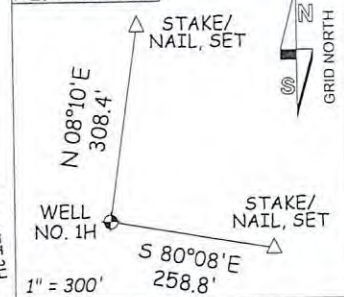
DATE 12/03/2025

OPERATOR'S WELL# LODGE #1H

PAD LAYOUT



REFERENCES



WELL TYPE: OIL ☐ GAS ☒ LIQUID INJECTION ☐ WASTE DISPOSAL ☐ 47 — 103 — 03790
(IF "GAS") PRODUCTION ☒ STORAGE ☐ DEEP ☐ SHALLOW ☒ STATE COUNTY PERMIT
LOCATION: ELEVATION 1,410' PROPOSED WATERSHED FISHING CREEK
QUADRANGLE PINE GROVE 7.5' DISTRICT GREEN COUNTY WETZEL
SURFACE OWNER WILLIAM WADE FLETCHER ACREAGE 49.8 ACRES +/-
OIL & GAS ROYALTY OWNER WILLIAM W. FLETCHER, SR. LEASE ACREAGE 49.8 ACRES±
PROPOSED WORK: DRILL ☐ CONVERT ☐ DRILL DEEPER ☒ REDRILL ☐ FRACTURE OR STIMULATE ☒
PLUG OFF OLD FORMATION ☐ PERFORATE NEW FORMATION ☒ OTHER PHYSICAL CHANGE IN WELL
(SPECIFY) MOD-BHL PLUG & ABANDON CLEAN OUT & REPLUG
TARGET FORMATION MARCELLUS ESTIMATED DEPTH 7,800' TVD 20,600' MD
WELL OPERATOR ANTERO RESOURCES CORP. DESIGNATED AGENT CONRAD BASTON
ADDRESS 1615 WYNKOOP ST. ADDRESS 535 WHITE OAKS BLVD
BRIDGEPORT, WV 26330

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

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

(1) the tract of land is the same tract described in this Application, partly or wholly depicted in the accompanying plat, and described in the Construction and Reclamation Plan;

(2) the parties and recordation data (if recorded) for lease(s) or other continuing contract(s) by which the Applicant claims the right to extract, produce or market the oil or gas are as follows:

Grantor, lessor, etc.	Grantee, lessee, etc.	Royalty	Book/Page
<u>A: William W. Fletcher, Sr. Lease</u> William W. Fletcher, Sr.	Antero Resources Corporation	1/8+	294A/0681
<u>B: William W. Fletcher, Sr. Lease</u> William W. Fletcher, Sr.	Antero Resources Corporation	1/8+	294A/0681
<u>D: Dean H. Bucher Lease</u> Dean H. Bucher	Antero Resources Corporation	1/8+	262A/0192
<u>F2: Stone Hill Minerals Holdings, LLC Lease</u> Stone Hill Minerals Holdings, LLC	Antero Resources Corporation	1/8+	259A/0769
<u>H: Wilma Marie Morris Lease</u> Wilma Marie Morris	Antero Resources Corporation	1/8+	406A/0662
<u>I: Wilma M. Morris Lease</u> Wilma M. Morris	Antero Resources Corporation	1/8+	301A/0844
<u>H: Wilma Marie Morris Lease</u> Wilma Marie Morris	Antero Resources Corporation	1/8+	406A/0662
<u>L: BRC Appalachian Minerals I, LLC Lease</u> BRC Appalachian Minerals I, LLC BRC Working Interest Company, LLC Chesapeake Appalachia, LLC SWN Production Company Antero Exchange Properties, Inc.	BRC Working Interest Company, LLC Chesapeake Appalachia, LLC SWN Production Company Antero Exchange Properties, Inc. Antero Resources Corporation	1/8 Assignment Assignment Assignment Name Change	102A/0505 103A/0470 157A/0540 177A/0533 0013/0311
<u>O: Wilda N. and Robert L. Yeager Lease</u> Wilda N. and Robert L. Yeager	Antero Resources Corporation	1/8+	437A/0174
<u>N: Junior L. Robinson Lease</u> Junior L. Robinson Mountain Link Associates, Inc. The Whittle Corporation	Mountain Link Associates, Inc. The Whittle Corporation Antero Resources Corporation	1/8 Assignment Assignment	101A/0335 111A/0574 377A/0896
<u>R: Ronald I. Hall and R. Kevin Hall, As JTWROS Lease</u> Ronald I. Hall and R. Kevin Hall, As JTWROS	Antero Resources Corporation	1/8+	294A/0016
<u>S: Bounty Minerals, LLC Lease</u> Bounty Minerals, LLC	Antero Resources Corporation	1/8+	288A/0110

*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 for this tract.
12/15/2023

**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
U1: Antero Minerals, LLC Lease				
	Antero Minerals, LLC	Antero Resources Corporation	1/8+	292A/0739

*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 the 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.

**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: Senior Vice President of Land