



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

Wednesday, February 19, 2025
PERMIT MODIFICATION APPROVAL
Horizontal 6A / New Drill

ANTERO RESOURCES CORPORATION
1615 WYNKOOP STREET

DENVER, CO 80202

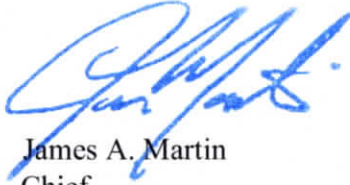
Re: Permit Modification Approval for Neptune Unit 1H
47-085-10537-00-00

Extended Lateral Length

ANTERO RESOURCES CORPORATION

The Office of Oil and Gas has reviewed the attached permit modification for the above referenced permit. The attached modification has been approved and well work may begin. Please be reminded that the oil and gas inspector is to be notified twenty-four (24) hours before permitted well work is commenced.

If there are any questions, please feel free to contact me at (304) 926- 0450.



James A. Martin
Chief

Operator's Well Number: Neptune Unit 1H
Farm Name: Richard E Blouir ET UX
U.S. WELL NUMBER: 47-085-10537-00-00
Horizontal 6A New Drill
Date Modification Issued: 2-19-2025

Promoting a healthy environment.

02/21/2025

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

1) Well Operator: Antero Resources Corpora 494507062 085 - Ritchie Clay Ellenboro 7.5'
Operator ID County District Quadrangle

2) Operator's Well Number: Neptune Unit 1H MOD Well Pad Name: Husher Pad

3) Farm Name/Surface Owner: Richard E. Blouir et ux Public Road Access: Lamberton Rd

4) Elevation, current ground: 1,007' As-Built Elevation, proposed post-construction:

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: 7600' TVD, Anticipated Thickness- 55 feet, Associated Pressure- 2850#

8) Proposed Total Vertical Depth: 7600' TVD

9) Formation at Total Vertical Depth: Marcellus

10) Proposed Total Measured Depth: 31,400' MD

11) Proposed Horizontal Leg Length: 20,666' *Open to modification at a later date

12) Approximate Fresh Water Strata Depths: 147', 406'

13) Method to Determine Fresh Water Depths: 47085015510000, 47085088820000 Offset well records. Depths have been adjusted according to surface elevations.

14) Approximate Saltwater Depths: 1654'

15) Approximate Coal Seam Depths: N/A

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

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

James Hill
1-31-25

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	J-55	94#	100'	100'	CTS, 96 Cu. Ft.
Fresh Water	13-3/8"	New	J-55	54.5#	456'	456'	CTS, 475 Cu. Ft.
Coal	9-5/8"	New	J-55	36#	6300'	6300'	CTS, 2565 Cu. Ft.
Intermediate							
Production	5-1/2"	New	P110-ICY	23#	31400'	31400'	CTS, 6985 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"	0.375"	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			

James Hill

1-31-25

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): 20.13 acres

22) Area to be disturbed for well pad only, less access road (acres): 9.66 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.

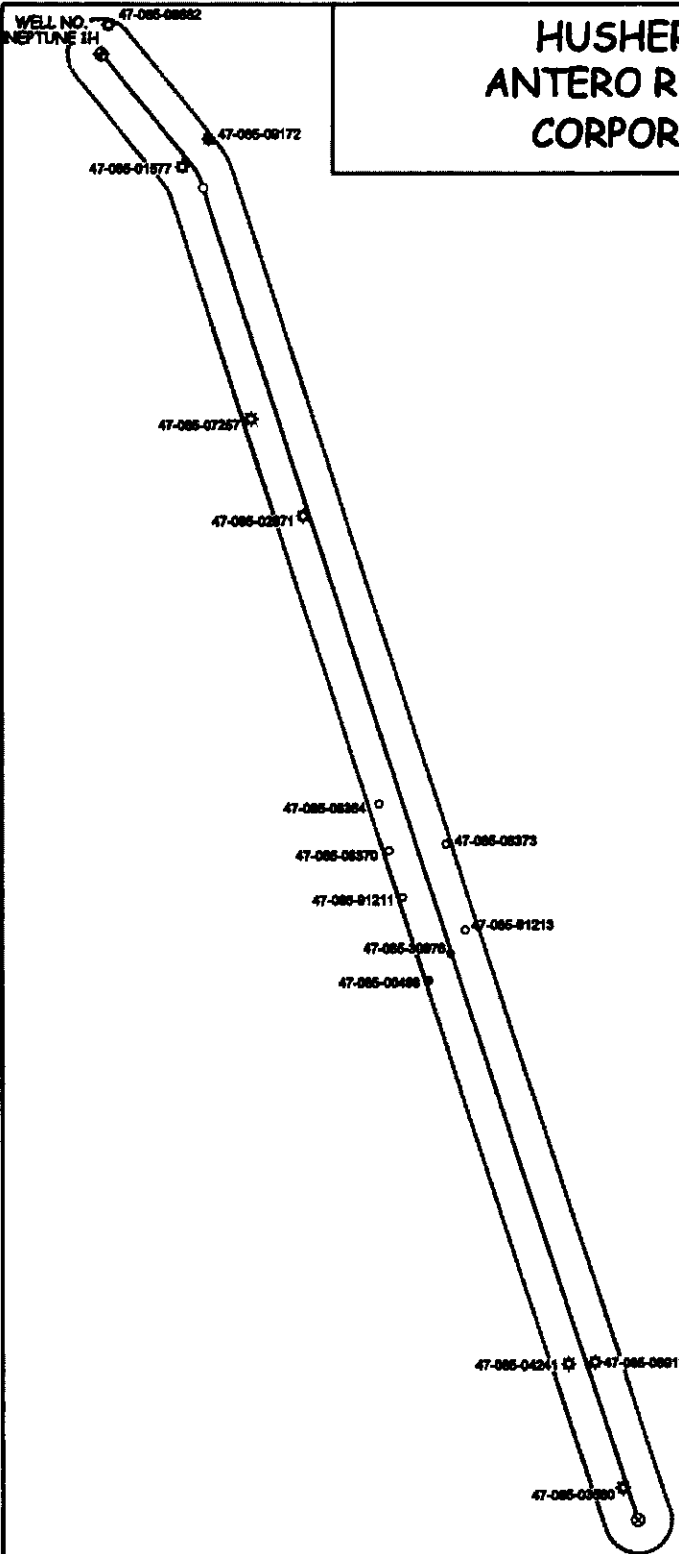
Intermediate: blowhole clean with air, trip to surface casing shoe, trip to bottom, blowhole clean with air, trip out, run casing, circulate 40 bbls brine water followed by 10 bbls fresh water and 25 bbls bentonite mud, pump 10 bbls fresh water.

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.


1-31-25

HUSHER PAD ANTERO RESOURCES CORPORATION



WILLOW LAND SURVEYING, PLLC P.O. BOX 17, PENNSBORO, WV 26415 (304) 659-1717		SCALE: 1-INCH = 2000-FEET 0' 2000' 4000' 6000'	
DATE: 01/22/25	DRAWN BY: D.L.P.	JOB #: 23-010WA	
		FILE: NEPTUNE1HAOR.DWG	

UWI (APINum)	Well Name	Well Number	Operator	Historical Operator	TD	Perforated Interval (shallowest, deepest)	Perforated Formation(s)	Producibile Formation(s) not perf'd
47085088820000	HAYHURST	1	ANJA RESOURCES	ANJA RESOURCES	3,072	1210 - 2879	Salt Sands, Big Injun, Tiona	Weir, Benson, Alexander
47085091720000	SHANLEY MARY	3	HALL DRILLING	JAY BEE PRODUCTION	3,210	1932 - 2759	Big Injun, Gordon	Weir, Benson, Alexander
47085015770000	GRAIG HOGUE HEIRS	1	CHARITY GAS INC	COTTRILLE C C	1,881		Big Injun	Weir, Benson, Alexander
47085028710000	WILLIAM MOORE HRS	1	DEEM J F OIL & GAS LLC	MOSSOR W H	1,916		Big Injun	Weir, Benson, Alexander
47085072570000	NAY EVA M	6A	STANDARD OIL CO INC	PRIOR FERRELL L	5,211		Udev, Lower Huron, Java	Weir, Benson, Alexander
47085083640000	MCGINNIS	7	BIALEK OIL & GAS CORP	UNKNOWN				
47085083700000	MCGINNIS	14	BIALEK OIL & GAS CORP	UNKNOWN				
47085912110000								
47085309760000	E B BUNNER	4	CHALMERS OIL & GAS	CHALMERS OIL & GAS	1,865		undetermined unit, Big Injun, undetermined unit	Weir, Benson, Alexander
47085004980000	LJ & CERA MORRIS	1	UNKNOWN	UNKNOWN	1,823		Big Injun	Weir, Benson, Alexander
47085083730000	MCGINNIS	17	UNKNOWN	UNKNOWN				
47085912130000								
47085042410000	BROADWATER M M	1	SUGAR ROCK INC	LIBERTY O&G CORP	2,256	2086 - 2086	Berea	Weir, Benson, Alexander
47085069130000	BROADWATER HEIRS	1	PETRO-MARK INC	PETRO-MARK INC	2,009	1787 - 1813	Big Injun	Weir, Benson, Alexander
47085035600000	EARL WILSON	4	LUCAS WELL SERV INC	BLAUSER WELL SERVICE	2,114	1900 - 2064	Big Injun	Weir, Benson, Alexander

LATITUDE 39°17'30" 6,000' LATITUDE 39°15'00"

1,694' LONGITUDE 81°00'00"
7,988' TO BOTTOM HOLE
LONGITUDE 80°57'30"

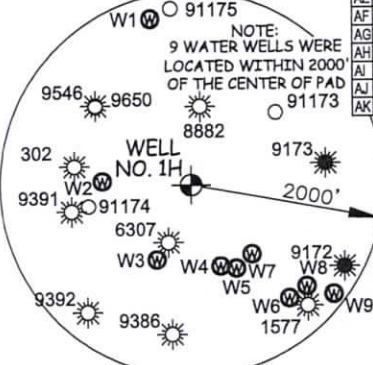
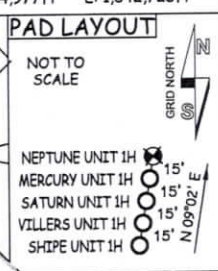
**Antero Resources Corporation
Well No. Neptune #1H**

18-14.2	RONALD HAYHURST
24-05	RICHARD BLOUIR
24-5.1	RICHARD BLOUIR
24-5.3	RICHARD BLOUIR
24-5.4	MATTHEW BLOUIR
24-06	TECH PIPE & EXTRUSIONS INC.
24-07	TECH SERVICE CENTER
24-24	KIMBERLY BARNES
24-25	MARK SPIKER
24-34	CRAIG HOGUE
24-34.1	CRAIG HOGUE
24-34.2	STONEWALL PROPERTY HOLDINGS LLC
24-34.4	BARNES & SONS TRUCKING LLC
24-34.5	RODNEY HOGUE
24-35	RICHARD LAMBERT
24-35.1	RICHARD LAMBERT
24-35.3	RICHARD LAMBERT
24-41	HALL FAMILY TRUST
24-47	JOEY SHAFFER
24-54	HAUGHT FAMILY TRUST
29-05	THE NATURE CONSERVANCY
29-14	ROBERT WHITEHAIR
29-16	BOBBY BUNNER
29-16.1	BOBBY BUNNER
29-21.1	EVERETT LEGGETT
29-23	GARY GILMORE
29-24	SANDRA BRADFORD
29-24.1	STEVEN DAVIS
29-27	BEAR KNOB HOLDINGS LLC
29-28	SARAH RIDDLE
29-35	SHEILA MAYO
29-36	THOMAS GUSTAITUS
29-36.1	CHAD KOPSHINA
29-37	SHEILA MAYO
29-38	SHEILA MAYO
29-39	SHEILA MAYO
29-40	AMOS BUNNER
29-58	ROBERT WHITEHAIR
29-64	JOSEPH VARESE
29-65	JAMES DUNLAP
29-66	JAMES DUNLAP
29-67	CHRISTIAN PROUSE
29-68	JAMES DUNLAP
30-31	DAVID RIDDLE
30-32	EARL RIDDLE
30-33	BEAR KNOB HOLDINGS LLC
34-21.2	LITTLE KANAWHA SOIL CONSERVATION DISTRICT
34-22.1	GARY BROADWATER
35-01	GARY GROBASKI
35-02	DEBRA DAVIS
35-07	DELORES SCHAMBERGER
35-7.1	DELORES SCHAMBERGER
35-13	PITILLIP RIGGS
35-14	DARREN DODD
35-29	DENNIS MCLOY
35-30	CHAD JOHNSON
A1	RODNEY STEVE HOGUE
A2	RODNEY STEVE HOGUE
A3	RODNEY STEVE HOGUE
B	MOUNTAIN GAS SERVICES, LLC
C	BARNES & SONS TRUCKING
D	WV DIVISION OF MULTIMODAL TRANSPORTATION FACILITIES
E1	MILDRED MAY LAMBERT
E2	MILDRED MAY LAMBERT
F	PERRY MICHAEL HANLON
G1	WILLIAM MOORE AND MELVINA MOORE
G2	WILLIAM MOORE AND MELVINA MOORE
H	LAURA M. ULAM
I	THE NATURE CONSERVANCY
J	RIDGEWOOD DEVELOPMENT, LLC
K	MOST WORSHIPFUL GRAND LODGE OF ANCIENT & ACCEPTED MASONS OF WV, INC.
L	BOBBY J. BUNNER
M	BOBBY J. BUNNER
N	LEE WILSON
O	EVERETT T. LEGGETT & DEBRA K. LEGGETT
P	ET BLUE GRASS, LLC
Q	BOBBY J. BUNNER
R	NANCY CAROLINE LAWRENCE MOSLEY
S1	NEAL COLLINS
S2	NEAL COLLINS
T	JUDITH A. BEARY
U	KEVIN A. RIDDLE
V	JUDITH A. BEARY
W	JUDITH A. BEARY
X	LINDA KAY SMITH
Y	NEAL COLLINS
Z	WAYNE DOUGLAS STEWART
AA1	CHARLES A. BROADWATER, ET AL
AA2	CHARLES A. BROADWATER, ET AL
AB	BURL DODD, ET AL
AC	ANTERO MINERALS, LLC
AD	DELANO PERLE HAYHURST
AE	DELANO PERLE HAYHURST
AF	DELANO PERLE HAYHURST
AG	KIMBERLY BARNES
AH	VIRGINIA L. CONNORS
AI	JOHN MICHAEL ANKROM
AJ	AGNES L. ROGERS
AK	HALL DRILLING, LLC

NOTES:
WELL 1H TOP HOLE INFORMATION:
N: 290,293ft E: 1,569,445ft
LAT: 39°17'13.26" LON: 81°01'16.31"
BOTTOM HOLE INFORMATION:
N: 268,686ft E: 1,577,394ft
LAT: 39°13'41.05" LON: 80°59'30.65"
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: 4,348,637m E: 498,186m
BOTTOM HOLE INFORMATION:
N: 4,342,095m E: 500,718m

(NAD) 27 (UTM) ZONE 17 COORDS:
WELL 1H TOP HOLE INFORMATION:
N: 14,266,440ft E: 1,634,419ft
POINT OF ENTRY INFORMATION:
N: 14,264,502ft E: 1,635,975ft
BOTTOM HOLE INFORMATION:
N: 14,244,977ft E: 1,642,725ft



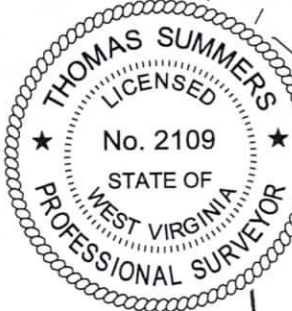
WATER WELLS

W1	S 13°36' E	1772.1'
W2	N 87°26' W	929.2'
W3	S 24°40' W	864.4'
W4	S 19°28' E	906.8'
W5	S 27°55' E	993.1'
W6	S 40°30' E	1566.5'
W7	N 40°45' W	960.8'
W8	S 48°22' E	1604.4'
W9	S 52°09' E	1872.9'

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 # 23-010WA
DRAWING # NEPTUNE1HR
SCALE 1" = 2000'
MINIMUM DEGREE OF ACCURACY SUBMETER
PROVEN SOURCE OF ELEV. SUBMETER MAPPING GRADE GPS

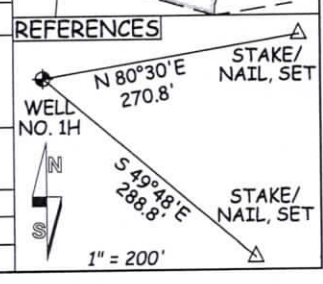
LEGEND

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

THOMAS SUMMERS P.S. 2109
DATE 01/29/25
OPERATOR'S WELL# NEPTUNE UNIT #1H
47 - 085 - 10537
STATE COUNTY PERMIT

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.

WELL TYPE: OIL GAS LIQUID INJECTION WASTE DISPOSAL
(IF "GAS") PRODUCTION STORAGE DEEP SHALLOW
LOCATION: ELEVATION PROPOSED - 1,007' WATERSHED NORTH FORK HUGHES RIVER
QUADRANGLE ELLENBORO 7.5' DISTRICT CLAY COUNTY RITCHIE
SURFACE OWNER RICHARD E. BLOUIR ET UX ACREAGE 53.682 ACRES +/-
OIL & GAS ROYALTY OWNER AGNES L. ROGERS LEASE ACREAGE 57 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 7,600' TVD 31,400' MD
WELL OPERATOR ANTERO RESOURCES CORP. DESIGNATED AGENT KEVIN ELLIS
ADDRESS 1615 WYNKOOP ST. ADDRESS 535 WHITE OAKS BLVD
DENVER, CO 80202 BRIDGEPORT, WV 26330



02/21/2025

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
<u>AJ: Agnes L. Rogers Lease</u>			
Agnes L. Rogers	Jenkins Energy Corporation	1/8	0204/0778
Jenkins Energy Corporation	Clarence W. Mutschelknaus	Assignment	0273/0692
Clarence W. Mutschelknaus	Antero Resources Corporation	Assignment	0274/1002
<u>AI: John Michael Ankrom Lease</u>			
John Michael Ankrom	Antero Resources Corporation	1/8	0283/1042
<u>C: Barnes & Sons Trucking Lease</u>			
Barnes & Sons Trucking	Antero Resources Corporation	1/8+	0348/0441
<u>B: Mountain Gas Services, LLC Lease</u>			
Mountain Gas Services, LLC	Antero Resources Corporation	Assignment	Pooled Tract
<u>D: WV Division of Multimodal Transportation Facilities Lease</u>			
WV Division of Multimodal Transportation Facilities	Antero Resources Corporation	1/8+	0336/0335
<u>E1: Mildred May Lambert Lease</u>			
Mildred May Lambert	Oil Development Company	1/8	0157/0769
Oil Development Company	Alan Gable Oil Development Energy Trust	Assignment	0207/0623
Alan Gable Oil Development Energy Trust	GasSearch Corporation	Assignment	0207/0628
GasSearch Corporation	Linn Energy Holdings, LLC	Assignment	0239/0118
Linn Energy Holdings, LLC	XTO Energy, Inc.	Assignment	0246/0814
XTO Energy, Inc.	Antero Resources Corporation	Assignment	0295/0836
<u>E2: Mildred May Lambert Lease</u>			
Mildred May Lambert	Oil Development Company	1/8	0157/0769
Oil Development Company	Alan Gable Oil Development Energy Trust	Assignment	0207/0623
Alan Gable Oil Development Energy Trust	GasSearch Corporation	Assignment	0207/0628
GasSearch Corporation	Linn Energy Holdings, LLC	Assignment	0239/0118
Linn Energy Holdings, LLC	XTO Energy, Inc.	Assignment	0246/0814
XTO Energy, Inc.	Antero Resources Corporation	Assignment	0295/0836
<u>E1: Mildred May Lambert Lease</u>			
Mildred May Lambert	Oil Development Company	1/8	0157/0769
Oil Development Company	Alan Gable Oil Development Energy Trust	Assignment	0207/0623
Alan Gable Oil Development Energy Trust	GasSearch Corporation	Assignment	0207/0628
GasSearch Corporation	Linn Energy Holdings, LLC	Assignment	0239/0118
Linn Energy Holdings, LLC	XTO Energy, Inc.	Assignment	0246/0814
XTO Energy, Inc.	Antero Resources Corporation	Assignment	0295/0836
<u>A1: Rodney Steve Hogue Lease</u>			
Rodney Steve Hogue	Antero Resources Corporation	1/8+	0347/0887

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>E1: Mildred May Lambert Lease</u>			
Mildred May Lambert	Oil Development Company	1/8	0157/0769
Oil Development Company	Alan Gable Oil Development Energy Trust	Assignment	0207/0623
Alan Gable Oil Development Energy Trust	GasSearch Corporation	Assignment	0207/0628
GasSearch Corporation	Linn Energy Holdings, LLC	Assignment	0239/0118
Linn Energy Holdings, LLC	XTO Energy, Inc.	Assignment	0246/0814
XTO Energy, Inc.	Antero Resources Corporation	Assignment	0295/0836
<u>H: Laura M. Ulam Lease</u>			
Laura M. Ulam	Antero Resources Corporation	1/8+	0317/0635
<u>G2: William Moore and Melvina Moore Lease</u>			
William Moore and Melvina Moore	Pittsburgh & West Virginia Gas Company	1/8	0045/0163
Pittsburgh & West Virginia Gas Company	A.W. Barnhart	Assignment	0046/0329
A.W. Barnhart	H.G. Hardbarger	Assignment	0083/0248
H.G. Hardbarger	Mossor Enterprises, Inc.	Assignment	0198/0193
Mossor Enterprises, Inc.	J. Frank Deem Et Al	Assignment	0201/0163
J. Frank Deem Et Al	J. F. Deem Oil & Gas, LLC	Assignment	0228/0230
J. F. Deem Oil & Gas, LLC	CHK Louisiana, LLC	Assignment	0247/0624
CHK Louisiana, LLC	Chesapeake Appalachia, LLC	Assignment	0247/0933
Chesapeake Appalachia, LLC	SWN Production Company, LLC	Assignment	0280/0707
SWN Production Company, LLC	Antero Resources Corporation	Assignment	0328/0780
<u>G1: William Moore and Melvina Moore Lease</u>			
William Moore and Melvina Moore	Pittsburgh & West Virginia Gas Company	1/8	0045/0163
Pittsburgh & West Virginia Gas Company	A.W. Barnhart	Assignment	0046/0329
A.W. Barnhart	H.G. Hardbarger	Assignment	0083/0248
H.G. Hardbarger	Mossor Enterprises, Inc.	Assignment	0198/0193
Mossor Enterprises, Inc.	J. Frank Deem Et Al	Assignment	0201/0163
J. Frank Deem Et Al	J. F. Deem Oil & Gas, LLC	Assignment	0228/0230
J. F. Deem Oil & Gas, LLC	CHK Louisiana, LLC	Assignment	0247/0624
CHK Louisiana, LLC	Chesapeake Appalachia, LLC	Assignment	0247/0933
Chesapeake Appalachia, LLC	SWN Production Company, LLC	Assignment	0280/0707
SWN Production Company, LLC	Antero Resources Corporation	Assignment	0328/0780
<u>I: The Nature Conservancy Lease</u>			
The Nature Conservancy	Antero Resources Corporation	Assignment	Pooled Tract
<u>J: Ridgewood Development, LLC Lease</u>			
Ridgewood Development, LLC	Antero Resources Corporation	1/8+	0346/0138
<u>M: Bobby J. Bunner Lease</u>			
Bobby J. Bunner	Antero Resources Corporation	1/8+	0338/0996
<u>L: Booby J. Bunner Lease</u>			
Bobby J. Bunner	Antero Resources Corporation	1/8+	0338/0990
<u>P: ET Blue Grass, LLC Lease</u>			
ET Blue Grass, LLC	Antero Resources Corporation	1/8+	0343/0564

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
R: Nancy Caroline Lawrence Mosley Lease Nancy Caroline Lawrence Mosley	Antero Resources Corporation	1/8+	0347/0900
T: Judith A. Beary Lease Judith A. Beary	Antero Resources Corporation	1/8+	0340/0260
S2: Neal Collins Lease Neal Collins	Antero Resources Corporation	1/8+	0344/0204
X: Linda Kay Smith Lease Linda Kay Smith	Antero Resources Corporation	1/8+	0346/0095
Y: Neal Collins Lease Neal Collins	Antero Resources Corporation	1/8+	0344/0204
Z: Wayne Douglas Stewart Lease Wayne Douglas Stewart	Antero Resources Corporation	1/8+	0337/0680
AA1: Charles A. Broadwater, Et Al Lease Charles A. Broadwater, Et Al Roy Guthrie Liberty Oil & Gas Company, Inc. Loren E. Bagley & Richard Hudson Petromark, Inc. Energy Processing, Inc.	Roy Guthrie Liberty Oil & Gas Company, Inc. Loren E. Bagley & Richard Hudson Petromark, Inc. Energy Processing, Inc. Antero Resources Corporation	1/8 Assignment Assignment Affidavit Assignment Assignment	0126/0720 0132/0228 0153/0459 0164/0746 0210/0506 0313/0660
AB: Burl Dodd, Et Al Lease Burl Dodd, Et Al Dennis D. Blauser Thomas H. Burrows Cedar Petroleum Donald V. Belatini Blauser Energy Corporation	Dennis D. Blauser Thomas H. Burrows Cedar Petroleum Donald V. Belatini Blauser Energy Corporation Antero Resources Corporation	1/8 Assignment Assignment Affidavit Assignment Assignment	0118/0318 0118/0792 0118/0790 0265/0645 0169/0352 0265/0648

*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
AC: Antero Minerals, LLC Lease				
	Antero Minerals, LLC	Antero Resources Corporation	1/8+	0337/0042

*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/Utilization – Antero has filed a horizontal well utilization 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: Max Green 
 Its: Vice President of Land

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

1) Well Operator: Antero Resources Corpora 494507062 085 - Ritchie Clay Ellenboro 7.5'
Operator ID County District Quadrangle

2) Operator's Well Number: Neptune Unit 1H MOD Well Pad Name: Husher Pad

3) Farm Name/Surface Owner: Richard E. Blouir et ux Public Road Access: Lamberton Rd

4) Elevation, current ground: 1,007' As-Built Elevation, proposed post-construction: _____

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: 7600' TVD, Anticipated Thickness- 55 feet, Associated Pressure- 2850#

8) Proposed Total Vertical Depth: 7600' TVD

9) Formation at Total Vertical Depth: Marcellus

10) Proposed Total Measured Depth: 31,400' MD

11) Proposed Horizontal Leg Length: 20,666' *Open to modification at a later date

12) Approximate Fresh Water Strata Depths: 147', 406'

13) Method to Determine Fresh Water Depths: 47085015510000, 47085088820000 Offset well records. Depths have been adjusted according to surface elevations.

14) Approximate Saltwater Depths: 1654'

15) Approximate Coal Seam Depths: N/A

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

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

RECEIVED
Office of Oil and Gas
JAN 24 2025
WV Department of
Environmental Protection

*CH# 4037872
7500'*