



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, September 11, 2023
PERMIT MODIFICATION APPROVAL
Horizontal 6A / New Drill

ANTERO RESOURCES CORPORATION
1615 WYNKOOP STREET

DENVER, CO 80202

Re: Permit Modification Approval for Key Unit 2H
47-085-10501-00-00

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.

James A. Martin
Chief

Operator's Well Number: Key Unit 2H
Farm Name: Pierce, Elmer W.
U.S. WELL NUMBER: 47-085-10501-00-00
Horizontal 6A New Drill
Date Modification Issued: 09/11/2023

Promoting a healthy environment.

09/15/2023

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: Key Unit 2H 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: 26000' MD
- 11) Proposed Horizontal Leg Length: 14681'
- 12) Approximate Fresh Water Strata Depths: 53', 236' 150', 180'
- 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
- (a) If Yes, provide Mine Info: Name: _____
Depth: _____
Seam: _____
Owner: _____

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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, 89 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#	26000	26000	5624 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			

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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.

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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

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25) Proposed borehole conditioning procedures:

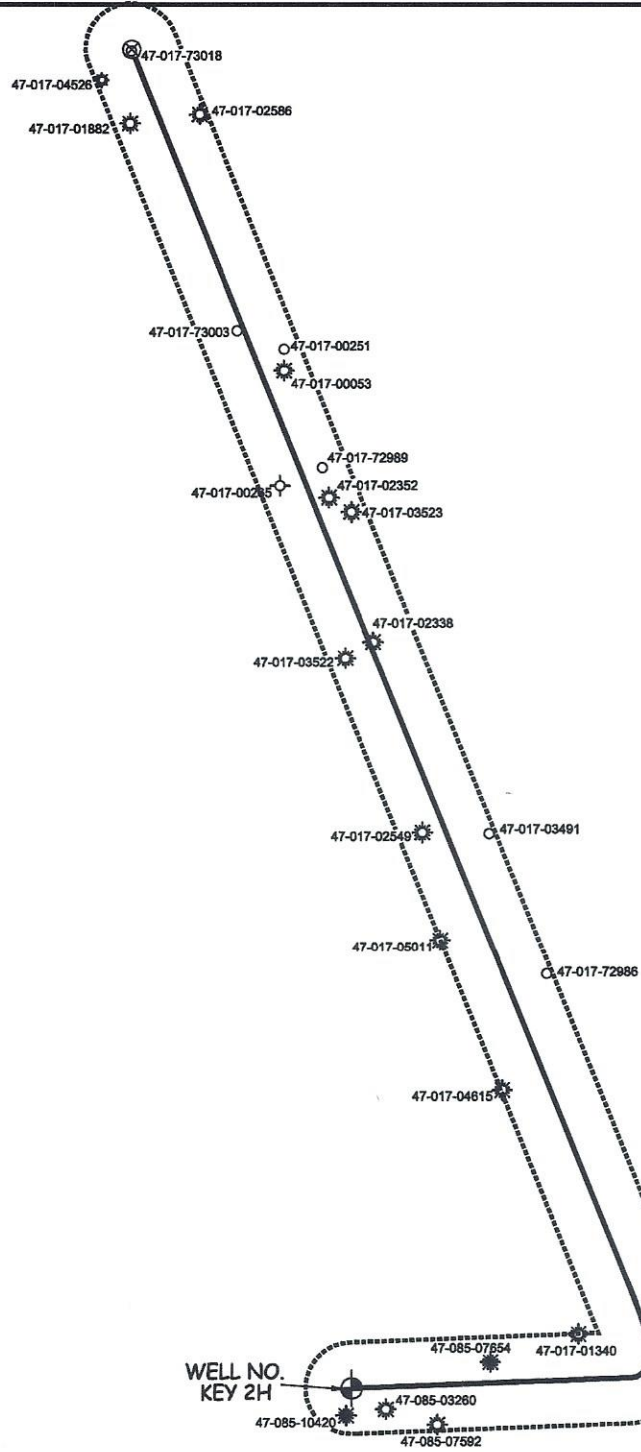
Conductor: blowhole clean with air, run casing, 10 bbls fresh water.
Surface: blowhole clean with air, trip to conductor shoe, trip to bottom, blowhole clean with air, trip out, run casing, circulate pipe capacity + 40 bbls fresh water followed by 25 bbls bentonite mud, 10 bbls fresh water spacer.
Intermediate: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

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CASHEW PAD ANTERO RESOURCES CORPORATION



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WELL NO.
KEY 2H

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

JOB #: 23-007WA

FILE: KEY2HAOR.DWG

SCALE : 1-INCH = 2000-FEET



DATE: 08/24/23

DRAWN BY: T.B.S.

09/15/2023

47085 10501

UWI (API/Num)	Well Name	Well Number	Operator	Historical Operator	TD	Perforated Interval (shallowest, deepest)	Perforated Formation(s)	Productible Formation(s) not perf'd
47085075920000	JETT MYRTLE ET AL	1	CHARITY GAS INC	STALWAKER GENE INC	5,231	3800 - 5200	Riley, Benson, Alexander, Huron, Angola	Weir, Berea
47085026000000	R L KEISTER	3	R & R OIL & GAS LLC	OIL STATES SALES	2,013		Big Injun	Weir, Berea, Benson, Alexander
47085076540000	JETT MYRTLE	3	CHARITY GAS INC	HALL HENRY Y	5,217		Speechley, Balltown, Benson, Alexander	Weir, Berea
47017013400000	DAVID BALL	1	HARGON OIL & GAS CO	FERRILL WILLARD E	1,862			Weir, Berea, Benson, Alexander
47085104200000	EIKLICK UNIT	2H	ANTERO RESOURCES CORP	ANTERO RESOURCES CORP	20,905	6974 - 20778	Marcellus	Weir, Berea
47017046150000	WHITEHAIR	3	KEY OIL CO	KEY OIL CO	5,237		Balltown, Riley, Alexander, Benson	Weir, Berea
47017050110000	GRAY JOHN M HERS ET AL	14261	DIVERSIFIED PRODUCTION LLC	DOMINION EXPL&PROD	2,554	3232 - 5076	3rd salt, Big Injun, Weir	Benson, Alexander
47017054900000	GRAY HAYWARD	A-861	MINERAL RESOURCES MANAGEMENT LLC	ALLEGHENY LAND&MINRL	2,500	2144 - 2234	Weir	Benson, Alexander
47017035220000	GRAY D W	2743	DIVERSIFIED PRODUCTION LLC	CNG DEVELOPMENT CO	5,180	4926 - 4974	Alexander	Benson
470170026560000	OXFORD BAPTIST CHURCH	2	DIVERSIFIED PRODUCTION LLC	HUNTER R J	1,844	1720 - 1844		
470177300300000	S M BROADWATER		UNKNOWN	UNKNOWN				
47017018820000	E M NUTTER ET AL	1	DIVERSIFIED PRODUCTION LLC	UNITED OPERATING CO	2,243		Weir	Benson, Alexander
47017045260000	GRAY HERS	1	KEY OIL CO	KEY OIL CO	5,309	3306 - 5152	Warren, Balltown, Riley, Benson, Alexander	Weir
47017301800000	THOMAS C GRAY 2	911	CARNEGIE NATURAL GAS	CARNEGIE NATURAL GAS	5,309			
47017025860000	BROADWATER LEONA	2	DIVERSIFIED PRODUCTION LLC	PETROLEUM DEV CORP	5,260	5120 - 5142	Alexander	Benson
47017002510000	DORSEY E HUFF	1	COFFMAN OIL & GAS	COFFMAN OIL & GAS				
47017000530000	SARAH BROADWATER	1	HUGHES RIVER O & G	HUGHES RIVER O & G	1,901		Big Injun	Benson, Alexander
47017298900000	LLOYD W GRAY	4931	HOPE NATURAL GAS	HOPE NATURAL GAS				
47017023520000	GRAY LLOYD W	A-812	CLEM ENERGY LLC	ALLEGHENY LAND&MINRL	2,466	1978 - 2281	Big Injun, Weir	Benson, Alexander
47017035230000	GRAY D W	2741	DIVERSIFIED PRODUCTION LLC	CNG DEVELOPMENT CO	2,450	5094 - 5124	Alexander	Benson
47017023800000	GRAY LLOYD W	A-810	HAUGHT ENERGY CORP	ALLEGHENY LAND&MINRL	2,450	1920 - 2238	Big Injun, Weir	Benson, Alexander
47017034910000	GRAY M B HERS	2285	DIVERSIFIED PRODUCTION LLC	CNG DEVELOPMENT CO	5,148	4976 - 5057	Penn System, Price, Alexander	Benson
47017729860000	M B GRAY	2	UNKNOWN	UNKNOWN				

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LATITUDE 39°12'30" 6,873'

LATITUDE 39°15'00" 9,419' TO BOTTOM HOLE

Antero Resources Corporation Well No. Key 2H

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 Evitts
9-20	Twila Evitts
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	Brier 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	Lois Gander
21-7	Elmer 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

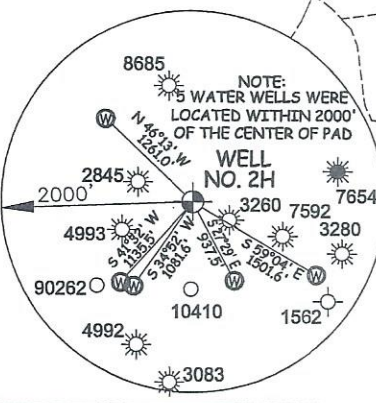
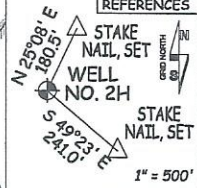
Southwest District - Doddridge County	
1-1	Jeffrey Polan
4-2	Cevasco Family Trust
4-10	James Webb
4-11	Juanita Leggett
4-14	Juanita Leggett
4-16	James Webb
4-18	James Webb
4-19.3	CNG Transmission Corp.
4-19.4	CNG Transmission Corp.
4-19.5	Dana Hurst
4-19.7	James Webb
4-19.8	James Webb
4-19.9	James Webb
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	Victi Moore
4-31.2	Bradley Davis
4-34	Carl Ravin
8-1	Richard Brwn
8-3	Randall Russell
8-4	John Gray Hrs
8-5	Larry Gander
12-1	David Ball

NOTES:
 WELL 2H TOP HOLE INFORMATION:
 N: 247,783ft E: 1,615,121ft
 LAT: 39°10'20.38" LON: 80°51'27.27"
 BOTTOM HOLE INFORMATION:
 N: 262,344ft E: 1,612,791ft
 LAT: 39°12'44.93" LON: 80°51'59.67"
 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 2H TOP HOLE INFORMATION:
 N: 4,335,919m E: 512,318m
 BOTTOM HOLE INFORMATION:
 N: 4,340,343m E: 511,534m

(NAD) 27 (UTM) ZONE 17 COORDS:
 WELL 2H TOP HOLE INFORMATION:
 N: 14,224,714ft E: 1,680,782ft
 POINT OF ENTRY INFORMATION:
 N: 14,225,507ft E: 1,683,923ft
 BOTTOM HOLE INFORMATION:
 N: 14,239,228ft E: 1,678,209ft

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.



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

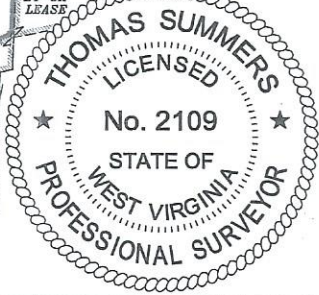
RECEIVED Office of Oil and Gas AUG 31 2023 Wv Department of Environmental Protection

JOB # 23-007WA
 DRAWING # KEY2H
 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 08/25/23
 OPERATOR'S WELL # KEY 2H



WELL TYPE: OIL ___ GAS X LIQUID INJECTION ___ WASTE DISPOSAL ___ 47 - 085 - 10501
 (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 LARRY GANDER ET UX ACREAGE 17 ACRES +/- 09/15/2023
 OIL & GAS ROYALTY OWNER B. GUY WHITEHAIR ET UX LEASE ACREAGE 50 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 26,000' 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

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
B. Guy Whitehair, et ux Lease:			
B. Guy Whitehair, et ux	L.E Mossor and Harry	1/8	107/346
L.E Mossor and Harry	Francis Friestad	Assignment	89/497
Francis Friestad	W.H. Thomson	Assignment	152/213
W.H. Thomson	BET-RO INC	Assignment	177/11
BET-RO INC	Jesam Energy	Assignment	204/134
Jesam Energy	Roberts Energy	Assignment	204/705
Roberts Energy	Key Oil Company	Assignment	258/619
Key Oil Company	Antero Resources Appalachian Corporation	Assignment	263/629
Antero Resources Appalachian Corporation	Antero Resources Corporation	Name Change	46/523
R. F. Kiester et al Lease:			
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
Ralph Jett et ux Lease:			
Ralph Jett, et ux	W.R. Development Co. Inc.	1/8	191/378
W.R. Development Co. Inc.	Whittle Corporation	Assignment	254/910
Whittle Corporation	Antero Resources Appalachian Corporation	Assignment	255/526
Antero Resources Appalachian Corporation	Antero Resources Corporation	Name Change	15/705
David Dale Ball Jr. Lease:			
David Dale Ball, Jr.	Antero Resources Corporation	1/8+	417/123
David Ball Jr. Lease:			
David Dale Ball, Jr.	Antero Resources Corporation	1/8+	417/123
Mary Zinn Lease:			
Mary Zinn	Key Oil Company	1/8	88/107
Key Oil Company	Antero Resources Appalachian Corporation	Assignment	276/526
Antero Resources Appalachian Corporation	Antero Resources Corporation	Name Change	46/523
B. Guy Whitehair, et ux Lease:			
B. Guy Whitehair, et ux	L.E Mossor and Harry	1/8	107/346
L.E Mossor and Harry	Francis Friestad	Assignment	89/497
Francis Friestad	W.H. Thomson	Assignment	152/213
W.H. Thomson	BET-RO INC	Assignment	177/11
BET-RO INC	Jesam Energy	Assignment	204/134
Jesam Energy	Roberts Energy	Assignment	204/705
Roberts Energy	Key Oil Company	Assignment	258/619
Key Oil Company	Antero Resources Appalachian Corporation	Assignment	263/629
Antero Resources Appalachian Corporation	Antero Resources Corporation	Name Change	46/523

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Grantor, lessor, etc.	Grantee, lessee, etc.	Royalty	Book/Page
✓ M. B. Gray, et al Lease:			
M. B. Gray and Mary Gray, et al	Hope Natural Gas Company	1/8	57/372
Hope Natural Gas Company	Consolidated gas Supply Corporation	Assignment	143/345
Consolidated gas Supply Corporation	Consolidated Gas Transmission Corporation	Assignment	135/583
Consolidated Gas Transmission Corporation	CNG Development	Assignment	139/41
CNG Development	Dominion Exploration and Production INC	Merger	WVSOS
Dominion Exploration and Production INC	Dominion Transmission INC	Assignment	244/528
Dominion Transmission INC	Consol Energy Holdings LLC XVI	Assignment	245/1
Consol Energy Holdings LLC XVI	Consol Gas Company	Merger	293/352
Consol Gas Company	CNX Gas Company and Noble Energy	Merger	293/352
CNX Gas Company and Noble Energy	Antero Resources Corporation	Assignment	332/303
✓ D.W. Gray and M. E. Gray Lease:			
D.W. and M.E. Gray	M.G. Taylor	1/8	30/148
M.G. Taylor	Tri State Gas Company	Assignment	26/39
Tri State Gas Company	Hope Natural Gas Company	Assignment	26/93
Hope Natural Gas Company	Consolidated Gas Supply Corporation	Assignment	143/345
Consolidated Gas Supply Corporation	Consolidated Gas Transmission Corporation	Assignment	135/583
Consolidated Gas Transmission Corporation	CNG Development	Assignment	139/41
CNG Development	Dominion Exploration and Production INC	Merger	WVSOS
Dominion Exploration and Production INC	Dominion Transmission INC	Assignment	244/528
Dominion Transmission INC	Consol Energy Holdings LLC XVI	Assignment	245/1
Consol Energy Holdings LLC XVI	Consol Gas Company	Merger	292/469
Consol Gas Company	CNX	Merger	292/469
CNX	Noble Energy	Assignment	339/642
Noble Energy	Antero Resources Corporation	Assignment	323/303
✓ D.W. Gray and M. E. Gray Lease:			
D.W. and M.E. Gray	M.G. Taylor	1/8	30/148
M.G. Taylor	Tri State Gas Company	Assignment	26/39
Tri State Gas Company	Hope Natural Gas Company	Assignment	26/93
Hope Natural Gas Company	Consolidated Gas Supply Corporation	Assignment	143/345
Consolidated Gas Supply Corporation	Consolidated Gas Transmission Corporation	Assignment	135/583
Consolidated Gas Transmission Corporation	CNG Development	Assignment	139/41
CNG Development	Dominion Exploration and Production INC	Merger	WVSOS
Dominion Exploration and Production INC	Dominion Transmission INC	Assignment	244/528
Dominion Transmission INC	Consol Energy Holdings LLC XVI	Assignment	245/1
Consol Energy Holdings LLC XVI	Consol Gas Company	Merger	292/469
Consol Gas Company	CNX	Merger	292/469
CNX	Noble Energy	Assignment	339/642
Noble Energy	Antero Resources Corporation	Assignment	323/303

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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>D.W. Gray and M. E. Gray Lease:</u>			
D.W. and M.E. Gray	M.G. Taylor	1/8	30/148
M.G. Taylor	Tri State Gas Company	Assignment	26/39
Tri State Gas Company	Hope Natural Gas Company	Assignment	26/93
Hope Natural Gas Company	Consolidated Gas Supply Corporation	Assignment	143/345
Consolidated Gas Supply Corporation	Consolidated Gas Transmission Corporation	Assignment	135/583
Consolidated Gas Transmission Corporation	CNG Development	Assignment	139/41
CNG Development	Dominion Exploration and Production INC	Merger	WVSOS
Dominion Exploration and Production INC	Dominion Transmission INC	Assignment	244/528
Dominion Transmission INC	Consol Energy Holdings LLC XVI	Assignment	245/1
Consol Energy Holdings LLC XVI	Consol Gas Company	Merger	292/469
Consol Gas Company	CNX	Merger	292/469
CNX	Noble Energy	Assignment	339/642
Noble Energy	Antero Resources Corporation	Assignment	323/303
<u>Anthony C. Ayers, et ux Lease:</u>			
Anthony C. Ayers, et ux	Antero Resources Corporation	1/8+	502/313
<u>Mildred Riddle, et vir Lease:</u>			
Mildred Riddle, et vir	Clarence W Mutschelknaus	1/8	102/618
Clarence W Mutschelknaus	J. Robert Hornor	Assignment	105/277
J. Robert Hornor	Petroleum Development	Assignment	112/664
Petroleum Development	PDC Mountaineer LLC	Assignment	240/118
PDC Mountaineer LLC	Antero Resources Appalachian Corporation	Assignment	278/607
Antero Resources Appalachian Corporation	Antero Resources Corporation	Name Change	46/523
<u>Mildred Riddle, et vir Lease:</u>			
Mildred Riddle, et vir	Clarence W Mutschelknaus	1/8	102/618
Clarence W Mutschelknaus	J. Robert Hornor	Assignment	105/277
J. Robert Hornor	Petroleum Development	Assignment	112/664
Petroleum Development	PDC Mountaineer LLC	Assignment	240/118
PDC Mountaineer LLC	Antero Resources Appalachian Corporation	Assignment	278/607
Antero Resources Appalachian Corporation	Antero Resources Corporation	Name Change	46/523

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*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.

WW-6A1
(5/13)

Operator's Well No. Key Unit 2H 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)**

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Lease Name or Number	Grantor, Lessor, etc.	Grantee, Lessee, etc.	Royalty	Book/Page
<u>Russell H. Gray, et al Lease</u>				
	Russell H. Gray, et al Alton Skinner	Alton Skinner Alton L. Skinner, II, Crystal G. Skinner and Desari S. Garrett	1/8 Will	121/123 222/266
	Alton L. Skinner, II, Crystal G. Skinner and Desari S. Garrett DC Petroleum	DC Petroleum		
	Antero Resources Appalachian Corporation	Antero Resources Appalachian Corporation Antero Resources Corporation	Assignment Name Change	257/62 46/523

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**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

CK# 4022860
CK# 7,500.00



August 30th, 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 well on the Cashew Pad. We are requesting to extend the horizontal lateral length which will change the bottom hole location of the Key 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 fluid and cursive, with the first name "Carly" and last name "Marvel" clearly legible.

Carly Marvel
Permitting Agent
Antero Resources Corporation

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Office of Oil and Gas

AUG 31 2023

WV Department of
Environmental Protection

Enclosures

09/15/2023