



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, June 7, 2022
PERMIT MODIFICATION APPROVAL
Horizontal 6A / New Drill

ANTERO RESOURCES CORPORATION
1615 WYNKOOP STREET

DENVER, CO 80202

Re: Permit Modification Approval for SHAYS 1H
47-085-10421-00-00

Changed lateral location

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: SHAYS 1H
Farm Name: ELMER W PIERCE
U.S. WELL NUMBER: 47-085-10421-00-00
Horizontal 6A New Drill
Date Modification Issued: 6/7/2022

Promoting a healthy environment.

06/10/2022

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 Union Oxford 7.5'
Operator ID County District Quadrangle

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

3) Farm Name/Surface Owner: Elmer W. Pierce Public Road Access: Pleasant Hollow Road

4) Elevation, current ground: 1040' Elevation, proposed post-construction: ~1019'

5) Well Type (a) Gas Oil Underground Storage

Other _____

(b) If Gas Shallow Deep

Horizontal _____

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- 2850#

8) Proposed Total Vertical Depth: 6900' TVD

9) Formation at Total Vertical Depth: Marcellus

10) Proposed Total Measured Depth: 23,100' MD

11) Proposed Horizontal Leg Length: 13,991.6'

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

13) Method to Determine Fresh Water Depths: 47-085-07654, 47-085-03102

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

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

Depth: _____

Seam: _____

Owner: _____

RECEIVED
Office of Oil and Gas
MAY 31 2022
WV Department of
Environmental Protection

06/10/2022
SM 5/26/22

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	16"	New	H-40	65#	80	80	CTS, 77 Cu. Ft.
Fresh Water	10-3/4"	New	J/K-55	40.4#	300	300	CTS, 417 Cu. Ft.
Coal	7-5/8"	New	P-110CY	26.4#	2500	2500	CTS, 1018 Cu. Ft.
Intermediate							
Production	5"	New	P-110CY	18#	23,100	23,100	4903 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	16"	20"	0.375"	1530	50	Class A	~1.16
Fresh Water	10-3/4"	13-1/2"	0.35"	2730	1000	Class A	~1.16
Coal	7-5/8"	9-7/8"	0.328"	9410	1500	Class A	~1.16
Intermediate							
Production	5"	6-3/4"	0.362"	15,840	12,000	Class G/H	~1.16
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 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): 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.

24) Describe all cement additives associated with each cement type:

Conductor: no additives, Class A cement.
Surface: Class A cement with 2-3% calcium chloride and 1/4 lb of flake
Intermediate: Class A 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

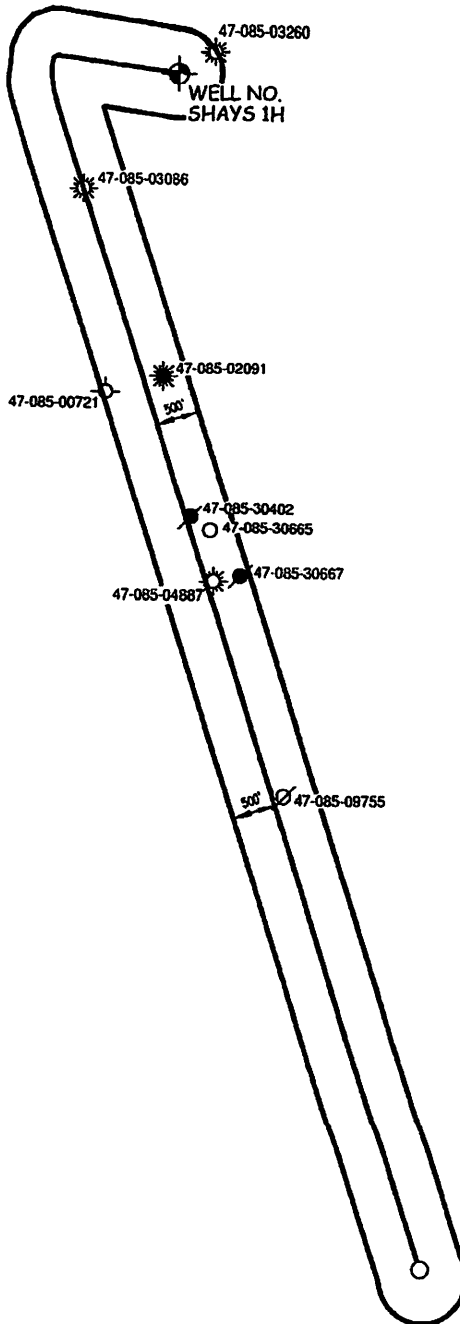
25) Proposed borehole conditioning procedures:

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.

SM 5/26/22 06/10/2022

CASHEW PAD ANTERO RESOURCES CORPORATION



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

JOB #: 22-005WA

FILE: SHAYS1HAOR.DWG

DATE: 05/18/22

DRAWN BY: D.L.P.

SCALE : 1-INCH = 2000-FEET



SM 5/24/22

UWI (API Num)	Well Name	Well Number	Operator	Historical Operator	TD	Perforated Interval (shallowest, deepest)	Perforated Formation(s)	Producible Formation(s) not perf'd
47085007210000	R E BRITTON	1	BICKERSTAFF W A	BICKERSTAFF W A	1,911		Big Injun	Pocono
47085306650000	D J RICHARDS	1	DEEM F S	DEEM F S				
47085304020000	D J RICHARDS	2	DEEM F S	DEEM F S				
47085306670000	D J RICHARDS	2	DEEM F S	DEEM F S				
47085048870000	COX FONDA	J-301	ROSS & WHARTON GAS	J & J ENTERPRISES	2,325	1,884-2,129	Weir	Big Injun, Pocono
47085097550000	DOUGLAS MAXSON	1	WEST VA DEPT ENERGY	WEST VA DEPT ENERGY				
47085030860000	J PIERCE HRS	1	R & R OIL & GAS LLC	FRIESTAD FRANCIS	1,863		Big Injun	Pocono
47085020910000	MARY BRITTON	2	HAUGHT ENERGY CORP	MOSSOR OIL & GAS	1,927		Big Injun	Pocono
47085032600000	R L KEISTER	3	R & R OIL & GAS LLC	OIL STATES SALES	2,013		Big Injun	Pocono

5/26/22 SW

LATITUDE 39°12'30" 6,984'

LATITUDE 39°10'00"

3,871' TO BOTTOM HOLE

Antero Resources Corporation Well No. Shays 1H

NOTES:

WELL 1H TOP HOLE INFORMATION: N: 247,442ft E: 1,615,005ft LAT: 39°10'16.98" LON: 80°51'28.68" ... 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: 4,335,815m E: 512,284m BOTTOM HOLE INFORMATION: N: 4,331,638m E: 513,240m

(NAD) 27 (UTM) ZONE 17 COORDS: WELL 1H TOP HOLE INFORMATION: N: 14,224,371ft E: 1,680,671ft POINT OF ENTRY INFORMATION: N: 14,223,907ft E: 1,679,297ft ...

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.

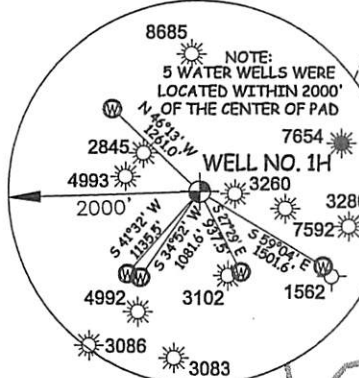
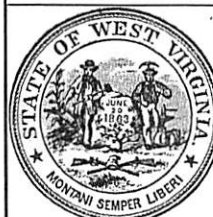


Table listing landowners and lease numbers for the area. Columns include Southwest District - Doddridge County and Union District - Ritchie County. Owners listed include David Ball, Trustees of Baptist Church, Kevin Ball, Isaac Richards, James Haught, etc.

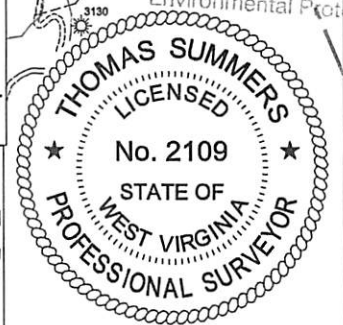
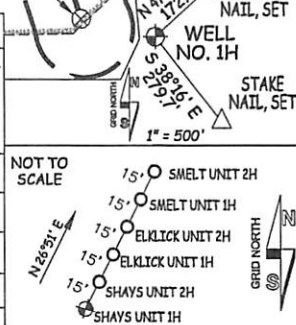
I THE UNDERSIGNED, HEREBY CERTIFY THAT THIS PLAT IS CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF AND SHOWS ALL THE INFORMATION REQUIRED BY LAW AND THE RULES ISSUED AND PERSCRIBED BY THE DEPARTMENT OF ENVIRONMENTAL PROTECTION.



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 # 21-015WA DRAWING # SHAYS1HR1 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 05/12/22 OPERATOR'S WELL# SHAYS 1H



WELL TYPE: OIL ___ GAS X LIQUID INJECTION ___ WASTE DISPOSAL ___ 47 - 085 - 10421 MD (IF "GAS") PRODUCTION X STORAGE ___ DEEP ___ SHALLOW X STATE COUNTY PERMIT LOCATION: ELEVATION 1,040'-ORIGINAL 1,019'-PROPOSED WATERSHED SOUTH FORK HUGHES RIVER QUADRANGLE OXFORD 7.5' DISTRICT UNION COUNTY RITCHIE SURFACE OWNER ELMER W. PIERCE ACREAGE 67.78 ACRES +/- OIL & GAS ROYALTY OWNER R.F. KEISTER ET AL; DELIA M. SHEPLER ET AL; JACOB PIERCE ET AL; LEASE ACREAGE 70 AC±; 48 AC±; 31 AC±; RALPH JETT ET UX; MARY J. BRITTON ET UX; D.J. RICHARDS ET UX; FONDA COX; ELIZABETH E. BRITTON; 148 AC±; 69 AC±; 38.2 AC±; 10.5 AC±; 160.75 AC±; JOSEPH C. DONOVAN ET UX; MILES S. BALL; DARLENE BOSTON; CHAD W. JOHNSON; HARVEY SHEPLER ET AL; CLARENCE E. BUSH ET UX. 6.37 AC±; 0.21 AC±; 100 AC±; 165 AC±; 188 AC±; 75 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 TARGET FORMATION MARCELLUS PLUG & ABANDON CLEAN OUT & REPLUG ESTIMATED DEPTH 6,900' TVD 23,100' MD WELL OPERATOR ANTERO RESOURCES CORP. DESIGNATED AGENT DIANNA STAMPER - CT CORPORATION SYSTEM ADDRESS 1615 WYNKOOP ST. ADDRESS 5400 D BIG TYLER ROAD DENVER, CO 80202 CHARLESTON, WV 25313

RECEIVED Office of Oil and Gas MAY 20 2022

WV Department of Environmental Protection

06/10/2022

11,995' TO BOTTOM HOLE

13,458

LONGITUDE 80°50'00"

LONGITUDE 80°50'00"

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. Kelster, et al Lease</u>			
R.F. Kelster, et al	G.L. Yaste	1/8	0105/0504
G.L. Yaste	D.L.Y., Inc.	Assignment	0112/0302
D.L.Y.m Inc.	Betty Jean Stalkner and Rosalee Roberts	Assignment	0132/0565
Betty Jean Stalkner and Rosalee Roberts	R & S Gas Company	Assignment	0147/0548
R & S Gas Company	BET-RO Inc	Assignment	0147/0554
BET-RO Inc	Roberts Energy Corporation	Assignment	0240/0036
Roberts Energy Corporation	Antero Resources Corporation	Assignment	0329/0138
<u>Della M. Shepler, et al Lease</u>			
Della M. Shepler, et al	Alton Skinner	1/8	0132/0345
Alton Skinner	Crystal G. Skinner and Desari S. Garrett	Assignment	0216/0391
Cyrstal G. Skinner and Desari S. Garrett	D C Petroleum, Inc.	Assignment	0247/0245
D C Petroleum, Inc.	Antero Resources Appalachian Corporation	Assignment	0254/0789
Antero Resources Appalachian Corporation	Antero Resources Corporation	Name Change	0015/0705
<u>Jacob Pierce, et al Lease</u>			
Jacob Pierce, et al	L.E. Mossor	1/8	0105/0210
L.E. Mossor	Francis Friestad	Assignment	0105/0353
Francis Friestad	W.H. Thompson	Assignment	0106/0020
W.H. Thompson	BET-RO Inc.	Assignment	0222/0426
BET-RO Inc.	Key Oil Company	Assignment	0226/0382
Key Oil Company	Antero Resources Appalachian Corporation	Assignment	0255/0547
Antero Resources Appalachian Corporation	Antero Resources Corporation	Name Change	0015/0702
<u>Ralph Jett, et ux Lease</u>			
Ralph Jett, et ux	W.R. Development Co. Inc.	1/8	0191/0378
W.R. Development Co. Inc.	Whittle Corporation	Assignment	0254/0910
Whittle Corporation	Antero Resources Appalachian Corporation	Assignment	0255/0526
Antero Resources Appalachian Corporation	Antero Resources Corporation	Name Change	0015/0702
<u>Mary J. Britton Lease</u>			
Mary J. Britton	W.H. Mossor	1/8	0088/0331
W.H. Mossor	J&J Enterprises	Assignment	0133/0004
J&J Enterprises	Term Energy Corporation, Robert E. Fox and Mary Ann Fox	Assignment	0172/0336
Term Energy Corporation, Robert E. Fox and Mary Ann Fox	Kiedash & Summers Enterprises, LLC	Assignment	0263/0827
Kiedash & Summers Enterprises, LLC	Antero Resources Appalachian Corporation	Assignment	0329/0315
Antero Resources Appalachian Corporation	Antero Resources Corporation	Name Change	0015/0705
<u>D.J. Richards, et ux Lease</u>			
D.J. Richards, et ux	S.W. Young	1/8	0051/0365
S.W. Young	B.W. Foley	Assignment	0064/0271
B.W. Foley	J.D. Foley	Assignment	0075/0051

SM 5/20/2022

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.D Foley	F.S. Deem	Assignment	0075/0051
F.S. Deem	W.H. Mossor	Assignment	0075/0053
W.H. Mosor	S.W. Jack Jr., S.W. Jack Drilling Company	Assignment	0130/0385
S.W. Jack Jr., S.W. Jack Drilling Company	J&J Enterprises, Inc	Assignment	0130/0392
J&J Enterprises, Inc	Eastern American Energy Corporation	Assignment	0231/0732
Eastern American Energy Corporation	Energy Corporation of America	Merger	0006/0450
Energy Corporation of America	Antero Resources Appalachian Corporation	Assignment	0264/0266
Antero Resources Appalachian Corporation	Antero Resources Corporation	Name Change	0015/0705
<u>Fonda Cox Lease</u>			
Fonda Cox	J&J Enterprises, Inc.	1/8	0131/0411
J&J Enterprises, Inc.	Eastern American Energy Corporation	Assignment	0231/0732
Eastern American Energy Corporation	Energy Corporation of America	Merger	0006/0450
Energy Corporation of America	Antero Resources Appalachian Corporation	Assignment	0264/0266
Antero Resources Appalachian Corporation	Antero Resources Corporation	Name Change	0015/0705
<u>D.J. Richards, et ux Lease</u>			
D.J. Richards, et ux	S.W. Young	1/8	0051/0365
S.W. Young	B.W. Foley	Assignment	0064/0271
B.W. Foley	J.D. Foley	Assignment	0075/0051
J.D Foley	F.S. Deem	Assignment	0075/0051
F.S. Deem	W.H. Mossor	Assignment	0075/0053
W.H. Mosor	S.W. Jack Jr., S.W. Jack Drilling Company	Assignment	0130/0385
S.W. Jack Jr., S.W. Jack Drilling Company	J&J Enterprises, Inc	Assignment	0130/0392
J&J Enterprises, Inc	Eastern American Energy Corporation	Assignment	0231/0732
Eastern American Energy Corporation	Energy Corporation of America	Merger	0006/0450
Energy Corporation of America	Antero Resources Appalachian Corporation	Assignment	0264/0266
Antero Resources Appalachian Corporation	Antero Resources Corporation	Name Change	0015/0705
<u>Joseph C. Donovan, et ux Lease</u>			
Joseph C. Donovan, et ux	Antero Resources Corporation	1/8+	0306/0882
<u>Darlene Boston Lease</u>			
Darlene J. Boston	Antero Resources Corporation	1/8+	0295/0891
<u>Chad W. Johnson Lease</u>			
Chad W. Johnson	Antero Resources Corporation	1/8+	0329/0663
<u>Edward Lee Shepler Lease</u>			
Edward lee Shepler	Antero Resources Corporation	1/8+	0329/0646

SM 5/26/2022

WW-6A1

Operator's Well Number Shays Unit 1H 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)

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>Antero Minerals, LLC Lease</u> Antero Minerals, LLC	Antero Resources Corporation	1/8+	0328/092

*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.

5/26/22 *SR* 06/10/2022

**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>Harvey Shepler, et al. Lease</u>				
	Harvey Shepler, et al	L.E. Mossor	1/8	0107/0451
	L.E. Mossor	Francis Friestad	Assignment	0148/0326
	Francis Friestad	W.H. Thomson	Assignment	0198/0705
	W.H. Thomson	BET-RO	Assignment	0222/0426
	BET-RO	William K. Stalnaker	Assignment	0227/0461
	William K. Stalnaker	Key Oil	Assignment	0254/1086
	Key Oil	Antero Resources Appalachian Corp.	Assignment	0255/0022
	Antero Resources Appalachian Corp.	Antero Resources Corporation	Name Change	0015/0705

*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.

**ACKNOWLEDGEMENT OF FEDERAL & STATE PERMITS/APPROVALS
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: VP of Land