



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, July 31, 2024
PERMIT MODIFICATION APPROVAL
Horizontal 6A / New Drill

ANTERO RESOURCES CORPORATION
1615 WYNKOOP STREET

DENVER, CO 80202

Re: Permit Modification Approval for Shenango Unit 1H
47-103-03658-00-00

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: Shenango Unit 1H
Farm Name: Dallison Lumber, Inc.
U.S. WELL NUMBER: 47-103-03658-00-00
Horizontal 6A New Drill
Date Modification Issued: 7/31/2024

Promoting a healthy environment.

08/02/2024

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: Shenango Unit 1H MOD Well Pad Name: Galmish Pad

3) Farm Name/Surface Owner: Dallison Lumber Inc. Public Road Access: McKimmie Ridge Road

4) Elevation, current ground: As-Built 1160.7 Elevation, proposed post-construction: _____

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: 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: 29000' MD

11) Proposed Horizontal Leg Length: 17,547' *Open to modification at a later date

12) Approximate Fresh Water Strata Depths: 45', 130'

13) Method to Determine Fresh Water Depths: 47103025550000 Offset well records. Depths have been adjusted according to surface elevations.

14) Approximate Saltwater Depths: 1961'

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

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

Depth: _____

Seam: _____

Owner: _____

WW-6B
(04/15)

API NO. 47- 103 - 03658
 OPERATOR WELL NO. Shenango Unit 1H MOD
 Well Pad Name: Galmish Pad

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	J-55	94#	100'	100'	CTS, 96 Cu. Ft.
Fresh Water	13-3/8"	New	J-55	54.5#	300'	300'	CTS, 313 Cu. Ft.
Coal	9-5/8"	New	J-55	36#	3200'	3200'	CTS, 1303 Cu. Ft.
Intermediate							
Production	5-1/2"	New	P110-ICV	23#	29000'	29000'	CTS, 6380 Cu. Ft.
Tubing	2-3/8"	New	N-80	4.7#			
Liners							

TYPE	Size (in)	Wellbore Diameter (in)	Wall Thickness (in)	Burst Pressure (psi)	Anticipated Max. Internal Pressure (psi)	Cement Type	Cement Yield (cu. ft./k)
Conductor	20"	24"	0.375"	2250	50	Class A/L	~1.18
Fresh Water	13-3/8"	17-1/2"	0.38"	2730	1000	Class A/L	~1.18
Coal	9-5/8"	12-1/4"	0.352"	3520	1500	Class A/L	~1.18
Intermediate							
Production	5-1/2"	8-3/4" & 8-1/2"	0.415"	14,360	2500	Class G/H	~1.8
Tubing	2-3/8"	4.778"	0.19"	11,200			
Liners							

PACKERS

Kind:	N/A			
Sizes:	N/A			
Depths Set:	N/A			


 08/02/2024
 7-17-24

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): 64.40 acres

22) Area to be disturbed for well pad only, less access road (acres): 17.53 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.

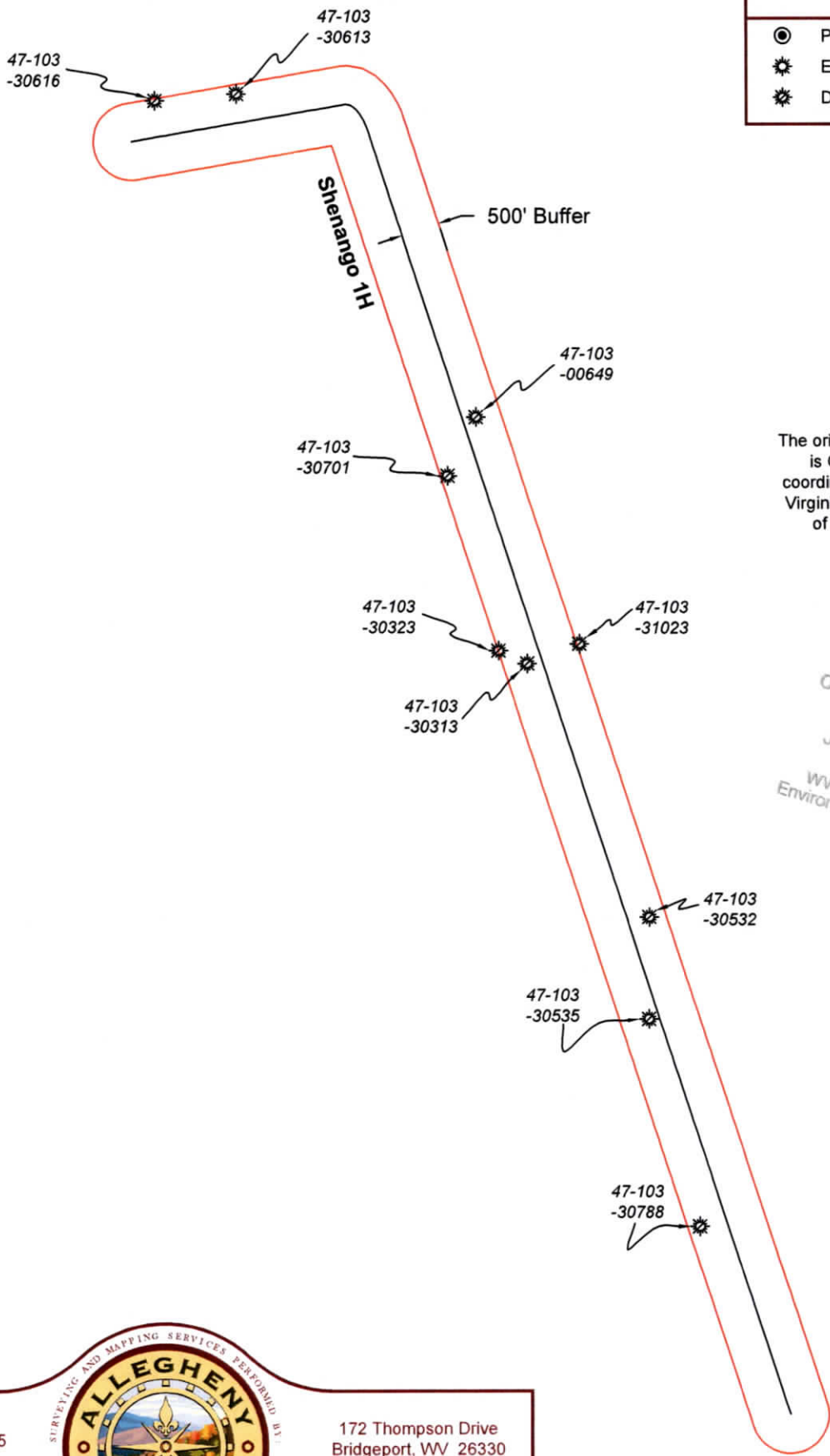
LEGEND

- ⊙ Proposed gas well
- ⊛ Existing Well, as noted
- ⊛ Digitized Well, as noted



The orientation of this survey is Grid North, and its coordinate base is the West Virginia Coordinate System of 1927, North Zone

RECEIVED
Office of Oil and Gas
JUL 11 2024
WV Department of
Environmental Protection



Bridgeport Office
Phone: (304) 848-5035
Fax: (304) 848-5037

172 Thompson Drive
Bridgeport, WV 26330

PARTY CHIEF: C. Lynch	DRAWN BY: J. McNemar
RESEARCH: J. Miller	PREPARED: March 14, 2024
SURVEYED: Dec. 2016	PROJECT NO: 151-34-G-23
FIELD CREW: C.L., K.M.	DRAWING NO: Shenango 1H AOR

Sheet 1 of 1



Scale: 1 inch = 2000 feet

08/02/2024

UWI (APINum)	Well Name	Well Number	Operator	Historical Operator	TD	Perforated Interval (shallowest, deepest)	Perforated Formation(s)	Producible Formation(s) not perf'd
47103306160000	J W HAINES 1	4850	UNKNOWN	UNKNOWN	2,891		Gordon Stray, Gordon	Weir, Benson, Alexander
47103306130000	LUTHER POSTLETHWAIT 1	6024	UNKNOWN	UNKNOWN	2,742		Big Injun, Gordon Stray, Fourth	Weir, Benson, Alexander
47103006490000	J MORGAN	16	DIVERSIFIED PRODUCTION LLC	CONSOL GAS SUPPLY CRP	2,720		Gordon	Weir, Benson, Alexander
47103307010000	S L JOLLIFFE 1	1694	PHILADELPHIA OIL	PITTSBURGH&W VA GAS	2,543	2530 - 2530	Gordon	Weir, Benson, Alexander
47103303230000	A C STONE	1	MILLER W H	MILLER W H				
47103303130000	T M & AMANDA STONE	1	UNKNOWN	UNKNOWN				
47103310230000	T M STONE	5	SOUTH PENN OIL	SOUTH PENN OIL	1,712		Big Injun, Gordon, Fourth	Weir, Benson, Alexander
47103305350000	L C LIEVTZ 1	3250	UNKNOWN	UNKNOWN	2,715		Big Injun, Gordon Stray, Gordon	Weir, Benson, Alexander
47103305320000	F M WATSON	1020	ALL PENN OIL & GAS	ALL PENN OIL & GAS	2,903	2690 - 2710	Gordon Stray, Gordon	Weir, Benson, Alexander
47103307880000	AMOS J LOWE	685	HOPE NATURAL GAS	HOPE NATURAL GAS	2,562		Gordon Stray, Gordon	Weir, Benson, Alexander

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 JUL 11 2024
 WV Department of
 Environmental Protection

11,079' to Bottom Hole

8,051' to Top Hole

TOP HOLE LATITUDE 39 - 35 - 00
BTM HOLE LATITUDE 39 - 32 - 30

TOP HOLE LONGITUDE 80 - 40 - 00
BTM HOLE LONGITUDE 80 - 37 - 30

3,534' to Bottom Hole

Antero Resources
Well No. Shenango 1H
BHL MOD
Antero Resources Corporation

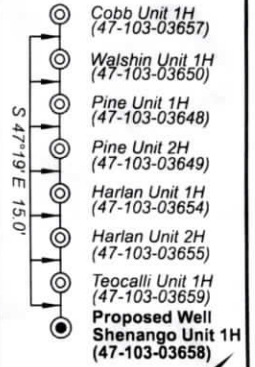


Proposed Well
No. Shenango
Unit 1H

Notes
West Virginia Coordinate System
of 1927, North Zone
based upon Differential GPS Measurements.
Well No. Shenango Unit 1H Top Hole coordinates are
N: 394,536.10' Latitude: 39°34'37.48"
E: 1,663,105.75' Longitude: 80°41'42.82"
Bottom Hole coordinates are
N: 377,990.76' Latitude: 39°31'55.07"
E: 1,671,615.43' Longitude: 80°39'51.41"
UTM Zone 17, NAD 1983
Top Hole Coordinates Bottom Hole Coordinates
N: 4,380,872.152m N: 4,375,874.801m
E: 526,190.626m E: 528,867.150m
Plat orientation and corner and well references
are based upon the grid north meridian.
Well location references are based upon the magnetic
meridian.

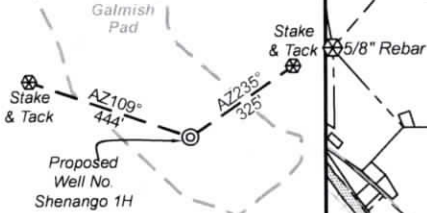
Notes:
Well No. Shenango Unit 1H
UTM Zone 17, NAD 1927
Top Hole Coordinates
N: 14,372,195.55'
E: 1,726,294.96'
Point of Entry Coordinates
N: 14,372,382.82'
E: 1,729,356.81'
Bottom Hole Coordinates
N: 14,355,800.00'
E: 1,735,076.68'

Wellhead Layout (NTS)



Well Location References

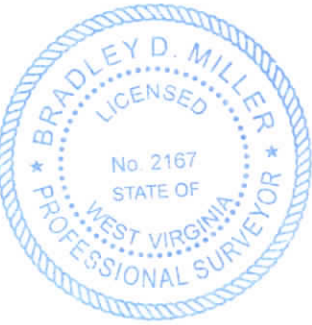
Not To Scale



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 prescribed by the Department of Environmental Protection.

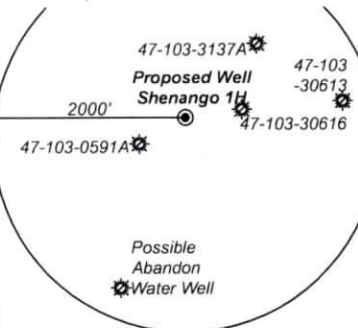
Bradley D. Miller

Bradley D. Miller, P.S. 2167



SEAL

Note: 1 water wells were found within 2000' of proposed well. No occupied dwellings or buildings 2,500 square feet or larger used to house or shelter dairy cattle or poultry husbandry are located within 625' of the center of the well pad.



	Bearing	Dist.
L1	S 05°59' W	1,307.5'
L2	S 54°21' W	1,327.6'
L3	S 89°10' W	1,579.0'
L4	N 41°29' E	2,734.8'
L5	N 87°27' E	3,068.6'

- Legend
- Proposed gas well
 - Monument, as noted
 - Existing Well, as noted
 - Digitized Well, as noted
 - Creek or Drain
 - Road
 - Railroad
 - Surface boundary (approx.)
 - Interior surface tracts (approx.)
 - District Line

FILE NO: 151-34-G-23
DRAWING NO: Shenango 1H Well Plat
SCALE: 1" = 2000'
MINIMUM DEGREE OF ACCURACY: Submeter
PROVEN SOURCE OF ELEVATION: WVDOT, Harrisville, WV

STATE OF WEST VIRGINIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
OIL AND GAS DIVISION

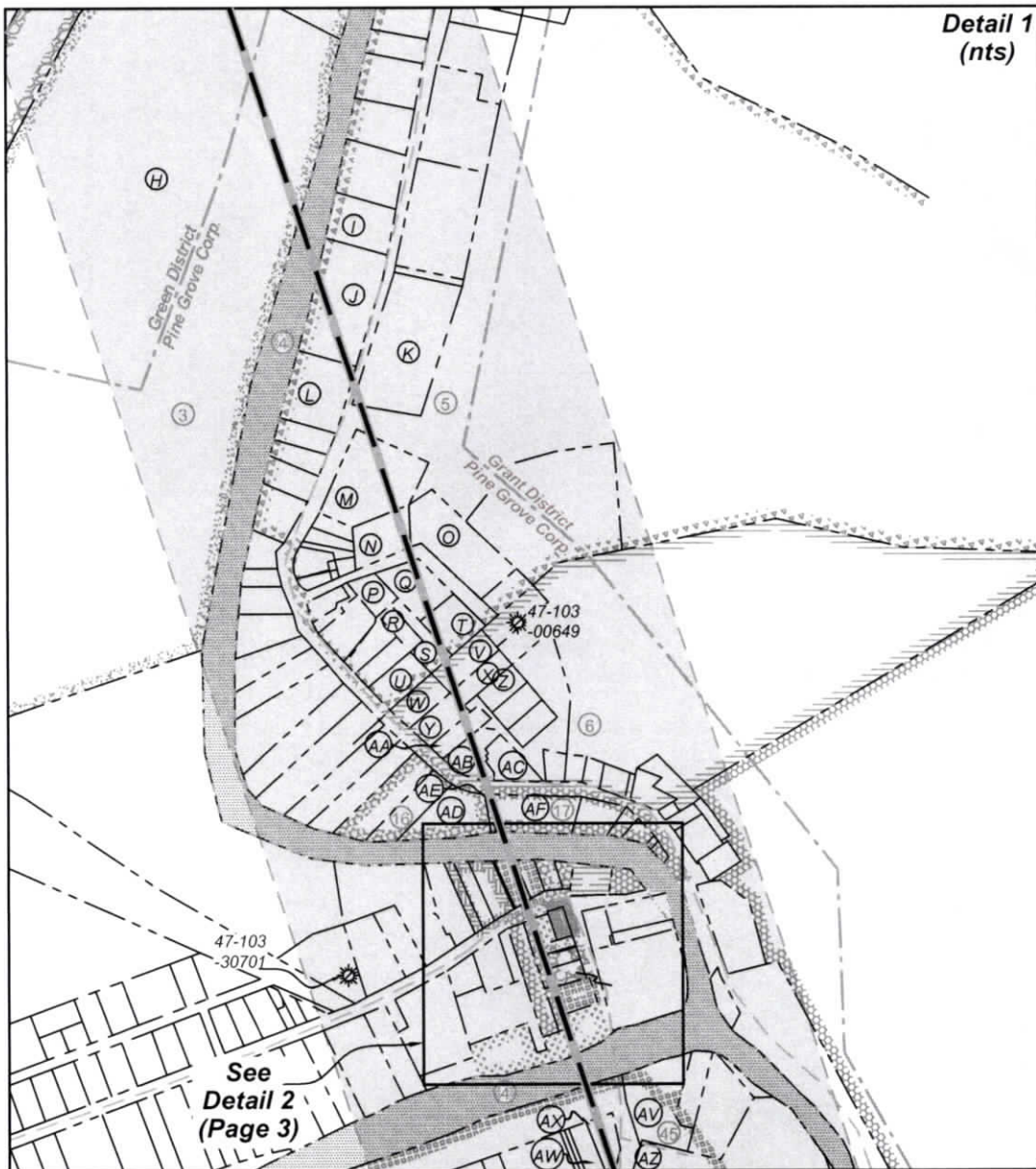
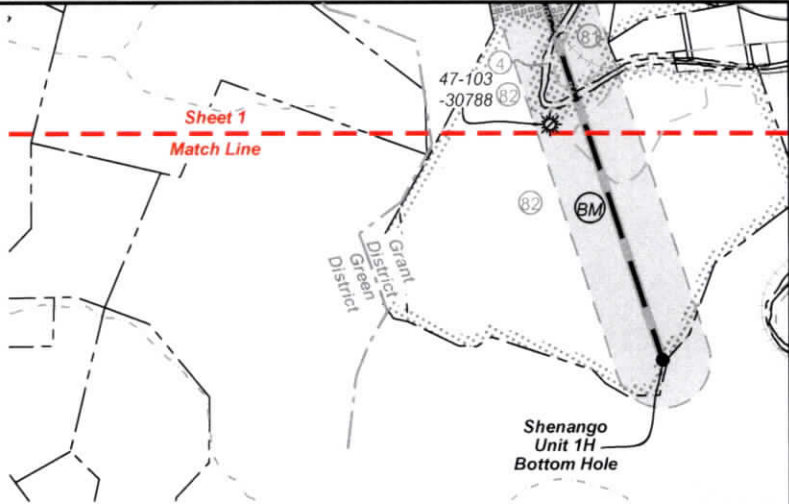
DATE: July 10 20 24
OPERATOR'S WELL NO. Shenango 1H
API WELL NO
47 - 103 - 03658
STATE COUNTY PERMIT

WELL TYPE: OIL GAS LIQUID INJECTION WASTE DISPOSAL
(IF GAS) PRODUCTION: STORAGE DEEP SHALLOW

LOCATION: ELEVATION: As-Built 1,160.7' WATERSHED: Fishing Creek QUADRANGLE: Pine Grove
DISTRICT: Green, Grant, Pine Grove Corp. COUNTY: Wetzel
SURFACE OWNER: Dallison Lumber Inc. ACREAGE: 25
ROYALTY OWNER: Robert Barry Myers, Jr. LEASE NO: ACREAGE: 25
PROPOSED WORK: DRILL CONVERT DRILL DEEPER FRACTURE OR STIMULATE PLUG OFF OLD FORMATION
 PERFORATE NEW FORMATION OTHER PHYSICAL CHANGE IN WELL (SPECIFY) BHL MOD 7,600' TVD
 PLUG AND ABANDON CLEAN OUT AND REPLUG TARGET FORMATION: Marcellus Shale ESTIMATED DEPTH: 29,000' MD

WELL OPERATOR: Antero Resources Corporation DESIGNATED AGENT: Kevin Ellis
ADDRESS: 1615 Wynkoop Street ADDRESS: 535 White Oaks Blvd.
Denver, CO 80202 Bridgeport, WV 26330

08/02/2024



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WVDOT, Harrisville, WV

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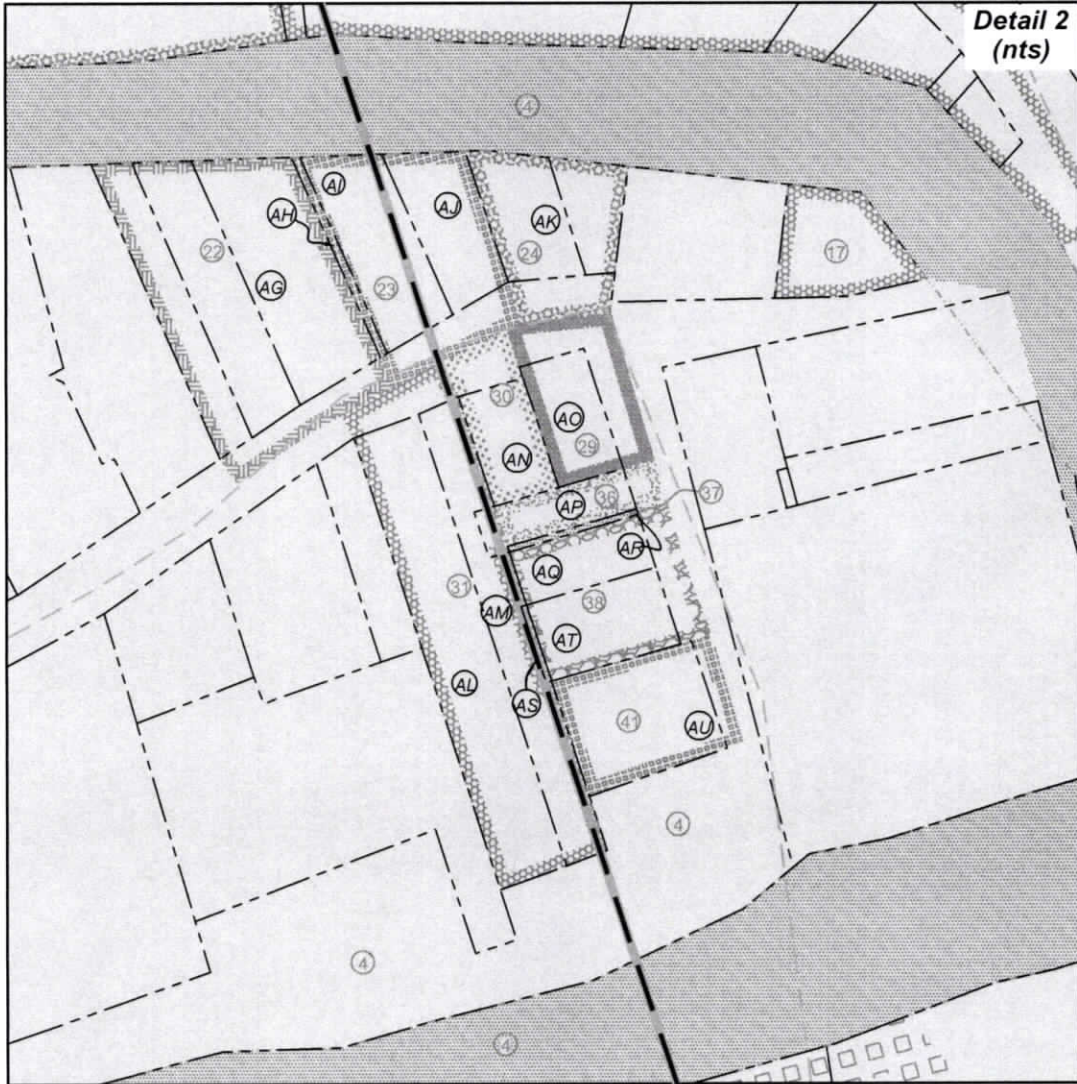
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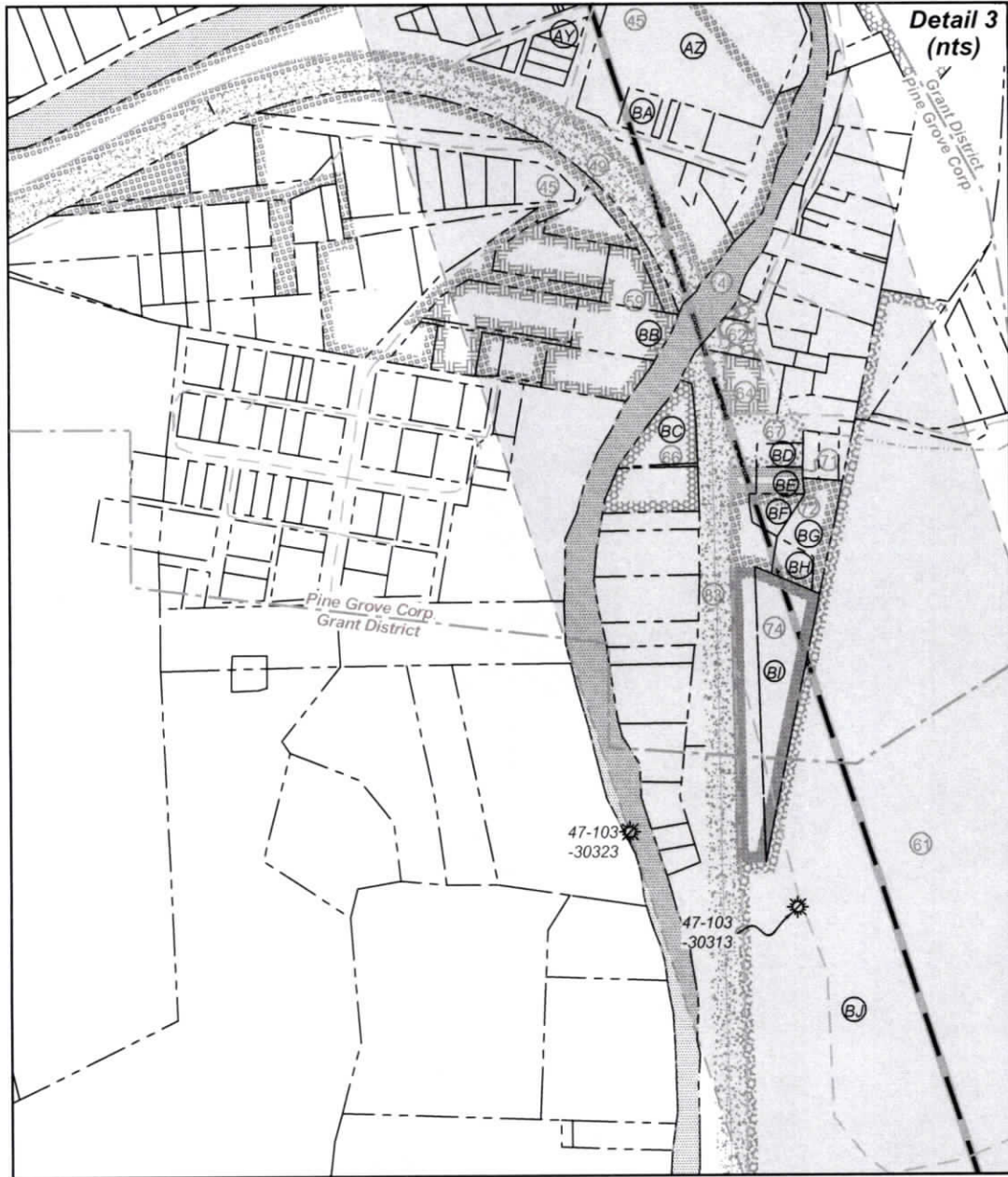
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ADDRESS: 1615 Wynkoop Street ADDRESS: 535 White Oaks Blvd
Denver, CO 80202 Bridgeport, WV 26330

08/02/2024



Leases	
1	Jay Michael Myers
2	Priscilla M. Grimm
3	Midwest Energy, Inc.
4	WVDNR
5	FF & M.V. Morgan
6	J.W & Lizzie Morgan
16	Scott R. Adams
17	Robert Barry Myers, Jr.
22	Thomas R. & Deborah S. Fluharty
23	Chapel of Victory
24	Town of Pine Grove
29	Karen Sue Adams
30	Joshua R. Bates
31	Richard D., Jr. & Joanne Chapple
36	Michael Pellegrino
37	Lisa Van Dyne Supplemental Special Needs Trust
38	Darren Phillip & Amanda Suzanne Underwood Brown
41	The Pine Grove Methodist Episcopal Church
45	Three Rivers Royalty II, LLC
49	CSX Transportation
59	Kristina Louise Earley
61	T.M. Stone & Amanda C. Stone
62	Larry D. & Mary A. Huggins
64	P&P Fujimo, LLC
66	Jordan Ray Stackpole
67	The Pine Grove Public Library, Inc.
71	Robert Leroy Edgell
72	Robert Leroy Edgell
74	Cheryl J. Haywood Supplemental Needs Trust
75	CNX Gas Company, LLC
76	Kimble White, et al
77	H3, LLC
78	Bounty Minerals, LLC
79	Betty M. Prine
80	American Heart Association, Inc.
81	A.H. Low, et ux
82	EQT Production Company
85	Robert Barry Myers, Jr.
86	Antero Minerals, LLC
87	Robert Barry Myers, Jr.
88	Aunix Energy, LLC

ID	TM-Par	Owner	Bk/Pg	Acres
A	14-9	Dallison Lumber, Inc.	474/290	25.00
B	14-12	Freeda M. Brown	W79/104	70.06
C	14-10	Sandra Jane Fortney	446/700	61.78
D	14-15.1	Community Sportsman's Club of Pine Grove	210/63	82.00
E	11-26	Keith E. & Rebecca K. Rush	426/789	105.95
F	11-35	Allen Byard Jr.	282/18	12.50
G	1-1	Allen S. Jr. & Beverly S. Byard	419/163	3.00
H	11-40	Michael J. Scyoc	341/102	22.09
I	1-8	Rachel Wyatt	488/886	0.32
J	1-9	Paul C. Tallman, Jr.	W84/612	0.81
K	11-41	Paul C. Tallman, Jr.	W84/612	1.00
L	1-10	Mary Pyles	398/604	0.47
M	1-38	Cindie Conley	492/642	0.66
N	1-44	Cindie Conley	492/642	0.27
O	1-45	James L. & Nila L. Smith	233/339	0.55
P	1-50	Sharon Ann McCoy	W67/221	0.13
Q	1-52	Kenneth D. & Janet Nice	359/413	0.28
R	1-54.1	William C. & Jennifer J. Barker	309/15	0.08
S	1-54	William C. & Jennifer J. Barker	309/15	0.41
T	1-53	Debra L. Thomas	397/526	0.23
U	1-56	William C. & Jennifer J. Barker	455/181	0.15
V	1-56.2	William C. & Jennifer J. Barker	455/181	0.17
W	1-56.1	William C. & Jennifer J. Barker	455/181	0.15
X	1-56.3	William C. & Jennifer J. Barker	455/181	0.14
Y	1-57	David A. Pelikan	408/356	0.17
Z	1-60	Richard E. & Karen J. Palmer	384/687	0.11
AA	1-58	Jason A. Snider	W96/691	0.11
AB	1-59	Richard E. & Karen J. Palmer	390/12	0.17
AC	1-59.1	Palmer Funeral Home, Inc.	377/158	0.16
AD	1-27	Scott R. Adams	410/184	0.50
AE	1-28.2	Paul C. Tallman, Jr.	W84/612	0.11
AF	1-28.1	American Legion Benton M. Lowe Post 81	347/540	0.39
AG	1-76	Thomas R. & Deborah S. Fluharty	410/856	0.15
AH	1-77.1	Chapel of Victory Church	395/13	0.01
AI	1-77	Chapel of Victory Church	395/13	0.11
AJ	1-78	Chapel of Victory Church	395/11	0.08
AK	1-79	Town of Pine Grove	281/137	0.08
AL	1-94.1	Richard D. Jr. & Joanne Chapple	373/116	0.12
AM	1-94	Richard D. Jr. & Joanne Chapple	373/116	0.21
AN	1-95	Joshua R. Bates	475/352	0.05
AO	1-96	Karen S. Kinkade & Perry L. Adams	347/660	0.05
AP	1-97	Lisa Van Dyne Supplemental Needs Trust	485/701	0.04
AQ	1-98	Darren Phillip Brown	423/415	0.05
AR	1-98.1	Lisa Van Dyne Supplemental Needs Trust	485/701	0.01
AS	1-94.2	Darren Phillip Brown	423/415	0.01
AT	1-99	Darren Phillip Brown	423/415	0.07
AU	1-100	M.E. Church	102/29	0.11
AV	1-89	Deetta L. Sell	237/92	3.00
AW	2-70	Edgar Shrum, Jr. & Logan Shrum	483/201	0.11
AX	2-71	Weidon P. Williams	454/191	0.14
AY	2-72	Lawrence K. & Tabatha L. Mason	412/302	0.04
AZ	2-78	Wetzel County BOE	---/---	3.00
BA	2-79	Wetzel County BOE	453/295	0.17
BB	2-140	Kristina Louise Earley	402/516	0.48
BC	3-69	Connie I. & Stephen C. Nixon, Sr.	436/72	0.52
BD	2-165	Pine Grove Public Library, Inc.	424/777	0.13
BE	2-170	Pine Grove Public Library, Inc.	431/393	0.15
BF	2-171	Shari Ann Letterman	383/376	0.13
BG	2-172	Shari Ann Letterman	383/376	0.39
BH	2-173	Shari Ann Letterman	383/376	0.70
BI	2-174	State Highway Commission	---/---	1.06
BJ	16-8	Dominion Gathering & Processing, Inc.	460/781	572.05
BK	16-8.3	CNG Transmission Corporation	106/445	0.15
BL	16-8.2	Consolidated Gas Transmission Corp.	123/412	6.80
BM	21-4.1	Eureka Hunter Land, LLC	431/771	258.75

FILE NO: 151-34-G-23
DRAWING NO: Shenango 1H Well Plat
SCALE: 1" = 2000'
MINIMUM DEGREE OF ACCURACY:
Submeter
PROVEN SOURCE OF ELEVATION:
WVDOT, Harrisville, WV

STATE OF WEST VIRGINIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
OIL AND GAS DIVISION

DATE: July 10 20 24
OPERATOR'S WELL NO. Shenango 1H
API WELL NO
47 - 103 - 03658
STATE COUNTY PERMIT

WELL TYPE: OIL GAS LIQUID INJECTION WASTE DISPOSAL
(IF GAS) PRODUCTION: STORAGE DEEP SHALLOW
LOCATION: ELEVATION: As-Built 1,160.7' WATERSHED: Fishing Creek QUADRANGLE: Pine Grove
DISTRICT: Green, Grant, Pine Grove Corp. COUNTY: Wetzel
SURFACE OWNER: Dallison Lumber Inc. ACREAGE: 25
ROYALTY OWNER: Robert Barry Myers, Jr. LEASE NO: ACREAGE: 25
PROPOSED WORK: DRILL CONVERT DRILL DEEPER FRACTURE OR STIMULATE PLUG OFF OLD FORMATION
 PERFORATE NEW FORMATION OTHER PHYSICAL CHANGE IN WELL (SPECIFY) BHL MOD 7,600' TVD
 PLUG AND ABANDON CLEAN OUT AND REPLUG TARGET FORMATION: Marcellus Shale ESTIMATED DEPTH: 29,000' MD

WELL OPERATOR: Antero Resources Corporation DESIGNATED AGENT: Kevin Ellis
ADDRESS: 1615 Wynkoop Street ADDRESS: 535 White Oaks 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)

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Grantor, lessor, etc.	Grantee, lessee, etc.	Royalty	Book/Page
85: Robert Barry Myers, Jr. Lease Robert Barry Myers, Jr.	Antero Resources Corporation	1/8+	300A/0634
88: Aunix Energy, LLC Lease AUnix Energy, LLC	Antero Resources Corporation	1/8+	305A/0014
87: Robert Barry Myers, Jr. Lease Robert Barry Myers, Jr.	Antero Resources Corporation	1/8+	304A/0413
86: Antero Minerals, LLC Lease Antero Minerals, LLC	Antero Resources Corporation	1/8+	292A/0739
1: Jay Michael Myers Lease Jay Michael Myers Gastar Exploration USA Inc. Stone Energy Corporation EQT Production Company	Gastar Exploration USA Inc. Stone Energy Corporation EQT Production Company Antero Resources Corporation	1/8 Assignment Assignment Assignment	103A/0277 152A/0521 183A/0305 230A/0783
2: Priscilla M. Grimm Lease Priscilla M. Grimm	Antero Resources Corporation	1/8+	306A/0195
3: Midwest Energy, Inc. Lease Midwest Energy, Inc.	Antero Resources Corporation	1/8+	297A/0395
4: WVDNR Lease WVDNR	Antero Resources Corporation	1/8+	323A/0541
5: F.F. & M. V. Morgan Lease F. F. Morgan & M. V. Morgan South Penn Oil Company Hope Natural Gas Company Consolidated Gas Supply Corporation Consolidated Gas Transmission Corporation CNG Transmission Corporation Eastern States Oil & Gas Inc Blazer Energy Corporation Eastern States Oil & Gas Inc Equitable Production - Eastern States Inc Equitable Production Company EQT Production Company	South Penn Oil Company Hope Natural Gas Company Consolidated Gas Supply Corporation Consolidated Gas Transmission Corporation CNG Transmission Corporation Eastern States Oil & Gas Inc Blazer Energy Corporation Eastern States Oil & Gas Inc Equitable Production - Eastern States Inc Equitable Production Company EQT Production Company Antero Resources Corporation	12.50% Assignment Assignment Assignment Name Change Assignment Name Change Name Change Name Change Name Change Name Change Assignment	0053/0144 028A/0280 0233/0387 066A/0069 0013/0151 076A/0232 0012/0253 0012/0259 0013/0014 0013/0014 0013/0014 230A/0801

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Grantor, lessor, etc.	Grantee, lessee, etc.	Royalty	Book/Page
6: J.W. & Lizzie Morgan Lease			
J. W. Morgan & Lizzie Morgan	South Penn Oil Company	12.50%	0046/0262
South Penn Oil Company	Hope Natural Gas Company	Assignment	009A/0230
Hope Natural Gas Company	Consolidated Gas Supply Corporation	Assignment	0233/0387
Consolidated Gas Supply Corporation	Consolidated Gas Transmission Corporation	Assignment	066A/0069
Consolidated Gas Transmission Corporation	CNG Transmission Corporation	Name Change	0013/0151
CNG Transmission Corporation	Eastern States Oil & Gas Inc	Assignment	076A/0232
Eastern States Oil & Gas Inc	Blazer Energy Corporation	Name Change	0012/0253
Blazer Energy Corporation	Eastern States Oil & Gas Inc	Name Change	0012/0259
Eastern States Oil & Gas Inc	Equitable Production - Eastern States Inc	Name Change	0013/0014
Equitable Production - Eastern States Inc	Equitable Production Company	Name Change	0013/0014
Equitable Production Company	EQT Production Company	Name Change	0013/0014
EQT Production Company	Antero Resources Corporation	Assignment	230A/0801
17: Robert Barry Myers, Jr. Lease			
Robert Barry Myers, Jr.	Antero Resources Corporation	1/8+	343A/0633
4: WVDNR Lease			
WVDNR	Antero Resources Corporation	1/8+	323A/0541
23: Chapel of Victory Lease			
Chapel of Victory	Antero Resources Corporation	1/8+	347A/0187
30: Joshua R. Bates Lease			
Joshua R. Bates	Antero Resources Corporation	1/8+	324A/0329
31: Richard D., Jr. & Joanne Chapple Lease			
Richard D., Jr. & Joanne Chapple	Antero Resources Corporation	1/8+	345A/0167
36: Michael Pellegrino Lease			
Michael Pellegrino	Antero Resources Corporation	1/8+	349A/0685
38: Darren Phillip & Amanda Suzanne Underwood Brown Lease			
Darren Phillip & Amanda Suzanne Underwood Brown	Antero Resources Corporation	1/8	Pooled Tract
31: Richard D., Jr. & Joanne Chapple Lease			
Richard D., Jr. & Joanne Chapple	Antero Resources Corporation	1/8+	345A/0167
4: WVDNR Lease			
WVDNR	Antero Resources Corporation	1/8+	323A/0541
45: Three Rivers Royalty II, LLC Lease			
Three Rivers Royalty II, LLC	CNX Gas Company, LLC	1/8+	293A/0373
CNX Gas Company, LLC	Antero Resources Corporation	Assignment	343A/0487
49: CSX Transportation Lease			
CSX Transportation	Antero Resources Corporation	1/8+	372A/0324

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08/02/2024

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Grantor, lessor, etc.	Grantee, lessee, etc.	Royalty	Book/Page
4: WVDNR Lease WVDNR	Antero Resources Corporation	1/8+	323A/0541
49: CSX Transportation Lease CSX Transportation	Antero Resources Corporation	1/8+	372A/0324
64: P&P Fujimo, LLC Lease P&P Fujimo, LLC	Antero Resources Corporation	1/8+	313A/0566
67: The Pine Grove Public Library, Inc. Lease The Pine Grove Public Library, Inc.	Antero Resources Corporation	1/8+	345A/0767
71: Robert Leroy Edgell Lease Robert Leroy Edgell	Antero Resources Corporation	1/8+	350A/0142
72: Robert Leroy Edgell Lease Robert Leroy Edgell	Antero Resources Corporation	1/8+	350A/0142
74: Cheryl J. Haywood Supplemental Needs Trust Lease Cheryl J. Haywood Supplemental Needs Trust	Antero Resources Corporation	1/8+	360A/0510
61: T.M. Stone & Amanda C. Stone Lease T.M. Stone & Amanda C. Stone South Penn Oil Company Hope Natural Gas Company Consolidated Gas Supply Corporation Consolidated Gas Transmission Corporation CNG Transmission Corporation CNG Development CNG Producing Company Dominion Exploration& Production, Inc Antero Resources Appalachian Corporation Dominion Exploration& Production, Inc CONSOL Gas Company CNX Gas Corporation	South Penn Oil Company Hope Natural Gas Company Consolidated Gas Supply Corporation Consolidated Gas Transmission Corporation CNG Transmission Corporation CNG Development CNG Producing Company Dominion Exploration& Production, Inc Antero Resources Appalachian Corporation Dominion Exploration& Production, Inc CONSOL Gas Company CNX Gas Corporation Antero Resources Corporation	12.50% Assignment Assignment Assignment Name Change Assignment Name Change Name Change Assignment Assignment Name Change Merger Assignment	0046/0270 002A/0299 0233/0387 066A/0069 0013/0151 067A/0453 WVSOS WVSOS 095A/0937 098A/0219 0013/0108 0096/0307 365A/0106
75: CNX Gas Company, LLC Lease CNX Gas Company, LLC	Antero Resources Corporation	1/8+	343A/0498
76: Kimble White, et al Lease Kimble White, et al Hope Natural Gas Company Consolidated Gas Supply Corporation Consolidated Gas Transmission Corporation CNG Transmission Corporation CONSOL Gas Company CNX Gas Company, LLC CNX Gas Company, LLC	Hope Natural Gas Company Consolidated Gas Supply Corporation Consolidated Gas Transmission Corporation CNG Transmission Corporation CONSOL Gas Company CNX Gas Company, LLC Antero Resources Corporation	12.50% Conveyance Conveyance Name Change Merger Merger Assignment	0126/0216 0233/0387 0311/0184 0013/0151 0013/0114 0096/0307 365A/0129

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4: WVDNR Lease WVDNR	Antero Resources Corporation	1/8+	323A/0541
77: H3, LLC Lease H3, LLC	Antero Resources Corporation	1/8+	347A/0174
78: Bounty Minerals, LLC Lease Bounty Minerals, LLC	Antero Resources Corporation	1/8+	329A/0048
79: Betty M. Prine Lease Betty M. Prine	Antero Resources Corporation	1/8+	349A/0788
80: American Heart Association, Inc. Lease American Heart Association, Inc.	Antero Resources Corporation	1/8+	362A/0078
4: WVDNR Lease WVDNR	Antero Resources Corporation	1/8+	323A/0541
81: A.H. Low, et ux Lease A.H. Low, et ux Hope Natural Gas Company Consolidated Gas Supply Corporation Consolidated Gas Transmission Corporation CNG Transmission Corporation Eastern States Oil & Gas Inc Equitable Production - Eastern States Inc Equitable Production Company EQT Production Company	Hope Natural Gas Company Consolidated Gas Supply Corporation Consolidated Gas Transmission Corporation CNG Transmission Corporation Eastern States Oil & Gas Inc Equitable Production - Eastern States Inc Equitable Production Company EQT Production Company Antero Resources Corporation	12.50% Assignment Assignment Merge Assignment Name Change Name Change Name Change Assignment	010A/0423 0233/0387 066A/0069 0013/0151 076A/0232 0013/0014 0013/0014 0013/0014 230A/0801

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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.

*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.

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Lease Name or Number	Grantor, Lessor, etc.	Grantee, Lessee, etc.	Royalty	Book/Page
82: EQT Production Company Lease	EQT Production Company	Antero Resources Corporation	1/8+	230A/0877

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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

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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