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west virginia department of environmental protection

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Office of Oil and Gas  
601 57<sup>th</sup> Street, S.E.  
Charleston, WV 25304  
(304) 926-0450  
fax: (304) 926-0452

Harold D. Ward, Cabinet Secretary  
[www.dep.wv.gov](http://www.dep.wv.gov)

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

ANTERO RESOURCES CORPORATION  
1615 WYNKOOP STREET  
  
DENVER, CO 80202

Re: Permit Modification Approval for Gunto 1H  
47-103-03616-00-00

**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.

A blue ink signature of James A. Martin, written in a cursive style.

James A. Martin  
Chief

Operator's Well Number: Gunto 1H  
Farm Name: Kenneth E & Vicky A VanDyne  
U.S. WELL NUMBER: 47-103-03616-00-00  
Horizontal 6A New Drill  
Date Modification Issued: 12/11/2023

Promoting a healthy environment.

12/15/2023

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

1) Well Operator: Antero Resources Corporation 494507062 103 - Wetzel Green Pine Grove 7.5'  
Operator ID County District Quadrangle

2) Operator's Well Number: Gunto Unit 1H MOD Well Pad Name: Cedar Pad

3) Farm Name/Surface Owner: Dallison Lumber Company Public Road Access: CR 52

4) Elevation, current ground: 1276' Elevation, proposed post-construction: 1248'

5) Well Type (a) Gas  Oil  Underground Storage   
Other

(b) If Gas Shallow  Deep   
Horizontal

6) Existing Pad: Yes or No No

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: 26100' MD

11) Proposed Horizontal Leg Length: 15882'

12) Approximate Fresh Water Strata Depths: 612'

13) Method to Determine Fresh Water Depths: 47103308970000 Offset well records. Depths have been adjusted according to surface elevations.

14) Approximate Saltwater Depths: 2193'

15) Approximate Coal Seam Depths: 1010'

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: \_\_\_\_\_

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*J. May*  
12/16/23

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#	662'	662' ✓	CTS, 690 Cu. Ft.
Coal	9-5/8"	New	J-55	36#	3450'	3450' ✓	CTS, 1405 Cu. Ft.
Intermediate							
Production	5-1/2"	New	P110-ICY	23#	26100'	26100' ✓	CTS, 6769 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			RECEIVED Office of Oil and Gas
Sizes:	N/A			DEC 11 2023
Depths Set:	N/A			WV Department of Environmental Protection

*M. Gog*  
12/16/23

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): 71.85 acres

22) Area to be disturbed for well pad only, less access road (acres): 18.45 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

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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.

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\*Note: Attach additional sheets as needed.

*macy*  
12/16/23

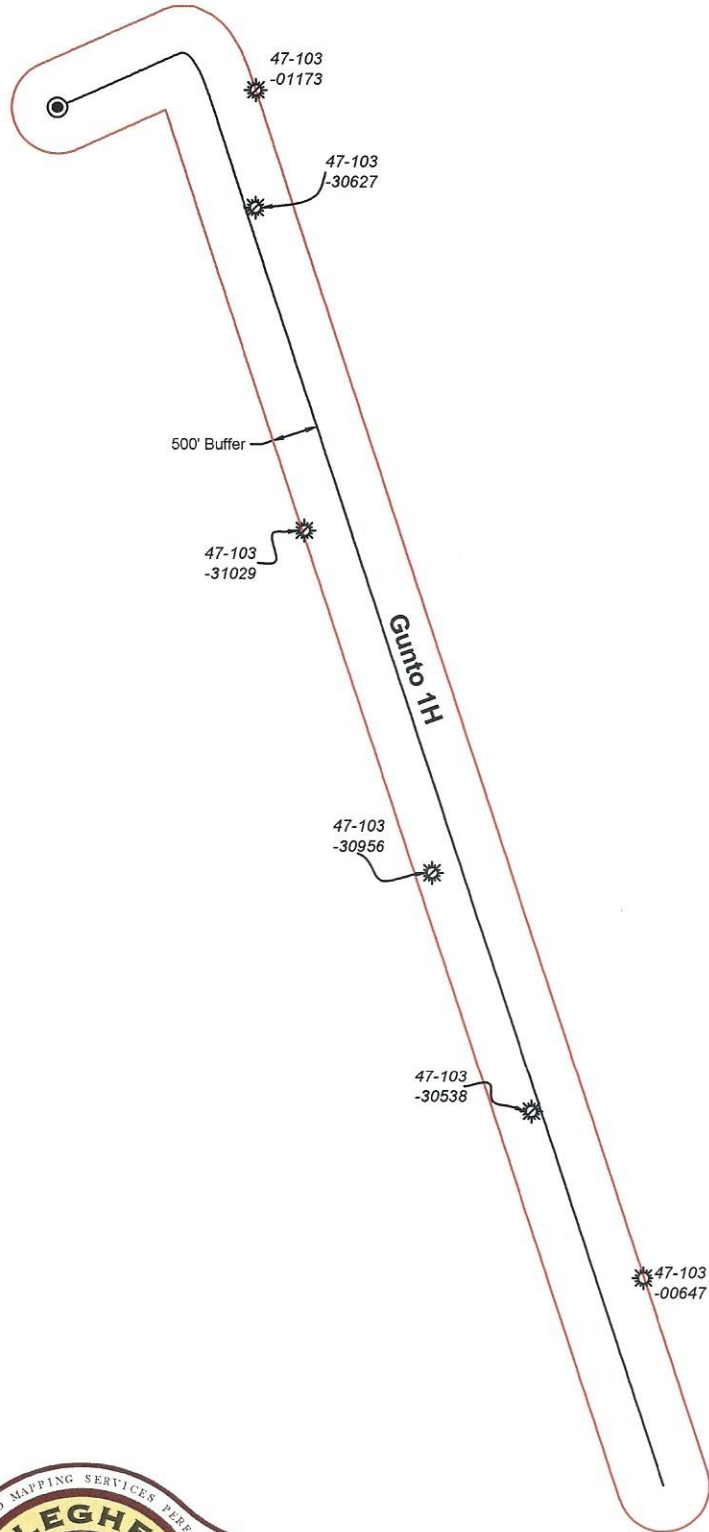
12/15/2023

**LEGEND**

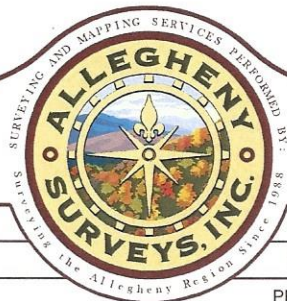
- ⊙ Proposed gas well
- ⊛ Existing Well, as noted
- ⊛ Digitized Well, as noted



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



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

172 Thompson Drive  
Bridgeport, WV 26330

PARTY CHIEF: C. Lynch	DRAWN BY: J. Smith
RESEARCH: J. Miller	PREPARED: October 23, 2023
SURVEYED: Dec. 2016	PROJECT NO: 123-34-G-18
FIELD CREW: C.L., K.M.	DRAWING NO: Gunto 1H AOR

Sheet 1 of 1



Scale: 1 inch = 2000 feet

12/15/2023

UWI (API Num)	Well Name	Well Number	Operator	Historical Operator	TD	Perforated Interval (shallowest, deepest)	Perforated Formation(s)	Producible Formation(s) not perf'd
47103011730000	K MORGAN	1739	A V CO INC	A V CO INC	2,815		Hamshire Group	Weir, Berea, Benson, Alexander
47103306270000	J U MILLER	5496	UNKNOWN	UNKNOWN	2,649		Gordon	Weir, Berea, Benson, Alexander
47103310290000	J B PRICE	1964	HOPE NATURAL GAS	HOPE NATURAL GAS	3,057		Big Injun, Gordon	Weir, Berea, Benson, Alexander
47103309560000	THOMAS CUNNINGHAM	3915	HOPE NATURAL GAS	HOPE NATURAL GAS	3,106		Mahoning, 2nd Salt, Big Injun, Gordon	Weir, Berea, Benson, Alexander
47103305380000	V B CUNNINGHAM 1	4376	UNKNOWN	UNKNOWN	2,764		Hamshire Group	Weir, Berea, Benson, Alexander
47103006470000	T CUNNINGHAM	5	DIVERSIFIED PRODUCTION LLC	CONSOL GAS SUPPLY CRP	2,593		Hamshire Group	Weir, Berea, Benson, Alexander

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NOV 27 2023

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12/15/2023

Antero Resources Corporation  
**No. Gunto 1H  
 3HL MOD**

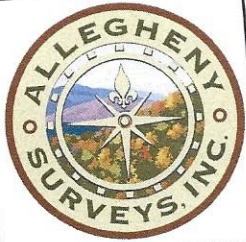
Page 1 of 2

Proposed Well  
 No. Gunto  
 Unit 1H

6,538' to Bottom Hole  
 1,552' to Top Hole  
**TOP HOLE LATITUDE 39 - 35 - 00**  
**BTM HOLE LATITUDE 39 - 32 - 30**

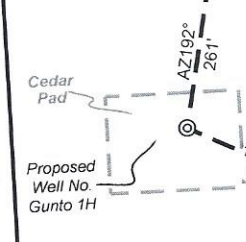
Notes  
 West Virginia Coordinate System  
 of 1927, North Zone  
 based upon Differential GPS Measurements.  
 Well No. Gunto Unit 1H Top Hole coordinates are  
 N: 391,164.17' Longitude: 80°34'03.46"  
 E: 1,657,813.37' Longitude: 80°42'49.82"  
 Bottom Hole coordinates are  
 N: 376,204.38' Longitude: 80°31'36.48"  
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 UTM Zone 17, NAD 1983  
 Top Hole Coordinates Bottom Hole Coordinates  
 N: 4,379,817.904m N: 4,375,293.716m  
 E: 524,595.341m E: 526,671.837m  
 Plat orientation and corner and well references  
 are based upon the grid north meridian.  
 Well location references are based upon the magnetic  
 meridian.

**TOP HOLE LONGITUDE 80 - 42 - 30**  
**BTM HOLE LONGITUDE 80 - 40 - 00**  
 5,721' to Top Hole  
 5,416' to Bottom Hole



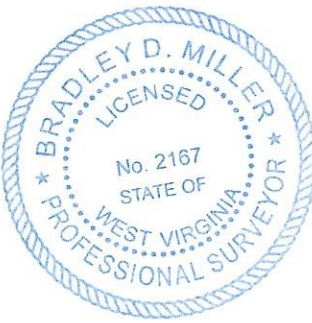
Well Location References

Not To Scale



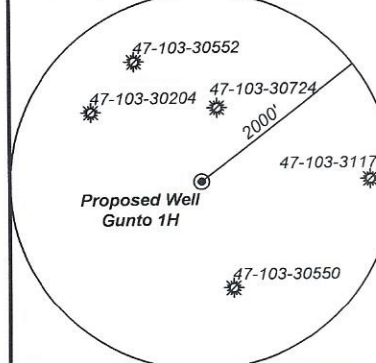
I, the undersigned, hereby certify that this  
 plat is correct to the best of my  
 knowledge and belief and shows all the  
 information required by law and the rules  
 issued and prescribed by the  
 Department of Environmental Protection.

Bradley D. Miller, P.S. 2167



SEAL

Note: 0 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.

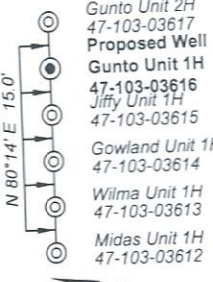


	Bearing	Dist.
L1	N 83°21' E	1,624.7'
L2	N 45°51' W	2,716.0'
L3	N 07°41' W	2,509.7'
L4	N 17°07' E	2,446.0'
L5	N 85°09' E	1,648.8'

- 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.)

Notes:  
 Well No. Gunto Unit 1H  
 UTM Zone 17, NAD 1927  
 Top Hole Coordinates  
 N: 14,368,736.90'  
 E: 1,721,061.34'  
 Point of Entry Coordinates  
 N: 14,368,903.85'  
 E: 1,722,701.16'  
 Bottom Hole Coordinates  
 N: 14,353,893.75'  
 E: 1,727,874.45'

Wellhead Layout (NTS)



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

DATE: November 16 2023  
 OPERATOR'S WELL NO. Gunto 1H  
 API WELL NO  
47 - 103 - 03616  
 STATE COUNTY PERMIT

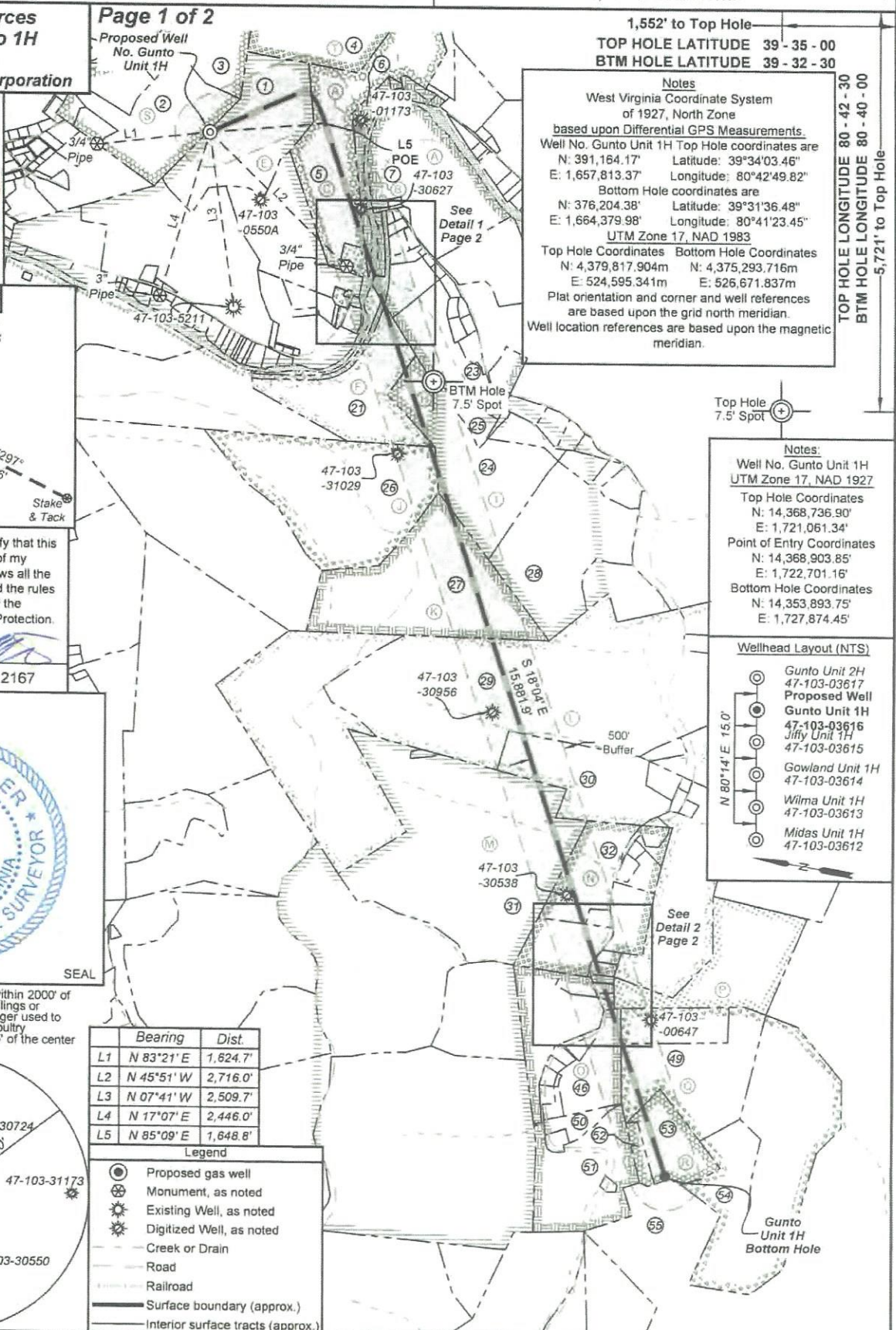
WELL TYPE:  OIL  GAS  LIQUID INJECTION  WASTE DISPOSAL  
 (IF GAS) PRODUCTION:  STORAGE  DEEP  SHALLOW

LOCATION: ELEVATION: Proposed: 1,248' WATERSHED: Fishing Creek QUADRANGLE: 12/15/2023  
 DISTRICT: Green Dallison Lumber COUNTY: Wetzel  
 SURFACE OWNER: Company ACREAGE: 51.5  
 ROYALTY OWNER: Jenkins Miller LEASE NO: \_\_\_\_\_ ACREAGE: 200  
 PROPOSED WORK:  DRILL  CONVERT  DRILL DEEPER  FRACTURE OR STIMULATE  PLUG OFF OLD FORMATION  
 PERFORATE NEW FORMATION  OTHER PHYSICAL CHANGE IN WELL (SPECIFY) BHL MOD  
 PLUG AND ABANDON  CLEAN OUT AND REPLUG TARGET FORMATION: Marcellus Shale ESTIMATED DEPTH: 7,600' TVD  
26,100' MD

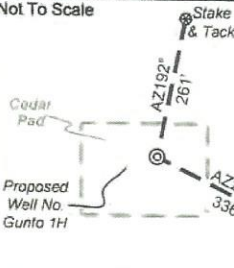
WELL OPERATOR: Antero Resources Corporation DESIGNATED AGENT: Kevin Ellis  
 ADDRESS: 1615 Wynkoop Street ADDRESS: 535 White Oaks Blvd  
Denver, CO 80202 Bridgeport, WV 26330

**Antero Resources**  
**Well No. Gunto 1H**  
**BHL MOD**  
**Antero Resources Corporation**

Page 1 of 2

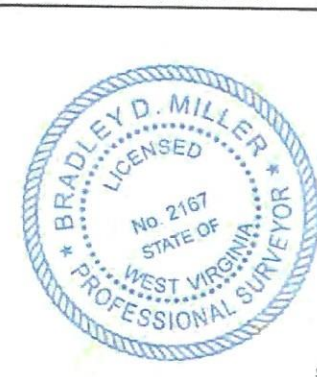


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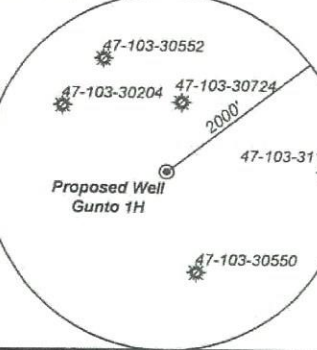


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*Bradley D. Miller*  
 Bradley D. Miller, P.S. 2167



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- Wellhead Layout (NTS)**
- Gunto Unit 2H 47-103-03617
  - Proposed Well Gunto Unit 1H 47-103-03616
  - Jiffy Unit 1H 47-103-03615
  - Gowland Unit 1H 47-103-03614
  - Wilma Unit 1H 47-103-03613
  - Midas Unit 1H 47-103-03612

FILE NO: 123-34-G-18  
 DRAWING NO: Gunto 1H BHL MOD Plat  
 SCALE: 1" = 2000'  
 MINIMUM DEGREE OF ACCURACY: Submeter  
 PROVEN SOURCE OF ELEVATION: WVDOT, Harrisville, WV

**STATE OF WEST VIRGINIA**  
 DEPARTMENT OF ENVIRONMENTAL PROTECTION  
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*SM*



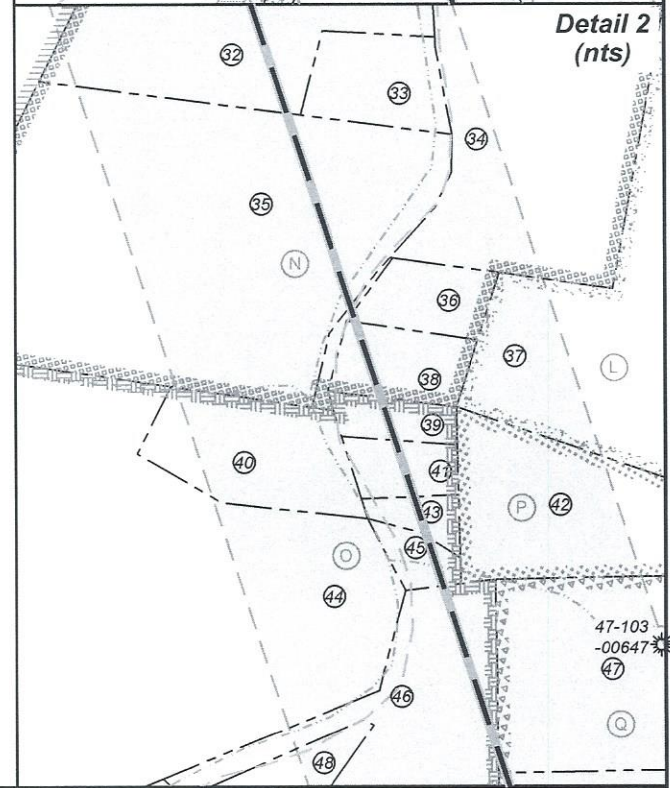
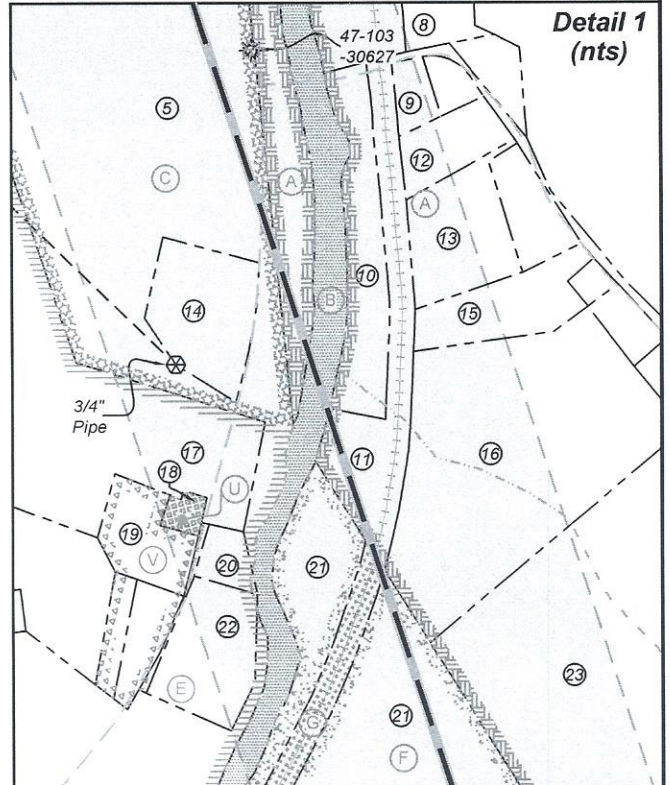
**Antero Resources  
Well No. Gunto 1H  
BHL MOD  
Antero Resources Corporation**



Page 2 of 2

Leases					
A	Chesapeake Appalachia, LLC	I	Three Rivers Royalty II, LLC	P	George H. & A. A. Umstead
B	WVDNR	J	Jeffrey T. Hayes	Q	T.M. Cunningham, et ux
C	Eddie D. Dallison	K	Tribune Resources Minerals, LLC	R	Clay D.C. Dallison, et al
E	Jenkins Miller	L	Thomas Cunningham, et ux	S	Antero Minerals, LLC
F	Coastal Forest Resources Co.	M	Shiben Estates Inc.	T	James E. Coen
G	CSX Transportation, Inc.	N	BRC Appalachian Minerals I, LLC	U	Albert J. Moore, et ux, et al
H	Chesapeake Appalachia, LLC	O	Shiben Estates Inc.	V	J.B. Holtzclaw

ID	TM-Par	Owner	Bk/Pg	Acres
1	14-19	Dallison Lumber Company	357/267	51.50
2	13-40	Kenneth E. & Vicky A. VanDyne	357/204	42.33
3	13-26.7	John M. & Stanley D. Pittman	458/837	55.00
4	14-16	Antero Midstream, LLC	491/484	54.00
5	14-20	Dallison Lumber Co.	357/270	109.91
6	14-21	Dominion Gathering & Processing, Inc.	460/781	3.20
7	14-36	Dominion Gathering & Processing, Inc.	460/781	57.41
8	14-64	Kathy Sue Phillips	436/126	0.50
9	14-64.13	Andrew C. Brown, Sr.	424/774	0.34
10	14-64.16	Kathy Sue Phillips	364/667	3.00
11	14-64.11	Clara M. Haught	462/594	25.26
12	14-64.12	Jaclyn S. Lively	M98/648	0.99
13	14-64.9	Timothy & Kimberly Bates Revocable Trust	486/525	1.84
14	14-20.1	David A. Burtrand, et al	435/879	2.00
15	14-64.8	Sandra J. Fortney	295/301	1.64
16	14-64.10	Clara M. Haught	462/594	8.33
17	14-34	Dearld T. Mason	292/646	41.00
18	14-44	Barbara Jo Leek, et al	360/141	0.25
19	14-43	Melvin G. Leek	397/499	0.60
20	14-63	Melvin G. Leek	397/499	0.50
21	17-10	Coastal Forest Resources	444/105	90.00
22	14-62	Brian Lowe	427/299	2.00
23	14-64.11	Clara M. Haught	462/594	25.26
24	18-2.1	Heath L. Tennant	404/26	56.85
25	18-2.10	Michael & Cheryl Adams	350/398	5.08
26	17-21	Pauline E. Hayes	420/626	83.30
27	17-32	Pauline E. Hayes	420/626	79.25
28	18-2.7	Howard B. & Roxie J. Rice	335/520	67.70
29	18-4	Barbara D. Cunningham	291/112	212.80
30	18-6	Barbara D. Cunningham	291/112	56.80
31	17-51	Linda K. Ice & Harry G. Witcherman Jr.	WB66/545	156.00
32	18-8	Linda K. Ice & Harry G. Wichterman Jr.	W66/545	23.40
33	18-8.9	Linda Ice Long	431/249	1.75
34	18-8.2	Harry Glenn Wichterman, Jr.	437/425	13.35
35	21-24	Linda Ice Long	431/249	17.95
36	21-23	Harry Glenn Wichterman	429/560	1.24
37	18-9	Gordon F. Yost, et al	405/237	74.47
38	21-22	Harry Glenn Wichterman	429/558	1.40
39	21-2	David L. Haught & Tammy L. Watson	378/684	0.90
40	21-1	Lucile Olga Noland, et al	157/348	3.30
41	21-5.1	David L. & Patricia L. Haught	249/274	1.02
42	21-3	Dallison Lumber	419/596	50.00
43	21-5.2	David L. & Patricia L. Haught	249/274	0.50
44	21-4	Michael & Janet Miller	282/45	23.06
45	21-5	Olga Lucille Nolan	260/264	1.00
46	21-7	Francis & Patricia Fluharty	436/793	14.14
47	21-6	Olga Lucille Nolan	260/264	18.20
48	21-7.5	Kelly L. Fluharty	431/816	1.50
49	21-8	Coastal Forest Resources Co.	444/105	60.70
50	21-7.7	Robert & Gloria Fluharty	436/808	5.44
51	21-9	Kyle R. & Lauren Fluharty	439/308	45.90
52	21-11	Unknown	---/---	6.8
53	21-12	Dallison Lumber Co.	372/1	21.72
54	21-13	Coastal Forest Resources Co.	444/105	27.70
55	21-3	State of WV	207/239	5228.5



FILE NO: 123-34-G-18  
DRAWING NO: Gunto 1H BHL MOD 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: November 16 2023  
OPERATOR'S WELL NO. Gunto 1H  
API WELL NO  
47 - 103 - 03616  
STATE COUNTY PERMIT

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

LOCATION: ELEVATION: Proposed: 1,248' WATERSHED: Fishing Creek QUADRANGLE: Pine Grove  
DISTRICT: Green Dallison Lumber COMPANY COUNTY: Wetzell  
SURFACE OWNER: Company ACREAGE: 51.5  
ROYALTY OWNER: Jenkins Miller LEASE NO: ACREAGE: 200

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: 26,100' 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)

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><u>E: Jenkins Miller Lease</u></b>			
Jenkins Miller	Hope Natural Gas Company	1/8	0107/0056
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	Eastern States Oil & Gas Inc.	Assignment	076A/0232
Eastern States Oil & Gas Inc.	Blazer Energy Corp.	Merger	0012/0253
Blazer Energy Corp.	Eastern States Oil & Gas Inc.	Name Change	0012/0259
Eastern States Oil & Gas Inc.	Equitable Production – Eastern States Inc.	Name Change	WVSOS
Equitable Production – Eastern States Inc.	Appalachian Natural Gas Trust	Assignment	079A/0244
Appalachian Natural Gas Trust	EQT Production Company	Merger	0096/0505
EQT Production Company	Antero Resources Corporation	Assignment	230A/0801
<b><u>C: Eddie D. Dallison Lease</u></b>			
Eddie D. Dallison	Antero Resources Corporation	1/8+	307A/0447
<b><u>A: Chesapeake Appalachia, LLC Lease</u></b>			
Chesapeake Appalachia, LLC	SWN Production Company LLC	1/8	157A/0640
SWN Production Company LLC	Antero Exchange Properties LLC	Assignment	177A/0533
Antero Exchange Properties LLC	Antero Resources Corporation	Merger	0013/0311
<b><u>B: WVDNR Lease</u></b>			
WVDNR	Antero Resources Corporation	1/8+	323A/0541
<b><u>A: Chesapeake Appalachia, LLC Lease</u></b>			
Chesapeake Appalachia, LLC	SWN Production Company LLC	1/8	157A/0640
SWN Production Company LLC	Antero Exchange Properties LLC	Assignment	177A/0533
Antero Exchange Properties LLC	Antero Resources Corporation	Merger	0013/0311
<b><u>G: CSX Transportation, Inc. Lease</u></b>			
CSX Transportation, Inc.	Antero Resources Corporation	1/8+	275A/0895
<b><u>F: Coastal Forest Resources Co. Lease</u></b>			
Coastal Forest Resources Co.	Antero Resources Corporation	1/8+	273A/0764
<b><u>H: Chesapeake Appalachia, LLC Lease</u></b>			
Chesapeake Appalachia, LLC	SWN Production Company LLC	1/8	157A/0640
SWN Production Company LLC	Antero Exchange Properties LLC	Assignment	177A/0533
Antero Exchange Properties LLC	Antero Resources Corporation	Merger	0013/0311
<b><u>F: Coastal Forest Resources Co. Lease</u></b>			
Coastal Forest Resources Co.	Antero Resources Corporation	1/8	273A/0764
<b><u>J: Jeffrey T. Hayes Lease</u></b>			
Jeffrey T. Hayes	Antero Resources Corporation	1/8+	327A/0836
<b><u>I: Three Rivers Royalty II, LLC Lease</u></b>			
Three Rivers Royalty II, LLC	CNX Gas Company LLC	1/8+	293A/0373
CNX Gas Company LLC	Antero Resources Corporation	Assignment	300A/0159

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WV Department of  
Environmental Protection

12/15/2023

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Grantor, lessor, etc.	Grantee, lessee, etc.	Royalty	Book/Page
<b><u>K: Tribune Resources Minerals, LLC Lease</u></b> Tribune Resources Minerals, LLC	Antero Resources Corporation	1/8+	218A/0794
<b><u>L: Thomas Cunningham, et ux Lease</u></b> Thomas Cunningham, et ux L.G. Robinson South Penn Oil 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	L.G. Robinson South Penn Oil 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	1/8 Assignment Assignment Assignment Assignment Name Change Assignment Name Change Merge Name Change Assignment	0048/0569 0049/0659 009A/0230 0233/0387 066A/0069 0013/0151 076A/0232 0013/0014 0013/0014 0013/0014 230A/0801
<b><u>M: Shiben Estates Inc. Lease</u></b> Shiben Estates Inc.	Antero Resources Corporation	1/8+	197A/0825
<b><u>N: BRC Appalachian Minerals I, LLC Lease</u></b> BRC Appalachian Minerals I, LLC BRC Working Interest Company Chesapeake Appalachia LLC SWN Production Company Antero Exchange Properties LLC	BRC Working Interest Company Chesapeake Appalachia LLC SWN Production Company Antero Exchange Properties LLC Antero Resources Corporation	1/8 Assignment Assignment Assignment Merge	102A/0505 103A/0470 157A/0540 177A/0533 0013/0311
<b><u>O: Shiben Estates Inc. Lease</u></b> Shiben Estates Inc.	Antero Resources Corporation	1/8+	202A/0234
<b><u>Q: T.M. Cunningham, et ux Lease</u></b> T.M. Cunningham M.A. Brast 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 Corp. Equitable Production – Eastern States Inc. Equitable Production Company EQT Production Company	M.A. Brast 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 Corp. Equitable Production – Eastern States Inc. Equitable Production Company EQT Production Company Antero Resources Corporation	1/8 Assignment Assignment Assignment Assignment Merge Assignment Name Change Name Change Name Change Merge Assignment	0049/0222 0053/0262 009A/0230 0233/0387 066A/0069 0013/0151 076A/0232 0012/0253 0013/0014 0013/0014 0013/0014 230A/0801

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WV Department of Environmental Protection

\*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.

12/15/2023

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Chapter 22, Article 6A, Section 5(a)(5)  
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Lease Name or Number	Grantor, Lessor, etc.	Grantee, Lessee, etc.	Royalty	Book/Page
<u>R: Clay D.C. Dallison, et al Lease</u>	Clay D.C. Dallison, et al	Antero Resources Corporation	1/8+	309A/0429

\*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.

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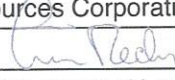
**Acknowledgement of Possible Permitting/Approval  
In Addition to the Office of Oil and Gas**

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



November 21, 2023

Antero Resources  
1615 Wynkoop Street  
Denver, CO 80202  
Office 303.357.7310  
Fax 303.357.7315

West Virginia Department of Environmental Protection  
Office of Oil and Gas  
Attn: Mr. Taylor Brewer  
601 57<sup>th</sup> Street  
Charleston, WV 25304

Mr. Brewer:

Antero Resources Corporation (Antero) would like to submit the following permit modifications for approved well on the existing Cedar Pad; Gunto Unit 1H & 2H (47-103-03616, 47-103-03617).

Attached you will find the following:

- Revised Forms WW-6B
- Revised Forms WW-6A1
- Revised Mylar Plats
- AORs

CK# 4025744  
\$7500<sup>00</sup>  
11/14/2023

If you have any questions please feel free to contact me at (303) 357-7182.

Thank you in advance for your consideration.

Sincerely,

A handwritten signature in blue ink that reads "Mallory Stanton". The signature is written in a cursive style.

Mallory Stanton  
Permitting Manager  
Antero Resources Corporation

Enclosures

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