

#### 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, March 21, 2022 PERMIT MODIFICATION APPROVAL Horizontal 6A / New Drill

ANTERO RESOURCES CORPORATION 1615 WYNKOOP STREET

DENVER, CO 80202

Permit Modification Approval for MULE UNIT 1H Re:

47-017-06916-00-00

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.

Operator's Well Number: MULE UNIT 1H

Farm Name: ANTERO MIDSTREAM, LLC

U.S. WELL NUMBER: 47-017-06916-00-00

Date Modification Issued: 3/21/2022

Promoting a healthy environment.

Horizontal 6A New Drill

API NO. 47-017	. 06916 N	AOD •	
<b>OPERATOR WEL</b>	L NO.	Mule Unit 1H	
Well Pad Name	• Gaspa	ır	-

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

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10/2022
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WW-6B	
(04/15)	

API NO. 47- 017 - 08916 MOD

OPERATOR WELL NO. Mule Unit 1H .

Well Pad Name: Gaspar .

18)

### **CASING AND TUBING PROGRAM**

ТҮРЕ	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#	100'	100' .	CTS, 79 Cu. Ft.
Fresh Water	10-3/4"	New	J/K-55	40.4#	300	300'	CTS, 164 Cu. Ft.
Coal	7-5/8"	New	P-110CY	26.4#	2500'	2500'	CTS, 698Cu. Ft.
Intermediate							
Production	5"	New	P-110 CY	18#	20400'	20400 .	CTS, 2023Cu. Ft
Tubing	2-3/8"	New	N-80	4.7#			
Liners							

50W 3(10/2022

ТҮРЕ	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		

WW-6B (10/14)

API NO. 47-017 - 06916 MOD

OPERATOR WELL NO. Mule Unit 1H

Well Pad Name: Gaspar

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): 48.38 acres
- 22) Area to be disturbed for well pad only, less access road (acres): 8.32 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:

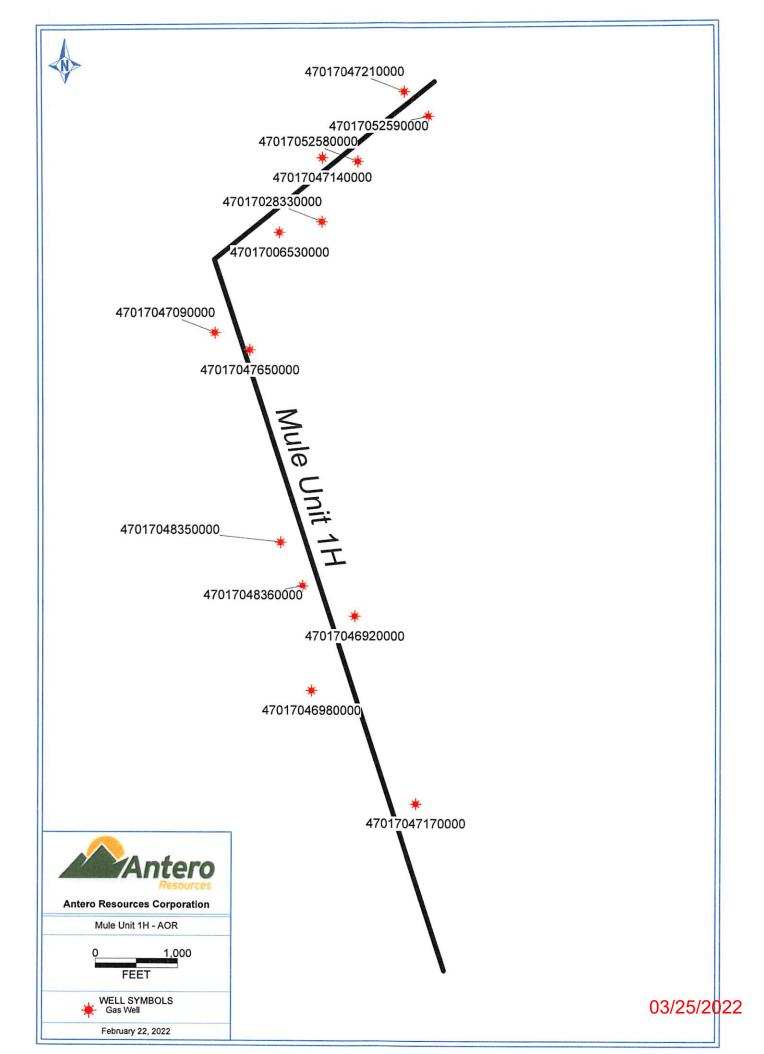
Conductor: blowhole clean with air, run casing, 10 bbls fresh water.

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.

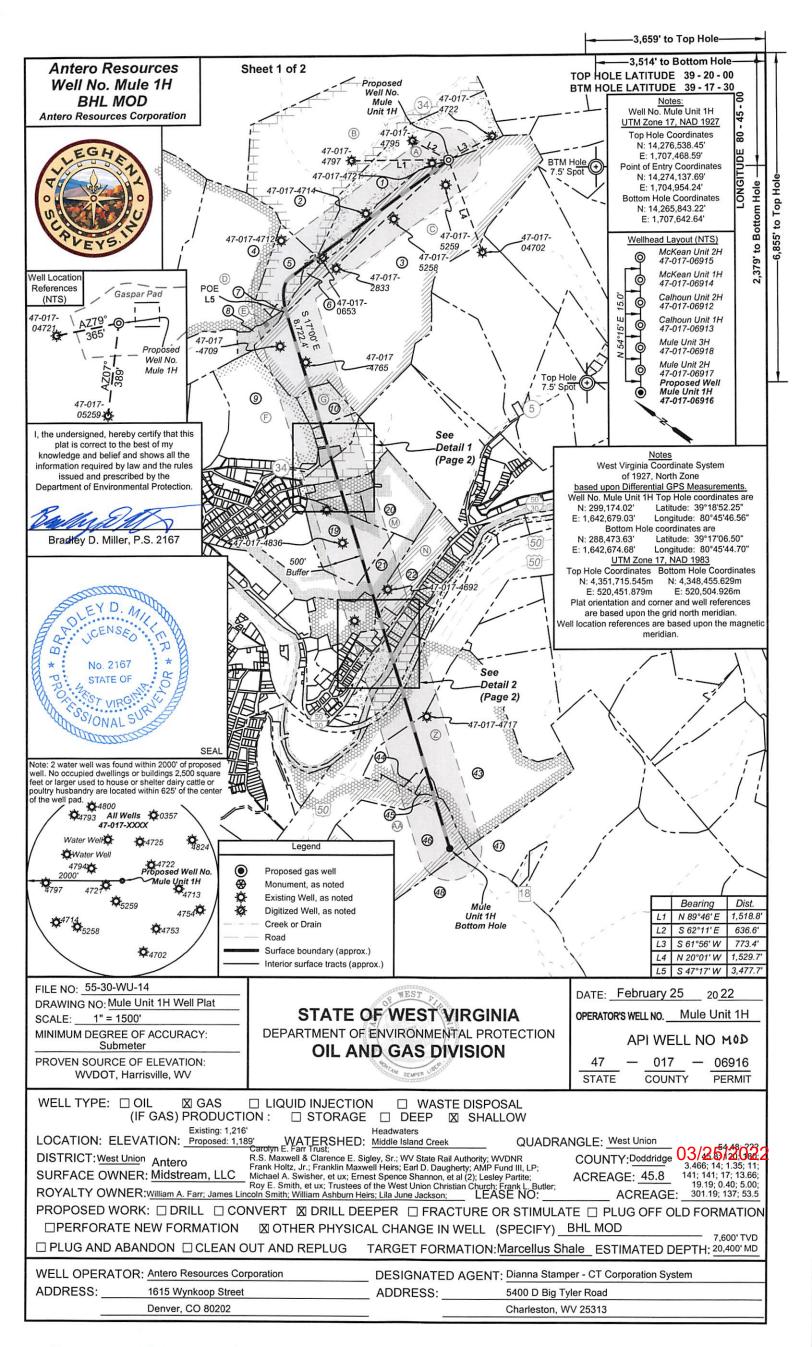
Intermediate: blowhole clean with air, trip to surface casing shoe, trip to bottom, blowhole clean with air, trip out, run casing, circulate 40 bbls brine water followed by 10 bbls fresh water and 25 bbls bentonite mud, pump 10 bbls fresh water.

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.

<sup>\*</sup>Note: Attach additional sheets as needed.



UWI (APINum)	Well Name	Well Number	Operator	Historical Operator	TD	Perforated Interval (shallowest, deepest)	Perforated Formation(s)	Producible Formation(s) not perf'd
47017052590000	J SMITH	5	ANTERO RESOURCES CORPORATION	SPENCER ENTERPRISES	2,966	2078 - 2766	Greenbrier, Big Injun, Gordon	Warren, Speechly, Balltown, Riley, Benson
47017047210000	FARR	2	KEY OIL CO	KEY OIL CO	5,630	3524 - 5481	Warren, Speechley, Balltown, Riley, Benson, Alexander	Gordon, Berea
47017052580000	J SMITH	4	ANTERO RESOURCES CORPORATION	SPENCER ENTERPRISES	2,818	1992 - 2712	Greenbrier, Big Injun, Gordon	Alexander, Berea
47017047140000	FARR	1	KEY OIL CO	KEY OIL CO	5,497	3439 - 5391	Warren, Speechley, Balltown, Riley, Benson, Alexander	Gordon, Berea
47017028330000	J SMITH	1	SPENCER ENTERPRISES	SPENCER HUGH K ET AL	2,500	Unknown	Unknown	Unknown
47017006530000	SUMMERS & SMITH	1	OLE COLONY DEV	OLE COLONY DEV	1,973	Unknown	Salt Sands, Big Injun	Alexander, Gordon, Berea
47017047090000	SMITH-SUMMERS	2	KEY OIL CO	KEY OIL CO	5,303	3230 - 5170	Warren, Speechley, Balltown, Riley, Benson, Alexander	Gordon, Berea
47017047650000	SMITH J	1	SPENCER ENTERPRISES	SPENCER ENTERPRISES	3,008	1994 - 2700	Big Injun, Gordon	Alexander, Berea
47017048350000	DAVIS	1	KEY OIL CO	KEY OIL CO	5,343	3243 - 5189	Warren, Speechley, Balltown, Riley, Benson, Alexander	Gordon, Berea
47017048360000	DAVIS	2	KEY OIL CO	KEY OIL CO	2,827	1963 - 2730	Keener, Big Injun, Squaw, Gordon	Alexander, Berea
47017046920000	LONGACRE	1	KEY OIL CO	KEY OIL CO	5,363	3238 - 5217	Warren, Speechley, Balltown, Riley, Benson, Alexander	Gordon, Berea
47017046980000	HOLTZ	2	KEY OIL CO	KEY OIL CO	2,763	1910 - 2602	Big Injun, Keener, Squaw, Gordon	Alexander, Berea
47017047170000	MAXWELL/FARR	5	BERRY ENERGY INC	ALPHA OIL & GAS CO	2,823	1847 - 2574	Maxton, Big Injun, Gordon	Alexander, Berea



### Antero Resources Well No. Mule 1H **BHL MOD**

Antero Resources Corporation



Sheet	2	of	

	Lea	ses	
Α	William A. Farr	0	Frank Holtz Jr.
В	William Ashburn Heirs	Р	Winston Love Family Trust
С	James Lincoln Smith	Q	Cherly Lynn Hall
D	G. Frank Ash, et al	R	James P. Pierce
E	Lila June Jackson	S	Earl D. Daugherty
F	John F. Curran, II	T	Franklin Maxwell Heirs
G	Roy E. Smith, et ux	U	WVDNR
	Trustees of West Union		Lesley Partite
H	Christian Church	W	Key Oil Company & Franklin Butler
$\Box$	Michael A. Swisher, et ux	X	AMP Fund III, LP
J	Elijah B. Ross	Y	WV State Rail Authority
К	L. Donald Cinci, III	-	R.S. Maxwell &
L	Ernest Spence Shannon, et al	Z	Clarence E. Sigley Sr.
М	Ernest Spence Shannon, et al	AA	Carolyn E. Farr Trust
N	Frank L. Butler	AB	Michael T. Headley, et ux

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Detail 1

(nts)

ID	TM/Par	Owner	Bk/Pg	Acres
1	7-18.1	Antero Midstream, LLC	346/612	45.8
2	7-18	Antero Midstream, LLC	387/708	116.54
3	7-29	Sharon A. Gaspar	W113/242	182.67
4	7-27	Barbara J. Travis & Sharon K. Weekley	W62/674	69.69
5	7-18.3	Bryan & Ronda Ash	216/663	15.00
6	7-18.2	Brian D. and Patricia Sue Reed	392/472	1.34
7	7-30	Bryan & Ronda Ash	426/74	0.36
8	7-24	Iva Marie Partridge	W119/186	3.46
9	11-7	Paul David, II & Linda Nicole Weekley	250/445	41.16
10	11-87	Amy B. & Howard Spurlock II	244/522	8.94
11	11-87.1	Amy B. & Howard Spurlock II	243/113	5.94
12	11-87.2	Howard & Amy Spurlock II	425/632	0.47
13	11-86	Freeman Cemetery	/	1.00
14	11-7.1	Michael A. & Vivian L. Swisher	219/617	3.50
15	11-30	Michael T. & Susan M. Headley	277/138	0.45
16	1-157	Elijah B. Ross	361/225	1.45
17	11-15	Rhoda Rene Fitzsimmons, et al	272/89	4.65
18	11-14	Rhoda Rene Fitzsimmons, et al	272/89	5.12
19	11-22	Rhoda Rene Fitzsimmons, et al	272/660	23.27
20	11-16	Rhoda Rene Fitzsimmons, et al	272/89	19.72
21	11-23	Justin E. & Melissa Ann Holtz	342/354	23.77
22	11-24	Clarence Ray Bonnell, et al	105/317	15.76
23	11-42	Justin E. Holtz & Melissa Ann Megna	259/269	14.00
24	11-53	Shelly G. Bonnell	275/367	0.29
25	11-52	Daniel L. Friend	274/34	0.51
26	11-47	Marlin Purkey	320/722	1.15
27	11-51	Cheryl Lynn Hall	W89/488	1.00
28	11-46	Marlin Purkey	320/722	1.16
29	11-50	Earl R. Daugherty	304/415	1.00
30	11-69.1	Franklin L. Butler	255/666	1.00
31	11-24.1	Jo Ann B. Waters Revocable Trust	331/354	0.30
32	11-44	Lucinda R. Buchanan	294/461	0.44
33	11-45	David M. & Cinda L. Fleming	W51/603	0.28
34	11-49	Earl R. Daugherty & Naomi Jean Cupp	305/518	0.40
35	11-48	Earl R. Daugherty & Naomi Jean Cupp	305/518	0.32
36	2-1	Daniel L. & Leiva J. Webb	264/262	0.40
37	2-3	Town of West Union	264/678	0.62
38	2-4	James D. Owens	273/263	0.69
39	11-67.5	Earl R. Daugherty	368/30	5.78
40	11-68	Earl R. Daugherty	286/205	5.00
41	4-101	James D. Owens	273/263	0.10
42	11-95	WV Railroad Maintenance Authority	216/166	31.84
43	11-80	Karen M. Ireland Family L.P.	235/3	105.35
44	11-79.1	Daniel J. Welling	190/537	1.40
45	11-79	Randolph Cemetery	140/139	1.92
46	11-81	Carolyn E. Farr Irrevocable Trust	221/627	41.74
47	12-71.1	Franklin L. Butler & Key Oil Co.	256/324	81.91

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Detail 2 17 1	4
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FILE NO: 55-30-WU-14 DRAWING NO: Mule Unit 1H Well Plat SCALE: \_\_\_\_1" = 1500' MINIMUM DEGREE OF ACCURACY: Submeter

Denver, CO 80202

PROVEN SOURCE OF ELEVATION:

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

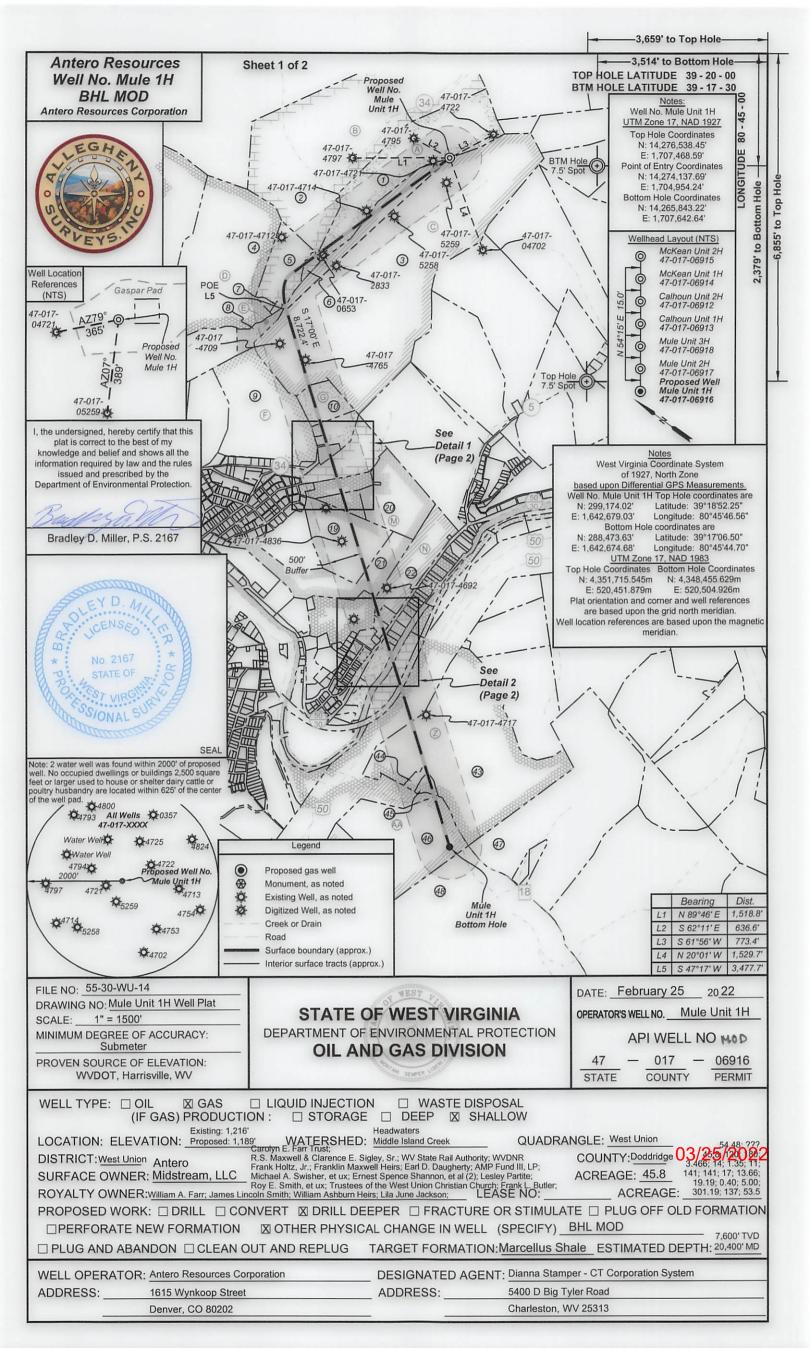
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WEST

DATE: February 25 20 22 OPERATOR'S WELL NO. Mule Unit 1H API WELL NO MOD 47 — 017 — 06916 STATE COUNTY PERMIT

Charleston, WV 25313

WVDOT, Harrisville, WV	M SEMPER LINE	STATE COUNT	Y PERMIT
(IF GAS) PRODUCTION: Existing: 1,216' LOCATION: ELEVATION: Proposed: 1,18 DISTRICT: West Union Antero SURFACE OWNER: Midstream, LLC ROYALTY OWNER: William A. Farr; James Lin PROPOSED WORK: DRILL CO	Headwaters  WATERSHED: Middle Island Creek Carolyn E. Farr Trust; R.S. Maxwell & Clarence E. Sigley, Sr.; WV State Rail Authority; WVDNR Frank Holtz, Jr.; Franklin Maxwell Heirs; Earl D. Daugherty; AMP Fund III, LP; Michael A. Swisher, et ux; Ernest Spence Shannon, et al (2); Lesley Partite; Roy E. Smith, et ux; Trustees of the West Union Christian Church; Frank L. Butler; coln Smith; William Ashburn Heirs; Lila June Jackson;  LEASE NO:  WVERT X DRILL DEEPER FRACTURE OR STIMULAT	ACREAGE: 45.8  ACREAGE: PLUG OFF OL BHL MOD	D FORMATION  7,600' TVD
WELL OPERATOR: Antero Resources Cor ADDRESS: 1615 Wynkoop Street	DESIGNATED AGENT: Dianna Stamp ADDRESS: 5400 D Big Ty		em



### Antero Resources Well No. Mule 1H BHL MOD

Antero Resources Corporation



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	Le	ases	
A William A. Farr		0	Frank Holtz Jr.
В	William Ashburn Heirs	Р	Winston Love Family Trust
С	James Lincoln Smith	Q	Cherly Lynn Hall
D	G. Frank Ash, et al	R	James P. Pierce
Е	Lila June Jackson	S	Earl D. Daugherty
F	John F. Curran, II	Т	Franklin Maxwell Heirs
G	Roy E. Smith, et ux	U	WVDNR
	Trustees of West Union	V	Lesley Partite
Н	Christian Church	W	Key Oil Company & Franklin Butlet
1	Michael A. Swisher, et ux	X	AMP Fund III, LP
J	Elijah B. Ross	Y	WV State Rail Authority
K	L. Donald Cinci, III	-	R.S. Maxwell &
L	Ernest Spence Shannon, et al	Z	Clarence E. Sigley Sr.
М	Ernest Spence Shannon, et al	AA	Carolyn E. Farr Trust
N	Frank L. Butler	AB	Michael T. Headley, et ux

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Detail 1

(nts)

ID	D TM/Par Owner			Acres
1	7-18.1	Antero Midstream, LLC	346/612	45.8
2	7-18	Antero Midstream, LLC	387/708	116.54
3	7-29	Sharon A. Gaspar	W113/242	182.67
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5	7-18.3	Bryan & Ronda Ash	216/663	15.00
6	7-18.2	Brian D. and Patricia Sue Reed	392/472	1.34
7	7-30	Bryan & Ronda Ash	426/74	0.36
8	7-24	Iva Marie Partridge	W119/186	3.46
9	11-7	Paul David, II & Linda Nicole Weekley	250/445	41.16
10	11-87	Amy B. & Howard Spurlock II	244/522	8.94
11	11-87.1	Amy B. & Howard Spurlock II	243/113	5.94
12	11-87.2	Howard & Amy Spurlock II	425/632	0.47
13	11-86	Freeman Cemetery	/	1.00
14	11-7.1	Michael A. & Vivian L. Swisher	219/617	3.50
15	11-30	Michael T. & Susan M. Headley	277/138	0.45
16	1-157	Elijah B. Ross	361/225	1.45
17	11-15	Rhoda Rene Fitzsimmons, et al	272/89	4.65
18	11-14	Rhoda Rene Fitzsimmons, et al	272/89	5.12
19	11-22	Rhoda Rene Fitzsimmons, et al	272/660	23.27
20	11-16	Rhoda Rene Fitzsimmons, et al	272/89	19.72
21	11-23	Justin E. & Melissa Ann Holtz	342/354	23.77
22	11-24	Clarence Ray Bonnell, et al	105/317	15.76
23	11-42	Justin E. Holtz & Melissa Ann Megna	259/269	14.00
24	11-53	Shelly G. Bonnell	275/367	0.29
25	11-52	Daniel L. Friend	274/34	0.51
26	11-47	Marlin Purkey	320/722	1.15
27	11-51	Cheryl Lynn Hall	W89/488	1.00
28	11-46	Marlin Purkey	320/722	1.16
29	11-50	Earl R. Daugherty	304/415	1.00
30	11-69.1	Franklin L. Butler	255/666	1.00
31	11-24.1	Jo Ann B. Waters Revocable Trust	331/354	0.30
32	11-24.1	Lucinda R. Buchanan	294/461	0.44
33	11-45	David M. & Cinda L. Fleming	W51/603	0.28
34	11-49	Earl R. Daugherty & Naomi Jean Cupp	305/518	0.40
35	11-48	Earl R. Daugherty & Naomi Jean Cupp	305/518	0.32
36	2-1	Daniel L. & Leiva J. Webb	264/262	0.40
37	2-3	Town of West Union	264/678	0.62
38	2-3	James D. Owens	273/263	0.69
39	11-67.5	Earl R. Daugherty	368/30	5.78
40	11-68	Earl R. Daugherty	286/205	5.00
41	4-101	James D. Owens	273/263	0.10
42	11-95	WV Railroad Maintenance Authority	216/166	31.84
43	11-95	Karen M. Ireland Family L.P.	235/3	105.3
44		Daniel J. Welling	190/537	1.40
45	11-79.1	Randolph Cemetery	140/139	1.92
46	11-79	Carolyn E. Farr Irrevocable Trust	221/627	41.74
47	11-81	Franklin L. Butler & Key Oil Co.	256/324	81.91
48	12-71.1 15-8	Ruth M. Davies Pierce Heirs	26/160	1437.9

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a <sub>n</sub>	DATE: February 25 2022

FILE NO: 55-30-WU-14

DRAWING NO: Mule Unit 1H Well Plat

SCALE: 1" = 1500'

MINIMUM DEGREE OF ACCURACY:
Submeter

PROVEN SOURCE OF ELEVATION:
WVDOT, Harrisville, WV

Denver, CO 80202

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

DATE: February 25 20 22

OPERATOR'S WELL NO. Mule Unit 1H

API WELL NO NO

47 — 017 — 06916

STATE COUNTY PERMIT

Charleston, WV 25313

WELL TYPE: □ OIL □ GAS □ LIQUID INJECTION □ WASTE DISPOSAL
(IF GAS) PRODUCTION : □ STORAGE □ DEEP ☒ SHALLOW
Existing: 1,216' Headwaters CLIADE ANOLE West Union
LOCATION: ELEVATION: Proposed: 1,189' WATERSHED: Middle Island Creek QUADRANGLE: West Union 54,48; ???
DISTRICT: West Union Antero  R.S. Maxwell & Clarence E. Sigley, Sr.; WV State Rail Authority; WVDNR Frank Holtz, Jr.; Franklin Maxwell Heirs; Earl D. Daugherty; AMP Fund III, LP;
SURFACE OWNER: Midstream, LLC Michael A. Swisher, et ux; Ernest Spence Shannon, et al (2); Lesley Partite; ACREAGE: 45.8 141; 141; 17; 13.66;
Roy E. Smith, et ux; Trustees of the West Union Christian Church; Frank L. Butler;  ROYALTY OWNER: William A. Farr; James Lincoln Smith; William Ashburn Heirs; Lila June Jackson;  LEASE NO:  ACREAGE: 301.19; 137; 53.5
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: 20,400° MD
WELL OPERATOR: Antero Resources Corporation  DESIGNATED AGENT: Dianna Stamper - CT Corporation System
ADDRESS: 1615 Wynkoop Street ADDRESS: 5400 D Big Tyler Road

# 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)

- (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
	William A. Farr Lease			
A	William A. Farr	Carolyn E. Farr Trust	1/8	0277/0644
14	Carolyn E. Farr Trust	Antero Resources Appalachian Corporation	Assignment	0281/0310
	Antero Resources Appalachian Corporation	Antero Resources Corporation	Name Change	0046/0523
0	James Lincoln Smith Lease			
	James Lincoln Smith	Duncan Sartain	1/8	0071/0080
	Duncan Sartain	L.E. Scherck	Assignment	0072/0377
	L.E. Scherck	Roscoe B.G. Cowper & B.T. Cowper	Assignment	0071/0183
	Roscoe B.G. Cowper & B.T. Cowper	Lawrence H. Aberegg	Assignment	0098/0233
	Lawrence H. Aberegg	Hugh K. Spencer	Assignment	0098/0235
	Hugh K. Spencer	Ronald B. Spencer and Rhonda S. Rossetti, as co- executors of the estate of Hugh K. Spencer	Will	0033/0068
	Ronald B. Spencer and Rhonda S. Rossetti, as co-	Ronald B. Spencer and Rhonda S. Rossetti, as co-	Assignment	0199/0282
	executors of the estate of Hugh K. Spencer Ronald B. Spencer and Rhonda S. Rossetti, as co-	trustees of the Hugh K. Spencer Martial Trust B Spencer Enterprises, LLC	Assignment	0199/0534
	trustees of the Hugh K. Spencer Martial Trust B		100	
	Spencer Enterprises, LLC	Antero Resources Appalachian Corporation	Assignment	0264/0099
	Antero Resources Appalachian Corporation	Antero Resources Corporation	Name Change	0046/0523
	William A. Farr Lease (NOT COTENANCY)			
N	William A. Farr	Carolyn E. Farr Trust	1/8	0277/0644
	Carolyn E. Farr Trust	Antero Resources Appalachian Corporation	Assignment	0281/0310
	Antero Resources Appalachian Corporation	Antero Resources Corporation	Name Change	0046/0523
	Antero Resources Apparachian corporation	Antero resources corporation	Hame change	33.00
^	William Ashburn Heirs Lease			
0	William Ashburn Heirs	J.C. Smith	1/8	0056/0249
	J.C. Smith	John W. Casto, et al	Fiduciary	0008/0071
	John W. Casto, et al	Antero Resources Corporation	Assignment	0333/0509
	PART NAME OF THE PART OF THE P			
E	Lila June Jackson Lease		4.10	2245/2242
	Lila June Jackson	Antero Resources Corporation	1/8+	0346/0340
C	James Lincoln Smith Lease			
	James Lincoln Smith	Duncan Sartain	1/8	0071/0080
	Duncan Sartain	L.E. Scherck	Assignment	0072/0377
	L.E. Scherck	Roscoe B.G. Cowper & B.T. Cowper	Assignment	0071/0183
	Roscoe B.G. Cowper & B.T. Cowper	Lawrence H. Aberegg	Assignment	0098/0233
	Lawrence H. Aberegg	Hugh K. Spencer	Assignment	0098/0235
	Hugh K. Spencer	Ronald B. Spencer and Rhonda S. Rossetti, as co-	Will	0033/0068
	Populd P. Changer and Phanda C. Dassatti	executors of the estate of Hugh K. Spencer	Accienn	0100/0202
	Ronald B. Spencer and Rhonda S. Rossetti, as co- executors of the estate of Hugh K. Spencer	Ronald B. Spencer and Rhonda S. Rossetti, as co- trustees of the Hugh K. Spencer Martial Trust B	Assignment	0199/0282
	executors of the estate of Hugh K. spencer	diastees of the hugh K. Spencer Martial Hust B		

# 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)

- (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;
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	Grantor, lessor, etc.	Grantee, lessee, etc.	Royalty	Book/Page
	Ronald B. Spencer and Rhonda S. Rossetti, as co- trustees of the Hugh K. Spencer Martial Trust B	Spencer Enterprises, LLC	Assignment	0199/0534
	Spencer Enterprises, LLC	Antero Resources Appalachian Corporation	Assignment	0264/0099
	Antero Resources Appalachian Corporation	Antero Resources Corporation	Name Change	0046/0523
η.	Roy E. Smith, et ux Lease			
8	Roy E. Smith, et ux	Key Oil Company	1/8	0105/0239
	Key Oil Company	J & J Enterprises Inc.	Assignment	0111/0326
	J & J Enterprises Inc	ENG Drilling Company No. 3	Assignment	0116/0181
	ENG Drilling Company No. 3	Eastern American Energy Corporation successor by Merger to J & J Enterprises, Inc.	Assignment	0167/0308
	Eastern American Energy Corporation successor by Merger to J & J Enterprises, Inc.	Energy Corporation of America	Assignment	0240/0498
	Energy Corporation of America	Antero Resources Appalachian Corporation	Assignment	0272/0307
	Antero Resources Appalachian Corporation	Antero Resources Corporation	Merger	0046/0523
مان	The Trustees of the West Union Christian			
ĸ	Church Lease	Antone Bossesson Communica	1/0	0498/0410
	The Trustees of the West Union Christian Church	Antero Resources Corporation	1/8+	0438/0410
1	Michael A. Swisher, et ux Lease			
y	Michael A. Swisher, et ux	Antero Resources Corporation	1/8+	0499/0712
	Ernest Spence Shannon, et al Lease			
ト	Ernest Spence Shannon, et al	Duncan Sartain	1/8	0073/0285
	Duncan Sartain	D. Lee Jones	Assignment	0074/0467
	D. Lee Jones	Bayard Thurman Cowper III, and Roscoe B.G. Cowper	Assignment	0098/0111
	Bayard Thurman Cowper III, and Roscoe B.G. Cowper	Lawrence H. Abregg	Assignment	0098/0120
	Lawrence H. Abregg	Hugh K. Spencer	Assignment	0098/0235
	Hugh K. Spencer	Ronald B. Spencer and Rhonda S. Rossetti as co trustees of the Hugh K. Spencer Marital B Trust	Will Book	0033/0068
	Ronald B. Spencer and Rhonda S. Rossetti as co trustees of the Hugh K. Spencer Marital B Trust	Spencer Enterprises, LLC	Assignment	0251/0529
	Spencer Enterprises LLC	Antero Resources Appalachian Corporation	Assignment	0264/0099
	Antero Resources Appalachian Corporation	Antero Resources Corporation	Merger	0046/0523
	Ernest Spence Shannon, et al Lease			
ħ/	Ernest Spence Shannon, et al	Duncan Sartain	1/8	0073/0285
	Duncan Sartain	D. Lee Jones	Assignment	0074/0467
	D. Lee Jones	Bayard Thurman Cowper III, and Roscoe B.G. Cowper	Assignment	0098/0111
	Bayard Thurman Cowper III, and Roscoe B.G.	Lawrence H. Abregg	Assignment	0098/0120
				03/25/2022

Mule Unit 1H MOD

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	Grantor, lessor, etc.	Grantee, lessee, etc.	Royalty	Book/Page
	Cowper			
	Lawrence H. Abregg	Hugh K. Spencer	Assignment	0098/0235
	Hugh K. Spencer	Ronald B. Spencer and Rhonda S. Rossetti as co trustees of the Hugh K. Spencer Marital B Trust	Will Book	0033/0068
	Ronald B. Spencer and Rhonda S. Rossetti as co trustees of the Hugh K. Spencer Marital B Trust	Spencer Enterprises, LLC	Assignment	0251/0529
	Spencer Enterprises LLC	Antero Resources Appalachian Corporation	Assignment	0264/0099
	Antero Resources Appalachian Corporation	Antero Resources Corporation	Merger	0046/0523
	Frank Holtz, Jr. Lease			
Ď	Frank Holtz, Jr.	Key Oil Company	1/8	0193/0012
	Key Oil Company	Antero Resources Appalachian Corporation	Assignment	0276/0526
	Antero Resources Appalachian Corporation	Antero Resources Corporation	Merger	0046/0523
1	Frank L. Butler Lease			
h	Frank L. Butler	Key Oil Company	1/8	0193/0150
	Key Oil Company	Antero Resources Appalachian Corporation	Assignment	0276/0526
	Antero Resources Appalachian Corporation	Antero Resources Corporation	Merger	0046/0523
_	Franklin Maxweil Heirs Lease			
7	Franklin Maxwell Heirs Limited Partnership	Antero Resources Corporation	1/8+	0484/0158
4	Earl D. Dougherty Lease			
7	Earl D. Dougherty	Antero Resources Corporation	1/8+	0476/0422
,	Lesley Partite Lease			
¥	Lesley Partite	Key Oil Company	1/8	0195/0130
	Key Oil Company	Antero Resources Appalachian Corporation	Assignment	0276/0526
	Antero Resources Appalachian Corporation	Antero Resources Corporation	Merger	0046/0523
J	WVDNR Lease			
v	West Virginia Department of Transportation, Division of Highways	Antero Resources Corporation	1/8+	0483/0188
ų	AMP Fund III, LP Lease			
,	AMP Fund III, LP	Antero Resources Corporation	1/8+	0487/0149
. 1	WV State Rail Authority Lease			
Y	West Virginia State Rail Authority	Antero Resources Appalachian Corporation	1/8+	0253/0409
•	Antero Resources Appalachian Corporation	Antero Resources Corporation	Name Change	0046/0523
っ	R.S. Maxwell and Clarence E. Sigley Sr. Lease			
6	R.S. Maxwell and Clarence E. Sigley, Sr. Trustee	Key Oil Company	1/8	0193/0020

Operator's Well Number

Mule Unit 1H MOD

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Grantor, lessor, etc.	Grantee, lessee, etc.	Royalty	Book/Page	
for Carolyn E. Farr Trust				
Key Oil Company	Antero Resources Appalachian Corporation	Assignment	0276/0526	
Antero Resources Appalachian Corporation	Antero Resources Corporation	Name Change	0046/0523	

<sup>\*</sup>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)

#### 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
Carolyn E. Farr Trust Lease				
	Carolyn E. Farr Trust	<b>Antero Resources Corporation</b>	1/8+	0500/0061

#### 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	(m) (led)	
Its:	Senior VP of Operations		



March 8, 2022

West Virginia Department of Environmental Protection Office of Oil and Gas Attn: Mr. Taylor Brewer 601 57<sup>th</sup> 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 modifications for approved well on the existing Gaspar Pad; Mule Unit 1H & 3H (47-017-06916, 47-017-06918).

Attached you will find the following:

- > Revised Form WW-6B
- > Revised Form WW-6A1
- > Revised Mylar Plat
- > AOR

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

Thank you in advance for your consideration.

Sincerely,

Mallory Stanton Permitting Supervisor

Antero Resources Corporation

Enclosures

WV Department of Environmental Protection



Stansberry, Wade A <wade.a.stansberry@wv.gov>

#### Modifications Horizontal H6A Well Work Permit API: 47-017-06916 & 47-017-06918)

1 message

Stansberry, Wade A <wade.a.stansberry@wv.gov>

Tue, Mar 22, 2022 at 1:31 PM

I have attached a copy of the newly issued well permit number. This will serve as your copy.

47-017-06916 - MULE UNIT 1H 47-017-06918 - MULE UNIT 3H

If you have any questions, then please contact us here at the Office of Oil and Gas.

Thank you,

Wade A. Stansberry
Environmental Resource Specialist 3
West Virginia Department of Environmental Protection
Office of Oil & Gas
601 57th St. SE
Charleston, WV 25304
(304) 926-0499 ext. 41115
(304) 926-0452 fax
Wade.A.Stansberry@wv.gov

#### 4 attachments

