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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, August 22, 2022  
PERMIT MODIFICATION APPROVAL  
Horizontal 6A / New Drill

ANTERO RESOURCES CORPORATION  
1615 WYNKOOP STREET

DENVER, CO 80202

Re: Permit Modification Approval for READER 1H  
47-103-03496-00-00

Lateral Extension

ANTERO RESOURCES CORPORATION

The Office of Oil and Gas has reviewed the attached permit modification for the above referenced permit. The attached modification has been approved and well work may begin. Please be reminded that the oil and gas inspector is to be notified twenty-four (24) hours before permitted well work is commenced.

If there are any questions, please feel free to contact me at (304) 926- 0450.

James A. Martin  
Chief

Operator's Well Number: READER 1H  
Farm Name: JAMES ALLEN SELL  
U.S. WELL NUMBER: 47-103-03496-00-00  
Horizontal 6A New Drill  
Date Modification Issued: 8/22/2022

Promoting a healthy environment.

08/26/2022

WW-6B  
(04/15)

ck# 40/2205  
2,500

API NO. 47-103 - 03496  
OPERATOR WELL NO. Reader Unit 1H MOD ✓  
Well Pad Name: Furbee Pad

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

1) Well Operator: Antero Resources Corporation 494507062 013-Wetzel Green ✓ Pine Grove 7.5' ✓  
Operator ID County District Quadrangle

2) Operator's Well Number: Reader Unit 1H MOD ✓ Well Pad Name: Furbee Pad

3) Farm Name/Surface Owner: James Allen Sell ✓ Public Road Access: Furbee Ridge Road

4) Elevation, current ground: 1240' ✓ Elevation, proposed post-construction: ~1212'

5) Well Type (a) Gas X Oil \_\_\_\_\_ Underground Storage \_\_\_\_\_  
Other \_\_\_\_\_  
(b) If Gas Shallow X Deep \_\_\_\_\_  
Horizontal X

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: 24700' MD ✓

11) Proposed Horizontal Leg Length: 15151.2' ✓

12) Approximate Fresh Water Strata Depths: 575' ✓

13) Method to Determine Fresh Water Depths: 47103308970000 ✓

14) Approximate Saltwater Depths: 2284' ✓

15) Approximate Coal Seam Depths: 973' ✓

16) Approximate Depth to Possible Void (coal mine, karst, other): None Anticipated

17) Does Proposed well location contain coal seams directly overlying or adjacent to an active mine? Yes \_\_\_\_\_ No X

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Office of Oil and Gas  
AUG 11 2022  
WV Department of Environmental Protection

(a) If Yes, provide Mine Info: Name: \_\_\_\_\_  
Depth: \_\_\_\_\_  
Seam: \_\_\_\_\_  
Owner: \_\_\_\_\_

WW-6B  
(04/15)

API NO. 47- 103 - 03496  
 OPERATOR WELL NO. Reader Unit 1H MOD  
 Well Pad Name: Furbee 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	H-40	79#	80	80	CTS, 77 Cu. Ft.
Fresh Water	13-3/8"	New	J/K-55	54.5#	625	625	CTS, 651 Cu. Ft.
Coal	9-5/8"	New	J/K-55	36#	2500	2500	CTS, 1018 Cu. Ft.
Intermediate							
Production	5-1/2"	New	P-110CY	20#	24700	24700	CTS, 5307 Cu. Ft.
Tubing	2-3/8"	New	N-80	4.7#			
Liners							

*Wm L. Reynolds 8-19-22*

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	~1.18
Fresh Water	13-3/8"	17-1/2"	0.38"	2730	1000	Class A	~1.18
Coal	9-5/8"	12-1/4"	0.352"	3520	1500	Class A	~1.18
Intermediate							
Production	5-1/2"	8-3/4" & 8-1/2"	0.415"	14,360	2500	Class G/H	~1.18
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, perforate, fracture a new horizontal shallow well and complete 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): 30.09 acres

22) Area to be disturbed for well pad only, less access road (acres): 13.86 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

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U.S. Department of  
Environmental Protection

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.

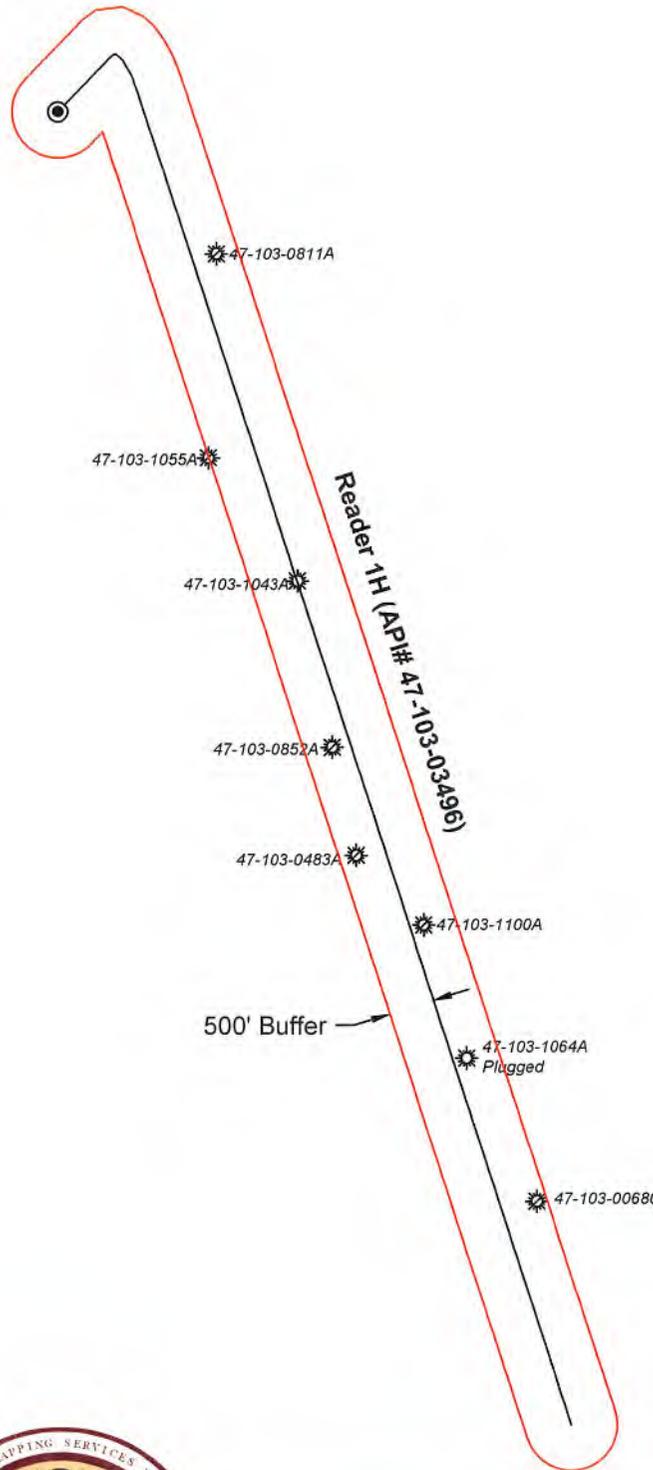
\*Note: Attach additional sheets as needed.

**LEGEND**

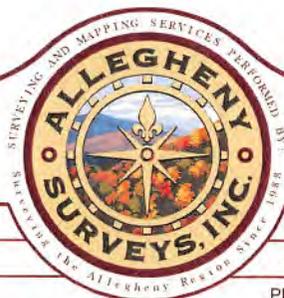
- ⊙ Proposed gas well
- ☀ Existing Well, as noted
- ☀ Digitized Well, as noted



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  
AUG 11 2022  
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. Smith
RESEARCH: J. Miller	PREPARED: August 4, 2022
SURVEYED: Dec. 2016	PROJECT NO: 120-34-G-18
FIELD CREW: C.L., K.M.	DRAWING NO: Reader 1H BHLM AOR

Sheet 1 of 1



Scale: 1 inch = 2000 feet 08/26/2022

UWI (APINum)	Well Name	Well Number	Operator	Historical Operator	TD	Perforated Interval (shallowest, deepest)	Perforated Formation(s)	Producible Formation(s) not perf'd
47103308110000	ORA G MCKIMMIE	5193	HOPE NATURAL GAS	HOPE NATURAL GAS	2,753		Big Injun, Gordon	Weir, Benson, Alexander
47103310050000	MCSWEENEY	6485	HOPE NATURAL GAS	HOPE NATURAL GAS	2,610		Big Injun, Gordon	Weir, Benson, Alexander
47103310430000	JOHN J FURBEE 1	1344	MANUFACT LIGHT &HEAT	MANUFACT LIGHT &HEAT	2,797			Weir, Benson, Alexander
47103308520000	J E HIGGINS 1	2516	MANUFACT LIGHT &HEAT	MANUFACT LIGHT &HEAT	2,812		Big Injun, Gordon	Weir, Benson, Alexander
47103304830000	MARY MARTIN	5439	HOPE NATURAL GAS	HOPE NATURAL GAS	2,711		Big Injun, Gordon	Weir, Benson, Alexander
47103311000000		1			2,785		Big Injun, Gordon	Weir, Benson, Alexander
47103310640000	B W PETERSON	64	CONSOLIDATION COAL	PENNZOIL CO INC	3,199			Weir, Benson, Alexander
47103006800000	J BRAST	1055	EQT PRODUCTION CO	CONSOL GAS SUPPLY CRP	2,166		Big Injun	Weir, Benson, Alexander

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

Page 1 of 2



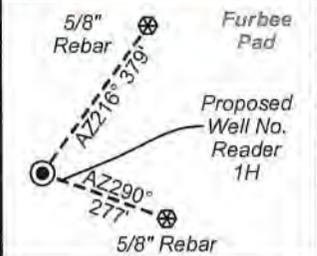
Proposed Well No. Reader Unit 1H  
 Conc. Mons.  
 L3  
 L4

769' to Bottom 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. Reader Unit 1H Top Hole coordinates are  
 N: 387,420.28' Latitude: 39°33'25.78"  
 E: 1,652,803.30' Longitude: 80°43'53.14"  
 Bottom Hole coordinates are  
 N: 373,155.00' Latitude: 39°31'05.54"  
 E: 1,658,354.40' Longitude: 80°42'39.82"  
 UTM Zone 17, NAD 1983  
 Top Hole Coordinates Bottom Hole Coordinates  
 N: 4,378,651.775m N: 4,374,334.009m  
 E: 523,087.954m E: 524,851.535m  
 Plat orientation and corner and well references are based upon the grid north meridian.  
 Well location references are based upon the magnetic meridian.

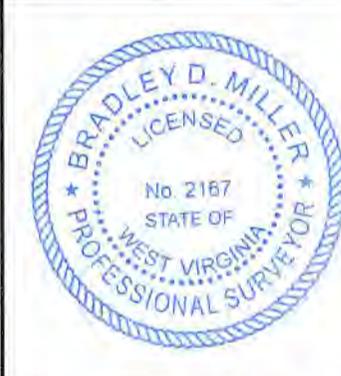
LONGITUDE 80 - 42 - 30  
 8,545' to Bottom Hole  
 9,533' to Top Hole

Well Location References (NTS)



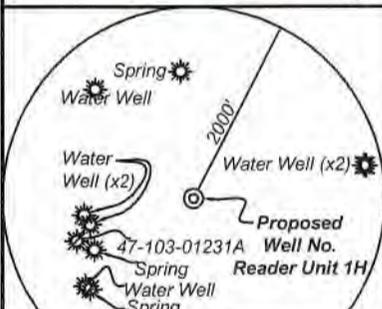
I, the undersigned, hereby certify that this plat is correct to the best of my knowledge and belief and shows all the information required by law and the rules issued and prescribed by the Department of Environmental Protection.

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

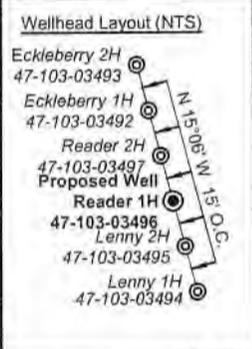


	Bearing	Dist.
L1	S 74°46' W	1,920.7'
L2	N 83°24' W	2,085.6'
L3	N 75°31' E	1,559.2'
L4	N 80°45' E	1,563.2'
L5	N 80°24' E	899.8'

- Legend**
- Proposed gas well
  - ⊗ Monument, as noted
  - ⊙ Existing Well, as noted
  - ⊙ Digitized Well, as noted
  - Creek or Drain
  - Road
  - Railroad Right-of-Way
  - Surface boundary (approx.)
  - Interior surface tracts (approx.)



Note: 6 water wells and 3 springs 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.



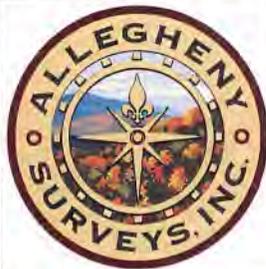
FILE NO: 129-34-G-18  
 DRAWING NO: Reader Unit 1H Well Plat  
 SCALE: 1" = 2000'  
 MINIMUM DEGREE OF ACCURACY: Submeter  
 PROVEN SOURCE OF ELEVATION: WVDOT, Harrisville, WV

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

DATE: August 4 20 22  
 OPERATOR'S WELL NO. Reader Unit 1H  
 API WELL NO. 47-103-03496  
 STATE COUNTY PERMIT

WELL TYPE:  OIL  GAS  LIQUID INJECTION  WASTE DISPOSAL  
 (IF GAS) PRODUCTION:  STORAGE  DEEP  SHALLOW  
 LOCATION: ELEVATION: Existing 1240' Proposed 1212' WATERSHED: Fishing Creek QUADRANGLE: Pine Grove  
 DISTRICT: Green James COUNTY: Wetzel  
 SURFACE OWNER: A. Sell Joshua R. Edgell, et al; Tribune Resources Minerals, LLC; AMP Fund II, LP (2); Shiben Estates, Inc. (4); BRC Appalachian Minerals I, LLC (2);  
 ROYALTY OWNER: James Allen Sell; Marilyn Halley Seeley; Josephine Brast, et al; George David Sell; LEASE NO: ACREAGE: 58.1  
 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  
 24,700' MD

WELL OPERATOR: Antero Resources Corporation DESIGNATED AGENT: Dianna Stamper - CT Corporation System  
 ADDRESS: 1615 Wynkoop Street ADDRESS: 5400 D Big Tyler Road  
 Denver, CO 80202 Charleston, WV 25313



ID	TM-Par	Owner	Bk/Pg	Acres
1	17-12	James Allen Sell	370/148	58.10
2	17-1	James Allen Sell	370/148	15.35
3	13-70	Doris Ruth Haught, et al	W49/615	33.78
4	13-71	Charles R. & Kay L. Blair	387/577	63.11
5	17-60	Ross Bucher	411/765	79.00
6	17-54	James Allen Sell	370/148	25.50
7	17-17	James Allen Sell	370/148	70.00
8	17-26	Heartland Forest Land Fund VII, LP	431/936	75.50
9	17-37	Heartland Forest Land Fund VII, LP	431/936	5.00
10	17-48	Heartland Forest Land Fund VII, LP	431/936	20.00
11	17-38	Heartland Forest Land Fund VII, LP	431/936	60.00
12	17-47	George David Sell	351/473	40.00
13	17-35	Alfred Raymond Furbee, Sr. & Olive Gay Brown	333/638	60.00
14	20-5	Debbie Brown, et al	A96/679	45.00
15	20-14	Robert Bassett	371/32	126.74
16	20-7	Debra L. & Mary Jane Brown	437/718	0.80
17	20-6	Debbie Brown, et al	A96/679	6.00
18	20-14.3	Albert E. & Betty Jean Clutter	379/182	14.35
19	20-14.4	Matthew D. Bassett, et al	421/365	97.18
20	20-14.10	Bobbi Jean Bassett	432/506	11.54
21	20-14.2	Coastal Forest Resources Co.	444/105	37.40
22	20-14.7	Randy D. & Dori R. Ice	404/39	1.74
23	20-14.6	Randy D. & Dori R. Ice	404/39	2.06
24	20-14.8	Randy D. & Dori R. Ice	404/43	2.46
25	20-14.9	Randy D. & Dori R. Ice	404/39	53.33
26	20-20.1	Robert Bassett	371/32	0.44
27	20-14.5	Marsha C. Hamrick, et al	363/279	44.46
28	20-19	Coastal Forest Resources Co.	444/105	16.44
29	20-19.2	Coastal Forest Resources Co.	444/105	35.56
30	20-28	Coastal Forest Resources Co.	444/105	36.00
31	20-37	Coastal Forest Resources Co.	444/105	246.84

Leases	
A	James Allen Sell
B	Antero Minerals, LLC
C	Marilyn Halley Seeley
D	William R. Stalnaker
E	Shiben Estates, Inc.
F	Shiben Estates, Inc.
G	BRC Appalachian Minerals I, LLC
H	AMP Fund II, LP
I	AMP Fund II, LP
J	George David Sell
K	Shiben Estates, Inc.
L	BRC Appalachian Minerals I, LLC
M	Tribune Resources Minerals, LLC
N	Joshua R. Edgell, et al
O	Morris Mountaineer Oil & Gas LLC
P	Josephine Brast, et al
Q	Shiben Estates, Inc.

FILE NO: 129-34-G-18  
 DRAWING NO: Reader Unit 1H Well Plat  
 SCALE: 1" = 2000'  
 MINIMUM DEGREE OF ACCURACY:  
 Submeter  
 PROVEN SOURCE OF ELEVATION:  
 WVDOT, Harrisville, WV



DATE: August 4 20 22  
 OPERATOR'S WELL NO. Reader Unit 1H  
 API WELL NO. **MOD**  
 47 — 103 — 03496  
 STATE COUNTY PERMIT

WELL TYPE:  OIL  GAS  LIQUID INJECTION  WASTE DISPOSAL  
 (IF GAS) PRODUCTION:  STORAGE  DEEP  SHALLOW  
 Proposed 1212'  
 LOCATION: ELEVATION: Existing 1240' WATERSHED: Fishing Creek QUADRANGLE: Pine Grove  
 DISTRICT: Green James Joshua R. Edgell, et al; COUNTY: Wetzel  
 SURFACE OWNER: A. Sell Tribune Resources Minerals, LLC; AMP Fund II, LP (2); ACREAGE: 58.1 264.75; 70; 75.5;  
 Shiben Estates, Inc. (4); BRC Appalachian Minerals I, LLC (2); 89; 50; 257; 72;  
 ROYALTY OWNER: James Allen Sell; Marilyn Halley Seeley; Josephine Brast, et al; George David Sell; LEASE NO: \_\_\_\_\_ ACREAGE: 65.4875; 140.3333  
 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: 24,700' MD

08/26/2022

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 ADDRESS: 1615 Wynkoop Street ADDRESS: 5400 D Big Tyler Road  
 Denver, CO 80202 Charleston, WV 25313

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

Page 1 of 2



Proposed Well No. Reader Unit 1H

Conc. Mons.

L3

L4

L5

POE

Rebar

6,512' to Top Hole

769' to Bottom Hole  
 TOP HOLE LATITUDE 39-35-00  
 BTM HOLE LATITUDE 39-32-30

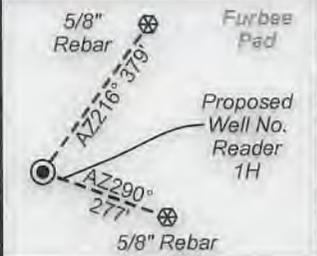
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LONGITUDE 80 - 42 - 30

8,545' to Bottom Hole

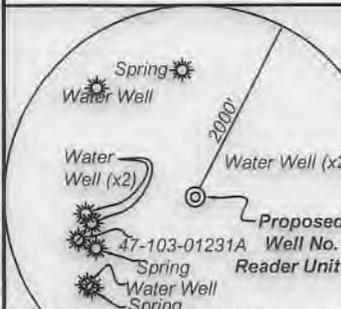
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**Well Location References (NTS)**



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Bradley D. Miller, P.S. 2167



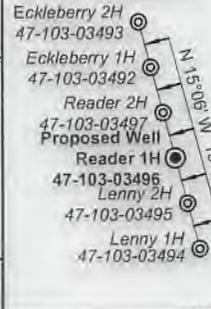
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  - Creek or Drain
  - Road
  - Railroad Right-of-Way
  - Surface boundary (approx.)
  - Interior surface tracts (approx.)

**Notes:**  
 Well No. Reader Unit 1H UTM Zone 17, NAD 1927  
 Top Hole Coordinates N: 14,364,911.19' E: 1,716,116.12'  
 Point of Entry Coordinates N: 14,365,076.09' E: 1,717,000.37'  
 Bottom Hole Coordinates N: 14,350,745.29' E: 1,721,902.60'

**Wellhead Layout (NTS)**



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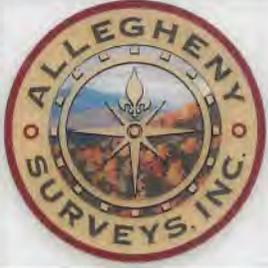
**STATE OF WEST VIRGINIA**  
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WELL OPERATOR: Antero Resources Corporation DESIGNATED AGENT: Dianna Stamper - CT Corporation System  
 ADDRESS: 1615 Wynkoop Street ADDRESS: 5400 D Big Tyler Road  
 Denver, CO 80202 Charleston, WV 25313

08/26/2022



ID	TM-Par	Owner	Bk/Pg	Acres
1	17-12	James Allen Sell	370/148	58.10
2	17-1	James Allen Sell	370/148	15.35
3	13-70	Doris Ruth Haught, et al	W49/615	33.78
4	13-71	Charles R. & Kay L. Blair	387/577	63.11
5	17-60	Ross Bucher	411/765	79.00
6	17-54	James Allen Sell	370/148	25.50
7	17-17	James Allen Sell	370/148	70.00
8	17-26	Heartland Forest Land Fund VII, LP	431/936	75.50
9	17-37	Heartland Forest Land Fund VII, LP	431/936	5.00
10	17-48	Heartland Forest Land Fund VII, LP	431/936	20.00
11	17-38	Heartland Forest Land Fund VII, LP	431/936	60.00
12	17-47	George David Sell	351/473	40.00
13	17-35	Alfred Raymond Furbee, Sr. & Olive Gay Brown	333/638	60.00
14	20-5	Debbie Brown, et al	A96/679	45.00
15	20-14	Robert Bassett	371/32	126.74
16	20-7	Debra L. & Mary Jane Brown	437/718	0.80
17	20-6	Debbie Brown, et al	A96/679	6.00
18	20-14.3	Albert E. & Betty Jean Clutter	379/182	14.35
19	20-14.4	Matthew D. Bassett, et al	421/365	97.18
20	20-14.10	Bobbi Jean Bassett	432/506	11.54
21	20-14.2	Coastal Forest Resources Co.	444/105	37.40
22	20-14.7	Randy D. & Dori R. Ice	404/39	1.74
23	20-14.6	Randy D. & Dori R. Ice	404/39	2.06
24	20-14.8	Randy D. & Dori R. Ice	404/43	2.46
25	20-14.9	Randy D. & Dori R. Ice	404/39	53.33
26	20-20.1	Robert Bassett	371/32	0.44
27	20-14.5	Marsha C. Hamrick, et al	363/279	44.46
28	20-19	Coastal Forest Resources Co.	444/105	16.44
29	20-19.2	Coastal Forest Resources Co.	444/105	35.56
30	20-28	Coastal Forest Resources Co.	444/105	36.00
31	20-37	Coastal Forest Resources Co.	444/105	246.84

Leases	
A	James Allen Sell
B	Antero Minerals, LLC
C	Marilyn Halley Seeley
D	William R. Stalnaker
E	Shiben Estates, Inc.
F	Shiben Estates, Inc.
G	BRC Appalachian Minerals I, LLC
H	AMP Fund II, LP
I	AMP Fund II, LP
J	George David Sell
K	Shiben Estates, Inc.
L	BRC Appalachian Minerals I, LLC
M	Tribune Resources Minerals, LLC
N	Joshua R. Edgell, et al
O	Morris Mountaineer Oil & Gas LLC
P	Josephine Brast, et al
Q	Shiben Estates, Inc.

FILE NO: 129-34-G-18  
 DRAWING NO: Reader Unit 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: August 4 20 22  
 OPERATOR'S WELL NO. Reader Unit 1H  
 API WELL NO **MOD**  
 47 - 103 - 03496  
 STATE COUNTY PERMIT

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

LOCATION: ELEVATION: Existing 1240' Proposed 1212' WATERSHED: Fishing Creek QUADRANGLE: Pine Grove  
 DISTRICT: Green James COUNTY: Wetzel  
 SURFACE OWNER: A. Sell Joshua R. Edgell, et al; Tribune Resources Minerals, LLC; AMP Fund II, LP (2);  
 Shiben Estates, Inc. (4); BRC Appalachian Minerals I, LLC (2);

ROYALTY OWNER: James Allen Sell; Marilyn Halley Seeley; Josephine Brast, et al; George David Sell; LEASE NO: ACREAGE: 58.1 264.75; 70; 75.5; 89; 50; 257; 72; 65.4875; 140.3333

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: 24,700' MD

WELL OPERATOR: Antero Resources Corporation DESIGNATED AGENT: Dianna Stamper - CT Corporation System  
 ADDRESS: 1615 Wynkoop Street ADDRESS: 5400 D Big Tyler Road  
 Denver, CO 80202 Charleston, WV 25313

08/26/2022

WW-6A1  
(5/13)

Operator's Well No. Reader 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:

Lease Name or Number	Grantor, Lessor, etc.	Grantee, Lessee, etc.	Royalty	Book/Page
<u>Q: Shiben Estates Lease</u>	Shiben Estates	Antero Resources Corporation	1/8+	198A/0540

\*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 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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**AUG 11 2022**  
WV Department of  
Environmental Protection

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 VP of Land

WW-6A1

Operator's Well Number Reader Unit 1H MOD

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Grantor, lessor, etc.	Grantee, lessee, etc.	Royalty	Book/Page
<u>A: James Allen Sell Lease</u> James Allen Sell	Antero Resources Corporation	1/8+	258A/0467
<u>C: Marilyn Halley Seeley Lease</u> Marilyn Halley Seeley EQT Production Company	EQT Production Company Antero Resources Corporation	1/8+ Assignment	148A/0831 230A/0801
<u>A: James Allen Sell Lease</u> James Allen Sell	Antero Resources Corporation	1/8+	258A/0467
<u>F: Shiben Estates, Inc Lease</u> Shiben Estates, Inc.	Antero Resources Corporation	1/8+	202A/0230
<u>G: BRC Appalachian Minerals I, LLC Lease</u> BRC Appalachian Minerals I, LLC BRC Working Interest Company LLC Chesapeake Appalachia LLC SWN Production Company Antero Exchange Properties, LLC	BRC Working Interest Company LLC Chesapeake Appalachia LLC SWN Production Company Antero Exchange Properties, LLC Antero Resources Corporation	1/8+ Assignment Assignment Assignment Merger	102A/0505 103A/0470 157A/0540 177A/0533 0013/0311
<u>I: AMP Fund II, LP Lease</u> AMP Fund II, LP	Antero Resources Corporation	1/8+	255A/0685
<u>J: George David Sell Lease</u> George David Sell, a married man dealing in his sole and separate property	Antero Resources Corporation	1/8+	176A/0463
<u>K: Shiben Estates, Inc. Lease</u> Shiben Estates, Inc.	Antero Resources Corporation	1/8+	265A/0267
<u>H: AMP Fund II, LP Lease</u> AMP Fund II, LP	Antero Resources Corporation	1/8+	255A/0685
<u>L: BRC Appalachian Minerals I, LLC Lease</u> BRC Appalachian Minerals I, LLC BRC Working Interest Company LLC Chesapeake Appalachia LLC SWN Production Company Antero Exchange Properties, LLC	BRC Working Interest Company LLC Chesapeake Appalachia LLC SWN Production Company Antero Exchange Properties, LLC Antero Resources Corporation	1/8+ Assignment Assignment Assignment Merger	102A/0505 103A/0470 157A/0540 177A/0533 0013/0311
<u>M: Tribune Resources Minerals, LLC Lease</u> Tribune Resources Minerals, LLC Tribune Resources, LLC	Tribune Resources, LLC Antero Resources Corporation	1/8+ Assignment	218A/0803 219A/0322

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Department of Environmental Protection

08/26/2022

WW-6A1

Operator's Well Number Reader Unit 1H MOD

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- (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>N: Joshua R. Edgell, et al Lease</b> Joshua R. Edgell, DSSP and Robin F. Moore	Antero Resources Corporation	1/8+	191A/0370
<b>P: Josephine Brast, et al Lease</b> Josephine Brast, et al. South Penn Oil Co. 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	South Penn Oil Co. 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 Tribune Resources successor in interest of Ascent Resources-Marcellus LLC fka American Energy Marcellus LLC	1/8 Assignment Assignment Assignment Name Change Assignment Name Change Merger Name Change Assignment	0049/0591 009A/0230 0233/0387 066A/0069 0013/0151 076A/0232 0013/0014 0013/0014 0013/0014 179A/0653
Tribune Resources successor in interest of Ascent Resources-Marcellus LLC fka American Energy Marcellus LLC	Antero Resources Corporation	Assignment	219A/0322

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AUG 11 2022

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.

08/26/2022



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

**Modification Horizontal H6A Well Work Permits API: (47-103-03492, 03494, 03495, 03496, & 03497)**

1 message

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

Tue, Aug 23, 2022 at 5:53 PM

To: Mallory Stanton <mstanton@anteroresources.com>, Diane Blair <dblair@anteroresources.com>, Dani DeVito <ddevito@shalepro.com>, Scott Lemley <slemley@wvassessor.com>, "Greynolds, Kenneth L" <kenneth.l.greynolds@wv.gov>

I have attached a copy of the newly issued well permit numbers:

- 47-103-03492 - ECKLEBERRY UNIT 1H
- 47-103-03494 - LENNY UNIT 1H
- 47-103-03495 - LENNY UNIT 2H
- 47-103-03496 - READER 1H
- 47-103-03497 - READER 2H

These will serve as your copy.

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](mailto:Wade.A.Stansberry@wv.gov)**

**5 attachments**

-  **47-103-03492 - mod.pdf**  
1310K
-  **47-103-03494 - mod.pdf**  
1287K
-  **47-103-03495 - mod.pdf**  
1225K
-  **47-103-03496 - mod.pdf**  
1243K
-  **47-103-03497 -mod.pdf**  
1185K

08/26/2022