

State of West Virginia  
Department of Environmental Protection - Office of Oil and Gas  
Well Operator's Report of Well Work

API 47 - 095 - 02864 County Tyler District Lincoln  
Quad Paden City Pad Name Dry Run Pad Field/Pool Name -----  
Farm name David E. Bowyer Well Number Ripple Unit 1H  
Operator (as registered with the OOG) Antero Resources Corporation  
Address 1615 Wynkoop Street City Denver State CO Zip 80202

As Drilled location NAD 83/UTM Attach an as-drilled plat, profile view, and deviation survey  
Top hole Northing 4378030.158m Easting 507586.286m  
Landing Point of Curve Northing 4354247.65m Easting 539357.05m  
Bottom Hole Northing 4383124.977m Easting 506060.251m

Elevation (ft) 1007' GL Type of Well  New  Existing Type of Report  Interim  Final  
Permit Type  Deviated  Horizontal  Horizontal 6A  Vertical Depth Type  Deep  Shallow  
Type of Operation  Convert  Deepen  Drill  Plug Back  Redrilling  Rework  Stimulate  
Well Type  Brine Disposal  CBM  Gas  Oil  Secondary Recovery  Solution Mining  Storage  Other \_\_\_\_\_  
Type of Completion  Single  Multiple Fluids Produced  Brine  Gas  NGL  Oil  Other \_\_\_\_\_  
Drilled with  Cable  Rotary

Drilling Media Surface hole  Air  Mud  Fresh Water Intermediate hole  Air  Mud  Fresh Water  Brine  
Production hole  Air  Mud  Fresh Water  Brine  
Mud Type(s) and Additive(s)  
Air - Foam & 4% KCL  
Mud - Polymer

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Date permit issued 4/24/2023 Date drilling commenced 5/10/2023 Date drilling ceased 8/1/2023  
Date completion activities began 10/9/2023 Date completion activities ceased 12/19/2023  
Verbal plugging (Y/N) N/A Date permission granted N/A Granted N/A

Please note: Operator is required to submit a plugging application within 5 days of verbal permission to plug

Freshwater depth(s) ft 382' Open mine(s) (Y/N) depths No  
Salt water depth(s) ft 1653' Void(s) encountered (Y/N) depths No  
Coal depth(s) ft N/A Cavem(s) encountered (Y/N) depths No  
Is coal being mined in area (Y/N) No

APPROVED  
Reviewed by: [Signature]  
06/28/2024

API 47-095 - 02864

Farm name David E. Bowyer

Well number Ripple Unit 1H

CASING STRINGS	Hole Size	Casing Size	Depth	New or Used	Grade wt/ft	Basket Depth(s)	Did cement circulate (Y/N) * Provide details below*
Conductor	28"	20"	125.5'	New	94#, H-40	N/A	Y
Surface	17-1/2"	13-3/8"	615'	New	54.5#, J-55	N/A	Y
Coal							
Intermediate 1	12-1/4"	9-5/8"	3234'	New	36#, J-55	N/A	Y
Intermediate 2							
Intermediate 3							
Production	8-3/4"/8-1/2"	5-1/2"	24522'	New	20#, P-100	N/A	Y
Tubing		2-3/8"	6474'		4.7#, P-110		
Packer type and depth set		N/A					

Comment Details \_\_\_\_\_

CEMENT DATA	Class/Type of Cement	Number of Sacks	Slurry wt (ppg)	Yield (ft <sup>3</sup> /sks)	Volume (ft <sup>2</sup> )	Cement Top (MD)	WOC (hrs)
Conductor	Class A	209 sx	15.6	1.18	247	0'	8 Hrs.
Surface	Class A	552 sx	15.6	1.20	662	0'	8 Hrs.
Coal							
Intermediate 1	Class A	1092 sx	15.6	1.20	1310	0'	8 Hrs.
Intermediate 2							
Intermediate 3							
Production	Class H	3334 sx (Tail)	13.5 (Lead), 15.2(Tail)	1.26 (Tail)	4201	-500' into Intermediate Casing	8 Hrs.
Tubing							

Drillers TD (ft) 24522' MD, 6231' TVD (BHL), 6280' (Deepest Point Drilled)

Loggers TD (ft) 24522' MD

Deepest formation penetrated Marcellus

Plug back to (ft) N/A

Plug back procedure N/A

Kick off depth (ft) 5529'

Check all wireline logs run

- caliper     density     deviated/directional     induction  
 neutron     resistivity     gamma ray     temperature     sonic

Well cored  Yes  No

Conventional  Sidewall

Were cuttings collected  Yes  No

DESCRIBE THE CENTRALIZER PLACEMENT USED FOR EACH CASING STRING \_\_\_\_\_

Conductor - 0

Surface - 1 above guide shoe, 1 above insert float, 1 every 4th joint to surface

Intermediate - 1 above float joint, 1 above float collar, 1 every 4th joint to surface

Production - 1 above float joint, 1 below float collar, 1 every 3rd joint to top of cement

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 Environmental Protection

WAS WELL COMPLETED AS SHOT HOLE  Yes  No    DETAILS \_\_\_\_\_

WAS WELL COMPLETED OPEN HOLE?  Yes  No    DETAILS \_\_\_\_\_

WERE TRACERS USED  Yes  No    TYPE OF TRACER(S) USED N/A

06/28/2024

API 47- 095 - 02864 Farm name David E. Bowyer Well number Ripple Unit 1H

PERFORATION RECORD

Stage No.	Perforation date	Perforated from MD ft.	Perforated to MD ft.	Number of Perforations	Formation(s)
<b>*PLEASE SEE ATTACHED EXHIBIT 1</b>					

Please insert additional pages as applicable.

STIMULATION INFORMATION PER STAGE

Complete a separate record for each stimulation stage.

Stage No.	Stimulations Date	Ave Pump Rate (BPM)	Ave Treatment Pressure (PSI)	Max Breakdown Pressure (PSI)	ISIP (PSI)	Amount of Proppant (lbs)	Amount of Water (bbls)	Amount of Nitrogen/other (units)
<b>*PLEASE SEE ATTACHED EXHIBIT 2</b>								

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Well number Ripple Unit 1H

PRODUCING FORMATION(S)

DEPTHS

<u>PRODUCING FORMATION(S)</u>	<u>6206' (TOP)</u>	<u>TVD</u>	<u>6518' (TOP)</u>	<u>MD</u>
Marcellus				

Please insert additional pages as applicable.

GAS TEST  Build up  Drawdown  Open Flow

OIL TEST  Flow  Pump

SHUT-IN PRESSURE Surface 1415 psi Bottom Hole --- psi DURATION OF TEST --- hrs

OPEN FLOW Gas 5716 mcfpd Oil 286 bpd NGL --- bpd Water 590 bpd  
GAS MEASURED BY  Estimated  Orifice  Pilot

LITHOLOGY/ FORMATION	TOP	BOTTOM	TOP	BOTTOM	DESCRIBE ROCK TYPE AND RECORD QUANTITY AND TYPE OF FLUID (FRESHWATER, BRINE, OIL, GAS, H <sub>2</sub> S, ETC)
	DEPTH IN FT NAME TVD	DEPTH IN FT TVD	DEPTH IN FT MD	DEPTH IN FT MD	
<b>*PLEASE SEE ATTACHED EXHIBIT 3</b>					


Please insert additional pages as applicable.

Drilling Contractor H & P Drilling

Address 912 N Eagle Valley Rd City Howard State PA Zip 16841

Logging Company Nine Energy Services

Address 6500 West Fwy City Fort Worth State TX Zip 76116

Cementing Company Schlumberger US Land

Address 1080 US-33 City Weston State WV Zip 26452

Stimulating Company Halliburton

Address 3000 W. Sam Houston Pkwy City Houston State TX Zip 76114

Please insert additional pages as applicable.

Completed by Carly Marvel

Signature Carly Marvel Title Permitting Agent Telephone 303-357-7373

Date 2/6/2024

Submittal of Hydraulic Fracturing Chemical Disclosure Information

Attach copy of FRACFOCUS Registry

*Signature* **06/28/2024**

10,397' to Top Hole

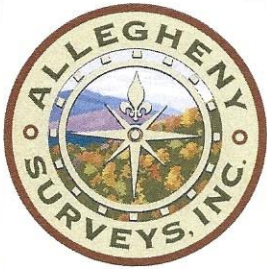
3,641' to Bottom Hole  
TOP HOLE LATITUDE 39 - 35 - 00  
BTM HOLE LATITUDE 39 - 37 - 30

9,922' to Bottom Hole  
TOP HOLE LONGITUDE 80 - 52 - 30  
BTM HOLE LONGITUDE 80 - 55 - 00

11,471' to Top Hole

**Antero Resources**  
**Well No. Ripple 1H**  
**As-Drilled**  
Antero Resources Corporation

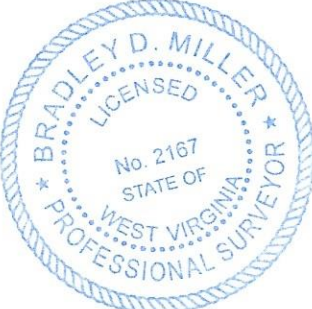
PAGE 1 of 2



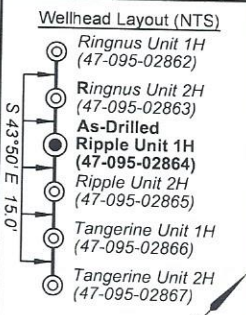
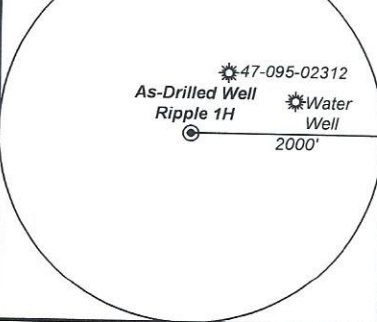
Top Hole Coordinates, As-drilled data, and information was provided by Antero Resources Corporation. Allegheny Surveys Inc. (ASI) is not certifying the data and information provided. ASI is not responsible for any errors or inaccuracies with the data and information that has been provided.

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



Note: 1 water well 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 larger used to house or shelter poultry husbandry are located within 625' of the center of the well pad.



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

**Notes**  
West Virginia Coordinate System of 1927, North Zone  
based upon Differential GPS Measurements.  
Well No. Ripple Unit 1H Top Hole coordinates are  
N: 386,231.04' Latitude: 39°33'06.63"  
E: 1,601,901.02' Longitude: 80°54'42.74"  
Bottom Hole coordinates are  
N: 403,033.25' Latitude: 39°35'51.94"  
E: 1,597,172.04' Longitude: 80°55'46.52"  
UTM Zone 17, NAD 1983  
Top Hole Coordinates Bottom Hole Coordinates  
N: 4,378,030.158m N: 4,383,124.977m  
E: 507,586.286m E: 506,060.251m  
Plat orientation and corner and well references are based upon the grid north meridian.  
Well location references are based upon the magnetic meridian.

**Ripple 1H As-Drilled POE Coordinates**  
West Virginia Coordinate System of 1927, North Zone  
N: 385,940.97'  
E: 1,602,717.09'  
Latitude: 39°33'03.89"  
Longitude: 80°54'32.27"  
UTM Zone 17, NAD 1983  
N: 4,377,945.944m  
E: 507,836.378m



**Wellhead Layout (NTS)**

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	Bearing	Dist.
L1	N 64°56' E	979.8'
L2	S 48°48' E	2,554.3'
L3	S 66°58' W	1,089.1'
L4	N 79°52' W	1,233.7'

FILE NO: 15-54-L-23  
DRAWING NO: Ripple 1H As-Drilled  
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**

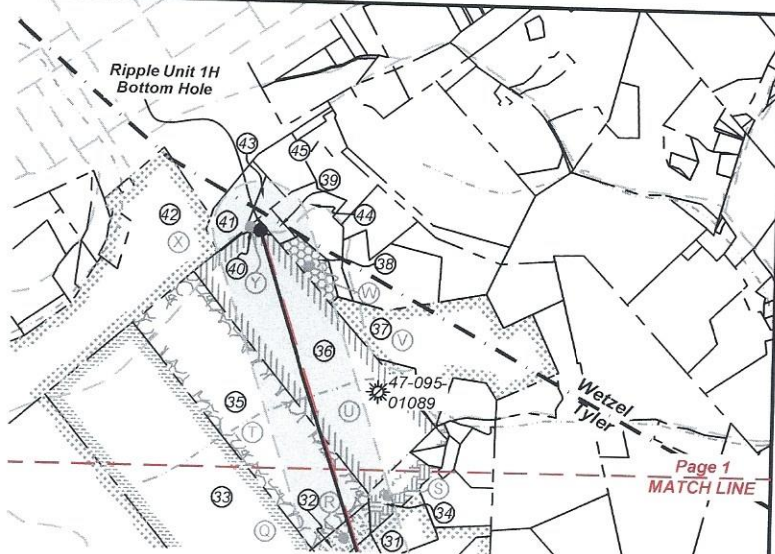
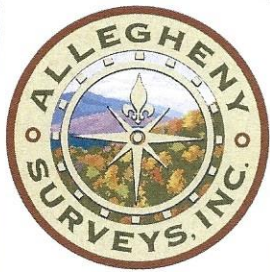
DATE: January 17 20 24  
OPERATOR'S WELL NO. Ripple 1H  
API WELL NO  
47 - 95 - 02864  
STATE COUNTY PERMIT

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

LOCATION: ELEVATION: As-Built 1,007' WATERSHED: Outlet Middle Island Creek QUADRANGLE: Paden City  
DISTRICT: Lincoln/Magnolia COUNTY: Tyler  
SURFACE OWNER: David E. Bowyer  
ROYALTY OWNER: Timothy L. VanCamp; Tamara M. Reynolds; BRC Appalachian Minerals I, LLC; J. Maurice Carlisle; LEASE NO: ACREAGE: 85.785  
PROPOSED WORK:  DRILL  CONVERT  DRILL DEEPER  FRACTURE OR STIMULATE  PLUG OFF OLD FORMATION  
 PERFORATE NEW FORMATION  OTHER PHYSICAL CHANGE IN WELL (SPECIFY) As-Drilled  
 PLUG AND ABANDON  CLEAN OUT AND REPLUG TARGET FORMATION: Marcellus Shale ESTIMATED DEPTH: 24,522' 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

06/28/2024



ID	TM-Par	Owner	Bk/Pg	Acres
1	9-19	David E. Bowyer	OR16/22	85.79
2	9-31.1	David E. Bowyer	OR16/22	38.04
3	9-21	Thomas K. Brotherton	23/310	64.00
4	9-20	Jason & Jessica Greathouse & Laken Curtis	OR59/513	7.38
5	9-17	Ethan A. & Marsha L. Riffle	323/649	90.04
6	9-18	Michael V. & Debra K. Smith	331/94	100.00
7	9-6	Larry G. & Joyce Ann Kaprich	375/254	12.11
8	9-6.1	Larry G. & Joyce Ann Kaprich	326/874	40.51
9	9-6.2	Larry G. & Joyce Ann Kaprich	375/254	9.47
10	9-7.3	Larry G. & Joyce Ann Kaprich	375/254	17.23
11	9-6.3	Donna E. Cecil	611/328	1.44
12	9-7	Ralph D. Thacker & Maurice J. Calisle Jr.	OR177/619	10.25
13	9-5.1	Carl L. & Donna M. Yoho	328/400	1.65
14	9-5	Chad & Janet L. Heintzman	330/527	64.35
15	9-7.1	Carl L. & Donna M. Yoho	320/456	117.00
16	5-17	Kenneth W. & Susan D. Paden	215/390	11.11
17	5-14	Kenneth W. & Susan D. Paden	215/390	55.22
18	5-15	Kenneth W. & Susan D. Paden	215/390	21.32
19	5-15.1	Joshua K. & Tomela Paden	355/821	1.09
20	5-20	Teri Jo Fiber	644/240	---
21	5-19	John P. & Susan Buck	337/634	159.21
22	5-8	Franklin & Nancy Broughman	338/292	33.17
23	5-1	Richard Lee & Linda Tuttle	362/43	88.00
24	5-34	Timothy J. & Miranda Haynes	OR151/407	74.50
25	5-35	Ethel & Timothy Brown	AR45/28	8.50
26	5-40	Jason Phillips	OR164/108	0.52
27	5-36	Brandon P. Mason and Katie E. Mason	396/464	56.86
28	5-39	Jason Phillips	OR164/108	16.29
29	5-41	Cheryl W. Cowen, et al	166/56	36.00
30	2-??	Shawn D. & Tara A. Cross	612/75	---
31	2-12	Shawn D. & Tara A. Cross	612/75	6.00
32	2-11	Misty D. Willey	555/467	4.00
33	1-8	Gary & Marsha L. Holmes	372/325	95.40
34	2-14	Shirley Billiter	215/573	7.13
35	2-1	Lloyd Wayne & Lottie Cross	188/383	50.00
36	2-2	Betty Lou Billiter Irrevocable Trust	375/476	65.00
37	2-4	Timothy J. & Tiffany D. Michael	575/824	37.50
38	2-3	Ernest & James Billiter	WB8/26	3.62
39	15-5	Betty Lou Billiter Irrevocable Trust	423/179	2.00
40	2-5	Betty Lou Billiter Irrevocable Trust	375/476	0.60
41	15-4	Linda K Patterson et al	AP97/843	7.17
42	15-12	Mike Ross Inc.	459/59	69.45
43	15-4.1	Lacey A Ryan, et al	AP94/179	1.83
44	15-6	Betty Lou Billiter Irrevocable Trust	423/179	9.00
45	15-1	Peter Testerman Jr & Marie Hass	439/425	9.00

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Leases	
A	Timothy L. Vancamp
B	Tamara M. Reynolds
C	Bounty Minerals, LLC
D	BRC Appalachian Minerals I LLC
E	J. Maurice Carlisle
F	John T. Goosman, et ux
G	Janet L. Heintzman
H	Jane Ann Miller
I	John Paul Buck, et ux
J	John Paul Buck, et ux
K	Drilling Appalachian Corporation
L	Waco Oil & Gas Co Inc.
M	Richard Tuttle, et ux
N	Terry D. Wade, et ux
O	Brandon P. Mason, et ux
P	Heritage Resources - Marcellus Minerals, LLC
Q	Gary Holmes, et ux
R	Misty D. Willey
S	Shirley J. Billiter
T	Bounty Minerals, LLC
U	Lonnie L. & Bettie Lou Billiter
V	Michael Dail Stillwagner
W	OCTO Energy, LLC
X	Henry P. Snyder, et al
Y	Betty Lou Billiter Irrevocable Trust

FILE NO: 15-54-L-23  
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 MINIMUM DEGREE OF ACCURACY:  
 Submeter  
 PROVEN SOURCE OF ELEVATION:  
 WVDOT, Harrisville, WV

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

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 ROYALTY OWNER: Timothy L. VanCamp, Tamara M. Reynolds, BRC Appalachian Minerals I, LLC, J. Maurice Carlisle, LEASE NO: \_\_\_\_\_ ACREAGE: 74.5, 58.293, 50, 65,  
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06/28/2024

Exhibit 1

Stage No.	Perforation Date	Perforated from MD ft.	Perforated to MD ft.	Number of Perforations	Formations
1	10/9/2023	24397.0	24353.0	36	Marcellus
2	10/9/2023	24314.3	24147.9	36	Marcellus
3	10/9/2023	24112.2	23945.7	36	Marcellus
4	10/10/2023	23910.0	23743.6	36	Marcellus
5	10/11/2023	23707.9	23541.4	36	Marcellus
6	10/11/2023	23505.7	23339.3	36	Marcellus
7	10/11/2023	23303.6	23137.1	36	Marcellus
8	10/12/2023	23101.4	22935.0	36	Marcellus
9	10/12/2023	22899.3	22732.8	36	Marcellus
10	10/12/2023	22697.1	22530.7	36	Marcellus
11	10/13/2023	22495.0	22328.5	36	Marcellus
12	10/13/2023	22292.8	22126.4	36	Marcellus
13	10/13/2023	22090.7	21924.2	36	Marcellus
14	10/13/2023	21888.5	21722.1	36	Marcellus
15	10/14/2023	21686.4	21519.9	36	Marcellus
16	10/14/2023	21484.2	21317.8	36	Marcellus
17	10/14/2023	21282.1	21115.6	36	Marcellus
18	10/15/2023	21079.9	20913.5	36	Marcellus
19	10/15/2023	20877.8	20711.3	36	Marcellus
20	10/15/2023	20675.6	20509.2	36	Marcellus
21	10/15/2023	20473.5	20307.0	36	Marcellus
22	10/16/2023	20271.4	20104.9	36	Marcellus
23	10/16/2023	20069.2	19902.8	36	Marcellus
24	10/16/2023	19867.1	19700.6	36	Marcellus
25	10/16/2023	19664.9	19498.5	36	Marcellus
26	10/17/2023	19462.8	19296.3	36	Marcellus
27	10/17/2023	19260.6	19094.2	36	Marcellus
28	10/17/2023	19058.5	18892.0	36	Marcellus
29	10/17/2023	18856.3	18689.9	36	Marcellus
30	10/18/2023	18654.2	18487.7	36	Marcellus
31	10/18/2023	18452.0	18285.6	36	Marcellus
32	10/18/2023	18249.9	18083.4	36	Marcellus
33	10/18/2023	18047.7	17881.3	36	Marcellus
34	10/19/2023	17845.6	17679.1	36	Marcellus
35	10/19/2023	17643.4	17477.0	36	Marcellus
36	10/19/2023	17441.3	17274.8	36	Marcellus
37	10/19/2023	17239.1	17072.7	36	Marcellus
38	10/20/2023	17037.0	16870.5	36	Marcellus
39	10/20/2023	16834.8	16668.4	36	Marcellus
40	10/20/2023	16632.7	16466.2	36	Marcellus
41	10/20/2023	16430.5	16264.1	36	Marcellus
42	10/21/2023	16228.4	16061.9	36	Marcellus
43	10/21/2023	16026.3	15859.8	36	Marcellus
44	10/21/2023	15824.1	15657.6	36	Marcellus
45	10/21/2023	15622.0	15455.5	36	Marcellus
46	10/22/2023	15419.8	15253.4	36	Marcellus
47	10/22/2023	15217.7	15051.2	36	Marcellus
48	10/22/2023	15015.5	14849.1	36	Marcellus
49	10/22/2023	14813.4	14646.9	36	Marcellus
50	10/22/2023	14611.2	14444.8	36	Marcellus
51	10/23/2023	14409.1	14242.6	36	Marcellus
52	10/23/2023	14206.9	14040.5	36	Marcellus
53	10/23/2023	14004.8	13838.3	36	Marcellus
54	10/23/2023	13802.6	13636.2	36	Marcellus
55	10/24/2023	13600.5	13434.0	36	Marcellus
56	10/24/2023	13398.3	13231.9	36	Marcellus
57	10/24/2023	13196.2	13029.7	36	Marcellus
58	10/24/2023	12994.0	12827.6	36	Marcellus
59	10/24/2023	12791.9	12625.4	36	Marcellus
60	10/25/2023	12589.7	12423.3	36	Marcellus
61	10/25/2023	12387.6	12221.1	36	Marcellus
62	10/25/2023	12185.4	12019.0	36	Marcellus
63	10/26/2023	11983.3	11816.8	36	Marcellus
64	10/26/2023	11781.1	11614.7	36	Marcellus
65	10/26/2023	11579.0	11412.5	36	Marcellus
66	10/26/2023	11376.9	11210.4	36	Marcellus
67	10/26/2023	11174.7	11008.3	36	Marcellus
68	10/26/2023	10972.6	10806.1	36	Marcellus
69	10/27/2023	10770.4	10604.0	36	Marcellus
70	10/27/2023	10568.3	10401.8	36	Marcellus
71	10/27/2023	10366.1	10199.7	36	Marcellus
72	10/27/2023	10164.0	9997.5	36	Marcellus
73	10/27/2023	9961.8	9795.4	36	Marcellus
74	10/28/2023	9759.7	9593.2	36	Marcellus
75	10/28/2023	9557.5	9391.1	36	Marcellus
76	10/28/2023	9355.4	9188.9	36	Marcellus
77	10/28/2023	9153.2	8986.8	36	Marcellus
78	10/29/2023	8951.1	8784.6	36	Marcellus
79	10/29/2023	8748.9	8582.5	36	Marcellus
80	10/29/2023	8546.8	8380.3	36	Marcellus
81	10/29/2023	8344.6	8178.2	36	Marcellus
82	10/29/2023	8142.5	7976.0	36	Marcellus
83	10/30/2023	7940.3	7773.9	36	Marcellus
84	10/30/2023	7738.2	7571.7	36	Marcellus
85	10/30/2023	7536.0	7369.6	36	Marcellus
86	10/30/2023	7333.9	7167.4	36	Marcellus
87	10/30/2023	7131.8	6965.3	36	Marcellus
88	10/31/2023	6929.6	6763.1	36	Marcellus
89	10/31/2023	6727.5	6561.0	36	Marcellus



EXHIBIT 2

Stage No.	Stimulations Date	Avg Pump Rate	Avg Treatment Pressure (PSI)	Max Breakdown Pressure (PSI)	ISIP (PSI)	Amount of Proppant (lbs)	Amount of Water (bbls)	Amount of Nitrogen/ other (units)
1	10/9/2023	71.1	8976.5	8214.55	3837.6	190340	5476.3	N/A
2	10/9/2023	82.5	9597.7	4996.49	4082.7	418240	8063.7	N/A
3	10/9/2023	82.0	9318.7	5132.36	3889.2	416080	10948.4	N/A
4	10/10/2023	79.3	9786.8	4950.27	3642.1	410820	7662.7	N/A
5	10/11/2023	84.0	9942.5	4756.46	3541.5	420820	8028.3	N/A
6	10/11/2023	80.4	8936.8	5238.57	4032.7	419420	10697.9	N/A
7	10/11/2023	81.6	9816.4	5357.12	3290.6	424280	8118.9	N/A
8	10/12/2023	82.8	9469.7	4975.94	3447.1	424980	7913.6	N/A
9	10/12/2023	80.4	9797.2	5067.67	3481.0	423240	7795.0	N/A
10	10/12/2023	84.0	9997.4	4965.96	3633.4	420000	7744.8	N/A
11	10/13/2023	83.5	9986.6	5174.43	3087.6	424140	8048.0	N/A
12	10/13/2023	86.2	9848.2	4835.35	3563.0	418600	7797.5	N/A
13	10/13/2023	81.5	9434.8	3990.56	3668.0	418800	7704.4	N/A
14	10/13/2023	85.1	9637.4	5200.49	3163.5	424000	8110.5	N/A
15	10/14/2023	86.6	9934.4	5117.96	3405.5	419300	7756.0	N/A
16	10/14/2023	83.6	10006.2	5045.13	3828.0	415360	7509.8	N/A
17	10/14/2023	90.2	9763.0	5252.71	3472.9	410760	8163.5	N/A
18	10/15/2023	89.7	9833.5	5204.44	3773.5	418840	7411.8	N/A
19	10/15/2023	92.2	9816.7	4275.94	3578.0	416742	7781.5	N/A
20	10/15/2023	91.5	10068.7	4831.9	3443.0	419740	7832.8	N/A
21	10/15/2023	94.0	9781.7	5172.21	3937.1	416760	7678.6	N/A
22	10/16/2023	92.5	9806.8	5359.13	3247.1	422800	7668.1	N/A
23	10/16/2023	92.8	9970.3	4823.29	3676.7	419580	7469.3	N/A
24	10/16/2023	92.0	9917.4	3624.11	3533.5	423620	7650.9	N/A
25	10/16/2023	91.3	9589.1	4990	3342.9	427580	7553.8	N/A
26	10/17/2023	92.9	9880.5	4959.67	3293.6	420140	7445.2	N/A
27	10/17/2023	95.2	10175.9	5252.56	3503.0	420360	7437.8	N/A
28	10/17/2023	94.7	9967.3	5529.5	3495.8	400550	7340.3	N/A
29	10/17/2023	95.5	10045.9	5363.14	3394.8	417420	7523.5	N/A
30	10/18/2023	91.0	9178.6	4227.13	3708.7	415700	7307.0	N/A
31	10/18/2023	97.3	9965.5	5268.32	3400.2	416380	7462.7	N/A
32	10/18/2023	97.3	9731.7	4974.95	3573.3	416260	7597.0	N/A
33	10/18/2023	96.2	9683.9	5320.33	3371.4	418160	7452.5	N/A
34	10/19/2023	94.1	9550.1	4410.12	3416.3	421240	7463.4	N/A
35	10/19/2023	96.0	9644.7	5188.77	3326.5	419140	7376.7	N/A
36	10/19/2023	97.1	9864.2	3553.05	3403.0	419220	7378.3	N/A
37	10/19/2023	96.6	9564.3	4576.69	3663.8	412160	7303.0	N/A
38	10/20/2023	95.7	9535.7	4137.64	3326.4	414300	7315.8	N/A
39	10/20/2023	96.3	9696.1	5099.03	3578.7	410460	7082.5	N/A
40	10/20/2023	96.5	9810.6	5345.91	3490.5	420900	7372.6	N/A
41	10/20/2023	96.2	9331.4	5317.3	3395.6	416500	7494.1	N/A
42	10/21/2023	97.1	9500.5	5331.41	3633.2	424460	7292.4	N/A
43	10/21/2023	96.6	9068.5	5454.43	3598.1	413100	7289.5	N/A
44	10/21/2023	97.9	9518.2	5320.31	3366.0	412100	7308.5	N/A
45	10/21/2023	97.2	9499.3	4894.07	3334.6	416400	7278.0	N/A
46	10/22/2023	95.6	9323.2	5096.66	3666.7	413560	7273.3	N/A
47	10/22/2023	96.0	9440.7	4894.32	3586.4	409300	6892.3	N/A
48	10/22/2023	96.1	9130.6	5174.05	3636.3	419820	7395.3	N/A
49	10/22/2023	97.1	9027.2	4923.9	3383.0	421680	7303.8	N/A
50	10/22/2023	96.4	9062.3	4626.31	3429.8	415060	7067.3	N/A
51	10/23/2023	97.8	8919.9	4726.34	3468.3	421820	6992.6	N/A
52	10/23/2023	97.7	8804.4	4891.94	3359.5	416100	6922.5	N/A
53	10/23/2023	96.0	8766.3	5040.09	3382.2	418700	7159.5	N/A
54	10/23/2023	97.6	8885.7	5099.83	3274.8	418380	7030.2	N/A
55	10/24/2023	97.4	8852.9	4779.89	3359.4	414220	6940.1	N/A
56	10/24/2023	97.0	8915.5	3919.61	3245.5	412860	6913.0	N/A
57	10/24/2023	98.1	8705.5	5142.43	3373.6	415840	6958.8	N/A
58	10/24/2023	97.2	8789.5	4969.0	3178.5	411500.0	6892.4	N/A
59	10/24/2023	97.9	8793.8	4992.1	3063.7	418920.0	6796.8	N/A
60	10/25/2023	97.8	8713.1	4799.8	3354.9	418700.0	6756.5	N/A
61	10/25/2023	97.3	8693.4	5492.0	3283.7	408860.0	6779.4	N/A
62	10/25/2023	83.5	8431.1	5761.4	3255.4	416890.0	8823.2	N/A
63	10/26/2023	96.1	8643.1	5436.3	3317.4	417600.0	7015.3	N/A
64	10/26/2023	89.9	8053.1	5497.8	3592.9	419320.0	6995.8	N/A
65	10/26/2023	95.6	8174.8	5279.0	3497.6	415040.0	6751.1	N/A
66	10/26/2023	95.3	8449.2	5762.3	3499.4	412000.0	6803.6	N/A
67	10/26/2023	96.8	8150.5	5573.6	3394.1	417540.0	6979.8	N/A
68	10/26/2023	97.8	8166.4	5304.6	3474.0	425360.0	7106.9	N/A
69	10/27/2023	96.0	8761.6	5451.5	3182.4	416560.0	6581.9	N/A
70	10/27/2023	98.0	8435.6	5845.4	3275.6	413040.0	6688.4	N/A
71	10/27/2023	97.8	8253.6	5613.7	3372.7	411580.0	6555.6	N/A
72	10/27/2023	98.0	8244.1	5500.4	3360.0	411940.0	6395.5	N/A
73	10/27/2023	97.8	8712.0	5640.5	3480.7	413900.0	6742.8	N/A
74	10/28/2023	97.8	8833.9	5141.0	3434.2	409980.0	6811.8	N/A
75	10/28/2023	97.3	8645.8	5183.0	3613.2	403160.0	6736.7	N/A
76	10/28/2023	96.6	8591.8	5492.3	3397.7	416620.0	6851.7	N/A
77	10/28/2023	97.0	8281.0	5287.6	3623.4	411540.0	6737.5	N/A
78	10/29/2023	98.3	8396.0	5386.4	3639.0	412840.0	6738.4	N/A
79	10/29/2023	98.3	8342.0	5288.8	3426.6	408320.0	6883.7	N/A
80	10/29/2023	97.9	8137.9	4923.2	3489.5	418660.0	7009.7	N/A
81	10/29/2023	98.6	7869.6	5167.4	3289.2	416540.0	6976.9	N/A
82	10/29/2023	97.9	8409.4	5350.1	3344.4	409780.0	6721.1	N/A
83	10/30/2023	98.2	8224.6	5425.2	3191.9	414640.0	6801.3	N/A
84	10/30/2023	97.2	8083.2	4863.8	3378.3	411800.0	6555.0	N/A
85	10/30/2023	97.5	7685.2	5284.9	3421.1	407020.0	6972.3	N/A
86	10/30/2023	97.3	7556.8	5032.9	3486.0	407800.0	6838.4	N/A
87	10/30/2023	98.1	7368.3	3870.1	3431.1	414420.0	6844.8	N/A
88	10/31/2023	81.2	6933.0	5607.4	4289.2	418260.0	10763.8	N/A
89	10/31/2023	91.0	6635.2	4937.8	3951.0	413580.0	6867.7	N/A
	AVERAGE	93	9,073	5,096	3,483	36,830,842	654,731	N/A



**EXHIBIT 3**

LITHOLOGY/ FORMATION	TOP DEPTH (TVD)	BOTTOM DEPTH (TVD)	TOP DEPTH (MD)	BOTTOM DEPTH (MD)
	From Surface	From Surface	From Surface	From Surface
Shaley Sandstone	624	724	624	724
Sandy Shale	724	774	724	774
Shale	774	824	774	824
Sandy Shale	824	874	824	874
Shale	874	1,024	874	1,024
Sandy Shale	1,024	1,124	1,024	1,124
Sandy Shale	1,124	1,224	1,124	1,224
Shaley Sandstone	1,224	1,324	1,224	1,324
Sandstone, Tr Shale	1,324	1,424	1,324	1,424
Shale, Tr Sandstone	1,424	1,524	1,424	1,524
Sandy Shale	1,524	1,624	1,524	1,624
Shale, tr Sandstone	1,624	1,774	1,624	1,774
Sandy Shale	1,774	1,795	1,774	1,797
Big Lime	1,821	2,694	1,797	2,700
Fifty Foot Sandstone	2,694	2,786	2,674	2,796
Gordon	2,786	2,915	2,770	2,931
Fifth Sandstone	2,915	3,166	2,905	3,193
Bayard	3,166	3,861	3,167	3,931
Speechley	3,861	4,097	3,905	4,186
Balltown	4,097	4,551	4,160	4,672
Bradford	4,551	4,865	4,646	5,003
Benson	4,865	5,076	4,977	5,230
Alexander	5,076	6,110	5,204	6,332
Sycamore	5,982	6,084	6,181	6,306
Middlesex	6,084	6,174	6,306	6,444
Burkett	6,174	6,206	6,444	6,518
Marcellus	6,206	NA	6,518	NA

\*Please note Antero determines formation tops based on mud logs that are only run on one well on a multi-well pad. The measured depth (MD) data on subsequent wells may be slightly different due to the well's unique departure.

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# Hydraulic Fracturing Fluid Product Component Information Disclosure

Job Start Date:	11/09/2023
Job End Date:	11/09/2023
State:	West Virginia
County:	Tyler
API Number:	47-095-02864-00-00
Operator Name:	Antero Resources Corporation
Well Name and Number:	RIPPLE UNIT 1H
Latitude:	39.5519
Longitude:	-80.9177
Datum:	WGS84
Federal Well:	NO
Indian Well:	NO
True Vertical Depth:	6280
Total Base Water Volume (gal)*:	29028819
Total Base Non Water Volume:	0



Water Source	Percent
Produced Water	100.00%

## Hydraulic Fracturing Fluid Composition:

Trade Name	Supplier	Purpose	Ingredients	Chemical Abstract Service Number (CAS #)	Maximum Ingredient Concentration in Additive (% by mass)**	Maximum Ingredient Concentration in HF Fluid (% by mass)**	Comments
FDP-S1464-22	Halliburton	Friction Reducer					
HAI-501	Halliburton	Acid Corrosion Inhibitor					
HYDROCHLORIC ACID, 22 BAUME	Halliburton	Solvent					
MC B-8614A	MultiChem	Biocide					
OPTIFLO-II DELAYED RELEASE BREAKER	Halliburton	Breaker					
Produced Water	Operator	Base Fluid					
Sand-Common White-100 Mesh, SSA-2	Halliburton	Proppant					
WG-36 GELLING AGENT	Halliburton	Gelling Agent					

Items above are Trade Names. Items below are the individual ingredients.

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			Water	7732-18-5	100.00000	86.62891
			Crystalline silica, quartz	14808-60-7	100.00000	13.17891
			Water	7732-18-5	100.00000	0.16511
			Hydrochloric acid	7647-01-0	30.00000	0.03817
			Complex amine compound	Proprietary	60.00000	0.02950
			Hydrotreated distillate	Proprietary	30.00000	0.01475
			Guar gum	9000-30-0	100.00000	0.00703
			Glutaraldehyde	111-30-8	30.00000	0.00251
			Ammonium chloride	12125-02-9	5.00000	0.00246
			Ethoxylated alcohol	Proprietary	5.00000	0.00246
			Fatty nitrogen derived amides	Proprietary	5.00000	0.00246
			Sorbitan, mono-9-octadecenoate, (z)	1338-43-8	1.00000	0.00049
			Sorbitan monooleate polyoxyethylene derivative	9005-65-6	1.00000	0.00049
			Alkyl (C12-16) dimethylbenzyl ammonium chloride	68424-85-1	5.00000	0.00042
			Methyl Alcohol	67-56-1	100.00000	0.00024
			Ammonium persulfate	7727-54-0	100.00000	0.00015
			Ethanol	64-17-5	1.00000	0.00008
			Mixture of dimer and trimer fatty acids of indefinite composition derived from tall oil	61790-12-3	30.00000	0.00007
			Modified thiourea polymer	Proprietary	30.00000	0.00007
			Oxylated phenolic resin	Proprietary	30.00000	0.00004
			Propargyl alcohol	107-19-7	5.00000	0.00001
			Hexadecene	629-73-2	5.00000	0.00001
			Ethoxylated alcohols	Proprietary	5.00000	0.00001
			C.I. pigment Orange 5	3468-63-1	1.00000	0.00000

\* Total Water Volume sources may include various types of water including fresh water, produced water, and recycled water

\*\* Information is based on the maximum potential for concentration and thus the total may be over 100%

Note: For Field Development Products (products that begin with FDP), MSDS level only information has been provided.

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Ingredient information for chemicals subject to 29 CFR 1910.1200(i) and Appendix D are obtained from suppliers Material Safety Data Sheets (MSDS)

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