

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

API 47 - 095 - 02862 County Tyler District Lincoln  
Quad Paden City Pad Name Dry Run Pad Field/Pool Name -----  
Farm name David E. Bowyer Well Number Ringnus 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 4378036.604m Easting 507579.751m  
Landing Point of Curve Northing 4353047.73m Easting 539200.08m  
Bottom Hole Northing 4383016.819m Easting 505571.397m

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

Date permit issued 4/24/2023 Date drilling commenced 5/10/2023 Date drilling ceased 7/13/2023  
Date completion activities began 10/9/2023 Date completion activities ceased 12/6/2023  
Verbal plugging (Y/N) N/A Date permission granted N/A Granted by N/A

RECEIVED  
Office Of Oil and Gas

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

FEB 14 2024

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 Cavern(s) encountered (Y/N) depths No  
Is coal being mined in area (Y/N) No

**APPROVED**

Reviewed by:

  
**06/28/2024**  
3-21-24

API 47-095 - 02862 Farm name David E. Bowyer Well number Ringnus 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"	651'	New	54.5#, J-55	N/A	Y
Coal							
Intermediate 1	12-1/4"	9-5/8"	3239'	New	36#, J-55	N/A	Y
Intermediate 2							
Intermediate 3							
Production	8-3/4"/8-1/2"	5-1/2"	25009'	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>3</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	1113 sx	15.6	1.20	1336	0'	8 Hrs.
Intermediate 2							
Intermediate 3							
Production	Class H	4367 sx (Tail)	13.5 (Lead), 15.2(Tail)	1.26 (Tail)	5502	-500' into Intermediate Casing	8 Hrs.
Tubing							

Drillers TD (ft) 25009' MD, 6202' TVD (BHL), 6273' (Deepest Point Drilled) Loggers TD (ft) 25009' MD  
 Deepest formation penetrated Marcellus Plug back to (ft) N/A  
 Plug back procedure N/A

Kick off depth (ft) 5331'

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 \_\_\_\_\_ RECEIVED \_\_\_\_\_  
Surface - 1 above guide shoe, 1 above insert float, 1 every 4th joint to surface \_\_\_\_\_ Office Of Oil and Gas \_\_\_\_\_  
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 \_\_\_\_\_ FEB 14 2024 \_\_\_\_\_

WAS WELL COMPLETED AS SHOT HOLE  Yes  No DETAILS \_\_\_\_\_ WV Department of Environmental Protection \_\_\_\_\_

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

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

06/28/2024  
3-27-24

API 47-095-02862

Farm name David E. Bowyer

Well number Ringnus 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>								


RECEIVED  
Office of Oil and Gas  
FEB 14 2024  
WV Department of  
Environmental Protection

Please insert additional pages as applicable.

06/28/2024  
*[Signature]*  
3-27-24

API 47- 095 - 02862 Farm name David E. Bowyer Well number Ringnus Unit 1H

PRODUCING FORMATION(S)	DEPTHS	
	6196' (TOP) TVD	6659' (TOP) MD
Marcellus		

Please insert additional pages as applicable.

GAS TEST  Build up  Drawdown  Open Flow OIL TEST  Flow  Pump

SHUT-IN PRESSURE Surface 1678 psi Bottom Hole --- psi DURATION OF TEST --- hrs

OPEN FLOW Gas 5785 mcfpd Oil 310 bpd NGL --- bpd Water 555 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	

**\*PLEASE SEE ATTACHED EXHIBIT 3**


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 Telephone 303-357-7373  
Signature Carly Marvel Title Permitting Agent Date 2/6/2024

Submittal of Hydraulic Fracturing Chemical Disclosure Information Attach copy of FRACFOCUS Registry

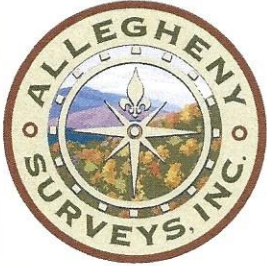
06/28/2024

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

PAGE 1 of 2

10,419' to Top Hole

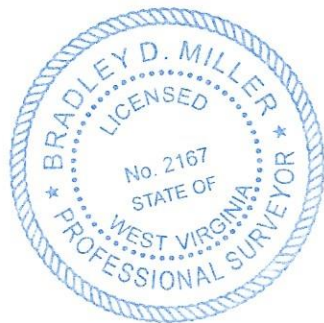
5,246' to Bottom Hole  
 TOP HOLE LATITUDE 39 - 35 - 00  
 BTM HOLE LATITUDE 39 - 37 - 30



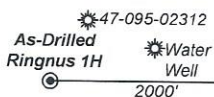
Top Hole Coordinates, As-drilled data, and information was provided by Antero Resources Corporation. Allegheny Surveys Inc. (ASI) is not certifying the data and information provided. ASI is not responsible for any errors or inaccuracies with the data and information that has been provided.

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 poultry husbandry are located within 625' of the center of the well pad.



**Wellhead Layout (NTS)**

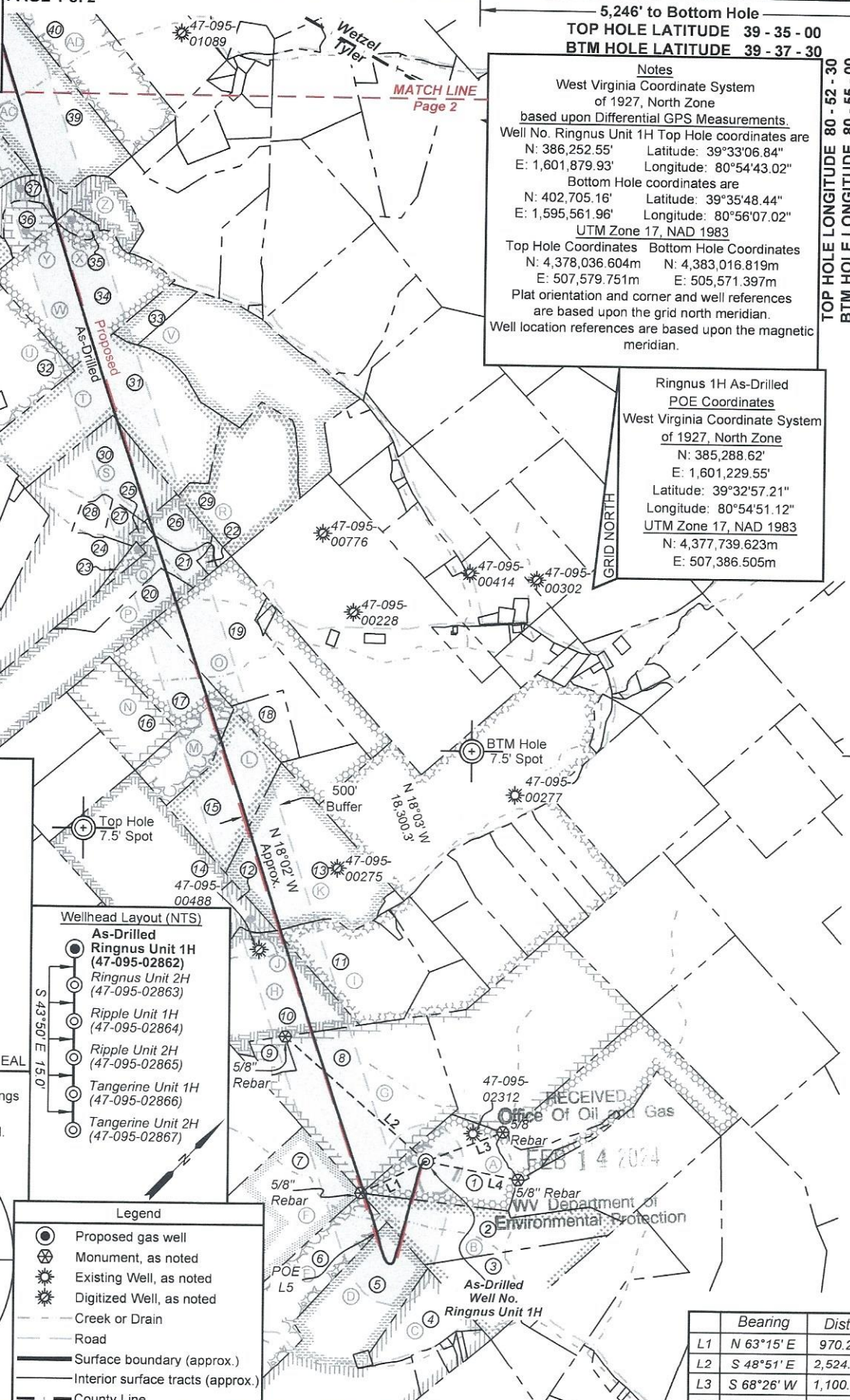
- As-Drilled Ringnus Unit 1H (47-095-02862)
- Ringnus Unit 2H (47-095-02863)
- Ripple Unit 1H (47-095-02864)
- Ripple Unit 2H (47-095-02865)
- Tangerine Unit 1H (47-095-02866)
- Tangerine Unit 2H (47-095-02867)

SEAL

- 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. Ringnus Unit 1H Top Hole coordinates are  
 N: 386,252.55' Latitude: 39°33'06.84"  
 E: 1,601,879.93' Longitude: 80°54'43.02"  
 Bottom Hole coordinates are  
 N: 402,705.16' Latitude: 39°35'48.44"  
 E: 1,595,561.96' Longitude: 80°56'07.02"  
 UTM Zone 17, NAD 1983  
 Top Hole Coordinates Bottom Hole Coordinates  
 N: 4,378,036.604m N: 4,383,016.819m  
 E: 507,579.751m E: 505,571.397m  
 Plat orientation and corner and well references are based upon the grid north meridian.  
 Well location references are based upon the magnetic meridian.

Ringnus 1H As-Drilled POE Coordinates  
 West Virginia Coordinate System of 1927, North Zone  
 N: 385,288.62'  
 E: 1,601,229.55'  
 Latitude: 39°32'57.21"  
 Longitude: 80°54'51.12"  
 UTM Zone 17, NAD 1983  
 N: 4,377,739.623m  
 E: 507,386.505m



	Bearing	Dist.
L1	N 63°15' E	970.2'
L2	S 48°51' E	2,524.2'
L3	S 68°26' W	1,100.5'
L4	N 79°05' W	1,258.4'

FILE NO: 20-54-L-18  
 DRAWING NO: Ringnus 1H As-Drilled Plat  
 SCALE: 1" = 2000'  
 MINIMUM DEGREE OF ACCURACY: Submeter  
 PROVEN SOURCE OF ELEVATION: WVDOT, Harrisville, WV

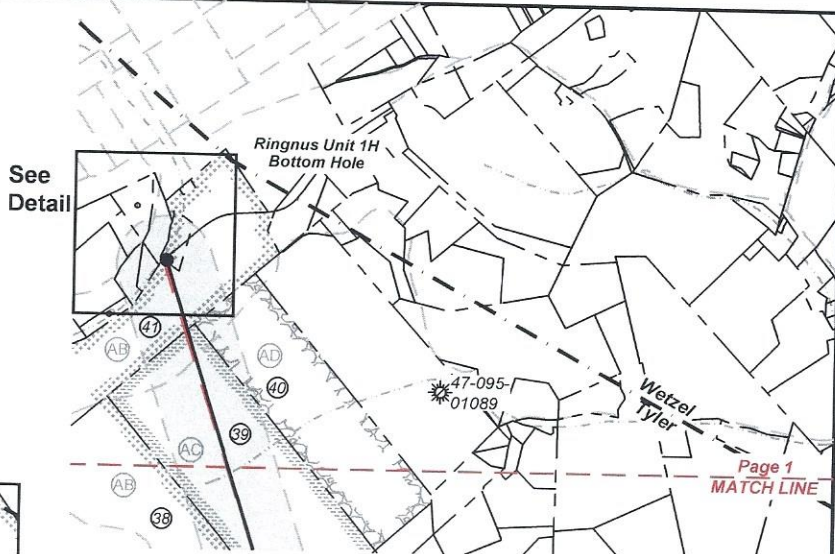
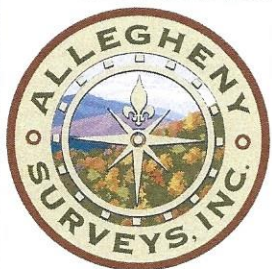
**STATE OF WEST VIRGINIA**  
 DEPARTMENT OF ENVIRONMENTAL PROTECTION  
**OIL AND GAS DIVISION**

DATE: January 17 20 24  
 OPERATOR'S WELL NO. Ringnus 1H  
 API WELL NO  
 47 - 95 - 02862  
 STATE COUNTY PERMIT

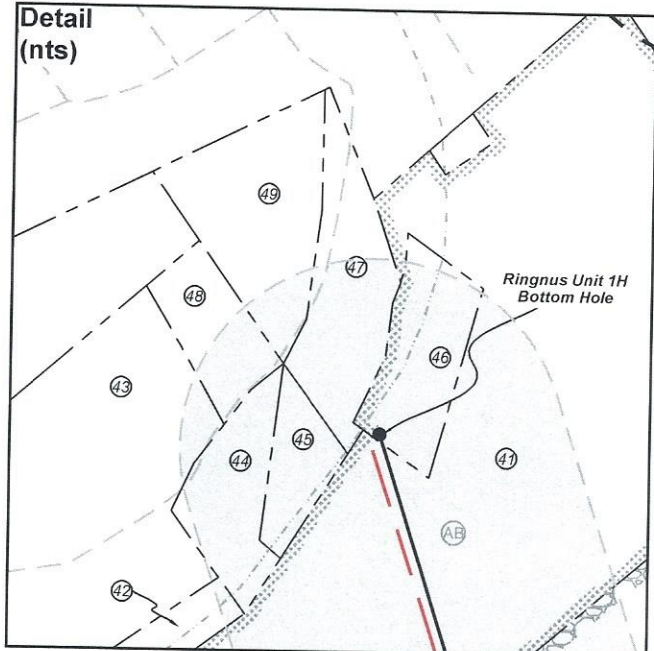
WELL TYPE:  OIL  GAS  LIQUID INJECTION  WASTE DISPOSAL  
 (IF GAS) PRODUCTION:  STORAGE  DEEP  SHALLOW

LOCATION: ELEVATION: As-Built 1,007' WATERSHED: Outlet Middle Island Creek QUADRANGLE: Paden City  
 DISTRICT: Lincoln COUNTY: Tyler  
 SURFACE OWNER: David E. Bowyer ACREAGE: 85.785  
 ROYALTY OWNER: Timothy L. VanCamp; Tamara M. Reynolds; Martha Hayes, et vir, David Mooney Carmichael; LEASE NO: ACREAGE: 95; 88; 59.5; 9.40; 200; 95.4;  
 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: 25,009' 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



**Detail (nts)**



Leases	
A	Timothy L. Vancamp
B	Tamara M. Reynolds
C	Blanch B. Bailey, et ux
D	Martha Hayes, et vir
E	David Mooney Carmichael
F	Betty K. Lucas
G	BRC Appalachian Minerals I LLC
H	Earl Grimes, et ux
I	J. Maurice Carlisle
J	BRC Appalachian Minerals I, LLC
K	Janet L. Heintzman
L	BRC Appalachian Minerals I, LLC
M	Robert F. Scardina, et ux
N	Robert F. Scardina, et ux
O	Jane Ann Miller

Leases	
P	BRC Appalachian Minerals I, LLC
Q	Richard L. Clark
R	Drilling Appalachian Corporation
S	Ralph & Stella Judge
T	Richard Tuttle, et ex
U	Richard Tuttle, et ex
V	Waco Oil & Gas Co Inc.
W	Brandon P. & Katie E. Mason
X	Mary Loretta Smith
Y	Clifton C. Lough, et ux
Z	Lee & Hall Royalties
AA	BRC Appalachian Minerals I, LLC
AB	Henry P. Snyder, et al
AC	Gary Holmes, et ux
AD	Bounty Minerals, LLC

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	9-31	David E. Bowyer	OR16/22	31.45
4	9-30	Ervin Leslie & Betty M Bassett	309/391	19.57
5	9-28	Constance Heintzman	WB43/505	104.50
6	9-27	Robert Livio Bolner	226/593	59.00
7	9-24	Ethan A. & Marsha L. Riffle	299/26	82.00
8	9-17	Ethan A. & Marsha L. Riffle	323/649	90.04
9	9-17.1	James E. VanCamp & Barbie J. Palmer	318/485	4.90
10	9-16	Donald Grimes	547/631	118.21
11	9-6.1	Larry G. & Joyce Ann Kaprich	326/874	40.51
12	9-4	Brandon Scott Grimes	637/841	20.00
13	9-5	Chad & Janet L. Heintzman	330/527	64.35
14	9-3	Donald Grimes	547/631	67.00
15	5-18	Melvin S. Stern, et al	222/185	43.50
16	5-12	Robert F. Scardina and Rita K. Scardina	320/646	25.00
17	5-13	Robert F. Scardina and Rita K. Scardina	320/646	46.00
18	5-16	Kenneth W. & Susan D. Paden	215/390	11.11
19	5-14	Kenneth W. & Susan D. Paden	215/390	55.22
20	5-9.4	Neil R. Stebbins	366/436	51.48
21	5-9	Sally Anderson	368/92	25.89
22	5-9.2	Bryan Scott & Eleanor A. Campbell	350/334	1.23
23	5-6	Stephen D. & Pamela Lynn Hayes	368/92	2.11
24	5-4	Ralph D. & Sophia Judge	306/681	60.77
25	5-9.1	Stephen D. Hayes	333/313	1.28

ID	TM-Par	Owner	Bk/Pg	Acres
26	5-9.3	Franklin G. & Nancy M. Broughman	351/143	8.92
27	5-5	Ralph David & Sophia Viola Judge	212/572	3.58
28	5-3	Warren P. Judge	345/89	4.10
29	5-8	Franklin & Nancy Broughman	338/292	33.17
30	5-2.1	John Goode	OR28/720	27.52
31	5-1	Richard Lee & Linda Tuttle	362/43	88.00
32	4-69	Richard Lee & Linda Tuttle	362/43	87.47
33	5-35	Ethel & Timothy Brown	AR45/28	8.50
34	5-36	Brandon P. Mason and Katie E. Mason	396/464	56.86
35	5-38	Clegg Family Irrevocable Trust	361/387	3.5
36	4-68	Clifton C. & Allyson B. Lough	354/569	9.00
37	5-37	Clegg Family Irrevocable Trust	369/576	19.80
38	1-7	Floyd O. & Alice M. Bungard	270/220	86.83
39	1-8	Gary & Marsha L. Holmes	372/325	95.40
40	2-1	Lloyd Wayne & Lottie Cross	188/383	50.00
41	15-12	Mike Ross Inc.	459/59	69.45
42	1-9	Anna & Ashley Efav	OR80/548	2.27
43	1-15	G.R. & Patti R. Casteel	412/395	11.44
44	1-11.1	Lloyd Lewis & Edward Robert	256/596	2.00
45	1-11	Lloyd Sr. & Mary M. Lewis	285/447	1.35
46	1-27	Lloyd Lewis	295/505	2.50
47	1-12	Mary Ellen Lewis	308/96	2.21
48	1-14	Glen R & Patti R Casteel Life Estate	412/398	2.16
49	1-13	Thomas & Jennifer Winegardner	OR144/329	3.74

FILE NO: 20-54-L-18

DRAWING NO: Ringnus 1H As-Drilled 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: January 17 20 24

OPERATOR'S WELL NO. Ringnus 1H

API WELL NO

47 - 95 - 02862  
 STATE COUNTY PERMIT

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 (IF GAS) PRODUCTION:  STORAGE  DEEP  SHALLOW

LOCATION: ELEVATION: As-Built 1,007' WATERSHED: Outlet Middle Island Creek QUADRANGLE: Paden City

DISTRICT: Lincoln

SURFACE OWNER: David E. Bowyer

Clifton C. Lough, et ux; Henry P. Snyder, et al; Gray Holmes, et ux;  
 Ralph & Stella Judge; Richard Tuttle, et ux; Brandon P. & Katie E. Mason;  
 J. Maurice Carlisle; Janet L. Heintzman; Robert F. Scardina, et ux; Jane Ann Miller;  
 Earl Grimes, et ux; BRC Appalachian Minerals I, LLC (4);

COUNTY: Tyler 93.167; 74.47; 40; 59;  
 90; 81; 12; 26; 17; 5;  
 26; 17; 5;  
 95; 88; 59.5; 9.40;  
 200; 95.4;

ROYALTY OWNER: Timothy L. Vancamp; Tamara M. Reynolds; Martha Hayes, et vir; David Mooney Carmichael;

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: 6,202' TVD  
 25,009' MD

WELL OPERATOR: Antero Resources Corporation

DESIGNATED AGENT: Kevin Ellis

ADDRESS: 1615 Wynkoop Street  
 Denver, CO 80202

ADDRESS: 535 White Oaks Blvd.  
 Bridgeport, WV 26330

API 47-095-02862 Farm Name David E. Bowyer Well Number Ringus Unit 1H  
**Exhibit 1**

Stage No.	Perforation Date	Perforated from MD ft.	Perforated to MD ft.	Number of Perforations	Formations
1	10/9/2023	24883	24838	36	Marcellus
2	10/10/2023	24799.42963	24633.5778	36	Marcellus
3	10/10/2023	24598.00741	24432.1556	36	Marcellus
4	10/10/2023	24396.58519	24230.7333	36	Marcellus
5	10/10/2023	24195.16296	24029.3111	36	Marcellus
6	10/11/2023	23993.74074	23827.8889	36	Marcellus
7	10/11/2023	23792.31852	23626.4667	36	Marcellus
8	10/11/2023	23590.8963	23425.0444	36	Marcellus
9	10/12/2023	23389.47407	23223.6222	36	Marcellus
10	10/12/2023	23188.05185	23022.2	36	Marcellus
11	10/12/2023	22986.62963	22820.7778	36	Marcellus
12	10/12/2023	22785.20741	22619.3556	36	Marcellus
13	10/13/2023	22583.78519	22417.9333	36	Marcellus
14	10/13/2023	22382.36296	22216.5111	36	Marcellus
15	10/13/2023	22180.94074	22015.0889	36	Marcellus
16	10/14/2023	21979.51852	21813.6667	36	Marcellus
17	10/14/2023	21778.0963	21612.2444	36	Marcellus
18	10/14/2023	21576.67407	21410.8222	36	Marcellus
19	10/14/2023	21375.25185	21209.4	36	Marcellus
20	10/15/2023	21173.82963	21007.9778	36	Marcellus
21	10/15/2023	20972.40741	20806.5556	36	Marcellus
22	10/15/2023	20770.98519	20605.1333	36	Marcellus
23	10/16/2023	20569.56296	20403.7111	36	Marcellus
24	10/16/2023	20368.14074	20202.2889	36	Marcellus
25	10/16/2023	20166.71852	20000.8667	36	Marcellus
26	10/16/2023	19965.2963	19799.4444	36	Marcellus
27	10/17/2023	19763.87407	19598.0222	36	Marcellus
28	10/17/2023	19562.45185	19396.6	36	Marcellus
29	10/17/2023	19361.02963	19195.1778	36	Marcellus
30	10/17/2023	19159.60741	18993.7556	36	Marcellus
31	10/18/2023	18958.18519	18792.3333	36	Marcellus
32	10/18/2023	18756.76296	18590.9111	36	Marcellus
33	10/18/2023	18555.34074	18389.4889	36	Marcellus
34	10/18/2023	18353.91852	18188.0667	36	Marcellus
35	10/19/2023	18152.4963	17986.6444	36	Marcellus
36	10/19/2023	17951.07407	17785.2222	36	Marcellus
37	10/19/2023	17749.65185	17583.8	36	Marcellus
38	10/19/2023	17548.22963	17382.3778	36	Marcellus
39	10/20/2023	17346.80741	17180.9556	36	Marcellus
40	10/20/2023	17145.38519	16979.5333	36	Marcellus
41	10/20/2023	16943.96296	16778.1111	36	Marcellus
42	10/20/2023	16742.54074	16576.6889	36	Marcellus
43	10/21/2023	16541.11852	16375.2667	36	Marcellus
44	10/21/2023	16339.6963	16173.8444	36	Marcellus
45	10/21/2023	16138.27407	15972.4222	36	Marcellus
46	10/21/2023	15936.85185	15771	36	Marcellus
47	10/21/2023	15735.42963	15569.5778	36	Marcellus
48	10/22/2023	15534.00741	15368.1556	36	Marcellus
49	10/22/2023	15332.58519	15166.7333	36	Marcellus
50	10/22/2023	15131.16296	14965.3111	36	Marcellus
51	10/22/2023	14929.74074	14763.8889	36	Marcellus
52	10/23/2023	14728.31852	14562.4667	36	Marcellus
53	10/23/2023	14526.8963	14361.0444	36	Marcellus
54	10/23/2023	14325.47407	14159.6222	36	Marcellus
55	10/23/2023	14124.05185	13958.2	36	Marcellus
56	10/23/2023	13922.62963	13756.7778	36	Marcellus
57	10/24/2023	13721.20741	13555.3556	36	Marcellus
58	10/24/2023	13519.78519	13353.9333	36	Marcellus
59	10/24/2023	13318.36296	13152.5111	36	Marcellus
60	10/24/2023	13116.94074	12951.0889	36	Marcellus
61	10/25/2023	12915.51852	12749.6667	36	Marcellus
62	10/25/2023	12714.0963	12548.2444	36	Marcellus
63	10/25/2023	12512.67407	12346.8222	36	Marcellus
64	10/25/2023	12311.25185	12145.4	36	Marcellus
65	10/25/2023	12109.82963	11943.9778	36	Marcellus
66	10/26/2023	11908.40741	11742.5556	36	Marcellus
67	10/26/2023	11706.98519	11541.1333	36	Marcellus
68	10/26/2023	11505.56296	11339.7111	36	Marcellus
69	10/26/2023	11304.14074	11138.2889	36	Marcellus
70	10/27/2023	11102.71852	10936.8667	36	Marcellus
71	10/27/2023	10901.2963	10735.4444	36	Marcellus
72	10/27/2023	10699.87407	10534.0222	36	Marcellus
73	10/27/2023	10498.45185	10332.6	36	Marcellus
74	10/27/2023	10297.02963	10131.1778	36	Marcellus
75	10/28/2023	10095.60741	9929.7556	36	Marcellus
76	10/28/2023	9894.185185	9728.3333	36	Marcellus
77	10/28/2023	9692.762963	9526.9111	36	Marcellus
78	10/28/2023	9491.340741	9325.48889	36	Marcellus
79	10/28/2023	9289.918519	9124.06667	36	Marcellus
80	10/29/2023	9088.496296	8922.64444	36	Marcellus
81	10/29/2023	8887.074074	8721.22222	36	Marcellus
82	10/29/2023	8685.651852	8519.8	36	Marcellus
83	10/29/2023	8484.22963	8318.37778	36	Marcellus
84	10/29/2023	8282.807407	8116.95556	36	Marcellus
85	10/30/2023	8081.385185	7915.53333	36	Marcellus
86	10/30/2023	7879.962963	7714.11111	36	Marcellus
87	10/30/2023	7678.540741	7512.68889	36	Marcellus
88	10/30/2023	7477.118519	7311.26667	36	Marcellus
89	10/31/2023	7275.696296	7109.84444	36	Marcellus
90	10/31/2023	7074.274074	6908.42222	36	Marcellus
91	10/31/2023	6872.851852	6707	36	Marcellus

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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	75.8	9748.4	7964	3153.8	184680	6472.9	N/A
2	10/10/2023	77.7	9309.1	4887	3660.5	418900	7786.2	N/A
3	10/10/2023	78.0	9526.4	3861.73	3085.3	421360	7681.7	N/A
4	10/10/2023	82.1	9854.8	4777.98	3033.3	416700	7675.0	N/A
5	10/10/2023	84.6	9882.0	4815.16	3355.7	414060	8114.0	N/A
6	10/11/2023	83.8	9791.1	4676.44	3342.0	417860	7988.4	N/A
7	10/11/2023	84.0	9755.0	4818.41	3775.5	414860	8380.7	N/A
8	10/11/2023	79.1	9462.7	4950.88	3639.4	414180	7986.1	N/A
9	10/12/2023	80.5	9629.4	4886.13	3428.1	417860	7888.2	N/A
10	10/12/2023	81.7	9497.7	5009.58	3369.0	416080	7654.2	N/A
11	10/12/2023	82.7	9862.8	4845.23	3869.0	421360	7810.3	N/A
12	10/12/2023	81.9	9953.8	5346.44	3735.4	421320	7983.5	N/A
13	10/13/2023	83.1	9580.1	4813.48	3509.1	422480	7906.9	N/A
14	10/13/2023	80.3	9727.7	4582.69	3896.0	412680	7775.5	N/A
15	10/13/2023	83.9	9491.7	4860.75	3562.2	418960	7748.6	N/A
16	10/14/2023	83.2	9881.2	5048.29	3047.0	421400	7871.3	N/A
17	10/14/2023	83.1	9944.4	4863.86	3913.0	420540	7535.6	N/A
18	10/14/2023	87.3	9766.9	4199.07	3236.4	417840	7913.5	N/A
19	10/14/2023	90.4	9821.9	4828.24	3410.5	419120	7480.1	N/A
20	10/15/2023	87.3	9992.3	5489.1	3230.0	420820	7683.4	N/A
21	10/15/2023	87.9	9938.9	5023.29	3438.9	418660	7559.0	N/A
22	10/15/2023	89.0	10105.7	5467.93	3247.2	420540	7443.0	N/A
23	10/16/2023	91.1	10043.3	5660.33	3592.7	418340	7628.5	N/A
24	10/16/2023	87.8	9816.5	5445.14	3857.0	418040	7475.4	N/A
25	10/16/2023	90.5	9849.1	5198.67	3666.2	417780	7459.9	N/A
26	10/16/2023	87.7	9984.1	5607.04	3258.5	424940	7720.8	N/A
27	10/17/2023	85.2	9897.4	5380.36	3191.2	420320	7691.2	N/A
28	10/17/2023	90.6	9997.0	5139.22	3380.1	405840	7415.5	N/A
29	10/17/2023	94.5	10101.8	4977.12	3314.4	418000	7411.5	N/A
30	10/17/2023	95.2	10151.7	5333.14	3515.1	420220	7496.5	N/A
31	10/18/2023	96.6	10081.0	5382.3	3689.9	415480	7532.8	N/A
32	10/18/2023	96.5	10163.5	5055.44	3600.9	415040	7441.0	N/A
33	10/18/2023	96.8	9951.2	5132.46	3473.3	415940	7468.7	N/A
34	10/18/2023	95.7	9921.7	4309.42	3353.4	420200	7294.3	N/A
35	10/19/2023	95.6	9697.9	4611.4	3550.1	418100	9217.5	N/A
36	10/19/2023	93.8	9583.0	5528.06	3570.9	417340	7357.9	N/A
37	10/19/2023	96.6	9789.5	5225.92	3277.7	413320	7240.0	N/A
38	10/19/2023	91.3	9569.0	4871.14	3157.1	419360	8024.4	N/A
39	10/20/2023	96.4	10019.1	4075.17	3106.7	421100	7316.4	N/A
40	10/20/2023	94.7	10033.6	4822.14	3413.5	419120	7319.3	N/A
41	10/20/2023	94.0	9703.0	5957.4	3993.0	415860	8862.5	N/A
42	10/20/2023	94.8	9885.8	4762.1	3684.6	419560	7321.5	N/A
43	10/21/2023	96.9	9674.6	4089.32	3265.9	418340	7429.2	N/A
44	10/21/2023	96.9	9558.1	4968.08	3239.6	416000	7298.5	N/A
45	10/21/2023	95.3	9658.3	5470.94	3343.0	418240	7375.6	N/A
46	10/21/2023	97.1	9717.8	5552.83	3363.8	418220	7260.9	N/A
47	10/21/2023	97.1	9633.9	4812.19	3364.4	418600	7240.1	N/A
48	10/22/2023	95.8	9749.9	4580.37	3386.3	410240	6888.2	N/A
49	10/22/2023	94.0	9574.6	5566.76	3266.0	413300	7019.5	N/A
50	10/22/2023	97.0	9475.2	5416.63	3330.2	419360	7290.3	N/A
51	10/22/2023	96.6	9285.2	4970.98	3335.9	418160	7134.5	N/A
52	10/23/2023	94.2	9087.7	3904.16	3255.0	416020	6893.4	N/A
53	10/23/2023	96.4	9130.6	5200.8	3174.7	415660	6965.3	N/A
54	10/23/2023	97.6	9289.7	5963.28	3140.4	415240	7052.2	N/A
55	10/23/2023	97.8	9061.8	5303.13	3117.4	419700	7195.4	N/A
56	10/24/2023	97.8	9083.3	4476.17	3065.7	416320	6880.2	N/A
57	10/24/2023	96.5	8825.2	4467.13	3260.1	417040	6854.3	N/A
58	10/24/2023	97.6	8856.6	5165.9	3129.6	412320.0	6757.4	N/A
59	10/24/2023	95.6	8927.2	4907.1	3135.3	416960.0	6897.7	N/A
60	10/24/2023	97.8	8629.3	5118.2	3230.9	418060.0	6810.3	N/A
61	10/25/2023	97.3	8642.2	3712.2	3235.8	413620.0	6733.5	N/A
62	10/25/2023	98.1	8796.3	4374.6	3328.1	418420.0	6818.0	N/A
63	10/25/2023	98.0	8798.7	5292.5	3467.4	417460.0	6982.7	N/A
64	10/25/2023	97.8	8117.8	4914.0	3490.3	417960.0	6993.8	N/A
65	10/25/2023	97.0	8263.6	5747.3	3374.1	420600.0	6978.5	N/A
66	10/26/2023	97.7	8814.7	5564.9	3199.6	418400.0	6890.3	N/A
67	10/26/2023	97.3	8429.2	5566.8	3331.5	421700.0	6743.7	N/A
68	10/26/2023	97.4	8185.0	5574.4	3388.6	418020.0	6939.4	N/A
69	10/26/2023	98.2	8254.4	5170.4	3272.1	415860.0	7242.7	N/A
70	10/27/2023	97.7	7998.3	5193.8	3420.0	409060.0	6810.2	N/A
71	10/27/2023	97.8	8223.2	5347.4	3298.3	420920.0	6941.9	N/A
72	10/27/2023	98.0	8309.0	5678.0	3393.3	419260.0	6633.4	N/A
73	10/27/2023	97.4	8209.7	5483.5	3353.2	414560.0	6589.8	N/A
74	10/27/2023	97.0	8776.6	5425.0	3301.9	410020.0	6495.5	N/A
75	10/28/2023	97.5	8823.5	4967.2	3346.5	415840.0	6990.2	N/A
76	10/28/2023	97.9	8864.4	5136.0	3470.8	413580.0	6853.0	N/A
77	10/28/2023	97.3	8389.2	5247.9	3260.6	412200.0	6838.1	N/A
78	10/28/2023	97.3	8469.0	5302.4	3366.4	416640.0	6765.1	N/A
79	10/28/2023	97.8	8315.4	5456.0	3281.1	413420.0	6756.6	N/A
80	10/29/2023	98.6	8214.6	4922.6	3371.1	411060.0	6843.3	N/A
81	10/29/2023	98.4	8160.5	5092.0	3349.2	411540.0	6922.9	N/A
82	10/29/2023	97.8	7847.7	5229.8	3422.4	405640.0	6823.0	N/A
83	10/29/2023	97.9	8317.2	5447.8	3368.6	411940.0	6748.4	N/A
84	10/29/2023	97.4	8256.0	5021.6	3418.9	415120.0	6660.5	N/A
85	10/30/2023	97.5	8209.7	5139.4	3239.6	409500.0	6612.6	N/A
86	10/30/2023	97.6	7878.3	5250.9	3357.7	412780.0	6735.4	N/A
87	10/30/2023	97.4	7697.9	5126.5	3129.5	415700.0	6893.6	N/A
88	10/30/2023	98.5	7479.5	4557.5	3033.1	416220.0	6879.9	N/A
89	10/31/2023	97.4	7718.3	4919.9	4228.8	425960.0	6797.1	N/A
90	10/31/2023	94.7	7513.8	5006.9	4000.1	406100.0	6686.0	N/A
91	10/31/2023	95.5	7260.7	5445.1	3115.5	408680.0	6523.2	N/A
AVERAGE		93	9,178	5,084	3,391	37,676,820	661,339	N/A

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**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	1,802	1,774	1,815
Big Lime	1,828	2,697	1,815	2,762
Fifty Foot Sandstone	2,697	2,792	2,736	2,863
Gordon	2,792	2,919	2,837	2,998
Fifth Sandstone	2,919	3,170	2,972	3,264
Bayard	3,170	3,866	3,238	4,007
Speechley	3,866	4,105	3,981	4,263
Balltown	4,105	4,551	4,237	4,737
Bradford	4,551	4,862	4,711	5,067
Benson	4,862	5,082	5,041	5,301
Alexander	5,082	6,103	5,275	6,426
Sycamore	5,975	6,077	6,252	6,400
Middlesex	6,077	6,164	6,400	6,572
Burkett	6,164	6,196	6,572	6,659
Marcellus	6,196	NA	6,659	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.

# 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:	47-095-02862-00-00
Operator Name:	Antero Resources Corporation
Well Name and Number:	RINGNUS UNIT 1H
Latitude:	39.5519
Longitude:	-80.9177
Datum:	WGS84
Federal Well:	NO
Indian Well:	NO
True Vertical Depth:	6273
Total Base Water Volume (gal)*:	29422025
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	86.52804	
			Crystalline silica, quartz	14808-60-7	100.00000	13.28596	
			Water	7732-18-5	100.00000	0.16119	
			Hydrochloric acid	7647-01-0	30.00000	0.03721	
			Complex amine compound	Proprietary	60.00000	0.02871	
			Hydrotreated distillate	Proprietary	30.00000	0.01435	
			Guar gum	9000-30-0	100.00000	0.00533	
			Glutaraldehyde	111-30-8	30.00000	0.00253	
			Ammonium chloride	12125-02-9	5.00000	0.00239	
			Ethoxylated alcohol	Proprietary	5.00000	0.00239	
			Fatty nitrogen derived amides	Proprietary	5.00000	0.00239	
			Sorbitan, mono-9-octadecenoate, (Z)	1338-43-8	1.00000	0.00048	
			Sorbitan monooleate polyoxyethylene derivative	9005-65-6	1.00000	0.00048	
			Alkyl (C12-16) dimethylbenzyl ammonium chloride	68424-85-1	5.00000	0.00042	
			Methanol	67-56-1	100.00000	0.00023	
			Ammonium persulfate	7727-54-0	100.00000	0.00012	
			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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