

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

API 47 - 095 - 02783 County Tyler District Lincoln, Ellsworth
Quad TH: Middleboure -- BH: Paden City Pad Name Eldon Field/Pool Name -----
Farm name Eldon J. & Ruth A. Helman Well Number Folger 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 4371561m Easting 503800m
Landing Point of Curve Northing 4372458.090m Easting 503660.253m
Bottom Hole Northing 4376694m Easting 502227m

Elevation (ft) 880' 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 3/21/2022 Date drilling commenced 6/1/2022 Date drilling ceased 7/28/2022
Date completion activities began 10/31/2022 Date completion activities ceased 12/16/2022
Verbal plugging (Y/N) N/A Date permission granted N/A Granted by N/A

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

Freshwater depth(s) ft 156' Open mine(s) (Y/N) depths No
Salt water depth(s) ft 1676' 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:

08/18/2023

Steve May
5/24/23

API 47-095 - 02783 Farm name Eldon J. & Ruth A. Helman Well number Folger 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	26"	20"	130'	New	78.67#, X-60	N/A	Y
Surface	17-1/2"	13-3/8"	350'	New	54.5#, J-55	N/A	Y
Coal							
Intermediate 1	12-1/4"	9-5/8"	2918'	New	36#, J-55	N/A	Y
Intermediate 2							
Intermediate 3							
Production	8-3/4"/8-1/2"	5-1/2"	21688'	New	23#, P-110cy	N/A	Y
Tubing		2-3/8"	6784'		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 ³ /sks)	Volume (ft ³)	Cement Top (MD)	WOC (hrs)
Conductor	Class A	141 sx	15.6	1.18	166	0'	8 Hrs.
Surface	Class A	330 sx	15.8	1.17	386	0'	8 Hrs.
Coal							
Intermediate 1	Class C	1010 sx	15.8	1.16	1172	0'	8 Hrs.
Intermediate 2							
Intermediate 3							
Production	Class H	3475 sx (Tail)	13.5 (Lead), 15.2(Tail)	1.18 (Tail)	4101	-500' into Intermediate Casing	8 Hrs.
Tubing							

Drillers TD (ft) 21688' MD, 5993' TVD (BHL), 6127' (Deepest Point Drilled) Loggers TD (ft) 21688' MD

Deepest formation penetrated Marcellus Plug back to (ft) N/A

Plug back procedure N/A

Kick off depth (ft) 6550'

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

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

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<u>PRODUCING FORMATION(S)</u>	<u>DEPTHS</u>		
Marcellus	6050' (TOP)	TVD	6971' (TOP) MD
_____	_____	_____	_____
_____	_____	_____	_____

Please insert additional pages as applicable.

GAS TEST Build up Drawdown Open Flow OIL TEST Flow Pump

SHUT-IN PRESSURE Surface 1373 psi Bottom Hole --- psi DURATION OF TEST --- hrs

OPEN FLOW Gas 13116 mcfpd Oil 370 bpd NGL --- bpd Water 1766 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 ₂ 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 Halliburton Energy Services
Address 3000 W. Sam Houston Pkwy City Houston State TX Zip 76114

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 2/27/2023

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

08/18/2023 

Exhibit 1

Stage No.	Perforation Date	Perforated from MD ft.	Perforated to MD ft.	Number of Perforations	Formations
1	10/31/2022	21560.0	21518.0	60	Marcellus
2	10/31/2022	21478.5	21312.7	60	Marcellus
3	10/31/2022	21277.2	21111.5	60	Marcellus
4	11/01/2022	21075.9	20910.2	60	Marcellus
5	11/01/2022	20874.7	20708.9	60	Marcellus
6	11/02/2022	20673.4	20507.7	60	Marcellus
7	11/02/2022	20472.1	20306.4	60	Marcellus
8	11/02/2022	20270.9	20105.2	60	Marcellus
9	11/03/2022	20069.6	19903.9	60	Marcellus
10	11/03/2022	19868.3	19702.6	60	Marcellus
11	11/03/2022	19667.1	19501.4	60	Marcellus
12	11/04/2022	19465.8	19300.1	60	Marcellus
13	11/04/2022	19264.6	19098.8	60	Marcellus
14	11/04/2022	19063.3	18897.6	60	Marcellus
15	11/05/2022	18862.0	18696.3	60	Marcellus
16	11/05/2022	18660.8	18495.0	60	Marcellus
17	11/05/2022	18459.5	18293.8	60	Marcellus
18	11/06/2022	18258.2	18092.5	60	Marcellus
19	11/06/2022	18057.0	17891.3	60	Marcellus
20	11/06/2022	17855.7	17690.0	60	Marcellus
21	11/07/2022	17654.4	17488.7	60	Marcellus
22	11/07/2022	17453.2	17287.5	60	Marcellus
23	11/07/2022	17251.9	17086.2	60	Marcellus
24	11/08/2022	17050.7	16884.9	60	Marcellus
25	11/08/2022	16849.4	16683.7	60	Marcellus
26	11/08/2022	16648.1	16482.4	60	Marcellus
27	11/09/2022	16446.9	16281.1	60	Marcellus
28	11/09/2022	16245.6	16079.9	60	Marcellus
29	11/09/2022	16044.3	15878.6	60	Marcellus
30	11/09/2022	15843.1	15677.3	60	Marcellus
31	11/10/2022	15641.8	15476.1	60	Marcellus
32	11/10/2022	15440.5	15274.8	60	Marcellus
33	11/10/2022	15239.3	15073.6	60	Marcellus
34	11/11/2022	15038.0	14872.3	60	Marcellus
35	11/11/2022	14836.7	14671.0	60	Marcellus
36	11/11/2022	14635.5	14469.8	60	Marcellus
37	11/11/2022	14434.2	14268.5	60	Marcellus
38	11/12/2022	14233.0	14067.2	60	Marcellus
39	11/12/2022	14031.7	13866.0	60	Marcellus
40	11/12/2022	13830.4	13664.7	60	Marcellus
41	11/13/2022	13629.2	13463.4	60	Marcellus
42	11/13/2022	13427.9	13262.2	60	Marcellus
43	11/13/2022	13226.6	13060.9	60	Marcellus
44	11/13/2022	13025.4	12859.7	60	Marcellus
45	11/14/2022	12824.1	12658.4	60	Marcellus
46	11/14/2022	12622.8	12457.1	60	Marcellus
47	11/14/2022	12421.6	12255.9	60	Marcellus
48	11/14/2022	12220.3	12054.6	60	Marcellus
49	11/15/2022	12019.1	11853.3	60	Marcellus
50	11/15/2022	11817.8	11652.1	60	Marcellus
51	11/15/2022	11616.5	11450.8	60	Marcellus
52	11/16/2022	11415.3	11249.5	60	Marcellus
53	11/16/2022	11214.0	11048.3	60	Marcellus
54	11/16/2022	11012.7	10847.0	60	Marcellus
55	11/16/2022	10811.5	10645.7	60	Marcellus
56	11/17/2022	10610.2	10444.5	60	Marcellus
57	11/17/2022	10408.9	10243.2	60	Marcellus
58	11/17/2022	10207.7	10042.0	60	Marcellus
59	11/17/2022	10006.4	9840.7	60	Marcellus
60	11/18/2022	9805.2	9639.4	60	Marcellus
61	11/18/2022	9603.9	9438.2	60	Marcellus
62	11/18/2022	9402.6	9236.9	60	Marcellus
63	11/19/2022	9201.4	9035.6	60	Marcellus
64	11/19/2022	9000.1	8834.4	60	Marcellus
65	11/20/2022	8798.8	8633.1	60	Marcellus
66	11/20/2022	8597.6	8431.8	60	Marcellus
67	11/20/2022	8396.3	8230.6	60	Marcellus
68	11/21/2022	8195.0	8029.3	60	Marcellus
69	11/21/2022	7993.8	7828.1	60	Marcellus
70	11/21/2022	7792.5	7626.8	60	Marcellus
71	11/21/2022	7591.2	7425.5	60	Marcellus
72	11/21/2022	7390.0	7224.3	60	Marcellus
73	11/21/2022	7188.7	7023.0	60	Marcellus



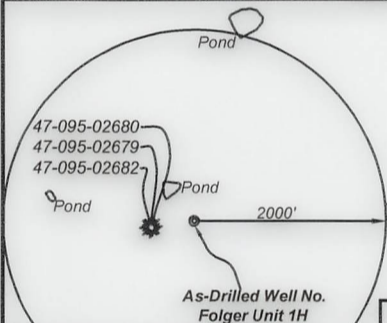
**Antero Resources
Well No. Folger 1H
As-Drilled**
Antero Resources Corporation



Top Hole Coordinates, As-drilled data, and information was provided by Antero Resources Corporation. Allegheeny 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.

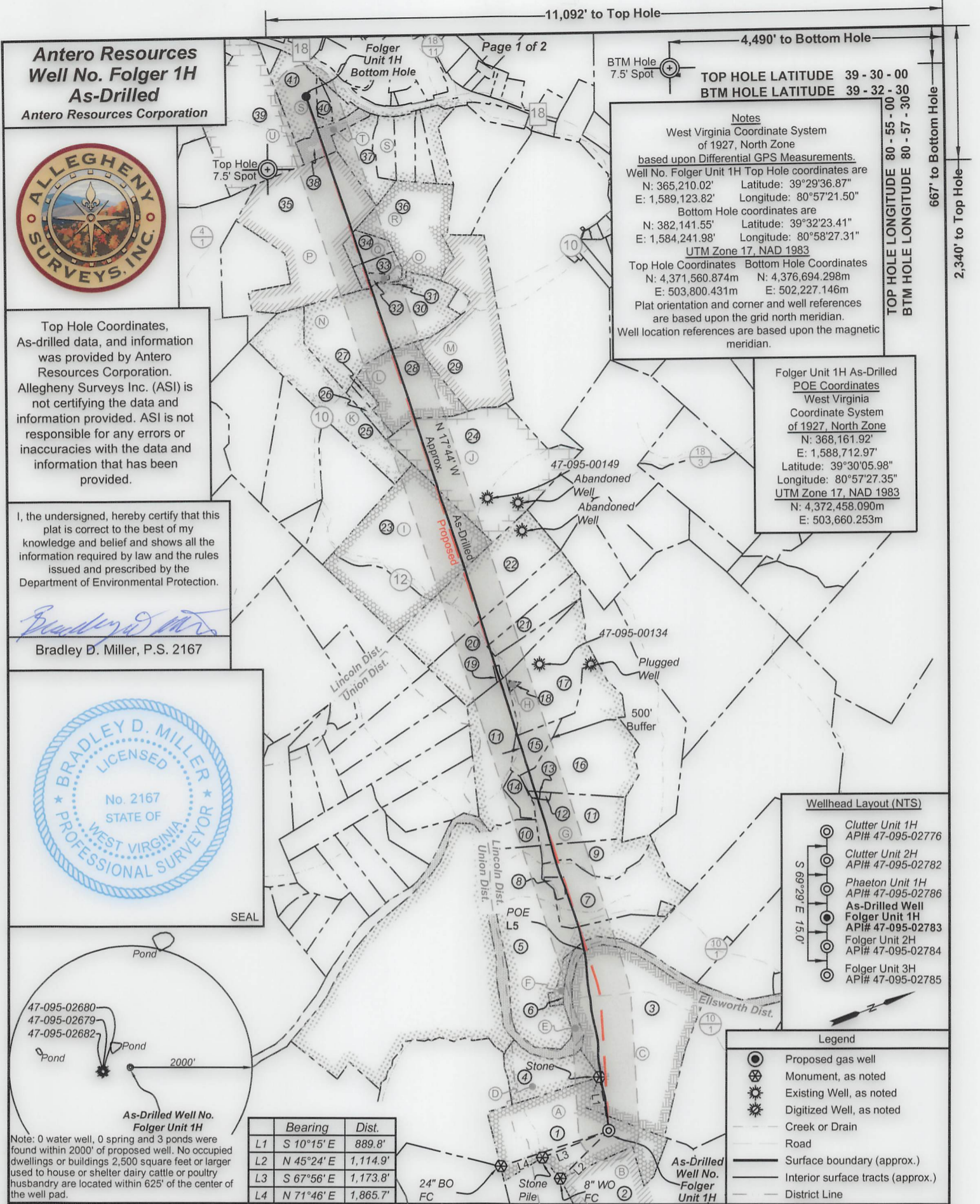
I, the undersigned, hereby certify that this plat is correct to the best of my knowledge and belief and shows all the information required by law and the rules issued and prescribed by the Department of Environmental Protection.

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



Note: 0 water well, 0 spring and 3 ponds were found within 2000' of proposed well. No occupied dwellings or buildings 2,500 square feet or larger used to house or shelter dairy cattle or poultry husbandry are located within 625' of the center of the well pad.

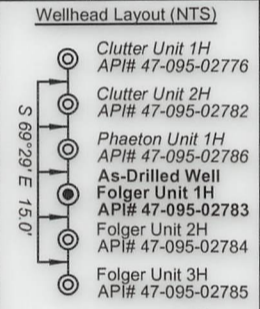
	Bearing	Dist.
L1	S 10°15' E	889.8'
L2	N 45°24' E	1,114.9'
L3	S 67°56' E	1,173.8'
L4	N 71°46' E	1,865.7'



11,092' to Top Hole
4,490' to Bottom Hole
BTM Hole 7.5' Spot
TOP HOLE LATITUDE 39 - 30 - 00
BTM HOLE LATITUDE 39 - 32 - 30
TOP HOLE LONGITUDE 80 - 55 - 00
BTM HOLE LONGITUDE 80 - 57 - 30
667' to Bottom Hole
2,340' to Top Hole

Notes
West Virginia Coordinate System of 1927, North Zone based upon Differential GPS Measurements.
Well No. Folger Unit 1H Top Hole coordinates are N: 365,210.02' Latitude: 39°29'36.87"
E: 1,589,123.82' Longitude: 80°57'21.50"
Bottom Hole coordinates are N: 382,141.55' Latitude: 39°32'23.41"
E: 1,584,241.98' Longitude: 80°58'27.31"
UTM Zone 17, NAD 1983
Top Hole Coordinates Bottom Hole Coordinates
N: 4,371,560.874m N: 4,376,694.298m
E: 503,800.431m E: 502,227.146m
Plat orientation and corner and well references are based upon the grid north meridian.
Well location references are based upon the magnetic meridian.

Folger Unit 1H As-Drilled POE Coordinates
West Virginia Coordinate System of 1927, North Zone
N: 368,161.92'
E: 1,588,712.97'
Latitude: 39°30'05.98"
Longitude: 80°57'27.35"
UTM Zone 17, NAD 1983
N: 4,372,458.090m
E: 503,660.253m



- 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.)
 - District Line

FILE NO: 02-54-U-20
DRAWING NO: Folger Unit 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: February 22 2023
OPERATOR'S WELL NO. Folger Unit 1H
API WELL NO
47 - 095 - 02783
STATE COUNTY PERMIT

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

LOCATION: ELEVATION: As-Built 880' WATERSHED: Middle Island Creek TH: Middleboure
DISTRICT: Lincoln Ellsworth Outlet: Middle Island Creek QUADRANGLE: BH: Paden City

SURFACE OWNER: Ruth A. Helman Eldon J. & Larry A. Wells, et ux; George C. Riddle, et ux; Myrtle Liva Tucker; Donald J. Berry; Timothy B. Ingram; William P. Ingram; Karen Moore Hwilka; William P. Ingram, et ux; William Michael Wells, et ux;
ROYALTY OWNER: Eldon J. & Ruth A. Helman; Ruth H. Wells; WVDNR; Mary Ann Devine; LEASE NO: ACREAGE: 61.83
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: 21,688' MD

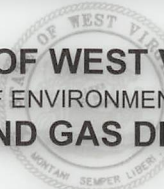
WELL OPERATOR: Antero Resources Corporation DESIGNATED AGENT: Kevin Ellis
ADDRESS: 1615 Wynkoop Street ADDRESS: 535 White Oaks Blvd.
Denver, CO 80202 Bridgeport, WV 26330



ID	TM/Par	Owner	Bk/Pg	Acres
1	19-1	Eldon J. & Ruth A. Helman	383/761	61.83
2	19-42	Carol J. Cox	334/298	142.00
3	13-10	Eldon J. & Ruth A. Helman	383/761	96.82
4	6-1.1	Eldon J. & Ruth A. Helman	383/761	21.00
5	15-18	B.F. Kile	174/412	70.00
6	15-19	Bennie H. & Karen Kile	263/40	1.00
7	15-15	Jack B. & Bennie H. Kile, Jr.	155/195	39.64
8	15-14	Larry Kile & Christopher Kile	15/647	1.52
9	15-15.2	Ridgetop Capital, LP	375/206	17.54
10	15-12	Roger & Claudia Weekly	317/317	7.66
11	15-10	Doris E. Haught	364/544	55.71
12	15-10.1	Stephen A., Jr. & Tina L. Goudy	323/352	0.50
13	15-11	Stephen A., Jr. & Tina L. Goudy	304/387	0.46
14	15-10.2	April A. & Christopher D. Ramsey	364/541	4.67
15	15-7.2	John P. Litten	500/466	8.90
16	15-7.1	John Preston Litten	391/769	56.00
17	15-7	Ivan W. & Karen L. Makely	281/498	35.10
18	15-6	Ivan Wesley & Karen Leila Makely	234/517	0.40
19	15-5	Ivan & Karen Makely	358/145	0.71
20	15-4	Ivan W. & Karen L. Makely	337/639	41.29
21	15-4.1	Ivan W. & Karen L. Makely	404/130	12.00
22	15-2	Stephen E. Surface, et al	365/302	54.00
23	12-55.1	Nathaniel V. & Tamela Frum	428/604	75.00
24	12-50	William P. Ingram	605/159	88.00
25	12-43	Estella J. & William J. Goodfellow, Jr.	178/489	43.18
26	12-47	Estella & William J. Goodfellow, Jr.	166/356	3.46
27	12-48.1	Estella & William J. Goodfellow, Jr.	333/223	1.91
28	12-48	William Michael & Mary Ann Wells	314/416	34.62
29	12-45	Timothy B. Ingram	326/353	56.35
30	12-44	William P. Ingram	455/477	62.50
31	12-25	Kenneth W. Hammond	363/204	0.75
32	12-24.1	Devan L. Derby & Mallory Hammond	431/752	1.10
33	12-24	Timothy Ingram	335/837	4.90
34	12-23	Timothy Ingram	335/837	6.00
35	12-22	William & Joanne Ingram	140/502	84.30
36	12-26	Kenneth W. Hammond	393/592	41.25
37	12-3	Carl W. & Wanda L. Lemley	175/179	13.50
38	12-2	George C. & Stephanie D. Riddle	334/543	8.80
39	7-40	Brett Grimm, et al	342/538	86.60
40	12-1.1	Mark E. & Jacqueline M. Heintzman	287/303	2.68
41	12-1	Ralph E. & Constance L. Heintzman	167/419	20.60

Leases	
A	Eldon J. & Ruth A. Helman
B	Carol J. Cox
C	Ruth H. Wells
D	Norma R. Spencer
E	WVDNR
F	Benjamin Michael Kile
G	Mary Ann Devine
H	Ivan W. Makely, et ux
I	Karen Moore Hwilka
J	William P. Ingram, et ux
K	William J. Goodfellow, et ux
L	William Michael Wells, et ux
M	Timothy B. Ingram
N	Myrtle Liva Tucker
O	Donald J. Berry
P	William P. Ingram
Q	Timothy B. Ingram
R	Beverly J. Lamp
S	Larry A. Wells, et ux
T	George C. Riddle, et ux
U	Erik D. Grimm

FILE NO: 02-54-U-20
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 Submeter
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 WVDOT, Harrisville, WV


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 ROYALTY OWNER: Eldon J. & Ruth A. Helman; Ruth H. Wells; WVDNR; Mary Ann Devine; LEASE NO: ACREAGE: 177.67900

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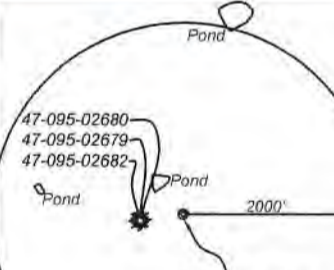
Antero Resources
Well No. Folger 1H
As-Drilled
 Antero Resources Corporation



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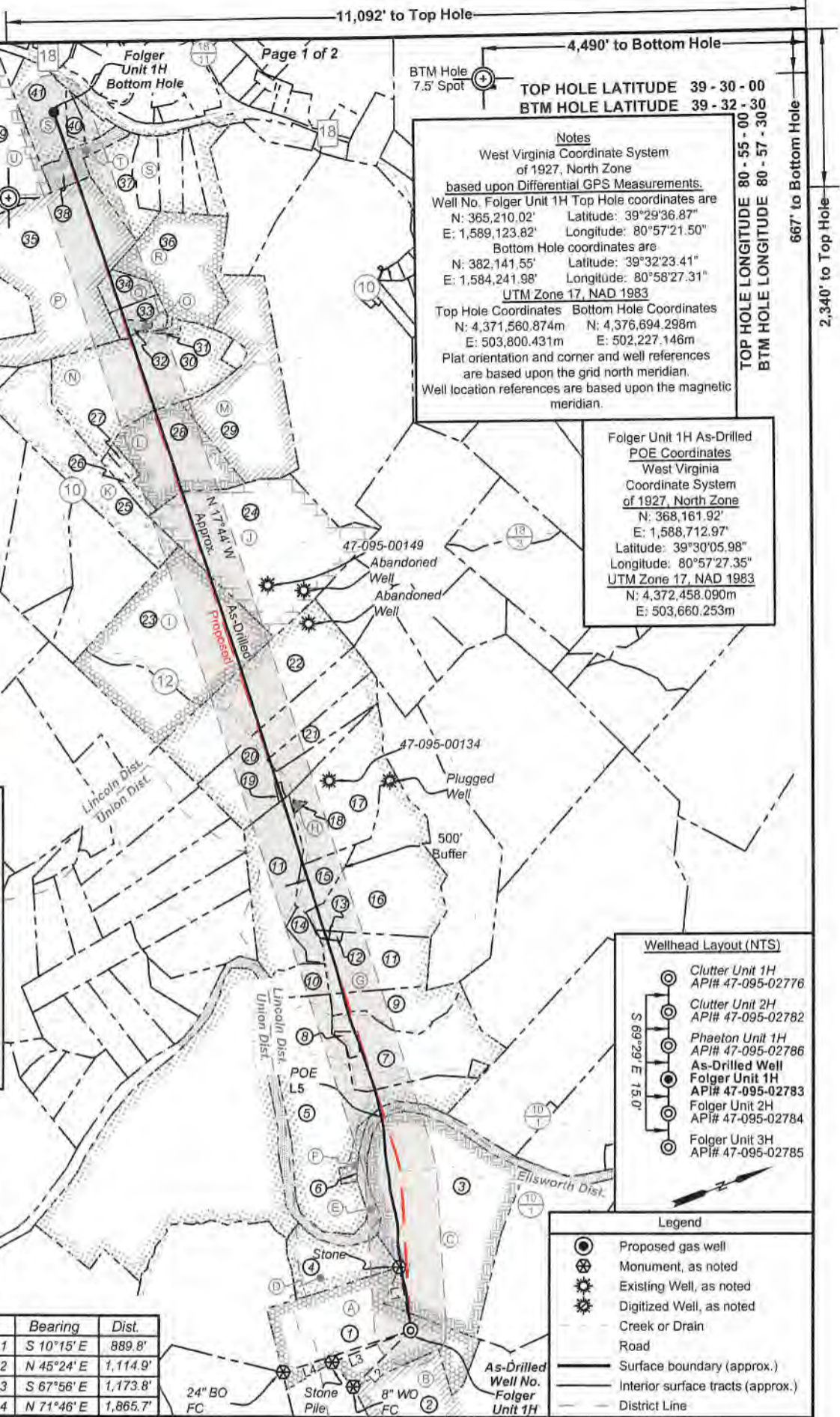
I, the undersigned, hereby certify that this plat is correct to the best of my knowledge and belief and shows all the information required by law and the rules issued and prescribed by the Department of Environmental Protection.

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



As-Drilled Well No. Folger Unit 1H
 Note: 0 water well, 0 spring and 3 ponds 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.

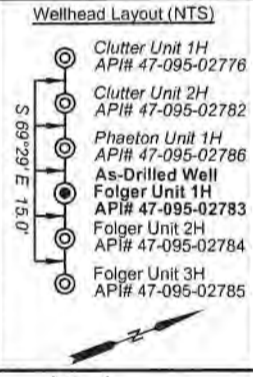
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11,092' to Top Hole
 4,490' to Bottom Hole
TOP HOLE LATITUDE 39 - 30 - 00
BTM HOLE LATITUDE 39 - 32 - 30
TOP HOLE LONGITUDE 80 - 55 - 00
BTM HOLE LONGITUDE 80 - 57 - 30
 667' to Bottom Hole
 2,340' to Top Hole

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 Top Hole Coordinates Bottom Hole Coordinates
 N: 4,371,560.874m N: 4,376,694.298m
 E: 503,800.431m E: 502,227.146m
 Plat orientation and corner and well references are based upon the grid north meridian. Well location references are based upon the magnetic meridian.

Folger Unit 1H As-Drilled POE Coordinates
 West Virginia Coordinate System of 1927, North Zone
 N: 368,161.92' E: 1,588,712.97' Latitude: 39°30'05.98" Longitude: 80°57'27.35" UTM Zone 17, NAD 1983
 N: 4,372,458.090m E: 503,660.253m



- 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.)
 - District Line

FILE NO: 02-54-U-20
 DRAWING NO: Folger Unit 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: February 22 2023
 OPERATOR'S WELL NO. Folger Unit 1H
 API WELL NO
 47 - 095 - 02783
 STATE COUNTY PERMIT

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

LOCATION: ELEVATION: As-Built 880' WATERSHED: Lincoln Middle Island Creek TH: Middlebourne
 DISTRICT: Ellsworth QUADRANGLE: BH: Paden City

SURFACE OWNER: Eldon J. & Ruth A. Helman COUNTY: Tyler
 Larry A. Wells, et ux; George C. Riddle, et ux; Myrtle Liva Tucker; Donald J. Berry; Timothy B. Ingram; William P. Ingram; Karen Moore Hwilka; William P. Ingram, et ux; William Michael Wells, et ux; ACREAGE: 61.83
 ROYALTY OWNER: Eldon J. & Ruth A. Helman; Ruth H. Wells; WVDNR; Mary Ann Devine; LEASE NO: ACREAGE: 177.67900

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: 5,993' TVD 21,688' 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

08/18/2023

Handwritten initials

Antero Resources
Well No. Folger 1H
As-Drilled
 Antero Resources Corporation



ID	TM/Par	Owner	Bk/Pg	Acres
1	19-1	Eldon J. & Ruth A. Helman	383/761	61.83
2	19-42	Carol J. Cox	334/298	142.00
3	13-10	Eldon J. & Ruth A. Helman	383/761	96.82
4	6-1.1	Eldon J. & Ruth A. Helman	383/761	21.00
5	15-18	B.F. Kile	174/412	70.00
6	15-19	Bennie H. & Karen Kile	263/40	1.00
7	15-15	Jack B. & Bennie H. Kile, Jr.	155/195	39.64
8	15-14	Larry Kile & Christopher Kile	15/647	1.52
9	15-15.2	Ridgetop Capital, LP	375/206	17.54
10	15-12	Roger & Claudia Weekly	317/317	7.66
11	15-10	Doris E. Haught	364/544	55.71
12	15-10.1	Stephen A., Jr. & Tina L. Goudy	323/352	0.50
13	15-11	Stephen A., Jr. & Tina L. Goudy	304/387	0.46
14	15-10.2	April A. & Christopher D. Ramsey	364/541	4.67
15	15-7.2	John P. Litten	500/466	8.90
16	15-7.1	John Preston Litten	391/769	56.00
17	15-7	Ivan W. & Karen L. Makely	281/498	35.10
18	15-6	Ivan Wesley & Karen Leila Makely	234/517	0.40
19	15-5	Ivan & Karen Makely	358/145	0.71
20	15-4	Ivan W. & Karen L. Makely	337/639	41.29
21	15-4.1	Ivan W. & Karen L. Makely	404/130	12.00
22	15-2	Stephen E. Surface, et al	365/302	54.00
23	12-55.1	Nathaniel V. & Tamela Frum	428/604	75.00
24	12-50	William P. Ingram	605/159	88.00
25	12-43	Estella J. & William J. Goodfellow, Jr.	178/489	43.18
26	12-47	Estella & William J. Goodfellow, Jr.	166/356	3.46
27	12-48.1	Estella & William J. Goodfellow, Jr.	333/223	1.91
28	12-48	William Michael & Mary Ann Wells	314/416	34.62
29	12-45	Timothy B. Ingram	326/353	56.35
30	12-44	William P. Ingram	455/477	62.50
31	12-25	Kenneth W. Hammond	363/204	0.75
32	12-24.1	Devan L. Derby & Mallory Hammond	431/752	1.10
33	12-24	Timothy Ingram	335/837	4.90
34	12-23	Timothy Ingram	335/837	6.00
35	12-22	William & Joanne Ingram	140/502	84.30
36	12-26	Kenneth W. Hammond	393/592	41.25
37	12-3	Carl W. & Wanda L. Lemley	175/179	13.50
38	12-2	George C. & Stephanie D. Riddle	334/543	8.80
39	7-40	Brett Grimm, et al	342/538	86.60
40	12-1.1	Mark E. & Jacqueline M. Heintzman	287/303	2.68
41	12-1	Ralph E. & Constance L. Heintzman	167/419	20.60

Leases	
A	Eldon J. & Ruth A. Helman
B	Carol J. Cox
C	Ruth H. Wells
D	Norma R. Spencer
E	WVDNR
F	Benjamin Michael Kile
G	Mary Ann Devine
H	Ivan W. Makely, et ux
I	Karen Moore Hwilka
J	William P. Ingram, et ux
K	William J. Goodfellow, et ux
L	William Michael Wells, et ux
M	Timothy B. Ingram
N	Myrtle Liva Tucker
O	Donald J. Berry
P	William P. Ingram
Q	Timothy B. Ingram
R	Beverly J. Lamp
S	Larry A. Wells, et ux
T	George C. Riddle, et ux
U	Erik D. Grimm

FILE NO: 02-54-U-20
 DRAWING NO: Folger Unit 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: February 22 2023
 OPERATOR'S WELL NO. Folger Unit 1H
 API WELL NO
 47 - 095 - 02783
 STATE COUNTY PERMIT

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

LOCATION: ELEVATION: As-Built 880' WATERSHED: Outlet Middle Island Creek QUADRANGLE: TH:Middleboure BH:Paden City
 Lincoln Ellsworth COUNTY: Tyler 08/18/2023
 SURFACE OWNER: Eldon J. & Ruth A. Helman; Larry A. Wells, et ux; George C. Riddle, et ux; Myrtle Liva Tucker; Donald J. Berry; Timothy B. Ingram; William P. Ingram; Karen Moore Hwilka; William P. Ingram, et ux; William Michael Wells, et ux; ACREAGE: 61.83
 ROYALTY OWNER: Eldon J. & Ruth A. Helman; Ruth H. Wells; WVDNR; Mary Ann Devine; LEASE NO: ACREAGE: 177.67900

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 PERFORATE NEW FORMATION OTHER PHYSICAL CHANGE IN WELL (SPECIFY) As-Drilled
 PLUG AND ABANDON CLEAN OUT AND REPLUG TARGET FORMATION: Marcellus Shale ESTIMATED DEPTH: 5,993' TVD 21,688' 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

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	10/31/2022	43.0	7462.0	5067.0	3828.0	22110	146371	N/A
2	10/31/2022	88.8	9078.7	4815.5	3902.0	402570	295612	N/A
3	10/31/2022	86.2	8536.8	4285.4	3441.1	404040	328891	N/A
4	11/01/2022	93.3	9500.0	4938.0	4062.0	402443	303863	N/A
5	11/01/2022	90.2	9197.8	4698.4	3419.3	398562	300936	N/A
6	11/02/2022	96.4	9386.9	5511.7	4323.2	396192	270991	N/A
7	11/02/2022	92.8	9054.8	4880.7	3372.8	411478	308453	N/A
8	11/02/2022	93.9	9196.3	4739.1	4217.9	397866	302208	N/A
9	11/03/2022	92.9	9210.0	4558.0	3992.0	404295	309376	N/A
10	11/03/2022	92.5	9391.2	4943.7	4446.8	415888	300952	N/A
11	11/03/2022	96.1	9856.6	5411.0	4256.8	401246	291503	N/A
12	11/04/2022	96.4	9775.5	4798.0	4036.4	400250	285748	N/A
13	11/04/2022	93.3	9509.0	5220.0	3839.0	400377	289554	N/A
14	11/04/2022	93.8	9466.7	4694.2	3468.1	414130	296607	N/A
15	11/05/2022	96.6	9492.9	4379.1	4589.8	416392	295114	N/A
16	11/05/2022	94.8	9340.7	4836.3	4079.1	398526	284887	N/A
17	11/05/2022	95.7	9307.5	4949.8	4024.3	400654	285400	N/A
18	11/06/2022	91.7	8936.0	5310.0	3923.0	412769	350025	N/A
19	11/06/2022	94.6	9113.0	5281.0	4258.0	415212	294801	N/A
20	11/06/2022	96.7	8827.7	4412.9	3784.8	404747	280468	N/A
21	11/07/2022	96.5	8870.5	4374.7	3291.5	412956	289779	N/A
22	11/07/2022	95.5	8735.0	5046.0	4093.0	396985	287380	N/A
23	11/07/2022	95.9	8615.6	4152.0	3499.3	411623	298818	N/A
24	11/08/2022	95.7	8505.4	4253.4	3542.9	413272	323228	N/A
25	11/08/2022	96.1	8532.0	4248.0	3760.0	408274	297635	N/A
26	11/08/2022	94.9	8896.3	5118.0	4417.8	416730	282149	N/A
27	11/09/2022	94.4	8556.7	4849.8	4726.9	413626	288702	N/A
28	11/09/2022	97.4	8577.4	3861.7	4397.5	396766	289379	N/A
29	11/09/2022	97.3	8614.0	4808.0	4510.0	415913	300893	N/A
30	11/09/2022	97.2	8734.0	5232.0	3893.0	413734	287282	N/A
31	11/10/2022	95.7	8564.0	4771.0	3362.0	408304	287795	N/A
32	11/10/2022	96.5	9125.0	4135.0	4016.0	409327	295260	N/A
33	11/10/2022	97.8	8594.7	5079.2	3351.8	410826	288417	N/A
34	11/11/2022	95.3	9223.6	4940.5	3344.9	409361	286581	N/A
35	11/11/2022	97.2	8986.0	4486.0	3578.0	409341	295785	N/A
36	11/11/2022	97.6	8618.6	3758.4	3395.2	408742	290227	N/A
37	11/11/2022	95.2	8662.1	4296.6	3254.0	403748	288755	N/A
38	11/12/2022	95.7	8803.0	4870.9	3227.9	407295	279674	N/A
39	11/12/2022	97.4	8798.5	4895.3	3318.3	409331	289287	N/A
40	11/12/2022	96.6	8710.0	4016.3	3541.8	408254	293071	N/A
41	11/13/2022	97.4	8663.9	4402.1	3640.2	403367	284007	N/A
42	11/13/2022	96.8	8763.0	4029.0	3244.0	402981	293932	N/A
43	11/13/2022	97.0	8713.0	4422.0	4166.0	402985	289745	N/A
44	11/13/2022	96.2	8520.7	4702.6	3343.8	409864	285411	N/A
45	11/14/2022	95.7	8548.8	4722.5	4915.7	405898	285116	N/A
46	11/14/2022	97.4	8733.0	4557.0	4732.0	406994	292821	N/A
47	11/14/2022	97.0	8682.9	3622.9	3366.4	407462	289774	N/A
48	11/14/2022	97.6	8931.5	4759.6	4312.4	391183	283432	N/A
49	11/15/2022	95.3	8689.0	4722.0	4720.0	416003	299614	N/A
50	11/15/2022	96.5	8015.0	4923.0	3466.0	405691	289611	N/A
51	11/15/2022	96.3	8363.8	5139.0	3503.2	409275	295520	N/A
52	11/16/2022	94.0	8145.5	4674.3	3816.8	403922	367957	N/A
53	11/16/2022	96.7	7700.0	4496.0	3607.0	401253	292950	N/A
54	11/16/2022	95.9	7853.1	3799.6	4415.0	406303	291096	N/A
55	11/16/2022	97.0	7738.4	4318.3	3164.3	401052	266780	N/A
56	11/17/2022	96.8	7909.5	4824.2	4060.2	414757	288870	N/A
57	11/17/2022	96.9	7735.0	5068.0	3996.0	409593	297847	N/A
58	11/17/2022	95.4	7597.0	4804.0	3697.0	400305.0	290102.0	N/A
59	11/17/2022	96.8	7747.3	4555.7	4391.7	415400.0	303337.0	N/A
60	11/18/2022	97.1	7877.0	4905.0	3733.0	411450.0	278969.0	N/A
61	11/18/2022	94.8	7611.0	5778.0	3671.0	410820.0	243175.0	N/A
62	11/18/2022	97.2	7900.3	3713.1	4133.0	414290.0	280927.0	N/A
63	11/19/2022	95.9	7923.0	4586.0	4292.0	399450.0	281322.0	N/A
64	11/19/2022	96.4	7557.0	4093.0	3519.0	416480.0	283143.0	N/A
65	11/20/2022	97.7	6991.5	4601.8	4050.7	396150.0	275525.0	N/A
66	11/20/2022	95.8	7002.0	4647.0	4001.0	419250.0	281389.0	N/A
67	11/20/2022	96.8	6759.9	2316.1	3721.9	398010.0	320966.0	N/A
68	11/21/2022	97.4	7126.0	4675.0	3613.0	400900.0	275410.0	N/A
69	11/21/2022	95.5	6971.4	4326.8	3770.5	408000.0	279180.0	N/A
70	11/21/2022	97.1	7112.0	3287.0	3863.0	398310.0	279498.0	N/A
71	11/21/2022	97.0	6943.0	2523.0	3577.0	397010.0	272587.0	N/A
72	11/21/2022	97.4	6837.0	4263.0	3696.0	393620.0	258139.0	N/A
73	11/21/2022	96.8	6490.2	4522.4	3053.3	417730.0	281040.0	N/A
	AVG=	95	8,445	4,571	3,850	29,299,913	21,141,049	TOTAL


08/18/2023


EXHIBIT 3

LITHOLOGY/ FORMATION	TOP DEPTH (TVD)	BOTTOM DEPTH (TVD)	TOP DEPTH (MD)	BOTTOM DEPTH (MD)
	From Surface	From Surface	From Surface	From Surface
Sandstone	145	220	145	220
Silty Sandstone	220	270	220	270
Silty Shale	270	420	270	420
Shale	370	470	370	470
Silty Sandstone	420	470	420	470
Silty Shale	470	670	470	670
Silty Sandstone	670	770	670	770
Shaly Siltstone	770	870	770	870
Shaly Sandstone w/ tr coal	870	1,070	870	1,070
Sandstone	1,070	1,220	1,070	1,220
Shaly Siltstone w/ tr coal	1,220	1,270	1,220	1,270
Shaly Sandstone and siltstone	1,270	1,320	1,270	1,320
Shaly Sandstone w/ tr coal	1,320	1,420	1,320	1,420
Silty Sandstone w/ coal	1,420	1,470	1,420	1,470
Sandy Shale	1,470	1,752	1,470	1,767
Big Lime	1,782	2,180	1,767	2,229
Fifty Foot Sandstone	2,180	2,587	2,199	2,673
Gordon	2,587	2,723	2,643	2,820
Fifth Sandstone	2,723	2,917	2,790	3,030
Bayard	2,917	3,726	3,000	4,011
Speechley	3,726	3,973	3,981	4,304
Balltown	3,973	4,421	4,274	4,853
Bradford	4,421	4,763	4,823	5,273
Benson	4,763	4,974	5,243	5,534
Alexander	4,974	5,974	5,504	6,780
Sycamore	5,846	5,944	6,604	6,750
Middlesex	5,944	6,025	6,750	6,905
Burkett	6,025	6,050	6,905	6,971
Marcellus	6,050	NA	6,971	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:	10/30/2022
Job End Date:	11/21/2022
State:	West Virginia
County:	Tyler
API Number:	47-095-02783-00-00
Operator Name:	Antero Resources Corporation
Well Name and Number:	FOLGER UNIT 1H
Latitude:	39.49357000
Longitude:	-80.95597000
Datum:	WGS84
Federal Well:	NO
Indian Well:	NO
True Vertical Depth:	6,127
Total Base Water Volume (gal):	22,293,461
Total Base Non Water Volume:	0



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
Produced Water	Halliburton	Base Fluid					
			Water	7732-18-5	100.00000	86.43652	Density = 8.50
Ingredients	Listed Above	Listed Above					
			Water	7732-18-5	100.00000	0.14901	

AS

MC B-8614A	MultiChem	Biocide					
				Listed Below			
Exceletrate LX-15	Halliburton	Friction Reducer					
				Listed Below			
Sand-Premium White-30/70	Halliburton	Proppant					
				Listed Below			
Chemstream StimSTREAM FR 9800	Chemstream, Inc.	Friction Reducer					
				Listed Below			
WG-36 GELLING AGENT	Halliburton	Gelling Agent					
				Listed Below			
Sand-Common White-100 Mesh, SSA-2	Halliburton	Proppant					
				Listed Below			
HAI-501	Halliburton	Acid Corrosion Inhibitor					
				Listed Below			
HYDROCHLORIC ACID, 22 BAUME	Halliburton	Solvent					
				Listed Below			

OPTIFLO-II DELAYED RELEASE BREAKER	Halliburton	Breaker					
				Listed Below			
Items above are Trade Names with the exception of Base Water . Items below are the individual ingredients.							
			Crystalline silica, quartz	14808-60-7	100.00000	13.36499	
			Hydrochloric acid	7647-01-0	30.00000	0.03876	
			Guar gum	9000-30-0	100.00000	0.01649	
			Complex Amine Compound	Proprietary	60.00000	0.01171	
			Alkanes, C16-20-iso-	Proprietary	25.00000	0.00614	
			Butene, homopolymer	9003-29-6	25.00000	0.00614	
			Hydrotreated light petroleum distillate	64742-47-8	30.00000	0.00586	
			Glutaraldehyde	111-30-8	30.00000	0.00243	
			Surfactant	Proprietary	5.00000	0.00098	
			Sorbitan, mono-9- octadecenoate, (Z)	1338-43-8	5.00000	0.00098	
			Ethoxylated alcohols (C12-16)	68213-23-0	3.00000	0.00074	
			Ammonium persulfate	7727-54-0	100.00000	0.00041	
			Alkyl (C12-16) dimethylbenzyl ammonium chloride	68424-85-1	5.00000	0.00040	
			Methanol	67-56-1	100.00000	0.00024	
			Ethoxylated alcohols	Proprietary	5.00000	0.00021	
			Alkoxylated polyhydric alcohol	Proprietary	1.00000	0.00020	
			Organic chloride compound	Proprietary	1.00000	0.00020	
			Oxylated phenolic resin	Proprietary	30.00000	0.00012	
			Ethanol	64-17-5	1.00000	0.00008	
			Modified thiourea polymer	Proprietary	30.00000	0.00007	

			Mixture of dimer and trimer fatty acids of indefinite composition derived from tall oil	61790-12-3	30.00000	0.00007	
			Propargyl alcohol	107-19-7	5.00000	0.00001	
			Hexadecene	629-73-2	5.00000	0.00001	
			C.I. pigment Orange 5	3468-63-1	1.00000	0.00000	
			Sodium hydroxide	1310-73-2	0.01000	0.00000	
			Acrylamide	79-06-1	0.01000	0.00000	
			Organic salt #2	Proprietary	0.01000	0.00000	
			Formaldehyde	50-00-0	0.01000	0.00000	
			Nitrated acetate salt	Proprietary	0.01000	0.00000	
			Organic salt #1	Proprietary	0.01000	0.00000	
			Sodium glycolate	2836-32-0	0.01000	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%

*** If you are calculating a percentage of total ingredients do not add the water volume below the green line to the water volume above the green line

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

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