

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

API 47 - 095 - 02758 County Tyler District Ellsworth
Quad Porter Falls 7.5' Pad Name Thin Air Field/Pool Name -----
Farm name Clara Suzanne Wallace & Rickie Wallace Well Number Purple 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 4375387m Easting 517801m
Landing Point of Curve Northing 4375564.16m Easting 517933.01m
Bottom Hole Northing 4380282m Easting 516331m

Elevation (ft) 1200' 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 9/20/2021 Date drilling commenced 11/12/2021 Date drilling ceased 2/14/2022
Date completion activities began 3/27/2022 Date completion activities ceased 7/2/2022
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 328' Open mine(s) (Y/N) depths No
Salt water depth(s) ft 1660' 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

Reviewed by: [Signature]
APPROVE
09/15/2023
5/24/23

API 47-095 - 02758 Farm name Clara Suzanne Wallace & Rickie Wallace Well number Purple 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	78.67#, X-60	N/A	Y
Surface	17-1/2"	13-3/8"	485'	New	54.5#, J-55	N/A	Y
Coal							
Intermediate 1	12-1/4"	9-5/8"	2611'	New	36#, J-55	N/A	Y
Intermediate 2							
Intermediate 3							
Production	8-3/4"/8-1/2"	5-1/2"	23766'	New	20#, P-110	N/A	Y
Tubing		2-3/8"	6914'		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 ²)	Cement Top (MD)	WOC (hrs)
Conductor	Class A	279 sx	15.6	1.18	329	0'	8 Hrs.
Surface	Class A	515 sx	15.6	1.20	618	0'	8 Hrs.
Coal							
Intermediate 1	Class A	903 sx	15.6	1.19	1075	0'	8 Hrs.
Intermediate 2							
Intermediate 3							
Production	Class H	3806 sx (Tail)	13.5 (Lead), 15.2(Tail)	1.26 (Tail)	4796	~500' into Intermediate Casing	8 Hrs.
Tubing							

Drillers TD (ft) 23766' MD, 6810' TVD (BHL), 6877' (Deepest Point Drilled) Loggers TD (ft) 23766' MD
 Deepest formation penetrated Marcellus Plug back to (ft) N/A
 Plug back procedure N/A

Kick off depth (ft) 6090'

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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PERFORATION RECORD

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


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)
*PLEASE SEE ATTACHED EXHIBIT 2								

Please insert additional pages as applicable.

09/15/2023 

API 47- 095 - 02758 Farm name Clara Suzanne Wallace & Rickie Wallace Well number Purple Unit 1H

<u>PRODUCING FORMATION(S)</u>	<u>DEPTHS</u>		
<u>Marcellus</u>	<u>6828' (TOP)</u>	<u>TVD</u>	<u>7178' (TOP)</u> <u>MD</u>
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____

Please insert additional pages as applicable.

GAS TEST Build up Drawdown Open Flow OIL TEST Flow Pump

SHUT-IN PRESSURE Surface 1459 psi Bottom Hole --- psi DURATION OF TEST --- hrs

OPEN FLOW Gas 14195 mcfpd Oil 568 bpd NGL --- bpd Water 1309 bpd GAS MEASURED BY Estimated Orifice Pilot

LITHOLOGY/ FORMATION	TOP DEPTH IN FT NAME TVD	BOTTOM DEPTH IN FT TVD	TOP DEPTH IN FT MD	BOTTOM DEPTH IN FT MD	DESCRIBE ROCK TYPE AND RECORD QUANTITY AND TYPE OF FLUID (FRESHWATER, BRINE, OIL, GAS, H ₂ S, ETC)
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***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 3/23/2023

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

09/15/2023 

LATITUDE 39°32'30" 392'

LATITUDE 39°32'30" 5,179' TO BOTTOM HOLE

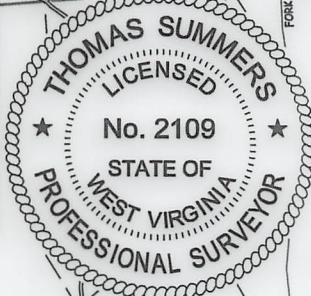
5,024'

LONGITUDE 80°45'00"

LONGITUDE 80°47'30"

Antero Resources Corporation Well No. Purple Unit 1H

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07-08	Lillie Gump
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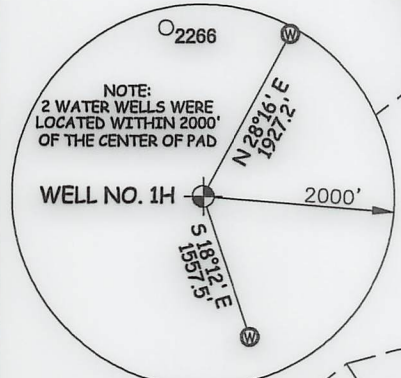
AS DRILLED DATA:
 WELL 1H TOP HOLE INFORMATION:
 N: 376,998ft E: 1,635,275ft
 LAT: 39°31'40.34" LON: 80°47'35.00"
 BOTTOM HOLE INFORMATION:
 N: 393,140ft E: 1,630,720ft
 LAT: 39°34'19.22" LON: 80°48'36.14"
 WEST VIRGINIA COORDINATE SYSTEM OF 1927 NORTH ZONE.
 ZONE WAS DERIVED FROM MEASUREMENTS TAKEN WITH TRIMBLE GEOXT SUBMETER MAPPING GRADE GPS UNIT. PLAT ORIENTATION, CORNER, AND WELL REFERENCE TIE LINES ARE BASED ON GRID NORTH.

(NAD) 83 (UTM) ZONE 17 COORDS:
 WELL 1H TOP HOLE INFORMATION:
 N: 4,375,387m E: 517,801m
 BOTTOM HOLE INFORMATION:
 N: 4,380,282m E: 516,331m

NOTE

1. NO OCCUPIED DWELLINGS OR BUILDINGS TWO THOUSAND FIVE HUNDRED (2,500) SQUARE FEET OR LARGER USED TO HOUSE OR SHELTER DAIRY CATTLE OR POULTRY HUSBANDRY ARE LOCATED WITHIN SIX HUNDRED TWENTY-FIVE (625) FEET OF THE CENTER OF THE WELL PAD.
2. TOP HOLE DATA SHOWN HEREON WAS PROVIDED BY ANTERO RESOURCES CORPORATION.
3. AS DRILLED DATA WAS PROVIDED BY ANTERO RESOURCES CORPORATION.
4. WLS IS NOT CERTIFYING THE DATA AND INFORMATION PROVIDED LISTED IN NOTES 2 AND 3, ONLY THE RELATIONSHIP TO THE DATA AND INFORMATION PROVIDED TO THE LEASE BOUNDARIES.
5. WLS IS BY NO MEANS RESPONSIBLE FOR ANY ERRORS OR INACCURACIES WITH THE DATA AND INFORMATION THAT HAS BEEN PROVIDED.

WV NORTH ZONE GRID NORTH



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.



STATE OF WEST VIRGINIA, DIVISION OF ENVIRONMENTAL PROTECTION, OFFICE OF OIL AND GAS

WILLOW LAND SURVEYING PLLC
 220 MASONIC AVE. PENNSBORO WEST VIRGINIA 26415

JOB # 20-013WA
 DRAWING # PURPLE1HAD
 SCALE 1" = 2000'
 MINIMUM DEGREE OF ACCURACY SUBMETER
 PROVEN SOURCE OF ELEV. SUBMETER MAPPING GRADE GPS

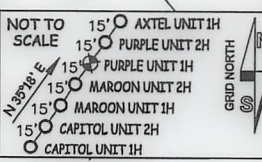
LEGEND

- Surface Owner Boundary Lines +/-
- Interior Surface Tracts +/-
- Proposed Well Path
- As Drilled Well Path

THOMAS SUMMERS P.S. 2109

STATE OF WEST VIRGINIA DEPARTMENT OF ENERGY DIVISION OF OIL AND GAS

DATE 10/11/22
 OPERATOR'S WELL# PURPLE UNIT #1H



(NAD) 27 (UTM) ZONE 17 COORDS:
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WELL TYPE: OIL ___ GAS X LIQUID INJECTION ___ WASTE DISPOSAL ___ 47 - 095 - 02758
 (IF "GAS") PRODUCTION X STORAGE ___ DEEP ___ SHALLOW X STATE COUNTY PERMIT
 LOCATION: ELEVATION 1,200' - AS BUILT WATERSHED OUTLET MIDDLE ISLAND CREEK
 QUADRANGLE PORTER FALLS 7.5' DISTRICT ELLSWORTH COUNTY TYLER
 SURFACE OWNER CLARA SUZANNE WALLACE & RICKIE WALLACE ACREAGE 60 ACRES +/- 09/15/2023
 OIL & GAS ROYALTY OWNER PHILLIP K. GEORGE; RICHARD J. FERRELL ET AL; LARRY CARROLL ET UX; LEASE ACREAGE 60 AC.±; 27.9 AC.±; 70 AC.±;
MACK PERCY GAS WELL INC.; D. RALPH THACKER; BARBARA K. BAKER ET VIR; MURIEL SHERWOOD; WILLIAM D. HOPE; 163.13 AC.±; 75.97 AC.±; 112 AC.±; 163.96 AC.±; 183.72 AC.±;
JOHN BENNETT ET UX; LEE & HALL PROPERTIES; ROBERT E. CLARK ET UX; JAMES W. YOHO ET UX; DAVID L. SMITH; JOHN MATHIEW STALEY; DAVID L. SMITH 103.05 AC.±; 49.68 AC.±; 4.32 AC.±; 119.69 AC.±; 27 AC.±; 4 AC.±; 50 AC.±
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 PLUG OFF OLD FORMATION ___ PERFORATE NEW FORMATION ___ OTHER PHYSICAL CHANGE IN WELL
 (SPECIFY) AS DRILLED PLUG & ABANDON CLEAN OUT & REPLUG
 TARGET FORMATION MARCELLUS ESTIMATED DEPTH 6,810' TVD 23,766' MD
 WELL OPERATOR ANTERO RESOURCES CORP. DESIGNATED AGENT DIANNA STAMPER - CT CORPORATION SYSTEM
 ADDRESS 1615 WYNKOOP ST. ADDRESS 5400 D BIG TYLER ROAD
 FORM WW-6 DENVER, CO 80202 CHARLESTON, WV 25313

COUNTY NAME

PERMIT

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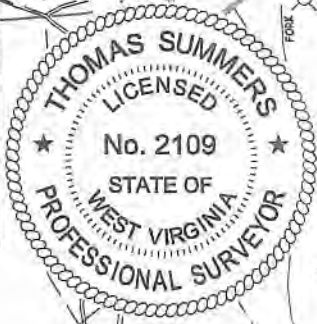
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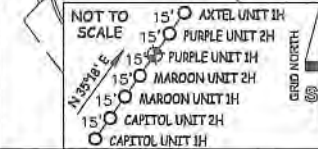
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WILLOW LAND SURVEYING PLLC
220 MASONIC AVE. PENNSBORO WEST VIRGINIA 26415

JOB # 20-013WA	LEGEND
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SCALE 1" = 2000'	Interior Surface Tracts +/-
MINIMUM DEGREE OF ACCURACY SUBMETER	Proposed Well Path
PROVEN SOURCE OF ELEV. SUBMETER MAPPING GRADE GPS	As Drilled Well Path
STATE OF WEST VIRGINIA DEPARTMENT OF ENERGY DIVISION OF OIL AND GAS	THOMAS SUMMERS P.S. 2109
DATE 10/11/22	OPERATOR'S WELL# PURPLE UNIT #1H



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LONGITUDE 80°45'00"

LONGITUDE 80°47'30"

COUNTY NAME

PERMIT

Handwritten initials 'JS'

Exhibit 1

Stage No.	Perforation Date	Perforated from MD ft.	Perforated to MD ft.	Number of Perforations	Formations
1	03/27/2022	23644.5	23598.2	60	Marcellus
2	03/27/2022	23559.1	23392.7	60	Marcellus
3	03/28/2022	23357.0	23190.6	60	Marcellus
4	03/29/2022	23154.9	22988.5	60	Marcellus
5	03/29/2022	22952.8	22786.4	60	Marcellus
6	03/30/2022	22750.7	22584.3	60	Marcellus
7	03/31/2022	22548.6	22382.2	60	Marcellus
8	04/14/2022	22346.5	22180.1	60	Marcellus
9	04/26/2022	22144.4	21978.0	60	Marcellus
10	04/27/2022	21942.3	21775.9	60	Marcellus
11	04/27/2022	21740.3	21573.8	60	Marcellus
12	04/28/2022	21538.2	21371.7	60	Marcellus
13	04/29/2022	21336.1	21169.6	60	Marcellus
14	04/29/2022	21134.0	20967.5	60	Marcellus
15	04/29/2022	20931.9	20765.5	60	Marcellus
16	04/30/2022	20729.8	20563.4	60	Marcellus
17	04/30/2022	20527.7	20361.3	60	Marcellus
18	04/30/2022	20325.6	20159.2	60	Marcellus
19	04/30/2022	20123.5	19957.1	60	Marcellus
20	05/01/2022	19921.4	19755.0	60	Marcellus
21	05/01/2022	19719.3	19552.9	60	Marcellus
22	05/01/2022	19517.2	19350.8	60	Marcellus
23	05/02/2022	19315.1	19148.7	60	Marcellus
24	05/02/2022	19113.0	18946.6	60	Marcellus
25	05/02/2022	18910.9	18744.5	60	Marcellus
26	05/03/2022	18708.8	18542.4	60	Marcellus
27	05/03/2022	18506.7	18340.3	60	Marcellus
28	05/04/2022	18304.6	18138.2	60	Marcellus
29	05/04/2022	18102.5	17936.1	60	Marcellus
30	05/04/2022	17900.4	17734.0	60	Marcellus
31	05/05/2022	17698.3	17531.9	60	Marcellus
32	05/05/2022	17496.2	17329.8	60	Marcellus
33	05/05/2022	17294.1	17127.7	60	Marcellus
34	05/06/2022	17092.0	16925.6	60	Marcellus
35	05/06/2022	16889.9	16723.5	60	Marcellus
36	05/07/2022	16687.8	16521.4	60	Marcellus
37	05/08/2022	16485.7	16319.3	60	Marcellus
38	05/08/2022	16283.7	16117.2	60	Marcellus
39	05/08/2022	16081.6	15915.1	60	Marcellus
40	05/08/2022	15879.5	15713.0	60	Marcellus
41	05/09/2022	15677.4	15510.9	60	Marcellus
42	05/09/2022	15475.3	15308.8	60	Marcellus
43	05/09/2022	15273.2	15106.8	60	Marcellus
44	05/10/2022	15071.1	14904.7	60	Marcellus
45	05/10/2022	14869.0	14702.6	60	Marcellus
46	05/10/2022	14666.9	14500.5	60	Marcellus
47	05/11/2022	14464.8	14298.4	60	Marcellus
48	05/11/2022	14262.7	14096.3	60	Marcellus
49	05/12/2022	14060.6	13894.2	60	Marcellus
50	05/12/2022	13858.5	13692.1	60	Marcellus
51	05/13/2022	13656.4	13490.0	60	Marcellus
52	05/13/2022	13454.3	13287.9	60	Marcellus
53	05/13/2022	13252.2	13085.8	60	Marcellus
54	05/13/2022	13050.1	12883.7	60	Marcellus
55	05/14/2022	12848.0	12681.6	60	Marcellus
56	05/14/2022	12645.9	12479.5	60	Marcellus
57	05/14/2022	12443.8	12277.4	60	Marcellus
58	05/14/2022	12241.7	12075.3	60	Marcellus
59	05/15/2022	12039.6	11873.2	60	Marcellus
60	05/15/2022	11837.5	11671.1	60	Marcellus
61	05/15/2022	11635.4	11469.0	60	Marcellus
62	05/16/2022	11433.3	11266.9	60	Marcellus
63	05/16/2022	11231.2	11064.8	60	Marcellus
64	05/17/2022	11029.1	10862.7	60	Marcellus
65	05/17/2022	10827.1	10660.6	60	Marcellus
66	05/17/2022	10625.0	10458.5	60	Marcellus
67	05/18/2022	10422.9	10256.4	60	Marcellus
68	05/18/2022	10220.8	10054.3	60	Marcellus
69	05/18/2022	10018.7	9852.3	60	Marcellus
70	05/18/2022	9816.6	9650.2	60	Marcellus
71	05/18/2022	9614.5	9448.1	60	Marcellus
72	05/19/2022	9412.4	9246.0	60	Marcellus
73	05/19/2022	9210.3	9043.9	60	Marcellus
74	05/19/2022	9008.2	8841.8	60	Marcellus
75	05/20/2022	8806.1	8639.7	60	Marcellus
76	05/20/2022	8604.0	8437.6	60	Marcellus
77	05/20/2022	8401.9	8235.5	60	Marcellus
78	05/21/2022	8199.8	8033.4	60	Marcellus
79	05/21/2022	7997.7	7831.3	60	Marcellus
80	05/21/2022	7795.6	7629.2	60	Marcellus
81	05/22/2022	7593.5	7427.1	60	Marcellus
82	05/22/2022	7391.4	7225.0	60	Marcellus



API 47-095-02758 Farm Name Clara Suzanne Wallace & Rickie Wallace Well Number Purple Unit 1H

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	03/27/2022	63.0	9546.33	8760.88	3907.97	175920	223809	N/A
2	03/27/2022	77.7	9202	6335	4524	397175	342149	N/A
3	03/28/2022	78.9	9233	5784	4133	408495	349672	N/A
4	03/29/2022	79.3	9404	5906	4396	397810	321693	N/A
5	03/29/2022	76.6	9414.09	6499.98	4039.49	397800	335051	N/A
6	03/30/2022	77.3	9080	5666	3116	402415	387240	N/A
7	03/31/2022	77.8	9257	6154	4757	409500	399357	N/A
8	04/14/2022	41.5	8097	6683	6750	292535	918458	N/A
9	04/26/2022	76.5	9195	6244	3926	396755	319462	N/A
10	04/27/2022	81.1	9023	6080	4177	407285	320307	N/A
11	04/27/2022	81.2	9216	5883	4503	400105	312442	N/A
12	04/28/2022	69.6	8687	3888	3403	400075	377761	N/A
13	04/29/2022	78.2	8755	4679	3601	406930	348375	N/A
14	04/29/2022	78.5	9010	5926	3561	401570	343942	N/A
15	04/29/2022	78.9	8833	5257	3708	410230	300769	N/A
16	04/30/2022	80.1	8891	4773	3479	405795	301234	N/A
17	04/30/2022	80.0	8782	2891	3402	402620	298314	N/A
18	04/30/2022	77.4	8313	5021	3587	402314	304368	N/A
19	04/30/2022	79.7	8698	4930	3667	408250	305274	N/A
20	05/01/2022	79.4	8607	5243	3746	404060	310271	N/A
21	05/01/2022	77.8	8599	5304	3791	399426	333705	N/A
22	05/01/2022	79.4	8403	4688	4180	407275	307839	N/A
23	05/02/2022	79.5	8691	5181	4079	400435	306857	N/A
24	05/02/2022	73.9	8315	4245	3982	399870	376742	N/A
25	05/02/2022	79.7	8667	5055	3820	402245	311890	N/A
26	05/03/2022	77.7	8622	4961	4012	402695	310758	N/A
27	05/03/2022	70.7	8711	4922	3497	419312	426996	N/A
28	05/04/2022	78.2	8860	5121	3601	409830	312513	N/A
29	05/04/2022	71.6	7696	4819	3793	405580	307739	N/A
30	05/04/2022	69.2	7961	5098	3634	403230	302922	N/A
31	05/05/2022	79.6	8371	4976	3961	399560	388193	N/A
32	05/05/2022	66.7	9040	5339	4733	393015	370911	N/A
33	05/05/2022	78.4	8451	3602	4319.26	406155	384204	N/A
34	05/06/2022	79.0	8486	8035	4484	400880	500102	N/A
35	05/06/2022	78.7	8620	8091	5014.99	406365	379415	N/A
36	05/07/2022	75.7	8568.62	5287.12	4797.57	403545	318338	N/A
37	05/08/2022	79.8	8040	5523	3995.09	403155	360578	N/A
38	05/08/2022	80.1	8082	4937	3725	400775	291449	N/A
39	05/08/2022	79.9	7980	5552	4338	406219	349152	N/A
40	05/08/2022	79.3	7963	5367	4086	401025	298093	N/A
41	05/09/2022	78.8	8129	4046	4755	347696	291921	N/A
42	05/09/2022	79.5	7860	5368	5462	407355	293436	N/A
43	05/09/2022	78.3	7770	5956	4299	408990	363318	N/A
44	05/10/2022	79.6	7965	5235	4546	390800	298608	N/A
45	05/10/2022	75.5	7810	8725	4619	404475	425642	N/A
46	05/10/2022	78.9	7917	5460	4556	404270	294885	N/A
47	05/11/2022	79.4	8232	5611	4270	399485	292819	N/A
48	05/11/2022	79.2	8013	5519	4618	398500	292539	N/A
49	05/12/2022	79.2	7951	5840	4844	399440	290791	N/A
50	05/12/2022	78.5	7672	7162	5040	398980	519707	N/A
51	05/13/2022	76.4	7533	6147	4735	411435	403503	N/A
52	05/13/2022	78.6	7958	6614	4819	403915	301439	N/A
53	05/13/2022	79.5	7536	5348	4580	406515	303626	N/A
54	05/13/2022	79.6	7793	7437	4825	398130	293101	N/A
55	05/14/2022	79.6	7568	5252	4597	396265	299502	N/A
56	05/14/2022	81.8	7456	5287	4991	399956	303585	N/A
57	05/14/2022	79.7	7430	6393	5073	398415	295248	N/A
58	05/14/2022	79.9	7620	7011	4770	403080	305357	N/A
59	05/15/2022	79.4	7464	5656	4712	400890	305432	N/A
60	05/15/2022	79.8	7703	6533	4116	404390	297010	N/A
61	05/15/2022	79.6	7513	5587	4302	412505	300793	N/A
62	05/16/2022	79.8	7270	6879	4335	413100	312802	N/A
63	05/16/2022	79.6	7135	3671	4612	410465	299857	N/A
64	05/17/2022	79.1	7063	4552	4456	413880	311713	N/A
65	05/17/2022	78.7	7437	5687	5218	387205	352619	N/A
66	05/17/2022	79.8	7386	6394	4604	404265	300551	N/A
67	05/18/2022	79.0	7121	5677	4361	398115	300398	N/A
68	05/18/2022	79.6	7069	5580	4703	402734	289108	N/A
69	05/18/2022	79.7	7110	4737	4775	398325	284357	N/A
70	05/18/2022	79.3	7126	3352	4665	396292	268620	N/A
71	05/18/2022	80.0	7112	4725	4778	403440	287172	N/A
72	05/19/2022	80.0	7085	3715	4977	401515	309277	N/A
73	05/19/2022	79.6	6936	4623	5124	403470	283078	N/A
74	05/19/2022	79.7	7345	5396	4287	402419	308485	N/A
75	05/20/2022	78.7	6992	4046	4313	401155	331427	N/A
76	05/20/2022	79.5	7174	5878	4351	400430	286449	N/A
77	05/20/2022	75.4	6747	4273	4453	398080	311679	N/A
78	05/21/2022	78.3	6846	4466	4673	406795	296385	N/A
79	05/21/2022	79.6	6843	4574	4463	403170	284394	N/A
80	05/21/2022	79.5	6755	4828	4503	401290	282652	N/A
81	05/22/2022	77.9	6864	5474	4620	400540	282696	N/A
82	05/22/2022	79.6	6674	6041	4248	406185	290531	N/A
	AVERAGE	78	8,029	5,481	4,357	32,646,588	27,105,856	TOTAL

09/15/2023


EXHIBIT 3

LITHOLOGY/ FORMATION	TOP DEPTH (TVD)	BOTTOM DEPTH (TVD)	TOP DEPTH (MD)	BOTTOM DEPTH (MD)
	From Surface	From Surface	From Surface	From Surface
Shaly Siltstone, tr LS	91	275	91	275
Sandy Siltstone, Coal	275	335	275	335
Silty Sandstone	335	425	335	425
Shaly Siltstone, occ LS	425	635	425	635
Sandy Siltstone, occ LS	635	965	635	965
Shaly Siltstone, occ SS	965	1,025	965	1,025
Shaly Siltstone	1,025	1,435	1,025	1,435
Sandy Siltstone, occ Shale	1,435	1,525	1,435	1,525
Silty Sandstone, tr coal	1,525	1,615	1,525	1,615
Silty Sandstone, coal, tr shale	1,615	1,735	1,615	1,735
Silty Sandstone, occ shale	1,735	1,885	1,735	1,885
Shaly Sandstone, coal, occ slst	1,885	2,125	1,885	2,125
Silty Sandstone, coal, occ Shale	2,125	2,088	2,125	2,094
Big Lime	2,113	2,970	2,094	2,978
Fifty Foot Sandstone	2,970	3,106	2,953	3,114
Gordon	3,106	3,397	3,089	3,410
Fifth Sandstone	3,397	3,483	3,385	3,497
Bayard	3,483	4,167	3,472	4,192
Speechley	4,167	4,474	4,167	4,503
Balltown	4,474	4,911	4,478	4,944
Bradford	4,911	5,178	4,919	5,213
Benson	5,178	5,406	5,188	5,444
Alexander	5,406	6,660	5,419	6,773
Sycamore	6,516	6,635	6,590	6,748
Middlesex	6,635	6,735	6,748	6,916
Burkett	6,735	6,765	6,916	6,982
Tully	6,765	6,828	6,982	7,178
Marcellus	6,828	NA	7,178	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:	3/27/2022
Job End Date:	5/22/2022
State:	West Virginia
County:	Tyler
API Number:	47-095-02758-00-00
Operator Name:	Antero Resources Corporation
Well Name and Number:	PURPLE UNIT 1H
Latitude:	39.52787000
Longitude:	-80.79306000
Datum:	WGS84
Federal Well:	NO
Indian Well:	NO
True Vertical Depth:	6,877
Total Base Water Volume (gal):	28,326,350
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	87.86731	Density = 8.50
Ingredients	Listed Above	Listed Above					
			Water	7732-18-5	100.00000	0.16249	

WG-36 GELLING AGENT	Halliburton	Gelling Agent					
				Listed Below			
HAI-501	Halliburton	Acid Corrosion Inhibitor					
				Listed Below			
Sand-Premium White-30/50	Halliburton	Proppant					
				Listed Below			
MC DF-7250	MultiChem	Defoamer					
				Listed Below			
Sand-Common White-100 Mesh, SSA-2	Halliburton	Proppant					
				Listed Below			
Excelerate LX-15	Halliburton	Friction Reducer					
				Listed Below			
WG-35 GELLING AGENT	Halliburton	Gelling Agent					
				Listed Below			
OPTIFLO-II DELAYED RELEASE BREAKER	Halliburton	Breaker					
				Listed Below			

MC B-8614A	MultiChem	Biocide					
				Listed Below			
FDP-S1443-21	Halliburton	Corrosion Inhibitor					
				Listed Below			
Sand-Premium White-30/70	Halliburton	Proppant					
				Listed Below			
D-AIR 3000L	Halliburton	Defoamer					
				Listed Below			
HYDROCHLORIC ACID, 22 BAUME	Halliburton	Solvent					
				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	11.91402	
			Hydrochloric acid	7647-01-0	30.00000	0.03814	
			Guar gum	9000-30-0	100.00000	0.03705	
			Complex Amine Compound	Proprietary	60.00000	0.02726	
			Hydrotreated light petroleum distillate	64742-47-8	30.00000	0.01363	
			Glutaraldehyde	111-30-8	30.00000	0.00243	
			Surfactant	Proprietary	5.00000	0.00227	
			Sorbitan, mono-9-octadecenoate, (Z)	1338-43-8	5.00000	0.00227	
			Ammonium persulfate	7727-54-0	100.00000	0.00075	
			Ethoxylated alcohols	Proprietary	30.00000	0.00052	

			Organic chloride compound	Proprietary	1.00000	0.00045	
			Alkoxylated polyhydric alcohol	Proprietary	1.00000	0.00045	
			Alkyl (C12-16) dimethylbenzyl ammonium chloride	68424-85-1	5.00000	0.00040	
			Methanol	67-56-1	100.00000	0.00025	
			Oxylated phenolic resin	Proprietary	30.00000	0.00022	
			Ethanol	64-17-5	1.00000	0.00008	
			Modified thiourea polymer	Proprietary	30.00000	0.00003	
			Alkenes	Proprietary	100.00000	0.00003	
			Mixture of dimer and trimer fatty acids of indefinite composition derived from tall oil	61790-12-3	30.00000	0.00002	
			Didecyldimethylammonium chloride	68910-32-7	60.00000	0.00002	
			Aldehyde	Proprietary	5.00000	0.00001	
			Polypropylene glycol	25322-69-4	30.00000	0.00001	
			Siloxanes and Silicones, di-Me, reaction products with silica	67762-90-7	30.00000	0.00001	
			C.I. pigment Orange 5	3468-63-1	1.00000	0.00001	
			Formaldehyde	50-00-0	0.01000	0.00000	
			Organic salt #2	Proprietary	0.01000	0.00000	
			Organic salt #1	Proprietary	0.01000	0.00000	
			Sodium hydroxide	1310-73-2	0.01000	0.00000	
			Sodium glycolate	2836-32-0	0.01000	0.00000	
			Acrylamide	79-06-1	0.01000	0.00000	
			Nitrated acetate salt	Proprietary	0.01000	0.00000	
			1-Hexadecene	629-73-2	1.00000	0.00000	
			1-Octadecene	112-88-9	1.00000	0.00000	
			Propargyl alcohol	107-19-7	5.00000	0.00000	

			Hexadecene	629-73-2	5.00000	0.00000	
			Alkylbenzene Derivatives	Proprietary	1.00000	0.00000	
			Sulfuric acid	7664-93-9	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%

*** 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)