

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

API 47 - 095 - 02815 County Tyler District Meade
Quad Bens Run Pad Name Wrigley Field/Pool Name ----
Farm name Shirley J. Wells & Suise Cunningham Well Number Trunk 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 4363527.052m Easting 499378.371m
Landing Point of Curve Northing 4363196.76m Easting 498436.11m
Bottom Hole Northing 4359264.883m Easting 499862.948m

Elevation (ft) 937' 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 8/30/2022 Date drilling commenced 12/12/2022 Date drilling ceased 3/23/2023
Date completion activities began 4/20/2023 Date completion activities ceased 5/28/2023
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 397' Open mine(s) (Y/N) depths No
Salt water depth(s) ft 1436, 1847' 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

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Reviewed by:

APPROVED


03/15/2024

API 47-095 - 02815 Farm name Shirley J. Wells & Suise Cunningham Well number Trunk 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"	130'	New	91.59#, J-55	N/A	Y
Surface	17-1/2"	13-3/8"	629'	New	54.5#, J-55	N/A	Y
Coal							
Intermediate 1	12-1/4"	9-5/8"	3573'	New	36#, J-55	N/A	Y
Intermediate 2							
Intermediate 3							
Production	8-3/4"/8-1/2"	5-1/2"	21338'	New	23#, P-110-ICY	N/A	Y
Tubing		2-3/8"	7063'		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	202 sx	15.6	1.18	238	0'	8 Hrs.
Surface	Class A	560 sx	15.8	1.16	650	0'	8 Hrs.
Coal							
Intermediate 1	Class A	1230 sx	15.8	1.16	1427	0'	8 Hrs.
Intermediate 2							
Intermediate 3							
Production	Class H	3335 sx (Lead)	15.2	1.28 (Lead)	4269	-500' Into Intermediate Casing	8 Hrs.
Tubing							

Drillers TD (ft) 21338' MD, 6182' TVD (BHL), 6182' (Deepest Point Drilled) Loggers TD (ft) 21338' MD
 Deepest formation penetrated Marcellus Plug back to (ft) N/A
 Plug back procedure N/A

Kick off depth (ft) 5752'

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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WAS WELL COMPLETED AS SHOT HOLE Yes No DETAILS _____

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WAS WELL COMPLETED OPEN HOLE? Yes No DETAILS _____

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

03/15/2024

API 47- 095 - 02815 Farm name Shirley J. Wells & Suisse Cunningham Well number Trunk Unit 1H

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								

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Please insert additional pages as applicable.

DWS
08/15/2024

API 47- 095 - 02815 Farm name Shirley J. Wells & Suise Cunningham Well number Trunk Unit 1H

<u>PRODUCING FORMATION(S)</u>	<u>DEPTHS</u>	
<u>Marcellus</u>	<u>6008' (TOP)</u> TVD	<u>7283' (TOP)</u> MD
_____	_____	_____
_____	_____	_____
_____	_____	_____

Please insert additional pages as applicable.

GAS TEST Build up Drawdown Open Flow OIL TEST Flow Pump

SHUT-IN PRESSURE Surface 1832 psi Bottom Hole --- psi DURATION OF TEST --- hrs

OPEN FLOW Gas 13451 mcfpd Oil 224 bpd NGL --- bpd Water 1074 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 8/3/2023

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

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[Signature]
03/15/2024

497' to Bottom Hole

2,088' to Top Hole
TOP HOLE LATITUDE 39 - 27 - 30
BTM HOLE LATITUDE 39 - 25 - 00

LONGITUDE 81 - 00 - 00

12,340' to Bottom Hole
13,528' to Top Hole

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



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

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.

Note: 8 water wells 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.

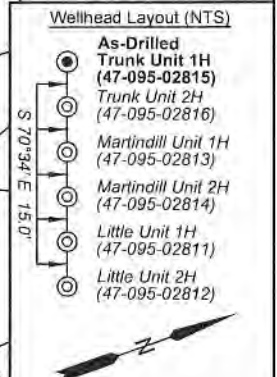


Legend

- As-Drilled 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. Trunk Unit 1H Top Hole coordinates are
N: 339,089.69' Latitude: 39°25'16.29"
E: 1,574,172.52' Longitude: 81°00'26.60"
Bottom Hole coordinates are
N: 325,076.76' Latitude: 39°22'58.03"
E: 1,575,529.12' Longitude: 81°00'06.33"
UTM Zone 17, NAD 1983
Top Hole Coordinates: Bottom Hole Coordinates
N: 4,363,527.052m N: 4,359,264.883m
E: 499,378.371m E: 499,862.948m
Plat orientation and corner and well references are based upon the grid north meridian.
Well location references are based upon the magnetic meridian.

Trunk Unit 1H As-Drilled POE Coordinates
West Virginia Coordinate System of 1927, North Zone
N: 338,355.15'
E: 1,571,047.99'
Latitude: 39°25'08.51"
Longitude: 81°01'06.26"
UTM Zone 17, NAD 1983
N: 4,363,287.363m
E: 498,430.221m



	Bearing	Dist.
L1	S 78°16' E	2,391.2'
L2	S 08°10' W	1,436.0'
L3	N 21°05' W	1,843.2'
L4	N 54°26' E	1,688.5'

FILE NO: 194-51-U-21
DRAWING NO: Trunk 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: August 17 2023
OPERATOR'S WELL NO. Trunk Unit 1H
API WELL NO
47 - 095 - 02815
STATE COUNTY PERMIT

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

LOCATION: ELEVATION: As-Built 937' WATERSHED: Outlet Middle Island Creek QUADRANGLE: Bens Run
DISTRICT: Meade COUNTY: Tyler 03/15/2024
SURFACE OWNER: Shirley J. Wells & Suise Cunningham Ora Virginia White, Patricia Lynn Wilson, Janice A. Childers, Glen Milton Evans, Jr., Robert Carl Anderson, Richard L. Gorrell, et ux; Wilma J. Monroe; B&A Family LP; ACREAGE: 53.85 89.11; 40, 14, 65.5; 57.375; 19.25; 32.38;
ROYALTY OWNER: Greenbrier Royalty Fund II, LLC (2); Janelle Sue Perkins; Bradley William Poch; LEASE NO: ACREAGE: 171.92250; 40, 26.864 55; 19; 112; 65; 20;
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: 6,182' TVD 21,338' MD

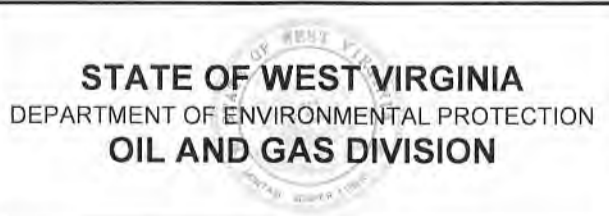
WELL OPERATOR: Antero Resources Corporation DESIGNATED AGENT: Kevin Ellis
ADDRESS: 1615 Wynkoop Street ADDRESS: 535 White Oaks Blvd.
Denver, CO 80202 Bridgeport, WV 26330



Leases	
A	Greenbrier Royalty Fund II LLC
B	Antero Minerals, LLC
C	Janelle Sue Perkins
D	Bradley William Poch
E	Mary C. Robinson Living Trust
F	Inex B. Fletcher, et vir
G	Paolo Augustus Tanzey
H	Timothy Bryant Perkins
I	Greenbrier Royalty Fund II, LLC
J	Barbara D. Terrell
K	Ora Virginia White
L	Robert Carl Anderson
M	Richard L. Gorrell, et ux
N	Wilma J. Monroe
O	Kenneth G. Hall
P	Patricia Lynn Freeland
Q	Patricia Lynn Wilson
R	Janice A. Childers
S	Glen Milton Evans, Jr.
T	710 Corporation
U	JayBee Production Company
V	Treva M. Burns, et vir
W	B&A Family LP
X	Thomas M. Jones
Y	Jack D. Gaddis
Z	710 Corporation

ID	TM/Par	Owner	Bk/Pg	Acres
1	7-2	Shirley J. Wells & Susie Cunningham	W41/317	53.85
2	7-1.1	Daniel Preston Bonner	416/11	20.19
3	12-17	Cecil E. & Betty J. Hamilton	269/58	32.38
4	7-8	John Wells	428/412	52.39
5	7-7	Janelle S. Perkins	184/378	74.08
6	12-30	Peggy Ann Flesher Tanzey	324/650	98.87
7	7-11	Timothy Bryant Perkins	481/481	91.77
8	7-17.1	Barbara Trunk Renner	332/524	8.65
9	7-17&18	Barbara Trunk Renner	332/525	97.00
10	16-10	Richard L. & Vickie L. Gorrell	147/399	98.00
11	7-17.2	Barbara Trunk Renner, et al	248/471	20.00
12	10-1	Wilma J. Monroe	W75/840	89.11
13	10-1.1	Jay Bee Oil & Gas Inc.	548/114	5.00
14	10-2	Kenneth G. Hall	263/633	5.89
15	10-3.1	Patricia Lynn (Wilson) Freeland	262/224	0.98
16	10-4	Patricia Lynn Wilson	514/557	40.00
17	10-3	Janice A. Childers	256/539	134.02
18	10-24	BB Farm Investments LLC	594/417	220.80
19	10-25	BB Farm Investments LLC	594/417	19.05
20	10-26	Lindsey & Carolyn Bartlett	375/456	22.00
21	10-27	Thomas M. Jones	313/250	114.00
22	10-21	Robert Lee & Suzanne B. Evans	329/172	81.13
23	10-30	Mark J. Curry	325/222	36.70

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 ADDRESS: 1615 Wynkoop Street ADDRESS: 535 White Oaks Blvd.
 Denver, CO 80202 Bridgeport, WV 26330

Exhibit 1

Stage No.	Perforation Date	Perforated from MD ft.	Perforated to MD ft.	Number of Perforations	Formations
1	4/20/2023	21220	21176	60	Marcellus
2	4/20/2023	21138.57246	20973.4348	60	Marcellus
3	4/20/2023	20938.00725	20772.8696	60	Marcellus
4	4/21/2023	20737.44203	20572.3043	60	Marcellus
5	4/21/2023	20536.87681	20371.7391	60	Marcellus
6	4/21/2023	20336.31159	20171.1739	60	Marcellus
7	4/21/2023	20135.74638	19970.6087	60	Marcellus
8	4/22/2023	19935.18116	19770.0435	60	Marcellus
9	4/22/2023	19734.61594	19569.4783	60	Marcellus
10	4/22/2023	19534.05072	19368.913	60	Marcellus
11	4/22/2023	19333.48551	19168.3478	60	Marcellus
12	4/23/2023	19132.92029	18967.7826	60	Marcellus
13	4/24/2023	18932.35507	18767.2174	60	Marcellus
14	4/24/2023	18731.78986	18566.6522	60	Marcellus
15	4/24/2023	18531.22464	18366.087	60	Marcellus
16	4/24/2023	18330.65942	18165.5217	60	Marcellus
17	4/25/2023	18130.0942	17964.9565	60	Marcellus
18	4/25/2023	17929.52899	17764.3913	60	Marcellus
19	4/25/2023	17728.96377	17563.8261	60	Marcellus
20	4/25/2023	17528.39855	17363.2609	60	Marcellus
21	4/26/2023	17327.83333	17162.6957	60	Marcellus
22	4/26/2023	17127.26812	16962.1304	60	Marcellus
23	4/26/2023	16926.7029	16761.5652	60	Marcellus
24	4/26/2023	16726.13768	16561	60	Marcellus
25	4/27/2023	16525.57246	16360.4348	60	Marcellus
26	4/27/2023	16325.00725	16159.8696	60	Marcellus
27	4/27/2023	16124.44203	15959.3043	60	Marcellus
28	4/28/2023	15923.87681	15758.7391	60	Marcellus
29	4/28/2023	15723.31159	15558.1739	60	Marcellus
30	4/28/2023	15522.74638	15357.6087	60	Marcellus
31	4/28/2023	15322.18116	15157.0435	60	Marcellus
32	4/29/2023	15121.61594	14956.4783	60	Marcellus
33	4/29/2023	14921.05072	14755.913	60	Marcellus
34	4/29/2023	14720.48551	14555.3478	60	Marcellus
35	4/29/2023	14519.92029	14354.7826	60	Marcellus
36	4/30/2023	14319.35507	14154.2174	60	Marcellus
37	4/30/2023	14118.78986	13953.6522	60	Marcellus
38	4/30/2023	13918.22464	13753.087	60	Marcellus
39	4/30/2023	13717.65942	13552.5217	60	Marcellus
40	5/1/2023	13517.0942	13351.9565	60	Marcellus
41	5/1/2023	13316.52899	13151.3913	60	Marcellus
42	5/1/2023	13115.96377	12950.8261	60	Marcellus
43	5/2/2023	12915.39855	12750.2609	60	Marcellus
44	5/2/2023	12714.83333	12549.6957	60	Marcellus
45	5/2/2023	12514.26812	12349.1304	60	Marcellus
46	5/2/2023	12313.7029	12148.5652	60	Marcellus
47	5/3/2023	12113.13768	11948	60	Marcellus
48	5/3/2023	11912.57246	11747.4348	60	Marcellus
49	5/3/2023	11712.00725	11546.8696	60	Marcellus
50	5/3/2023	11511.44203	11346.3043	60	Marcellus
51	5/4/2023	11310.87681	11145.7391	60	Marcellus
52	5/4/2023	11110.31159	10945.1739	60	Marcellus
53	5/4/2023	10909.74638	10744.6087	60	Marcellus
54	5/4/2023	10709.18116	10544.0435	60	Marcellus
55	5/5/2023	10508.61594	10343.4783	60	Marcellus
56	5/5/2023	10308.05072	10142.913	60	Marcellus
57	5/5/2023	10107.48551	9942.34783	60	Marcellus
58	5/5/2023	9906.92029	9741.78261	60	Marcellus
59	5/5/2023	9706.355072	9541.21739	60	Marcellus
60	5/6/2023	9505.789855	9340.65217	60	Marcellus
61	5/6/2023	9305.224638	9140.08696	60	Marcellus
62	5/6/2023	9104.65942	8939.52174	60	Marcellus
63	5/6/2023	8904.094203	8738.95652	60	Marcellus
64	5/6/2023	8703.528986	8538.3913	60	Marcellus
65	5/6/2023	8502.963768	8337.82609	60	Marcellus
66	5/7/2023	8302.398551	8137.26087	60	Marcellus
67	5/7/2023	8101.833333	7936.69565	60	Marcellus
68	5/7/2023	7901.268116	7736.13043	60	Marcellus
69	5/7/2023	7700.702899	7535.56522	60	Marcellus
70	5/7/2023	7500.137681	7335	60	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	4/20/2023	67.9	8463	5334	4121	175120	4920.16667	N/A
2	4/20/2023	85.0	9417	5119	4444	396270	7280.66667	N/A
3	4/20/2023	86.1	8907	6779	4964	403419	7306.23762	N/A
4	4/21/2023	90.6	9679	5169	4277	417069	7436.36669	N/A
5	4/21/2023	85.4	9407	4663	4930	415370	7056.61238	N/A
6	4/21/2023	87.4	9748	5433	3839	396080	6881.70262	N/A
7	4/21/2023	88.9	9853	5717	3577	418920	7293.35833	N/A
8	4/22/2023	89.9	10146	5363	3751	414500	7231.155	N/A
9	4/22/2023	89.4	10028	5457	4579	417360	7183.65833	N/A
10	4/22/2023	93.0	9896	5548	4363	416900	6502	N/A
11	4/22/2023	91.0	9875	4960	3484	414550	7116.08048	N/A
12	4/23/2023	84.7	9226	5252	3487	399730	6905.32929	N/A
13	4/24/2023	87.3	9475	5301	3571	418420	6968.58857	N/A
14	4/24/2023	84.2	8997	5389	3683	416090	7039.41429	N/A
15	4/24/2023	83.0	9066	5894	4139	416060	7201.42762	N/A
16	4/24/2023	81.4	8856	5864	3616	415950	7495.37667	N/A
17	4/25/2023	81.9	8902	4825	3696	417340	7140.23714	N/A
18	4/25/2023	86.7	9184	5003	4446	398610	6850.68262	N/A
19	4/25/2023	82.5	8683	5189	3834	413480	7018.32833	N/A
20	4/25/2023	82.0	8252	4624	3968	402910	7088.2931	N/A
21	4/26/2023	84.0	8376	4853	3959	396570	6925.05524	N/A
22	4/26/2023	79.8	8077	5226	4100	416940	7030.25048	N/A
23	4/26/2023	82.0	8196	3899	4722	403400	6939.45357	N/A
24	4/26/2023	84.0	8172	4400	3828	397180	6992.02857	N/A
25	4/27/2023	85.1	8312	4308	3950	399600	6941.84024	N/A
26	4/27/2023	84.2	8102	5856	4193	415080	7354.05476	N/A
27	4/27/2023	84.5	7801	5964	3809	397600	6915.06881	N/A
28	4/28/2023	83.1	7797	5236	4186	394860	7275.91762	N/A
29	4/28/2023	86.4	8086	4502	4515	411340	7027.84571	N/A
30	4/28/2023	88.9	8331	5353	4248	419910	7452.5981	N/A
31	4/28/2023	85.8	7835	5275	3991	411240	7588.64548	N/A
32	4/29/2023	86.2	7676	4715	3446	406860	7665.06976	N/A
33	4/29/2023	88.0	7928	5497	3833	416030	6862.16667	N/A
34	4/29/2023	88.4	7989	5318	3365	415820	6973.55429	N/A
35	4/29/2023	84.6	7861	4568	3632	410020	7196.23333	N/A
36	4/30/2023	85.0	7649	5470	3777	411790	7069.53405	N/A
37	4/30/2023	87.7	7777	4171	3577	414960	6758.56643	N/A
38	4/30/2023	89.5	7970	4660	3869	397540	6969.4969	N/A
39	4/30/2023	84.5	7579	4890	3770	410570	6986.46762	N/A
40	5/1/2023	83.3	7338	4857	3633	395140	6709.17595	N/A
41	5/1/2023	87.7	7781	4694	3859	409350	6860.04857	N/A
42	5/1/2023	88.1	7727	4652	3686	397150	6685.09643	N/A
43	5/2/2023	35.5	5315	5008	4463	396960	9626.51595	N/A
44	5/2/2023	84.9	7316	5036	3680	412860	6855.73786	N/A
45	5/2/2023	86.4	7550	4425	3745	394430	6827.31786	N/A
46	5/2/2023	87.2	7445	5309	3848	406450	6755.88929	N/A
47	5/3/2023	86.8	7591	5601	3751	401030	6792.97405	N/A
48	5/3/2023	88.5	7373	4667	3491	407040	6896.77071	N/A
49	5/3/2023	88.1	7376	4462	3501	402000	6686.99071	N/A
50	5/3/2023	87.6	7352	3758	3581	401960	6795.53786	N/A
51	5/4/2023	87.0	7162	4283	4126	406360	6858.61786	N/A
52	5/4/2023	88.6	7188	4564	3456	412890	7084.81738	N/A
53	5/4/2023	90.2	7176	4501	3366	412470	6825.94571	N/A
54	5/4/2023	89.0	7158	3452	3865	416370	6989.09905	N/A
55	5/5/2023	88.5	7147	4325	3653	409440	6717.60048	N/A
56	5/5/2023	88.0	6890	4637	3384	402318	6809.35048	N/A
57	5/5/2023	90.2	7021	6107	3177	409100	6891.94786	N/A
58	5/5/2023	90.1	7023	4067	3339	417380	6941.75452	N/A
59	5/5/2023	88.9	6922	4045	3491	396680	6625.56452	N/A
60	5/6/2023	89.0	6905	3782	3601	416660	6839.16857	N/A
61	5/6/2023	89.4	6886	3975	3486	414920	6872.33476	N/A
62	5/6/2023	90.2	6930	3810	3441	414880	6897.49619	N/A
63	5/6/2023	89.6	6837	4307	3387	400680	6636.44143	N/A
64	5/6/2023	88.7	6839	3975	3530	402940	6614.2381	N/A
65	5/6/2023	88.3	6729	4667	3670	410210	6668.19214	N/A
66	5/7/2023	87.6	6477	5237	3454	398960	6642.78	N/A
67	5/7/2023	88.2	6664	5315	3679	399360	6597.80833	N/A
68	5/7/2023	89.6	6480	4780	3518	417450	6812.86881	N/A
69	5/7/2023	90.0	6423	3810	3729	400090	6697.49214	N/A
70	5/7/2023	89.2	6354	4373	3346	399000	6549.57738	N/A
	AVERAGE	86	7,928	4,879	3,821	28,313,986	487,905	TOTAL

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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
Silty Sandstone	120	220	120	220
Sandy Siltstone	220	420	220	420
Sandstone, tr Siltstone	420	720	420	720
Sandy Siltstone	570	770	570	770
Sandstone	720	770	720	770
Sandstone, com LS	770	820	770	820
Silty Sandstone	820	870	820	870
Sandy Siltstone	870	1,070	870	1,070
Sandstone, rr Siltstone	1,070	1,370	1,070	1,370
Silty Sandstone, tr imb pyr	1,370	1,420	1,370	1,420
Silty Sandstone, com coal	1,420	1,570	1,420	1,570
Sandstone	1,570	1,620	1,570	1,620
Silty Sandstone	1,620	1,670	1,620	1,670
Sandstone, tr Coal	1,670	1,720	1,670	1,720
Silty Sandstone	1,720	1,761	1,720	1,836
Big Lime	1,791	2,510	1,836	2,717
Fifty Foot Sandstone	2,510	2,600	2,687	2,821
Gordon	2,600	2,796	2,791	3,051
Fifth Sandstone	2,796	3,179	3,021	3,501
Bayard	3,179	3,763	3,471	4,199
Speechley	3,763	4,061	4,169	4,555
Balltown	4,061	4,385	4,525	4,940
Bradford	4,385	4,681	4,910	5,287
Benson	4,681	4,991	5,257	5,654
Alexander	4,991	5,942	5,624	7,100
Sycamore	5,824	5,912	6,918	7,070
Middlesex	5,912	5,986	7,070	7,229
Burkett	5,986	6,008	7,229	7,283
Tully	N/A	N/A	N/A	N/A
Marcellus	6,008	N/A	7,283	N/A

*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:	4/20/2023
Job End Date:	5/7/2023
State:	West Virginia
County:	Tyler
API Number:	47-095-02815-00-00
Operator Name:	Antero Resources Corporation
Well Name and Number:	Wrigley Trunk 1H
Latitude:	39.42126900
Longitude:	-81.00722300
Datum:	WGS84
Federal Well:	NO
Indian Well:	NO
True Vertical Depth:	6,181
Total Base Water Volume (gal):	21,560,897
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	86.78938	Density = 8.80
Ingredients	Listed Above	Listed Above					
			Water	7732-18-5	100.00000	0.21990	

ml

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Excelerate LX-15	Halliburton	Friction Reducer					
				Listed Below			
OPTIFLO-II DELAYED RELEASE BREAKER	Halliburton	Breaker					
				Listed Below			
HYDROCHLORIC ACID, 22 BAUME	Halliburton	Solvent					
				Listed Below			
MC B-8614A	MultiChem	Biocide					
				Listed Below			
FDP-S1464-22	Halliburton	Friction Reducer					
				Listed Below			
HAI-501	Halliburton	Acid Corrosion Inhibitor					
				Listed Below			
WG-36 GELLING AGENT	Halliburton	Gelling Agent					
				Listed Below			
Sand-Common White-100 Mesh, SSA-2	Halliburton	Proppant					
				Listed Below			

Items above are Trade Names with the exception of Base Water . Items below are the individual ingredients.

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			Crystalline silica, quartz	14808-60-7	100.00000	12.95148	
			Hydrochloric acid	7647-01-0	30.00000	0.05354	
			Complex amine compound	Proprietary	60.00000	0.02118	
			Guar gum	9000-30-0	100.00000	0.01629	
			Complex Amine Compound	Proprietary	60.00000	0.01226	
			Hydrotreated distillate	Proprietary	30.00000	0.01059	
			Hydrotreated light petroleum distillate	64742-47-8	30.00000	0.00613	
			Glutaraldehyde	111-30-8	30.00000	0.00240	
			Ethoxylated alcohol	Proprietary	5.00000	0.00177	
			Ammonium chloride	12125-02-9	5.00000	0.00177	
			Fatty nitrogen derived amides	Proprietary	5.00000	0.00177	
			Sorbitan, mono-9-octadecenoate, (Z)	1338-43-8	5.00000	0.00137	
			Surfactant	Proprietary	5.00000	0.00102	
			Alkyl (C12-16) dimethylbenzyl ammonium chloride	68424-85-1	5.00000	0.00040	
			Ammonium persulfate	7727-54-0	100.00000	0.00036	
			Sorbitan monooleate polyoxyethylene derivative	9005-65-6	1.00000	0.00035	
			Methanol	67-56-1	100.00000	0.00033	
			Ethoxylated alcohols	Proprietary	5.00000	0.00022	
			Organic chloride compound	Proprietary	1.00000	0.00020	
			Alkoxylated polyhydric alcohol	Proprietary	1.00000	0.00020	
			Oxylated phenolic resin	Proprietary	30.00000	0.00011	
			Modified thiourea polymer	Proprietary	30.00000	0.00010	
			Mixture of dimer and trimer fatty acids of indefinite composition derived from tall oil	61790-12-3	30.00000	0.00010	

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			Ethanol	64-17-5	1.00000	0.00008	
			Hexadecene	629-73-2	5.00000	0.00002	
			Propargyl alcohol	107-19-7	5.00000	0.00002	
			C.I. pigment Orange 5	3468-63-1	1.00000	0.00000	
			Organic salt #1	Proprietary	0.01000	0.00000	
			Sodium glycolate	2836-32-0	0.01000	0.00000	
			Nitrated acetate salt	Proprietary	0.01000	0.00000	
			Sodium hydroxide	1310-73-2	0.01000	0.00000	
			Acrylamide	79-06-1	0.01000	0.00000	
			Formaldehyde	50-00-0	0.01000	0.00000	
			Organic salt #2	Proprietary	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)

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