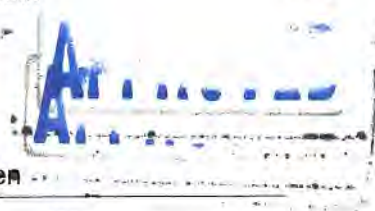


State of West Virginia
Department of Environmental Protection - Office of Oil and Gas
Well Operator's Report of Well Work



API 47 - 103 - 03495 County Wetzel District Green
Quad Pine Grove Pad Name Furbee Field/Pool Name ----
Farm name James A. Sell Well Number Lenny Unit 2H
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 4378647.447m Easting 523089.135m
Landing Point of Curve Northing 4378333.93m Easting 523197.70m
Bottom Hole Northing 4374257.380m Easting 524611.900m

Elevation (ft) 1211' 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 4/28/2022 Date drilling commenced 8/15/2022 Date drilling ceased 10/10/2022
Date completion activities began 12/8/2022 Date completion activities ceased 2/23/2023
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 575' Open mine(s) (Y/N) depths No
Salt water depth(s) ft 2284' Void(s) encountered (Y/N) depths No
Coal depth(s) ft 973' Cavern(s) encountered (Y/N) depths No
Is coal being mined in area (Y/N) No



Reviewed by: [Signature]
12/08/2023

API 47- 103 - 03495 Farm name James A. Sell Well number Lenny Unit 2H

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	78.67#, X-60	N/A	Y
Surface	17-1/2"	13-3/8"	673'	New	54.5#, K-55	N/A	Y
Coal							
Intermediate 1	12-1/4"	9-5/8"	3494'	New	36#, J-55	N/A	Y
Intermediate 2							
Intermediate 3							
Production	8-3/4"/8-1/2"	5-1/2"	22433'	New	23#, P-110	N/A	Y
Tubing		2-3/8"	7069'		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	209 sx	15.6	1.18	247	0'	8 Hrs.
Surface	Class A	780 sx	15.8	1.17	913	0'	8 Hrs.
Coal							
Intermediate 1	Class C	1235 sx	15.8	1.16	1433	0'	8 Hrs.
Intermediate 2							
Intermediate 3							
Production	Class H	3625 sx (Tail)	13.5 (Lead), 15.2(Tail)	1.25 (Tail)	4531	-500' into Intermediate Casing	8 Hrs.
Tubing							

Drillers TD (ft) 22433' MD, 7117' TVD (BHL), 7117' (Deepest Point Drilled) Loggers TD (ft) 22433' MD

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

Plug back procedure N/A

Kick off depth (ft) 8131'

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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

Department of
Environmental Protection

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

12/08/2023 

API 47- 103 - 03495 Farm name James A. Sell Well number Lenny Unit 2H

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						RECEIVED Office of Oil and Gas MAY 10 2023 WV Department of Environmental Protection		

Please insert additional pages as applicable.

12/08/2023 *JS*

API 47- 103 - 03495 Farm name James A. Sell Well number Lenny Unit 2H

<u>PRODUCING FORMATION(S)</u>	<u>DEPTHS</u>		
<u>Marcellus</u>	<u>6985' (TOP)</u>	<u>TVD</u>	<u>7277' (TOP) MD</u>
_____	_____	_____	_____
_____	_____	_____	_____

Please insert additional pages as applicable.

GAS TEST Build up Drawdown Open Flow OIL TEST Flow Pump

SHUT-IN PRESSURE Surface 856.45 psi Bottom Hole --- psi DURATION OF TEST --- hrs

OPEN FLOW Gas 17005 mcfpd Oil 468 bpd NGL --- bpd Water 828 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**

					RECEIVED
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					MAY 10 2023
					WV Department of Environmental Protection

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 5/3/2023

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

12/08/2023 

Antero Resources
Well No. Lenny 2H
As-Drilled
 Antero Resources Corporation



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



Legend

- Proposed gas well
- Monument, as noted
- Existing Well, as noted
- Digitized Well, as noted
- Creek or Drain
- Road
- Railroad Right-of-Way
- Surface boundary (approx.)
- Interior surface tracts (approx.)

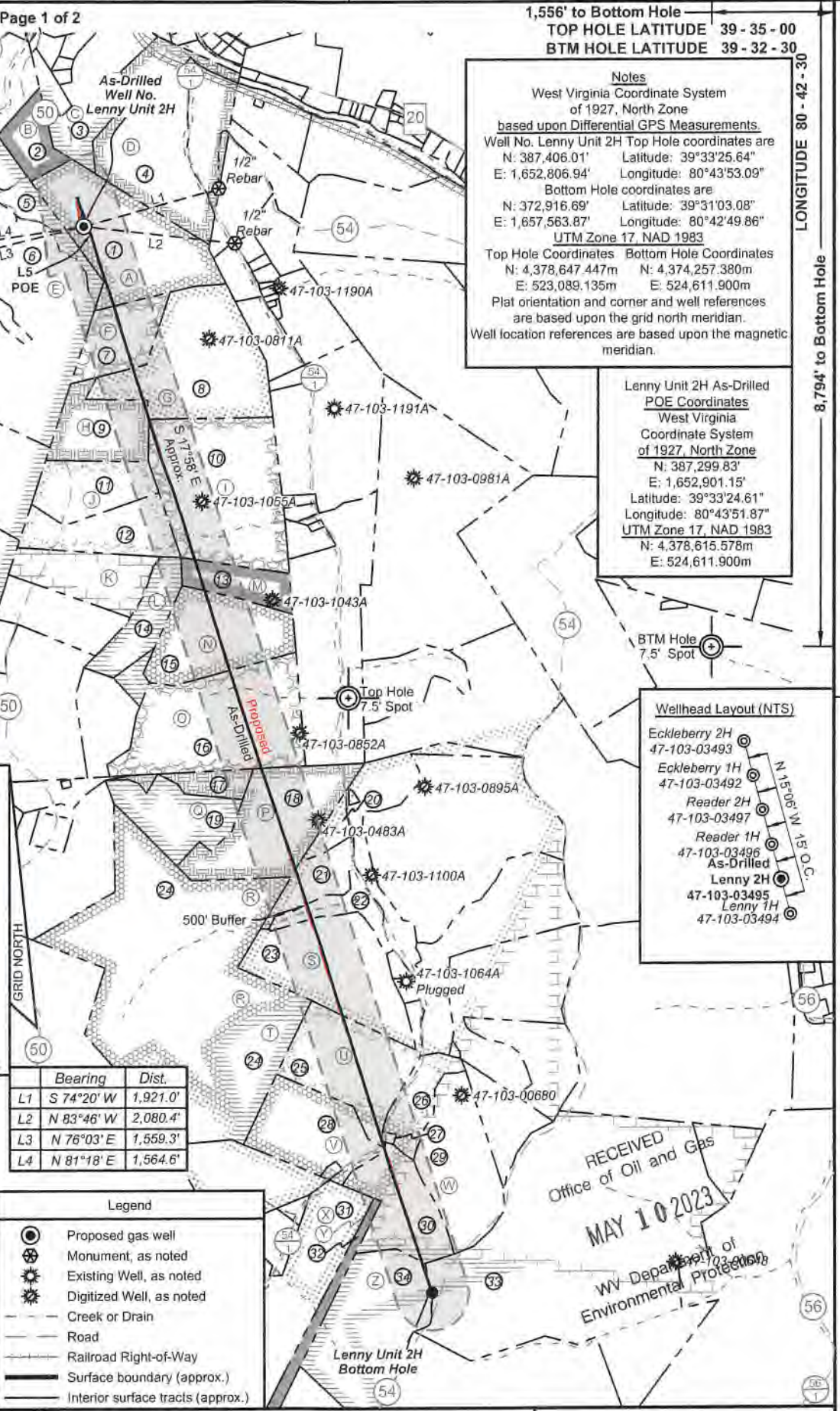
Table:

	Bearing	Dist.
L1	S 74°20' W	1,921.0'
L2	N 83°46' W	2,080.4'
L3	N 76°03' E	1,559.3'
L4	N 81°18' E	1,564.6'

Wellhead Layout (NTS)

- Eckleberry 2H 47-103-03493
- Eckleberry 1H 47-103-03492
- Reader 2H 47-103-03497
- Reader 1H 47-103-03496
- As-Drilled Lenny 2H 47-103-03495
- Lenny 1H 47-103-03494

Notes: Note: 6 water wells and 3 springs 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.



6,508' to Top Hole
 1,556' to Bottom Hole
TOP HOLE LATITUDE 39 - 35 - 00
BTM HOLE LATITUDE 39 - 32 - 30

Notes
 West Virginia Coordinate System of 1927, North Zone based upon Differential GPS Measurements.
 Well No. Lenny Unit 2H Top Hole coordinates are
 N: 387,406.01' Latitude: 39°33'25.64"
 E: 1,652,806.94' Longitude: 80°43'53.09"
 Bottom Hole coordinates are
 N: 372,916.69' Latitude: 39°31'03.08"
 E: 1,657,563.87' Longitude: 80°42'49.86"
 UTM Zone 17, NAD 1983
 Top Hole Coordinates Bottom Hole Coordinates
 N: 4,378,647.447m N: 4,374,257.380m
 E: 523,089.135m E: 524,611.900m
 Plat orientation and corner and well references are based upon the grid north meridian.
 Well location references are based upon the magnetic meridian.

Lenny Unit 2H As-Drilled POE Coordinates
 West Virginia Coordinate System of 1927, North Zone
 N: 387,299.83'
 E: 1,652,901.15'
 Latitude: 39°33'24.61"
 Longitude: 80°43'51.87"
 UTM Zone 17, NAD 1983
 N: 4,378,615.578m
 E: 524,611.900m

Wellhead Layout (NTS)

- Eckleberry 2H 47-103-03493
- Eckleberry 1H 47-103-03492
- Reader 2H 47-103-03497
- Reader 1H 47-103-03496
- As-Drilled Lenny 2H 47-103-03495
- Lenny 1H 47-103-03494



FILE NO: 125-34-G-18
 DRAWING NO: Lenny Unit 2H 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: May 5 2023
 OPERATOR'S WELL NO. Lenny Unit 2H
 API WELL NO
 47 - 103 - 03495
 STATE COUNTY PERMIT

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

LOCATION: ELEVATION: As-Drilled 1,211' WATERSHED: Fishing Creek QUADRANGLE: Pine Grove
 DISTRICT: Green James COUNTY: Wayne
 SURFACE OWNER: A. Sell ACREAGE: 58.1
 ROYALTY OWNER: James Allen Sell; Shilben Estates, Inc. (4); Stone Hill Mineral Holdings, LLC; AMP Fund II, LP; LEASE NO: _____ ACREAGE: 300; 50

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: 22,433' MD

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

AM



ID	TM-Par	Owner	Bk/Pg	Acres
1	17-12	James Allen Sell	370/148	58.10
2	13-69.1	Donald L. Mason	410/759	14.00
3	13-70	Doris Ruth Haught, et al	W49/615	33.78
4	13-71	Charles R. & Kay L. Blair	387/577	63.11
5	17-1	James Allen Sell	370/148	15.35
6	17-60	Ross Bucher	411/765	79.00
7	17-54	James Allen Sell	370/148	25.50
8	17-17	James Allen Sell	370/148	70.00
9	17-16	James & Andrea Sell	417/40	25.75
10	17-26	Heartland Forest Land Fund VII, LP	431/936	75.50
11	17-24	Nola Parks	417/35	26.50
12	17-25	Nola Parks & Jonathan Sivert	417/35	25.00
13	17-48	Heartland Forest Land Fund VII, LP	431/936	20.00
14	17-34	Debra Lynn Brown	332/480	20.00
15	17-47	George David Sell	351/473	40.00
16	17-35	Alfred Raymond Furbee, Sr. & Olive Gay Brown	333/638	60.00
17	17-30	Alfred Raymond Furbee, Sr. & Olive Gay Brown	333/638	11.70
18	20-5	Debbie Brown, et al	A96/679	45.00
19	20-4	Nola J. Parks & Gloria C. Higgins	A100/689	25.50
20	20-6	Debbie Brown, et al	A96/679	6.00
21	20-14.3	Albert E. & Betty Jean Clutter	379/182	14.35
22	20-14.10	Bobbi Jean Bassett	432/506	11.54
23	20-14.9	Randy D. & Dori R. Ice	404/39	53.33
24	20-13	Dallison Lumber Inc.	440/243	208.00
25	20-14.5	Marsha C. Hamrick, et al	363/279	44.46
26	20-19	Coastal Forest Resources Co.	444/105	16.44
27	20-19.1	Teresa Bassett	439/684	0.54
28	20-17	Christopher N. Kise	420/812	34.30
29	20-19.2	Coastal Forest Resources Co.	444/105	35.56
30	20-28	Coastal Forest Resources Co.	444/105	36.00
31	20-33	David Edward Arthurs, et al	347/49	26.50
32	20-34	Columbia Gas Transmission Corporation	263/164	12.00
33	20-37	Coastal Forest Resources Co.	444/105	246.84
34	20-35	Louisa Bassett & Irvin Bassett	168/157	62.00

Leases	
A	James Allen Sell
B	George Neason Myers, et ux
C	Antero Minerals, LLC
D	Marilyn Halley Seeley
E	William R. Stalnaker
F	Shiben Estates, Inc.
G	Shiben Estates, Inc.
H	Stone Hill Mineral Holdings, LLC
I	BRC Appalachian Minerals I, LLC
J	Ridgetop Capital IV, LP
K	Debra L. Brown
L	Lydia Sims
M	AMP Fund II, LP
N	George David Sells
O	Shiben Estates, Inc.
P	BRC Appalachian Minerals I, LLC
Q	Barbara Barker, et vir
R	Waco Oil & Gas Company Inc.
S	Tribune Resources Minerals, LLC
T	Joan B. Hoge Trust
U	Joshua R. Edgell, et al
V	Morris Mountaineer Oil & Gas LLC
W	Josephine Brast, et al
X	BRC Appalachian Minerals I, LLC
Y	Antero Minerals, LLC
Z	Shiben Estates, Inc.

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 MAY 10 2023
 WV Department of
 Environmental Protection

FILE NO: 125-34-G-18
 DRAWING NO: Lenny Unit 2H 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: May 5 20 23
 OPERATOR'S WELL NO. Lenny Unit 2H
 API WELL NO
 47 - 103 - 03495
 STATE COUNTY PERMIT

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

LOCATION: ELEVATION: As-Drilled 1,211' WATERSHED: Fishing Creek QUADRANGLE: Pine Grove
 DISTRICT: Green James COUNTY: Wayne
 SURFACE OWNER: A. Sell Joshua R. Edgell, et al; BRC Appalachian Minerals I, LLC (2); Morris Mountaineer Oil & Gas, LLC;
 ROYALTY OWNER: James Allen Sell; Shiben Estates, Inc. (4); Stone Hill Mineral Holdings, LLC; AMP Fund II, LP; LEASE NO: ACREAGE: 58.1 140.3333; 257; 72;
 PROPOSED WORK: DRILL CONVERT DRILL DEEPER FRACTURE OR STIMULATE PLUG OFF OLD FORMATION
 PERFORATE NEW FORMATION OTHER PHYSICAL CHANGE IN WELL (SPECIFY) As-Drilled 89; 75.5; 40; 50;
 PLUG AND ABANDON CLEAN OUT AND REPLUG TARGET FORMATION: Marcellus Shale ESTIMATED DEPTH: 22,433' MD 7,117' TVD

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

API 47-103-03495 Farm Name James A. Sell Well Number Lenny Unit 2H

Exhibit 1

Stage No.	Perforation Date	Perforated from MD ft.	Perforated to MD ft.	Number of Perforations	Formations
1	12/8/2022	22305.2	22262.8	60	Marcellus
2	12/9/2022	22223.97252	22057.8351	60	Marcellus
3	12/9/2022	22022.20766	21856.0703	60	Marcellus
4	12/10/2022	21820.44279	21654.3054	60	Marcellus
5	12/11/2022	21618.67793	21452.5405	60	Marcellus
6	12/11/2022	21416.91306	21250.7757	60	Marcellus
7	12/12/2022	21215.1482	21049.0108	60	Marcellus
8	12/12/2022	21013.38333	20847.2459	60	Marcellus
9	12/13/2022	20811.61847	20645.4811	60	Marcellus
10	12/13/2022	20609.8536	20443.7162	60	Marcellus
11	12/14/2022	20408.08874	20241.9514	60	Marcellus
12	12/14/2022	20206.32387	20040.1865	60	Marcellus
13	12/15/2022	20004.55901	19838.4216	60	Marcellus
14	12/15/2022	19802.79414	19636.6568	60	Marcellus
15	12/16/2022	19601.02928	19434.8919	60	Marcellus
16	12/16/2022	19399.26441	19233.127	60	Marcellus
17	12/17/2022	19197.49955	19031.3622	60	Marcellus
18	12/17/2022	18995.73468	18829.5973	60	Marcellus
19	12/17/2022	18793.96982	18627.8324	60	Marcellus
20	12/18/2022	18592.20495	18426.0676	60	Marcellus
21	12/18/2022	18390.44009	18224.3027	60	Marcellus
22	12/20/2022	18188.67523	18022.5378	60	Marcellus
23	12/20/2022	17986.91036	17820.773	60	Marcellus
24	12/21/2022	17785.1455	17619.0081	60	Marcellus
25	12/21/2022	17583.38063	17417.2432	60	Marcellus
26	12/22/2022	17381.61577	17215.4784	60	Marcellus
27	12/22/2022	17179.8509	17013.7135	60	Marcellus
28	12/22/2022	16978.08604	16811.9486	60	Marcellus
29	12/25/2022	16776.32117	16610.1838	60	Marcellus
30	12/27/2022	16574.55631	16408.4189	60	Marcellus
31	12/27/2022	16372.79144	16206.6541	60	Marcellus
32	12/27/2022	16171.02658	16004.8892	60	Marcellus
33	12/28/2022	15969.26171	15803.1243	60	Marcellus
34	12/28/2022	15767.49685	15601.3595	60	Marcellus
35	12/28/2022	15565.73198	15399.5946	60	Marcellus
36	12/29/2022	15363.96712	15197.8297	60	Marcellus
37	12/29/2022	15162.20225	14996.0649	60	Marcellus
38	12/29/2022	14960.43739	14794.3	60	Marcellus
39	12/29/2022	14758.67252	14592.5351	60	Marcellus
40	12/29/2022	14556.90766	14390.7703	60	Marcellus
41	12/30/2022	14355.14279	14189.0054	60	Marcellus
42	12/30/2022	14153.37793	13987.2405	60	Marcellus
43	12/31/2022	13951.61306	13785.4757	60	Marcellus
44	12/31/2022	13749.8482	13583.7108	60	Marcellus
45	12/31/2022	13548.08333	13381.9459	60	Marcellus
46	12/31/2022	13346.31847	13180.1811	60	Marcellus
47	1/1/2023	13144.5536	12978.4162	60	Marcellus
48	1/1/2023	12942.78874	12776.6514	60	Marcellus
49	1/1/2023	12741.02387	12574.8865	60	Marcellus
50	1/1/2023	12539.25901	12373.1216	60	Marcellus
51	1/2/2023	12337.49414	12171.3568	60	Marcellus
52	1/2/2023	12135.72928	11969.5919	60	Marcellus
53	1/2/2023	11933.96441	11767.827	60	Marcellus
54	1/2/2023	11732.19955	11566.0622	60	Marcellus
55	1/3/2023	11530.43468	11364.2973	60	Marcellus
56	1/3/2023	11328.66982	11162.5324	60	Marcellus
57	1/3/2023	11126.90495	10960.7676	60	Marcellus
58	1/4/2023	10925.14009	10759.0027	60	Marcellus
59	1/4/2023	10723.37523	10557.2378	60	Marcellus
60	1/4/2023	10521.61036	10355.473	60	Marcellus
61	1/4/2023	10319.8455	10153.7081	60	Marcellus
62	1/4/2023	10118.08063	9951.94324	60	Marcellus
63	1/4/2023	9916.315766	9750.17838	60	Marcellus
64	1/5/2023	9714.550901	9548.41351	60	Marcellus
65	1/5/2023	9512.786036	9346.64865	60	Marcellus
66	1/5/2023	9311.021171	9144.88378	60	Marcellus
67	1/5/2023	9109.256306	8943.11892	60	Marcellus
68	1/5/2023	8907.491441	8741.35405	60	Marcellus
69	1/5/2023	8705.726577	8539.58919	60	Marcellus
70	1/5/2023	8503.961712	8337.82432	60	Marcellus
71	1/6/2023	8302.196847	8136.05946	60	Marcellus
72	1/6/2023	8100.431982	7934.29459	60	Marcellus
73	1/6/2023	7898.667117	7732.52973	60	Marcellus
74	1/6/2023	7696.902252	7530.76486	60	Marcellus
75	1/6/2023	7495.137387	7329	60	Marcellus

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Environmental Protection

12/08/2023

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	12/8/2022	79.0	9017	6480	3782	173340	211590	N/A
2	12/9/2022	85.7	9356	5961	4124	396430	404218	N/A
3	12/9/2022	87.8	10269	6450	4925	408395	374217	N/A
4	12/10/2022	92.8	10302	5759	4177	393735	365574	N/A
5	12/11/2022	92.0	10440	5461	4984	373948	328645	N/A
6	12/11/2022	92.3	9762	5850.4	4037.52	400190	396176	N/A
7	12/12/2022	86.1	9595	6211	4927	401240	364013	N/A
8	12/12/2022	89.7	9843	6502	4448	401570	296104	N/A
9	12/13/2022	84.3	9573	5997	5053	397831	368033	N/A
10	12/13/2022	93.2	10333	6675	5638	425050	390902	N/A
11	12/14/2022	90.1	9596	5552	4134	410730	370578	N/A
12	12/14/2022	94.9	9839	6346	5292	409060	306343	N/A
13	12/15/2022	90.8	9794	6492	4563	414170	333959	N/A
14	12/15/2022	95.4	10075	5259	5238	412000	303209	N/A
15	12/16/2022	89.5	9887	5409	4380	413360	297780	N/A
16	12/16/2022	96.7	9760	6035	5294	420820	388039	N/A
17	12/17/2022	96.4	9750	5642	5686	412904	296410	N/A
18	12/17/2022	89.0	9514	5820	4890	406050	350226	N/A
19	12/17/2022	97.0	9859	5383	5163	412070	287043	N/A
20	12/18/2022	90.1	9428	5876	4627	404388	283876	N/A
21	12/18/2022	93.0	9409	5461	5079	410310	350699	N/A
22	12/20/2022	74.1	8907	5529	5114	439520	607543	N/A
23	12/20/2022	90.5	9769	6050	4254	410160	281856	N/A
24	12/21/2022	96.8	9716	6185	4181	416960	295075	N/A
25	12/21/2022	93.6	9577	5563	4344	416700	285758	N/A
26	12/22/2022	95.0	9072	9398	4533	411770	273213	N/A
27	12/22/2022	86.7	9077	6051	5101	411490	287011	N/A
28	12/22/2022	97.3	9049	8608	4336	395560	278964	N/A
29	12/25/2022	82.9	9323	5802	4392	405570	377784	N/A
30	12/27/2022	77.8	9012	6714	4399	398800	556275	N/A
31	12/27/2022	91.2	9061	5474	4260	400870	288739	N/A
32	12/27/2022	87.5	8715	8193	4291	415750	324754	N/A
33	12/28/2022	86.0	8715	5514	4766	394750	295637	N/A
34	12/28/2022	95.1	9556	6215	3984	402970	292804	N/A
35	12/28/2022	91.3	9086	5365	4260	403410	293328	N/A
36	12/29/2022	91.7	8924	5249	4396	394600	300932	N/A
37	12/29/2022	73.5	9848	5779	4455	401350	374045	N/A
38	12/29/2022	92.9	9019	5079	4786	403000	291791	N/A
39	12/29/2022	93.8	9017	5433	5234	398320	287439	N/A
40	12/29/2022	93.4	8594	4954	5058	392050	326939	N/A
41	12/30/2022	91.7	8989	5005	4896	396620	290932	N/A
42	12/30/2022	93.6	8731	4525	4246	403220	296185	N/A
43	12/31/2022	90.0	8522	5735	4432	410768	284257	N/A
44	12/31/2022	93.3	8484	4420	4335	407680	301965	N/A
45	12/31/2022	94.1	8769	5564	4101	408000	299736	N/A
46	12/31/2022	93.7	8797	5982	4200	410420	284587	N/A
47	1/1/2023	94.6	8770	5426	4364	413770	321575	N/A
48	1/1/2023	95.1	8727	5140	4539	402800	294401	N/A
49	1/1/2023	95.1	8920	5811	4713	413590	291014	N/A
50	1/1/2023	95.9	8717	6225	5045	411960	290165	N/A
51	1/2/2023	93.7	8808	5185	4917	397560	288374	N/A
52	1/2/2023	94.6	8728	7267	4089	408040	282746	N/A
53	1/2/2023	93.9	8502	4620	3965	399150	296025	N/A
54	1/2/2023	95.0	8880	5692	4446	399040	287620	N/A
55	1/3/2023	96.4	8503	5866	5040	395880	282850	N/A
56	1/3/2023	93.0	8308	5316	4301	393600	282054	N/A
57	1/3/2023	93.7	8546	5530	4387	410280	283167	N/A
58	1/4/2023	95.4	8871	4500	4170	412050	288464	N/A
59	1/4/2023	94.6	8487	5848	4023	403150	271457	N/A
60	1/4/2023	94.5	8233	5497	4470	414370	286157	N/A
61	1/4/2023	92.7	8363	5523	4409	398870	283207	N/A
62	1/4/2023	94.4	7986	5268	3911	406860	278994	N/A
63	1/4/2023	94.6	8238	5698	4181	405570	282449	N/A
64	1/5/2023	94.2	8292	5937	4094	408340	284583	N/A
65	1/5/2023	95.1	8535	5193	4083	411130	277887	N/A
66	1/5/2023	94.2	8081	6102	4123	397350	279858	N/A
67	1/5/2023	95.4	7764	5566	4314	403220	283402	N/A
68	1/5/2023	93.4	7936	5448	4087	397550	274994	N/A
69	1/5/2023	95.0	7898	5116	4227	400680	284707	N/A
70	1/5/2023	94.3	7928	3636	4534	405210	284499	N/A
71	1/6/2023	95.4	7722	5247	4587	402980	283313	N/A
72	1/6/2023	92.3	7511	5518	4399	408640	287547	N/A
73	1/6/2023	95.0	7472	5984	4019	398110	279670	N/A
74	1/6/2023	95.9	7632	5557	3968	412640	294666	N/A
75	1/6/2023	93.3	7474	5140	4240	400521	270957	N/A
	AVERAGE	92	8,954	5,758	4,513	30,180,810	23,421,985	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
Sandy Siltstone, LS	100	320	100	320
Shaley Siltstone, tr LS	320	370	320	370
Sandy Shale	370	620	370	620
Siltstone, Occ SS, tr Shale, tr Coal	470	820	470	820
Sandy Siltstone, tr LS, tr Shale	620	820	620	820
Silty Sandstone, tr LS	820	920	820	920
Sandy Siltstone, tr LS, tr Shale	920	1,020	920	1,020
Silty Sandstone, tr Shale	1,020	1,120	1,020	1,120
Silty Sandstone, tr Shale, tr LS	1,120	1,220	1,120	1,220
Shaley Sandstone, occ Siltstone	1,220	1,420	1,220	1,420
Silty Sandstone, tr shale	1,420	1,520	1,420	1,520
Sandy Siltstone, tr Coal	1,520	1,670	1,520	1,670
Silty Sandstone, tr Coal, tr Shale	1,670	1,870	1,670	1,870
Sandy Shale, tr Coal	1,870	2,020	1,870	2,020
Silty Sandstone, rr Coal	2,020	2,106	2,020	2,108
Big Lime	2,136	2,981	2,108	2,983
Fifty Foot Sandstone	2,981	3,022	2,953	3,025
Gordon	3,022	3,242	2,995	3,245
Fifth Sandstone	3,242	3,569	3,215	3,572
Bayard	3,569	3,975	3,542	3,981
Speechley	3,975	4,125	3,951	4,133
Balltown	4,125	4,616	4,103	4,634
Bradford	4,616	5,189	4,604	5,217
Benson	5,189	5,623	5,187	5,655
Alexander	5,623	6,802	5,625	6,887
Sycamore	6,647	6,772	6,701	6,857
Middlesex	6,772	6,873	6,857	7,012
Burkett	6,873	6,902	7,012	7,066
Tully	6,902	6,985	7,066	7,277
Marcellus	6,985	NA	7,277	NA

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

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Hydraulic Fracturing Fluid Product Component Information Disclosure

Job Start Date:	12/8/2022
Job End Date:	1/6/2023
State:	West Virginia
County:	Wetzel
API Number:	47-103-03495-00-00
Operator Name:	Antero Resources Corporation
Well Name and Number:	Lenny Unit 2H
Latitude:	39.55712000
Longitude:	-80.73141000
Datum:	WGS84
Federal Well:	NO
Indian Well:	NO
True Vertical Depth:	7,116
Total Base Water Volume (gal):	24,469,802
Total Base Non Water Volume:	0

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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	87.13981	Density = 8.50
Ingredients	Listed Above	Listed Above					
			Water	7732-18-5	100.00000	0.14684	

Handwritten mark

Sand-Common White-100 Mesh, SSA-2	Halliburton	Proppant					
				Listed Below			
HAI-501	Halliburton	Acid Corrosion Inhibitor					
				Listed Below			
SAND, COMMON BROWN 100 MESH	Halliburton	Proppant					
				Listed Below			
HYDROCHLORIC ACID, 22 BAUME	Halliburton	Solvent					
				Listed Below			
MC B-8614A	MultiChem	Biocide					
				Listed Below			
OPTIFLO-II DELAYED RELEASE BREAKER	Halliburton	Breaker					
				Listed Below			
Chemstream StimSTREAM FR 9800	Chemstream, Inc.	Friction Reducer					
				Listed Below			
WG-36 GELLING AGENT	Halliburton	Gelling Agent					

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				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	12.64441	
			Hydrochloric acid	7647-01-0	30.00000	0.04157	
			Butene, homopolymer	9003-29-6	25.00000	0.01568	
			Alkanes, C16-20-iso-	Proprietary	25.00000	0.01568	
			Guar gum	9000-30-0	100.00000	0.00579	
			Glutaraldehyde	111-30-8	30.00000	0.00249	
			Ethoxylated alcohols (C12-16)	68213-23-0	3.00000	0.00188	
			Alkyl (C12-16) dimethylbenzyl ammonium chloride	68424-85-1	5.00000	0.00041	
			Methanol	67-56-1	100.00000	0.00026	
			Ammonium persulfate	7727-54-0	100.00000	0.00017	
			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	0.00008	
			Modified thiourea polymer	Proprietary	30.00000	0.00008	
			Oxylated phenolic resin	Proprietary	30.00000	0.00005	
			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%

*** 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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