

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

API 47 - 095 - 02703 County Tyler District Ellsworth  
Quad Porter Falls 7.5' Pad Name Margery Pad Field/Pool Name -----  
Farm name Kayla Leek Well Number Lemon 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 4374201m Easting 514658m  
Landing Point of Curve Northing 4374487.55m Easting 515310.64m  
Bottom Hole Northing 4377808m Easting 514198m

Elevation (ft) 1042' 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

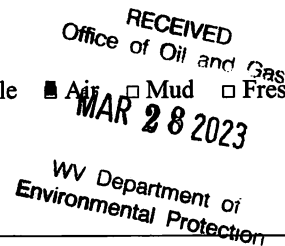
Mud - Polymer

Date permit issued 9/23/2020 Date drilling commenced 11/8/2020 Date drilling ceased 12/22/2020  
Date completion activities began 2/3/2021 Date completion activities ceased 3/19/2021  
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 102' Open mine(s) (Y/N) depths No  
Salt water depth(s) ft 1998' Void(s) encountered (Y/N) depths No  
Coal depth(s) ft None identified Cavern(s) encountered (Y/N) depths No  
Is coal being mined in area (Y/N) No

Reviewed by: \_\_\_\_\_



API 47- 095 - 02703 Farm name Kayla Leek Well number Lemon 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	24"	20"	106'	New	94#, H-40	N/A	Y
Surface	17-1/2"	13-3/8"	372'	New	54.5#, J-55	N/A	Y
Coal							
Intermediate 1	12-1/4"	9-5/8"	2696'	New	40#, J-55	N/A	Y
Intermediate 2							
Intermediate 3							
Production	8-3/4"/8-1/2"	5-1/2"	19057'	New	20#, P-110	N/A	Y
Tubing		2-3/8"	7325'		4.7#, P-110		
Packer type and depth set		N/A					

Comment Details \_\_\_\_\_

CEMENT DATA	Class/Type of Cement	Number of Sacks	Slurry wt (ppg)	Yield (ft <sup>3</sup> /sks)	Volume (ft <sup>3</sup> )	Cement Top (MD)	WOC (hrs)
Conductor	Class A	285 sx	15.6	1.18	60	0'	8 Hrs.
Surface	Class A	431 sx	15.6	1.20	92	0'	8 Hrs.
Coal							
Intermediate 1	Class A	994 sx	15.6	1.19	199	0'	8 Hrs.
Intermediate 2							
Intermediate 3							
Production	Class H	792 sx (Lead) 2891 sx (Tail)	13.5 (Lead), 15.2(Tail)	1.4 (Lead), 1.26 (Tail)	649	-500' into Intermediate Casing	8 Hrs.
Tubing							

Drillers TD (ft) 19075' MD, 6562' TVD (BHL), 6642' (Deepest Point Drilled) Loggers TD (ft) 19075' MD

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

Plug back procedure N/A

Kick off depth (ft) 6353'

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

RECEIVED  
Office of Oil and Gas  
MAR 28 2023  
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



API 47- 095 - 02703 Farm name Kayla Leek Well number Lemon Unit 1H

PRODUCING FORMATION(S)	DEPTHS		
<u>Marcellus</u>	<u>6596' (TOP)</u>	<u>TVD</u>	<u>7386" (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 2800 psi Bottom Hole --- psi DURATION OF TEST --- hrs

OPEN FLOW Gas 3772 mcfpd Oil 173 bpd NGL --- bpd Water 62 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 <sub>2</sub> S, ETC)
-------------------------	--------------------------------	------------------------------	--------------------------	-----------------------------	--

**\*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

RECEIVED  
Office of Gas  
MAR 28 2023

Logging Company Nine Energy Services  
Address 6500 West Fwy City Fort Worth State TX

WV Department of  
Environmental Protection

Cementing Company Schlumberger Oilfield Services  
Address 300 Schlumberger Dr City Sugarland State TX Zip 77478

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 3/27/2023

## Exhibit 1

Stage No.	Perforation Date	Perforated from MD ft.	Perforated to MD ft.	Number of Perforations	Formations
1	2/3/2021	18951	18904	36	Marcellus
2	2/4/2021	18865.47076	18699.8246	36	Marcellus
3	2/5/2021	18664.29532	18498.6491	36	Marcellus
4	2/6/2021	18463.11988	18297.4737	36	Marcellus
5	2/6/2021	18261.94444	18096.2982	36	Marcellus
6	2/6/2021	18060.76901	17895.1228	36	Marcellus
7	2/7/2021	17859.59357	17693.9474	36	Marcellus
8	2/7/2021	17658.41813	17492.7719	36	Marcellus
9	2/8/2021	17457.24269	17291.5965	36	Marcellus
10	2/8/2021	17256.06725	17090.4211	36	Marcellus
11	2/9/2021	17054.89181	16889.2456	36	Marcellus
12	2/10/2021	16853.71637	16688.0702	36	Marcellus
13	2/10/2021	16652.54094	16486.8947	36	Marcellus
14	2/10/2021	16451.3655	16285.7193	36	Marcellus
15	2/11/2021	16250.19006	16084.5439	36	Marcellus
16	2/11/2021	16049.01462	15883.3684	36	Marcellus
17	2/12/2021	15847.83918	15682.193	36	Marcellus
18	2/12/2021	15646.66374	15481.0175	36	Marcellus
19	2/13/2021	15445.4883	15279.8421	36	Marcellus
20	2/14/2021	15244.31287	15078.6667	36	Marcellus
21	2/14/2021	15043.13743	14877.4912	36	Marcellus
22	2/15/2021	14841.96199	14676.3158	36	Marcellus
23	2/15/2021	14640.78655	14475.1404	36	Marcellus
24	2/16/2021	14439.61111	14273.9649	36	Marcellus
25	2/17/2021	14238.43567	14072.7895	36	Marcellus
26	2/18/2021	14037.26023	13871.614	36	Marcellus
27	2/19/2021	13836.0848	13670.4386	36	Marcellus
28	2/19/2021	13634.90936	13469.2632	36	Marcellus
29	2/20/2021	13433.73392	13268.0877	36	Marcellus
30	2/20/2021	13232.55848	13066.9123	36	Marcellus
31	2/21/2021	13031.38304	12865.7368	36	Marcellus
32	2/21/2021	12830.2076	12664.5614	36	Marcellus
33	2/22/2021	12629.03216	12463.386	36	Marcellus
34	2/22/2021	12427.85673	12262.2105	36	Marcellus
35	2/23/2021	12226.68129	12061.0351	36	Marcellus
36	2/23/2021	12025.50585	11859.8596	36	Marcellus
37	2/24/2021	11824.33041	11658.6842	36	Marcellus
38	2/24/2021	11623.15497	11457.5088	36	Marcellus
39	2/25/2021	11421.97953	11256.3333	36	Marcellus
40	2/25/2021	11220.80409	11055.1579	36	Marcellus
41	2/26/2021	11019.62865	10853.9825	36	Marcellus
42	2/26/2021	10818.45322	10652.807	36	Marcellus
43	2/26/2021	10617.27778	10451.6316	36	Marcellus
44	2/26/2021	10416.10234	10250.4561	36	Marcellus
45	2/27/2021	10214.9269	10049.2807	36	Marcellus
46	2/27/2021	10013.75146	9848.10526	36	Marcellus
47	2/27/2021	9812.576023	9646.92982	36	Marcellus
48	2/27/2021	9611.400585	9445.75439	36	Marcellus
49	2/28/2021	9410.225146	9244.57895	36	Marcellus
50	2/28/2021	9209.049708	9043.40351	36	Marcellus
51	2/28/2021	9007.874269	8842.22807	36	Marcellus
52	3/1/2021	8806.69883	8641.05263	36	Marcellus
53	3/1/2021	8605.523392	8439.87719	36	Marcellus
54	3/1/2021	8404.347953	8238.70175	36	Marcellus
55	3/2/2021	8203.172515	8037.52632	36	Marcellus
56	3/2/2021	8001.997076	7836.35088	36	Marcellus
57	3/2/2021	7800.821637	7635.17544	36	Marcellus
58	3/3/2021	7599.646199	7434	36	Marcellus

RECEIVED  
Office of Oil and Gas  
MAR 28 2023  
WV Department of  
Environmental Protection

**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	2/3/2021	60.66	8369	8345	3364.63	173217	234552	N/A
2	2/4/2021	77.53	8418	6525	4186.79	407667	313442	N/A
3	2/5/2021	78.6	8236	5865	3780	408030	318931	N/A
4	2/6/2021	78.02	8391	6133	3916	410090	312382	N/A
5	2/6/2021	80.31	8301	6319	4281	410362	309541	N/A
6	2/6/2021	81.58	8311	6037	4011	408400	311525	N/A
7	2/7/2021	80.86	8211	5729	4401	409200	314528	N/A
8	2/7/2021	79.07	8329	5659	4224	401630	298137	N/A
9	2/8/2021	79.28	8288	5859	4416.28	413110	303995	N/A
10	2/8/2021	77.03	8263	5755	4134	407750	304082	N/A
11	2/9/2021	77.53	8227	5790	4206	405720	302508	N/A
12	2/10/2021	79.88	8381	5355	4294	415220	307130	N/A
13	2/10/2021	77.09	8138	5488	4039.74	405900	302056	N/A
14	2/10/2021	80.55	8331	5243	4110	406548	308236	N/A
15	2/11/2021	81.04	8281	8219	3862.06	406000	302938	N/A
16	2/11/2021	77.11	8396	5424	4124	409950	299161	N/A
17	2/12/2021	79.94	8227	5331	4106.09	391710	304179	N/A
18	2/12/2021	78.82	7831	5297	4135	409284	296145	N/A
19	2/13/2021	81.19	8161	8388	4282	413480	299821	N/A
20	2/14/2021	77.8	8009	3735	4663.06	407400	397798	N/A
21	2/14/2021	80.24	8241	5064	4468	405785	297049	N/A
22	2/15/2021	81.28	8213	5215	4232	412160	301580	N/A
23	2/15/2021	78.17	7826.43	4537.17	4312.85	405440	295199	N/A
24	2/16/2021	83.12	7854	5407	4543	414440	294163	N/A
25	2/17/2021	81.94	7849	5348	4163.99	406098	299253	N/A
26	2/18/2021	81.05	7945	5390	3925.89	408962	299777	N/A
27	2/19/2021	84.25	8169	7853	4189	407760	294550	N/A
28	2/19/2021	83.32	7807	7470	4420	406752	297145	N/A
29	2/20/2021	81.51	8062	5215	3655.33	406900	304956	N/A
30	2/20/2021	85.01	7919	7698	3949	405996	300461	N/A
31	2/21/2021	80.79	7950	5260	4274.2	406282	297478	N/A
32	2/21/2021	83.99	7852	8622	4231	406014	294566	N/A
33	2/22/2021	81.71	7587	5635	4365.91	408770	298999	N/A
34	2/22/2021	84.19	7633	5698	4513	410650	296458	N/A
35	2/23/2021	81.33	7529	6461	4194	411970	299324	N/A
36	2/23/2021	84.78	7492	6102	4095	405969	357125	N/A
37	2/24/2021	85.4	7680	6139	4247	406380	295198	N/A
38	2/24/2021	84.63	7563	6044	3957	408060	295527	N/A
39	2/25/2021	83.48	7568	6341	4117	469650	294048	N/A
40	2/25/2021	84.51	7599	6193	3886	406990	297684	N/A
41	2/26/2021	84.26	7597	5721	3939	408920	297093	N/A
42	2/26/2021	81.02	7246	5966	4393	409400	294635	N/A
43	2/26/2021	84.45	7455	5829	4107	411890	293400	N/A
44	2/26/2021	84.85	7374	5615	4240	408420	295238	N/A
45	2/27/2021	84.54	7254	5759	4124	406280	295889	N/A
46	2/27/2021	85.6	7402	5866	4074	407110	290649	N/A
47	2/27/2021	84.67	7193	5612	4153	408740	292297	N/A
48	2/27/2021	84.4	7214	5561	4129	407010	294595	N/A
49	2/28/2021	84.75	7400	6163	4128	408000	289298	N/A
50	2/28/2021	84.32	7191	6173	4123	405730	287201	N/A
51	2/28/2021	84.49	7043	5894	3921	400580	281226	N/A
52	3/1/2021	83.57	6982	6048	4230	404730	294567	N/A
53	3/1/2021	84.14	7021	5762	4041	407790	292812	N/A
54	3/1/2021	83.43	7132	6065	4196	407660	370299	N/A
55	3/2/2021	84.2	6889	3938	3786	405975	291973	N/A
56	3/2/2021	83.9	6719	5825	3592	407420	281626	N/A
57	3/2/2021	82.12	6640	5887	3904.43	405908	295846	N/A
58	3/3/2021	82.59	6882	6492	3883	405617	293779	N/A
	AVG=	82	7,760	5,972	4,125	23,468,876	17,484,050	TOTAL

RECEIVED  
Office of Oil and Gas  
MAR 28 2023  
WV Department of Environmental Protection

**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	74	134	74	134
Shaley Siltstone	134	194	134	194
Shaley Sandstone	194	344	194	344
Shaley Siltstone	344	734	344	734
Sandy Siltstone	734	854	734	854
Shaley Siltstone, Tr Limestone	854	1,334	854	1,334
Shaley Sandstone	1,334	1,454	1,334	1,454
Sandstone, Tr Shale	1,454	1,634	1,454	1,634
Silty Shale	1,634	1,784	1,634	1,784
Shaley Siltstone	1,784	1,844	1,784	1,844
Sandy Shale	1,844	1,874	1,844	1,874
Shale, Tr Limestone	1,874	1,904	1,874	1,904
Shaley Limestone	1,904	1,902	1,904	1,957
Big Lime	1,928	2,595	1,983	2,727
Fifty Foot Sandstone	2,595	2,773	2,727	2,925
Gordon	2,773	3,077	2,925	3,271
Fifth Sandstone	3,077	3,153	3,271	3,358
Bayard	3,153	3,915	3,358	4,187
Speechley	3,915	4,216	4,187	4,512
Balltown	4,216	4,609	4,512	4,942
Bradford	4,609	5,029	4,942	5,391
Benson	5,029	5,274	5,391	5,660
Alexander	5,274	6,440	5,660	7,006
Sycamore	6,304	6,414	6,833	6,980
Middlesex	6,414	6,513	6,980	7,151
Burkett	6,513	6,538	7,151	7,203
Tully	6,538	6,596	7,203	7,386
Marcellus	6,596	NA	7,386	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.

RECEIVED  
Office of Oil and Gas  
MAR 28 2023  
WV Department  
Environmental



LATITUDE 39°32'30"

10,717'

LATITUDE 39°35'00"

448' TO BOTTOM HOLE

Antero Resources Corporation Well No. Lemon Unit 1H

NOTES: WELL 1H TOP HOLE INFORMATION: N: 373,277ft E: 1,324,896ft LAT: 39°31'02.07" LON: 80°49'46.75" BOTTOM HOLE INFORMATION: N: 385,140ft E: 1,323,585ft LAT: 39°32'59.12" LON: 80°50'05.72" 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: 4,374,201m E: 514,658m BOTTOM HOLE INFORMATION: N: 4,377,808m E: 514,198m

Table with 3 columns: LINE, BEARING, DISTANCE. Lists lines L1 through L12 with bearings and distances.

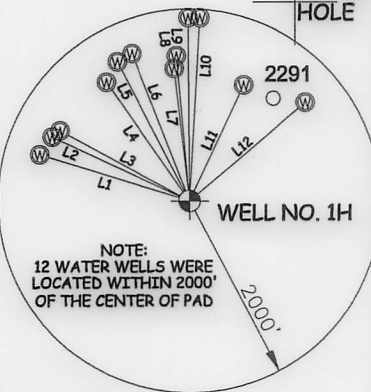
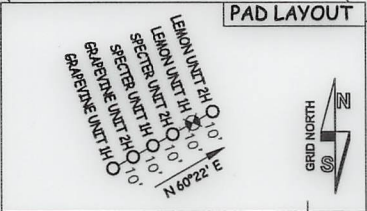


Table listing land parcels with owner names and acreage. Owners include REOP, LLC, LINDA K. LOEHR, RYAN GREENLEE ET UX, RYAN GREENLEE ET UX, FISHER OIL COMPANY, BOUNTY MINERALS, LLC, RICHARD MOORE, BOUNTY MINERALS, LLC, CHARLES RAY JOBE, BRC APPALACHIAN MINERALS I LLC, RALPH D. THACKER, GARY A. SOLE, JUDITH A. ASH, MAURICE CARLISLE JR., GARY A. SOLE, MICHAEL W. EDDY, GARY A. SOLE, RIDGETOP CAPITAL IV, LP, NILE DEAN HARRIS, RIDGETOP CAPITAL LP, BRC APPALACHIAN MINERALS I LLC, RIDGETOP CAPITAL IV, LP, DOUGLAS SCOTT FUNK SR., ANTERO RESOURCES CORP., and BRC APPALACHIAN MINERALS I LLC.

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 PERSCRIBED 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

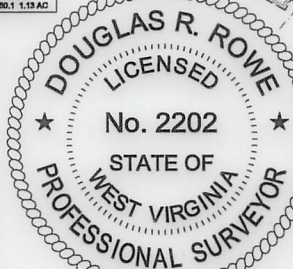
List of surveyors and their credentials, including Lee Roy Howell, Robert D. Miller, Lee Roy Howell, Robert D. Miller, John E. Grimes, Ronald R. Jones, Charles R. Ferrell, Charles J. Ferrell, Ronald R. Jones, Sarah E. Pittman, and Richard J. Ferrell.

JOB # 20-008WA DRAWING # LEMON1HAD 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. Includes signature of Douglas R. Rowe.

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

DATE 06/09/21 OPERATOR'S WELL# LEMON UNIT #1H



- NOTES: 1. NO OCCUPIED DWELLINGS OR BUILDINGS TWO THOUSAND FIVE HUNDRED (2,500) SQUARE FEET OR LARGER... 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... 5. WLS IS BY NO MEANS RESPONSIBLE FOR ANY ERRORS OR INACCURACIES WITH THE DATA AND INFORMATION THAT HAS BEEN PROVIDED.

WELL TYPE: OIL GAS X LIQUID INJECTION WASTE DISPOSAL 47 095 02703 (IF "GAS") PRODUCTION X STORAGE DEEP SHALLOW X STATE COUNTY PERMIT LOCATION: ELEVATION 1,042' AS BUILT WATERSHED OUTLET MIDDLE ISLAND CREEK QUADRANGLE PORTER FALLS 7.5 DISTRICT ELLSWORTH COUNTY TYLER SURFACE OWNER KAYLA LEEK ACREAGE 69.06 ACRES +/- OIL & GAS ROYALTY OWNER RIDGETOP CAPITAL LP; BRC APPALACHIAN MINERALS I LLC LEASE ACREAGE 69.06 AC.±; 58.56 AC.±; DOUGLAS SCOTT FUNK SR.; RIDGETOP CAPITAL IV LP; RIDGETOP CAPITAL IV LP; GARY A. SOLE; GARY A. SOLE; JUDITH A. ASH; 11.5 AC.±; 16.5 AC.±; 43.5 AC.±; 60 AC.±; 60 AC.±; 92.5 AC.±; 59.69 AC.±; BRC APPALACHIAN MINERALS I LLC; BOUNTY MINERALS, LLC; BOUNTY MINERALS, LLC; RYAN GREENLEE ET UX; 39.29 AC.±; 28.47 AC.±; 38.5 AC.±; 15 AC.±; LINDA K. LOEHR; REOP, LLC 82 AC.±; 17 AC.± PROPOSED WORK: DRILL CONVERT DRILL DEEPER REDRILL FRACTURE OR STIMULATE 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 6,562' TVD 19,075' MD WELL OPERATOR ANTERO RESOURCES CORP. DESIGNATED AGENT DIANNA STAMPER - CT CORPORATION SYSTEM ADDRESS 1615 WYNKOOP ST. ADDRESS 5400 D BIG TOWER ROAD FORM WW-6 DENVER, CO 80202 CHARLESTON, WV 25313

8,897' 12,230' TO BOTTOM HOLE LONGITUDE 80°47'30" LONGITUDE 80°50'00" COUNTY NAME PERMIT



LATITUDE 39°32'30"

10,717'

LATITUDE 39°35'00"

448' TO BOTTOM HOLE

# Antero Resources Corporation Well No. Lemon Unit 1H

**NOTES:**  
**WELL 1H TOP HOLE INFORMATION:**  
 N: 373,277ft E: 1,324,896ft  
 LAT: 39°31'02.07" LON: 80°49'46.75"  
**BOTTOM HOLE INFORMATION:**  
 N: 385,140ft E: 1,323,585ft  
 LAT: 39°32'59.12" LON: 80°50'05.72"  
 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: 4,374,201m E: 514,658m  
**BOTTOM HOLE INFORMATION:**  
 N: 4,377,808m E: 514,198m

LINE	BEARING	DISTANCE
L1	N 72°40' W	1638.0'
L2	N 64°54' W	1582.1'
L3	N 61°22' W	1537.8'
L4	N 34°54' W	1512.5'
L5	N 27°19' W	1636.7'
L6	N 21°11' W	1650.6'
L7	N 06°24' W	1392.9'
L8	N 05°00' W	1521.3'
L9	N 00°15' W	1911.8'
L10	N 03°26' E	1913.5'
L11	N 25°08' E	1338.5'
L12	N 49°41' E	1592.6'

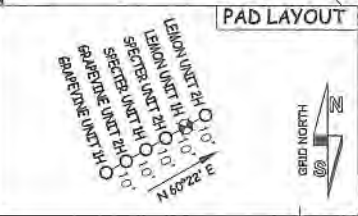
WV NORTH ZONE GRID NORTH

8,897'

12,230' TO BOTTOM HOLE

LONGITUDE 80°47'30"

LONGITUDE 80°50'00"



B	REOP, LLC	17 ACRES±
C	LINDA K. LOEHR	82 ACRES±
D	RYAN GREENLEE ET UX	15 ACRES±
E	RYAN GREENLEE ET UX	27.49 ACRES±
F	FISHER OIL COMPANY	45.67 ACRES±
G	BOUNTY MINERALS, LLC	28.47 ACRES±
H	RICHARD MOORE	111.52 ACRES±
I	BOUNTY MINERALS, LLC	38.5 ACRES±
J	CHARLES RAY JOBE	48.74 ACRES±
K	BRC APPALACHIAN MINERALS I LLC	39.29 ACRES±
L	RALPH D. THACKER	25 ACRES±
M	GARY A. SOLE	92.6 ACRES±
N	JUDITH A. ASH	59.69 ACRES±
O	J. MAURICE CARLISLE JR.	19 ACRES±
P	GARY A. SOLE	60 ACRES±
Q	MICHAEL W. EDDY	33.74 ACRES±
R	GARY A. SOLE	45.34 ACRES±
S	RIDGETOP CAPITAL IV, LP	43.5 ACRES±
T	NILE DEAN HARRIS	53.75 ACRES±
U	RIDGETOP CAPITAL LP	69.06 ACRES±
V	BRC APPALACHIAN MINERALS I LLC	58.58 ACRES±
W	RIDGETOP CAPITAL IV, LP	16.5 ACRES±
X	DOUGLAS SCOTT FUNK SR.	11.5 ACRES±
Y	ANTERO RESOURCES CORP.	40 ACRES±
Z	BRC APPALACHIAN MINERALS I LLC	61.73 ACRES±

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 PERSCRIBED 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

A-LEE ROY HOWELL D.B. 174078 TM 11-41 1.07 AC  
 B-ROBERT D. WELLEN D.B. 288471 TM 11-42 2.77 AC  
 C-LEE ROY HOWELL D.B. 234937 TM 11-42.1 0.18 AC  
 D-ROBERT D. WELLEN D.B. 310202 TM 11-42.1 0.34 AC  
 E-JOHN E. DUBBED D.B. 30846 TM 11-46 1.08 AC  
 F-ROBERT D. JONES D.B. 402804 TM 11-44 4.38 AC  
 G-CHARLES R. FERRELL D.B. 218708 TM 11-41.1 0.8 AC  
 H-ROBERT D. JONES D.B. 240226 TM 11-44.2 16.86 AC  
 I-CHARLES R. FERRELL D.B. 241029 TM 11-44.2 1.98 AC  
 J-ROBERT D. JONES D.B. 402804 TM 11-45 0.84 AC  
 K-SARAH E. PITTMAN D.B. 214079 TM 11-43 2.5 AC  
 L-ROBERT D. JONES D.B. 421079 TM 11-43.1 1.17 AC

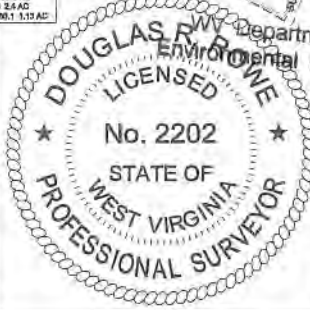
JOB # 20-008WA  
 DRAWING # LEMON1HAD  
 SCALE 1" = 2000'  
 MINIMUM DEGREE OF ACCURACY SUBMETER  
 PROVEN SOURCE OF ELEV. SUBMETER MAPPING GRADE GPS

**LEGEND**  
 - - - Surface Owner Boundary Lines +/-  
 --- Interior Surface Tracts +/-  
 ○ Proposed Well Path  
 ⊗ As Drilled Well Path

DOUGLAS R. ROWE P.S. 2202

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

DATE 06/09/21  
 OPERATOR'S WELL# LEMON UNIT #1H



**NOTES:**  
 1. NO OCCUPIED DWELLINGS OR BUILDINGS WITHIN FIVE HUNDRED (500) FEET OR LARGER USED TO HOUSE OR FEED 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.

WELL TYPE: OIL GAS X LIQUID INJECTION WASTE DISPOSAL 47 095 02703  
 (IF "GAS") PRODUCTION X STORAGE DEEP SHALLOW X STATE COUNTY PERMIT  
 LOCATION: ELEVATION 1,042' AS BUILT WATERSHED OUTLET MIDDLE ISLAND CREEK  
 QUADRANGLE PORTER FALLS 7.5' DISTRICT ELLSWORTH COUNTY TYLER  
 SURFACE OWNER KAYLA LEEK ACREAGE 69.06 ACRES +/-  
 OIL & GAS ROYALTY OWNER RIDGETOP CAPITAL LP; BRC APPALACHIAN MINERALS I LLC LEASE ACREAGE 69.06 AC±; 58.56 AC±;  
 DOUGLAS SCOTT FUNK SR.; RIDGETOP CAPITAL IV LP; RIDGETOP CAPITAL IV LP; GARY A. SOLE; GARY A. SOLE; JUDITH A. ASH 11.5 AC±; 16.5 AC±; 43.5 AC±; 60 AC±; 92.6 AC±; 59.69 AC±;  
 BRC APPALACHIAN MINERALS I LLC; BOUNTY MINERALS, LLC; BOUNTY MINERALS, LLC; RYAN GREENLEE ET UX; 39.29 AC±; 28.47 AC±; 38.5 AC±; 15 AC±;  
 LINDA K. LOEHR; REOP, LLC 82 AC±; 17 AC±

PROPOSED WORK: DRILL CONVERT DRILL DEEPER REPAIR FRACTURE OR STIMULATE  
 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 OF 6,562' TVD 19,075' MD  
 WELL OPERATOR ANTERO RESOURCES CORP. DESIGNATED AGENT DIANNE 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



## Hydraulic Fracturing Fluid Product Component Information Disclosure

Job Start Date:	2/3/2021
Job End Date:	3/3/2021
State:	West Virginia
County:	Tyler
API Number:	47-095-02703-00-00
Operator Name:	Antero Resources Corporation
Well Name and Number:	Lemon 1H
Latitude:	39.51724200
Longitude:	-80.82965600
Datum:	NAD83
Federal Well:	NO
Indian Well:	NO
True Vertical Depth:	6,642
Total Base Water Volume (gal):	18,314,328
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 Mixture	Halliburton	Base Fluid					
			Water	7732-18-5	100.00000	86.75243	Density = 8.50
Ingredients	Listed Above	Listed Above					
			Water	7732-18-5	100.00000	0.16844	

HAI-501	Halliburton	Acid Corrosion Inhibitor					
				Listed Below			
Sand-Common White-100 Mesh, SSA-2	Halliburton	Proppant					
				Listed Below			
HYDROCHLORIC ACID, 22 BAUME	Halliburton	Solvent					
				Listed Below			
WG-36 GELLING AGENT	Halliburton	Gelling Agent					
				Listed Below			
Excelerate LX-15	Halliburton	Friction Reducer					
				Listed Below			
OPTIFLO-II DELAYED RELEASE BREAKER	Halliburton	Breaker					
				Listed Below			
MC B-8614	Halliburton	Biocide					
				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	13.05282	
			Hydrochloric acid	7647-01-0	30.00000	0.03823	
			Complex Amine Compound	Proprietary	60.00000	0.03229	

RECEIVED  
 Office of Oil and Gas  
 WV Department of  
 Environmental Protection  
 MAR 28 2023



			Hydrotreated light petroleum distillate	64742-47-8	30.00000	0.01614	
			Guar gum	9000-30-0	100.00000	0.00445	
			Sorbitan, mono-9-octadecenoate, (Z)	1338-43-8	5.00000	0.00269	
			Surfactant	Proprietary	5.00000	0.00269	
			Glutaraldehyde	111-30-8	30.00000	0.00262	
			Ethoxylated alcohols	Proprietary	5.00000	0.00055	
			Organic chloride compound	Proprietary	1.00000	0.00054	
			Alkoxylated polyhydric alcohol	Proprietary	1.00000	0.00054	
			Quaternary ammonium compounds, benzyl-C12-16-alkyldimethyl chlorides	68424-85-1	5.00000	0.00044	
			Methanol	67-56-1	100.00000	0.00033	
			Ammonium persulfate	7727-54-0	100.00000	0.00010	
			Ethanol	64-17-5	1.00000	0.00009	
			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	
			Oxylated phenolic resin	Proprietary	30.00000	0.00003	
			Propargyl alcohol	107-19-7	5.00000	0.00001	
			Hexadecene	629-73-2	5.00000	0.00001	
			Phosphoric acid	7664-38-2	0.10000	0.00001	
			Nitrated acetate salt	Proprietary	0.01000	0.00001	
			Sodium glycolate	2836-32-0	0.01000	0.00001	
			Organic salt #1	Proprietary	0.01000	0.00001	
			Acrylamide	79-06-1	0.01000	0.00001	
			Organic salt #2	Proprietary	0.01000	0.00001	
			Sodium hydroxide	1310-73-2	0.01000	0.00001	
			Formaldehyde	50-00-0	0.01000	0.00001	

WV Department of  
 Environmental Protection

MAR 28 2023

			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)

RECEIVED  
Office of Oil and Gas

MAR 28 2023

WV Department of  
Environmental Protection