

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

API 47 - 103 - 03587 County Wetzel District Green  
Quad Pine Grove Pad Name Furbee Field/Pool Name ----  
Farm name Antero Resources Group Well Number Makar 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 4378579.018m Easting 523128.027m  
Landing Point of Curve Northing 4378981.61m Easting 523794.15m  
Bottom Hole Northing 4383938.812m Easting 522077.681m

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 7/10/2023 Date drilling commenced 8/1/2023 Date drilling ceased 11/21/2023  
Date completion activities began 1/31/2024 Date completion activities ceased 3/27/2024  
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

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**APPROVED**

Reviewed by: [Signature]  
07/19/2024

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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	91.59#, J-55	N/A	Y
Surface	17-1/2"	13-3/8"	688'	New	54.5#, J-55	N/A	Y
Coal							
Intermediate 1	12-1/4"	9-5/8"	3723'	New	36#, J-55	N/A	Y
Intermediate 2							
Intermediate 3							
Production	8-3/4" /8-1/2"	5-1/2"	25373'	New	23#, P-110	N/A	Y
Tubing		2-3/8"	7632'		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	200 sx	15.6	1.18	236	0'	8 Hrs.
Surface	Class A	689 sx	15.6	1.20	827	0'	8 Hrs.
Coal							
Intermediate 1	Class A	1240 sx	15.6	1.20	1488	0'	8 Hrs.
Intermediate 2							
Intermediate 3							
Production	Class H	4358 sx (Tail)	13.5 (Lead), 15.2(Tail)	1.26 (Tail)	5491	-500' into Intermediate Casing	8 Hrs.
Tubing							

Drillers TD (ft) 25,373' MD, 6995' TVD (BHL), 7058' TVD (Deepest Point Drilled) Loggers TD (ft) 25342' MD  
 Deepest formation penetrated Marcellus Plug back to (ft) N/A  
 Plug back procedure N/A

Kick off depth (ft) 6760'

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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*Handwritten signature/initials*

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PERFORATION RECORD

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

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)
<b>*PLEASE SEE ATTACHED EXHIBIT 2</b>								

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<u>PRODUCING FORMATION(S)</u>	<u>DEPTHS</u>		
Marcellus	7005' (TOP)	TVD	7931' (TOP) MD
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____

Please insert additional pages as applicable.

GAS TEST  Build up  Drawdown  Open Flow OIL TEST  Flow  Pump

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

OPEN FLOW Gas 16626.62 mcfpd Oil 621.55 bpd NGL --- bpd Water 736.45 bpd GAS MEASURED BY  Estimated  Orifice  Pilot

LITHOLOGY/ FORMATION	TOP		BOTTOM		DESCRIBE ROCK TYPE AND RECORD QUANTITY AND TYPE OF FLUID (FRESHWATER, BRINE, OIL, GAS, H <sub>2</sub> 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 Schlumberger US Land  
Address 3600 Briarpark Drive City Houston State TX Zip 77042

Stimulating Company Halliburton  
Address 3000 N Sam Houston Pkwy E. City Houston State TX Zip 77032

Please insert additional pages as applicable.

Completed by Stefan Gaspar Telephone 303-357-6959  
Signature *S Gaspar* Title Permitting Agent Date \_\_\_\_\_

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

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EXHIBIT 1

Stage No.	Perforation Date	Perforated from MD ft.	Perforated to MD ft.	Number of Perforations	Formations
1	1/31/2024	25243	25199	36	Marcellus
2	1/31/2024	25160.63372	24995.8023	36	Marcellus
3	1/31/2024	24960.43605	24795.6047	36	Marcellus
4	2/1/2024	24760.23837	24595.407	36	Marcellus
5	2/1/2024	24560.0407	24395.2093	36	Marcellus
6	2/1/2024	24359.84302	24195.0116	36	Marcellus
7	2/1/2024	24159.64535	23994.814	36	Marcellus
8	2/2/2024	23959.44767	23794.6163	36	Marcellus
9	2/2/2024	23759.25	23594.4186	36	Marcellus
10	2/2/2024	23559.05233	23394.2209	36	Marcellus
11	2/2/2024	23358.85465	23194.0233	36	Marcellus
12	2/3/2024	23158.65698	22993.8256	36	Marcellus
13	2/3/2024	22958.4593	22793.6279	36	Marcellus
14	2/3/2024	22758.26163	22593.4302	36	Marcellus
15	2/3/2024	22558.06395	22393.2326	36	Marcellus
16	2/4/2024	22357.86628	22193.0349	36	Marcellus
17	2/4/2024	22157.6686	21992.8372	36	Marcellus
18	2/4/2024	21957.47093	21792.6395	36	Marcellus
19	2/4/2024	21757.27326	21592.4419	36	Marcellus
20	2/5/2024	21557.07558	21392.2442	36	Marcellus
21	2/5/2024	21356.87791	21192.0465	36	Marcellus
22	2/5/2024	21156.68023	20991.8488	36	Marcellus
23	2/5/2024	20956.48256	20791.6512	36	Marcellus
24	2/5/2024	20756.28488	20591.4535	36	Marcellus
25	2/6/2024	20556.08721	20391.2558	36	Marcellus
26	2/6/2024	20355.88953	20191.0581	36	Marcellus
27	2/6/2024	20155.69186	19990.8605	36	Marcellus
28	2/6/2024	19955.49419	19790.6628	36	Marcellus
29	2/7/2024	19755.29651	19590.4651	36	Marcellus
30	2/7/2024	19555.09884	19390.2674	36	Marcellus
31	2/7/2024	19354.90116	19190.0698	36	Marcellus
32	2/7/2024	19154.70349	18989.8721	36	Marcellus
33	2/7/2024	18954.50581	18789.6744	36	Marcellus
34	2/8/2024	18754.30814	18589.4767	36	Marcellus
35	2/8/2024	18554.11047	18389.2791	36	Marcellus
36	2/8/2024	18353.91279	18189.0814	36	Marcellus
37	2/8/2024	18153.71512	17988.8837	36	Marcellus
38	2/9/2024	17953.51744	17788.686	36	Marcellus
39	2/9/2024	17753.31977	17588.4884	36	Marcellus
40	2/9/2024	17553.12209	17388.2907	36	Marcellus
41	2/9/2024	17352.92442	17188.093	36	Marcellus
42	2/10/2024	17152.72674	16987.8953	36	Marcellus
43	2/10/2024	16952.52907	16787.6977	36	Marcellus
44	2/10/2024	16752.3314	16587.5	36	Marcellus
45	2/10/2024	16552.13372	16387.3023	36	Marcellus
46	2/10/2024	16351.93605	16187.1047	36	Marcellus
47	2/11/2024	16151.73837	15986.907	36	Marcellus
48	2/11/2024	15951.5407	15786.7093	36	Marcellus
49	2/11/2024	15751.34302	15586.5116	36	Marcellus
50	2/11/2024	15551.14535	15386.314	36	Marcellus
51	2/12/2024	15350.94767	15186.1163	36	Marcellus
52	2/12/2024	15150.75	14985.9186	36	Marcellus
53	2/12/2024	14950.55233	14785.7209	36	Marcellus
54	2/12/2024	14750.35465	14585.5233	36	Marcellus
55	2/13/2024	14550.15698	14385.3256	36	Marcellus
56	2/13/2024	14349.9593	14185.1279	36	Marcellus
57	2/13/2024	14149.76163	13984.9302	36	Marcellus
58	2/13/2024	13949.56395	13784.7326	36	Marcellus
59	2/14/2024	13749.36628	13584.5349	36	Marcellus
60	2/14/2024	13549.1686	13384.3372	36	Marcellus
61	2/14/2024	13348.97093	13184.1395	36	Marcellus
62	2/14/2024	13148.77326	12983.9419	36	Marcellus
63	2/15/2024	12948.57558	12783.7442	36	Marcellus
64	2/15/2024	12748.37791	12583.5465	36	Marcellus
65	2/15/2024	12548.18023	12383.3488	36	Marcellus
66	2/15/2024	12347.98256	12183.1512	36	Marcellus
67	2/15/2024	12147.78488	11982.9535	36	Marcellus
68	2/16/2024	11947.58721	11782.7558	36	Marcellus
69	2/16/2024	11747.38953	11582.5581	36	Marcellus
70	2/16/2024	11547.19186	11382.3605	36	Marcellus
71	2/16/2024	11346.99419	11182.1628	36	Marcellus
72	2/16/2024	11146.79651	10981.9651	36	Marcellus
73	2/17/2024	10946.59884	10781.7674	36	Marcellus
74	2/17/2024	10746.40116	10581.5698	36	Marcellus
75	2/17/2024	10546.20349	10381.3721	36	Marcellus
76	2/17/2024	10346.00581	10181.1744	36	Marcellus
77	2/17/2024	10145.80814	9980.97674	36	Marcellus
78	2/18/2024	9945.610465	9780.77907	36	Marcellus
79	2/18/2024	9745.412791	9580.5814	36	Marcellus
80	2/18/2024	9545.215116	9380.38372	36	Marcellus
81	2/18/2024	9345.017442	9180.18605	36	Marcellus
82	2/18/2024	9144.819767	8979.98837	36	Marcellus
83	2/19/2024	8944.622093	8779.7907	36	Marcellus
84	2/19/2024	8744.424419	8579.59302	36	Marcellus
85	2/19/2024	8544.226744	8379.39535	36	Marcellus
86	2/20/2024	8344.02907	8179.19767	36	Marcellus
87	2/20/2024	8143.831395	7979	36	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	1/31/2024	67.38311	10078.25	8582.95	3909.619	178720	5285.54762	N/A
2	1/31/2024	80.92471	9710.001	5724.17	4409.476	407200	6754.64286	N/A
3	1/31/2024	65.24544	9606.693	7328.33	4037.813	410780	11260.3095	N/A
4	2/1/2024	83.87531	10308	6960.59	4159.464	411560	7190.02381	N/A
5	2/1/2024	82.48119	10030.64	7238.49	4057.838	412720	7199.88095	N/A
6	2/1/2024	85.23444	10151.35	7004.43	4036.265	414220	7188.30952	N/A
7	2/1/2024	82.33829	10185.18	7091.64	3985.432	416820	7307.52381	N/A
8	2/2/2024	86.72959	10276.75	6584.55	3958	417600	7169.92857	N/A
9	2/2/2024	84.62792	9932.299	6106.18	4181	414700	7464.88095	N/A
10	2/2/2024	85.17928	9856.804	6173.4	4297.13	417220	7117.69048	N/A
11	2/2/2024	90.72755	10160.11	6072.18	4438.032	414380	7107.35714	N/A
12	2/3/2024	92.41462	10049.45	6107.43	4294.698	414820	7128.5	N/A
13	2/3/2024	91.72382	10004.37	6818.01	4137.061	410440	7127.21429	N/A
14	2/3/2024	91.68707	9991.352	7051.55	4382.128	412620	6988.07143	N/A
15	2/3/2024	93.62432	10239.34	5885.24	4448.607	416620	7116.35714	N/A
16	2/4/2024	95.40724	10322.47	6639.64	4540.901	422160	7286.59524	N/A
17	2/4/2024	89.2295	9906.945	6679.3	4141.16	415380	7015.88095	N/A
18	2/4/2024	87.79985	9656.77	7142.06	4405.187	418740	7040.14286	N/A
19	2/4/2024	92.33059	10056.9	7296.51	4270.883	423620	7201.61905	N/A
20	2/5/2024	92.78735	9885.647	6818.23	4231.923	423820	7044.69048	N/A
21	2/5/2024	93.06351	10079.62	6648.15	4168.789	419380	7173.69048	N/A
22	2/5/2024	92.25756	9902.678	6895.68	4174.458	424240	7186.09524	N/A
23	2/5/2024	92.69857	10048.96	6792.83	4562	418240	7162.42857	N/A
24	2/5/2024	94.14839	10091.15	6977.2	4457.905	425220	7251.54762	N/A
25	2/6/2024	93.09603	9952.606	7045.43	4287.518	422700	7204.04762	N/A
26	2/6/2024	96.92351	10168.24	6556.62	4661	406880	7027.61905	N/A
27	2/6/2024	97.02599	10039.33	6607.42	4494	415540	6929.14286	N/A
28	2/6/2024	95.28934	10010.19	6528.05	4505.998	396930	6715.2619	N/A
29	2/7/2024	95.95007	10044.27	6637.21	4416	418180	7124.97619	N/A
30	2/7/2024	96.98743	10024.64	6579.23	4546	420560	7061.47619	N/A
31	2/7/2024	97.04228	9952.625	6566.27	4672	421980	6938.54762	N/A
32	2/7/2024	96.9558	10054.66	6618.1	4459.832	414040	6769.04762	N/A
33	2/7/2024	95.91668	9844.207	6323.29	4287.613	400320	6807.16667	N/A
34	2/8/2024	94.8535	9854.613	6669.03	4226	400190	6793.02381	N/A
35	2/8/2024	96.52472	10023.69	7028	4233	416040	6962.52381	N/A
36	2/8/2024	97.09807	10017.27	7032.14	4310	420240	7145.88095	N/A
37	2/8/2024	95.05249	9790.855	6975.04	4296	413560	7124	N/A
38	2/9/2024	94.58597	9652.211	7052.77	4359	413240	7029.80952	N/A
39	2/9/2024	96.53311	9548.186	6945.52	4608	420020	7162.47619	N/A
40	2/9/2024	96.30543	9935.959	6723.87	4372	418360	7106.54762	N/A
41	2/9/2024	89.23277	9546.511	6773.51	4556.053	412060	6916.69048	N/A
42	2/10/2024	95.43701	9837.143	6837.14	4306.213	412700	6825.09524	N/A
43	2/10/2024	89.69803	9620.968	6553.34	4682	416880	6887.30952	N/A
44	2/10/2024	96.80994	9672.357	6435.22	4365	415200	6861.16667	N/A
45	2/10/2024	95.19759	9095.536	6647.5	4479.174	407680	6740.42857	N/A
46	2/10/2024	96.7816	10066.68	6946.3	4316	415000	7000.14286	N/A
47	2/11/2024	96.20218	9953.785	6517.64	4416	416500	7137.35714	N/A
48	2/11/2024	96.75025	10035.32	6736.96	4384	419000	6856.85714	N/A
49	2/11/2024	97.61404	10013.57	6935.94	4115	413240	6958.30952	N/A
50	2/11/2024	96.13158	9700.923	6573.44	3997.16	418000	6975.19048	N/A
51	2/12/2024	96.26226	9370.44	6824.59	4233	415660	7157.92857	N/A
52	2/12/2024	97.14215	9384.839	7120.68	4096	416600	6797.88095	N/A
53	2/12/2024	97.69758	9097.268	6548.08	4152	401230	6736.90476	N/A
54	2/12/2024	90.9209	8576.555	6323.43	4544.872	400840	8242.83333	N/A
55	2/13/2024	96.75179	9052.003	6648.58	4188.293	417200	6897.2619	N/A
56	2/13/2024	94.38578	8874.815	6215.22	4468	417740	6939.09524	N/A
57	2/13/2024	97.74063	9051.403	6739.5	4602	419480	6918.7381	N/A
58	2/13/2024	93.75096	9100	6493.91	4249.022	420800	6761.69048	N/A
59	2/14/2024	94.95896	9096.911	6520.5	4073.402	410380	6851.83333	N/A
60	2/14/2024	97.34332	9089.584	6474.3	4386	415940	6869.92857	N/A
61	2/14/2024	96.79136	9208.84	6779.83	4300	418080	6868.47619	N/A
62	2/14/2024	95.69875	8952.581	6383.72	4147.923	416960	6805.35714	N/A
63	2/15/2024	94.47849	8845.043	6961.65	4027.191	416720	6563.2381	N/A
64	2/15/2024	95.51965	9099	6830.06	4030	408820	6864.80952	N/A
65	2/15/2024	97.59182	8918.418	6524.14	4193	416360	6764.07143	N/A
66	2/15/2024	98.14548	8822.163	6872.81	3987	420960	6843.80952	N/A
67	2/15/2024	96.93957	8829.03	6324.78	3837.576	418440	6840.04762	N/A
68	2/16/2024	97.30305	8648.053	6717.12	3762.518	417140	6730.88095	N/A
69	2/16/2024	97.67729	8782.974	6378.26	4231	416980	6840.7381	N/A
70	2/16/2024	97.894	8952.865	6343.83	4102	414720	6780.35714	N/A
71	2/16/2024	97.93733	8845.407	6764.08	4138	417220	6762.66667	N/A
72	2/16/2024	97.3631	8652.011	6762.36	4047.874	413800	6785.7619	N/A
73	2/17/2024	96.55204	8548.524	6348.95	3881.871	414120	6810.71429	N/A
74	2/17/2024	98.14737	8719.057	6518.55	4104	418400	6809.38095	N/A
75	2/17/2024	97.94443	8866.016	7023.05	4092	416820	6816.83333	N/A
76	2/17/2024	97.93395	8109.926	6581.83	4140.1	418340	6995.2619	N/A
77	2/17/2024	96.80944	8240.976	6588.91	4178.586	397250	6672.09524	N/A
78	2/18/2024	97.34979	8361.29	5915.18	4209.352	419160	7040.97619	N/A
79	2/18/2024	97.78173	8350.156	4763.76	4107	412260	7021.66667	N/A
80	2/18/2024	97.61436	8009.393	4859.63	4259	412380	6935.69048	N/A
81	2/18/2024	98.53292	8084.461	7608.56	3944.662	419040	6991.07143	N/A
82	2/18/2024	97.72489	8370.831	7725.7	4001.779	419340	6919.92857	N/A
83	2/19/2024	97.10893	8159.08	6500.21	3997.409	414640	6965.19048	N/A
84	2/19/2024	97.94119	7718.224	5273.16	4183	416240	6921.5	N/A
85	2/19/2024	97.64071	7898.133	7457.56	4197	413340	7020.78571	N/A
86	2/20/2024	98.07767	8177.493	5125.89	4652	416900	7015.92857	N/A
87	2/20/2024	98.18649	7481.346	5954.42	4022.531	420520	7042	N/A
	AVERAGE	94	9,395	6,635	4,251	35,887,080	610,432	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	From Surface	From Surface	From Surface	From Surface
Sandy Siltstone, LS	104	324	104	324	104	324	104	324
Shaley Siltstone, tr LS	324	374	324	374	324	374	324	374
Sandy Shale	374	624	374	624	374	624	374	624
Siltstone, Occ SS, tr Shale, tr Coal	474	824	474	824	474	824	474	824
Sandy Siltstone, tr LS, tr Shale	624	824	624	824	624	824	624	824
Silty Sandstone, tr LS	824	924	824	924	824	924	824	924
Sandy Siltstone, tr LS, tr Shale	924	1,024	924	1,024	924	1,024	924	1,024
Silty Sandstone, tr Shale	1,024	1,124	1,024	1,124	1,024	1,124	1,024	1,124
Silty Sandstone, tr Shale, tr LS	1,124	1,224	1,124	1,224	1,124	1,224	1,124	1,224
Shaley Sandstone, occ Siltstone	1,224	1,424	1,224	1,424	1,224	1,424	1,224	1,424
Silty Sandstone, tr shale	1,424	1,524	1,424	1,524	1,424	1,524	1,424	1,524
Sandy Siltstone, tr Coal	1,524	1,674	1,524	1,674	1,524	1,674	1,524	1,674
Siltly Sandstone, tr Coal, tr Shale	1,674	1,874	1,674	1,874	1,674	1,874	1,674	1,874
Sandy Shale, tr Coal	1,874	2,024	1,874	2,024	1,874	2,024	1,874	2,024
Silty Sandstone, rr Coal	2,024	2,114	2,024	2,114	2,024	2,166	2,024	2,166
Big Lime	2,140	2,902	2,166	3,047	2,166	3,047	2,166	3,047
Fifty Foot Sandstone	2,902	3,021	3,021	3,180	3,021	3,180	3,021	3,180
Gordon	3,021	3,243	3,154	3,428	3,154	3,428	3,154	3,428
Fifth Sandstone	3,243	3,288	3,402	3,479	3,402	3,479	3,402	3,479
Bayard	3,288	4,086	3,453	4,381	3,453	4,381	3,453	4,381
Speechley	4,086	4,343	4,355	4,671	4,355	4,671	4,355	4,671
Balltown	4,343	4,789	4,645	5,167	4,645	5,167	4,645	5,167
Bradford	4,789	5,196	5,141	5,626	5,141	5,626	5,141	5,626
Benson	5,196	5,632	5,600	6,114	5,600	6,114	5,600	6,114
Alexander	5,632	6,822	6,088	7,496	6,088	7,496	6,088	7,496
Sycamore	6,665	6,796	7,300	7,470	7,300	7,470	7,300	7,470
Middlesex	6,796	6,893	7,470	7,627	7,470	7,627	7,470	7,627
Burkett	6893	6924	7627	7687	7627	7687	7627	7687
Tully	6924	7005	7687	7931	7687	7931	7687	7931
Marcellus	7005	NA	7931	NA	7931	NA	7931	NA

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## Hydraulic Fracturing Fluid Product Component Information Disclosure

Job Start Date:	01/31/2024
Job End Date:	02/20/2024
State:	West Virginia
County:	Wetzel
API Number:	47-103-03587-00-00
Operator Name:	Antero Resources Corporation
Well Name and Number:	MAKAR UNIT 1H
Latitude:	39.5565
Longitude:	-80.7307
Datum:	WGS84
Federal Well:	NO
Indian Well:	NO
True Vertical Depth:	7057
Total Base Water Volume (gal)*:	27057571.5
Total Base Non Water Volume:	0



Water Source	Percent
Produced Water	100.00%

## 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
FDP-S1464-22	Halliburton	Friction Reducer					
HAI-501	Halliburton	Acid Corrosion Inhibitor					
HYDROCHLORIC ACID, 22 BAUME	Halliburton	Solvent					
MC B-8614A	MultiChem	Biocide					
OPTIFLO-II DELAYED RELEASE BREAKER	Halliburton	Breaker					
Produced Water (Density 10.0)	Operator	Base Fluid					
Sand-Common White-100 Mesh, SSA-2	Halliburton	Proppant					
WG-36 GELLING AGENT	Halliburton	Gelling Agent					

Items above are Trade Names. Items below are the individual ingredients.

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A handwritten signature in blue ink, appearing to be "GJ", is located in the bottom right corner of the page.



			Water	7732-18-5	100.00000	88.13641	None
			Crystalline silica, quartz	14808-60-7	100.00000	11.68975	None
			Water	7732-18-5	100.00000	0.14792	None
			Hydrochloric acid	7647-01-0	30.00000	0.03344	None
			Complex amine compound	Proprietary	60.00000	0.02960	None
			Hydrotreated distillate	Proprietary	30.00000	0.01480	None
			Guar gum	9000-30-0	100.00000	0.00586	None
			Ammonium chloride	12125-02-9	5.00000	0.00247	None
			Fatty nitrogen derived amides	Proprietary	5.00000	0.00247	None
			Ethoxylated alcohol	Proprietary	5.00000	0.00247	None
			Glutaraldehyde	111-30-8	30.00000	0.00206	None
			Sorbitan, mono-9-octadecenoate, (Z)	1338-43-8	1.00000	0.00049	None
			Sorbitan monooleate polyoxyethylene derivative	9005-65-6	1.00000	0.00049	None
			Alkyl (C12-16) dimethylbenzyl ammonium chloride	68424-85-1	5.00000	0.00034	None
			Methanol	67-56-1	100.00000	0.00021	None
			Ammonium persulfate	7727-54-0	100.00000	0.00013	None
			Ethanol	64-17-5	1.00000	0.00007	None
			Mixture of dimer and trimer fatty acids of indefinite composition derived from tall oil	61790-12-3	30.00000	0.00006	None
			Modified thiourea polymer	Proprietary	30.00000	0.00006	None
			Oxylated phenolic resin	Proprietary	30.00000	0.00004	None
			Propargyl alcohol	107-19-7	5.00000	0.00001	None
			Hexadecene	629-73-2	5.00000	0.00001	None
			Ethoxylated alcohols	Proprietary	5.00000	0.00001	None
			C.I. pigment Orange 5	3468-63-1	1.00000	0.00000	None

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\* 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%

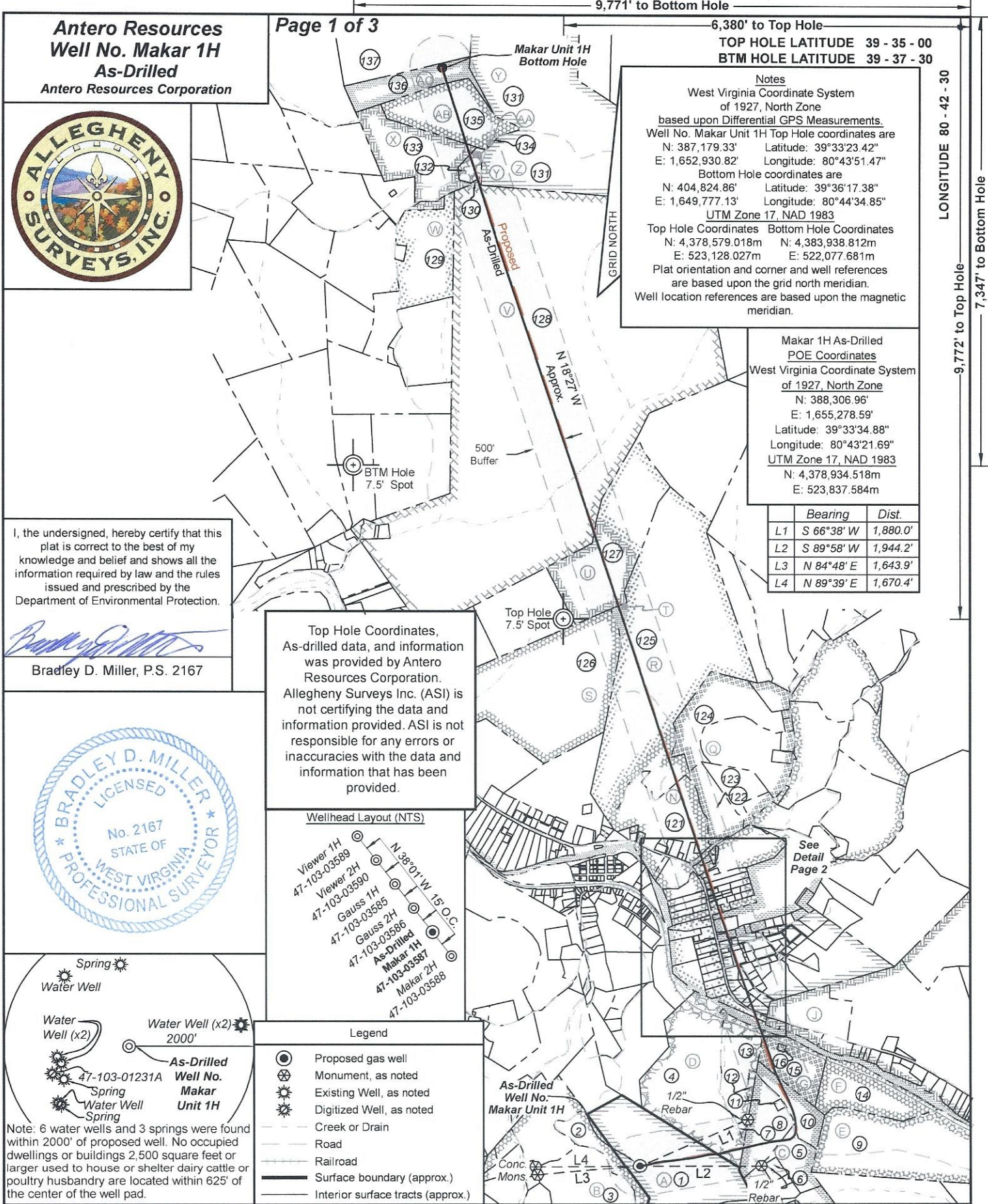
Note: For Field Development Products (products that begin with FDP), MSDS level only information has been provided.

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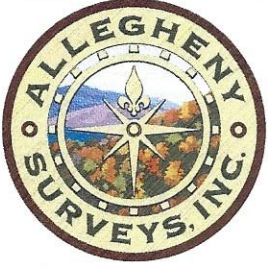
**Antero Resources**  
**Well No. Makar 1H**  
**As-Drilled**  
 Antero Resources Corporation

Page 1 of 3

9,771' to Bottom Hole

6,380' to Top Hole

TOP HOLE LATITUDE 39 - 35 - 00  
 BTM HOLE LATITUDE 39 - 37 - 30



**Notes**  
 West Virginia Coordinate System of 1927, North Zone based upon Differential GPS Measurements.  
 Well No. Makar Unit 1H Top Hole coordinates are  
 N: 387,179.33' Latitude: 39°33'23.42"  
 E: 1,652,930.82' Longitude: 80°43'51.47"  
 Bottom Hole coordinates are  
 N: 404,824.86' Latitude: 39°36'17.38"  
 E: 1,649,777.13' Longitude: 80°44'34.85"  
 UTM Zone 17, NAD 1983  
 Top Hole Coordinates Bottom Hole Coordinates  
 N: 4,378,579.018m N: 4,383,938.812m  
 E: 523,128.027m E: 522,077.681m  
 Plat orientation and corner and well references are based upon the grid north meridian.  
 Well location references are based upon the magnetic meridian.

LONGITUDE 80 - 42 - 30

9,772' to Top Hole

7,347' to Bottom Hole

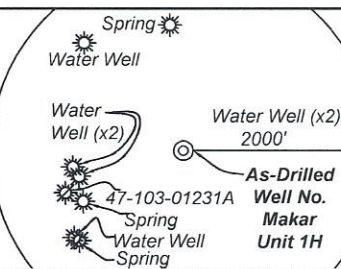
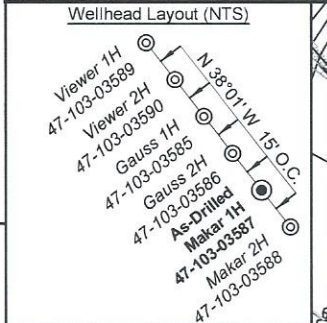
Makar 1H As-Drilled POE Coordinates  
 West Virginia Coordinate System of 1927, North Zone  
 N: 388,306.96'  
 E: 1,655,278.59'  
 Latitude: 39°33'34.88"  
 Longitude: 80°43'21.69"  
 UTM Zone 17, NAD 1983  
 N: 4,378,934.518m  
 E: 523,837.584m

	Bearing	Dist.
L1	S 66°38' W	1,880.0'
L2	S 89°58' W	1,944.2'
L3	N 84°48' E	1,643.9'
L4	N 89°39' E	1,670.4'

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: 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.

FILE NO: 53-34-G-23  
 DRAWING NO: Makar Unit 1H As Drilled Plat  
 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: June 20 20 24  
 OPERATOR'S WELL NO. Makar Unit 1H  
 API WELL NO  
 47 - 103 - 03587  
 STATE COUNTY PERMIT

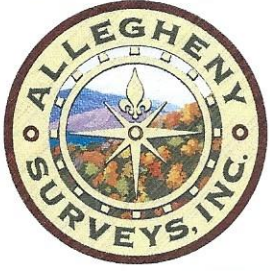
WELL TYPE:  OIL  GAS  LIQUID INJECTION  WASTE DISPOSAL  
 (IF GAS) PRODUCTION:  STORAGE  DEEP  SHALLOW  
 LOCATION: ELEVATION: As-Drilled 1211' WATERSHED: Fishing Creek QUADRANGLE: Pine Grove  
 DISTRICT: Green COUNTY: Wayne  
 SURFACE OWNER: Antero Resources Corp. ACREAGE: 58.1  
 ROYALTY OWNER: James Allen Sell LEASE NO: ACREAGE: 58.1  
 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: 25,373' MD 6,995' TVD

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

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

Leases	
A	James Allen Sell
B	William R. Stalnaker
C	Tribune Resources Minerals, LLC
D	Marilyn Halley Seeley
E	Tribune Resources Minerals, LLC
F	Marcella K. Harrison
G	Linda Darlene Straight
H	CSX Transportation, Inc.
I	WVDNR
J	Jenkins Miller
K	Antero Minerals, LLC
L	Antero Minerals, LLC
M	Antero Minerals, LLC
N	Antero Minerals, LLC
O	Antero Minerals, LLC

Leases	
P	Lynn P. Newton
Q	Antero Minerals, LLC
R	Chesapeake Appalachia, LLC
S	Chesapeake Appalachia, LLC
T	DDE, Inc.
U	BRC Minerals, LP & BRC Appalachian Minerals, LLC
V	Shiben Estates, Inc.
W	Nancy B. Hatfield, et al
X	Cylde B. Snider
Y	Deborah Kay Clark
Z	Chesapeake Appalachia, LLC
AA	Elizabeth P. Omer
AB	Donzel A. Hornbeck
AC	Elizabeth P. Omer



FILE NO: 53-34-G-23  
 DRAWING NO: Makar Unit 1H As Drilled Plat  
 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: June 20 20 24  
 OPERATOR'S WELL NO. Makar Unit 1H  
 API WELL NO  
47 — 103 — 03587  
 STATE COUNTY PERMIT

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

LOCATION: ELEVATION: As-Drilled 1211' WATERSHED: Fishing Creek QUADRANGLE: Pine Grove  
 DISTRICT: Green COUNTY: Wetzel  
 SURFACE OWNER: Antero Resources Corp. ACREAGE: 58.1  
 ROYALTY OWNER: James Allen Sell LEASE NO: \_\_\_\_\_ ACREAGE: 58.1  
 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: 25,373' MD 6,995' TVD

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



ID	TM-Par	Owner	Bk/Pg	Acres
65	30-47	David L. Cunningham	WB42/436	0.75
66	30-46	David L. & Freda V. Cunningham	283/252	0.34
67	30-45	Gary B. & Pauline Hayes, et al	420/626	0.48
68	30-44	Gary B. & Pauline Hayes, et al	420/626	0.41
69	30-42	Reader Vol. Fire Dept. Inc.	261/307	0.34
70	30-43	Reader Vol. Fire Dept. Inc.	280/326	0.10
71	30-15	Reva E. Shanholtzer	WB44/164	0.73
72	30-14.1	Reva E. Shanholtzer	WB44/164	0.25
73	30-13	Kathy L. Wright	WB75/465	4.74
74	30-14	Kathy L. Wright	428/931	0.18
75	30-13.1	Joshua R. Wright	370/13	1.53
76	30-12	Kenneth R. & Charlene Ice	319/352	1.97
77	13-33	Ryan R. Bucher	426/768	1.79
78	13-33.11	Richard D. & Jacqueline M. Bucher	372/601	2.00
79	30-6.2	James C. & Corinna L. Tennant	373/178	1.18
80	30-6.2	James K. Tennant	417/208	0.38
81	30-6.1	Franklin D. & L. Marlene Tennant	417/205	0.44
82	30-11	Michael & Patricia A. Leek	AP98/638	0.05
83	30-10	Eric & Estella Hayes	409/390	1.25
84	30-9	Jerry D. & Joyce Martin	339/379	0.85
85	30-9.1	Jerry D. & Joyce Martin	339/379	0.57
86	30-5	Matthew C. Harris	442/183	0.61
87	30-5.2	Travis C. Ice & Mandy Barker	391/275	0.30
88	30-5.1	Travis C. Ice & Mandy Barker	391/275	0.25
89	30-5.3	Michael D. Lloyd	431/490	0.45
90	30-4.1	Michael D. Lloyd	431/490	0.43
91	30-4.5	Travis C. & Amanda J. Ice	395/346	0.32
92	30-4.4	Donna J. Titus	372/558	1.64
93	30-4.3	Donna J. Titus	372/558	0.17
94	30-4.2	Donna J. Titus	372/558	0.19
95	30-4	Marsha Derby	423/472	0.23
96	30-5.4	Marsha Derby	423/472	0.03
97	30-8	Robert J. Yeager	310/433	1.25
98	30-7	Jerry Lee & Karen Beryl Mason	365/533	1.25
99	30-3.2	Michael Miller, Sr.	361/143	0.33
100	30-3	Phyllis L. Willey	WB41/389	0.59
101	30-3.1	Phyllis L. Willey	WB41/389	0.83
102	30-2	Wallace E. & Daisy M. Kendall	289/476	1.75
103	13-24.2	Jerry Lee & Karen Beryl Mason	365/533	0.03
104	13-24.1	Jerry Lee & Karen Beryl Mason	235/9	3.10
105	30-1	Robert C. & Heidi M. Brown	428/14	1.75
106	13-32.3	Board of Education	282/414	12.39
107	13-32	Robert C. & Heidi M. Brown	428/14	0.45
108	13-24	Howard D. & Clara M. Bucher	367/144	34.02
109	13-31	Richard D. & Jacqueline Bucher	433/361	0.47
110	13-32.6	Wetzel County Board of Education	368/49	0.01
111	13-32.5	Richard D. & Jacqueline M. Bucher	367/530	0.20
112	13-32.2	Richard D. & Jacqueline Bucher	329/595	0.19
113	13-32.1	Richard D. & Jacqueline Bucher	332/167	0.27
114	13-30	Richard D. & Jacqueline Bucher	433/361	0.34
115	13-24.3	William R. & Denise Poling	311/70	0.97
116	13-29	Howard D. & Clara M. Bucher	367/144	0.17
117	13-24.7	Jerry L. & Karen B. Mason	367/79	0.91
118	13-24.6	Jerry L. & Karen B. Mason	367/74	0.35
119	13-24.5	Marilyn K. Daugherty	MS89/328	0.45
120	13-24.9	Nila E. Nice	431/653	0.37
121	13-24	Howard D. & Clara M. Bucher	367/144	34.02
122	13-25	Wayne & Brenda Balwanz	440/693	12.15
123	13-25.2	Diane K. Howell	416/682	10.20
124	13-14	Ronald S. Anderson	399/387	32.80
125	13-7	WSD Properties LLC	441/793	162.00
126	13-13	Linda M. Headley	385/209	85.50
127	8-41	Nancy Hatfield	267/370	60.00
128	8-28	Nancy B. Hatfield	474/48/1	449.48
129	8-23	Debra Kay Fluharty, et al	368/561	28.04
130	8-18	Carlton L. Hornbeck	320/3	0.24
131	3-37	Carlton J. Hornbeck	250/263	118.00
132	8-6	Carlton J. Hornbeck	250/263	3.30
133	8-5	Charles J. Jr & Robin D Stillwagoner	367/460	37.87
134	8-7	Carlton J. Hornbeck	259/335	0.25
135	3-36	Donzel A. Hornbeck	459/560	35.00
136	3-35	Richard Hornbeck, et al	483/191	19.50
137	3-27	Ronald E. Wade	433/785	100.00

ID	TM-Par	Owner	Bk/Pg	Acres
1	17-12	Antero Resources Corp.	483/888	58.10
2	17-1	Antero Resources Corp	483/888	15.35
3	17-60	Ross Bucher	411/765	79.00
4	13-71	Charles R. & Kay L. Blair	387/577	63.11
5	17-14	Bradford Highley	386/607	18.53
6	17-14.2	Michael & Tammy Lemasters	384/10	2.18
7	17-2	Clarence & Carol Lancaster	287/357	0.50
8	17-3	Bradford Highley	386/607	17.00
9	17-5	Coastal Forest Resources	444/105	90.00
10	17-4	James Straight	223/193	10.8
11	13-72	Straight Cemetery	---/---	0.45
12	17-3.1	Bradford D. Highley	386/607	1.00
13	13-71.1	Clarence L. & Carol J. Lancaster	387/266	19.19
14	13-78	Sebastian, Jr. & Marcella Harrison	281/94	25.37
15	13-73	James Straight, et al	WB67/427	14.60
16	13-74	Linda D. Straight	WB67/427	0.29
17	13-65.4	Raye Anne Lloyd	445/660	2.99
18	xx-xx	WV State Road Commission	162/497	0.90
19	13-65	Raye Anne Lloyd	445/660	18.01
20	30-59	James D. Glasscock II	377/180	1.09
21	30-23.1	Michael A. McDiffitt	447/102	2.06
22	30-55	James D. Glasscock II	377/180	0.81
23	30-58	James D. Glasscock II	377/180	0.47
24	30-54	James D. Glasscock II	377/180	0.41
25	30-57	Dwain R. & Dena L. Brown	286/736	0.91
26	30-23	Charles R. & Kay Blair	312/585	1.29
27	30-23.2	Charles R. & Kay L. Blair	305/372	1.00
28	30-56	Charles R. Blair	362/606	0.60
29	30-53	Lantz Cemetery	---/---	0.67
30	30-52	Clinton W. & Karen S. Harris	266/268	0.35
31	13-64	Loraine Highley	WB81/258	5.64
32	30-41	Clinton W. & Karen S. Harris	244/413	0.50
33	30-51	Wayne Morrison	366/58	1.00
34	30-40	Donald W. Harris	439/418	0.36
35	30-39	Donald W. Harris	439/418	0.66
36	30-38.1	Melissa Carter & Theresa Jones	423/283	0.50
37	30-38	William Stephen & Trudy J. Thomas	379/206	0.97
38	30-21	Robert Dennis Lawson	326/512	1.00
39	30-20	Esther R. Coen	433/68	1.00
40	30-37	Martin Carl & Sandra L. Bucher	342/568	0.52
41	30-33	James D. & Florence L. Eddy	354/320	0.85
42	30-31	Donna D. Williams	420/381	0.07
43	30-33.1	Donna D. Williams	420/381	0.09
44	30-33.2	Temple M. & Glenda D. Jackson	249/271	0.09
45	30-32	Temple M. & Glenda D. Jackson	249/271	0.42
46	30-50	Forrest L. & Anna Jane Tennant	228/278	0.22
47	30-49	Forrest L. & Anna Jane Tennant	218/4	0.45
48	30-29	Chad A. Pittman	397/351	1.01
49	30-28	Flora L. Trader, et al	WB74/931	0.91
50	30-30	Temple M. & Glenda D. Jackson	261/482	0.33
51	30-30.2	Donna D. Williams	420/381	0.03
52	30-30.1	Donna D. Williams	420/381	0.08
53	30-34	Richard W. & Connie J. Rine	294/308	0.24
54	30-35.1	Columbia Gas Transmission Corporation	263/164	0.05
55	30-36	Bayer Heritage Federal	442/478	0.26
56	30-35	Everett M. & Tresa A. Rine	354/510	0.20
57	30-19	Zachary C. Propst	431/280	1.0
58	30-17	Laura A. Hicks	439/363	0.15
59	30-18	Laura A. Hicks	439/363	0.37
60	30-16	Thomas R. & Paula C. Loy	393/683	0.77
61	30-27	Gary Hayes, et al	420/626	0.46
62	30-26	Richard W. & Connie J. Rine	294/308	0.20
63	30-25	Edward E. Martin Jr. & Violet Lorraine Martin	428/427	0.69
64	30-24	Edward E. Martin Jr. & Violet Lorraine Martin	428/427	0.23

FILE NO: 53-34-G-23  
 DRAWING NO: Makar Unit 1H As Drilled Plat  
 SCALE: 1" = 2000'  
 MINIMUM DEGREE OF ACCURACY:  
Submeter  
 PROVEN SOURCE OF ELEVATION:  
WVDOT, Harrisville, WV



DATE: June 20 2024  
 OPERATOR'S WELL NO. Makar Unit 1H  
 API WELL NO  
47 — 103 — 03587  
 STATE COUNTY PERMIT

WELL TYPE:  OIL  GAS  LIQUID INJECTION  WASTE DISPOSAL  
 (IF GAS) PRODUCTION:  STORAGE  DEEP  SHALLOW  
 LOCATION: ELEVATION: As-Drilled 1211' WATERSHED: Fishing Creek QUADRANGLE: Pine Grove  
 DISTRICT: Green COUNTY: Wetzel  
 SURFACE OWNER: Antero Resources Corp. ACREAGE: 58.1  
 ROYALTY OWNER: James Allen Sell LEASE NO: \_\_\_\_\_ ACREAGE: 58.1  
 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: 25,373' MD 6,995' TVD

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