

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

API 47 - 103 - 03461 County Wetzel District Green  
Quad TOP Hole: Pine Grove -- BTM Hole: Porter Falls Pad Name Journeyman Field/Pool Name -----  
Farm name Antero Resources Corporation Well Number Welder 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 4377635m Easting 522033m  
Landing Point of Curve Northing 4378075.72m Easting 522492.98m  
Bottom Hole Northing 4382769m Easting 520892m

Elevation (ft) 1154' 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 11/2/2021 Date drilling commenced 12/10/2021 Date drilling ceased 3/17/2022  
Date completion activities began 7/8/2022 Date completion activities ceased 9/10/2022  
Verbal plugging (Y/N) N/A Date permission granted N/A Granted by N/A

Please note: Operator is required to submit a plugging application within 5 days of verbal permission to plug

Freshwater depth(s) ft 1088' Open mine(s) (Y/N) depths No  
Salt water depth(s) ft 502' Void(s) encountered (Y/N) depths No  
Coal depth(s) ft 960' Cavern(s) encountered (Y/N) depths No  
Is coal being mined in area (Y/N) No

**APPROVED**

Reviewed by: [Signature]  
03/17/2023  
2/15/22

API 47-103 - 03461 Farm name Antero Resources Corporation Well number Welder Unit 1H

CASING STRINGS	Hole Size	Casing Size	Depth	New or Used	Grade wt/ft	Basket Depth(s)	Did cement circulate (Y/N) * Provide details below*
Conductor	28"	20"	130'	New	78.67#, X-60	N/A	Y
Surface	17-1/2"	13-3/8"	368'	New	54.5#, J-55	N/A	Y
Coal							
Intermediate 1	12-1/4"	9-5/8"	2650'	New	36#, J-55	N/A	Y
Intermediate 2							
Intermediate 3							
Production	8-3/4"/8-1/2"	5-1/2"	23731'	New	23#, P-110cy	N/A	Y
Tubing		2-3/8"	7168'		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	319 sx	15.6	1.18	376	0'	8 Hrs.
Surface	Class A	328 sx	15.8	1.20	394	0'	8 Hrs.
Coal							
Intermediate 1	Class C	945 sx	15.8	1.16	1096	0'	8 Hrs.
Intermediate 2							
Intermediate 3							
Production	Class H	4090 sx (Tail)	13.5 (Lead), 15.2(Tail)	1.18 (Tail)	4826	-500' into Intermediate Casing	8 Hrs.
Tubing							

Drillers TD (ft) 23731' MD, 6908' TVD (BHL), 6984' (Deepest Point Drilled) Loggers TD (ft) 23731' MD

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

Plug back procedure N/A

Kick off depth (ft) 6515'

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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03/17/2023





API 47- 103 - 03461 Farm name Antero Resources Corporation Well number Welder Unit 1H

<u>PRODUCING FORMATION(S)</u>	<u>DEPTHS</u>	
<u>Marcellus</u>	<u>6874' (TOP)</u> TVD	<u>7419' (TOP)</u> MD
_____	_____	_____
_____	_____	_____
_____	_____	_____

Please insert additional pages as applicable.

GAS TEST  Build up  Drawdown  Open Flow OIL TEST  Flow  Pump

SHUT-IN PRESSURE Surface 1973 psi Bottom Hole --- psi DURATION OF TEST --- hrs

OPEN FLOW Gas 9711 mcfpd Oil 357 bpd NGL --- bpd Water 1002 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 <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 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 1/4/2023

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

*Handwritten signature and date:*  
3/17/2023

Exhibit 1

Stage No.	Perforation Date	Perforated from MD ft.	Perforated to MD ft.	Number of Perforations	Formations
1	07/08/2022	23605.0	23560.0	60	Marcellus
2	07/10/2022	23521.5	23355.9	60	Marcellus
3	07/10/2022	23320.4	23154.9	60	Marcellus
4	07/10/2022	23119.3	22953.8	60	Marcellus
5	07/11/2022	22918.3	22752.7	60	Marcellus
6	07/12/2022	22717.2	22551.6	60	Marcellus
7	07/12/2022	22516.1	22350.6	60	Marcellus
8	07/13/2022	22315.0	22149.5	60	Marcellus
9	07/13/2022	22114.0	21948.4	60	Marcellus
10	07/14/2022	21912.9	21747.3	60	Marcellus
11	07/14/2022	21711.8	21546.3	60	Marcellus
12	07/15/2022	21510.7	21345.2	60	Marcellus
13	07/15/2022	21309.7	21144.1	60	Marcellus
14	07/16/2022	21108.6	20943.0	60	Marcellus
15	07/16/2022	20907.5	20741.9	60	Marcellus
16	07/17/2022	20706.4	20540.9	60	Marcellus
17	07/18/2022	20505.4	20339.8	60	Marcellus
18	07/18/2022	20304.3	20138.7	60	Marcellus
19	07/18/2022	20103.2	19937.6	60	Marcellus
20	07/19/2022	19902.1	19736.6	60	Marcellus
21	07/20/2022	19701.1	19535.5	60	Marcellus
22	07/20/2022	19500.0	19334.4	60	Marcellus
23	07/21/2022	19298.9	19133.3	60	Marcellus
24	07/21/2022	19097.8	18932.3	60	Marcellus
25	07/22/2022	18896.8	18731.2	60	Marcellus
26	07/22/2022	18695.7	18530.1	60	Marcellus
27	07/23/2022	18494.6	18329.0	60	Marcellus
28	07/23/2022	18293.5	18128.0	60	Marcellus
29	07/24/2022	18092.5	17926.9	60	Marcellus
30	07/25/2022	17891.4	17725.8	60	Marcellus
31	07/25/2022	17690.3	17524.7	60	Marcellus
32	07/25/2022	17489.2	17323.7	60	Marcellus
33	07/26/2022	17288.2	17122.6	60	Marcellus
34	07/26/2022	17087.1	16921.5	60	Marcellus
35	07/27/2022	16886.0	16720.4	60	Marcellus
36	07/27/2022	16684.9	16519.4	60	Marcellus
37	07/28/2022	16483.9	16318.3	60	Marcellus
38	07/28/2022	16282.8	16117.2	60	Marcellus
39	07/29/2022	16081.7	15916.1	60	Marcellus
40	07/30/2022	15880.6	15715.1	60	Marcellus
41	07/30/2022	15679.6	15514.0	60	Marcellus
42	07/30/2022	15478.5	15312.9	60	Marcellus
43	07/31/2022	15277.4	15111.8	60	Marcellus
44	07/31/2022	15076.3	14910.8	60	Marcellus
45	07/31/2022	14875.3	14709.7	60	Marcellus
46	07/31/2022	14674.2	14508.6	60	Marcellus
47	08/01/2022	14473.1	14307.5	60	Marcellus
48	08/01/2022	14272.0	14106.5	60	Marcellus
49	08/01/2022	14071.0	13905.4	60	Marcellus
50	08/01/2022	13869.9	13704.3	60	Marcellus
51	08/01/2022	13668.8	13503.2	60	Marcellus
52	08/02/2022	13467.7	13302.2	60	Marcellus
53	08/02/2022	13266.7	13101.1	60	Marcellus
54	08/02/2022	13065.6	12900.0	60	Marcellus
55	08/02/2022	12864.5	12698.9	60	Marcellus
56	08/02/2022	12663.4	12497.9	60	Marcellus
57	08/03/2022	12462.4	12296.8	60	Marcellus
58	08/03/2022	12261.3	12095.7	60	Marcellus
59	08/04/2022	12060.2	11894.6	60	Marcellus
60	08/04/2022	11859.1	11693.6	60	Marcellus
61	08/04/2022	11658.1	11492.5	60	Marcellus
62	08/05/2022	11457.0	11291.4	60	Marcellus
63	08/06/2022	11255.9	11090.3	60	Marcellus
64	08/06/2022	11054.8	10889.3	60	Marcellus
65	08/06/2022	10853.8	10688.2	60	Marcellus
66	08/07/2022	10652.7	10487.1	60	Marcellus
67	08/07/2022	10451.6	10286.0	60	Marcellus
68	08/07/2022	10250.5	10085.0	60	Marcellus
69	08/07/2022	10049.5	9883.9	60	Marcellus
70	08/07/2022	9848.4	9682.8	60	Marcellus
71	08/08/2022	9647.3	9481.7	60	Marcellus
72	08/08/2022	9446.2	9280.7	60	Marcellus
73	08/08/2022	9245.2	9079.6	60	Marcellus
74	08/08/2022	9044.1	8878.5	60	Marcellus
75	08/08/2022	8843.0	8677.4	60	Marcellus
76	08/09/2022	8641.9	8476.4	60	Marcellus
77	08/09/2022	8440.9	8275.3	60	Marcellus
78	08/09/2022	8239.8	8074.2	60	Marcellus
79	08/09/2022	8038.7	7873.1	60	Marcellus
80	08/09/2022	7837.6	7672.1	60	Marcellus
81	08/10/2022	7636.6	7471.0	60	Marcellus

*Smiley*  
*03/17/2022*

03/17/2023



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 (bbbls)	Amount of Nitrogen/ other (units)
1	07/08/2022	70.7	9,484	9,105	4,117	179,260	229,702	N/A
2	07/10/2022	88.2	9,967	5,687	3,978	397,960	327,640	N/A
3	07/10/2022	83.7	9,520	6,337	3,651	410,480	322,839	N/A
4	07/10/2022	88.8	9,869	5,589	4,702	412,289	316,118	N/A
5	07/11/2022	88.8	9,766	5,691	4,730	409,477	311,631	N/A
6	07/12/2022	89.0	9,440	5,016	5,049	408,502	310,486	N/A
7	07/12/2022	89.5	9,700	5,465	4,381	398,165	304,693	N/A
8	07/13/2022	89.0	9,453	5,406	5,076	411,897	344,148	N/A
9	07/13/2022	87.7	9,458	6,047	4,299	406,507	414,948	N/A
10	07/14/2022	85.2	9,378	5,341	4,839	399,652	333,270	N/A
11	07/14/2022	93.4	9,678	5,796	5,145	401,675	328,872	N/A
12	07/15/2022	83.9	10,201	5,034	4,393	396,251	316,823	N/A
13	07/15/2022	91.9	9,818	6,474	4,437	395,488	293,373	N/A
14	07/16/2022	92.7	9,848	5,821	5,040	410,225	291,089	N/A
15	07/16/2022	92.3	10,204	5,745	4,720	413,790	298,149	N/A
16	07/17/2022	89.9	9,700	6,250	4,639	408,665	305,935	N/A
17	07/18/2022	93.2	9,714	5,832	4,696	407,982	298,081	N/A
18	07/18/2022	92.4	9,818	6,020	4,584	413,126	292,781	N/A
19	07/18/2022	92.5	9,569	6,325	4,815	389,510	292,667	N/A
20	07/19/2022	91.1	9,558	6,535	4,826	414,072	292,271	N/A
21	07/20/2022	92.3	9,481	5,940	4,639	377,587	286,400	N/A
22	07/20/2022	90.1	9,304	5,963	4,961	402,412	282,108	N/A
23	07/21/2022	87.3	9,020	6,231	4,634	399,938	377,863	N/A
24	07/21/2022	81.0	8,336	5,350	5,038	398,206	391,893	N/A
25	07/22/2022	89.7	8,850	7,586	4,749	409,400	311,306	N/A
26	07/22/2022	91.6	9,099	6,266	4,999	406,853	287,069	N/A
27	07/23/2022	87.1	8,935	6,006	4,946	406,190	293,594	N/A
28	07/23/2022	90.8	9,175	6,536	4,739	408,783	302,708	N/A
29	07/24/2022	89.9	8,588	5,587	5,083	400,798	295,786	N/A
30	07/25/2022	87.9	8,326	5,837	5,093	412,264	320,347	N/A
31	07/25/2022	91.9	9,153	5,831	4,933	409,588	282,472	N/A
32	07/25/2022	87.1	8,432	5,559	4,911	403,745	288,876	N/A
33	07/26/2022	85.8	10,058	5,814	4,268	407,607	296,399	N/A
34	07/26/2022	93.2	9,227	5,654	4,532	399,608	286,282	N/A
35	07/27/2022	95.6	9,382	7,386	4,774	399,241	282,175	N/A
36	07/27/2022	93.3	9,158	5,912	4,562	411,487	306,549	N/A
37	07/28/2022	94.4	9,184	7,747	4,625	400,463	296,097	N/A
38	07/28/2022	93.5	8,936	5,876	5,035	404,130	322,557	N/A
39	07/29/2022	96.0	8,655	7,486	4,897	403,010	304,733	N/A
40	07/30/2022	88.3	8,044	7,163	0	399,906	388,349	N/A
41	07/30/2022	97.7	8,459	6,793	5,018	399,324	296,353	N/A
42	07/30/2022	97.6	8,457	6,654	4,845	408,084	304,563	N/A
43	07/31/2022	96.3	8,540	5,519	4,613	403,791	285,776	N/A
44	07/31/2022	95.9	8,201	6,837	5,044	405,893	300,354	N/A
45	07/31/2022	96.4	8,333	6,721	4,972	407,560	293,367	N/A
46	07/31/2022	94.2	8,260	5,208	4,701	403,053	288,647	N/A
47	08/01/2022	96.5	8,412	5,529	4,875	399,734	281,871	N/A
48	08/01/2022	96.1	8,241	6,758	5,155	410,101	293,358	N/A
49	08/01/2022	96.3	8,318	7,790	5,206	399,546	312,799	N/A
50	08/01/2022	97.5	8,223	6,484	4,734	409,446	296,208	N/A
51	08/01/2022	93.4	8,050	6,055	5,042	403,264	290,768	N/A
52	08/02/2022	94.4	8,065	5,302	5,001	397,287	281,429	N/A
53	08/02/2022	96.2	8,396	7,545	4,755	402,183	285,178	N/A
54	08/02/2022	96.5	8,675	7,784	4,779	399,559	284,290	N/A
55	08/02/2022	97.3	8,219	7,157	4,996	408,351	279,057	N/A
56	08/02/2022	95.6	8,082	6,430	4,930	406,024	279,096	N/A
57	08/03/2022	62.7	9,770	4,156	5,079	402,825	601,005	N/A
58	08/03/2022	97.0	8,039	6,447	5,008	412,853	279,107	N/A
59	08/04/2022	94.6	7,776	6,352	5,016	406,640	291,093	N/A
60	08/04/2022	95.5	8,105	6,477	4,672	406,350	295,569	N/A
61	08/04/2022	96.0	8,161	7,019	4,783	401,682	299,469	N/A
62	08/05/2022	95.1	7,921	7,496	5,124	400,963	292,763	N/A
63	08/06/2022	93.1	7,825	6,380	5,055	410,502	306,685	N/A
64	08/06/2022	96.6	8,029	6,805	4,796	409,223	333,728	N/A
65	08/06/2022	92.5	7,568	5,620	5,011	405,331	273,284	N/A
66	08/07/2022	94.2	7,764	6,020	4,887	416,962	290,890	N/A
67	08/07/2022	97.3	7,935	6,888	4,640	419,574	296,361	N/A
68	08/07/2022	97.0	8,061	8,273	4,773	409,249	287,526	N/A
69	08/07/2022	96.9	8,001	8,409	4,646	397,633	281,001	N/A
70	08/07/2022	92.8	8,030	6,428	4,998	415,437	317,581	N/A
71	08/08/2022	94.7	8,139	6,204	5,065	411,917	312,106	N/A
72	08/08/2022	96.8	7,739	8,086	4,580	415,412	284,746	N/A
73	08/08/2022	97.0	7,901	7,820	4,557	408,034	315,372	N/A
74	08/08/2022	95.1	7,865	7,596	4,279	411,643	299,347	N/A
75	08/08/2022	96.1	7,464	5,903	4,450	394,038	272,530	N/A
76	08/09/2022	97.1	7,571	6,228	4,527	412,378	315,193	N/A
77	08/09/2022	96.9	7,314	7,049	4,707	417,490	314,906	N/A
78	08/09/2022	96.0	7,325	6,157	4,722	414,800	289,522	N/A
79	08/09/2022	92.1	7,127	5,108	4,988	410,656	369,524	N/A
80	08/09/2022	95.9	7,036	6,022	5,031	406,577	289,268	N/A
81	08/10/2022	86.4	6,824	6,524	4,646	416,253	324,844	N/A
	AVG=	92	8,663	6,361	4,719	32,643,811	24,915,613	TOTAL

*James*  
03/17/2023

**EXHIBIT 3**

LITHOLOGY/ FORMATION	TOP DEPTH (TVD)	BOTTOM DEPTH (TVD)	TOP DEPTH (MD)	BOTTOM DEPTH (MD)
	From Surface	From Surface	From Surface	From Surface
Sandstone	75	210	75	210
Silty Sandstone	210	240	210	240
Shaly sandstone	240	270	240	270
Silty Sandstone	270	420	270	420
Shaly sandstone	420	490	420	490
Silty Sandstone	490	600	490	600
Shale	600	810	600	810
Silty Sandstone	810	1,070	810	1,070
Shale w/coal interbeds	1,070	1,230	1,070	1,230
Sandy shale	1,230	1,320	1,230	1,320
Shale	1,320	1,410	1,320	1,410
Sandy shale	1,410	1,710	1,410	1,710
Shaly sandstone	1,710	2,070	1,710	2,128
Big Lime	2,100	2,568	2,128	2,657
Fifty Foot Sandstone	2,568	2,717	2,627	2,816
Gordon	2,717	2,957	2,786	3,075
Fifth Sandstone	2,957	3,007	3,045	3,129
Bayard	3,007	3,938	3,099	4,104
Speechley	3,938	4,065	4,074	4,238
Balltown	4,065	4,550	4,208	4,748
Bradford	4,550	5,113	4,718	5,336
Benson	5,113	5,553	5,306	5,799
Alexander	5,553	6,700	5,769	7,055
Sycamore	6,545	6,670	6,867	7,025
Middlesex	6,670	6,769	7,025	7,175
Burkett	6,769	6,797	7,175	7,226
Tully	6,797	6,874	7,226	7,419
Marcellus	6,874	NA	7,419	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.

03/17/2023  
*[Handwritten signature]*



# Hydraulic Fracturing Fluid Product Component Information Disclosure

Job Start Date:	7/8/2022
Job End Date:	8/10/2022
State:	West Virginia
County:	Wetzel
API Number:	47-103-03461-00-00
Operator Name:	Antero Resources Corporation
Well Name and Number:	WELDER UNIT 1H
Latitude:	39.54803000
Longitude:	-80.74374000
Datum:	WGS84
Federal Well:	NO
Indian Well:	NO
True Vertical Depth:	6,984
Total Base Water Volume (gal):	26,832,219
Total Base Non Water Volume:	0



## Hydraulic Fracturing Fluid Composition:

Trade Name	Supplier	Purpose	Ingredients	Chemical Abstract Service Number (CAS #)	Maximum Ingredient Concentration in Additive (% by mass)**	Maximum Ingredient Concentration in HF Fluid (% by mass)**	Comments
Produced Water	Halliburton	Base Fluid					
			Water	7732-18-5	100.00000	87.23926	Density = 8.50
Ingredients	Listed Above	Listed Above					
			Water	7732-18-5	100.00000	0.21640	

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FDP-S1443-21	Halliburton	Corrosion Inhibitor					
				Listed Below			
HYDROCHLORIC ACID, 22 BAUME	Halliburton	Solvent					
				Listed Below			
Sand-Common White-100 Mesh, SSA-2	Halliburton	Proppant					
				Listed Below			
OPTIFLO-II DELAYED RELEASE BREAKER	Halliburton	Breaker					
				Listed Below			
EXCELERATE LX-16	Halliburton	Friction Reducer					
				Listed Below			
WG-36 GELLING AGENT	Halliburton	Gelling Agent					
				Listed Below			
Sand-Premium White-30/70	Halliburton	Proppant					
				Listed Below			
MC B-8614A	MultiChem	Biocide					
				Listed Below			

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

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			Crystalline silica, quartz	14808-60-7	100.00000	12.48650	
			Hydrochloric acid	7647-01-0	30.00000	0.05251	
			Guar gum	9000-30-0	100.00000	0.03433	
			Complex Amine Compound	Proprietary	60.00000	0.03337	
			Hydrotreated light petroleum distillate	64742-47-8	30.00000	0.01669	
			Sodium chloride	7647-14-5	10.00000	0.00556	
			Amine	Proprietary	5.00000	0.00278	
			Ethoxylated alcohol	Proprietary	5.00000	0.00278	
			Glutaraldehyde	111-30-8	30.00000	0.00240	
			Ammonium persulfate	7727-54-0	100.00000	0.00103	
			Alkyl (C12-16) dimethylbenzyl ammonium chloride	68424-85-1	5.00000	0.00040	
			Methanol	67-56-1	100.00000	0.00038	
			Oxylated phenolic resin	Proprietary	30.00000	0.00031	
			Ethoxylated alcohols	Proprietary	30.00000	0.00010	
			Ethanol	64-17-5	1.00000	0.00008	
			Potassium formate	590-29-4	0.10000	0.00006	
			Sodium bisulphite	7681-57-4	0.10000	0.00006	
			Diethanolamine	111-42-2	0.10000	0.00006	
			Modified thiourea polymer	Proprietary	10.00000	0.00003	
			Mixture of dimer and trimer fatty acids of indefinite composition derived from tall oil	61790-12-3	5.00000	0.00002	
			Aldehyde	Proprietary	5.00000	0.00002	
			C.I. pigment Orange 5	3468-63-1	1.00000	0.00001	
			Nitrotriacetic acid, trisodium salt monohydrate	5064-31-3	0.01000	0.00001	
			Ethylenediaminetetraacetic acid, tetrasodium salt	64-02-8	0.01000	0.00001	
			Acetaldehyde	75-07-0	0.01000	0.00001	

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			Ethylene oxide	75-21-8	0.01000	0.00001	
			Sodium hydroxide	1310-73-2	0.01000	0.00001	
			1,4-Dioxane	123-91-1	0.01000	0.00001	
			Hydroquinone monomethyl ether	150-76-5	0.01000	0.00001	
			1-Hexadecene	629-73-2	1.00000	0.00000	
			1-Octadecene	112-88-9	1.00000	0.00000	

\* Total Water Volume sources may include various types of water including fresh water, produced water, and recycled water

\*\* Information is based on the maximum potential for concentration and thus the total may be over 100%

\*\*\* If you are calculating a percentage of total ingredients do not add the water volume below the green line to the water volume above the green line

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

Ingredient information for chemicals subject to 29 CFR 1910.1200(i) and Appendix D are obtained from suppliers Material Safety Data Sheets (MSDS)

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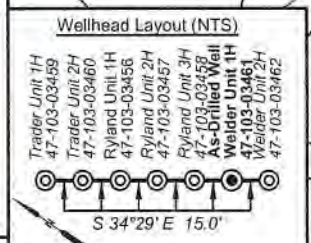
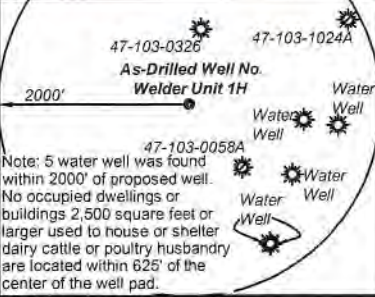
**Antero Resources  
Well No. Welder 1H  
As-Drilled**  
Antero Resources Corporation



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.

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
- Surface boundary (approx.)
- Interior surface tracts (approx.)

9,984' to Top Hole  
1,933' to Bottom Hole

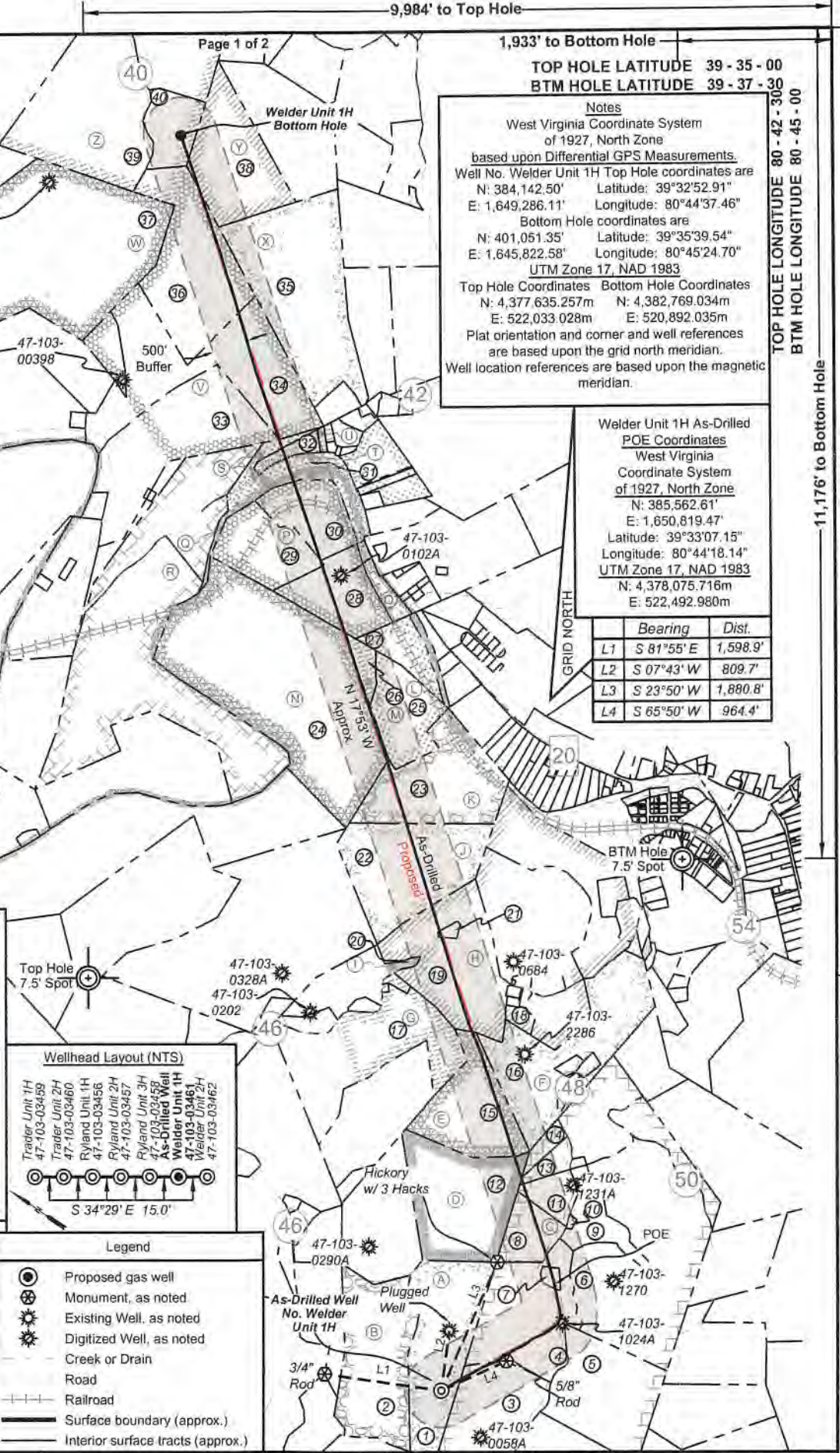
**TOP HOLE LATITUDE 39 - 35 - 00**  
**BTM HOLE LATITUDE 39 - 37 - 30**

**TOP HOLE LONGITUDE 80 - 42 - 30**  
**BTM HOLE LONGITUDE 80 - 45 - 00**

**Notes**  
West Virginia Coordinate System of 1927, North Zone based upon Differential GPS Measurements.  
Well No. Welder Unit 1H Top Hole coordinates are  
N: 384,142.50' Latitude: 39°32'52.91"  
E: 1,649,286.11' Longitude: 80°44'37.46"  
Bottom Hole coordinates are  
N: 401,051.35' Latitude: 39°35'39.54"  
E: 1,645,822.58' Longitude: 80°45'24.70"  
UTM Zone 17, NAD 1983  
Top Hole Coordinates Bottom Hole Coordinates  
N: 4,377,635.257m N: 4,382,769.034m  
E: 522,033.028m E: 520,892.035m  
Plat orientation and corner and well references are based upon the grid north meridian.  
Well location references are based upon the magnetic meridian.

**Welder Unit 1H As-Drilled POE Coordinates**  
West Virginia Coordinate System of 1927, North Zone  
N: 385,562.61'  
E: 1,650,819.47'  
Latitude: 39°33'07.15"  
Longitude: 80°44'18.14"  
UTM Zone 17, NAD 1983  
N: 4,378,075.716m  
E: 522,492.980m

	Bearing	Dist.
L1	S 81°55' E	1,598.9'
L2	S 07°43' W	809.7'
L3	S 23°50' W	1,890.8'
L4	S 65°50' W	964.4'



FILE NO: 135-34-G-18  
DRAWING NO: Welder 1H As-Drilled  
SCALE: 1" = 2000'  
MINIMUM DEGREE OF ACCURACY: Submeter  
PROVEN SOURCE OF ELEVATION: CORS, Monroe County, OH

**STATE OF WEST VIRGINIA**  
DEPARTMENT OF ENVIRONMENTAL PROTECTION  
**OIL AND GAS DIVISION**

DATE: December 6 20 22  
OPERATOR'S WELL NO. Welder Unit 1H  
API WELL NO  
47 - 103 - 03461  
STATE COUNTY PERMIT

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

LOCATION: ELEVATION: As-Built 1,154' WATERSHED: Fishing Creek QUADRANGLE: TOP Hole: Pine Grove  
DISTRICT: Green Antero Resources CORPORATION WATERSHED: Fishing Creek QUADRANGLE: BTM Hole: Porter Falls  
SURFACE OWNER: Corporation COUNTY: Wetzel  
ROYALTY OWNER: Pamela Ann Palmer Emch; William R. Stalnaker; David E. Bowyer; Acropolis, Inc. LEASE NO: ACREAGE: 47.5  
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: 23,731' MD

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

11,176' to Bottom Hole  
12,859' to Top Hole

03/17/2023

*Handwritten signature and date: 2/11/22*



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



Leases	
A	Pamela Ann Palmer Emch
B	BRC Appalachian Minerals I, LLC
C	William R. Stalnaker
D	David E. Bowyer
E	Acropolis, Inc.
F	Antero Minerals, LLC
G	Acropolis, Inc.
H	Dean H. Bucher
I	Linda Carol Gadd Leatham
J	Melody Ree Posey
K	Coastal Forest Resources Co.
L	Terry Lee Cummings
M	Betsy J. Westfall
N	BRC Appalachian Minerals I, LLC
O	Jeffrey D. Brown
P	Dwain Ray Brown
Q	WVDNR
R	Bounty Minerals, LLC
S	H. Dorn Higginbotham, et ux
T	WVDOH
U	David L. Anderson
V	BRC Appalachian Minerals I, LLC
W	Chesapeake Appalachia, LLC
X	Carolyn Jacobs Hampson
Y	P&P Fujimo LLC
Z	Linda Headlee Malone, et vir

ID	TMP/Par	Owner	Bk/Pg	Acres
1	16-26	Antero Resources Corporation	474/713	47.50
2	16-25	Antero Resources Corporation	474/713	39.00
3	17-22	Perry D. Bucher	411/759	37.65
4	17-58	Pennie Baker	411/735	42.41
5	17-23	Michael Steven Blinkman	461/443	40.10
6	17-60	Ross Bucher	411/765	79.00
7	17-56	Pennie R. & Richard K. Bauer	366/273	1.63
8	17-15.1	Douglas Alan & Shirley Joann Bucher	442/718	12.41
9	17-59	Pennie Baker	446/344	12.51
10	17-15.8	Ross William Bucher, Jr.	411/765	0.37
11	17-15.7	Jeremy & Terry Bucher	365/108	7.37
12	16-16	Donald L. Smith II, et ux	451/925	60.75
13	17-15.6	Jeremy & Terry Bucher	365/108	4.14
14	17-15.5	Jeremy & Terry Bucher	427/509	2.13
15	16-13	Donald L. Smith II, et ux	451/925	35.00
16	13-69	Donald L. Mason	410/759	69.61
17	13-67	Gerold F. & Debra D. Richard	398/544	63.27
18	13-68.2	John R. & Jahanna S. Harter	437/873	2.87
19	13-55	John P. Workman, Jr.	W53/535	48.97
20	13-67.5	Julie A. & Aaron E. Hinderman	398/322	16.44
21	13-42	Brian K. & Rebecca A. Starkey	410/127	1.02
22	13-36	Coastal Forest Resources Co.	444/105	50.00
23	13-28	Coastal Forest Resources Co.	444/105	46.25
24	13-18	Coastal Forest Resources Co.	444/105	119.00
25	13-19	John F. Long Estate, et al	442/101	19.25
26	13-87	Raymond P. & Pamela J. Gaston	429/227	4.45
27	13-88	John F. Long Estate, et al	442/101	26.00
28	13-12.6	Dwain Ray Brown	421/897	15.00
29	13-2	Dwain Ray Brown	421/897	19.75
30	8-42	Dwain Ray Brown	421/897	22.00
31	8-38.9	H. Dorn Higginbotham & Janet L. Workman Higginbotham	363/197	5.00
32	8-38.1	David L. Anderson	340/578	2.25
33	8-47	Larrison Brothers, LLC	417/100	53.62
34	8-29	James L. Scott, Sr., et al	431/50	64.76
35	8-30	Michael L. & Erin M. Greathouse	363/91	76.00
36	8-46	John George	367/478	52.21
37	8-25	Jody Kay Rine, et al	435/542	130.00
38	8-21	BP Mineral Holdings II LLC & Somerset Minerals LP	425/427	43.50
39	8-20.3	Brent A. & Amy S. Boram	427/802	62.60
40	8-20.2	Loraine M. Williams	383/463	15.00

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SMC  
 2/13/22