

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

API 47 - 103 - 03462 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 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 4377632m Easting 522036m  
Landing Point of Curve Northing 4378165.26m Easting 522740.66m  
Bottom Hole Northing 4382897m Easting 521110m

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 11/10/2021 Date drilling commenced 12/10/2021 Date drilling ceased 3/27/2022  
Date completion activities began 7/11/2022 Date completion activities ceased 9/16/2022  
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

Reviewed by: [Signature]  
03/17/2023

**APPROVED**

API 47-103 - 03462 Farm name Antero Resources Corporation Well number Welder 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#, X60	N/A	Y
Surface	17-1/2"	13-3/8"	367'	New	54.5#, J-55	N/A	Y
Coal							
Intermediate 1	12-1/4"	9-5/8"	2707'	New	36#, J-55	N/A	Y
Intermediate 2							
Intermediate 3							
Production	8-3/4"/8-1/2"	5-1/2"	24240'	New	23#, P-110cy	N/A	Y
Tubing		2-3/8"	7462-1/2'		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	4160 sx (Tail)	13.5 (Lead), 15.2(Tail)	1.18 (Tail)	4909	-500' into Intermediate Casing	8 Hrs.
Tubing							

Drillers TD (ft) 24240' MD, 6925' TVD (BHL), 6987' (Deepest Point Drilled) Loggers TD (ft) 24240' MD

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

Plug back procedure N/A

Kick off depth (ft) 6797'

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

*SMG*  
*3/13/23*  
**03/17/2023**





API 47- 103 - 03462 Farm name Antero Resources Corporation Well number Welder Unit 2H

<u>PRODUCING FORMATION(S)</u>	<u>DEPTHS</u>	
Marcellus	6898' (TOP) TVD	7780' (TOP) MD

Please insert additional pages as applicable.

GAS TEST  Build up  Drawdown  Open Flow OIL TEST  Flow  Pump

SHUT-IN PRESSURE Surface 1281 psi Bottom Hole --- psi DURATION OF TEST --- hrs

OPEN FLOW Gas 13424 mcfpd Oil 517 bpd NGL --- bpd Water 1538 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

*SM*  
*2/13/23*  
03/17/2023

**Exhibit 1**

Stage No.	Perforation Date	Perforated from MD ft.	Perforated to MD ft.	Number of Perforations	Formations
1	07/11/2022	24105.0	24058.0	60	Marcellus
2	07/11/2022	24019.6	23854.7	60	Marcellus
3	07/12/2022	23819.3	23654.4	60	Marcellus
4	07/12/2022	23619.1	23454.1	60	Marcellus
5	07/12/2022	23418.8	23253.9	60	Marcellus
6	07/12/2022	23218.5	23053.6	60	Marcellus
7	07/13/2022	23018.2	22853.3	60	Marcellus
8	07/13/2022	22817.9	22653.0	60	Marcellus
9	07/13/2022	22617.6	22452.7	60	Marcellus
10	07/14/2022	22417.3	22252.4	60	Marcellus
11	07/14/2022	22217.1	22052.2	60	Marcellus
12	07/15/2022	22016.8	21851.9	60	Marcellus
13	07/15/2022	21816.5	21651.6	60	Marcellus
14	07/16/2022	21616.2	21451.3	60	Marcellus
15	07/16/2022	21415.9	21251.0	60	Marcellus
16	07/17/2022	21215.6	21050.7	60	Marcellus
17	07/18/2022	21015.4	20850.5	60	Marcellus
18	07/18/2022	20815.1	20650.2	60	Marcellus
19	07/18/2022	20614.8	20449.9	60	Marcellus
20	07/19/2022	20414.5	20249.6	60	Marcellus
21	07/19/2022	20214.2	20049.3	60	Marcellus
22	07/20/2022	20013.9	19849.0	60	Marcellus
23	07/20/2022	19813.7	19648.8	60	Marcellus
24	07/21/2022	19613.4	19448.5	60	Marcellus
25	07/21/2022	19413.1	19248.2	60	Marcellus
26	07/22/2022	19212.8	19047.9	60	Marcellus
27	07/23/2022	19012.5	18847.6	60	Marcellus
28	07/23/2022	18812.2	18647.3	60	Marcellus
29	07/24/2022	18612.0	18447.0	60	Marcellus
30	07/24/2022	18411.7	18246.8	60	Marcellus
31	07/25/2022	18211.4	18046.5	60	Marcellus
32	07/25/2022	18011.1	17846.2	60	Marcellus
33	07/26/2022	17810.8	17645.9	60	Marcellus
34	07/26/2022	17610.5	17445.6	60	Marcellus
35	07/27/2022	17410.2	17245.3	60	Marcellus
36	07/27/2022	17210.0	17045.1	60	Marcellus
37	07/28/2022	17009.7	16844.8	60	Marcellus
38	07/28/2022	16809.4	16644.5	60	Marcellus
39	07/29/2022	16609.1	16444.2	60	Marcellus
40	07/29/2022	16408.8	16243.9	60	Marcellus
41	07/30/2022	16208.5	16043.6	60	Marcellus
42	07/30/2022	16008.3	15843.4	60	Marcellus
43	07/30/2022	15808.0	15643.1	60	Marcellus
44	07/31/2022	15607.7	15442.8	60	Marcellus
45	07/31/2022	15407.4	15242.5	60	Marcellus
46	07/31/2022	15207.1	15042.2	60	Marcellus
47	08/01/2022	15006.8	14841.9	60	Marcellus
48	08/01/2022	14806.6	14641.7	60	Marcellus
49	08/01/2022	14606.3	14441.4	60	Marcellus
50	08/01/2022	14406.0	14241.1	60	Marcellus
51	08/01/2022	14205.7	14040.8	60	Marcellus
52	08/02/2022	14005.4	13840.5	60	Marcellus
53	08/02/2022	13805.1	13640.2	60	Marcellus
54	08/02/2022	13604.9	13440.0	60	Marcellus
55	08/02/2022	13404.6	13239.7	60	Marcellus
56	08/02/2022	13204.3	13039.4	60	Marcellus
57	08/02/2022	13004.0	12839.1	60	Marcellus
58	08/03/2022	12803.7	12638.8	60	Marcellus
59	08/03/2022	12603.4	12438.5	60	Marcellus
60	08/03/2022	12403.2	12238.2	60	Marcellus
61	08/04/2022	12202.9	12038.0	60	Marcellus
62	08/04/2022	12002.6	11837.7	60	Marcellus
63	08/04/2022	11802.3	11637.4	60	Marcellus
64	08/05/2022	11602.0	11437.1	60	Marcellus
65	08/05/2022	11401.7	11236.8	60	Marcellus
66	08/06/2022	11201.4	11036.5	60	Marcellus
67	08/06/2022	11001.2	10836.3	60	Marcellus
68	08/06/2022	10800.9	10636.0	60	Marcellus
69	08/07/2022	10600.6	10435.7	60	Marcellus
70	08/07/2022	10400.3	10235.4	60	Marcellus
71	08/07/2022	10200.0	10035.1	60	Marcellus
72	08/07/2022	9999.7	9834.8	60	Marcellus
73	08/08/2022	9799.5	9634.6	60	Marcellus
74	08/08/2022	9599.2	9434.3	60	Marcellus
75	08/08/2022	9398.9	9234.0	60	Marcellus
76	08/08/2022	9198.6	9033.7	60	Marcellus
77	08/08/2022	8998.3	8833.4	60	Marcellus
78	08/09/2022	8798.0	8633.1	60	Marcellus
79	08/09/2022	8597.8	8432.9	60	Marcellus
80	08/09/2022	8397.5	8232.6	60	Marcellus
81	08/09/2022	8197.2	8032.3	60	Marcellus
82	08/09/2022	7996.9	7832.0	60	Marcellus

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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	07/11/2022	75.9	9,331	0	4,220	178,130	249,035	N/A
2	07/11/2022	87.7	10,268	5,548	4,612	408,360	331,201	N/A
3	07/12/2022	86.3	9,985	5,836	4,253	401,082	309,966	N/A
4	07/12/2022	86.5	9,889	5,515	4,374	408,324	312,028	N/A
5	07/12/2022	84.0	9,514	5,426	4,639	407,984	307,213	N/A
6	07/12/2022	85.8	9,546	5,272	4,565	406,714	310,375	N/A
7	07/13/2022	89.2	9,743	5,261	4,469	403,190	317,119	N/A
8	07/13/2022	86.9	9,533	5,228	5,048	402,713	297,815	N/A
9	07/13/2022	89.7	9,685	5,347	4,977	396,755	316,857	N/A
10	07/14/2022	87.1	9,615	5,322	4,772	407,527	319,891	N/A
11	07/14/2022	90.3	9,851	5,346	4,995	396,748	309,211	N/A
12	07/15/2022	90.3	10,077	5,542	5,390	404,746	296,909	N/A
13	07/15/2022	81.5	9,317	5,699	4,427	413,915	384,447	N/A
14	07/16/2022	88.0	10,015	0	4,047	410,527	315,895	N/A
15	07/16/2022	83.5	9,862	6,425	4,987	411,042	363,331	N/A
16	07/17/2022	83.1	9,862	5,467	5,000	393,938	311,425	N/A
17	07/18/2022	92.7	10,081	6,773	4,480	411,523	300,644	N/A
18	07/18/2022	89.9	9,849	5,444	4,731	412,015	291,344	N/A
19	07/18/2022	91.9	9,808	0	4,572	393,593	290,308	N/A
20	07/19/2022	87.4	9,628	0	4,989	393,771	293,543	N/A
21	07/19/2022	90.2	9,745	5,381	4,955	397,509	289,652	N/A
22	07/20/2022	91.6	9,666	6,078	4,910	401,294	282,889	N/A
23	07/20/2022	88.0	9,450	8,183	4,473	406,207	295,947	N/A
24	07/21/2022	88.2	9,167	6,049	5,003	406,957	291,809	N/A
25	07/21/2022	87.8	8,853	6,622	4,842	404,568	327,470	N/A
26	07/22/2022	85.2	8,899	6,475	5,050	406,617	297,254	N/A
27	07/23/2022	88.0	9,103	6,268	5,159	407,338	291,156	N/A
28	07/23/2022	90.3	8,886	5,844	4,837	414,660	312,596	N/A
29	07/24/2022	88.8	9,007	7,412	5,026	402,972	296,138	N/A
30	07/24/2022	85.8	9,208	5,290	4,905	412,367	291,238	N/A
31	07/25/2022	91.1	9,330	6,997	4,998	412,100	305,173	N/A
32	07/25/2022	87.6	8,913	5,612	5,040	405,737	305,418	N/A
33	07/26/2022	76.0	8,531	7,014	5,265	388,142	394,114	N/A
34	07/26/2022	92.1	9,595	6,246	4,575	357,640	301,669	N/A
35	07/27/2022	89.6	8,654	6,831	4,711	400,899	310,397	N/A
36	07/27/2022	87.0	8,254	4,875	5,198	390,132	535,405	N/A
37	07/28/2022	92.6	8,992	6,713	4,718	407,676	322,817	N/A
38	07/28/2022	65.5	7,731	6,424	4,851	401,221	397,174	N/A
39	07/29/2022	95.2	8,864	6,534	5,250	410,441	298,468	N/A
40	07/29/2022	92.2	8,832	6,727	4,461	400,235	355,963	N/A
41	07/30/2022	96.9	8,824	7,025	4,812	398,659	308,563	N/A
42	07/30/2022	96.4	8,845	7,119	4,732	401,383	309,470	N/A
43	07/30/2022	95.8	8,653	6,753	4,560	411,470	288,541	N/A
44	07/31/2022	95.0	8,722	7,418	5,032	400,600	281,836	N/A
45	07/31/2022	97.0	8,325	7,105	4,879	399,605	289,482	N/A
46	07/31/2022	98.3	9,123	7,497	4,578	405,196	287,606	N/A
47	08/01/2022	90.7	8,705	8,121	4,983	400,416	286,841	N/A
48	08/01/2022	88.4	8,688	7,351	3,863	401,255	286,645	N/A
49	08/01/2022	95.5	8,529	7,258	4,799	398,334	285,872	N/A
50	08/01/2022	95.9	8,435	7,058	4,993	408,206	292,447	N/A
51	08/01/2022	94.6	8,616	7,261	4,587	407,002	287,389	N/A
52	08/02/2022	94.1	8,048	6,976	0	399,372	307,994	N/A
53	08/02/2022	96.2	8,134	6,745	5,022	397,259	281,947	N/A
54	08/02/2022	96.1	8,352	7,556	5,158	403,397	279,515	N/A
55	08/02/2022	96.8	8,253	7,680	3,997	399,432	281,959	N/A
56	08/02/2022	93.2	8,577	7,090	4,012	381,105	268,743	N/A
57	08/02/2022	94.1	8,034	6,077	5,089	396,405	271,421	N/A
58	08/03/2022	95.4	8,492	7,546	5,032	409,842	283,980	N/A
59	08/03/2022	97.5	8,547	0	4,903	407,762	294,594	N/A
60	08/03/2022	86.9	8,293	7,696	4,978	411,134	316,310	N/A
61	08/04/2022	95.1	8,432	7,030	5,064	413,721	295,918	N/A
62	08/04/2022	93.7	8,765	0	4,900	405,198	328,340	N/A
63	08/04/2022	92.4	8,576	8,190	4,621	399,376	311,121	N/A
64	08/05/2022	97.7	8,082	7,314	4,979	408,546	302,475	N/A
65	08/05/2022	93.5	8,077	6,274	5,015	396,280	284,061	N/A
66	08/06/2022	94.7	7,814	7,061	5,067	406,312	322,072	N/A
67	08/06/2022	97.0	7,930	5,937	5,078	411,296	302,693	N/A
68	08/06/2022	92.3	8,817	6,079	4,818	410,905	302,018	N/A
69	08/07/2022	90.1	7,486	5,490	5,015	411,068	279,419	N/A
70	08/07/2022	97.6	7,940	7,649	4,661	399,714	279,666	N/A
71	08/07/2022	95.2	7,986	7,181	4,188	410,528	307,437	N/A
72	08/07/2022	94.9	7,676	8,149	4,993	413,580	314,221	N/A
73	08/08/2022	94.8	7,783	6,341	5,093	415,897	310,925	N/A
74	08/08/2022	96.1	7,810	5,848	5,043	397,132	302,453	N/A
75	08/08/2022	97.5	7,865	8,140	4,509	398,347	323,562	N/A
76	08/08/2022	97.2	8,015	7,866	4,400	396,067	320,688	N/A
77	08/08/2022	96.7	7,763	5,935	4,639	408,572	310,584	N/A
78	08/09/2022	96.3	7,514	5,601	4,674	396,953	273,590	N/A
79	08/09/2022	97.0	7,365	5,791	4,469	414,835	314,784	N/A
80	08/09/2022	94.8	7,378	0	5,144	415,463	286,496	N/A
81	08/09/2022	96.4	7,319	6,728	4,605	419,854	295,706	N/A
82	08/09/2022	94.9	7,091	5,503	5,017	399,961	280,452	N/A
	AVG=	91	8,766	5,957	4,729	32,884,748	25,181,140	TOTAL

SMG  
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	2,068	1,710	2,164
Big Lime	2,098	2,569	2,164	2,714
Fifty Foot Sandstone	2,569	2,716	2,684	2,875
Gordon	2,716	2,945	2,845	3,128
Fifth Sandstone	2,945	2,995	3,098	3,184
Bayard	2,995	3,928	3,154	4,222
Speechley	3,928	4,058	4,192	4,369
Balltown	4,058	4,556	4,339	4,915
Bradford	4,556	5,114	4,885	5,534
Benson	5,114	5,551	5,504	6,028
Alexander	5,551	6,719	5,998	7,363
Sycamore	6,562	6,689	7,163	7,333
Middlesex	6,689	6,789	7,333	7,497
Burkett	6,789	6,820	7,497	7,560
Tully	6,820	6,898	7,560	7,780
Marcellus	6,898	NA	7,780	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



## Hydraulic Fracturing Fluid Product Component Information Disclosure

Job Start Date:	7/11/2022
Job End Date:	8/9/2022
State:	West Virginia
County:	Wetzel
API Number:	47-103-03462-00-00
Operator Name:	Antero Resources Corporation
Well Name and Number:	WELDER UNIT 2H
Latitude:	39.54800000
Longitude:	-80.74371000
Datum:	WGS84
Federal Well:	NO
Indian Well:	NO
True Vertical Depth:	6,987
Total Base Water Volume (gal):	27,174,847
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	87.28357	Density = 8.50
Ingredients	Listed Above	Listed Above					
			Water	7732-18-5	100.00000	0.22884	

*Smiley  
2/13/23*



HYDROCHLORIC ACID, 22 BAUME	Halliburton	Solvent					
				Listed Below			
MC B-8614A	MultiChem	Biocide					
				Listed Below			
Sand-Premium White-30/70	Halliburton	Proppant					
				Listed Below			
EXCELERATE LX-16	Halliburton	Friction Reducer					
				Listed Below			
WG-36 GELLING AGENT	Halliburton	Gelling Agent					
				Listed Below			
Sand-Common White-100 Mesh, SSA-2	Halliburton	Proppant					
				Listed Below			
FDP-S1443-21	Halliburton	Corrosion Inhibitor					
				Listed Below			
OPTIFLO-II DELAYED RELEASE BREAKER	Halliburton	Breaker					
				Listed Below			
Items above are Trade Names with the exception of Base Water . Items below are the individual ingredients.							

SM

		Crystalline silica, quartz	14808-60-7	100.00000	12.42638
		Hydrochloric acid	7647-01-0	30.00000	0.05534
		Complex Amine Compound	Proprietary	60.00000	0.03622
		Guar gum	9000-30-0	100.00000	0.03576
		Hydrotreated light petroleum distillate	64742-47-8	30.00000	0.01811
		Sodium chloride	7647-14-5	10.00000	0.00604
		Amine	Proprietary	5.00000	0.00302
		Ethoxylated alcohol	Proprietary	5.00000	0.00302
		Glutaraldehyde	111-30-8	30.00000	0.00244
		Ammonium persulfate	7727-54-0	100.00000	0.00106
		Alkyl (C12-16) dimethylbenzyl ammonium chloride	68424-85-1	5.00000	0.00041
		Methanol	67-56-1	100.00000	0.00041
		Oxylated phenolic resin	Proprietary	30.00000	0.00032
		Ethoxylated alcohols	Proprietary	30.00000	0.00010
		Ethanol	64-17-5	1.00000	0.00008
		Sodium bisulphite	7681-57-4	0.10000	0.00006
		Potassium formate	590-29-4	0.10000	0.00006
		Diethanolamine	111-42-2	0.10000	0.00006
		Modified thiourea polymer	Proprietary	10.00000	0.00003
		Aldehyde	Proprietary	5.00000	0.00002
		Mixture of dimer and trimer fatty acids of indefinite composition derived from tall oil	61790-12-3	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
		Hydroquinone monomethyl ether	150-76-5	0.01000	0.00001
		Ethylene oxide	75-21-8	0.01000	0.00001

UJ



			Sodium hydroxide	1310-73-2	0.01000	0.00001	
			Ethylenediaminetetraacetic acid, tetrasodium salt	64-02-8	0.01000	0.00001	
			Acetaldehyde	75-07-0	0.01000	0.00001	
			1,4-Dioxane	123-91-1	0.01000	0.00001	
			1-Octadecene	112-88-9	1.00000	0.00000	
			1-Hexadecene	629-73-2	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)

JM



9,976' to Top Hole

1,217' 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

**Antero Resources**  
**Well No. Welder 2H**  
**As-Drilled**  
Antero Resources Corporation



**Notes**  
West Virginia Coordinate System of 1927, North Zone based upon Differential GPS Measurements. Well No. Welder Unit 2H Top Hole coordinates are N: 384,130.18' Latitude: 39°32'52.79" E: 1,649,294.61' Longitude: 80°44'37.35" Bottom Hole coordinates are N: 401,458.65' Latitude: 39°35'43.67" E: 1,646,544.72' Longitude: 80°45'15.55" UTM Zone 17, NAD 1983

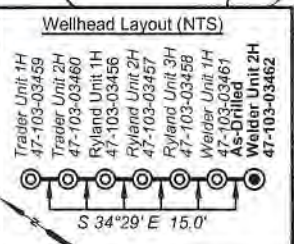
Top Hole Coordinates Bottom Hole Coordinates  
N: 4,377,631.547m N: 4,382,896.800m  
E: 522,035.680m E: 521,109.974m

Plat orientation and corner and well references are based upon the grid north meridian. Well location references are based upon the magnetic meridian.

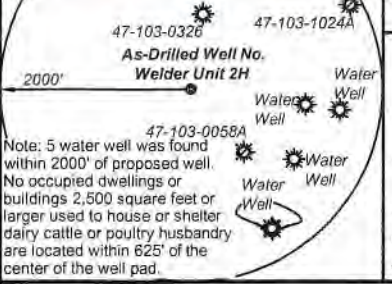
Top Hole Coordinates, As-drilled data, and information was provided by Antero Resources Corporation. Allegheny Surveys Inc. (ASI) is not certifying the data and information provided. ASI is not responsible for any errors or inaccuracies with the data and information that has been provided.

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.)



FILE NO: 135-34-G-18  
DRAWING NO: Welder 2H 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 2H  
API WELL NO  
47 - 103 - 03462  
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 537.11875; BTM Hole: Porter Falls 47.5, 167.650, 50.0  
DISTRICT: Green Antero Resources Rocky G. Miracle, et ux; R. Kevin Hall & Ronald L. Hall; H. Dom Higginbotham, et ux COUNTY: Wetzel 036772023  
SURFACE OWNER: Corporation Jeffrey D. Brown; Judy Smith; Margaret Lancaster, et vir; ACREAGE: 47.5 0.604; 6.89; 1.25; 50.225; 57.38;  
ROYALTY OWNER: Pamela Ann Palmer Emch; William R. Stalnaker; Antero Minerals, LLC; Dean H. Bucher. LEASE NO: ACREAGE: 3.19; 4.5; 76; 43.5

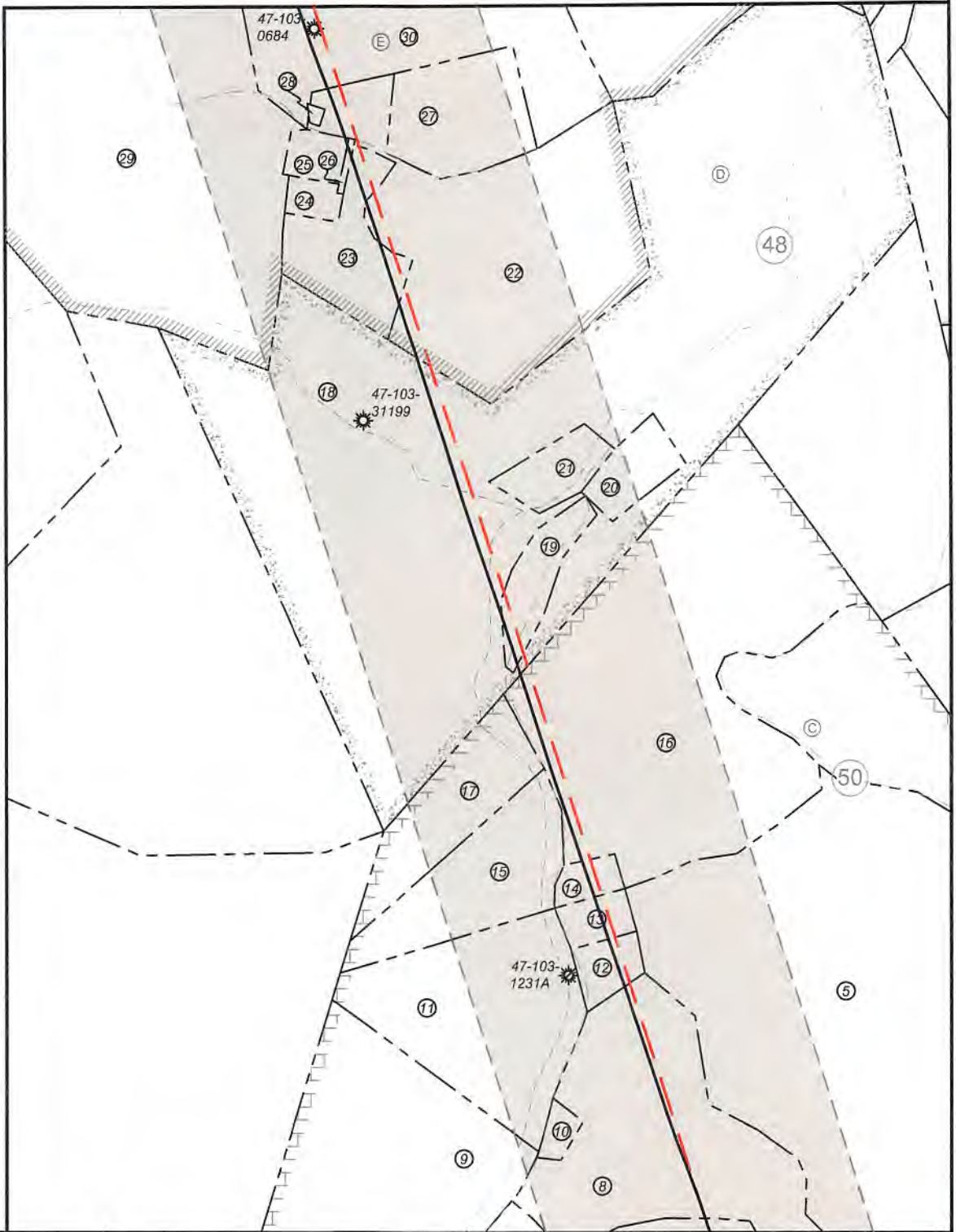
PROPOSED WORK:  DRILL  CONVERT  DRILL DEEPER  FRACTURE OR STIMULATE  PLUG OFF OLD FORMATION  
 PERFORATE NEW FORMATION  OTHER PHYSICAL CHANGE IN WELL (SPECIFY) As-Drilled  
 PLUG AND ABANDON  CLEAN OUT AND REPLUG TARGET FORMATION: Marcellus Shale ESTIMATED DEPTH: 6,925' TVD 24,240' MD

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

*Handwritten signature and date: Miller 12/6/23*



**Antero Resources**  
**Well No. Welder 2H**  
**As-Drilled**  
 Antero Resources Corporation



FILE NO: 135-34-G-18  
 DRAWING NO: Welder 2H As-Drilled  
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 CORS, Monroe County, OH

**STATE OF WEST VIRGINIA**  
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 DISTRICT: Green Antero Resources Rocky G. Miracle, et ux; R. Kevin Hall & Ronald L. Hall; H. Dom Higginbotham, et ux COUNTY: Wetzel 47.5; 167.650; 50;  
 SURFACE OWNER: Corporation Jeffrey D. Brown; Judy Smith; Margaret Lancaster, et vir; Melody Ree Posey; Coastal Forest Resources Co.; Terry Lee Cummings; Doris L. West; ACREAGE: 47.5 4.20; 2.71; 39.396;  
 ROYALTY OWNER: Pamela Ann Palmer Emch; William R. Stalnaker; Antero Minerals, LLC; Dean H. Bucher; LEASE NO: ACREAGE: 3.19; 4.5; 76; 43.5

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: 6,925' TVD  
 24,240' MD

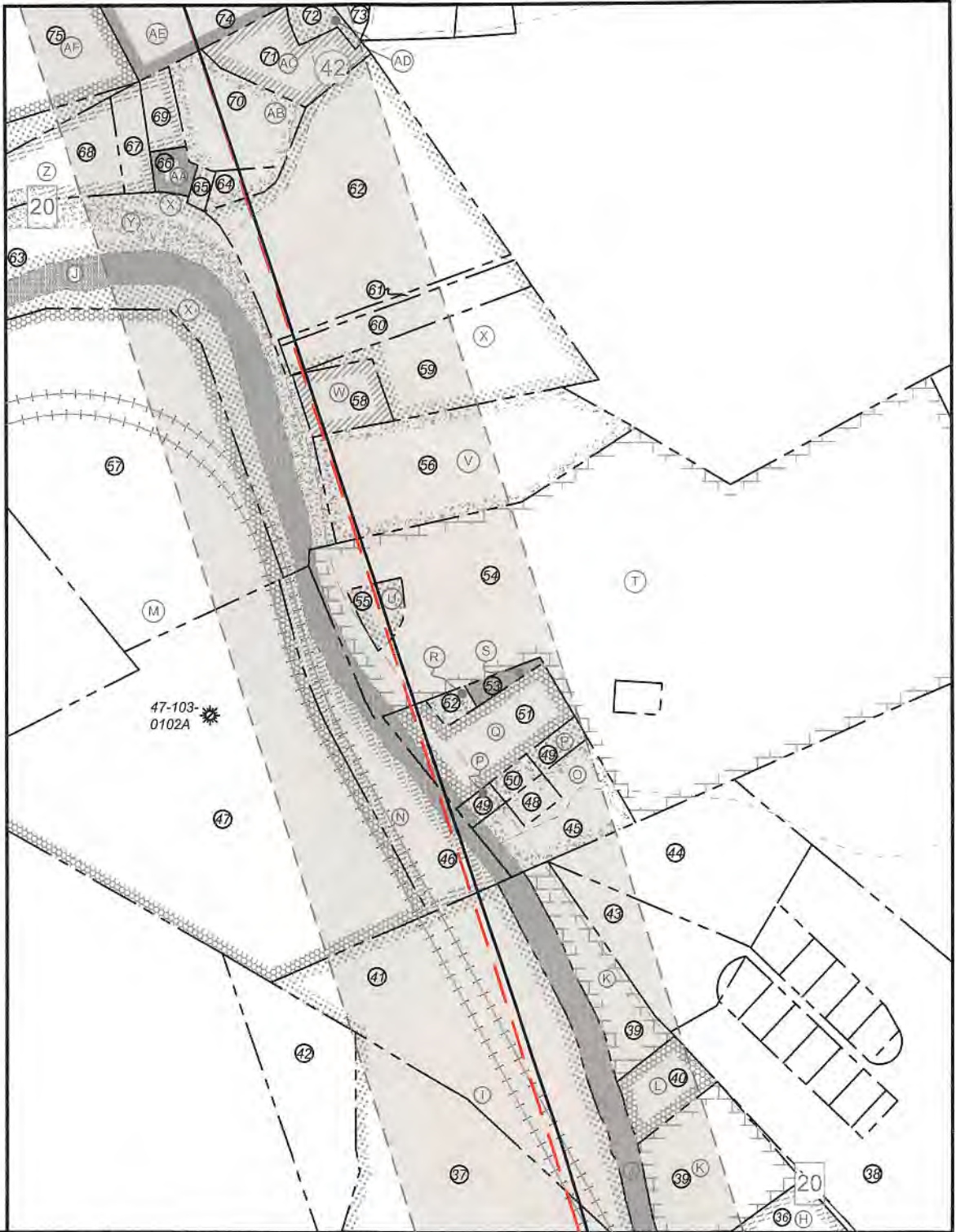
WELL OPERATOR: Antero Resources Corporation DESIGNATED AGENT: Kevin Ellis  
 ADDRESS: 1615 Wynkoop Street ADDRESS: 535 White Oaks Blvd.  
 Denver, CO 80202 Bridgeport, WV 26330

03/17/2023

*Handwritten signature and date: JMW 2/23/23*



**Antero Resources**  
**Well No. Welder 2H**  
**As-Drilled**  
 Antero Resources Corporation



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

FILE NO: 135-34-G-18  
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Submeter  
 PROVEN SOURCE OF ELEVATION:  
CORS, Monroe County, OH

DATE: December 6 2022  
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 API WELL NO  
47 — 103 — 03462  
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WELL TYPE:  OIL  GAS  LIQUID INJECTION  WASTE DISPOSAL  
 (IF GAS) PRODUCTION:  STORAGE  DEEP  SHALLOW

LOCATION: ELEVATION: As-Built 1,154' WATERSHED: Fishing Creek QUADRANGLE: BTM Hole: Porter Falls TOP Hole: Pine Grove 537.11875;  
 DISTRICT: Green Antero Resources WVDNR: Wilbur B. Dawson; Lloyd Lee King; Carolyn Jacobs Hampson; P&P Fujimo, LLC 47.5; 167.850; 50;  
 SURFACE OWNER: Corporation Jeffrey D. Brown; Judy Smith; Margaret Lancaster, et vir; Melody Ree Posey; Coastal Forest Resources Co.; Terry Lee Cummings; Doris L. West; COUNTY: Wetzel 0341772023  
 ROYALTY OWNER: Pamela Ann Palmer Emch; William R. Stalnaker; Antero Minerals, LLC; Dean H. Bucher; LEASE NO: \_\_\_\_\_ ACREAGE: 47.5 4.20; 2.71; 39.396;  
 PROPOSED WORK:  DRILL  CONVERT  DRILL DEEPER  FRACTURE OR STIMULATE  PLUG OFF OLD FORMATION 0.604; 6.89; 1.25;  
 PERFORATE NEW FORMATION  OTHER PHYSICAL CHANGE IN WELL (SPECIFY) As-Drilled 50.225; 57.38;  
 PLUG AND ABANDON  CLEAN OUT AND REPLUG TARGET FORMATION: Marcellus Shale ESTIMATED DEPTH: 24,240' MD 6,925' 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

*Handwritten signature and date:*  
 Smith  
 2/2/23



**Antero Resources**  
**Well No. Welder 2H**  
**As-Drilled**  
 Antero Resources Corporation



Leases	
A	Pamela Ann Palmer Emch
B	BRC Appalachian Minerals I LLC
C	William R. Stalnaker
D	Antero Minerals LLC
E	Dean H. Bucher
F	Melody Ree Posey
G	Coastal Forest Resources Co.
H	Nola Jean Parks
I	Terry Lee Cummings
J	WVDNR
K	Betty C. Long
L	Gary R. Partridge, et ux
M	Dwain Ray Brown
N	Jeffrey D. Brown
O	Timothy L. McDiffitt, et ux
P	Daniel S. Brown
Q	Judy Smith
R	Margaret Lancaster

Leases	
S	Margaret Lancaster
T	Margaret Lancaster, et vir
U	Doris L. West
V	Rocky G. Miracle, et ux
W	R. Kevin Hall & Ronald L. Hall
X	H. Dorn Higginbotham, et ux
Y	WVDOH
Z	David L. Anderson
AA	Ray G. Ice, et ux
AB	Wilbur B. Dawson
AC	Donald Ardell Howell
AD	Samuel R. Haught, et ux
AE	Lloyd Lee King
AF	BRC Appalachian Minerals I LLC
AG	Lillian Priscilla Grimm
AH	Carolyn Jacobs Hampson
AI	P&P Fujimo LLC
AJ	Maria Delia Estrada
AK	Linda Headlee Malone, et vir

ID	TM/Par	Owner	Bk/Pg	Acres	ID	TM/Par	Owner	Bk/Pg	Acres
1	16-26	Antero Resources Corporation	474/713	47.50	43	13-19.3	Roger L. & Sarah M. Harrison	455/399	3.01
2	16-25	Antero Resources Corporation	474/713	39.00	44	13-19.2	Roger D. & Kimmie L. Long	313/183	4.99
3	17-22	Perry D. Bucher	411/759	37.65	45	13-12.3	Timothy L. & Tammy D. McDiffitt	441/68	2.24
4	17-58	Pennie Baker	411/735	42.41	46	13-12.5	Jeffrey D. Brown	383/701	4.20
5	17-23	Michael Steven Blinkman	461/443	40.10	47	13-12.6	Dwain Ray Brown	421/897	15.00
6	17-56	Pennie R. & Richard K. Bauer	366/273	1.63	48	13-12.2	Timothy L. & Tammy D. McDiffitt	441/68	0.34
7	17-60	Ross Bucher	411/765	79.00	49	13-12.4	Bradley Keith & Daniel Scott Brown	440/781	0.48
8	17-59	Pennie Baker	446/344	12.51	50	13-12.1	Timothy L. & Tammy D. McDiffitt	441/68	0.27
9	17-15.1	Douglas Alan & Shirley Joann Bucher	442/718	12.41	51	13-12	Judy Smith	341/320	2.71
10	17-15.8	Ross William Bucher, Jr.	411/765	0.37	52	13-3	Phillip Dale Haught	465/207	0.29
11	17-15.7	Jeremy & Terry Bucher	365/108	7.37	53	13-4	Phillip Dale Haught	465/207	0.32
12	17-15.2	Ross William Bucher, Jr.	411/765	0.84	54	13-6	Margaret Lancaster	333/440	39.40
13	17-15.3	Ross William Bucher, Jr.	292/329	0.73	55	13-6.1	Doris L. West	442/411	0.60
14	17-15.4	Steven C. & Bertie G. Blinkman	292/332	0.57	56	13-8.5	Rocky G. & Vicki S. Miracle	325/11	6.89
15	17-15.6	Jeremy & Terry Bucher	365/108	4.14	57	8-42	Dwain Ray Brown	421/897	22.00
16	17-57	Steven C. & Bertie G. Blinkman	388/243	20.60	58	8-38.4	Kevin R. & Ronald L. Hall	360/124	1.25
17	17-15.5	Jeremy & Terry Bucher	427/509	2.13	59	8-38.6	Kevin R. & Ronald L. Hall	360/124	4.25
18	13-69	Donald L. Mason	410/759	69.61	60	8-38.7	Robert & Carolyn Kocher	269/420	1.86
19	13-69.4	David P. & Jami D. Morris	450/428	1.47	61	8-38.10	Robert P. & Carolyn J. Kocher	484/459	0.36
20	13-69.3	David P. & Jami D. Morris	364/9	1.25	62	8-38.2	H. Dorn Higginbotham & Janet L. Workman Higginbotham	286/386	10.32
21	13-69.2	Carol S. Bishop	344/568	1.25	63	8-38.9	H. Dorn Higginbotham & Janet L. Workman Higginbotham	363/197	5.00
22	13-68	John Ronald & Johnna Shay Harter	437/867	14.62	64	8-38.3	Wilbur B. Dawson & Loretta P. Ueltschy	378/108	0.48
23	13-68.2	John R. & Johnna S. Harter	437/873	2.87	65	8-38.12	Wilbur B. Dawson & Loretta P. Ueltschy	378/108	0.19
24	XX-XX	Milburn Cemetery Association	299/524	0.52	66	8-38	Ray G. & Thelma L. Ice	367/290	2.00
25	13-56	Milburn Cemetery Association	—/—	0.64	67	8-38.8	David L. Anderson	340/578	0.77
26	13-68.3	Milburn Cemetery Association	440/710	0.07	68	8-38.1	David L. Anderson	340/578	2.25
27	13-68.1	Charles M. Haught	315/642	3.44	69	8-38.11	David L. Anderson	340/578	0.63
28	XX-XX	Wetzel County Public Service District	433/849	0.06	70	8-38.5	Wilbur B. Dawson & Loretta P. Ueltschy	378/108	2.53
29	13-55	John P. Workman, Jr.	W53/535	48.97	71	8-40	Donald A. Howell & Glenda D. Jackson	403/415	1.75
30	13-43	John R. & Johnna S. Harter	437/867	46.25	72	8-40.1	Clara M. & Samuel R. Haught	403/411	0.58
31	13-90	Coastal Forest Resources Co.	444/105	36.13	73	8-28.2	Theresa A. Ice	347/368	0.85
32	13-36	Coastal Forest Resources Co.	444/105	50.00	74	8-39	John F. King	25/264	4.50
33	13-28	Coastal Forest Resources Co.	444/105	46.25	75	8-29	James L. Scott, Sr., et al	431/50	64.76
34	28-8	John C. & Wilma Jean Brown	212/387	1.85	76	8-33	Lloyd L. King	319/55	20.35
35	28-7.1	Gloria D. & Eugene Mason, Jr.	261/373	1.24	77	8-30	Michael L. & Erin M. Greathouse	363/91	76.00
36	28-7	William C. & Blanche Kocher	196/423	8.35	78	8-22	John D. & Connie J. Morgan	417/944	40.00
37	13-19	John F. Long Estate, et al	442/101	19.25	79	8-21	BP Mineral Holdings II LLC & Somerset Minerals LP	425/427	43.50
38	13-19.1	Michael Paul & Tamatha Lynn Melott	379/128	23.95	80	8-20.2	Loraine M. Williams	383/463	15.00
39	13-20	Betty Long	191/288	6.94	81	8-20.1	Loraine M. Williams	383/463	26.80
40	13-20.1	Gary R. & Angela E. Partridge	451/425	1.39					
41	13-88	John F. Long Estate, et al	442/101	26.00					
42	13-87	Raymond P. & Pamela J. Gaston	429/227	4.45					

FILE NO: 135-34-G-18  
 DRAWING NO: Welder 2H 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 2022  
 OPERATOR'S WELL NO. Welder Unit 2H  
 API WELL NO  
 47 — 103 — 03462  
 STATE COUNTY PERMIT

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

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 DISTRICT: Green Antero Resources WVDNR: Wilbur B. Dawson; Lloyd Lee King; Carolyn Jacobs Hampson; P&P Fujimo, LLC COUNTY: Wetzel 0317/2023  
 SURFACE OWNER: Corporation Rocky G. Miracle, et ux; R. Kevin Hall & Ronald L. Hall; H. Dorn Higginbotham, et ux  
 ROYALTY OWNER: Pamela Ann Palmer Emch; William R. Stalnaker; Antero Minerals, LLC; Dean H. Bucher; LEASE NO: ACREAGE: 47.5 0.60; 6.89; 1.25;  
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 3.19; 4.5; 76; 43.5

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: 6,925' TVD  
 24,240' 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

*Handwritten signature and date: J. [unclear] 2/15/23*