

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

API 47-085-10423 County Ritchie District Union
Quad Oxford 7.5' Pad Name Cashew Field/Pool Name -----
Farm name Elmer W. Pierce Well Number Smelt 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 4335831m Easting 512292m
Landing Point of Curve Northing 4335635.99m Easting 513085.74m
Bottom Hole Northing 4331972m Easting 514349m

Elevation (ft) 1040' 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
Drilled with Cable Rotary

Drilling Media Surface hole Air Mud Fresh Water Intermediate hole Air Mud Fresh Water Brine
Production hole Air Mud Fresh Water Brine
Mud Type(s) and Additive(s)
Air - Foam & 4% KCL
Mud - Polymer

Date permit issued 4/6/2022 Date drilling commenced 5/20/2022 Date drilling ceased 9/25/2022
Date completion activities began 11/11/2022 Date completion activities ceased 12/23/2022
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 184,53,236' Open mine(s) (Y/N) depths No
Salt water depth(s) ft 1847,1759,1709' Void(s) encountered (Y/N) depths No
Coal depth(s) ft None Reported Cavern(s) encountered (Y/N) depths No
Is coal being mined in area (Y/N) No

Reviewed by:

APPROVED

EMC

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API 47- 085 - 10423 Farm name Elmer W. Pierce Well number Smelt 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	20"	16"	130'	New	62.64#, X-60	N/A	Y
Surface	13-1/2"	10-3/4"	352'	New	40.5#, J-55	N/A	Y
Coal							
Intermediate 1	9-7/8"	7-5/8"	2692'	New	26.4#, L-80	N/A	Y
Intermediate 2							
Intermediate 3							
Production	6-3/4"	5"	20753'	New	18#, P-110CY	N/A	Y
Tubing		2-3/8"	6900'		4.7#, P-110		
Packer type and depth set		N/A					

Comment Details _____

CEMENT DATA	Class/Type of Cement	Number of Sacks	Slurry wt (ppg)	Yield (ft ³ /sks)	Volume (ft ³)	Cement Top (MD)	WOC (hrs)
Conductor	Class A	81 sx	15.6	1.18	96	0'	8 Hrs.
Surface	Class A	220 sx	15.8	1.17	257	0'	8 Hrs.
Coal							
Intermediate 1	Class A	655 sx	15.8	1.16	760	0'	8 Hrs.
Intermediate 2							
Intermediate 3							
Production	Class H	740 sx (Lead)	11 (Lead), 8.33 (Tail)	2.7 (Lead)	1051	~500' into Intermediate Casing	8 Hrs.
Tubing							

Drillers TD (ft) 23200' MD, 6900' TVD (BHL), 6435' (Deepest Point Drilled) Loggers TD (ft) 23200' MD

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

Plug back procedure N/A

Kick off depth (ft) 6132'

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 and analyzed 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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PERFORATION RECORD

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

Please insert additional pages as applicable.

STIMULATION INFORMATION PER STAGE

Complete a separate record for each stimulation stage.

Stage No.	Stimulations Date	Ave Pump Rate (BPM)	Ave Treatment Pressure (PSI)	Max Breakdown Pressure (PSI)	ISIP (PSI)	Amount of Proppant (lbs)	Amount of Water (bbls)	Amount of Nitrogen/other (units)
*PLEASE SEE ATTACHED EXHIBIT 2								

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Please insert additional pages as applicable.

API 47- 085 - 10423

Farm name Elmer W. Pierce

Well number Smelt Unit 1H

PRODUCING FORMATION(S)

DEPTHS

Marcellus 6368' (TOP) TVD 7085' (TOP) MD

Please insert additional pages as applicable.

GAS TEST Build up Drawdown Open Flow OIL TEST Flow Pump

SHUT-IN PRESSURE Surface 1874 psi Bottom Hole --- psi DURATION OF TEST --- hrs

OPEN FLOW Gas 12638 mcfd Oil 209 bpd NGL --- bpd Water 1750 bpd
GAS MEASURED BY Estimated Orifice Pilot

LITHOLOGY/ FORMATION	TOP DEPTH IN FT NAME TVD	BOTTOM DEPTH IN FT TVD	TOP DEPTH IN FT MD	BOTTOM DEPTH IN FT MD	DESCRIBE ROCK TYPE AND RECORD QUANTITY AND TYPE OF FLUID (FRESHWATER, BRINE, OIL, GAS, H ₂ S, ETC)
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***PLEASE SEE ATTACHED EXHIBIT 3**

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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 Baker Hughes
Address 1681 E Main St City Bridgeport State WV Zip 26330

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 3/15/2023

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

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API 47-085-10423 Farm Name Elmer W. Pierce Well Number Smelt Unit 1H

Exhibit 1

Stage No.	Perforation Date	Perforated from MD ft.	Perforated to MD ft.	Number of Perforations	Formations
1	11/12/2022	20613.4	20567.5	60	Marcellus
2	11/12/2022	20530.09577	20365.07	60	Marcellus
3	11/12/2022	20329.6704	20164.65	60	Marcellus
4	11/13/2022	20129.24502	19964.22	60	Marcellus
5	11/13/2022	19928.81965	19763.80	60	Marcellus
6	11/14/2022	19728.39428	19563.37	60	Marcellus
7	11/14/2022	19527.96891	19362.95	60	Marcellus
8	11/14/2022	19327.54353	19162.52	60	Marcellus
9	11/15/2022	19127.11816	18962.10	60	Marcellus
10	11/15/2022	18926.69279	18761.67	60	Marcellus
11	11/16/2022	18726.26741	18561.25	60	Marcellus
12	11/16/2022	18525.84204	18360.82	60	Marcellus
13	11/16/2022	18325.41667	18160.40	60	Marcellus
14	11/17/2022	18124.99129	17959.97	60	Marcellus
15	11/17/2022	17924.56592	17759.54	60	Marcellus
16	11/18/2022	17724.14055	17559.12	60	Marcellus
17	11/18/2022	17523.71517	17358.69	60	Marcellus
18	11/19/2022	17323.2898	17158.27	60	Marcellus
19	11/19/2022	17122.86443	16957.84	60	Marcellus
20	11/19/2022	16922.43905	16757.42	60	Marcellus
21	11/20/2022	16722.01368	16556.99	60	Marcellus
22	11/20/2022	16521.58831	16356.57	60	Marcellus
23	11/20/2022	16321.16294	16156.14	60	Marcellus
24	11/20/2022	16120.73756	15955.72	60	Marcellus
25	11/21/2022	15920.31219	15755.29	60	Marcellus
26	11/21/2022	15719.88682	15554.87	60	Marcellus
27	11/21/2022	15519.46144	15354.44	60	Marcellus
28	11/22/2022	15319.03607	15154.01	60	Marcellus
29	11/22/2022	15118.6107	14953.59	60	Marcellus
30	11/22/2022	14918.18532	14753.16	60	Marcellus
31	11/23/2022	14717.75995	14552.74	60	Marcellus
32	11/23/2022	14517.33458	14352.31	60	Marcellus
33	11/24/2022	14316.9092	14151.89	60	Marcellus
34	11/24/2022	14116.48383	13951.46	60	Marcellus
35	11/24/2022	13916.05846	13751.04	60	Marcellus
36	11/25/2022	13715.63308	13550.61	60	Marcellus
37	11/25/2022	13515.20771	13350.19	60	Marcellus
38	11/25/2022	13314.78234	13149.76	60	Marcellus
39	11/26/2022	13114.35697	12949.34	60	Marcellus
40	11/26/2022	12913.93159	12748.91	60	Marcellus
41	11/26/2022	12713.50622	12548.49	60	Marcellus
42	11/27/2022	12513.08085	12348.06	60	Marcellus
43	11/27/2022	12312.65547	12147.63	60	Marcellus
44	11/27/2022	12112.2301	11947.21	60	Marcellus
45	11/28/2022	11911.80473	11746.78	60	Marcellus
46	11/28/2022	11711.37935	11546.36	60	Marcellus
47	11/28/2022	11510.95398	11345.93	60	Marcellus
48	11/29/2022	11310.52861	11145.51	60	Marcellus
49	11/29/2022	11110.10323	10945.08	60	Marcellus
50	11/29/2022	10909.67786	10744.66	60	Marcellus
51	11/29/2022	10709.25249	10544.23	60	Marcellus
52	11/30/2022	10508.82711	10343.81	60	Marcellus
53	11/30/2022	10308.40174	10143.38	60	Marcellus
54	11/30/2022	10107.97637	9942.96	60	Marcellus
55	12/1/2022	9907.550995	9742.53	60	Marcellus
56	12/1/2022	9707.125622	9542.10	60	Marcellus
57	12/2/2022	9506.700249	9341.68	60	Marcellus
58	12/2/2022	9306.274876	9141.25	60	Marcellus
59	12/2/2022	9105.849502	8940.83	60	Marcellus
60	12/2/2022	8905.424129	8740.40	60	Marcellus
61	12/2/2022	8704.998756	8539.98	60	Marcellus
62	12/3/2022	8504.573383	8339.55	60	Marcellus
63	12/3/2022	8304.14801	8139.13	60	Marcellus
64	12/3/2022	8103.722637	7938.70149	60	Marcellus
65	12/3/2022	7903.297264	7738.27612	60	Marcellus
66	12/3/2022	7702.871891	7537.85075	60	Marcellus
67	12/3/2022	7502.446517	7337.42537	60	Marcellus
68	12/4/2022	7302.021144	7137	60	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	11/12/2022	53.6	8648	8419	3623	178120	268322	N/A
2	11/12/2022	65.4	8363	6526	3351	409040	313376	N/A
3	11/12/2022	67.9	8339	6808	4349	398810	396074	N/A
4	11/13/2022	67.7	8240	6667	3505	399641	322309	N/A
5	11/13/2022	71.5	8512	6541	3609	393374	307618	N/A
6	11/14/2022	67.6	8365	6543	3284	400876	368146	N/A
7	11/14/2022	67.0	8238	6306	3322	392025	305153	N/A
8	11/14/2022	68.8	8377	6695	3421	414153	325556	N/A
9	11/15/2022	67.6	8112	6901	3477	404983	375503	N/A
10	11/15/2022	68.9	8182	6763	3347	412086	302703	N/A
11	11/16/2022	71.6	8301	7129	3259	410377	322343	N/A
12	11/16/2022	72.3	8350	6304	3538	399384	291767	N/A
13	11/16/2022	71.9	8507	7707	3339	398423	307068	N/A
14	11/17/2022	72.5	8291	7117	3600	401037	300799	N/A
15	11/17/2022	73.8	8374	4098	3269	410936	293219	N/A
16	11/18/2022	73.6	8030	5586	3191	404564	288353	N/A
17	11/18/2022	71.7	8436	8223	3317	414190	291566	N/A
18	11/19/2022	69.1	8430	8265	3042	394650	280422	N/A
19	11/19/2022	72.8	8291	5558	3684	400180	281253	N/A
20	11/19/2022	71.8	8248	6163	3394	400660	289191	N/A
21	11/20/2022	73.8	8357	7301	3495	396510	289046	N/A
22	11/20/2022	75.0	8349	6274	3789	410324	288583	N/A
23	11/20/2022	74.3	8229	6306	4136	399770	289843	N/A
24	11/20/2022	76.0	8258	7848	3484	407790	288822	N/A
25	11/21/2022	77.1	8221	7220	4453	400930	280434	N/A
26	11/21/2022	76.7	8291	6068	3678	404932	292379	N/A
27	11/21/2022	71.5	8183	8222	3293	399520	284327	N/A
28	11/22/2022	74.0	8391	8014	3675	396561	292732	N/A
29	11/22/2022	76.4	8227	5912	3592	400541	287271	N/A
30	11/22/2022	79.4	8240	6121	3276	394702	292381	N/A
31	11/23/2022	82.4	8551	6348	3298	395126	290699	N/A
32	11/23/2022	75.5	7927	4350	3231	402165	289443	N/A
33	11/24/2022	79.3	8230	6305	4127	409610	301059	N/A
34	11/24/2022	76.6	7581	6358	3381	413642	309748	N/A
35	11/24/2022	75.3	8260	4581	4421	395352	291292	N/A
36	11/25/2022	73.4	7872	6367	3819	396196	289797	N/A
37	11/25/2022	70.8	7709	6808	2891	412684	373629	N/A
38	11/25/2022	79.6	8239	6433	4024	401418	286906	N/A
39	11/26/2022	76.5	8085	6839	4200	395069	286667	N/A
40	11/26/2022	72.5	7612	7090	2771	392063	295108	N/A
41	11/26/2022	77.5	7943	5870	3804	410839	305457	N/A
42	11/27/2022	82.3	7897	7255	4517	394142	286859	N/A
43	11/27/2022	73.9	7411	6541	3015	405811	342151	N/A
44	11/27/2022	85.5	8062	5890	4094	394722	285436	N/A
45	11/28/2022	86.2	8095	7046	4569	396853	288099	N/A
46	11/28/2022	77.9	7399	6673	3057	410446	295257	N/A
47	11/28/2022	83.1	7588	6394	3219	396470	280880	N/A
48	11/29/2022	82.1	7937	6783	4286	397132	286086	N/A
49	11/29/2022	84.8	7916	7894	2848	395161	288842	N/A
50	11/29/2022	74.6	7365	6507	2827	396265	327497	N/A
51	11/29/2022	81.1	7659	5060	2913	394182	327972	N/A
52	11/30/2022	83.9	7787	4929	3027	414294	295966	N/A
53	11/30/2022	85.0	7576	7822	3208	395260	290225	N/A
54	11/30/2022	85.4	7751	5821	2919	412651	290789	N/A
55	12/1/2022	83.4	7408	4478	2789	407280	293479	N/A
56	12/1/2022	87.0	7704	6124	2951	398040	273280	N/A
57	12/2/2022	87.6	7750	6109	2918	414240	280725	N/A
58	12/2/2022	82.3	7697.0	6450.0	2866.0	397030.0	283253.0	N/A
59	12/2/2022	83.9	7402.0	6217.0	3058.0	402210.0	277128.0	N/A
60	12/2/2022	85.2	7779.0	6938.0	2478.0	398770.0	272576.0	N/A
61	12/2/2022	87.2	7531.0	5499.0	2841.0	394550.0	274127.0	N/A
62	12/3/2022	85.3	7573.0	6552.0	2982.0	399929.0	287898.0	N/A
63	12/3/2022	84.8	7607.0	6380.0	2748.0	397062.0	276980.0	N/A
64	12/3/2022	86.4	7154.0	7165.0	2864.0	412909.0	289562.0	N/A
65	12/3/2022	84.8	7168.0	6981.0	2768.0	409619.0	280305.0	N/A
66	12/3/2022	86.7	7290.0	6533.0	2557.0	413185.0	286305.0	N/A
67	12/3/2022	66.2	6489.0	6886.0	2640.0	402707.0	351236.0	N/A
68	12/4/2022	72.9	6705.0	7292.0	2783.0	401228.0	288965.0	N/A
	AVERAGE	77	7,998	6,530	3,395	26,321,466	19,698,041	TOTAL

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LITHOLOGY/ FORMATION	TOP DEPTH (TVD)	BOTTOM DEPTH (TVD)	TOP DEPTH (MD)	BOTTOM DEPTH (MD)
	From Surface	From Surface	From Surface	From Surface
Sandy Siltstone, tr LS	100	280	100	280
Sandy Siltstone, occ LS	280	430	280	430
Shaly Siltstone, tr SS	430	490	430	490
Shaly Siltstone, Coal	490	520	490	520
Shaly Siltstone, occ SS, tr Coal	520	610	520	610
Shaly Siltstone	610	730	610	730
Silty Shale, tr ls, coal	730	820	730	820
Sandy Shale, tr coal	820	970	820	970
Shaly Sandstone, tr coal	970	1,300	970	1,300
Sandy Shale, occ Siltstone	1,300	1,540	1,300	1,540
Silty Shale, occ sandstone	1,540	1,930	1,540	1,930
Shale, occ sandstone	1,930	2,050	1,930	2,050
Sandy Siltstone, occ shale	2,050	1,845	2,050	1,917
Big Lime	1,875	2,380	1,917	2,495
Fifty Foot Sandstone	2,380	2,582	2,465	2,720
Gordon	2,582	2,867	2,690	3,033
Fifth Sandstone	2,867	2,953	3,003	3,125
Bayard	2,953	3,666	3,095	3,901
Speechley	3,666	3,831	3,871	4,082
Balltown	3,831	4,375	4,052	4,677
Bradford	4,375	4,771	4,647	5,113
Benson	4,771	5,014	5,083	5,379
Alexander	5,014	6,218	5,349	6,750
Sycamore	6,008	6,188	6,477	6,720
Middlesex	6,188	6,298	6,720	6,909
Burkett	6,298	6,343	6,909	7,010
Tully	6,343	6,368	7,010	7,085
Marcellus	6,368	NA	7,085	NA

Marcellus

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

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LATITUDE 39°12'30"

6,958'

222' TO BOTTOM HOLE

LATITUDE 39°10'00"

Antero Resources Corporation Well No. Smelt 1H

AS DRILLED DATA: WELL 1H TOP HOLE INFORMATION: N: 247,495ft E: 1,615,031ft ... BOTTOM HOLE INFORMATION: N: 234,730ft E: 1,621,579ft ... WEST VIRGINIA COORDINATE SYSTEM OF 1927 NORTH ZONE.

(NAD) 83 (UTM) ZONE 17 COORDS: WELL 1H TOP HOLE INFORMATION: N: 4,335,831m E: 512,292m ... BOTTOM HOLE INFORMATION: N: 4,331,976m E: 514,351m

(NAD) 27 (UTM) ZONE 17 COORDS: WELL 1H TOP HOLE INFORMATION: N: 14,224,424ft E: 1,680,696ft ... POINT OF ENTRY INFORMATION: N: 14,224,677ft E: 1,683,058ft ... BOTTOM HOLE INFORMATION: N: 14,211,775ft E: 1,687,453ft

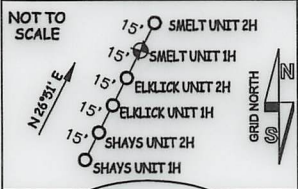


Table listing landowners and lease information. Columns include District (Southwest District - Doddridge County and Union District - Ritchie County), Lease Number, and Owner Name. Owners listed include David Ball, Trustees of Baptist Church, Isaac Richards, James Haught, Jeffrey Bailey, Brown Goodwin, Charles Leonard, Coy Adams, Arden Cogar, Danita Hilley, Larry Gander, WF Smith, Lois Gander, Elmer Pierce, Larry Gander, Brian Vansant, Brian Vansant, Brian Vansant, Brian Vansant, Brian Vansant, Brian Vansant, James Beck, Harvey Shepler, James Beck, Brian Harriman, Mark Vansant, Danita Hilley, Brian Harriman, Randall Hess, Steven Lusk, Kenny Osbourne, Kenny Osbourne, Kenny Osbourne, Kent Grotjan, Joshua Friedman, Miles Ball, M E Church, Kenny Osbourne, Kenny Osbourne, Brian Vansant, James Haught, Miles Ball, Kent Grotjan, Douglas Maxson, Douglas Maxson, Douglas Maxson, Mary Deberry, Linda Jennings, Clarence Bush, Patricia Shepler, Daryl Shepler, Terrell Henderson, Santi Italiano, Santi Italiano, Santi Italiano, Clarence Bush, Jan Bennell, Jan Bennell, Daryl Shepler, Darlene Nailor, Harold Pierce, WV DOT.

I THE UNDERSIGNED, HEREBY CERTIFY THAT THIS PLAT IS CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF AND SHOWS ALL THE INFORMATION REQUIRED BY LAW AND THE RULES ISSUED AND PERSCRIBED BY THE DEPARTMENT OF ENVIRONMENTAL PROTECTION.

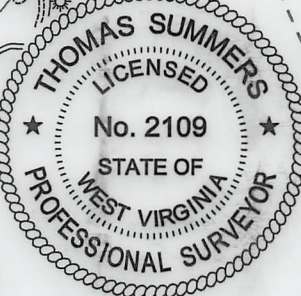


STATE OF WEST VIRGINIA, DIVISION OF ENVIRONMENTAL PROTECTION, OFFICE OF OIL AND GAS. WILLOW LAND SURVEYING PLLC 220 MASONIC AVE. PENNSBORO WEST VIRGINIA 26415

JOB # 21-015WA DRAWING # SMELT1HAD SCALE 1" = 2000' MINIMUM DEGREE OF ACCURACY SUBMETER PROVEN SOURCE OF ELEV. SUBMETER MAPPING GRADE GPS

LEGEND: Surface Owner Boundary Lines +/- Interior Surface Tracts +/- Proposed Well Path As Drilled Well Path. THOMAS SUMMERS P.S. 2109

NOTE: 1. NO OCCUPIED DWELLINGS OR BUILDINGS TWO THOUSAND FIVE HUNDRED (2,500) SQUARE FEET OR LARGER USED TO HOUSE OR SHELTER DAIRY CATTLE OR POULTRY HUSBANDRY ARE LOCATED WITHIN SIX HUNDRED TWENTY-FIVE (625) FEET OF THE CENTER OF THE WELL PAD. 2. TOP HOLE DATA SHOWN HEREON WAS PROVIDED BY ANTERO RESOURCES CORPORATION. 3. AS DRILLED DATA WAS PROVIDED BY ANTERO RESOURCES CORPORATION. 4. WLS IS NOT CERTIFYING THE DATA AND INFORMATION PROVIDED LISTED IN NOTES 2 AND 3, ONLY THE RELATIONSHIP TO THE DATA AND INFORMATION PROVIDED TO THE LEASE BOUNDARIES. 5. WLS IS BY NO MEANS RESPONSIBLE FOR ANY ERRORS OR INACCURACIES WITH THE DATA AND INFORMATION THAT HAS BEEN PROVIDED.



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

DATE 03/17/23 OPERATOR'S WELL# SMELT 1H

WELL TYPE: OIL ___ GAS X LIQUID INJECTION ___ WASTE DISPOSAL ___ 47 - 085 - 10423 (IF "GAS") PRODUCTION X STORAGE ___ DEEP ___ SHALLOW X STATE COUNTY PERMIT LOCATION: ELEVATION 1,019' -AS BUILT WATERSHED SOUTH FORK HUGHES RIVER QUADRANGLE OXFORD 7.5' DISTRICT UNION COUNTY RITCHIE SURFACE OWNER ELMER W. PIERCE ACREAGE 67.78 ACRES +/- OIL & GAS ROYALTY OWNERR. F. KEISTER ET AL.; B. GUY WHITEHAIR ET UX; RALPH JETT ET UX; LEASE ACREAGE 70 AC.±; 17 AC.±; 148 AC.±; DAVID D. BALL, JR.; ENID W. ZINN ET AL.; JAY-BEE ROYATLY, LLC.; T. M. GRIFFIN ET UX; JAMES V. PIERCE ET UX; WALLACE B. HAUGHT ET AL.; 260 AC.±; 40 AC.±; 38 AC.±; 140 AC.±; 31 AC.±; 100 AC.±; E. W. SUMMERS ET UX; LUCILLE DEBERRY; MARY LUCILLE DEBERRY; ANTERO MINERALS LLC; LUCILLE DEBERRY ET VIR 125 AC.±; 46.79 AC.±; 147 AC.±; 107.16 AC.±; 90 AC.± PROPOSED WORK: DRILL ___ CONVERT ___ DRILL DEEPER ___ REDRILL ___ FRACTURE OR STIMULATE ___ PLUG OFF OLD FORMATION ___ PERFORATE NEW FORMATION ___ OTHER PHYSICAL CHANGE IN WELL (SPECIFY) AS DRILLED PLUG & ABANDON CLEAN OUT & REPLUG TARGET FORMATION MARCELLUS ESTIMATED DEPTH 6,401' TVD 20,753' MD WELL OPERATOR ANTERO RESOURCES CORP. DESIGNATED AGENT KEVIN ELLIS ADDRESS 1615 WYNKOOP ST. ADDRESS 535 WHITE OAKS BLVD BRIDGEPORT, WV 26330

10,893' TO BOTTOM HOLE

13,404'

LONGITUDE 80°50'00"

LONGITUDE 80°50'00"

05/11/2023

LATITUDE 39°12'30"

6,958'

222' TO BOTTOM HOLE

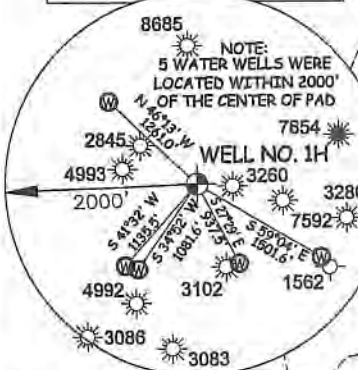
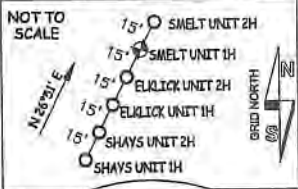
LATITUDE 39°10'00"

Antero Resources Corporation Well No. Smelt 1H

AS DRILLED DATA: WELL 1H TOP HOLE INFORMATION: N: 247,495ft E: 1,615,031ft LAT: 39°10'17.51" LON: 80°51'28.35" BOTTOM HOLE INFORMATION: N: 234,730ft E: 1,621,579ft LAT: 39°08'12.33" LON: 80°50'02.82" WEST VIRGINIA COORDINATE SYSTEM OF 1927 NORTH ZONE. ZONE WAS DERIVED FROM MEASUREMENTS TAKEN WITH TRIMBLE GEOXT SUBMETER MAPPING GRADE GPS UNIT. PLAT. ORIENTATION, CORNER, AND WELL REFERENCE TIE LINES ARE BASED ON GRID NORTH.

(NAD) 83 (UTM) ZONE 17 COORDS: WELL 1H TOP HOLE INFORMATION: N: 4,335,831m E: 512,292m BOTTOM HOLE INFORMATION: N: 4,331,976m E: 514,351m

(NAD) 27 (UTM) ZONE 17 COORDS: WELL 1H TOP HOLE INFORMATION: N: 14,224,424ft E: 1,680,696ft POINT OF ENTRY INFORMATION: N: 14,224,677ft E: 1,683,058ft BOTTOM HOLE INFORMATION: N: 14,211,775ft E: 1,687,453ft



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 PERSIBED BY THE DEPARTMENT OF ENVIRONMENTAL PROTECTION.



STATE OF WEST VIRGINIA, DIVISION OF ENVIRONMENTAL PROTECTION, OFFICE OF OIL AND GAS

WILLOW LAND SURVEYING PLLC 220 MASONIC AVE. PENNSBORO WEST VIRGINIA 26415

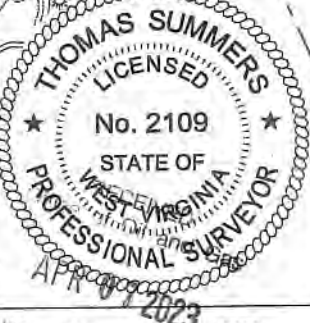
JOB # 21-015WA DRAWING # SMELT1HAD SCALE 1" = 2000' MINIMUM DEGREE OF ACCURACY SUBMETER PROVEN SOURCE OF ELEV. SUBMETER MAPPING GRADE GPS

LEGEND Surface Owner Boundary Lines +/- Interior Surface Tracts +/- Proposed Well Path As Drilled Well Path THOMAS SUMMERS P.S. 2109

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

DATE 03/17/23 OPERATOR'S WELL# SMELT1H

NOTE 1. NO OCCUPIED DWELLINGS OR BUILDINGS TWO THOUSAND FIVE HUNDRED (2,500) SQUARE FEET OR LARGER USED TO HOUSE OR SHELTER DAIRY CATTLE OR POULTRY HUSBANDRY ARE LOCATED WITHIN SIX HUNDRED TWENTY-FIVE (625) FEET OF THE CENTER OF THE WELL PAD. 2. TOP HOLE DATA SHOWN HEREON WAS PROVIDED BY ANTERO RESOURCES CORPORATION. 3. AS DRILLED DATA WAS PROVIDED BY ANTERO RESOURCES CORPORATION. 4. WLS IS NOT CERTIFYING THE DATA AND INFORMATION PROVIDED LISTED IN NOTES 2 AND 3, ONLY THE RELATIONSHIP TO THE DATA AND INFORMATION PROVIDED TO THE LEASE BOUNDARIES. 5. WLS IS BY NO MEANS RESPONSIBLE FOR ANY ERRORS OR INACCURACIES WITH THE DATA AND INFORMATION THAT HAS BEEN PROVIDED.



WELL TYPE: OIL GAS X LIQUID INJECTION WASTE DISPOSAL (IF "GAS") PRODUCTION X STORAGE DEEP SHALLOW X LOCATION: ELEVATION 1,019' -AS BUILT WATERSHED SOUTH FORK HUGHES RIVER QUADRANGLE OXFORD 7.5' DISTRICT UNION COUNTY RITCHIE SURFACE OWNER ELMER W. PIERCE ACREAGE 67.78 ACRES +/- OIL & GAS ROYALTY OWNER R. F. KEISTER ET AL; B. GUY WHITEHAIR ET UX; RALPH JETT ET UX; LEASE ACREAGE 70 AC.±; 17 AC.±; 148 AC.±; DAVID D. BALL, JR.; ENID W. ZINN ET AL; JAY-BEE ROYALTY, LLC; T. M. GRIFFIN ET UX; JAMES V. PIERCE ET UX; WALLACE B. HAUGHT ET AL; 260 AC.±; 40 AC.±; 38 AC.±; 140 AC.±; 31 AC.±; 100 AC.±; E. W. SUMMERS ET UX; LUCILLE DEBERRY; MARY LUCILLE DEBERRY; ANTERO MINERALS LLC; LUCILLE DEBERRY ET VIR 125 AC.±; 46.79 AC.±; 147 AC.±; 107.16 AC.±; 90 AC.± PROPOSED WORK: DRILL CONVERT DRILL DEEPER REDRILL FRACTURE OR STIMULATE PLUG OFF OLD FORMATION PERFORATE NEW FORMATION OTHER PHYSICAL CHANGE IN WELL (SPECIFY) AS DRILLED PLUG & ABANDON CLEAN OUT & REPLUG TARGET FORMATION MARCELLUS ESTIMATED DEPTH 6,401' TVD 20,753' MD WELL OPERATOR ANTERO RESOURCES CORP. DESIGNATED AGENT KEVIN ELLIS ADDRESS 1615 WYNKOOP ST. ADDRESS 535 WHITE OAKS BLVD DENVER, CO 80202 BRIDGEPORT, WV 26330

Table listing landowners and lease numbers for Southwest District - Doddridge County and Union District - Ritchie County.

WV NORTH ZONE GRID NORTH

10,893' TO BOTTOM HOLE

13,404'

LONGITUDE 80°50'00"

LONGITUDE 80°50'00"

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Hydraulic Fracturing Fluid Product Component Information Disclosure

Job Start Date:	11/11/2022
Job End Date:	12/4/2022
State:	West Virginia
County:	Ritchie
API Number:	47-085-10423-00-00
Operator Name:	Antero Resources Corporation
Well Name and Number:	SMELT UNIT 1H
Latitude:	39.17153000
Longitude:	-80.85787000
Datum:	WGS84
Federal Well:	NO
Indian Well:	NO
True Vertical Depth:	6,435
Total Base Water Volume (gal):	21,414,371
Total Base Non Water Volume:	0

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Hydraulic Fracturing Fluid Composition:

Trade Name	Supplier	Purpose	Ingredients	Chemical Abstract Service Number (CAS #)	Maximum Ingredient Concentration in Additive (% by mass)**	Maximum Ingredient Concentration in HF Fluid (% by mass)**	Comments
Produced Water	Halliburton	Base Fluid					
			Water	7732-18-5	100.00000	86.81840	Density = 8.50
Ingredients	Listed Above	Listed Above					
			Water	7732-18-5	100.00000	0.13982	

OPTIFLO-II DELAYED RELEASE BREAKER	Halliburton	Breaker					
				Listed Below			
Chemstream StimSTREAM FR 2800	Chemstream, Inc.	Friction Reducer					
				Listed Below			
HAI-501	Halliburton	Acid Corrosion Inhibitor					
				Listed Below			
HYDROCHLORI C ACID, 22 BAUME	Halliburton	Solvent					
				Listed Below			
Excelerate LX-15	Halliburton	Friction Reducer					
				Listed Below			
100 Mesh Permian	Halliburton	Proppant					
				Listed Below			
WG-36 GELLING AGENT	Halliburton	Gelling Agent					
				Listed Below			
Sand-Premium White-30/70	Halliburton	Proppant					
				Listed Below			

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Sand-Common White-100 Mesh, SSA-2	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.							
			Crystalline silica, quartz	14808-60-7	100.00000	12.93798	
			Hydrochloric acid	7647-01-0	30.00000	0.03912	
			Guar gum	9000-30-0	100.00000	0.02484	
			Distillates, (petroleum), hydrotreated light	64742-47-8	25.00000	0.01929	
			Alcohols, C11-14-iso, C-13-rich, ethoxylated	78330-21-9	5.00000	0.00386	
			Glutaraldehyde	111-30-8	30.00000	0.00243	
			Complex Amine Compound	Proprietary	60.00000	0.00131	
			Ammonium persulfate	7727-54-0	100.00000	0.00079	
			Hydrotreated light petroleum distillate	64742-47-8	30.00000	0.00066	
			Alkyl (C12-16) dimethylbenzyl ammonium chloride	68424-85-1	5.00000	0.00041	
			Methanol	67-56-1	100.00000	0.00024	
			Oxylated phenolic resin	Proprietary	30.00000	0.00024	
			Surfactant	Proprietary	5.00000	0.00011	
			Sorbitan, mono-9-octadecenoate, (Z)	1338-43-8	5.00000	0.00011	
			Ethanol	64-17-5	1.00000	0.00008	
			Modified thiourea polymer	Proprietary	30.00000	0.00007	

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Environmental Protection

			Mixture of dimer and trimer fatty acids of indefinite composition derived from tall oil	61790-12-3	30.00000	0.00007	
			Ethoxylated alcohols	Proprietary	5.00000	0.00003	
			Alkoxyated polyhydric alcohol	Proprietary	1.00000	0.00002	
			Organic chloride compound	Proprietary	1.00000	0.00002	
			Hexadecene	629-73-2	5.00000	0.00001	
			Propargyl alcohol	107-19-7	5.00000	0.00001	
			C.I. pigment Orange 5	3468-63-1	1.00000	0.00001	
			Organic salt #2	Proprietary	0.01000	0.00000	
			Sodium hydroxide	1310-73-2	0.01000	0.00000	
			Nitrated acetate salt	Proprietary	0.01000	0.00000	
			Acrylamide	79-06-1	0.01000	0.00000	
			Formaldehyde	50-00-0	0.01000	0.00000	
			Organic salt #1	Proprietary	0.01000	0.00000	
			Sodium glycolate	2836-32-0	0.01000	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)