

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

API 47-017-06914 County Doddridge District West Union
Quad TH: West Union -- BH: Smithburg Pad Name Gaspar Field/Pool Name -----
Farm name Antero Midstream, LLC Well Number McKean 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 4351729m Easting 520470m
Landing Point of Curve Northing 4351779.56m Easting 520742.41m
Bottom Hole Northing 4347436m Easting 522230m

Elevation (ft) 1189' 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 1/18/2022 Date drilling commenced 3/5/2022 Date drilling ceased 5/6/2022
Date completion activities began 8/13/2022 Date completion activities ceased 10/23/2022
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 140, 200, 171' Open mine(s) (Y/N) depths No
Salt water depth(s) ft 1345' Void(s) encountered (Y/N) depths No
Coal depth(s) ft 814' Cavern(s) encountered (Y/N) depths No
Is coal being mined in area (Y/N) No

Reviewed by:

APPROVED

JMR 04/13/2023

03/17/2023

APPROVED

Faint, illegible text, possibly bleed-through from the reverse side of the page.

Handwritten signature or initials.

APPROVED

03/17/2023

API 47- 017 - 06914 Farm name Antero Midstream, LLC Well number McKean 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	26"	20"	130'	New	78.67#, X-60	N/A	Y
Surface	17-1/2"	13-3/8"	350'	New	54.5#, J-55	N/A	Y
Coal							
Intermediate 1	12-1/4"	9-5/8"	2582'	New	36#, J-55	N/A	Y
Intermediate 2							
Intermediate 3							
Production	8-3/4"/8-1/2"	5-1/2"	22243'	New	23#, P-110CYHP	N/A	Y
Tubing		2-3/8"	6998-1/2'		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 ³ /sks)	Volume (ft ³)	Cement Top (MD)	WOC (hrs)
Conductor	Class A	254 sx	15.6	1.18	140	0'	8 Hrs.
Surface	Class A	390 sx	15.8	1.16	452	0'	8 Hrs.
Coal							
Intermediate 1	Class A	890 sx	15.8	1.16	1032	0'	8 Hrs.
Intermediate 2							
Intermediate 3							
Production	Class H	3792 sx (Tail)	13.5 (Lead), 15.2(Tail)	5.92 (Lead), 1.18 (Tail)	4475	-500' into Intermediate Casing	8 Hrs.
Tubing							

Drillers TD (ft) 22243' MD, 6854' TVD (BHL), 6938' (Deepest Point Drilled) Loggers TD (ft) 22243' MD
 Deepest formation penetrated Marcellus Plug back to (ft) N/A
 Plug back procedure N/A

Kick off depth (ft) 6537'

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

API 47- 017 - 06914 Farm name Antero Midstream, LLC Well number McKean Unit 1H

<u>PRODUCING FORMATION(S)</u>	<u>DEPTHS</u>		
<u>Marcellus</u>	<u>6868' (TOP)</u>	<u>TVD</u>	<u>7132' (TOP)</u> <u>MD</u>
_____	_____	_____	_____
_____	_____	_____	_____

Please insert additional pages as applicable.

GAS TEST Build up Drawdown Open Flow OIL TEST Flow Pump

SHUT-IN PRESSURE Surface 2387 psi Bottom Hole --- psi DURATION OF TEST --- hrs

OPEN FLOW Gas 13548 mcfpd Oil 53 bpd NGL --- bpd Water 668 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 ₂ 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 GR Energy Services
Address 2150 Town Square Pl #410 City Sugar Land State TX Zip 77479

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 1/5/2023

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

03/17/2023

Exhibit 1

Stage No.	Perforation Date	Perforated from MD ft.	Perforated to MD ft.	Number of Perforations	Formations
1	08/13/2022	22123.3	22077.2	60	Marcellus
2	08/14/2022	22039.7	21874.0	60	Marcellus
3	08/14/2022	21838.4	21672.7	60	Marcellus
4	08/14/2022	21637.2	21471.5	60	Marcellus
5	08/15/2022	21436.0	21270.3	60	Marcellus
6	08/15/2022	21234.7	21069.0	60	Marcellus
7	08/16/2022	21033.5	20867.8	60	Marcellus
8	08/16/2022	20832.3	20666.6	60	Marcellus
9	08/16/2022	20631.0	20465.3	60	Marcellus
10	08/17/2022	20429.8	20264.1	60	Marcellus
11	08/17/2022	20228.6	20062.9	60	Marcellus
12	08/18/2022	20027.3	19861.6	60	Marcellus
13	08/18/2022	19826.1	19660.4	60	Marcellus
14	08/18/2022	19624.9	19459.2	60	Marcellus
15	08/18/2022	19423.6	19257.9	60	Marcellus
16	08/19/2022	19222.4	19056.7	60	Marcellus
17	08/19/2022	19021.2	18855.5	60	Marcellus
18	08/19/2022	18819.9	18654.2	60	Marcellus
19	08/19/2022	18618.7	18453.0	60	Marcellus
20	08/20/2022	18417.5	18251.8	60	Marcellus
21	08/20/2022	18216.2	18050.6	60	Marcellus
22	08/20/2022	18015.0	17849.3	60	Marcellus
23	08/20/2022	17813.8	17648.1	60	Marcellus
24	08/20/2022	17612.5	17446.9	60	Marcellus
25	08/21/2022	17411.3	17245.6	60	Marcellus
26	08/21/2022	17210.1	17044.4	60	Marcellus
27	08/21/2022	17008.9	16843.2	60	Marcellus
28	08/21/2022	16807.6	16641.9	60	Marcellus
29	08/22/2022	16606.4	16440.7	60	Marcellus
30	08/22/2022	16405.2	16239.5	60	Marcellus
31	08/22/2022	16203.9	16038.2	60	Marcellus
32	08/22/2022	16002.7	15837.0	60	Marcellus
33	08/22/2022	15801.5	15635.8	60	Marcellus
34	08/23/2022	15600.2	15434.5	60	Marcellus
35	08/23/2022	15399.0	15233.3	60	Marcellus
36	08/23/2022	15197.8	15032.1	60	Marcellus
37	08/23/2022	14996.5	14830.8	60	Marcellus
38	08/24/2022	14795.3	14629.6	60	Marcellus
39	08/24/2022	14594.1	14428.4	60	Marcellus
40	08/24/2022	14392.8	14227.1	60	Marcellus
41	08/24/2022	14191.6	14025.9	60	Marcellus
42	08/24/2022	13990.4	13824.7	60	Marcellus
43	08/25/2022	13789.1	13623.4	60	Marcellus
44	08/25/2022	13587.9	13422.2	60	Marcellus
45	08/25/2022	13386.7	13221.0	60	Marcellus
46	08/26/2022	13185.4	13019.7	60	Marcellus
47	08/26/2022	12984.2	12818.5	60	Marcellus
48	08/27/2022	12783.0	12617.3	60	Marcellus
49	08/27/2022	12581.7	12416.0	60	Marcellus
50	08/28/2022	12380.5	12214.8	60	Marcellus
51	08/28/2022	12179.3	12013.6	60	Marcellus
52	08/28/2022	11978.0	11812.3	60	Marcellus
53	08/29/2022	11776.8	11611.1	60	Marcellus
54	08/29/2022	11575.6	11409.9	60	Marcellus
55	08/30/2022	11374.3	11208.6	60	Marcellus
56	08/30/2022	11173.1	11007.4	60	Marcellus
57	08/30/2022	10971.9	10806.2	60	Marcellus
58	08/31/2022	10770.6	10605.0	60	Marcellus
59	08/31/2022	10569.4	10403.7	60	Marcellus
60	08/31/2022	10368.2	10202.5	60	Marcellus
61	08/31/2022	10166.9	10001.3	60	Marcellus
62	09/01/2022	9965.7	9800.0	60	Marcellus
63	09/01/2022	9764.5	9598.8	60	Marcellus
64	09/01/2022	9563.3	9397.6	60	Marcellus
65	09/01/2022	9362.0	9196.3	60	Marcellus
66	09/01/2022	9160.8	8995.1	60	Marcellus
67	09/02/2022	8959.6	8793.9	60	Marcellus
68	09/02/2022	8758.3	8592.6	60	Marcellus
69	09/02/2022	8557.1	8391.4	60	Marcellus
70	09/02/2022	8355.9	8190.2	60	Marcellus
71	09/02/2022	8154.6	7988.9	60	Marcellus
72	09/03/2022	7953.4	7787.7	60	Marcellus
73	09/03/2022	7752.2	7586.5	60	Marcellus
74	09/03/2022	7550.9	7385.2	60	Marcellus
75	09/03/2022	7349.7	7184.0	60	Marcellus

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	08/13/2022	66.1	10554	6204	4412	160,720	192,718	N/A
2	08/14/2022	88.7	10078	5643	3724	403,550	461,761	N/A
3	08/14/2022	90.4	10379	5179	4446	401,400	313,796	N/A
4	08/14/2022	89.0	9954	5121	4528	408,120	316,553	N/A
5	08/15/2022	91.5	10286	4979	4902	397,500	320,147	N/A
6	08/15/2022	92.5	10459	5021	4212	393,180	300,431	N/A
7	08/16/2022	89.9	10002	4969	4262	401,240	281,024	N/A
8	08/16/2022	90.9	10045	6394	4875	396,730	286,665	N/A
9	08/16/2022	88.5	10000	5277	4606	413,220	350,744	N/A
10	08/17/2022	92.1	10463	5745	4493	399,150	287,771	N/A
11	08/17/2022	92.5	10400	5201	4852	402,030	279,308	N/A
12	08/18/2022	86.8	10298	5408	5931	408,900	282,643	N/A
13	08/18/2022	93.8	10282	5054	4590	405,120	289,002	N/A
14	08/18/2022	93.4	10349	4710	4979	407,690	285,716	N/A
15	08/18/2022	94.3	10206	5926	5196	413,020	283,964	N/A
16	08/19/2022	91.8	10087	6016	5471	410,600	288,749	N/A
17	08/19/2022	92.9	10165	5583	4914	399,900	308,490	N/A
18	08/19/2022	92.9	10281	4872	4516	399,700	290,229	N/A
19	08/19/2022	96.7	9983	6336	4394	397,680	287,088	N/A
20	08/20/2022	95.8	9954	6095	4658	402,240	297,651	N/A
21	08/20/2022	92.8	10087	6082	4657	402,480	305,351	N/A
22	08/20/2022	97.5	10014	5913	4261	395,710	291,157	N/A
23	08/20/2022	94.0	9894	5576	4367	394,880	288,849	N/A
24	08/20/2022	95.1	9873	5558	5093	396,780	291,930	N/A
25	08/21/2022	95.5	10009	6046	4808	412,960	298,113	N/A
26	08/21/2022	97.6	9727	5841	4630	395,650	291,134	N/A
27	08/21/2022	98.1	9969	4786	4403	396,340	291,925	N/A
28	08/21/2022	97.2	10037	5867	5613	395,200	294,475	N/A
29	08/22/2022	96.9	9821	6074	4991	405,180	289,022	N/A
30	08/22/2022	96.1	9602	3950	5019	399,830	292,999	N/A
31	08/22/2022	97.9	9562	6395	4812	395,310	289,473	N/A
32	08/22/2022	97.9	9914	5655	4496	405,020	293,879	N/A
33	08/22/2022	97.2	9286	5901	5871	399,780	332,039	N/A
34	08/23/2022	95.5	9433	5744	5472	398,480	290,045	N/A
35	08/23/2022	98.5	9790	5445	5129	399,090	292,061	N/A
36	08/23/2022	95.5	9058	5862	5055	395,840	288,405	N/A
37	08/23/2022	92.0	9105	6340	4210	398,110	287,427	N/A
38	08/24/2022	97.1	9444	6229	5633	415,870	302,408	N/A
39	08/24/2022	97.0	9557	5507	5236	397,380	302,048	N/A
40	08/24/2022	93.7	9034	6002	4595	400,970	283,280	N/A
41	08/24/2022	92.1	9097	6139	4345	394,890	290,943	N/A
42	08/24/2022	96.3	9420	5947	4648	399,010	283,736	N/A
43	08/25/2022	96.4	9035	6093	5027	415,910	297,074	N/A
44	08/25/2022	95.6	8864	4769	4298	398,900	295,206	N/A
45	08/25/2022	97.8	8875	5426	6083	398,060	281,681	N/A
46	08/26/2022	97.6	8973	4517	5246	394,500	275,354	N/A
47	08/26/2022	96.2	8658	5900	4723	402,360	281,660	N/A
48	08/27/2022	84.8	8131	5792	3927	400,310	351,313	N/A
49	08/27/2022	95.9	8525	4706	4409	398,190	299,640	N/A
50	08/28/2022	97.0	8494	5628	4413	409,020	288,420	N/A
51	08/28/2022	96.7	8406	5644	4525	395,540	275,577	N/A
52	08/28/2022	96.6	8425	6118	4356	400,040	277,285	N/A
53	08/29/2022	95.7	8354	5601	3867	403,120	276,440	N/A
54	08/29/2022	98.3	8503	6158	4971	397,230	277,523	N/A
55	08/30/2022	93.1	6346	5776	4833	400,660	274,263	N/A
56	08/30/2022	97.6	8172	4584	4773	403,350	305,064	N/A
57	08/30/2022	96.8	8202	5534	4025	408,350	285,686	N/A
58	08/31/2022	96.5	8077	5204	4708	396,260	283,313	N/A
59	08/31/2022	97.2	8198	5578	5008	400,290	284,977	N/A
60	08/31/2022	98.2	7963	6125	4071	392,036	278,665	N/A
61	08/31/2022	98.3	8014	5816	4206	396,980	281,909	N/A
62	09/01/2022	97.4	8181	5917	4046	399,220	282,050	N/A
63	09/01/2022	98.3	8128	6421	4356	400,590	285,072	N/A
64	09/01/2022	97.8	7882	5779	5007	392,390	280,616	N/A
65	09/01/2022	96.5	8040	6309	4517	402,130	283,464	N/A
66	09/01/2022	95.9	7708	5725	4185	392,360	279,224	N/A
67	09/02/2022	96.9	7724	5755	4803	396,130	280,610	N/A
68	09/02/2022	96.9	7929	6257	4276	401,800	283,102	N/A
69	09/02/2022	97.4	7696	6016	4240	405,900	283,046	N/A
70	09/02/2022	97.0	7464	6489	4840	398,570	283,139	N/A
71	09/02/2022	85.5	7076	5414	4437	411,580	341,148	N/A
72	09/03/2022	97.9	7528	5530	4763	396,930	265,976	N/A
73	09/03/2022	97.9	7287	5592	4417	413,380	286,284	N/A
74	09/03/2022	97.3	7789	6105	4140	393,200	284,020	N/A
75	09/03/2022	97.4	7540	5982	4077	393,930	323,175	N/A
	AVG=	95	9,095	5,665	4,678	29,825,666	21,987,125	TOTAL

EXHIBIT 3

LITHOLOGY/ FORMATION	TOP DEPTH (TVD)	BOTTOM DEPTH (TVD)	TOP DEPTH (MD)	BOTTOM DEPTH (MD)
	From Surface	From Surface	From Surface	From Surface
Shaley Siltstone	120	210	120	210
Shale	210	390	210	390
Silty Shale	390	480	390	480
Shale	480	810	480	810
Silty Shale	810	840	810	840
Shaley Sandstone	840	960	840	960
Shaley Sandstone	960	1,050	960	1,050
Shale	1,050	1,110	1,050	1,110
Sandy Shale	1,110	1,230	1,110	1,230
Shaley Sandstone	1,230	1,290	1,230	1,290
Sandstone, Tr Shale, Tr Silt	1,290	1,710	1,290	1,710
Shaley Sandstone, Occ Coal	1,710	1,890	1,710	1,890
Sandy Shale, Tr Coal, Tr Limestone	1,890	2,134	1,890	2,155
Big Lime	2,164	2,790	2,155	2,823
Fifty Foot Sandstone	2,790	2,861	2,793	2,896
Gordon	2,861	3,146	2,866	3,188
Fifth Sandstone	3,146	3,343	3,158	3,390
Bayard	3,343	4,020	3,360	4,081
Speechley	4,020	4,292	4,051	4,357
Balltown	4,292	4,706	4,327	4,775
Bradford	4,706	5,175	4,745	5,251
Benson	5,175	5,434	5,221	5,514
Alexander	5,434	6,682	5,484	6,795
Sycamore	6,443	6,652	6,536	6,765
Middlesex	6,652	6,787	6,765	6,954
Burkett	6,787	6,816	6,954	7,004
Tully	6,816	6,868	7,004	7,132
Marcellus	6,868	NA	7,132	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.

Hydraulic Fracturing Fluid Product Component Information Disclosure

Job Start Date:	8/13/2022
Job End Date:	9/3/2022
State:	West Virginia
County:	Doddridge
API Number:	47-017-06914-00-00
Operator Name:	Antero Resources Corporation
Well Name and Number:	MCKEAN UNIT 1H
Latitude:	39.31464000
Longitude:	-80.76272000
Datum:	WGS84
Federal Well:	NO
Indian Well:	NO
True Vertical Depth:	6,937
Total Base Water Volume (gal):	23,071,890
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	86.62275	Density = 8.50
Ingredients	Listed Above	Listed Above					
			Water	7732-18-5	100.00000	0.16723	

FDP-S1443-21	Halliburton	Corrosion Inhibitor					
				Listed Below			
HYDROCHLORIC ACID, 22 BAUME	Halliburton	Solvent					
				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			
OPTIFLO-II DELAYED RELEASE BREAKER	Halliburton	Breaker					
				Listed Below			
Sand-Common White-100 Mesh, SSA-2	Halliburton	Proppant					
				Listed Below			
Excelerate LX-15	Halliburton	Friction Reducer					
				Listed Below			

HAI-501	Halliburton	Acid Corrosion Inhibitor					
				Listed Below			
Items above are Trade Names with the exception of Base Water. Items below are the individual ingredients.							
			Crystalline silica, quartz	14808-60-7	100.00000	13.17411	
			Hydrochloric acid	7647-01-0	30.00000	0.03906	
			Complex Amine Compound	Proprietary	60.00000	0.02865	
			Guar gum	9000-30-0	100.00000	0.01619	
			Hydrotreated light petroleum distillate	64742-47-8	30.00000	0.01433	
			Glutaraldehyde	111-30-8	30.00000	0.00252	
			Sorbitan, mono-9-octadecenoate, (Z)	1338-43-8	5.00000	0.00239	
			Surfactant	Proprietary	5.00000	0.00239	
			Ethoxylated alcohols	Proprietary	30.00000	0.00053	
			Alkoxylated polyhydric alcohol	Proprietary	1.00000	0.00048	
			Organic chloride compound	Proprietary	1.00000	0.00048	
			Alkyl (C12-16) dimethylbenzyl ammonium chloride	68424-85-1	5.00000	0.00042	
			Ammonium persulfate	7727-54-0	100.00000	0.00041	
			Methanol	67-56-1	100.00000	0.00024	
			Oxylated phenolic resin	Proprietary	30.00000	0.00012	
			Ethanol	64-17-5	1.00000	0.00008	
			Modified thiourea polymer	Proprietary	30.00000	0.00004	
			Mixture of dimer and trimer fatty acids of indefinite composition derived from tall oil	61790-12-3	30.00000	0.00003	
			Aldehyde	Proprietary	5.00000	0.00001	
			Nitrated acetate salt	Proprietary	0.01000	0.00000	
			Formaldehyde	50-00-0	0.01000	0.00000	

			Sodium glycolate	2836-32-0	0.01000	0.00000	
			Organic salt #2	Proprietary	0.01000	0.00000	
			Organic salt #1	Proprietary	0.01000	0.00000	
			Acrylamide	79-06-1	0.01000	0.00000	
			Sodium hydroxide	1310-73-2	0.01000	0.00000	
			Hexadecene	629-73-2	5.00000	0.00000	
			Propargyl alcohol	107-19-7	5.00000	0.00000	
			C.I. pigment Orange 5	3468-63-1	1.00000	0.00000	
			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)

Antero Resources
Well No. McKean 1H
As-Drilled
 Antero Resources Corporation

Sheet 1 of 2

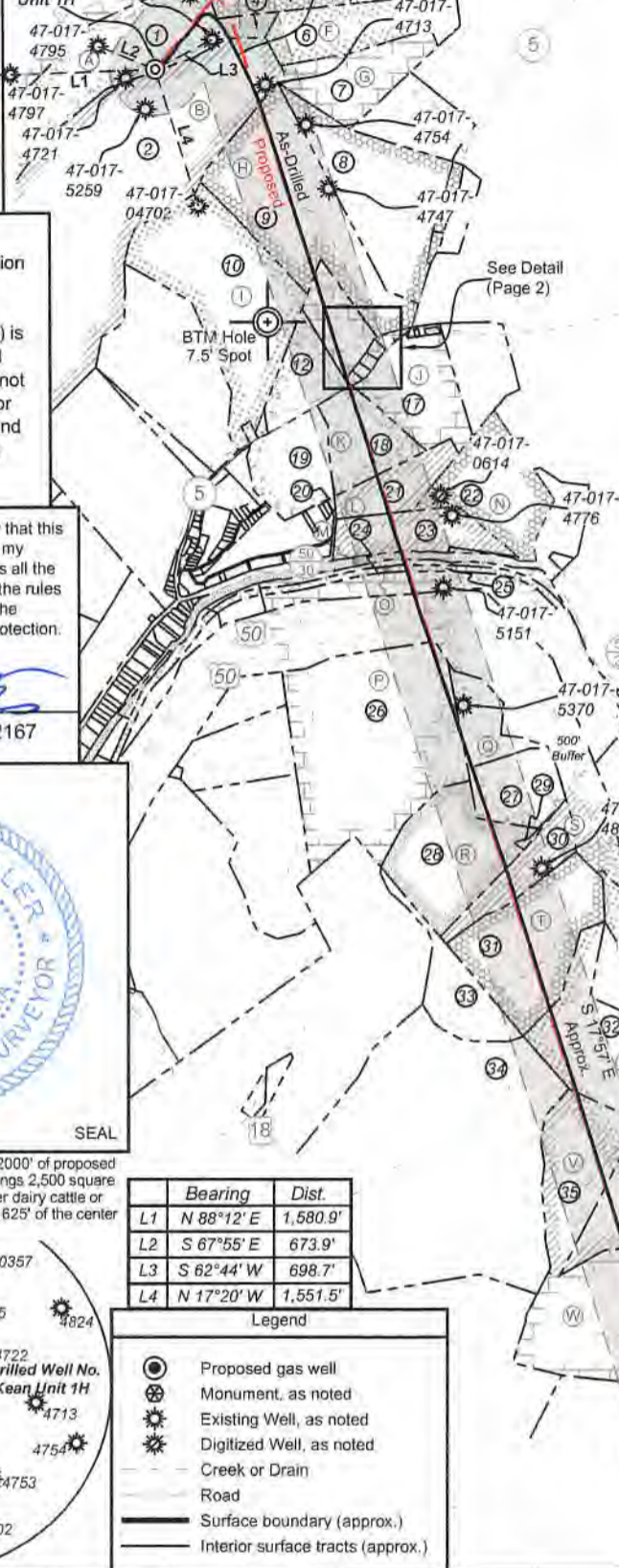
9,657' to Bottom Hole

3,598' to Top Hole

TOP HOLE LATITUDE 39 - 20 - 00
 BTM HOLE LATITUDE 39 - 17 - 30



As-Drilled Well No. McKean Unit 1H



Notes
 West Virginia Coordinate System of 1927, North Zone based upon Differential GPS Measurements. Well No. McKean Unit 1H Top Hole coordinates are N: 299,217.73' Longitude: 80°45'45.78" E: 1,642,740.39' Bottom Hole coordinates are N: 285,031.90' Longitude: 80°44'32.80" E: 1,648,280.92' UTM Zone 17, NAD 1983
 Top Hole Coordinates: N: 4,351,729.174m E: 520,470.350m
 Bottom Hole Coordinates: N: 4,347,435.635m E: 522,230.360m
 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 LONGITUDE 80 - 45 - 00
 BTM HOLE LONGITUDE 80 - 42 - 30
 5,742' to Bottom Hole
 6,810' to Top Hole

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.

McKean Unit 1H As-Drilled POE Coordinates
 West Virginia Coordinate System of 1927, North Zone
 N: 299,368.14'
 E: 1,643,635.91'
 Latitude: 39°18'54.30"
 Longitude: 80°45'34.42"
 UTM Zone 17, NAD 1983
 N: 4,351,779.555m
 E: 520,742.406m

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.

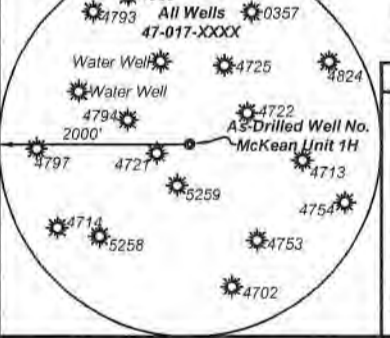
Bradley D. Miller
 Bradley D. Miller, P.S. 2167

Leases

A	William A. Farr
B	James Lincoln Smith
C	William Ashburn Heirs
D	James R. Fraley, et ux
E	David Lipscomb
F	Charles A. McKinney
G	Robert W. Sponaugle
H	Betty Lou Calhoun
I	Jennie Mae Sponaugle, et al
J	Jackson V. Moffatt
K	William Franklin Willis
L	Franklin L. Butler & Key Oil Co.
M	WVDNR
N	Rossie & Eva Lowery
O	WV State Rail Authority
P	Wanda Longacre, et al
Q	C. M. Tate, et ux
R	Thomas L. Barnes, et ux
S	Grace Evelyn Bunner
T	AMP Fund III, LP
U	Alton J. Childers, et al
V	Winnie J. Hackley
W	W.L. Davis, et ux

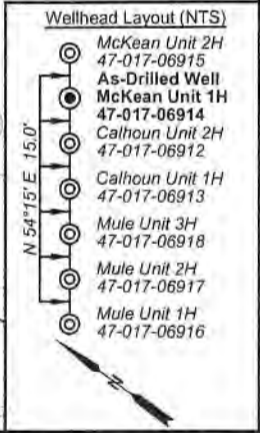


Note: 2 water well was found within 2000' of proposed well. No occupied dwellings or buildings 2,500 square feet or larger used to house or shelter dairy cattle or poultry husbandry are located within 625' of the center of the well pad.



Legend

- Proposed gas well
- Monument, as noted
- Existing Well, as noted
- Digitized Well, as noted
- Creek or Drain
- Road
- Surface boundary (approx.)
- Interior surface tracts (approx.)



FILE NO: 46-30-WU-14
 DRAWING NO: McKean 1H As-Drilled
 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: December 20 2022
 OPERATOR'S WELL NO. McKean Unit 1H
 API WELL NO
 47 - 017 - 06914
 STATE COUNTY PERMIT

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

LOCATION: ELEVATION: As-Built: 1,189' WATERSHED: Middle Island Creek QUADRANGLE: TH: West Union BH: Smithburg
 DISTRICT: West Union Antero COUNTY: Doddridge
 SURFACE OWNER: Midstream, LLC ROYALTY OWNER: William A. Farr; David Lipscomb; James Lincoln Smith; LEASE NO: ACREAGE: 45.8
 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: 6,854' TVD 22,243' 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



ID	TM/Par	Owner	Bk/Pg	Acres
1	7-18.1	Antero Midstream, LLC	346/612	45.80
2	7-29	Sharon A. Gaspar	W113/242	182.67
3	7-18	Antero Midstream, LLC	387/708	116.54
4	7-19	James R. Fraley, Jr.	459/86	2.60
5	7-12.1	James R. Fraley, Jr.	459/86	41.00
6	8-53	Charter McKinney Heirs	69/311	13.00
7	8-24	Robert Sponaugle	248/81	13.00
8	8-31.1	Jackson H. & Doris Todd Calhoun	365/647	41.92
9	8-31	Jacqueline D. & Gayford A. Cox	469/369	53.75
10	7-25	Robert W. Sponaugle, et al	369/496	49.50
11	8-40	Spencer Enterprise, LLC	261/512	11.06
12	12-2	Frank Jr. & Doris E. Holtz	235/23	13.54
13	8-40.4	Kristen Thomas	382/507	0.81
14	8-40.3	Jonathan M. Johnson	305/616	0.48
15	8-40.2	Sharon K. & Robert W. Sponaugle	W37/387	0.56
16	8-40.1	Melanie A. & Benjamin M. Blair	330/195	0.56
17	8-45	Tensil D. Davis	312/177	20.89
18	12-4	Sharon E. Walker & Ronald J. Burns	259/365	18.70
19	12-1	Antero Midstream, LLC	378/34	18.90
20	34-98	Roy F. Rupert	122/141	0.32
21	12-6	Rossie & Eva Lowery, et al	258/336	15.30
22	12-7	Harold F. Robinson, et al	196/331	26.00
23	12-23	Rossie & Eva Lowery	258/336	14.63
24	12-103	Barnes Siblings Property, LLC	471/545	43.11
25	12-101	WV Railroad Maintenance Authority	216/166	11.30
26	12-50	Key Oil Co, et al	252/558	76.98
27	12-51	Key Oil Co., et al	259/283	43.70
28	12-64	Frank L. Butler, et al	259/275	34.13
29	12-64.2	Frank L. Butler, et al	259/275	0.55
30	12-65	James T. & Claire A. Robinson, et al	436/695	10.86
31	12-72	James T. & Claire A. Robinson, et al	436/695	35.96
32	12-72.4	Doddridge County 4-H Association	162/441	44.30
33	12-64.1	Frank L Butler, et al	259/275	15.50
34	16-1	Barbara Jo McCutchan	333/91	123.17
35	16-21	Dustin Underwood & Matthew Samer	309/252	27.27
36	16-22	William H. Knisely, III	247/201	27.27
37	16-7	Doddridge County Park & Recreation	304/437	179.23
38	16-17	I. L. Morris	230/307	108.59




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

FILE NO: 46-30-WU-14
 DRAWING NO: McKean 1H As-Drilled
 SCALE: 1" = 2000'
 MINIMUM DEGREE OF ACCURACY:
Submeter
 PROVEN SOURCE OF ELEVATION:
WVDOT, Harrisville, WV

DATE: December 20 2022
 OPERATOR'S WELL NO. McKean Unit 1H
 API WELL NO
47 — 017 — 06914
 STATE COUNTY PERMIT

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

LOCATION: ELEVATION: As-Built: 1,189' WATERSHED: Headwaters Middle Island Creek QUADRANGLE: TH: West Union BH: Smithburg
 DISTRICT: West Union Antero COUNTY: Doddridge
 SURFACE OWNER: Midstream, LLC ACREAGE: 45.8
 ROYALTY OWNER: William A. Farr; David Lipscomb; James Lincoln Smith; LEASE NO: _____ ACREAGE: 15.18750; 265;

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: 6,854' TVD 22,243' 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

Antero Resources
Well No. McKean 1H
As-Drilled
 Antero Resources Corporation



Top Hole Coordinates, As-drilled data, and information was provided by Antero Resources Corporation. Allegany 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, P.S. 2167



Sheet 1 of 2

9,657' to Bottom Hole

3,598' to Top Hole

TOP HOLE LATITUDE 39 - 20 - 00
 BTM HOLE LATITUDE 39 - 17 - 30

Notes
 West Virginia Coordinate System of 1927, North Zone based upon Differential GPS Measurements.
 Well No. McKean Unit 1H Top Hole coordinates are
 N: 299,217.73' Latitude: 39°18'52.69"
 E: 1,642,740.39' Longitude: 80°45'45.78"
 Bottom Hole coordinates are
 N: 285,031.90' Latitude: 39°16'33.25"
 E: 1,648,280.92' Longitude: 80°44'32.80"
 UTM Zone 17, NAD 1983
 Top Hole Coordinates Bottom Hole Coordinates
 N: 4,351,729.174m N: 4,347,435.635m
 E: 520,470.350m E: 522,230.360m
 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 LONGITUDE 80 - 45 - 00
 BTM HOLE LONGITUDE 80 - 42 - 30
 5,742' to Bottom Hole
 6,810' to Top Hole



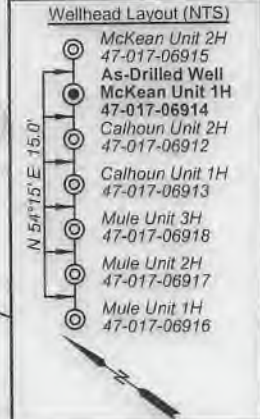
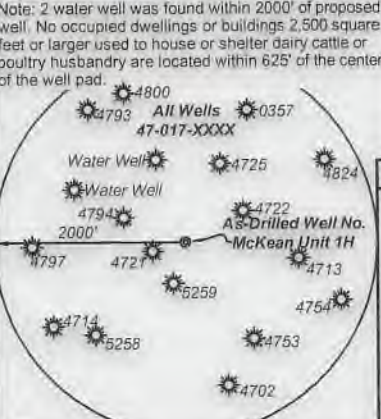
McKean Unit 1H As-Drilled POE Coordinates
 West Virginia Coordinate System of 1927, North Zone
 N: 299,368.14'
 E: 1,643,635.91'
 Latitude: 39°18'54.30"
 Longitude: 80°45'34.42"
 UTM Zone 17, NAD 1983
 N: 4,351,779.555m
 E: 520,742.406m

Leases

A	William A. Farr
B	James Lincoln Smith
C	William Ashburn Heirs
D	James R. Fraley, et ux
E	David Lipscomb
F	Charles A. McKinney
G	Robert W. Sponaugle
H	Betty Lou Calhoun
I	Jennie Mae Sponaugle, et al
J	Jackson V. Moffatt
K	William Franklin Willis
L	Franklin L. Butler & Kay Oil Co.
M	WVDNR
N	Rossie & Eva Lowery
O	WV State Rail Authority
P	Wanda Longacre, et al
Q	C. M. Tate, et ux
R	Thomas L. Barnes, et ux
S	Grace Evelyn Bunner
T	AMP Fund III, LP
U	Alton J. Childers, et al
V	Winnie J. Hackley
W	W.L. Davis, et ux

	Bearing	Dist.
L1	N 88°12' E	1,580.9'
L2	S 67°55' E	673.9'
L3	S 62°44' W	698.7'
L4	N 17°20' W	1,551.5'

- Legend**
- ⊙ Proposed gas well
 - ⊗ Monument, as noted
 - ⊙ Existing Well, as noted
 - ⊙ Digitized Well, as noted
 - ⊙ Creek or Drain
 - Road
 - Surface boundary (approx.)
 - Interior surface tracts (approx.)



FILE NO: 46-30-WU-14
 DRAWING NO: McKean 1H As-Drilled
 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: December 20 2022
 OPERATOR'S WELL NO. McKean Unit 1H
 API WELL NO
 47 - 017 - 06914
 STATE COUNTY PERMIT

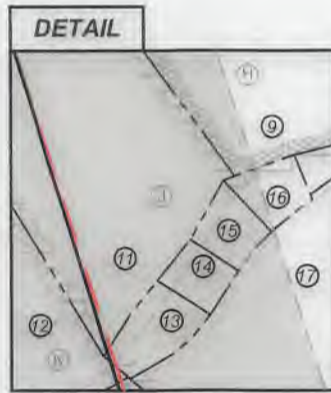
WELL TYPE: OIL GAS LIQUID INJECTION WASTE DISPOSAL
 (IF GAS) PRODUCTION: STORAGE DEEP SHALLOW

LOCATION: ELEVATION: As-Built: 1,189' WATERSHED: Middle Island Creek QUADRANGLE: TH: West Union BH: Smithburg 40 37 54 48
 DISTRICT: West Union Antero COUNTY: Doddridge 39 24 57 2023
 SURFACE OWNER: Midstream, LLC Winnie J. Hackley; Alton J. Childers, et al; AMP Fund III, LP; WVDNR William Franklin Willis; Thomas L. Barnes, et ux; Grace Evelyn Bunner; 2 96 180 95 67
 Betty Lou Calhoun; Jackson V. Moffatt; Franklin L. Butler & Key Oil Co. ACREAGE: 45.8 38.75; 30; 301.19;
 ROYALTY OWNER: William A. Farr; David Lipscomb; James Lincoln Smith; LEASE NO: ACREAGE: 15.18750, 265;
 PROPOSED WORK: DRILL CONVERT DRILL DEEPER FRACTURE OR STIMULATE PLUG OFF OLD FORMATION
 PERFORATE NEW FORMATION OTHER PHYSICAL CHANGE IN WELL (SPECIFY) As-Drilled 6,854' TVD
 PLUG AND ABANDON CLEAN OUT AND REPLUG TARGET FORMATION: Marcellus Shale ESTIMATED DEPTH: 22,243' 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



ID	TM/Par	Owner	Bk/Pg	Acres
1	7-18.1	Antero Midstream, LLC	346/612	45.80
2	7-29	Sharon A. Gaspar	W113/242	182.67
3	7-18	Antero Midstream, LLC	387/708	116.54
4	7-19	James R. Fraley, Jr.	459/86	2.60
5	7-12.1	James R. Fraley, Jr.	459/86	41.00
6	8-53	Charter McKinney Heirs	69/311	13.00
7	8-24	Robert Sponaugle	248/81	13.00
8	8-31.1	Jackson H. & Doris Todd Calhoun	365/647	41.92
9	8-31	Jacqueline D. & Gayford A. Cox	469/369	53.75
10	7-25	Robert W. Sponaugle, et al	369/496	49.50
11	8-40	Spencer Enterprise, LLC	261/512	11.06
12	12-2	Frank Jr. & Doris E. Holtz	235/23	13.54
13	8-40.4	Kristen Thomas	362/507	0.81
14	8-40.3	Jonathan M. Johnson	305/616	0.48
15	8-40.2	Sharon K. & Robert W. Sponaugle	W37/387	0.56
16	8-40.1	Melanie A. & Benjamin M. Blair	330/195	0.56
17	8-45	Tensil D. Davis	312/177	20.89
18	12-4	Sharon E. Walker & Ronald J. Burns	259/365	18.70
19	12-1	Antero Midstream, LLC	378/34	18.90
20	34-98	Roy F. Rupert	122/141	0.32
21	12-6	Rossie & Eva Lowery, et al	258/336	15.30
22	12-7	Harold F. Robinson, et al	196/331	26.00
23	12-23	Rossie & Eva Lowery	258/336	14.63
24	12-103	Barnes Siblings Property, LLC	471/545	43.11
25	12-101	WV Railroad Maintenance Authority	216/166	11.30
26	12-50	Key Oil Co., et al	252/558	76.98
27	12-51	Key Oil Co., et al	259/283	43.70
28	12-64	Frank L. Butler, et al	259/275	34.13
29	12-64.2	Frank L. Butler, et al	259/275	0.55
30	12-65	James T. & Claire A. Robinson, et al	436/695	10.86
31	12-72	James T. & Claire A. Robinson, et al	436/695	35.96
32	12-72.4	Doddridge County 4-H Association	162/441	44.30
33	12-64.1	Frank L. Butler, et al	259/275	15.50
34	16-1	Barbara Jo McCutchan	333/91	123.17
35	16-21	Dustin Underwood & Matthew Samer	309/252	27.27
36	16-22	William H. Knisely, III	247/201	27.27
37	16-7	Doddridge County Park & Recreation	304/437	179.23
38	16-17	I. L. Morris	230/307	108.59



FILE NO: 46-30-WU-14
 DRAWING NO: McKean 1H As-Drilled
 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: December 20 2022
 OPERATOR'S WELL NO. McKean Unit 1H
 API WELL NO
 47 - 017 - 06914
 STATE COUNTY PERMIT

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

LOCATION: ELEVATION: As-Built: 1,189' WATERSHED: Middle Island Creek QUADRANGLE: TH: West Union BH: Smithburg
 DISTRICT: West Union Antero COUNTY: Doddridge
 SURFACE OWNER: Midstream, LLC ACREAGE: 45.8
 ROYALTY OWNER: William A. Farr; David Lipscomb; James Lincoln Smith; LEASE NO: ACREAGE: 15.18750; 265;

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: 22,243' 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