04/05/2019

Antero Resources
1615 Wynkoop Street
Denver, CO 80202
Office 303.357.7310
Fax 303.357.7315

April 4, 2019

West Virginia Department of Environmental Protection
Office of Oil and Gas
601 57th Street
Charleston, WV 25304

To Whom It May Concern:

Please find enclosed the Well Operator's Report of Well Work, Form WR-35 (including As-Drilled Survey Plat, Directional Survey and FracFocus report), Discharge Monitoring Report Form WR-34 and corresponding logs for the following wells:

- Parachute Unit 1H (API # 47-095-02429)—Stonefly Pad
- Parachute Unit 2H (API # 47-095-02429)—Stonefly Pad
- Parachute Unit 3H (API # 47-095-02433)—Stonefly Pad
- Copper John Unit 1H (API # 47-095-02404)—Stonefly Pad
- Copper John Unit 2H (API # 47-095-02405)—Stonefly Pad
- Copper John Unit 3H (API # 47-095-02406)—Stonefly Pad
- Pheasant Unit 1H (API # 47-095-02434)—Stonefly Pad
- Pheasant Unit 2H (API # 47-095-02435)—Stonefly Pad
- Pheasant Unit 3H (API # 47-095-02437)—Stonefly Pad
- Tauscher Unit 1H (API # 47-095-02357)—Stonefly Pad
- Tauscher Unit 2H (API # 47-095-02407)—Stonefly Pad
- Tauscher Unit 3H (API # 47-095-02456)—Stonefly Pad

If you have any questions please feel free to contact me at (303) 357-7223.

Sincerely,

Megan Griffith
Permitting Agent
Antero Resources Corporation

Enclosures

WR-35
Rev. 8/23/13

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

API 47 - 095 - 02429 County Tyler District Centerville
Quad Middlebourne 7.5' Pad Name Stonefly Pad Field/Pool Name -----
Farm name Steven McPeek et al Well Number Parachute 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 4363176m Easting 506662m
Landing Point of Curve Northing 4363054.87m Easting 506028.81m
Bottom Hole Northing 4366561m Easting 504776m

Elevation (ft) 982' 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 3/15/2017 Date drilling commenced 8/29/2017 Date drilling ceased 3/10/2018
Date completion activities began 6/15/2018 Date completion activities ceased 12/7/2018
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 52', 400', 457' Open mine(s) (Y/N) depths No
Salt water depth(s) ft 1425', 1431' Void(s) encountered (Y/N) depths No
Coal depth(s) ft 52', 457' Cavern(s) encountered (Y/N) depths No
Is coal being mined in area (Y/N) No

Reviewed by:

WR-35
Rev. 8/23/13

API 47- 095 - 02429 Farm name Steven McPeek et al Well number Parachute 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	24"	20"	95'	New	94#, H-40	N/A	Y
Surface	17-1/2"	13-3/8"	576'	New	54#, J-55	N/A	Y
Coal							
Intermediate 1	12-1/4"	9-5/8"	2649'	New	36#, H-40	N/A	Y
Intermediate 2							
Intermediate 3							
Production	8-3/4"/8-1/2"	5-1/2"	19558'	New	23#, P-110	N/A	Y
Tubing		2-3/8"	6787'		4.7#, N-80		
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	204 sx	15.6	1.18	244	0'	8 Hrs.
Surface	Class A	480 sx	15.6	1.19	402	0'	8 Hrs.
Coal							
Intermediate 1	Class A	909 sx	15.6	1.18	1047	0'	8 Hrs.
Intermediate 2							
Intermediate 3							
Production	Class H	796sx (Lead) 1116 sx (Tail)	13.5 (Lead), 15.2 (Tail)	1.53 (Lead), 1.83 (Tail)	2819	~500' into Intermediate Casing	8 Hrs.
Tubing							

Drillers TD (ft) 19558' MD, 6250' TVD (BHL), 6370' (Deepest Point Drilled) Loggers TD (ft) 19558' MD

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

Plug back procedure N/A

Kick off depth (ft) 6100'

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

WR-35
Rev. 8/23/13

API 47- 095 - 02429 Farm name Steven McPeek et al Well number Parachute Unit 1H

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

Please insert additional pages as applicable.

04/05/2019

WR-35
Rev. 8/23/13

API 47- 095 - 02429 Farm name Steven McPeek et al Well number Parachute Unit 1H

PRODUCING FORMATION(S)	DEPTHS			
Marcellus	6317' (TOP)	TVD	' (TOP)	MD

Please insert additional pages as applicable.

GAS TEST □ Build up □ Drawdown ■ Open Flow OIL TEST ■ Flow □ Pump

SHUT-IN PRESSURE Surface 2800 psi Bottom Hole --- psi DURATION OF TEST --- hrs

OPEN FLOW Gas 8043 mcfpd Oil 232 bpd NGL --- bpd Water 10 bpd GAS MEASURED BY □ Estimated ■ Orifice □ Pilot

LITHOLOGY/ FORMATION NAME	TOP DEPTH IN FT 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_2S, ETC)

***PLEASE SEE ATTACHED EXHIBIT 3**

Please insert additional pages as applicable.

Drilling Contractor Frontier Drilling LLC
Address 562 Spring Run Road City Pennsboro State WV Zip 26415

Logging Company Nine Energy Services
Address 125 Museum Road City Washington State PA Zip 15301

Cementing Company C&J Energy Services
Address 1650 Hackers Creek City Jane Lew State WV Zip 26378

Stimulating Company Baker Hughes
Address 837 Philippi Pike City Clarksburg State WV Zip 26301

Please insert additional pages as applicable.

Completed by Megan Griffith Telephone 303-357-7223
Signature Title Permitting Agent Date April 4, 2019

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

API 47-095-02429 Farm Name Steven McPeek et al Well Number Parachute Unit 1H					
EXHIBIT 1					
Stage No.	Perforation Date	Perforated from MD ft.	Perforated to MD ft.	Number of Perforations	Formations
1	8/8/2018	19283.175	19454.7	60	Marcellus
2	8/9/2018	19083.585	19251.91	60	Marcellus
3	8/10/2018	18883.995	19052.32	60	Marcellus
4	8/10/2018	18684.405	18852.73	60	Marcellus
5	8/11/2018	18484.815	18653.14	60	Marcellus
6	8/11/2018	18285.225	18453.55	60	Marcellus
7	8/12/2018	18085.635	18253.96	60	Marcellus
8	8/11/2018	17886.045	18054.37	60	Marcellus
9	8/11/2018	17686.455	17854.78	60	Marcellus
10	8/13/2018	17486.865	17655.19	60	Marcellus
11	8/14/2018	17287.275	17455.6	60	Marcellus
12	8/14/2018	17087.685	17256.01	60	Marcellus
13	8/15/2018	16888.095	17056.42	60	Marcellus
14	8/16/2018	16688.505	16856.83	60	Marcellus
15	8/17/2018	16488.915	16657.24	60	Marcellus
16	8/17/2018	16289.325	16457.65	60	Marcellus
17	8/18/2018	16089.735	16258.06	60	Marcellus
18	8/18/2018	15890.145	16058.47	60	Marcellus
19	8/19/2018	15690.555	15858.88	60	Marcellus
20	8/19/2018	15490.965	15659.29	60	Marcellus
21	8/20/2018	15291.375	15459.7	60	Marcellus
22	8/20/2018	15091.785	15260.11	60	Marcellus
23	8/21/2018	14892.195	15060.52	60	Marcellus
24	8/21/2018	14692.605	14860.93	60	Marcellus
25	8/22/2018	14493.015	14661.34	60	Marcellus
26	8/22/2018	14293.425	14461.75	60	Marcellus
27	8/21/2018	14093.835	14262.16	60	Marcellus
28	8/24/2018	13894.245	14062.57	60	Marcellus
29	8/24/2018	13694.655	13862.98	60	Marcellus
30	8/24/2018	13495.065	13663.39	60	Marcellus
31	8/24/2018	13295.475	13463.8	60	Marcellus
32	8/25/2018	13095.885	13264.21	60	Marcellus
33	8/26/2018	12896.295	13064.62	60	Marcellus
34	8/26/2018	12696.705	12865.03	60	Marcellus
35	8/27/2018	12497.115	12665.44	60	Marcellus
36	8/27/2018	12297.525	12465.85	60	Marcellus
37	8/28/2018	12097.935	12266.26	60	Marcellus
38	8/29/2018	11898.345	12066.67	60	Marcellus
39	8/29/2018	11698.755	11867.08	60	Marcellus
40	8/30/2018	11499.165	11667.49	60	Marcellus
41	8/31/2018	11299.575	11467.9	60	Marcellus
42	8/31/2018	11099.985	11268.31	60	Marcellus
43	9/1/2018	10900.395	11068.72	60	Marcellus
44	9/1/2018	10700.805	10869.13	60	Marcellus
45	9/1/2018	10501.215	10669.54	60	Marcellus
46	9/2/2018	10301.625	10469.95	60	Marcellus
47	9/2/2018	10102.035	10270.36	60	Marcellus
48	9/3/2018	9902.445	10070.77	60	Marcellus
49	9/3/2018	9702.855	9871.18	60	Marcellus
50	9/3/2018	9503.265	9671.59	60	Marcellus
51	9/4/2018	9303.675	9472	60	Marcellus
52	9/4/2018	9104.085	9272.41	60	Marcellus
53	9/5/2018	8904.495	9072.82	60	Marcellus
54	9/5/2018	8704.905	8873.23	60	Marcellus
55	9/6/2018	8505.315	8673.64	60	Marcellus
56	9/7/2018	8305.725	8474.05	60	Marcellus
57	9/7/2018	8106.135	8274.46	60	Marcellus
58	9/8/2018	7906.545	8074.87	60	Marcellus
59	9/8/2018	7706.955	7875.28	60	Marcellus
60	9/9/2018	7507.365	7675.69	60	Marcellus
61	9/9/2018	7307.775	7476.1	60	Marcellus
62	9/10/2018	7108.185	7276.51	60	Marcellus
63	9/10/2018	6908.595	7076.92	60	Marcellus

API 47-095-02429 **Farm Name** Steven McPeek et al **Well Number** Parachute Unit 1H

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	8/8/2018	78	7762	3861	3321	316150	9413	N/A
2	8/9/2018	15	8112	4758	3348	402500	8681	N/A
3	8/10/2018	69.3	7601	5300	3602	403100	8363	N/A
4	8/10/2018	70.61667	7328.133	5397	3475	402100	8349	N/A
5	8/11/2018	69.56667	7403.833	5571	3116	402700	8166	N/A
6	8/11/2018	69.24	7208.46	5788	3145	401900	8196	N/A
7	8/12/2018	73.37	7522.78	6796	3424	402400	8145	N/A
8	8/11/2018	70.0775	7196.62	6357	3679	402150	8284	N/A
9	8/11/2018	78.44286	7943.571	6837	3922	402800	10241	N/A
10	8/13/2018	73.9	7416	6187	3211	402200	8254	N/A
11	8/14/2018	68.91	7193.58	6998	3670	402100	8350	N/A
12	8/14/2018	72.525	7535.25	5843	3635	402450	8194	N/A
13	8/15/2018	77.95	7657.63	6292	3735	402400	8204	N/A
14	8/16/2018	74.1	7610	6858	3900	401900	8592	N/A
15	8/17/2018	77.09	7788.71	6868	3622	402350	8291	N/A
16	8/17/2018	77.6	7688	6341	3551	402150	8262	N/A
17	8/18/2018	74.5	7465	6022	3129	401300	8388.005	N/A
18	8/18/2018	75.7	7535	6549	4020	401150	8070.005	N/A
19	8/19/2018	78.2773	7612.43	6582	3643	387650	8058	N/A
20	8/19/2018	72.9	7333	6754	4214	402100	8047	N/A
21	8/20/2018	75.3779	7459.8	6401	3842	400200	7895	N/A
22	8/20/2018	77.5	7583	6756	3677	402250	8286.005	N/A
23	8/21/2018	77.4861	7531.55	5867	3770	400250	8012	N/A
24	8/21/2018	73.9	7462	6232	3168	401100	8033.005	N/A
25	8/22/2018	75.9831	7376.26	6509	4523	396950	8116	N/A
26	8/22/2018	75.3	7885	5872	4125	402350	8257.005	N/A
27	8/21/2018	77.08125	7615.813	6685	4538	402500	9473	N/A
28	8/24/2018	74.7	7494	6496	4056	402750	7988.005	N/A
29	8/24/2018	77.425	7436.25	6564	4475	403750	7885	N/A
30	8/24/2018	74.55385	7740.462	6326	4430	403900	8735.005	N/A
31	8/24/2018	77.54167	7313.25	6227	3889	404410	8070	N/A
32	8/25/2018	76.46667	7471.25	6433	3410	402200	8125.005	N/A
33	8/26/2018	78.425	7381.167	6196	3911	400950	7906	N/A
34	8/26/2018	76.23077	7426.077	6480	3343	401950	8040.005	N/A
35	8/27/2018	77.575	7155.583	6765	3934	402800	7950	N/A
36	8/27/2018	75.46667	7127.75	6653	3517	401950	8150.005	N/A
37	8/28/2018	71.78333	6858.167	6498	3340	402400	8077.005	N/A
38	8/29/2018	76.3	7148.75	6597	3496	402400	8042	N/A
39	8/29/2018	79.075	7359.917	5912	3407	403100	8044	N/A
40	8/30/2018	75.74167	6988.583	5850	3747	402400	7761	N/A
41	8/31/2018	74.85833	6915.75	5636	3270	402150	7690	N/A
42	8/31/2018	79.29286	6952.857	5445	3513	403650	8815	N/A
43	9/1/2018	74.58333	6762.083	5777	3814	405400	7837	N/A
44	9/1/2018	77.76667	7095.167	5909	3546	401860	8164	N/A
45	9/1/2018	77.05833	6884.167	5413	4022	401550	7745	N/A
46	9/2/2018	78.95833	6937.333	5563	3370	402450	7996	N/A
47	9/2/2018	77.68333	6740.417	5889	3602	402000	7845	N/A
48	9/3/2018	78.8	6883.25	6266	3506	406550	7746	N/A
49	9/3/2018	78.175	6960.583	5975	3454	402850	7852	N/A
50	9/3/2018	76.65833	6872.417	6021	3954	402500	7748	N/A
51	9/4/2018	78.75	7026.833	7357	3609	402950	7889	N/A
52	9/4/2018	78.025	6898.417	6524	3609	403100	7876	N/A
53	9/5/2018	78.35	7068.333	6703	3325	403750	7867	N/A
54	9/5/2018	79.16667	6757.333	6160	3778	402400	7811	N/A
55	9/6/2018	79.95833	6780.583	6470	3613	402450	7765	N/A
56	9/7/2018	78.56985	6763.289	6235	3516	404200	7914.11	N/A
57	9/7/2018	77.63368	6830.407	6112	3534	402600	7916.72	N/A
58	9/8/2018	75.84954	6659.253	6708	4576	360500	7672.02	N/A
59	9/8/2018	76.49075	6606.496	5864	5421	401600	7735	N/A
60	9/9/2018	76.36058	6653.843	6297	4311	408400	8064.31	N/A
61	9/9/2018	76.13697	6668.189	6512	4561	401550	7897	N/A
62	9/10/2018	77.64225	6546.948	6384	3634	401700	7907	N/A
63	9/10/2018	71.32154	5710.954	6689	3149	401650	7968.79	N/A
	AVG=	**73.3**	**7,484**	**6,250**	**3,705**	**15,178,610**	**315,588**	TOTAL

API 47-095-02429 Farm Name Steven McPeek et al Well Number Parachute Unit 1H				
EXHIBIT 3				
LITHOLOGY/ FORMATION	**TOP DEPTH (TVD) From Surface**	**BOTTOM DEPTH (TVD) From Surface**	**TOP DEPTH (MD) From Surface**	**BOTTOM DEPTH (MD) From Surface**
Silty Sandstone	0	205	0	205
Sandy siltstone	205	310	205	310
Sandstone	310	605	310	605
Silty Sandstone	605	785	605	785
limey siltstone	785	960	785	960
silty sandstone, tr. coal	960	1,110	960	1,110
silty sandstone	1,110	1,505	1,110	1,505
silty shale	1,505	1,635	1,505	1,635
sandstone, tr coal	1,635	1,645	1,635	1,645
silty sandstone	1,645	1,685	1,645	1,685
sandstone	1,685	1,760	1,685	1,760
sandy shale	1,760	1,785	1,760	1,785
shaly sand	1,785	1,857	1,785	1,891
Big Lime	1,872	2,020	1,906	2,064
Big Injun	2,020	2,477	2,064	2,543
Gantz Sand	2,477	2,612	2,543	2,684
Fifty Foot Sandstone	2,612	2,718	2,684	2,795
Gordon	2,718	3,054	2,795	3,157
Fifth Sandstone	3,054	3,113	3,157	3,223
Bayard	3,113	3,482	3,223	3,632
Warren	3,482	3,881	3,632	4,074
Speechley	3,881	4,576	4,074	4,843
Balltown	4,181	4,960	4,405	5,268
Bradford	4,576	4,960	4,843	5,268
Benson	4,960	5,209	5,268	5,545
Alexander	5,209	5,832	5,545	6,234
Rhinestreet	5,808	6,023	6,210	6,471
Sycamore	6,023	6,185	6,471	6,710
Middlesex	6,185	6,275	6,710	6,863
Burkett	6,275	6,295	6,863	6,908
Tully	6,295	6,317	6,908	6,965
Marcellus	6,317	NA	6,965	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:	8/8/2018
Job End Date:	9/10/2018
State:	West Virginia
County:	Tyler
API Number:	47-095-02429-00-00
Operator Name:	Antero Resources Corporation
Well Name and Number:	Parachute Unit 1H
Latitude:	39.41800300
Longitude:	-80.92277800
Datum:	NAD83
Federal Well:	NO
Indian Well:	NO
True Vertical Depth:	6,250
Total Base Water Volume (gal):	21,550,807
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
Water	Supplied by Operator	Base Fluid					
			Water	7732-18-5	70.00000	87.39282	
DWP-111	CWS	Gel Slurry					
				Listed Below			

04/05/2019

CI-9100G	CWS	Corrosion Inhibitor					
				Listed Below			
Hydrochloric Acid	CWS	Clean Perforations					
				Listed Below			
DAP-902	CWS	Scale Inhibitor					
				Listed Below			
Calbreak 5501	CWS	Breaker					
				Listed Below			
DWP-641	CWS	Friction Reducer					
				Listed Below			
Sand (Proppant)	CWS	Propping Agent					
				Listed Below			
DAP-103	CWS	Iron Control					
				Listed Below			
SaniFrac 8844	CWS	Biocide					
				Listed Below			
Other Chemical (s)	Listed Above	See Trade Name (s) List					

04/05/2019

				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	12.25153	
			Calcite	471-34-1	1.00000	0.08033	
			Hydrochloric acid	7647-01-0	37.00000	0.05724	
			Illite	12173-60-3	1.00000	0.04216	
			Guar gum	9000-30-0	60.00000	0.02956	
			Distillates (petroleum), hydrotreated middle	64742-46-7	60.00000	0.02956	
			Polymer	26100-47-0	45.00000	0.02481	
			Distillates (petroleum), hydrotreated light	64742-47-8	30.00000	0.01654	
			Biotite	1302-27-8	0.10000	0.01225	
			Goethite	1310-14-1	0.10000	0.01225	
			Apatite	64476-38-6	0.10000	0.01225	
			Polyethylene glycol mixture	25322-68-3	54.50000	0.00641	
			2-Propenoic acid, homopolymer, sodium salt	9003-04-7	40.00000	0.00628	
			Ammonium chloride	12125-02-9	11.00000	0.00606	
			Ilmenite	98072-94-7	0.10000	0.00422	
			Quaternary ammonium compounds, bis (hydrogenated tallow alkyl)dimethyl, salts with bentonite	68953-58-2	5.00000	0.00246	
			2,2-Dibromo-3-Nitrilopropionamide	10222-01-2	20.00000	0.00235	
			Sorbitan monooleate	1338-43-8	4.00000	0.00221	
			Polyethylene glycol monooleate	9004-96-0	3.00000	0.00165	
			1,2-Propanediol	57-55-6	10.00000	0.00157	
			Ammonium Persulfate	64742-47-8	100.00000	0.00112	
			Sorbitol tetraoleate	61723-83-9	2.00000	0.00110	

			Oxirane, 2-methyl-, polymer with oxirane, monodecyl ether	37251-67-5	1.50000	0.00074	
			Amines, tallow alkyl, ethoxylated	61791-26-2	1.00000	0.00055	
			Citric acid	77-92-9	60.00000	0.00052	
			Sodium bromide	7647-15-6	4.00000	0.00047	
			Dibromoacetonitrile	3252-43-5	3.00000	0.00035	
			Alkyloxypolyethyleneoxy ethanol	84133-50-6	0.50000	0.00028	
			Vinylidene chloride-methyl acrylate copolymer	69418-26-4	20.00000	0.00022	
			Acrylamide	79-06-1	0.10000	0.00006	
			Ethylene glycol	107-21-1	40.00000	0.00003	
			Diethylene glycol (mono) methyl ether	34590-94-8	20.00000	0.00002	
			Ethoxylated alcohols	Proprietary	10.00000	0.00001	Proprietary CAS
			Formic Acid	64-18-6	10.00000	0.00001	
			Diethylene glycol	111-46-6	1.00000	0.00001	
			Cinnamaldehyde	104-55-2	10.00000	0.00001	
			Tar bases, quinolone derivs, benzyl chloride-quatenized	72480-70-7	10.00000	0.00001	
			Tar bases, quinolone derivs	68513-87-1	1.00000	0.00001	
			Isopropanol	67-63-0	5.00000	0.00001	

* 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)

WR-34
Page 1 of 3
Rev. 10-10

State of West Virginia
Department of Environmental Protection - Office of Oil and Gas
Discharge Monitoring Report
Oil and Gas General Permit

Company Name: Antero Resources Corporation
API No: 47-095-02429 County: Tyler
District: Centerville Well No: Parachute Unit 1H
Farm Name: Steven McPeek et al
Discharge Date/s From:(MMDDYY) 01/08/19 To: (MMDDYY) 02/07/19
Discharge Times. From: 0:00 To: 24:00
Total Volume to be Disposed from this facility (gallons): 765,779
Disposal Option(s) Utilized (write volumes in gallons):

(1) Land Application: _____ (Include a topographical map of the Area.)
(2) UIC: 458,877 Permit No. 3400923821, 3410523619, 3416729731, 3416729543, 3416729464, 3416729445, 3405320968, 4708509721, 3400923761, 3416723862, 3410523268
(3) Offsite Disposal: 700 Site Location: Mud Masters
(4) Reuse: 306,202 Alternate Permit Number: _____
(5) Centralized Facility: _____ Permit No. _____
(6) Other method: _____ (Include an explanation)

Follow Instructions below to determine your treatment category:
Optional Pretreatment test: n/a Cl- mg/l n/a DO mg/l

1. Do you have permission to use expedited treatment from the Director or his representative? (Y/N) n/a If yes, who? _____ and place a four (4) on line 7. If not go to line 2
2. Was Frac Fluid or flowback put into the pit? (Y/N) n/a If yes, go to line 5. If not, go to line 3.
3. Do you have a chloride value pretreatment (see above)? (Y/N) n/a If yes, go to line 4 If not, go to line 5.
4. Is the Chloride level less than 5000 mg/l? (Y/N) n/a If yes, then enter a one (1) on line 7.
5. Do you have a pretreatment value for DO? (See above) (Y/N) n/a If yes, go to line 6 If not, enter a three (3) in line 7.
6. Is the DO level greater than 2.5 mg/l?(Y/N) n/a If yes, enter a two (2) on line 7. If not, enter a three (3) on line 7.
7. n/a is the category of your pit. Use the Appropriate section.
8. Comments on Pit condition: n/a No pit on site.

Name of Principal Exec. Officer: Gretchen Kohler
Title of Officer: Senior Environmental and Regulatory Manager
Date Completed: 3/18/19

I certify under penalty of law that I have personally examined and am familiar with the information submitted on this document and all the attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

Gretchen Kohler
Signature of a Principal Exec. Officer or Authorized agent.

Category 1
Sampling Results
API No : _____

Parameter	Predischarge Limits	Predischarge Reported	Discharge Limits	Discharge Reported	Units
pH	6-10		6-10		S.U
Settling Time	5		N/A	N/A	Days
Fe	6		6		mg/l
D.O.	2.5		2.5		mg/l
Settleable Sol.	0.5		0.5		mg/l
Cl	5,000		5,000		mg/l
Oil	Trace		Trace		Obs.
TOC**			Monitor		mg/l
Oil and Grease			Monitor		mg/l
Total Al***			Monitor		mg/l
TSS			Monitor		mg/l
Total Mn	Monitor		Monitor		mg/l
Volume			Monitor		Gal
Flow			Monitor		Gal/min
Disposal Area			Monitor		Acres

*** Al is only reported if the pH is above 9.0

Category 2
Sampling Results
API No : _____

Parameter	Predischarge Limits	Predischarge Reported	Discharge Limits	Discharge Reported	Units
pH	6-10		6-10		S.U
Settling Time	10		N/A	N/A	Days
Fe	6		6		mg/l
D.O.	2.5		2.5		mg/l
Settleable Sol.	0.5		0.5		mg/l
Cl*	12,500		12,500		mg/l
Oil	Trace		Trace		Obs.
TOC**			Monitor		mg/l
Oil and Grease			Monitor		mg/l
Total Al***			Monitor		mg/l
TSS			Monitor		mg/l
Total Mn	Monitor		Monitor		mg/l
Volume			Monitor		Gal
Flow			Monitor		Gal/min
Disposal Area			Monitor		Acres

* Can be 25,000 with inspector's approval,

(Inspector's signature): _____ Date: _____

** Include a description of your aeration technique. Aeration Code: _____

*** Al is only reported if the pH is above 9.0

Category 3
Sampling Results
API No : _____

Parameter	Predischarge Limits	Predischarge Reported	Discharge Limits	Discharge Reported	Units
pH	6-10		6-10		S.U
Settling Time	20		N/A	N/A	Days
Fe	6		6		mg/l
D.O.	2.5		2.5		mg/l
Settleable Sol.	0.5		0.5		mg/l
Cl*	12,500		12,500		mg/l
Oil	Trace		Trace		Obs.
TOC**			Monitor		mg/l
Oil and Grease			Monitor		mg/l
Total Al***			Monitor		mg/l
TSS			Monitor		mg/l
Total Mn	Monitor		Monitor		mg/l
Volume			Monitor		Gal
Flow			Monitor		Gal/min
Disposal Area			Monitor		Acres

* Can be 25,000 with inspector's approval,

(Inspector's signature): _____ Date: _____
** Include a description of your aeration technique. Aeration Code: _____
*** Al is only reported if the pH is above 9.0.

Category 4
Sampling Results
API No: _____

Parameter	Predischarge Limits	Predischarge Reported	Discharge Limits	Discharge Reported	Units
pH	6-10		6-10		S.U
Settling Time	1		N/A	N/A	Days
Fe	Monitor		Monitor		mg/l
D.O.	Monitor		Monitor		mg/l
Settleable Sol.	Monitor		Monitor		mg/l
Cl*	12,500		12,500		mg/l
Oil	Trace		Trace		Obs.
TOC**			Monitor		mg/l
Oil and Grease			Monitor		mg/l
TSS			Monitor		mg/l
Total Mn	Monitor		Monitor		mg/l
Volume			Monitor		Gal
Flow			Monitor		Gal/min
Activated Carbon (0.175)			N/A	N/A	lb/Bl
Date Site Reclaimed	N/A	N/A			10 days from dis.
Disposal Area			Monitor		Acres

* Can be 25,000 with inspector's approval,

(Inspector's signature): _____ Date: _____