



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

May 15, 2020

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 off of the **Dawson Pad**:

- Gabitalalek Unit 1H-2H
- Kilska Unit 1H-2H
- Rodzina Unit 1H-3H

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

Sincerely,

A handwritten signature in black ink, appearing to read "MGriffith", written over a horizontal line.

Megan Griffith
Permitting Agent
Antero Resources Corporation

Enclosures

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

API 47 - 095 - 02582 County Tyler District Centerville
Quad Shirley 7.5' Pad Name Dawson Pad Field/Pool Name ----
Farm name Gary D. Dawson et ux Well Number Kilska 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 4358977m Easting 510948m
Landing Point of Curve Northing 4358701.37m Easting 510819.38m
Bottom Hole Northing 4353493m Easting 512254m

Elevation (ft) 1009' 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 3/12/2019 Date drilling commenced 4/23/2019 Date drilling ceased 8/9/2019
Date completion activities began 10/18/2019 Date completion activities ceased 1/29/2020
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 115', 455' Open mine(s) (Y/N) depths No
Salt water depth(s) ft 551', 1830' Void(s) encountered (Y/N) depths No
Coal depth(s) ft 275', 975' Cavern(s) encountered (Y/N) depths No
Is coal being mined in area (Y/N) No

Reviewed by:

API 47-095 - 02582 Farm name Gary D. Dawson et ux Well number Kilska 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"	589'	New	54#, J-55	N/A	Y
Coal							
Intermediate 1	12-1/4"	9-5/8"	2608'	New	36#, H-40	N/A	Y
Intermediate 2							
Intermediate 3							
Production	8-3/4"/8-1/2"	5-1/2"	21625'	New	23#, P-110	N/A	Y
Tubing		2-3/8"	6719'		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	490 sx	15.6	1.19	402	0'	8 Hrs.
Coal							
Intermediate 1	Class A	885 sx	15.6	1.18	1047	0'	8 Hrs.
Intermediate 2							
Intermediate 3							
Production	Class H	798sx (Lead) 3104 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) 21644' MD, 6461' TVD (BHL), 6463' (Deepest Point Drilled) Loggers TD (ft) 21644' 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

API 47- 095 - 02582 Farm name Gary D. Dawson et ux Well number Kilska Unit 1H

<u>PRODUCING FORMATION(S)</u>	<u>DEPTHS</u>	
<u>Marcellus</u>	<u>6442' (TOP)</u> TVD	<u>6764' (TOP)</u> 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 14191 mcfpd Oil 214 bpd NGL --- bpd Water 845 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 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 5/15/20

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

EXHIBIT 1

Stage No.	Perforation Date	Perforated from MD ft.	Perforated to MD ft.	Number of Perforations	Formations
1	11/16/2019	21525	21481	60	Marcellus
2	11/17/2019	21442.52511	21277.1507	60	Marcellus
3	11/17/2019	21241.6758	21076.3014	60	Marcellus
4	11/17/2019	21040.82648	20875.4521	60	Marcellus
5	11/17/2019	20839.97717	20674.6027	60	Marcellus
6	11/18/2019	20639.12785	20473.7534	60	Marcellus
7	11/18/2019	20438.27854	20272.9041	60	Marcellus
8	11/18/2019	20237.42922	20072.0548	60	Marcellus
9	11/19/2019	20036.57991	19871.2055	60	Marcellus
10	11/19/2019	19835.73059	19670.3562	60	Marcellus
11	11/19/2019	19634.88128	19469.5068	60	Marcellus
12	11/20/2019	19434.03196	19268.6575	60	Marcellus
13	11/20/2019	19233.18265	19067.8082	60	Marcellus
14	11/20/2019	19032.33333	18866.9589	60	Marcellus
15	11/20/2019	18831.48402	18666.1096	60	Marcellus
16	11/21/2019	18630.6347	18465.2603	60	Marcellus
17	11/21/2019	18429.78539	18264.411	60	Marcellus
18	11/21/2019	18228.93607	18063.5616	60	Marcellus
19	11/22/2019	18028.08676	17862.7123	60	Marcellus
20	11/22/2019	17827.23744	17661.863	60	Marcellus
21	11/22/2019	17626.38813	17461.0137	60	Marcellus
22	11/22/2019	17425.53881	17260.1644	60	Marcellus
23	11/23/2019	17224.6895	17059.3151	60	Marcellus
24	11/23/2019	17023.84018	16858.4658	60	Marcellus
25	11/23/2019	16822.99087	16657.6164	60	Marcellus
26	11/23/2019	16622.14155	16456.7671	60	Marcellus
27	11/24/2019	16421.29224	16255.9178	60	Marcellus
28	11/24/2019	16220.44292	16055.0685	60	Marcellus
29	11/24/2019	16019.59361	15854.2192	60	Marcellus
30	11/25/2019	15818.74429	15653.3699	60	Marcellus
31	11/25/2019	15617.89498	15452.5205	60	Marcellus
32	11/25/2019	15417.04566	15251.6712	60	Marcellus
33	11/25/2019	15216.19635	15050.8219	60	Marcellus
34	11/26/2019	15015.34703	14849.9726	60	Marcellus
35	11/26/2019	14814.49772	14649.1233	60	Marcellus
36	11/26/2019	14613.6484	14448.274	60	Marcellus
37	11/26/2019	14412.79909	14247.4247	60	Marcellus
38	11/26/2019	14211.94977	14046.5753	60	Marcellus
39	11/27/2019	14011.10046	13845.726	60	Marcellus
40	11/27/2019	13810.25114	13644.8767	60	Marcellus
41	11/27/2019	13609.40183	13444.0274	60	Marcellus
42	11/28/2019	13408.55251	13243.1781	60	Marcellus
43	11/28/2019	13207.7032	13042.3288	60	Marcellus
44	11/28/2019	13006.85388	12841.4795	60	Marcellus
45	11/29/2019	12806.00457	12640.6301	60	Marcellus
46	11/29/2019	12605.15525	12439.7808	60	Marcellus
47	11/29/2019	12404.30594	12238.9315	60	Marcellus
48	11/29/2019	12203.45662	12038.0822	60	Marcellus
49	12/4/2019	12002.60731	11837.2329	60	Marcellus
50	12/4/2019	11801.75799	11636.3836	60	Marcellus
51	12/5/2019	11600.90868	11435.5342	60	Marcellus
52	12/5/2019	11400.05936	11234.6849	60	Marcellus
53	12/5/2019	11199.21005	11033.8356	60	Marcellus
54	12/6/2019	10998.36073	10832.9863	60	Marcellus
55	12/6/2019	10797.51142	10632.137	60	Marcellus
56	12/7/2019	10596.6621	10431.2877	60	Marcellus
57	12/7/2019	10395.81279	10230.4384	60	Marcellus
58	12/7/2019	10194.96347	10029.589	60	Marcellus
59	12/7/2019	9994.114155	9828.73973	60	Marcellus
60	12/8/2019	9793.26484	9627.89041	60	Marcellus
61	12/8/2019	9592.415525	9427.0411	60	Marcellus
62	12/8/2019	9391.56621	9226.19178	60	Marcellus
63	12/8/2019	9190.716895	9025.34247	60	Marcellus
64	12/9/2019	8989.86758	8824.49315	60	Marcellus
65	12/9/2019	8789.018265	8623.64384	60	Marcellus
66	12/9/2019	8588.16895	8422.79452	60	Marcellus
67	12/9/2019	8387.319635	8221.94521	60	Marcellus
68	12/9/2019	8186.47032	8021.09589	60	Marcellus
69	12/10/2019	7985.621005	7820.24658	60	Marcellus
70	12/10/2019	7784.771689	7619.39726	60	Marcellus
71	12/10/2019	7583.922374	7418.54795	60	Marcellus
72	12/10/2019	7383.073059	7217.69863	60	Marcellus
73	12/11/2019	7182.223744	7016.84932	60	Marcellus
74	12/11/2019	6981.374429	6816	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	11/16/2019	70.51943	7941.828	6820	4090	162100	4933.506	N/A
2	11/17/2019	84.14343	9735.711	5398	4096	405500	7351.146	N/A
3	11/17/2019	83.67839	9410.678	5122	4202	414660	7563.26	N/A
4	11/17/2019	79.8182	9511.555	5140	3569	402220	7390.55	N/A
5	11/17/2019	74.12509	10241.26	5355	3516	404470	7301.1	N/A
6	11/18/2019	83.75481	10006.16	5355	3791	404480	7280.67	N/A
7	11/18/2019	82.09813	9724.285	6302	3525	402780	7288.68	N/A
8	11/18/2019	79.39051	9315.264	5771	3583	400120	7548.84	N/A
9	11/19/2019	85.11228	9569.898	6499	3718	400240	7260.86	N/A
10	11/19/2019	82.16392	9107.766	6179	3565	412820	7403.31	N/A
11	11/19/2019	82.43921	9298.023	6349	3582	411080	7343.16	N/A
12	11/20/2019	77.02553	9313.843	6087	4027	398460	7166.48	N/A
13	11/20/2019	83.62453	9095.215	5067	3845	406100	7224.91	N/A
14	11/20/2019	86.09035	9253.831	6300	3906	405740	7274.63	N/A
15	11/20/2019	82.95263	9067.911	5032	3961	404040	7199.42	N/A
16	11/21/2019	81.93021	8817.373	6123	4203	401940	7230.78	N/A
17	11/21/2019	84.05354	8946.471	5943	4333	400220	7098.26	N/A
18	11/21/2019	80.24558	9012.575	5762	3937	401980	7145.76	N/A
19	11/22/2019	80.00257	8909.065	6381	3841	403000	7158.24	N/A
20	11/22/2019	77.42576	9697.632	6506	3898	410660	7239.46	N/A
21	11/22/2019	82.89995	8832.628	6136	3717	407800	7032.27	N/A
22	11/22/2019	84.22124	8715.295	6645	3906	397780	7027.78	N/A
23	11/23/2019	85.38184	8994.108	6040	4156	387340	6869.95	N/A
24	11/23/2019	83.43259	8798.327	6064	3791	396620	6998.98	N/A
25	11/23/2019	84.79727	9007.481	5655	3801	408120	7129.18	N/A
26	11/23/2019	83.47513	8653.13	4927	3948	402180	7109.85	N/A
27	11/24/2019	80.13516	8884.014	6209	4049	399680	8183.32	N/A
28	11/24/2019	83.70118	9158.972	4649	3932	401520	6858.36	N/A
29	11/24/2019	84.61109	9058.505	6089	4210	404660	6963.04	N/A
30	11/25/2019	82.97016	8865.343	5987	4351	402020	6917.95	N/A
31	11/25/2019	83.49948	8729.294	5825	3891	402640	6877.62	N/A
32	11/25/2019	85.45371	8999.59	5796	3810	403660	6854.97	N/A
33	11/25/2019	83.4432	8748.738	6005	4004	403260	7138.15	N/A
34	11/26/2019	82.8538	9238.769	6151	4070	401980	6983.22	N/A
35	11/26/2019	82.51441	8502.276	5988	3976	402080	6847.81	N/A
36	11/26/2019	82.64396	9178.556	5862	3913	405380	6875.1	N/A
37	11/26/2019	83.3931	9035.082	5121	4479	401300	7007.66	N/A
38	11/26/2019	83.35918	8615.868	5697	4786	401160	6893.58	N/A
39	11/27/2019	84.7451	8971.912	5499	4610	401400	6814.56	N/A
40	11/27/2019	82.49856	8175.31	4725	4583	401780	8709.64	N/A
41	11/27/2019	82.84513	8393.607	5810	3982	408800	6975	N/A
42	11/28/2019	83.05791	8593.788	5697	4204	407840	6961.13	N/A
43	11/28/2019	83.74065	8551.246	5895	4321	412500	6896.28	N/A
44	11/28/2019	84.02927	8416.132	5982	4601	405680	6851.55	N/A
45	11/29/2019	85.03066	8399.121	5466	4124	408300	6882.34	N/A
46	11/29/2019	82.98912	7816.809	4750	3965	400760	6817.15	N/A
47	11/29/2019	82.97844	8827.015	5517	4194	404260	6908.28	N/A
48	11/29/2019	82.93876	8307.321	4762	4734	401020	6976.78	N/A
49	12/4/2019	62.75981	10114.8	6732	4614	403840	12963.39	N/A
50	12/4/2019	86.33741	8886.792	6194	4238	404520	6874.73	N/A
51	12/5/2019	86.35367	8574.513	6689	4393	399420	6856.31	N/A
52	12/5/2019	84.02769	8605.637	6342	3749	404960	6920.72	N/A
53	12/5/2019	86.43227	8966.826	6420	3934	405260	7446.67	N/A
54	12/6/2019	85.57985	9162.892	6094	3948	401140	6890.9	N/A
55	12/6/2019	85.48357	9009.401	6366	4177	405480	6834.71	N/A
56	12/7/2019	83.93115	8310.165	5967	3709	401900	6778.53	N/A
57	12/7/2019	83.83798	7665.93	6204	3884	401440	6856.42	N/A
58	12/7/2019	91.11587	8296.518	6031	4086	408140	6775.2	N/A
59	12/7/2019	89.38862	8226.004	5983	4164	402940	6757.22	N/A
60	12/8/2019	88.09885	7930.681	5804	3870	405280	7131.71	N/A
61	12/8/2019	86.72767	7873.987	5606	3728	406240	6760.47	N/A
62	12/8/2019	86.77888	8122.501	5904	3773	402760	6829.86	N/A
63	12/8/2019	87.93932	7572.302	5018	4065	408300	6638.27	N/A
64	12/9/2019	87.95424	7806.432	5887	3770	410380	6641.77	N/A
65	12/9/2019	86.76578	7655.98	6563	3768	407760	6882.445	N/A
66	12/9/2019	86.20841	7652.489	5939	3867	401300	6698.52	N/A
67	12/9/2019	89.25786	7746.308	5784	3663	402860	6741.81	N/A
68	12/9/2019	89.81429	7816.893	5709	3731	403080	6527.71	N/A
69	12/10/2019	90.54016	7777.636	6041	3893	402200	6707.97	N/A
70	12/10/2019	86.72779	7089.508	5658	3696	405800	6738.44	N/A
71	12/10/2019	87.36834	7129.02	5246	3652	399640	6636.09	N/A
72	12/10/2019	90.48008	7388.978	5523	3472	394480	6575.53	N/A
73	12/11/2019	90.39065	7575.872	5492	3998	404600	6636.51	N/A
74	12/11/2019	87.58733	7055.734	5661	3364	402940	6695.71	N/A
	AVG=	82.3	9,062	5,814	3,979	16,293,770	292,471	TOTAL

EXHIBIT 3

LITHOLOGY/ FORMATION	TOP DEPTH (TVD) From Surface	BOTTOM DEPTH (TVD) From Surface	TOP DEPTH (MD) From Surface	BOTTOM DEPTH (MD) From Surface
Sandstone	0	300	0	300
Silty sandstone	300	440	300	440
Sandy siltstone	440	600	440	600
Sandstone	600	700	600	700
Sandy Marlstone	700	880	700	880
Calcareous Sandstone	880	1,070	880	1,070
Silty Marlstone	1,070	1,280	1,070	1,280
Sandstone w/ interbedded co	1,280	1,440	1,280	1,440
Sandstone w/ trace coal	1,440	1,590	1,440	1,590
Calcareous shale	1,590	1,650	1,590	1,650
Coal / shale	1,650	1,670	1,650	1,670
Calcareous shale	1,670	1,840	1,670	1,840
Calcareous Sandstone	1,840	1,920	1,840	N/A
Big Lime	1,920	2,713	1,923	2,720
Fifty Foot Sandstone	2,713	2,797	2,720	2,804
Gordon	2,797	3,058	2,804	3,068
Fifth Sandstone	3,058	3,228	3,068	3,240
Bayard	3,228	3,991	3,240	4,011
Speechley	3,991	4,268	4,011	4,290
Balltown	4,268	4,569	4,290	4,595
Bradford	4,569	4,806	4,595	4,835
Benson	4,806	5,162	4,835	5,195
Alexander	5,162	6,283	5,195	6,389
Sycamore	6,098	6,253	6,190	6,359
Middlesex	6,253	6,378	6,389	6,578
Burkett	6,378	6,410	6,608	6,658
Tully	6,410	6,442	6,688	6,764
Marcellus	6,442	NA	6,764	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.

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: 47-095-02582 County: Tyler
District: Centerville Well No: Kilska Unit 1H
Farm Name: Gary D. Dawson et ux
Discharge Date/s From:(MMDDYY) 02/03/20 To: (MMDDYY) 03/04/20
Discharge Times. From: 0:00 To: 24:00
Total Volume to be Disposed from this facility (gallons): 1,325,486
Disposal Option(s) Utilized (write volumes in gallons):

- (1) Land Application: 0 (Include a topographical map of the Area.)
(2) UIC: 0 Permit No. _____
(3) Offsite Disposal: 0 Site Location: _____
(4) Reuse: 1,325,486 Alternate Permit Number: _____
(5) Centralized Facility: 0 Permit No. _____
(6) Other method: 0 (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: Sr. Environmental & Regulatory Manager

Date Completed: 05/08/2020

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

Digitally signed by Gretchen Kohler
Date: 2020.05.11 15:58:02 -06'00'

Signature of a Principal Exec. Officer or Authorized agent.

Category 1
Sampling Results
API No : _____

Parameter	Predischarge		Discharge		Units
	Limits	Reported	Limits	Reported	
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		Discharge		Units
	Limits	Reported	Limits	Reported	
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		Discharge		Units
	Limits	Reported	Limits	Reported	
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		Discharge		Units
	Limits	Reported	Limits	Reported	
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/B1
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: _____

Hydraulic Fracturing Fluid Product Component Information Disclosure

Job Start Date:	11/16/2019
Job End Date:	12/11/2019
State:	West Virginia
County:	Tyler
API Number:	47-095-02582-00-00
Operator Name:	Antero Resources Corporation
Well Name and Number:	Kiliska 1H
Latitude:	39.38012500
Longitude:	-80.87305300
Datum:	NAD83
Federal Well:	NO
Indian Well:	NO
True Vertical Depth:	6,467
Total Base Water Volume (gal):	23,404,617
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	100.00000	86.51051	
Hydrochloric Acid	CWS	Clean Perforations					
				Listed Below			

CalGel 4000	CWS	Gel Slurry								
					Listed Below					
DynaRate 6522	CWS	Friction Reducer								
					Listed Below					
SaniFrac 8844	CWS	Biocide								
					Listed Below					
Calbreak 5501	CWS	Breaker								
					Listed Below					
CI-9100G	CWS	Corrosion Inhibitor								
					Listed Below					
Sand (Proppant)	CWS	Propping Agent								
					Listed Below					
Other Chemical (s)	Listed Above	See Trade Name (s) List								
					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		13.12562		
			Illite	12173-60-3		1.00000		0.13125		
			Hydrochloric acid	7647-01-0		37.00000		0.11097		
			Copolymer of 2-propanamide	69418-26-4		30.00000		0.01499		
			Goethite	1310-14-1		0.10000		0.01312		

			Isopropyl alcohol	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)

LATITUDE 39°25'00"

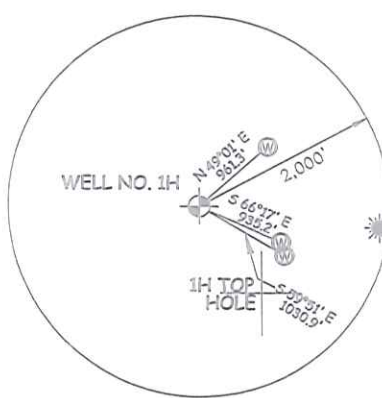
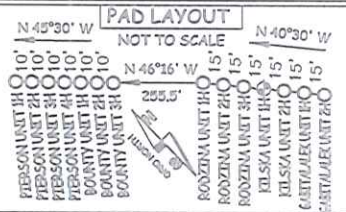
11,227'

LATITUDE 39°22'30"

Antero Resources Corporation
Well No. Kilska Unit 1H

NOTES:
WELL 1H TOP HOLE INFORMATION:
N: 323,525ft E: 1,611,891ft
LAT: 39°22'48.45" LON: 80°52'22.99"
BOTTOM HOLE INFORMATION:
N: 308,739ft E: 1,615,928ft
LAT: 39°20'22.92" LON: 80°51'28.73"
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: 4,358,977m E: 510,948m
BOTTOM HOLE INFORMATION:
N: 4,354,493m E: 512,254m



Clay District - Ritchie County

12-14	Warren Salkar Jr.
12-14.1	Gary Dawson
12-14.4	Gary Dawson
12-19	Robert Sinclair
15-01	Gary Dawson
15-1.1	Larry Gains
15-1.2	Larry Robinson
15-1.3	Joseph Mills Community Center
15-1.4	David Cowles Jr.
15-1.5	Russell Banner Est
15-1.6	Russell Banner Est
15-1.7	Antero Resources Corp.
15-1.8	W.V.D.N.R.
15-1.9	Antero Resources Corp.
15-1.10	Gary Dawson
15-07	Ralph Underwood III
15-7.1	Judith Banley
15-08	Conrad Cortlow
15-12	Larry Hadley
15-13	Sara Reed
15-13.1	Sara Reed
15-13.2	Cecil Levalley
15-14	George Moore
15-14.1	Linda Moore
15-18	John Jecentkiew Sr.
15-20	Sandra Clark
15-28	Coastal Forest Resources Co.
15-32	Marvin Sole
15-32.1	Marvin Sole
15-33	Randy Dawson
15-34	Rennie Dawson
15-35	Jamie Ferguson
17-2.1	Alfred Meredith
17-2.2	Alfred Meredith
17-2.4	Andrew Smith
17-03	Kimberly Ridgeway
17-09	Antero Midstream LLC
17-10.1	Sandra Clark
17-10.2	Sandra Clark
17-10.3	Sandra Clark
17-10.4	Sandra Clark
17-10.5	Sandra Clark
17-12	CNG Transmission Corporation
17-13	George Ash
17-22	David Glasure
17-23	Colleen Ash
17-24	Jeffrey Milligen

LONGITUDE 80°50'00"

12,858' TO BOTTOM HOLE

13,310'

LONGITUDE 80°50'00"

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.



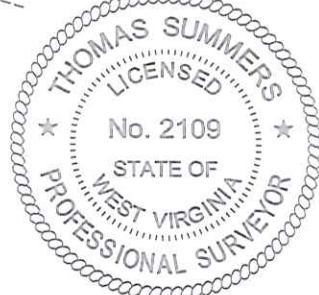
STATE OF WEST VIRGINIA, DIVISION OF ENVIRONMENTAL PROTECTION, OFFICE OF OIL AND GAS

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

- 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 DISCREPANCIES WITH THE DATA AND INFORMATION THAT HAS BEEN PROVIDED.

JOB # 18-031WA
DRAWING # KILSKA1HAD
SCALE 1" = 2000'
MINIMUM DEGREE OF ACCURACY SUBMETER
PROVEN SOURCE OF ELEV. SUBMETER MAPPING GRADE GPS
STATE OF WEST VIRGINIA DEPARTMENT OF ENERGY DIVISION OF OIL AND GAS

LEGEND
----- Surface Owner Boundary Lines +/-
----- Interior Surface Tracts +/-
o----- Proposed Well Path
o----- As Drilled Well Path
THOMAS SUMMERS P.S. 2109
DATE 05/01/20
OPERATOR'S WELL# KILSKA UNIT #1H



WELL TYPE: OIL GAS X LIQUID INJECTION WASTE DISPOSAL 47 095 02582
(IF "GAS") PRODUCTION x STORAGE DEEP SHALLOW x STATE COUNTY PERMIT
LOCATION: ELEVATION 1,009' - AS BUILT WATERSHED HEADWATERS MIDDLE ISLAND CREEK
QUADRANGLE SHIRLEY 7.5' (TH) WEST UNION 7.5' (BH) DISTRICT CENTERTVILLE COUNTY TYLER
SURFACE OWNER GARY D. DAWSON ET UX ACREAGE 104.27 ACRES +/-
OIL & GAS ROYALTY OWNER GARY D. DAWSON ET UX; COASTAL FOREST RESOURCES CO.; BRC MINERALS 1, LLC; LEASE ACREAGE 104.27 AC. +/-; 108 AC. +/-; 22 AC. +/-;
RALPH J. UNDERWOOD; RALPH J. UNDERWOOD; ROY L. ULLUM ET UX; ROY L. ULLUM ET UX; CLARENCE HADLEY ET UX; CLARENCE HADLEY ET UX; 57 AC. +/-; 76 AC. +/-; 30 AC. +/-; 32 AC. +/-; 176 AC. +/-; 31.2 AC. +/-;
EDWARD GREGG ET UX; EMERSON LAURENCE MOORE ET UX; VIOLET GREGG ET AL; EUGENE R. HILL ET AL; SARAH E. DOAK ET AL; CNX GAS COMPANY, LLC 18 AC. +/-; 168 AC. +/-; 114 AC. +/-; 22 AC. +/-; 136 AC. +/-; 7.6 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 6,461' TVD 21,644' MD
WELL OPERATOR ANTERO RESOURCES CORP. DESIGNATED AGENT DIANNA STAMPER - CT CORPORATION SYSTEM
ADDRESS 1615 WYNKOOP ST. ADDRESS 5400 D BIG TYLER ROAD
FORM WW-6 DENVER, CO 80202 CHARLESTON, WV 25313