



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

June 3, 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**:

- Dierkes Unit 1H-2H
- Kirk Hadley Unit 1H
- Treasury Unit 1H-2H
- Weese Unit 1H-2H

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 "Megan Griffith", with a long horizontal flourish extending to the right.

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 - 02553 County Tyler District Meade
Quad Middlebourne 7.5' Pad Name Kirk Hadley Pad Field/Pool Name ----
Farm name Kirk L. Hadley Well Number Weese Unit 2H
Operator (as registered with the OOG) Antero Resources Corporation
Address 1615 Wynkoop Street City Denver State CO Zip 80202

As Drilled location NAD 83/UTM Attach an as-drilled plat, profile view, and deviation survey
Top hole Northing 4368202.108m Easting 505840.000m
Landing Point of Curve Northing 4368398.45m Easting 505988.07m
Bottom Hole Northing 4372586.448m Easting 504567.022m

Elevation (ft) 912' 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 1/30/2019 Date drilling commenced 7/20/2019 Date drilling ceased 10/7/2019
Date completion activities began 2/7/2020 Date completion activities ceased 3/9/2020
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 142', 242', 349' Open mine(s) (Y/N) depths No
Salt water depth(s) ft 1225', 1691', 2032' Void(s) encountered (Y/N) depths No
Coal depth(s) ft 527', 681' Cavern(s) encountered (Y/N) depths No
Is coal being mined in area (Y/N) No

Reviewed by: _____

API 47- 095 - 02553 Farm name Kirk L. Hadley Well number Weese Unit 2H

CASING STRINGS	Hole Size	Casing Size	Depth	New or Used	Grade wt/ft	Basket Depth(s)	Did cement circulate (Y/N) * Provide details below*
Conductor	24"	20"	105'	New	94#, H-40	N/A	Y
Surface	17-1/2"	13-3/8"	477'	New	48#, H-40	N/A	Y
Coal							
Intermediate 1	12-1/4"	9-5/8"	2578'	New	36#, J-55	N/A	Y
Intermediate 2							
Intermediate 3							
Production	8-3/4"/8-1/2"	5-1/2"	21444'	New	23#, P-110	N/A	Y
Tubing		2-3/8"	6451'		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	120	0'	8 Hrs.
Surface	Class A	400 sx	15.6	1.18	826	0'	8 Hrs.
Coal							
Intermediate 1	Class A	880 sx	15.6	1.18	1181	0'	8 Hrs.
Intermediate 2							
Intermediate 3							
Production	Class H	450 sx (Lead) 3345 sx (Tail)	13.5 (Lead), 15.2 (Tail)	1.53 (Lead), 1.83 (Tail)		~500' into Intermediate Casing	8 Hrs.
Tubing							

Drillers TD (ft) 21464' MD, 6177' TVD (BHL), 6178' (Deepest Point Drilled) Loggers TD (ft) 21464' MD

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

Plug back procedure N/A

Kick off depth (ft) 5500'

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 - 02553 Farm name Kirk L. Hadley Well number Weese Unit 2H

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.

API 47- 095 - 02553 Farm name Kirk L. Hadley Well number Weese Unit 2H

<u>PRODUCING FORMATION(S)</u>	<u>DEPTHS</u>	
<u>Marcellus</u>	<u>6145' (TOP)</u> TVD	<u>6505' (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 5993 mcfpd Oil 223 bpd NGL --- bpd Water 555 bpd GAS MEASURED BY Estimated Orifice Pilot

<u>LITHOLOGY/ FORMATION</u>	<u>TOP DEPTH IN FT NAME TVD</u>	<u>BOTTOM DEPTH IN FT TVD</u>	<u>TOP DEPTH IN FT MD</u>	<u>BOTTOM DEPTH IN FT MD</u>	<u>DESCRIBE ROCK TYPE AND RECORD QUANTITY AND TYPE OF FLUID (FRESHWATER, BRINE, OIL, GAS, H₂S, ETC)</u>
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***PLEASE SEE ATTACHED EXHIBIT 3**

Please insert additional pages as applicable.


Drilling Contractor Patterson UTI Drilling
Address 1660 Wynkoop Street, Suite 1100 City Denver State CO Zip 80202

Logging Company KLX Energy Services
Address 3040 Post Oak Boulevard City Houston State TX Zip 77056

Cementing Company Halliburton Energy Services
Address 1125 17th Street City Denver State CO Zip 80202

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 6/3/20

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

API 47-095-02553 Farm Name Kirk L. Hadley Well Number Weese Unit 2H

EXHIBIT 1

Stage No.	Perforation Date	Perforated from MD ft.	Perforated to MD ft.	Number of Perforations	Formations
1	1/18/2020	21312.2	21269.1	60	Marcellus
2	1/19/2020	21231.95788	21068.2473	60	Marcellus
3	1/19/2020	21033.10518	20869.3946	60	Marcellus
4	1/19/2020	20834.25248	20670.5419	60	Marcellus
5	1/20/2020	20635.39977	20471.6892	60	Marcellus
6	1/20/2020	20436.54707	20272.8365	60	Marcellus
7	1/20/2020	20237.69437	20073.9838	60	Marcellus
8	1/21/2020	20038.84167	19875.1311	60	Marcellus
9	1/21/2020	19839.98896	19676.2784	60	Marcellus
10	1/21/2020	19641.13626	19477.4257	60	Marcellus
11	1/22/2020	19442.28356	19278.573	60	Marcellus
12	1/22/2020	19243.43086	19079.7203	60	Marcellus
13	1/23/2020	19044.57815	18880.8676	60	Marcellus
14	1/23/2020	18845.72545	18682.0149	60	Marcellus
15	1/23/2020	18646.87275	18483.1622	60	Marcellus
16	1/24/2020	18448.02005	18284.3095	60	Marcellus
17	1/24/2020	18249.16734	18085.4568	60	Marcellus
18	1/24/2020	18050.31464	17886.6041	60	Marcellus
19	1/24/2020	17851.46194	17687.7514	60	Marcellus
20	1/25/2020	17652.60923	17488.8986	60	Marcellus
21	1/25/2020	17453.75653	17290.0459	60	Marcellus
22	1/25/2020	17254.90383	17091.1932	60	Marcellus
23	1/25/2020	17056.05113	16892.3405	60	Marcellus
24	1/26/2020	16857.19842	16693.4878	60	Marcellus
25	1/26/2020	16658.34572	16494.6351	60	Marcellus
26	1/26/2020	16459.49302	16295.7824	60	Marcellus
27	1/27/2020	16260.64032	16096.9297	60	Marcellus
28	1/27/2020	16061.78761	15898.077	60	Marcellus
29	1/27/2020	15862.93491	15699.2243	60	Marcellus
30	1/27/2020	15664.08221	15500.3716	60	Marcellus
31	1/28/2020	15465.2295	15301.5189	60	Marcellus
32	1/28/2020	15266.3768	15102.6662	60	Marcellus
33	1/28/2020	15067.5241	14903.8135	60	Marcellus
34	1/29/2020	14868.6714	14704.9608	60	Marcellus
35	1/29/2020	14669.81869	14506.1081	60	Marcellus
36	1/29/2020	14470.96599	14307.2554	60	Marcellus
37	1/29/2020	14272.11329	14108.4027	60	Marcellus
38	1/30/2020	14073.26059	13909.55	60	Marcellus
39	1/30/2020	13874.40788	13710.6973	60	Marcellus
40	1/30/2020	13675.55518	13511.8446	60	Marcellus
41	1/31/2020	13476.70248	13312.9919	60	Marcellus

42	1/31/2020	13277.84977	13114.1392	60	Marcellus
43	1/31/2020	13078.99707	12915.2865	60	Marcellus
44	1/31/2020	12880.14437	12716.4338	60	Marcellus
45	2/1/2020	12681.29167	12517.5811	60	Marcellus
46	2/1/2020	12482.43896	12318.7284	60	Marcellus
47	2/1/2020	12283.58626	12119.8757	60	Marcellus
48	2/1/2020	12084.73356	11921.023	60	Marcellus
49	2/2/2020	11885.88086	11722.1703	60	Marcellus
50	2/2/2020	11687.02815	11523.3176	60	Marcellus
51	2/2/2020	11488.17545	11324.4649	60	Marcellus
52	2/2/2020	11289.32275	11125.6122	60	Marcellus
53	2/3/2020	11090.47005	10926.7595	60	Marcellus
54	2/3/2020	10891.61734	10727.9068	60	Marcellus
55	2/3/2020	10692.76464	10529.0541	60	Marcellus
56	2/3/2020	10493.91194	10330.2014	60	Marcellus
57	2/4/2020	10295.05923	10131.3486	60	Marcellus
58	2/4/2020	10096.20653	9932.49595	60	Marcellus
59	2/5/2020	9897.353829	9733.64324	60	Marcellus
60	2/5/2020	9698.501126	9534.79054	60	Marcellus
61	2/5/2020	9499.648423	9335.93784	60	Marcellus
62	2/6/2020	9300.795721	9137.08514	60	Marcellus
63	2/6/2020	9101.943018	8938.23243	60	Marcellus
64	2/6/2020	8903.090315	8739.37973	60	Marcellus
65	2/6/2020	8704.237613	8540.52703	60	Marcellus
66	2/6/2020	8505.38491	8341.67432	60	Marcellus
67	2/7/2020	8306.532207	8142.82162	60	Marcellus
68	2/7/2020	8107.679505	7943.96892	60	Marcellus
69	2/7/2020	7908.826802	7745.11622	60	Marcellus
70	2/7/2020	7709.974099	7546.26351	60	Marcellus
71	2/8/2020	7511.121396	7347.41081	60	Marcellus
72	2/8/2020	7312.268694	7148.55811	60	Marcellus
73	2/8/2020	7113.415991	6949.70541	60	Marcellus
74	2/8/2020	6914.563288	6750.8527	60	Marcellus
75	2/9/2020	6715.710586	6552	60	Marcellus

API 47-095-02553 Farm Name Kirk L. Hadley Well Number Weese Unit 2H

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	1/18/2020	71.6	8479	6403	3852	160160	5200.095	N/A
2	1/19/2020	79.51	8916	5507	3923	403360	7280.429	N/A
3	1/19/2020	82.83	9073	5473	3709	401980	7692.5	N/A
4	1/19/2020	75.91	8403	5447	3527	398760	7766.119	N/A
5	1/20/2020	80.04	8922	5156	3056	401720	7391.333	N/A
6	1/20/2020	80.3	8728	5010	4259	406980	7860.714	N/A
7	1/20/2020	83.51	9047	5954	3520	404420	7471.095	N/A
8	1/21/2020	84.84	8966	5265	3999	404860	7446.429	N/A
9	1/21/2020	66.27	8668	5294	3772	401920	8669.024	N/A
10	1/21/2020	75.46	8778	6117	3664	403100	7231.119	N/A
11	1/22/2020	81.07	9080	5667	3596	401300	7189.5	N/A
12	1/22/2020	81.37	8777	5424	4222	402400	7502.19	N/A
13	1/23/2020	83.75	9111	5512	3889	404600	7208.286	N/A
14	1/23/2020	81.54	8729	5101	3751	404360	7205.81	N/A
15	1/23/2020	82.97	8852	5055	4031	404400	7167.595	N/A
16	1/24/2020	81.76	8898	5965	3915	402700	7061.69	N/A
17	1/24/2020	82.96	8584	4974	4144	402320	7253.024	N/A
18	1/24/2020	85.54	8674	5452	4331	403100	7112.69	N/A
19	1/24/2020	85.93	8761	5686	3778	403120	7179.119	N/A
20	1/25/2020	85.6	8514	5748	3607	402740	7140.786	N/A
21	1/25/2020	85.72	8695	5876	3640	401120	7130.548	N/A
22	1/25/2020	84.1	8233	5358	3862	400900	6992	N/A
23	1/25/2020	85.67	8473	5347	3760	400060	6999.714	N/A
24	1/26/2020	85.9	8325	5638	3829	404640	7150.786	N/A
25	1/26/2020	85.63	8357	5814	3722	406180	7173.071	N/A
26	1/26/2020	82.59	8571	5652	3799	399960	6934.262	N/A
27	1/27/2020	82.26	8910	6152	3409	400840	7178.238	N/A
28	1/27/2020	83.71	8651	5593	3694	397270	7144.476	N/A
29	1/27/2020	84.92	8753	5370	3600	399360	7003.381	N/A
30	1/27/2020	77.72	8204	5911	3623	394640	6918.81	N/A
31	1/28/2020	85.55	9025	6198	3494	396820	6987.095	N/A
32	1/28/2020	83.34	8913	6568	3506	400640	7033.19	N/A
33	1/28/2020	79.19	8936	5195	3430	402320	7043.857	N/A
34	1/29/2020	84.55	8986	6649	3483	402600	7030.429	N/A
35	1/29/2020	84.22	8802	6268	3538	399500	6990.738	N/A
36	1/29/2020	82.3	8727	6232	3569	406240	7097.762	N/A
37	1/29/2020	83.49	8979	6882	3598	398320	7138.524	N/A
38	1/30/2020	82.76	8854	5798	3531	405520	6964.357	N/A
39	1/30/2020	82.34	8977	6594	3512	402300	7902.643	N/A
40	1/30/2020	84.46	9087	6287	3569	407180	7011.929	N/A
41	1/31/2020	85.03	9083	6970	3745	406940	6850.905	N/A
42	1/31/2020	85.24	8693	6623	3782	407680	7006.429	N/A
43	1/31/2020	85.93	9066	6122	3787	405360	6882.119	N/A
44	1/31/2020	85.9	9019	6190	3807	402820	6953.095	N/A
45	2/1/2020	85.55	9064	5951	3593	401180	6873.857	N/A
46	2/1/2020	85.3	9065	6266	3855	397900	6860.095	N/A
47	2/1/2020	84.73	9024	6059	3452	401460	6794.905	N/A

48	2/1/2020	85.83	9024	5997	3465	398340	6900.238	N/A
49	2/2/2020	85.9	8891	5468	3534	400640	6856.619	N/A
50	2/2/2020	85.89	8657	6369	3731	406300	6837.262	N/A
51	2/2/2020	85.74	8669	6188	3852	392320	6790.214	N/A
52	2/2/2020	85.06	9076	5772	3410	401660	6797.119	N/A
53	2/3/2020	48.9	9913	6119	5476	401720	9816.881	N/A
54	2/3/2020	85.23	8946	6185	3676	398640	6835.667	N/A
55	2/3/2020	75.73	8920	6171	4254	269825	6664.024	N/A
56	2/3/2020	34.1	9573	5844	5009	20440	3845.929	N/A
57	2/4/2020	82.31	7367	5577	3503	405200	6811.095	N/A
58	2/4/2020	80.23	8128	6110	3661	401620	6694.857	N/A
59	2/5/2020	85.57	8425	5395	3476	401560	6773.762	N/A
60	2/5/2020	79.44	7380	6369	3482	400760	6820.19	N/A
61	2/5/2020	85.57	7615	5497	3508	401060	7444.81	N/A
62	2/6/2020	85.45	7745	5712	3752	404160	6795.143	N/A
63	2/6/2020	85.6	7895	5552	3499	403020	6728.429	N/A
64	2/6/2020	81.55	7092	5929	3669	403260	6878.262	N/A
65	2/6/2020	85.99	7145	6556	3850	414830	6934.238	N/A
66	2/6/2020	85.74	7334	6623	3676	408260	6857.095	N/A
67	2/7/2020	85.16	7332	5288	3985	397680	6839.881	N/A
68	2/7/2020	85.72	7217	5380	3715	405680	7116.571	N/A
69	2/7/2020	79.26	6908	5828	3713	407920	6842.024	N/A
70	2/7/2020	85.42	7496	5482	3389	418340	6818.31	N/A
71	2/8/2020	85.59	7349	5265	3583	401300	6743.595	N/A
72	2/8/2020	83.33	7056	5703	3704	409560	6793.595	N/A
73	2/8/2020	83.62	7204	6117	3793	399040	6607.619	N/A
74	2/8/2020	85.68	7190	5511	3669	399620	6669.048	N/A
75	2/9/2020	85.68	7020	4664	3515	400240	6634.81	N/A
	AVG.	82.0	8,752	5,726	3,722	15,437,530	280,843	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
Siltstone	75	175	75	175
Silty Sandstone	175	295	175	295
Siltstone	295	455	295	455
Shaly Siltstone	455	555	455	555
Siltstone	555	715	555	715
Sandstone	715	755	715	755
Siltstone	755	985	755	985
Silty Sandstone	985	1,095	985	1,095
Sandstone	1,095	1,255	1,095	1,255
Silty Sandstone	1,255	1,485	1,255	1,485
Sandy Siltstone	1,485	1,555	1,485	1,555
Sandstone	1,555	1,625	1,555	1,625
Siltstone	1,625	1,696	1,625	1,721
Big Lime	1,721	2,249	1,696	2,249
Fifty Foot Sandstone	2,249	2,485	2,224	2,485
Gordon	2,485	2,674	2,460	2,674
Fifth Sandstone	2,674	2,775	2,649	2,775
Bayard	2,775	3,719	2,750	3,745
Speechley	3,719	3,873	3,720	3,905
Balltown	3,873	4,362	3,880	4,418
Bradford	4,362	4,665	4,393	4,736
Benson	4,665	5,015	4,711	5,104
Alexander	5,015	6,047	5,079	6,241
Sycamore	5,923	6,022	6,077	6,216
Middlesex	6,022	6,111	6,216	6,392
Burkett	6,111	6,130	6,392	6,449
Tully	6,130	6,145	6,449	6,505
Marcellus	6,145	NA	6,505	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: 47-095-02553 County: Tyler
District: Meade Well No: Weese Unit 2H
Farm Name: Kirk L. Hadley
Discharge Date/s From:(MMDDYY) 04/13/20 To: (MMDDYY) 05/13/20
Discharge Times. From: 0:00 To: 24:00
Total Volume to be Disposed from this facility (gallons): 765,688
Disposal Option(s) Utilized (write volumes in gallons):

(1) Land Application: 0 (Include a topographical map of the Area.)
(2) UIC: 43,505 Permit No. 3400923821; 3416729543; 3412123995; 3410523619
(3) Offsite Disposal: 205 Site Location: Mud Masters
(4) Reuse: 721,978 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: 05/28/2020

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: 2020.05.28 17:13:16 -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/Bt
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: _____

ANTERO RESOURCES CORPORATION

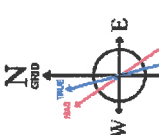
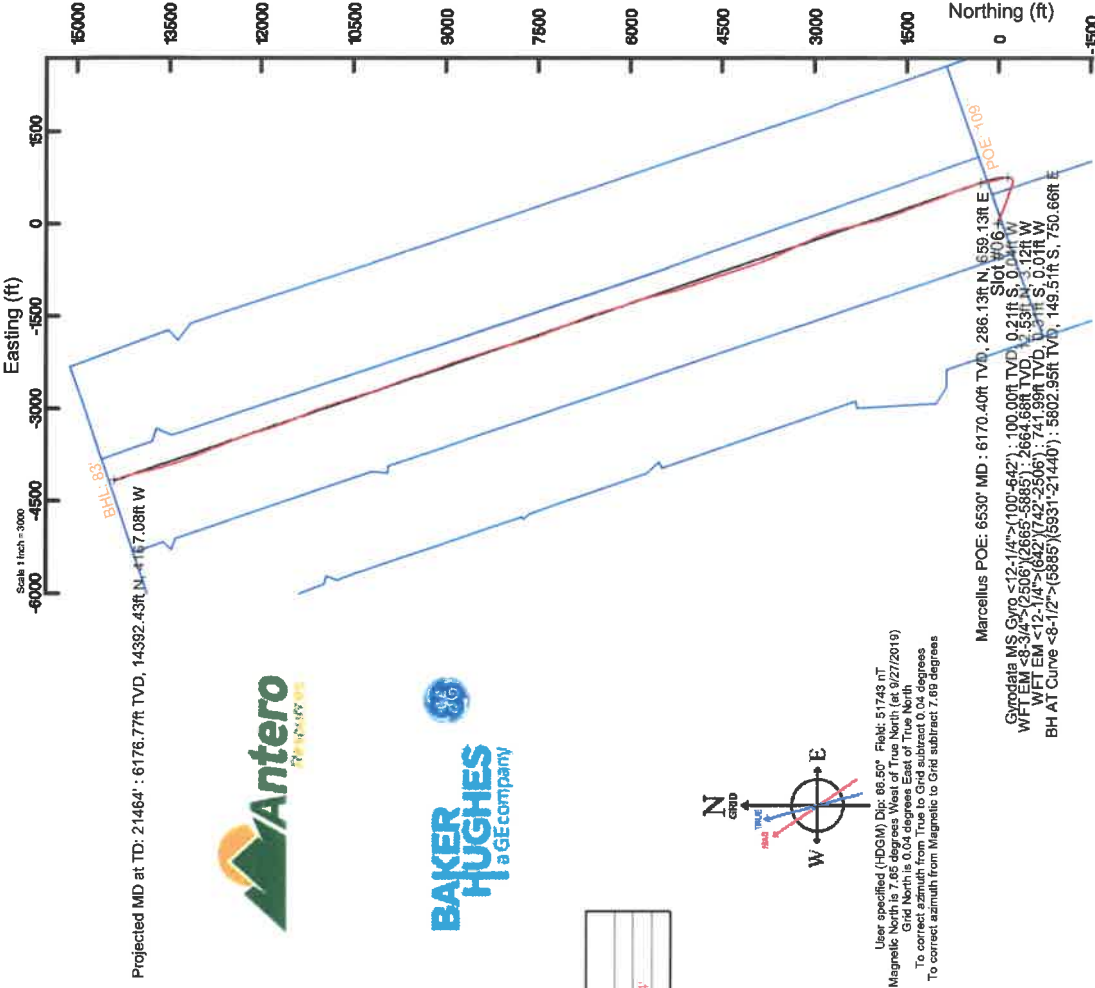
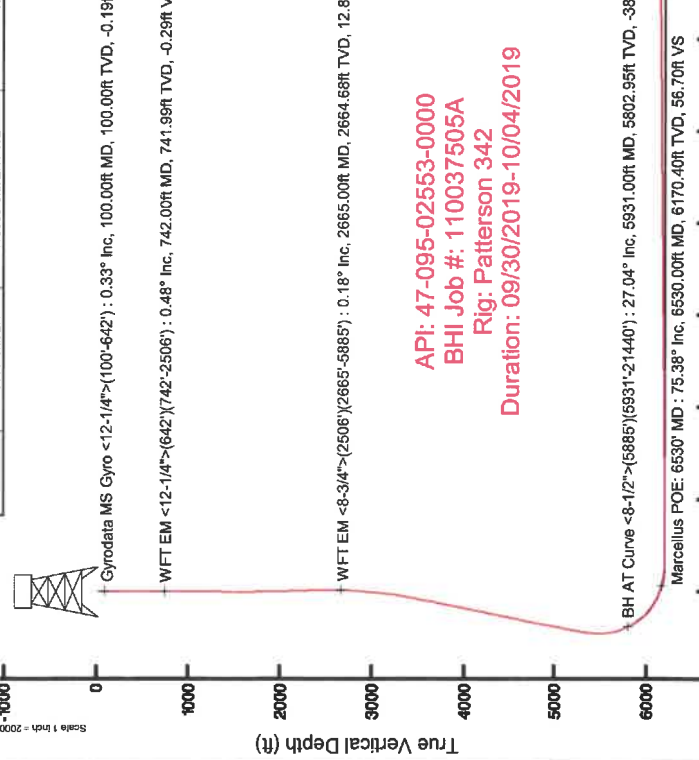
Location: Tyler County, WV
 Field: Tyler
 Facility: Kirk Hadley Pad
 Slot: Slot #06
 Well: Weese Unit 2H
 Wellbore: Weese Unit 2H PWB

Plot reference wellbore is Weese Unit 2H PWP Rev-A-0
 True vertical depths are referenced to Patterson 342 (RKB)
 Measured depths are referenced to Patterson 342 (RKB)
 Patterson 342 (RKB) to Mean Sea Level: 937 feet
 Mean Sea Level to Ground level (At Slot Slot #06) - 912 feet
 Coordinates are in feet referenced to Slot

Location Information			
Facility Name	Grid East (US ft)	Grid North (US ft)	Longitude
Kirk Hadley Pad	1659520.650	14330576.920	80°55'56.326"W
North Reference:	Grid north		
Scale:	True distance		
Depths are in feet			
Created by:	delatou on 2019-10-06		
Database:	WA_MPL_EASTMUS_Defn		
Well Information			
Slot	Local E (ft)	Local N (ft)	Longitude
Slot #06	49.32	8.50	80°55'56.217"W
Patterson 342 (RKB) to Ground level (At Slot Slot #06)	26ft		
Mean Sea Level to Ground level (At Slot Slot #06)	-912ft		
Patterson 342 (RKB) to Mean Sea Level	937ft		

Well Profile Data						
Design Comment	MD (ft)	Inc (°)	Az (°)	TVD (ft)	Local N (ft)	VS (ft)
Trn On	5885.00	24.600	3.660	5781.55	-169.55	750.25
PTB	5855.00	28.150	2.070	5822.16	-136.83	751.76
Build/Turn	6485.72	68.413	342.754	6195.08	225.90	662.54
POE	6506.11	71.271	341.058	6189.00	265.84	670.76
LP	6734.51	90.000	341.058	6206.00	478.15	597.93
BH-L	21426.24	80.000	341.058	6206.00	14374.31	-4171.08
						14949.92

Well Data			
Slot	Well	Wellbore	Wellpath
Slot #06	Weese Unit 2H	Weese Unit 2H AWB	Weese Unit 2H AWP Proj: 21464
Slot #06	Weese Unit 2H	Weese Unit 2H PWB	Weese Unit 2H PWP Rev-A-0



API: 47-095-02553-0000
 BHI Job #: 110037505A
 Rig: Patterson 342
 Duration: 09/30/2019-10/04/2019

Hydraulic Fracturing Fluid Product Component Information Disclosure

Job Start Date:	1/18/2020
Job End Date:	2/9/2020
State:	West Virginia
County:	Tyler
API Number:	47-095-02553-00-00
Operator Name:	Antero Resources Corporation
Well Name and Number:	Weese 2H
Latitude:	39.46329720
Longitude:	-80.93228300
Datum:	NAD83
Federal Well:	NO
Indian Well:	NO
True Vertical Depth:	6,206
Total Base Water Volume (gal):	23,479,836
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 Mixture	Halliburton	Base Fluid					
			Water	7732-18-5	100.00000	86.93917	Density = 8.50
Ingredients	Listed Above	Listed Above					
			Water	7732-18-5	100.00000	0.17245	

Product Name	Halliburton	Solvent	Other	Other	Other	Other	Other	Other	Other
HYDROCHLORIC ACID, 22 BAUME							Listed Below		
OPTIFLO-II DELAYED RELEASE BREAKER	Halliburton	Breaker							
							Listed Below		
Sand-Common White-100 Mesh, SSA-2	Halliburton	Proppant							
							Listed Below		
Legend LD-2990	MultiChem	Friction Reducer							
							Listed Below		
Legend LD-2555	MultiChem	Additive							
							Listed Below		
MC B-8614	Halliburton	Biocide							
							Listed Below		
FDP-S1296-17	Halliburton	Acid Corrosion Inhibitor							
							Listed Below		
LD-2950	MultiChem	Friction Reducer							
							Listed Below		

WG-36 GELLING AGENT	Halliburton	Gelling Agent								
					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	Proprietary	100.00000	12.86119			
			Hydrochloric acid	7647-01-0	Proprietary	30.00000	0.04251			
			Complex Amine Compound		Proprietary	60.00000	0.01356			
			Hydrotreated light petroleum distillate	64742-47-8		30.00000	0.01124			
			Complex Amine Compound		Proprietary	60.00000	0.00891			
			Guar gum	9000-30-0		100.00000	0.00819			
			Glutaraldehyde	111-30-8		30.00000	0.00249			
			Polyethoxylated fatty amine salt	61791-26-2		30.00000	0.00108			
			Surfactant		Proprietary	5.00000	0.00074			
			Sorbitan, mono-9-octadecenoate, (Z)	1338-43-8		5.00000	0.00074			
			Quaternary ammonium compounds, benzyl-C12-16-alkyldimethyl chlorides	68424-85-1		5.00000	0.00041			
			Methanol	67-56-1		100.00000	0.00034			
			Adipic acid	124-04-9		1.00000	0.00023			
			Ethoxylated alcohols		Proprietary	1.00000	0.00023			
			Poly(oxy-1,2-ethanediyl), alpha-tridecyl-omega-hydroxy-, branched	69011-36-5		1.00000	0.00023			
			Ammonium persulfate	7727-54-0		100.00000	0.00017			
			Alkoxyated polyhydric alcohol		Proprietary	1.00000	0.00015			
			Ethoxylated alcohols		Proprietary	1.00000	0.00015			
			Organic chloridie compound		Proprietary	1.00000	0.00015			
			Ethanol	64-17-5		1.00000	0.00008			

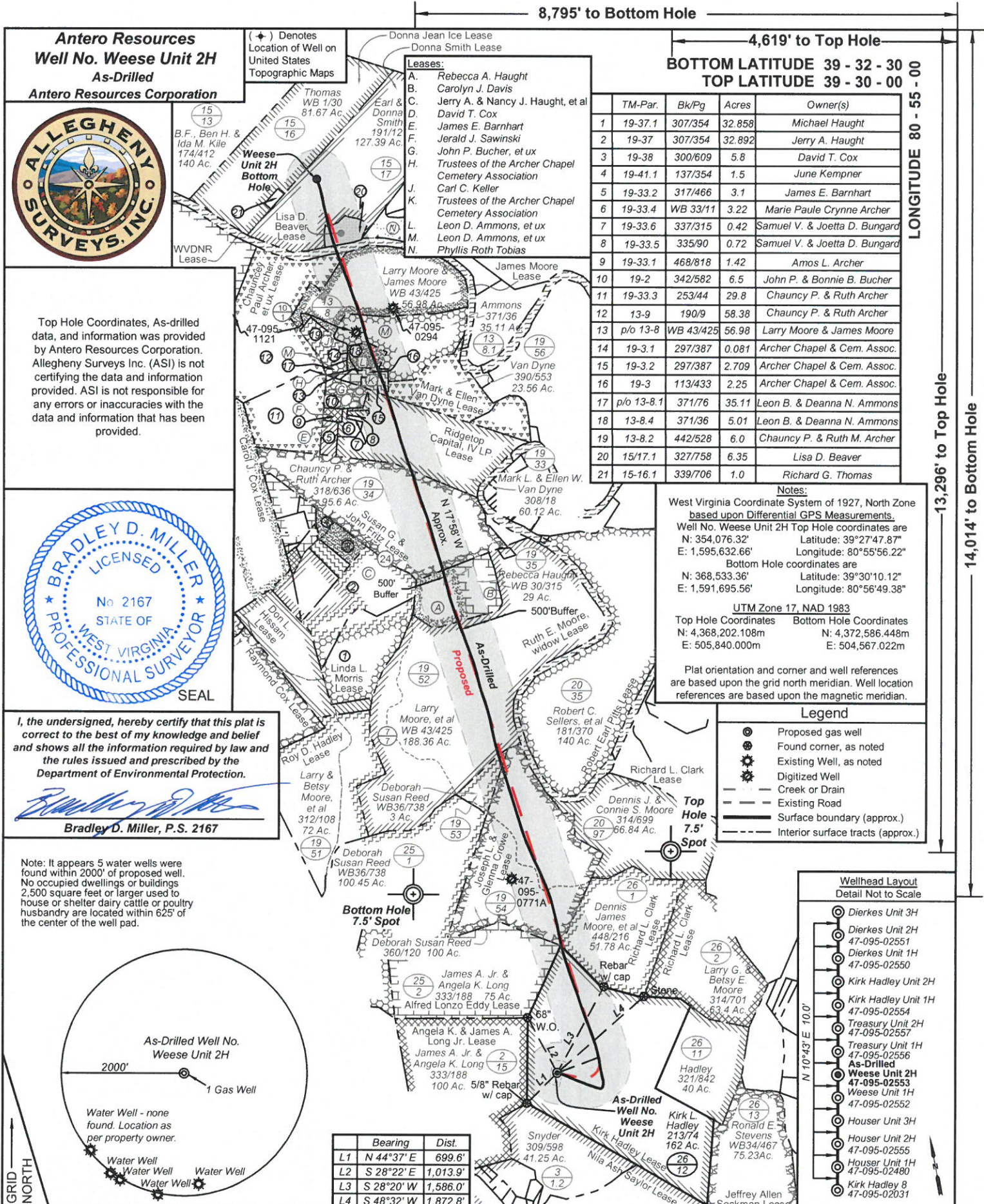
				61790-12-3	30.00000	0.00008	
			Mixture of dimer and trimer fatty acids of indefinite composition derived from tall oil	Proprietary	30.00000	0.00008	
			Modified thiourea polymer	Proprietary	30.00000	0.00005	
			Oxylated phenolic resin	79-06-1	0.10000	0.00001	
			Acrylamide	Proprietary	0.10000	0.00001	
			Organic salt #1	Proprietary	5.00000	0.00001	
			Ethoxylated alcohols	107-19-7	5.00000	0.00001	
			Propargyl alcohol	629-73-2	5.00000	0.00001	
			Hexadecene	7664-38-2	0.10000	0.00001	
			Phosphoric acid	3468-63-1	1.00000	0.00000	
			C.I. pigment Orange 5	1310-73-2	0.01000	0.00000	
			Sodium hydroxide	Proprietary	0.01000	0.00000	
			Organic salt #3	Proprietary	0.01000	0.00000	
			Organic salt #2	2836-32-0	0.01000	0.00000	
			Sodium glycollate	Proprietary	0.01000	0.00000	
			Nitrated acetate salt	50-00-0	0.01000	0.00000	
			Formaldehyde		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)



Antero Resources
Well No. Weese Unit 2H
As-Drilled
Antero Resources Corporation

Donna Jean Ice Lease
Donna Smith Lease

Thomas WB 1/30 81.67 Ac.
Earl & Donna Smith 191/12 127.39 Ac.

B.F., Ben H. & Ida M. Kile 174/412 140 Ac.

Weese Unit 2H Bottom Hole

Lisa D. Beaver Lease

WVDNR Lease

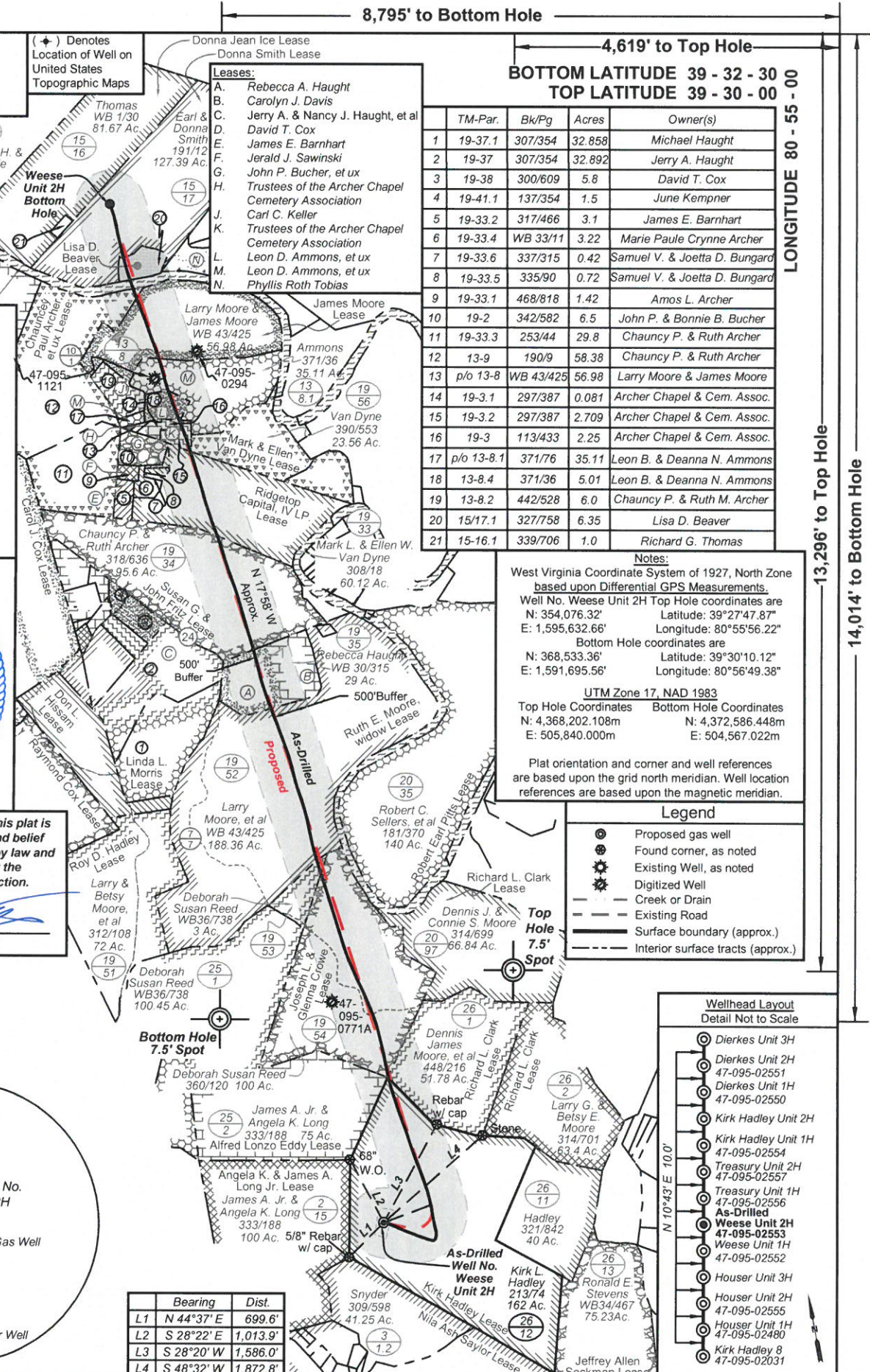
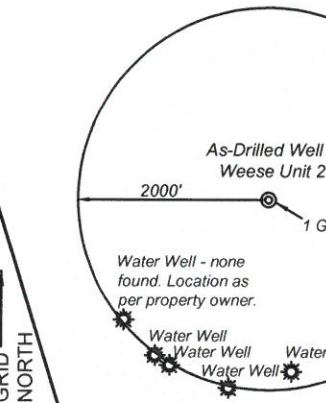
Top Hole Coordinates, As-drilled data, and information was provided by Antero Resources Corporation. Allegany Surveys Inc. (ASI) is not certifying the data and information provided. ASI is not responsible for any errors or inaccuracies with the data and information that has been provided.

BRADLEY D. MILLER
 LICENSED
 No 2167
 STATE OF WEST VIRGINIA
 PROFESSIONAL SURVEYOR
 SEAL

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

Note: It appears 5 water wells were 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.



FILE NO: 217-54-E-16
 DRAWING NO: Weese 2H-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: April 23 2020
 OPERATOR'S WELL NO. Weese Unit 2H
 API WELL NO
 47 - 095 - 02553
 STATE COUNTY PERMIT

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

LOCATION: ELEVATION: As-Built 912' WATERSHED: Outlet Middle Island Creek QUADRANGLE: Middlebourne
 DISTRICT: Meade & Ellsworth COUNTY: Tyler
 SURFACE OWNER: Kirk L. Hadley ACREAGE: 162
 ROYALTY OWNER: Kirk Hadley; Donna Smith; Ridgetop Capital IV LP.; James Moore; Roy D. Hadley LEASE NO: ACREAGE: 291.5; 202; 6.35;

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: 21,464' MD 6,177' TVD

WELL OPERATOR: Antero Resources Corporation DESIGNATED AGENT: Dianna Stamper - CT Corporation System
 ADDRESS: 1615 Wynkoop Street ADDRESS: 5400 D Big Tyler Road
 Denver, CO 80202 Charleston, WV 25313