

RECEIVED
Office of Oil and Gas
NOV 12 2021
WV Department of
Environmental Protection

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

API 47-095-02711 County Tyler District Union/Meade
Quad Middlebourne/ Ben's Run Pad Name Gorrell Field/Pool Name ----
Farm name Elizabeth Gorrell Well Number Hodge 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 4363195m Easting 500811m
Landing Point of Curve Northing 4363497.06m Easting 501454.28m
Bottom Hole Northing 4367439m Easting 500028m

Elevation (ft) 1045' 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 10/26/2020 Date drilling commenced 3/4/2021 Date drilling ceased 3/30/2021
Date completion activities began 5/13/2021 Date completion activities ceased 6/26/2021
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 505' Open mine(s) (Y/N) depths No
Salt water depth(s) ft 1378' Void(s) encountered (Y/N) depths No
Coal depth(s) ft None Identified Cavern(s) encountered (Y/N) depths No
Is coal being mined in area (Y/N) No

Reviewed by:

DCN
12/21/21
12/31/2021

API 47-095 - 02711 Farm name Elizabeth Gorrell Well number Hodge 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"	80'	New	94#, H-40	N/A	Y
Surface	17-1/2"	13-3/8"	588'	New	54.5#, J-55	N/A	Y
Coal							
Intermediate 1	12-1/4"	9-5/8"	2694'	New	36#, J-55	N/A	Y
Intermediate 2							
Intermediate 3							
Production	8-3/4"/8-1/2"	5-1/2"	21010'	New	20#, P-110	N/A	Y
Tubing		2-3/8"			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	266 sx	15.6	1.18	56	0'	8 Hrs.
Surface	Class A	760 sx	15.8	1.17	124	0'	8 Hrs.
Coal							
Intermediate 1	Class A	1065 sx	15.8	1.17	220	0'	8 Hrs.
Intermediate 2							
Intermediate 3							
Production	Class H	792 sx (Lead) 3200 sx (Tail)	13.5 (Lead), 15.2(Tail)	1.4 (Lead), 1.16 (Tail)	751	~500' into Intermediate Casing	8 Hrs.
Tubing							

Drillers TD (ft) 21065' MD, 6190' TVD (BHL), 6282' (Deepest Point Drilled) Loggers TD (ft) 21065' MD

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

Plug back procedure N/A

Kick off depth (ft) 5675'

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 - 02711 Farm name Elizabeth Gorrell Well number Hodge Unit 1H

<u>PRODUCING FORMATION(S)</u>	<u>DEPTHS</u>		
Marcellus	6206' (TOP)	TVD	7039' (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 19323 mcfpd Oil 865 bpd NGL --- bpd Water -2 bpd GAS MEASURED BY Estimated Orifice Pilot

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

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 Nine Energy Services
Address 6500 West Fwy City Fort Worth State TX Zip 76116

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 Brandi Hankins Telephone 303-357-7223
Signature  Title Completions Technician Date 11/10/21

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

12/31/2021

API 47-095-02711 Farm Name Elizabeth Gorrell Well Number Hodge Unit 1H

Stage No.	Perforation Date	Perforated from MD ft.	Perforated to MD ft.	Number of Perforations	Formations
1	5/13/2021	20949	20909	36	Marcellus
2	5/13/2021	20870.13971	20702.8382	36	Marcellus
3	5/13/2021	20666.97794	20499.6765	36	Marcellus
4	5/13/2021	20463.81618	20296.5147	36	Marcellus
5	5/14/2021	20260.65441	20093.3529	36	Marcellus
6	5/14/2021	20057.49265	19890.1912	36	Marcellus
7	5/14/2021	19854.33088	19687.0294	36	Marcellus
8	5/15/2021	19651.16912	19483.8676	36	Marcellus
9	5/15/2021	19448.00735	19280.7059	36	Marcellus
10	5/15/2021	19244.84559	19077.5441	36	Marcellus
11	5/15/2021	19041.68382	18874.3824	36	Marcellus
12	5/16/2021	18838.52206	18671.2206	36	Marcellus
13	5/16/2021	18635.36029	18468.0588	36	Marcellus
14	5/16/2021	18432.19853	18264.8971	36	Marcellus
15	5/16/2021	18229.03676	18061.7353	36	Marcellus
16	5/16/2021	18025.875	17858.5735	36	Marcellus
17	5/17/2021	17822.71324	17655.4118	36	Marcellus
18	5/17/2021	17619.55147	17452.25	36	Marcellus
19	5/17/2021	17416.38971	17249.0882	36	Marcellus
20	5/17/2021	17213.22794	17045.9265	36	Marcellus
21	5/18/2021	17010.06618	16842.7647	36	Marcellus
22	5/18/2021	16806.90441	16639.6029	36	Marcellus
23	5/18/2021	16603.74265	16436.4412	36	Marcellus
24	5/18/2021	16400.58088	16233.2794	36	Marcellus
25	5/19/2021	16197.41912	16030.1176	36	Marcellus
26	5/19/2021	15994.25735	15826.9559	36	Marcellus
27	5/19/2021	15791.09559	15623.7941	36	Marcellus
28	5/20/2021	15587.93382	15420.6324	36	Marcellus
29	5/21/2021	15384.77206	15217.4706	36	Marcellus
30	5/21/2021	15181.61029	15014.3088	36	Marcellus
31	5/21/2021	14978.44853	14811.1471	36	Marcellus
32	5/21/2021	14775.28676	14607.9853	36	Marcellus
33	5/21/2021	14572.125	14404.8235	36	Marcellus
34	5/22/2021	14368.96324	14201.6618	36	Marcellus
35	5/22/2021	14165.80147	13998.5	36	Marcellus
36	5/22/2021	13962.63971	13795.3382	36	Marcellus
37	5/22/2021	13759.47794	13592.1765	36	Marcellus
38	5/22/2021	13556.31618	13389.0147	36	Marcellus
39	5/23/2021	13353.15441	13185.8529	36	Marcellus
40	5/23/2021	13149.99265	12982.6912	36	Marcellus
41	5/23/2021	12946.83088	12779.5294	36	Marcellus
42	5/23/2021	12743.66912	12576.3676	36	Marcellus
43	5/24/2021	12540.50735	12373.2059	36	Marcellus
44	5/24/2021	12337.34559	12170.0441	36	Marcellus
45	5/24/2021	12134.18382	11966.8824	36	Marcellus
46	5/24/2021	11931.02206	11763.7206	36	Marcellus
47	5/24/2021	11727.86029	11560.5588	36	Marcellus
48	5/25/2021	11524.69853	11357.3971	36	Marcellus
49	5/25/2021	11321.53676	11154.2353	36	Marcellus
50	5/25/2021	11118.375	10951.0735	36	Marcellus
51	5/25/2021	10915.21324	10747.9118	36	Marcellus
52	5/26/2021	10712.05147	10544.75	36	Marcellus
53	5/26/2021	10508.88971	10341.5882	36	Marcellus
54	5/26/2021	10305.72794	10138.4265	36	Marcellus
55	5/26/2021	10102.56618	9935.26471	36	Marcellus
56	5/26/2021	9899.404412	9732.10294	36	Marcellus
57	5/27/2021	9696.242647	9528.94118	36	Marcellus
58	5/27/2021	9493.080882	9325.77941	36	Marcellus
59	5/27/2021	9289.919118	9122.61765	36	Marcellus
60	5/27/2021	9086.757353	8919.45588	36	Marcellus
61	5/28/2021	8883.595588	8716.29412	36	Marcellus
62	5/28/2021	8680.433824	8513.13235	36	Marcellus
63	5/28/2021	8477.272059	8309.97059	36	Marcellus
64	5/28/2021	8274.110294	8106.80882	36	Marcellus
65	5/29/2021	8070.948529	7903.64706	36	Marcellus
66	5/29/2021	7867.786765	7700.48529	36	Marcellus
67	5/29/2021	7664.625	7497.32353	36	Marcellus
68	5/29/2021	7461.463235	7294.16176	36	Marcellus
69	5/29/2021	7258.301471	7091	36	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	5/13/2021	70.76	8532	8836	3344	164264	220291	N/A
2	5/13/2021	85.7	8639	5219	3698.74	408800	325799	N/A
3	5/13/2021	86.87	8777	4888	3234	406598	325049	N/A
4	5/13/2021	86.51	8784	5291	3131	406518	323601	N/A
5	5/14/2021	85.47	8653	4729	3033	406279	327968	N/A
6	5/14/2021	85.95	8539	4880	3170	406335	322743	N/A
7	5/14/2021	84.95	8704	5344	3467	405940	306422	N/A
8	5/15/2021	85.52	8709	5058	3347.65	407953	300970	N/A
9	5/15/2021	83.28	8661	5045	3536	407475	304174	N/A
10	5/15/2021	81.79	8454	5172	3769.73	411940	306443	N/A
11	5/15/2021	71.63	8372	5519	3533	406320	378324	N/A
12	5/16/2021	96.35	8704	4912	3696	406376	306507	N/A
13	5/16/2021	96.17	8686	5795	3338	406300	306400	N/A
14	5/16/2021	95.39	8704	6940	3468	406316	309853	N/A
15	5/16/2021	93.89	8441	5799	3680	407200	303839	N/A
16	5/16/2021	99.36	8618	6850	3425	406556	306162	N/A
17	5/17/2021	96.1	8684	5204	3482.54	406315	303497	N/A
18	5/17/2021	96.5	8627	8427	3412	406252	302294	N/A
19	5/17/2021	93.72	8592	5109	3603	403002	300457	N/A
20	5/17/2021	59.27	8261	6699	3973	405399	466184	N/A
21	5/18/2021	65.69	8431	5918	4279	406360	450013	N/A
22	5/18/2021	79.22	8545	5176	3343	366440	346330	N/A
23	5/18/2021	96.35	8664	7895	3270	401500	300443	N/A
24	5/18/2021	92.98	8539	5350	3363	409266	301456	N/A
25	5/19/2021	82.67	8650	5265	3279	409229	309605	N/A
26	5/19/2021	97.83	8664	8515	3377	408000	301018	N/A
27	5/19/2021	58.94	8387	8502	3923	425206	510925	N/A
28	5/20/2021	17.27	6616	6525	5009	6379	155979	N/A
29	5/21/2021	95.35	7958	4995	4480	406378	345502	N/A
30	5/21/2021	96.28	8135	5651	4455	408272	280619	N/A
31	5/21/2021	97.52	8380	5979	4221	403055	285244	N/A
32	5/21/2021	95.16	8476	6239	3700.11	402040	298600	N/A
33	5/21/2021	93.41	8501	6055	3600	403500	290046	N/A
34	5/22/2021	76.08	8362	5926	4230	410041	428314	N/A
35	5/22/2021	96.92	8206	5357	4411	408800	292625	N/A
36	5/22/2021	97.92	7949	5678	4103	402995	288165	N/A
37	5/22/2021	99.27	8203	5001	3784	405700	270839	N/A
38	5/22/2021	98.45	8332	5720	3959	405117	271286	N/A
39	5/23/2021	80.38	8166	6002	3979	401220	275546	N/A
40	5/23/2021	97.26	7899	5729	3982	402995	287182	N/A
41	5/23/2021	95.99	8044	5419	3738	402820	283931	N/A
42	5/23/2021	97.99	8242	5585	3948	403327	269666	N/A
43	5/24/2021	99.04	7946	5417	3931	406886	269798	N/A
44	5/24/2021	95.19	7862	6234	3847	402772	284311	N/A
45	5/24/2021	96.87	8154	6177	3994	404580	281619	N/A
46	5/24/2021	97.85	7870	5733	3791	403144	275288	N/A
47	5/24/2021	95.19	8404	6105	3785	403045	272959	N/A
48	5/25/2021	87.01	8627	5205	3519	401680	279074	N/A
49	5/25/2021	96.65	7786	5819	3772	402910	260009	N/A
50	5/25/2021	93	7714	6124	4016	401880	275343	N/A
51	5/25/2021	95.23	7985	6341	4007.5	403451	269816	N/A
52	5/26/2021	99.36	8026	6293	3687.45	402793	269436	N/A
53	5/26/2021	97.4	7688	6214	3746	402928	269374	N/A
54	5/26/2021	98.13	7731	6026	3803	399380	268140	N/A
55	5/26/2021	97.4	7393	6050	3892	402972	269477	N/A
56	5/26/2021	99.64	7576	5462	3980.84	402800	267000	N/A
57	5/27/2021	99.68	7596	6063	4132.69	403749	280267	N/A
58	5/27/2021	98.08	7560	6011	3739	403129	270761	N/A
59	5/27/2021	98.97	7489	5979	3831	403020	266639	N/A
60	5/27/2021	97.24	7806	5881	4165.84	402797	281219	N/A
61	5/28/2021	99.31	7392	5937	4310.88	403560	276867	N/A
62	5/28/2021	96.56	7153	5486	4076	405308	270748	N/A
63	5/28/2021	96.85	7209	5863	3820	402960	271484	N/A
64	5/28/2021	99.85	7331	5845	4126.86	402685	260520	N/A
65	5/29/2021	99.7	7063	5751	4274.09	404080	279252	N/A
66	5/29/2021	99.49	6957	6090	4266.75	403032	272257	N/A
67	5/29/2021	99.13	6603	5948	3711	402872	262620	N/A
68	5/29/2021	94.96	6727	5874	3678	402913	264860	N/A
69	5/29/2021	98.4	6814	5471	3966.39	402466	258506	N/A
	AVG=	91	8,086	5,907	3,792	27,274,570	20,517,955	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
Silty Sandstone	70	300	70	300
Sandy Siltstone	300	380	300	380
Sandstone	380	540	380	540
Sandy Siltstone	540	580	540	580
Silty Sandstone	580	630	580	630
Silty Shale	630	720	630	720
Shale	720	1,280	720	1,280
Sandstone	1,280	1,660	1,280	1,660
Sandy Siltstone	1,660	1,780	1,660	1,780
Silty Sandstone, tr Shale	1,780	1,820	1,780	1,820
Sandstone	1,820	1,870	1,820	1,870
Sandy siltstone	1,870	1,880	1,870	1,880
Sandstone	1,880	1,940	1,880	N/A
Big Lime	1,970	2,797	2,021	2,974
Fifty Foot Sandstone	2,797	2,909	2,944	3,102
Gordon	2,909	3,242	3,072	3,476
Fifth Sandstone	3,242	3,332	3,446	3,576
Bayard	3,332	3,898	3,546	4,198
Speechley	3,898	4,168	4,168	4,503
Balltown	4,168	4,497	4,473	4,873
Bradford	4,497	4,914	4,843	5,347
Benson	4,914	5,214	5,317	5,680
Alexander	5,214	6,125	5,650	6,801
Sycamore	5,997	6,095	6,593	6,771
Middlesex	6,095	6,184	6,771	6,981
Burkett	6,184	6,201	6,981	7,027
Tully	6,201	6,206	7,027	7,039
Marcellus	6,206	NA	7,039	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:	5/12/2021
Job End Date:	5/29/2021
State:	West Virginia
County:	Tyler
API Number:	47-095-02711-00-00
Operator Name:	Antero Resources Corporation
Well Name and Number:	HODGE UNIT 1H
Latitude:	39.41821000
Longitude:	-80.99074000
Datum:	NAD83
Federal Well:	NO
Indian Well:	NO
True Vertical Depth:	6,282
Total Base Water Volume (gal):	21,724,522
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 Mixture	Halliburton	Base Fluid					
			Water	7732-18-5	100.00000	86.93045	Density = 8.50
Ingredients	Listed Above	Listed Above					
			Water	7732-18-5	100.00000	0.15414	

WG-36 GELLING AGENT	Halliburton	Gelling Agent					
				Listed Below			
FLUID Enviro-Syn HCR-7000-WL	Fluid Energy Group	Acid Replacement					
				Listed Below			
OPTIFLO-II DELAYED RELEASE BREAKER	Halliburton	Breaker					
				Listed Below			
MC B-8614A	MultiChem	Biocide					
				Listed Below			
HAI-501	Halliburton	Acid Corrosion Inhibitor					
				Listed Below			
HYDROCHLORIC ACID, 22 BAUME	Halliburton	Solvent					
				Listed Below			
Excelerate LX-15	Halliburton	Friction Reducer					
				Listed Below			
Sand-Common White-100 Mesh, SSA-2	Halliburton	Proppant					
				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	12.85873	
			Complex Amine Compound	Proprietary	60.00000	0.03489	
			Hydrochloric acid	7647-01-0	30.00000	0.03324	
			Hydrotreated light petroleum distillate	64742-47-8	30.00000	0.01745	
			Guar gum	9000-30-0	100.00000	0.00727	
			Proprietary	Proprietary	20.00000	0.00518	
			Sorbitan, mono-9-octadecenoate, (Z)	1338-43-8	5.00000	0.00291	
			Surfactant	Proprietary	5.00000	0.00291	
			Proprietary	Proprietary	10.00000	0.00259	
			Glutaraldehyde	111-30-8	30.00000	0.00253	
			Ethoxylated alcohols	Proprietary	5.00000	0.00059	
			Alkoxylated polyhydric alcohol	Proprietary	1.00000	0.00058	
			Organic chloride compound	Proprietary	1.00000	0.00058	
			Alkyl (C12-16) dimethylbenzyl ammonium chloride	68424-85-1	5.00000	0.00042	
			Methanol	67-56-1	100.00000	0.00020	
			Ethanol	64-17-5	1.00000	0.00008	
			Mixture of dimer and trimer fatty acids of indefinite composition derived from tall oil	61790-12-3	30.00000	0.00006	
			Modified thiourea polymer	Proprietary	30.00000	0.00006	
			Ammonium persulfate	7727-54-0	100.00000	0.00005	
			Oxylated phenolic resin	Proprietary	30.00000	0.00002	
			Hexadecene	629-73-2	5.00000	0.00001	
			Propargyl alcohol	107-19-7	5.00000	0.00001	
			Organic salt #2	Proprietary	0.01000	0.00001	
			Organic salt #1	Proprietary	0.01000	0.00001	

			Nitrated acetate salt	Proprietary	0.01000	0.00001	
			Sodium glycolate	2836-32-0	0.01000	0.00001	
			Sodium hydroxide	1310-73-2	0.01000	0.00001	
			Formaldehyde	50-00-0	0.01000	0.00001	
			Acrylamide	79-06-1	0.01000	0.00001	
			C.I. pigment Orange 5	3468-63-1	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. Hodge Unit 1H
 As-Drilled
 Antero Resources Corporation

11,718' to Bottom Hole

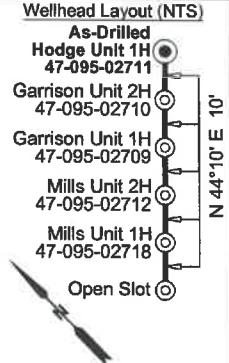
LATITUDE 39 - 27 - 30

Legend

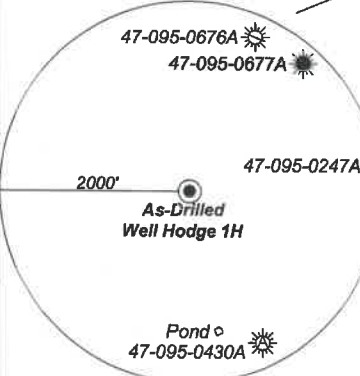
- ⊙ Proposed gas well
- ⊗ Monument, as noted
- ⊙ Existing Well, as noted
- ⊙ Digitized Well
- Creek or Drain
- Road
- Surface boundary (approx.)
- Interior surface tracts (approx.)
- District Line

Notes:
 West Virginia Coordinate System of 1927, North Zone based upon Differential GPS Measurements. Well No. Hodge Unit 1H Top Hole coordinates are N: 337,924.24' Latitude: 39°25'05.55" E: 1,578,858.86' Longitude: 80°59'26.65"
 Bottom Hole coordinates are N: 351,892.57' Latitude: 39°27'23.21" E: 1,576,521.29' Longitude: 80°59'59.40"
 UTM Zone 17, NAD 1983
 Top Hole Coordinates N: 4,363,195.865m E: 500,811.996m
 Bottom Hole Coordinates N: 4,367,439.452m E: 500,028.789m
 Plat orientation and corner and well references are based upon the grid north meridian. Well location references are based upon the magnetic meridian.

Hodge Unit 1H As-Drilled POE Coordinates
 West Virginia Coordinate System of 1927, North Zone
 N: 338,679.95' E: 1,581,107.15' Latitude: 39°25'13.39" Longitude: 80°58'58.16"
 UTM Zone 17, NAD 1983
 N: 4,363,437.549m E: 501,493.096m



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.



Note: It appears 0 water wells and a pond were found within 2000' of proposed well. No occupied dwellings and no 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.

	Bearing	Dist.
L1	S 87°33' E	439.4'
L2	S 27°27' E	2,236.5'
L3	N 47°13' W	2,525.0'
L4	N 02°13' W	2,178.8'

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



FILE NO: 219-54-M-17
 DRAWING NO: Hodge 1H As Drilled
 SCALE: 1" = 2000'
 MINIMUM DEGREE OF ACCURACY: Submeter
 PROVEN SOURCE OF ELEVATION: WV DOT, Harrisville, WV

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

DATE: October 4 20 21
 OPERATOR'S WELL NO. Hodge Unit 1H
 API WELL NO
 47 - 095 - 02711
 STATE COUNTY PERMIT

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

LOCATION: ELEVATION: As-Built 1045' WATERSHED: Outlet Middle Island Creek QUADRANGLE: BTM: Bens Run Top: Middlebourne
 DISTRICT: Union & Meade Ridgewood Development, LLC (2); J&N Management Enterprises, LLC; WV Division of Natural Resources; COUNTY: Tyler 234.74; 185; 201.8;
 SURFACE OWNER: Elizabeth Gorrell Charles & Deborah Weekley; Thelma E. Hadley Testamentary Trust; RMH Trust; Roger L. & Dawn E. Billiter; COUNTY: Tyler 54; 166; 5925; 42.73;
 ROYALTY OWNER: Elizabeth Gorrell, et al; Kerr-McGee Oil & Gas Onshore LP; Antero Resources Corp.; LEASE NO: ACREAGE: 12.31/20.25 13.8625; 14.45;
 PROPOSED WORK: DRILL CONVERT DRILL DEEPER FRACTURE OR STIMULATE PLUG OFF OLD FORMATION
 PERFORATE NEW FORMATION OTHER PHYSICAL CHANGE IN WELL (SPECIFY) As-Drilled ACREAGE: 13.5; 93.83; 17.5;
 PLUG AND ABANDON CLEAN OUT AND REPLUG TARGET FORMATION: Marcellus Shale ESTIMATED DEPTH: 21,065' MD 6,190' TVD

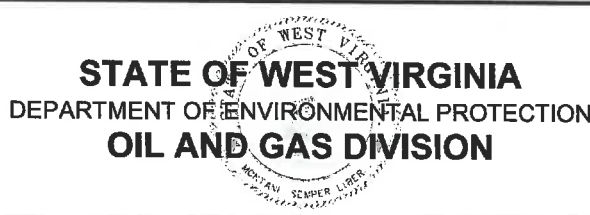
WELL OPERATOR: Antero Resources Corporation DESIGNATED AGENT: Dianna Stamper - CT Corporation System
 ADDRESS: 1615 Wynkoop Street ADDRESS: 5400 D Big Tyler Road
 Denver, CO 80202 Charleston, WV 25313



	Lease
A	Elizabeth Gorrell, et al
B	Janet Sue Baker
C	Mary E. Clymer
D	Kerr-McGee Oil & Gas Onshore LP
E	Wilma Jane Benefield
F	Rita G. Jarvis
G	Tony E. & Ellen L. Wince
H	Michael A. Domino
I	John M. Garrison
J	Betty M. Knowlton Starkey
K	Charles H. & Deborah L. Weekley
L	Ronald Cooper, et ux
M	BRC Appalachian Minerals I LLC
N	Charles & Deborah Weekley
O	The Thelma E. Hadley Testamentary Trust
P	RMH Trust
Q	Kerr-McGee Oil & Gas Onshore LP
R	Roger L. & Dawn E. Billiter
S	Ridgewood Development, LLC
T	Ridgewood Development, LLC
U	Roger Billiter & Dawn E. Billiter
V	Ridgewood Development, LLC
W	Antero Resources Corp.
X	BRC Appalachian Minerals I LLC
Y	WV Division of Natural Resources
Z	I.L. Morris
AA	George E. & Ardele J. Post
AB	Geraldine Moses
AC	J&N Management Enterprises, LLC

ID	TM/Par	Owner	Bk/Pg	Acres
1	7-15	Elizabeth Gorrell	321/360	242.50
2	7-14	Russell G. & Ruth M. Smith Family Trust	541/608	50.00
3	7-16	Seven Spirits Farms, LLC	381/67	175.11
4	7-10	Michael R. & Linda Fritzsimmmons	336/764	161.63
5	7-5	Coastal Forest Resources Co.	301/131	74.30
6	7-6	Joseph K. Turbish	390/22	75.00
7	4-30	Tony E. & Ellen L. Wince	246/25	97.15
8	4-27	Stanley M. & Shelba J. Shultz	202/438	271.29
9	4-29	Michael A. Domino	378/751	42.73
10	4-24	Betty M. Starkey	263/622	49.24
11	4-23.2	Stanley N. & Shelba J. Shultz and Charles H. & Deborah Weekley	335/958	2.00
12	4-23	Stanley N. & Shelba J. Shultz, and Charles H. & Deborah Weekley	335/958	41.27
13	4-16.1	Charles H. & Deborah L. Weekley	249/627	5.38
14	4-16.2	Ronald & Linda Cooper	362/510	0.55
15	4-23.3	William R. & Ruth R. Erlewine	335/958	17.00
16	4-16	Charles H. & Deborah L. Weekley	248/44	14.45
17	4-15	Sharon O. McGrew	WB14/516	38.66
18	4-14	Roger L. & Dawn Billiter	290/155	26.03
19	4-5	Sharon O. McGrew	WB14/516	31.00
20	4-3.4	Roger L. H. & Dawn Ellen Billiter	369/541	13.50
21	4-3	Janice K. Brooks	521/333	31.71
22	4-3.1	Roger L. H. & Dawn E. Billiter	354/118	7.54
23	4-3.2	Roger L. H. & Dawn Ellen Billiter	334/310	1.87
24	15-38	Roger L. H. & Dawn E. Billiter	340/643	21.00
25	4-2	Flossie Arvilla Cline	AR46/1	33.50
26	15-4	Stephen P. Racer	301/595	60.00
27	1-4	Randall W. & Diane R. Hayes	285/27	28.42
28	13-76	Robert Lawson	359/392	17.50
29	1-1.3	George E. & Ardele J. Post	322/485	15.25
30	13-57	Charles S. Sapp	366/484	1.50
31	13-56	Charles S. Sapp	366/484	0.50
32	13-55.1	Charles S. Sapp	271/309	1.00
33	13-55	Steven P. Racer	213/412	61.50
34	13-74.2	Roger Lee & Sara Lee Hall	358/110	22.48
35	13-74.13	Amanda J. Pardine	390/753	2.20
36	13-74.3	Bobbin E. Pardine	358/115	22.88
37	13-54	Linda L. Jones	304/241	28.0

FILE NO: 219-54-M-17
 DRAWING NO: Hodge 1H As Drilled
 SCALE: 1" = 2000'
 MINIMUM DEGREE OF ACCURACY:
 Submeter
 PROVEN SOURCE OF ELEVATION:
 WVDOT, Harrisville, WV



DATE: October 4 20 21
 OPERATOR'S WELL NO. Hodge Unit 1H
 API WELL NO
 47 - 095 - 02711
 STATE COUNTY PERMIT

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

LOCATION: ELEVATION: As-Built 1045' WATERSHED: Outlet Middle Island Creek QUADRANGLE: BTM: Bens Run Top: Middlebourne

DISTRICT: Union & Meade SURFACE OWNER: Elizabeth Gorrell COUNTY: Tyler

ROYALTY OWNER: Elizabeth Gorrell, et al; Kerr-McGee Oil & Gas Onshore LP; Antero Resources Corp.; LEASE NO: ACREAGE: 12731/2080

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: 6,190' TVD 21,065' MD

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

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: 47-095-02711 County: Tyler
District: Union /Meade Well No: Hodge Unit 1H
Farm Name: Elizabeth Gorrell

Discharge Date/s From:(MMDDYY) 07/13/21 To: (MMDDYY) 08/12/21
Discharge Times. From: 0:00 To: 24:00

Total Volume to be Disposed from this facility (gallons): 1,030,780
Disposal Option(s) Utilized (write volumes in gallons):

- (1) Land Application: 0 (Include a topographical map of the Area.)
(2) UIC: 1087 Permit No. 3400923821, 3400923823, 3400923824
(3) Offsite Disposal: 0 Site Location: _____
(4) Reuse: 1,029,692 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? N/A 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: Director, Environmental and Regulatory Compliance
Date Completed: 10/27/21

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.

12/31/2021

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: _____