

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

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NOV 1 2021

WV Department of
Environmental Protection

API 47 - 095 - 02719 County Wetzel District Ellsworth/Magnolia
Quad Porter Falls/ Paden City Pad Name Elk Fork Field/Pool Name ----
Farm name Patricia Ann Heintzman Well Number Cheat 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 4376855m Easting 511130m
Landing Point of Curve Northing 4377143.99m Easting 510973.20m
Bottom Hole Northing 4381322m Easting 509575m

Elevation (ft) 1126' 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 12/16/2020 Date drilling commenced 1/12/2021 Date drilling ceased 2/11/2021
Date completion activities began 3/30/2021 Date completion activities ceased 5/29/2021
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 408' Open mine(s) (Y/N) depths No
Salt water depth(s) ft 1703' Void(s) encountered (Y/N) depths No
Coal depth(s) ft 58' 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 - 02719 Farm name Patricia Ann Heintzman Well number Cheat 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"	349'	New	54.5#, J-55	N/A	Y
Coal							
Intermediate 1	12-1/4"	9-5/8"	2550'	New	36#, J-55	N/A	Y
Intermediate 2							
Intermediate 3							
Production	8-3/4"/8-1/2"	5-1/2"	21786'	New	23#, P-110	N/A	Y
Tubing		2-3/8"	6608'		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	429 sx	15.6	1.20	92	0'	8 Hrs.
Coal							
Intermediate 1	Class A	884 sx	15.6	1.19	187	0'	8 Hrs.
Intermediate 2							
Intermediate 3							
Production	Class H	792 sx (Lead) 3443 sx (Tail)	13.5 (Lead), 15.2(Tail)	1.4 (Lead), 1.26 (Tail)	773	~500' into Intermediate Casing	8 Hrs.
Tubing							

Drillers TD (ft) 21832' MD, 6469' TVD (BHL), 6536' (Deepest Point Drilled) Loggers TD (ft) 21832' MD

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

Plug back procedure N/A

Kick off depth (ft) 5722'

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

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<u>PRODUCING FORMATION(S)</u>	<u>DEPTHS</u>		
<u>Marcellus</u>	<u>6474' (TOP)</u>	<u>TVD</u>	<u>6684' (TOP)</u> <u>MD</u>
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____

Please insert additional pages as applicable.

GAS TEST Build up Drawdown Open Flow OIL TEST Flow Pump

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

OPEN FLOW Gas 8628 mcfpd Oil 471 bpd NGL --- bpd Water 1729 bpd GAS MEASURED BY Estimated Orifice Pilot

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

***PLEASE SEE ATTACHED EXHIBIT 3**

Please insert additional pages as applicable.

Drilling Contractor H & P Drilling
Address 912 N Eagle Valley Rd City Howard State PA Zip 16841

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

Cementing Company Schlumberger Oilfield Services
Address 300 Schlumberger Dr City Sugarland State TX Zip 77478

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 10/27/2021

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

12/31/2021

Stage No.	Perforation Date	Perforated from MD ft.	Perforated to MD ft.	Number of Perforations	Formations
1	3/30/2021	21719.5	21678.7	36	Marcellus
2	3/31/2021	21639.84347	21473.5608	36	Marcellus
3	3/31/2021	21437.90428	21271.6216	36	Marcellus
4	4/1/2021	21235.96509	21069.6824	36	Marcellus
5	4/1/2021	21034.0259	20867.7432	36	Marcellus
6	4/6/2021	20832.08671	20665.8041	36	Marcellus
7	4/6/2021	20630.14752	20463.8649	36	Marcellus
8	4/6/2021	20428.20833	20261.9257	36	Marcellus
9	4/21/2021	20226.26914	20059.9865	36	Marcellus
10	4/21/2021	20024.32995	19858.0473	36	Marcellus
11	4/21/2021	19822.39077	19656.1081	36	Marcellus
12	4/21/2021	19620.45158	19454.1689	36	Marcellus
13	4/22/2021	19418.51239	19252.2297	36	Marcellus
14	4/22/2021	19216.5732	19050.2905	36	Marcellus
15	4/22/2021	19014.63401	18848.3514	36	Marcellus
16	4/23/2021	18812.69482	18646.4122	36	Marcellus
17	4/23/2021	18610.75563	18444.473	36	Marcellus
18	4/23/2021	18408.81644	18242.5338	36	Marcellus
19	4/24/2021	18206.87725	18040.5946	36	Marcellus
20	4/24/2021	18004.93806	17838.6554	36	Marcellus
21	4/24/2021	17802.99887	17636.7162	36	Marcellus
22	4/24/2021	17601.05968	17434.777	36	Marcellus
23	4/25/2021	17399.1205	17232.8378	36	Marcellus
24	4/25/2021	17197.18131	17030.8986	36	Marcellus
25	4/25/2021	16995.24212	16828.9595	36	Marcellus
26	4/26/2021	16793.30293	16627.0203	36	Marcellus
27	4/26/2021	16591.36374	16425.0811	36	Marcellus
28	4/26/2021	16389.42455	16223.1419	36	Marcellus
29	4/27/2021	16187.48536	16021.2027	36	Marcellus
30	4/27/2021	15985.54617	15819.2635	36	Marcellus
31	4/27/2021	15783.60698	15617.3243	36	Marcellus
32	4/27/2021	15581.66779	15415.3851	36	Marcellus
33	4/28/2021	15379.7286	15213.4459	36	Marcellus
34	4/28/2021	15177.78941	15011.5068	36	Marcellus
35	4/28/2021	14975.85023	14809.5676	36	Marcellus
36	4/28/2021	14773.91104	14607.6284	36	Marcellus
37	4/29/2021	14571.97185	14405.6892	36	Marcellus
38	4/29/2021	14370.03266	14203.75	36	Marcellus
39	4/29/2021	14168.09347	14001.8108	36	Marcellus
40	4/29/2021	13966.15428	13799.8716	36	Marcellus
41	4/30/2021	13764.21509	13597.9324	36	Marcellus
42	4/30/2021	13562.2759	13395.9932	36	Marcellus
43	4/30/2021	13360.33671	13194.0541	36	Marcellus
44	5/1/2021	13158.39752	12992.1149	36	Marcellus
45	5/1/2021	12956.45833	12790.1757	36	Marcellus
46	5/1/2021	12754.51914	12588.2365	36	Marcellus
47	5/1/2021	12552.57995	12386.2973	36	Marcellus
48	5/2/2021	12350.64077	12184.3581	36	Marcellus
49	5/2/2021	12148.70158	11982.4189	36	Marcellus
50	5/2/2021	11946.76239	11780.4797	36	Marcellus
51	5/2/2021	11744.8232	11578.5405	36	Marcellus
52	5/3/2021	11542.88401	11376.6014	36	Marcellus
53	5/3/2021	11340.94482	11174.6622	36	Marcellus
54	5/3/2021	11139.00563	10972.723	36	Marcellus
55	5/3/2021	10937.06644	10770.7838	36	Marcellus
56	5/4/2021	10735.12725	10568.8446	36	Marcellus
57	5/4/2021	10533.18806	10366.9054	36	Marcellus
58	5/4/2021	10331.24887	10164.9662	36	Marcellus
59	5/5/2021	10129.30968	9963.02703	36	Marcellus
60	5/5/2021	9927.370495	9761.08784	36	Marcellus
61	5/5/2021	9725.431306	9559.14865	36	Marcellus
62	5/6/2021	9523.492117	9357.20946	36	Marcellus
63	5/6/2021	9321.552928	9155.27027	36	Marcellus
64	5/6/2021	9119.613739	8953.33108	36	Marcellus
65	5/7/2021	8917.67455	8751.39189	36	Marcellus
66	5/7/2021	8715.73536	8549.4527	36	Marcellus
67	5/7/2021	8513.796171	8347.51351	36	Marcellus
68	5/7/2021	8311.856982	8145.57432	36	Marcellus
69	5/8/2021	8109.917793	7943.63514	36	Marcellus
70	5/8/2021	7907.978604	7741.69595	36	Marcellus
71	5/8/2021	7706.039414	7539.75676	36	Marcellus
72	5/8/2021	7504.100225	7337.81757	36	Marcellus
73	5/9/2021	7302.161036	7135.87838	36	Marcellus
74	5/10/2021	7100.221847	6933.93919	36	Marcellus
75	5/10/2021	6898.282658	6732	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	3/30/2021	73.29	9040	5612	4028.95	158940	183610	N/A
2	3/31/2021	84.77	9769	5731	3766.44	405380	310481	N/A
3	3/31/2021	83.3	9601	4993	3549.55	406280	312705	N/A
4	4/1/2021	84.84	9662.55	5890.35	8849.12	410100	313351	N/A
5	4/1/2021	85.12	9740	5220	3931.09	404360	310909	N/A
6	4/6/2021	87.35	9700	5547	3893	409960	307180	N/A
7	4/6/2021	86.26	9645	5299	3993	412100	302842	N/A
8	4/6/2021	90.2	9821	5804	4101	413460	313436	N/A
9	4/21/2021	90.52	9939	4833	3872.7	408660	290043	N/A
10	4/21/2021	88.61	9898	5624	3587.64	410640	290831	N/A
11	4/21/2021	78.28	9191	5888	3855	406480	355105	N/A
12	4/21/2021	92.3	9843.44	5249.92	3815.8	412440	288759	N/A
13	4/22/2021	93.86	9907	5452	4025	412620	289098	N/A
14	4/22/2021	92.56	9883	5567	3462	409030	295955	N/A
15	4/22/2021	92.74	9751	5985	4332	410100	291723	N/A
16	4/23/2021	94.45	9939	5566	4220	405640	286672	N/A
17	4/23/2021	93.04	9859	5593	4408	407060	294683	N/A
18	4/23/2021	92.46	9816	5375	4304	405800	293464	N/A
19	4/24/2021	93.07	9720.85	5506.55	4094.46	413640	289689	N/A
20	4/24/2021	89.51	9194	5391	3848	401040	382926	N/A
21	4/24/2021	88.66	9261	5187	4625	411780	325585	N/A
22	4/24/2021	92.37	9454	5328	4404	406680	289608	N/A
23	4/25/2021	93.56	9480	5562	4260	410620	296096	N/A
24	4/25/2021	93.43	9758	5287	4357	409340	292385	N/A
25	4/25/2021	92.71	9380	5531	4336	411220	287815	N/A
26	4/26/2021	90.33	8858	5562	4230	408640	287246	N/A
27	4/26/2021	92.12	9424	5834	4342	410440	292106	N/A
28	4/26/2021	91.11	9012	5625	4499	412340	288109	N/A
29	4/27/2021	93.32	8820	5282	4254	411120	289900	N/A
30	4/27/2021	93.28	9359	5543	4407	407960	289068	N/A
31	4/27/2021	95.53	8915	5530	4724	408880	328252	N/A
32	4/27/2021	93.26	8931	5844	4552	412340	288613	N/A
33	4/28/2021	92.54	8928	5674	4569	401800	286005	N/A
34	4/28/2021	92.61	8943	5902	4522	404940	286302	N/A
35	4/28/2021	93.85	8906	5134	4349	406760	294060	N/A
36	4/28/2021	94.45	8885	5290	4189	401560	286292	N/A
37	4/29/2021	94.85	8799	5800	3966	403040	285198	N/A
38	4/29/2021	93.24	8512	5213	3998	415180	290501	N/A
39	4/29/2021	92.93	8514	5858	4109	409720	292159	N/A
40	4/29/2021	94.41	8655	5708	4022	406600	287118	N/A
41	4/30/2021	94.16	8436	5335	3714	402020	282763	N/A
42	4/30/2021	93.3	8651	5883	3991	406980	284408	N/A
43	4/30/2021	94.3	8442	5354	4124	411180	288694	N/A
44	5/1/2021	95.2	8483	5838	4208	404460	283381	N/A
45	5/1/2021	93.75	8480	5717	4125	403480	287101	N/A
46	5/1/2021	95.22	8492	6028	4380	414500	289039	N/A
47	5/1/2021	95.18	8463	5943	4277	405720	285718	N/A
48	5/2/2021	95.01	8493	5646	4157	407520	283802	N/A
49	5/2/2021	93.66	8759	6219	4186	397440	283931	N/A
50	5/2/2021	95.05	8777	5688	4206	404580	286425	N/A
51	5/2/2021	94.54	8292	5486	4316	407600	281606	N/A
52	5/3/2021	94.86	8312	5685	4339	412400	281461	N/A
53	5/3/2021	94.96	8363	5139	3942	401160	298068	N/A
54	5/3/2021	94.99	8385	8550	3930	404380	302679	N/A
55	5/3/2021	95.28	8143	5599	4053	404040	297652	N/A
56	5/4/2021	94.27	8395	5805	4139	393000	292797	N/A
57	5/4/2021	95.75	8509.97	5789.18	4066.47	412220	300252	N/A
58	5/4/2021	95.68	8269	5497	3696	410340	296641	N/A
59	5/5/2021	94.68	8130	5585	4244	409940	299481	N/A
60	5/5/2021	94.8	7904	4226	3800	407400	294685	N/A
61	5/5/2021	96.11	7841	5598	3548	412160	297053	N/A
62	5/6/2021	95.67	7747	5563	4086	406200	296614	N/A
63	5/6/2021	95.28	7809	5715	3997	402900	296030	N/A
64	5/6/2021	95.84	7745	5121	3626	404480	296517	N/A
65	5/7/2021	96.36	7764	5903	3369	409280	297172	N/A
66	5/7/2021	95.78	7627	5228	3744	404580	297765	N/A
67	5/7/2021	95.42	7713	5711	4224	403300	298267	N/A
68	5/7/2021	96.33	7189	5432	3960	407180	294508	N/A
69	5/8/2021	96.29	7189	5597	3926	402440	294235	N/A
70	5/8/2021	96.16	7491	5379	3393	404480	298107	N/A
71	5/8/2021	95.77	7524	5301	3900	409920	294725	N/A
72	5/8/2021	96.59	7495	5848	3748	403980	294741	N/A
73	5/9/2021	94.66	7186	5845	3916	413380	297415	N/A
74	5/10/2021	90.41	6831	6168	3820	414760	338672	N/A
75	5/10/2021	94.22	6881	4912	3934	409060	295506	N/A
	AVG=	93	8,732	5,589	4,130	30,317,750	22,153,781	TOTAL

EXHIBIT 3

LITHOLOGY/ FORMATION	TOP DEPTH (TVD)	BOTTOM DEPTH (TVD)	TOP DEPTH (MD)	BOTTOM DEPTH (MD)
	From Surface	From Surface	From Surface	From Surface
Shaley Siltstone	74	194	74	194
Shaley Sandstone	194	284	194	284
Shaley Siltstone	284	364	284	364
Limestone, Tr Shale	364	494	364	494
Sandstone	494	584	494	584
Limestone, Tr Shale	584	794	584	794
Shaley Sandstone	794	884	794	884
Shale, Tr Sandstone	884	1,134	884	1,134
Sandy Shale, Limestone	1,134	1,244	1,134	1,244
Sandy Shale	1,244	1,484	1,244	1,484
Sandstone, Tr Shale	1,484	1,664	1,484	1,664
Silty Shale, tr SS	1,664	1,754	1,664	1,754
Shale, Tr Sst	1,754	1,920	1,754	1,920
Big Lime	1,946	2,596	1,920	2,596
Fifty Foot Sandstone	2,596	2,686	2,570	2,686
Gordon	2,686	3,034	2,660	3,035
Fifth Sandstone	3,034	3,137	3,009	3,137
Bayard	3,137	3,959	3,111	3,959
Speechley	3,959	4,209	3,933	4,209
Balltown	4,209	4,660	4,183	4,662
Bradford	4,660	5,083	4,636	5,086
Benson	5,083	5,309	5,060	5,312
Alexander	5,309	6,351	5,286	6,415
Sycamore	6,219	6,325	6,253	6,389
Middlesex	6,325	6,413	6,389	6,532
Burkett	6,413	6,431	6,532	6,569
Tully	6,431	6,474	6,569	6,684
Marcellus	6,474	NA	6,684	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:	3/30/2021
Job End Date:	5/10/2021
State:	West Virginia
County:	Tyler
API Number:	47-095-02719-00-00
Operator Name:	Antero Resources Corporation
Well Name and Number:	CHEAT 1H
Latitude:	39.54122000
Longitude:	-80.87064000
Datum:	NAD83
Federal Well:	NO
Indian Well:	NO
True Vertical Depth:	6,536
Total Base Water Volume (gal):	23,053,907
Total Base Non Water Volume:	0



Hydraulic Fracturing Fluid Composition:

Trade Name	Supplier	Purpose	Ingredients	Chemical Abstract Service Number (CAS #)	Maximum Ingredient Concentration in Additive (% by mass)**	Maximum Ingredient Concentration in HF Fluid (% by mass)**	Comments
Produced Water	Halliburton	Base Fluid					
			Water	7732-18-5	100.00000	86.43894	Density = 8.50
Ingredients	Listed Above	Listed Above					
			Water	7732-18-5	100.00000	0.16500	

WG-36 GELLING AGENT	Halliburton	Gelling Agent					
				Listed Below			
OPTIFLO-II DELAYED RELEASE BREAKER	Halliburton	Breaker					
				Listed Below			
MC B-8614A	MultiChem	Biocide					
				Listed Below			
Sand-Common White-100 Mesh, SSA-2	Halliburton	Proppant					
				Listed Below			
Excelerate LX-15	Halliburton	Friction Reducer					
				Listed Below			
HYDROCHLORIC ACID, 22 BAUME	Halliburton	Solvent					
				Listed Below			
MC B-8614	Halliburton	Biocide					
				Listed Below			
HAI-501	Halliburton	Acid Corrosion Inhibitor					
				Listed Below			

Items above are Trade Names with the exception of Base Water . Items below are the individual ingredients.

		Crystalline silica, quartz	14808-60-7	100.00000	13.37344
		Hydrochloric acid	7647-01-0	30.00000	0.03875
		Complex Amine Compound	Proprietary	60.00000	0.02754
		Hydrotreated light petroleum distillate	64742-47-8	30.00000	0.01377
		Guar gum	9000-30-0	100.00000	0.00394
		Glutaraldehyde	111-30-8	30.00000	0.00249
		Surfactant	Proprietary	5.00000	0.00229
		Sorbitan, mono-9-octadecenoate, (Z)	1338-43-8	5.00000	0.00229
		Ethoxylated alcohols	Proprietary	5.00000	0.00047
		Organic chloride compound	Proprietary	1.00000	0.00046
		Alkoxylated polyhydric alcohol	Proprietary	1.00000	0.00046
		Alkyl (C12-16) dimethylbenzyl ammonium chloride	68424-85-1	5.00000	0.00037
		Methanol	67-56-1	100.00000	0.00025
		Ammonium persulfate	7727-54-0	100.00000	0.00009
		Ethanol	64-17-5	1.00000	0.00008
		Modified thiourea polymer	Proprietary	30.00000	0.00007
		Mixture of dimer and trimer fatty acids of indefinite composition derived from tall oil	61790-12-3	30.00000	0.00007
		Quaternary ammonium compounds, benzyl-C12-16-alkyldimethyl chlorides	68424-85-1	5.00000	0.00004
		Oxylated phenolic resin	Proprietary	30.00000	0.00003
		Propargyl alcohol	107-19-7	5.00000	0.00001
		Hexadecene	629-73-2	5.00000	0.00001
		Acrylamide	79-06-1	0.01000	0.00000
		Organic salt #1	Proprietary	0.01000	0.00000

			Sodium glycolate	2836-32-0	0.01000	0.00000	
			Formaldehyde	50-00-0	0.01000	0.00000	
			Nitrated acetate salt	Proprietary	0.01000	0.00000	
			Organic salt #2	Proprietary	0.01000	0.00000	
			Sodium hydroxide	1310-73-2	0.01000	0.00000	
			C.I. pigment Orange 5	3468-63-1	1.00000	0.00000	
			Phosphoric acid	7664-38-2	0.10000	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)

10,522' to Top Hole

3,853' to Bottom Hole

Page 1 of 2

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



TOP HOLE LATITUDE 39 - 32 - 30
BTM HOLE LATITUDE 39 - 35 - 00

Notes
West Virginia Coordinate System of 1927, North Zone based upon Differential GPS Measurements.
Well No. Cheat Unit 1H Top Hole coordinates are
N: 382,181.76' Latitude: 39°32'28.38"
E: 1,613,465.89' Longitude: 80°52'14.32"
Bottom Hole coordinates are
N: 396,926.43' Latitude: 39°34'53.36"
E: 1,608,609.67' Longitude: 80°53'19.21"
UTM Zone 17, NAD 1983
Top Hole Coordinates Bottom Hole Coordinates
N: 4,376,855.434m N: 4,381,322.763m
E: 511,130.139m E: 509,575.806m
Plat orientation and corner and well references are based upon the grid north meridian.
Well location references are based upon the magnetic meridian.

TOP HOLE LONGITUDE 80 - 50 - 00
BTM HOLE LONGITUDE 80 - 52 - 30
164' to Top Hole
672' to Bottom Hole

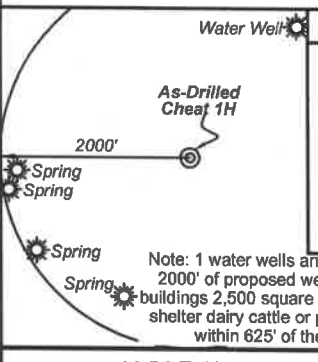
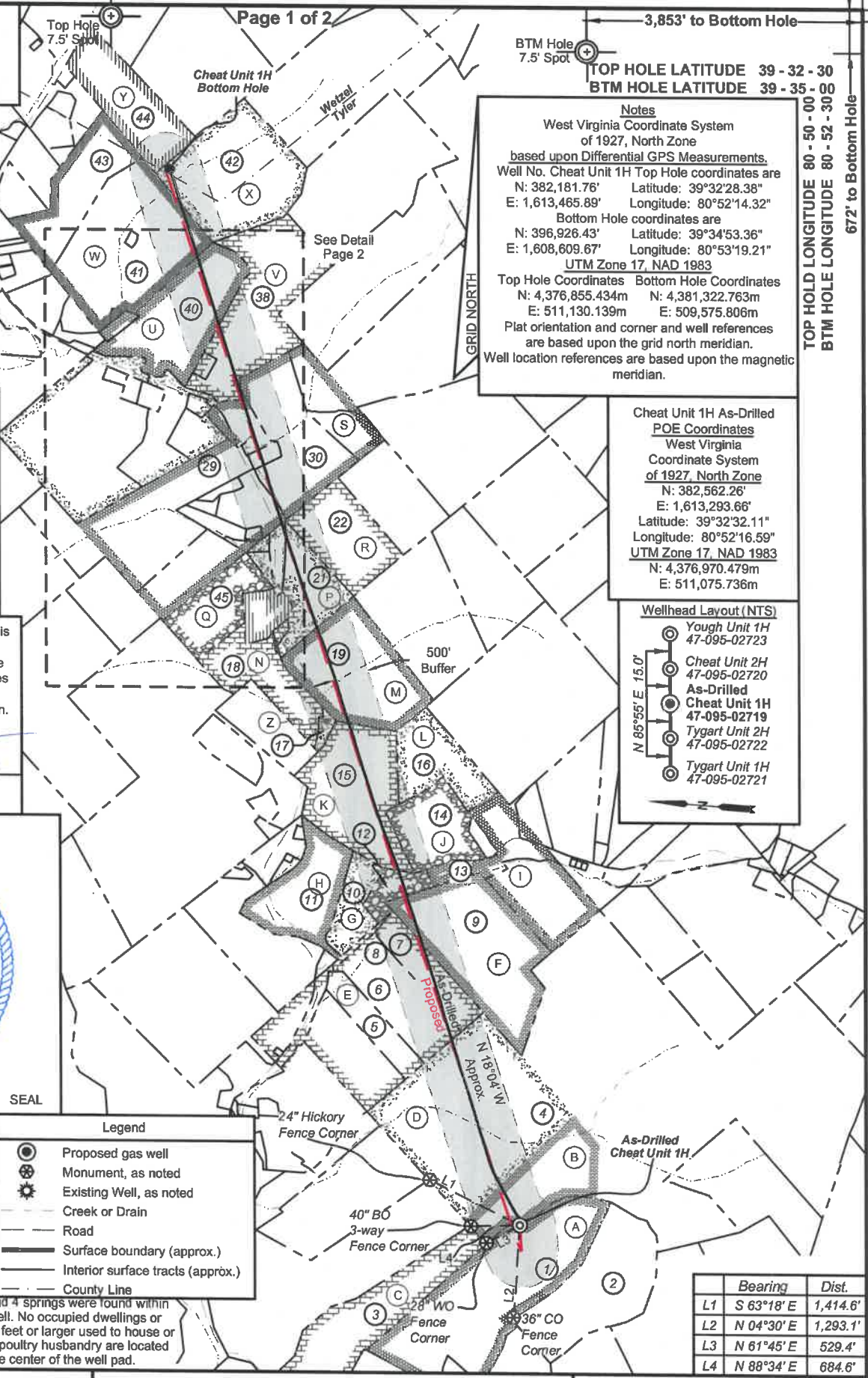
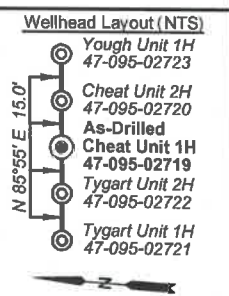
Top Hole Coordinates, As-drilled data, and information was provided by Antero Resources Corporation. Allegheny Surveys Inc. (ASI) is not certifying the data and information provided. ASI is not responsible for any errors or inaccuracies with the data and information that has been provided.

I, the undersigned, hereby certify that this plat is correct to the best of my knowledge and belief and shows all the information required by law and the rules issued and prescribed by the Department of Environmental Protection.

Bradley D. Miller, P.S. 2167



Cheat Unit 1H As-Drilled POE Coordinates
West Virginia Coordinate System of 1927, North Zone
N: 382,562.26'
E: 1,613,293.66'
Latitude: 39°32'32.11"
Longitude: 80°52'16.59"
UTM Zone 17, NAD 1983
N: 4,376,970.479m
E: 511,075.736m



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

Note: 1 water wells and 4 springs 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.

	Bearing	Dist.
L1	S 63°18' E	1,414.6'
L2	N 04°30' E	1,293.1'
L3	N 61°45' E	529.4'
L4	N 88°34' E	684.6'

FILE NO: 44-54-E-19
DRAWING NO: Cheat Unit 1H As-Drilled
SCALE: 1" = 2000'
MINIMUM DEGREE OF ACCURACY: Submeter
PROVEN SOURCE OF ELEVATION: WVDOT, Harrisville, WV



DATE: August 30 2021
OPERATOR'S WELL NO. Cheat 1H
API WELL NO
47 - 095 - 02719
STATE COUNTY PERMIT

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

LOCATION: ELEVATION: As-Built 1,126' WATERSHED: Outlet Middle Island Creek QUADRANGLE: Top Hole:Porter Falls
DISTRICT: Ellsworth/Magnolia COUNTY: Top Hole Tyler 76.25; 33.8125;
BTM Hole Wetzel 70.5; 32.6985; 98.2;

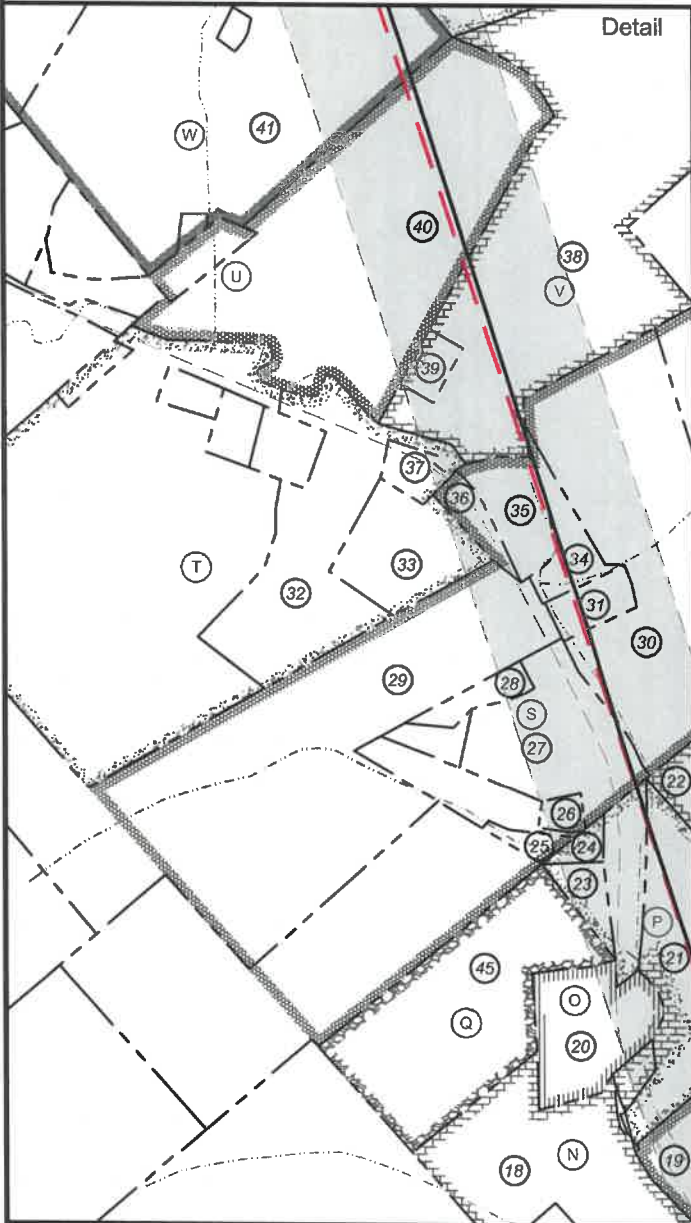
SURFACE OWNER: Patricia Ann Heintzman, James D. Van Camp, et ux; Harold Skinner; Shery Lynn Chefrin; Lowmax R. Kunkel; BRC Appalachian Minerals I, LLC (3); James D. VanCamp, et al (3); ACRES: 12/31/2021
ROYALTY OWNER: Patricia Ann Heintzman; Norma Smith; Dennis R. Heintzman, et ux; Brenda L. Martin; LEASE NO: ACREAGE: 59.75; 109.875; 151.08;

PROPOSED WORK: DRILL CONVERT DRILL DEEPER FRACTURE OR STIMULATE PLUG OFF OLD FORMATION
 PERFORATE NEW FORMATION OTHER PHYSICAL CHANGE IN WELL (SPECIFY) As-Drilled 6,469' TVD
 PLUG AND ABANDON CLEAN OUT AND REPLUG TARGET FORMATION: Marcellus Shale ESTIMATED DEPTH: 21,832' 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



Leases			
A	Patricia Ann Heintzman	N	James D. VanCamp, et al
B	Norma Smith	O	James D. VanCamp, et al
C	Patricia Ann Heintzman	P	BRC Appalachian Minerals I, LLC
D	Dennis R. Heintzman, et ux	Q	Sybil Mae Gorby
E	BRC Appalachian Minerals I, LLC	R	Penny G. Bond
F	Harold Skinner	S	James D. VanCamp, et al
G	James D. VanCamp, et al	T	BRC Appalachian Minerals I, LLC
H	Kerry Lemasters, et ux	U	James D. VanCamp, et ux
I	Antero Minerals, LLC	V	Lowmax R. Kunkel
J	Brenda L. Martin	W	Sherry Lynn Chefred
K	James D. VanCamp, et al	X	BRC Appalachian Minerals, I LLC
L	Judy P. Meyers	Y	David B. Shriver
M	James D. VanCamp, et al	Z	James D. VanCamp, et al



ID	TM/Par	Owner	Bk/Pg	Acres
1	10-2	Patricia Ann Heintzman	W13/384	73.26
2	10-3	Kevin S. & Melinda S. Goff	597/808	53.75
3	10-1	Patricia Ann Heintzman	150/15	48.50
4	6-36	Dennis & Cista Heintzman	297/640	417.60
5	6-35.1	Stephen & Andria Knowlton	289/20	13.32
6	6-35.2	Stephen & Andria Knowlton	224/77	29.02
7	6-35.4	Stephen & Andria Knowlton	340/412	17.46
8	6-35.3	Stephen & Andria Knowlton	224/77	3.00
9	6-24	Harold Skinner	204/595	62.18
10	6-16.2	Stephen J. & Andria Knowlton	211/375	13.30
11	6-16	Kerry & Barbara Lemasters	215/548	33.76
12	6-16.3	Michael L. Roberts	407/45	14.81
13	6-25.1	Kevin Lee Fletcher	328/723	5.76
14	6-16.4	Michael L. Roberts	407/45	27.74
15	6-15	James D. VanCamp, et al	W38/144	47.50
16	6-16.5	James M. & Sherry Starkey	344/785	24.44
17	6-15.1	James D. VanCamp, et ux	174/451	2.28
18	6-3	James D. Vancamp, et al	W38/144	23.87
19	6-4	James D. Vancamp, et al	W38/144	46.76
20	6-2	Joel A. Prosser	387/736	6.64
21	3-43	Joel A Prosser	387/736	23.62
22	6-5	Gary A. & Penny K. Midcap	301/265	75.55
23	3-43.2	Larry & Kimberly Henthorn	642/513	2.05
24	3-43.1	Janet Johnson	W29/203	0.90
25	3-44.1	Tylor D. Hostuttler	592/109	0.98
26	3-44.2	Gary A & Penny K Midcap	272/632	0.88
27	3-44	Jamie Leigh Parks	337/764	9.86
28	3-44.5	W.J. & Melissa Buchanan	326/348	1.72
29	2-11	Rosalie B. Henry	W35/616	61.54
30	3-40	Rosalie Henry	170/006	46.21
31	3-40.1	Ernest D & Karen Sure Helmick	185/431	2.21
32	2-8.4	Jonathan & Mary Belle Pittman	186/170	21.14
33	3-47	Donna & Matthew Cecil	462/582	8.61
34	3-45	Clay R. Hupp	302/460	3.14
35	3-46.1	Pamela R. Nelson-Lansford	328/699	2.96
36	3-46	Vada R Hart	40/469	1.54
37	3-47.1	Jack L. Throck-Morton	462/582	1.33
38	3-12	Lomax R. Kunkel	297/692	57.51
39	3-12.1	Josephine Kunkel	286/75	1.90
40	3-48	Linda Hoover	356/233	45.00
41	2-1.1	Donald E. Virden, Jr.	421/281	68.20
42	16-65	Kenneth W. & Norma A. Headley	355/347	58.60
43	2-1	Donald E. Virden, Jr.	421/281	30.84
44	16-56	Verda Hart	W69/785	10.50
45	6-1	Sybil Gorby	175/265	17.26

FILE NO: 44-54-E-19
 DRAWING NO: Cheat Unit 1H As-Drilled
 SCALE: 1" = 2000'
 MINIMUM DEGREE OF ACCURACY:
 Submeter
 PROVEN SOURCE OF ELEVATION:
 WVDOT, Harrisville, WV



DATE: August 27 2021
 OPERATOR'S WELL NO. Cheat 1H
 API WELL NO
 47 - 095 - 02719
 STATE COUNTY PERMIT

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

LOCATION: ELEVATION: As-Built 1,126' WATERSHED: Outlet Middle Island Creek QUADRANGLE: Top Hole:Porter Falls
 DISTRICT: Ellsworth/Magnolia COUNTY: Top Hole Tyler 76.25; 33.8125;
 SURFACE OWNER: Patricia Ann Heintzman James D. Van Camp, et ux; Harold Skinner; Sherry Lynn Chefred; Lowmax R. Kunkel; 706.93; 6985; 98.2;
 BRC Appalachian Minerals I, LLC (3); James D. VanCamp, et al (3); 385.2064; 62.18; 100;
 ROYALTY OWNER: Patricia Ann Heintzman; Norma Smith; Dennis R. Heintzman, et ux; Brenda L. Martin; LEASE NO: ACREAGE: 59.75; 109.875; 151.08;
 PROPOSED WORK: DRILL CONVERT DRILL DEEPER FRACTURE OR STIMULATE PLUG OFF OLD FORMATION
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 ADDRESS: 1615 Wynkoop Street ADDRESS: 5400 D Big Tyler Road
 Denver, CO 80202 Charleston, WV 25313