

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

API 47 - 095 - 02647 County Tyler District McElroy
Quad Shirley 7.5' Pad Name Colorado East Pad Field/Pool Name -----
Farm name Antero Resources Corporation Well Number Stampede Unit 3H
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 4361526m Easting 518249m
Landing Point of Curve Northing 4361079.68m Easting 518150.17m
Bottom Hole Northing 4358098m Easting 519144m

Elevation (ft) 743' 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

RECEIVED
Office of Oil and Gas
JAN 04 2020

WV Department of
Environmental Protection

Date permit issued 9/16/2019 Date drilling commenced 11/14/2019 Date drilling ceased 1/19/2020
Date completion activities began 4/26/2020 Date completion activities ceased 5/28/2020
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 235', 241', 298' Open mine(s) (Y/N) depths No
Salt water depth(s) ft 970' 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:
QCB
1/27/2021

API 47-095 - 02647 Farm name Antero Resources Corporation Well number Stampede Unit 3H

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"	431'	New	54.5#, J-55	N/A	Y
Coal							
Intermediate 1	12-1/4"	9-5/8"	2620'	New	36#, J-55	N/A	Y
Intermediate 2							
Intermediate 3							
Production	8-3/4"/8-1/2"	5-1/2"	18369'	New	23#, HCP-110	N/A	Y
Tubing		2-3/8"	6634'		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	204 sx	15.6	1.18	241	0'	8 Hrs.
Surface	Class A	372 sx	15.6	1.20	635	0'	8 Hrs.
Coal							
Intermediate 1	Class A	886 sx	15.6	1.19	1082	0'	8 Hrs.
Intermediate 2							
Intermediate 3							
Production	Class H	792 sx (Lead) 2840 sx (Tail)	14.5 (Lead), 15.2(Tail)	1.4 (Lead), 1.6 (Tail)	3003	-500' into Intermediate Casing	8 Hrs.
Tubing							

Drillers TD (ft) 18390' MD, 6425' TVD (BHL), 6442' (Deepest Point Drilled) Loggers TD (ft) 18390' MD

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

Plug back procedure N/A

Kick off depth (ft) 5680'

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 47-095-02647 Farm name Antero Resources Corporation Well number Stampede Unit 3H

PRODUCING FORMATION(S)	DEPTHS		
Marcellus	6351' (TOP)	TVD	6663' (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 3009 mcfpd Oil 407 bpd NGL --- bpd Water 116 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 Patterson UTI
Address 1660 Wynkoop Street City Denver State CO Zip 80202

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 _____

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

API 47-095-02647 Farm Name Antero Resource Corporation Well Number Stampede Unit 3H					
Stage No.	Perforation Date	Perforated from MD ft.	Perforated to MD ft.	Number of Perforations	Formations
1	4/26/2020	18265.6	18222.2	60	Marcellus
2	4/26/2020	18184.54444	18018.2667	60	Marcellus
3	4/27/2020	17982.61111	17816.3333	60	Marcellus
4	4/27/2020	17780.67778	17614.4	60	Marcellus
5	4/27/2020	17578.74444	17412.4667	60	Marcellus
6	4/27/2020	17376.81111	17210.5333	60	Marcellus
7	4/27/2020	17174.87778	17008.6	60	Marcellus
8	4/28/2020	16972.94444	16806.6667	60	Marcellus
9	4/28/2020	16771.01111	16604.7333	60	Marcellus
10	4/28/2020	16569.07778	16402.8	60	Marcellus
11	4/28/2020	16367.14444	16200.8667	60	Marcellus
12	4/29/2020	16165.21111	15998.9333	60	Marcellus
13	4/29/2020	15963.27778	15797	60	Marcellus
14	4/29/2020	15761.34444	15595.0667	60	Marcellus
15	4/30/2020	15559.41111	15393.1333	60	Marcellus
16	4/30/2020	15357.47778	15191.2	60	Marcellus
17	4/30/2020	15155.54444	14989.2667	60	Marcellus
18	4/30/2020	14953.61111	14787.3333	60	Marcellus
19	5/1/2020	14751.67778	14585.4	60	Marcellus
20	5/1/2020	14549.74444	14383.4667	60	Marcellus
21	5/1/2020	14347.81111	14181.5333	60	Marcellus
22	5/2/2020	14145.87778	13979.6	60	Marcellus
23	5/2/2020	13943.94444	13777.6667	60	Marcellus
24	5/2/2020	13742.01111	13575.7333	60	Marcellus
25	5/3/2020	13540.07778	13373.8	60	Marcellus
26	5/3/2020	13338.14444	13171.8667	60	Marcellus
27	5/3/2020	13136.21111	12969.9333	60	Marcellus
28	5/4/2020	12934.27778	12768	60	Marcellus
29	5/4/2020	12732.34444	12566.0667	60	Marcellus
30	5/4/2020	12530.41111	12364.1333	60	Marcellus
31	5/4/2020	12328.47778	12162.2	60	Marcellus
32	5/5/2020	12126.54444	11960.2667	60	Marcellus
33	5/5/2020	11924.61111	11758.3333	60	Marcellus
34	5/5/2020	11722.67778	11556.4	60	Marcellus
35	5/6/2020	11520.74444	11354.4667	60	Marcellus
36	5/6/2020	11318.81111	11152.5333	60	Marcellus
37	5/6/2020	11116.87778	10950.6	60	Marcellus
38	5/6/2020	10914.94444	10748.6667	60	Marcellus
39	5/7/2020	10713.01111	10546.7333	60	Marcellus
40	5/7/2020	10511.07778	10344.8	60	Marcellus
41	5/7/2020	10309.14444	10142.8667	60	Marcellus
42	5/8/2020	10107.21111	9940.93333	60	Marcellus
43	5/8/2020	9905.27778	9739	60	Marcellus
44	5/8/2020	9703.34444	9537.06667	60	Marcellus
45	5/8/2020	9501.41111	9335.13333	60	Marcellus
46	5/9/2020	9299.47778	9133.2	60	Marcellus
47	5/9/2020	9097.54444	8931.26667	60	Marcellus
48	5/10/2020	8895.61111	8729.33333	60	Marcellus
49	5/10/2020	8693.67778	8527.4	60	Marcellus
50	5/10/2020	8491.74444	8325.46667	60	Marcellus
51	5/10/2020	8289.81111	8123.53333	60	Marcellus
52	5/11/2020	8087.87778	7921.6	60	Marcellus
53	5/11/2020	7885.94444	7719.66667	60	Marcellus
54	5/11/2020	7684.01111	7517.73333	60	Marcellus
55	5/11/2020	7482.07778	7315.8	60	Marcellus
56	5/12/2020	7280.14444	7113.86667	60	Marcellus
57	5/12/2020	7078.21111	6911.93333	60	Marcellus
58	5/12/2020	6876.27778	6710	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	4/26/2020	85.94	8516	7852	4193	182720	4929.429	N/A
2	4/26/2020	85.9	8418	6027	4974	405520	7132.119	N/A
3	4/27/2020	85.59	8425	5036	4663	408880	7146.262	N/A
4	4/27/2020	85.92	8430	6120	4213	405360	7131.619	N/A
5	4/27/2020	85.82	8464	5854	4368	405620	7178.786	N/A
6	4/27/2020	85.63	8484	5718	4308	402680	7182.262	N/A
7	4/27/2020	85.88	8644	5739	4471	406080	7150.81	N/A
8	4/28/2020	95.86	8789	5785	4585	405180	7113.69	N/A
9	4/28/2020	92.27	8831	5478	4295	407540	7155.429	N/A
10	4/28/2020	95.09	8691	5595	4459	405020	7133.643	N/A
11	4/28/2020	94.47	8615	5462	4491	408320	7152.048	N/A
12	4/29/2020	93.56	8482	5772	4581	407980	7206.595	N/A
13	4/29/2020	85.94	8100	5328	4514	407520	7139.786	N/A
14	4/29/2020	85.81	8314	5600	4580	407160	7066.857	N/A
15	4/30/2020	95.45	8428	5674	4671	407980	7145.619	N/A
16	4/30/2020	85.97	7858	5793	5088	406420	9172.905	N/A
17	4/30/2020	91.45	8274	6074	4797	406780	7066.69	N/A
18	4/30/2020	95.87	8588	5275	4860	407500	7046.69	N/A
19	5/1/2020	95.19	8596	5844	4813	404580	7066.048	N/A
20	5/1/2020	95.77	8481	5698	4609	407200	7055.643	N/A
21	5/1/2020	93.7	8611	5466	4662	406860	7138.024	N/A
22	5/2/2020	91.5	8403	5307	4630	407720	7344.762	N/A
23	5/2/2020	95.18	8705	4467	4932	409240	7076.095	N/A
24	5/2/2020	96	8578	5785	4470	408360	7136	N/A
25	5/3/2020	95.9	8659	5692	4473	407580	7073.619	N/A
26	5/3/2020	92.71	7931	6369	4833	409120	8871.214	N/A
27	5/3/2020	95.9	8441	5639	4815	409800	7054.738	N/A
28	5/4/2020	95.87	8508	5710	4692	408740	7057.024	N/A
29	5/4/2020	95.04	8181	6300	4530	405840	6925.619	N/A
30	5/4/2020	95.89	8132	5767	4374	407200	7012.048	N/A
31	5/4/2020	95.75	8125	6038	4555	406600	6962.69	N/A
32	5/5/2020	95.22	7748	5530	4499	407200	6785.619	N/A
33	5/5/2020	95.69	7963	5599	4264	407860	6905.357	N/A
34	5/5/2020	95.89	8143	5491	4596	405120	6903.119	N/A
35	5/6/2020	95.76	8026	5517	4519	407360	6934.381	N/A
36	5/6/2020	95.36	8170	5760	4656	405800	6784.929	N/A
37	5/6/2020	95.85	7918	5675	4375	406260	6852.714	N/A
38	5/6/2020	95.9	8035	6121	4347	406820	6825.024	N/A
39	5/7/2020	95.76	7950	6387	4430	404000	6785.833	N/A
40	5/7/2020	95.68	7738	5903	4445	406520	6782.048	N/A
41	5/7/2020	95.7	7649	6164	4715	407220	6811.857	N/A
42	5/8/2020	95.89	8186	5757	4492	406880	6813.619	N/A
43	5/8/2020	95.94	8157	5904	4465	404460	6815.952	N/A
44	5/8/2020	95.9	8104	5363	4580	405520	6757.619	N/A
45	5/8/2020	95.91	8008	5627	4521	406860	6798.762	N/A
46	5/9/2020	95.93	7937	5814	4583	407360	6856.262	N/A
47	5/9/2020	95.87	7685	5994	4163	407020	6810.333	N/A
48	5/10/2020	95.84	7935	5799	4377	407900	6835.238	N/A
49	5/10/2020	95.78	7887	5973	4501	408780	6718.143	N/A
50	5/10/2020	95.86	7727	5429	4326	402960	6652.452	N/A
51	5/10/2020	95.94	7692	5613	4828	406740	6707.143	N/A
52	5/11/2020	95.93	7802	6233	4342	407580	6833.405	N/A
53	5/11/2020	95.89	7594	5640	4260	407780	6719.476	N/A
54	5/11/2020	94.46	7471	5409	4220	407360	6680.214	N/A
55	5/11/2020	95.9	7490	5886	4423	407700	6742.929	N/A
56	5/12/2020	95.03	7800	6118	4849	408500	6785.786	N/A
57	5/12/2020	94.83	7418	6326	4665	408080	6679.262	N/A
58	5/12/2020	94.64	7325	5618	4404	406920	6684.833	N/A
	AVG=	94	8,160	5,774	4,540	23,375,660	405,287	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
Shale	0	310	0	310
Silty sandstone	310	460	310	460
Shale	460	700	460	700
Silty Shale	700	820	700	820
Shale with interbedded limestone	820	850	820	850
Shale	850	880	850	880
Shale w/ trace coal	880	910	880	910
Shaley Sandstone	910	1,180	910	1,180
Shale	1,180	1,240	1,180	1,240
Sandstone w/ interbedded coals	1,240	1,330	1,240	1,330
Sandstone w/ trace coal	1,330	1,480	1,330	1,480
Sandstone	1,480	1,510	1,480	1,510
Shale	1,510	1,633	1,510	1,639
Big Lime	1,633	2,336	1,639	2,355
Fifty Foot Sandstone	2,336	2,433	2,355	2,453
Gordon	2,433	2,737	2,453	2,761
Fifth Sandstone	2,737	2,778	2,761	2,803
Bayard	2,778	3,569	2,803	3,611
Speechley	3,569	3,786	3,611	3,832
Balltown	3,786	4,298	3,832	4,350
Bradford	4,298	4,725	4,350	4,781
Benson	4,725	4,987	4,781	5,046
Alexander	4,987	6,162	5,046	6,274
Sycamore	5,981	6,162	6,086	6,249
Middlesex	6,137	6,298	6,274	6,467
Burkett	6,273	6,327	6,492	6,530
Tully	6,302	6,376	6,555	6,663
Marcellus	6,351	NA	6,663	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.

ANTERO RESOURCES CORPORATION

Location: Tyler County, WV
 Field: Tyler
 Facility: Colorado East Pad

Slot: Slot #02
 Well: Stampede Unit 3H
 Wellbore: Stampede Unit 3H PWB

Plot reference wellpath is Stampede Unit 3H PWP Rev-B.0	Grid System: NAD27 / UTM Zone 17 North, US feet
True vertical depths are referenced to Patterson 342 (RKB)	North Reference: Grid north
Reference wellpath measured depths are referenced to Patterson 342 (RKB)	Scale: True distance
Patterson 342 (RKB) to Mean Sea Level: 768 feet	Coordinates are in feet referenced to Slot
Mean Sea Level to Ground level (At Slot: Slot #02): -743 feet	Depths are in feet
Offset wellpath MDs are referenced to each path's default MD datum	Created by: dclaset on 2020-01-24; Database: W.A. MPA EasternUS Defn

Location Information					
Facility Name	Grid East (US ft)	Grid North (US ft)	Latitude	Longitude	
Colorado East Pad	1700256.880	14308700.580	39°24'10.4301"N	80°47'17.3894"W	
Slot	Local N (ft)	Local E (ft)	Grid East (US ft)	Grid North (US ft)	Longitude
Slot #02	25.34	-18.05	1700240.840	14308725.890	39°24'10.8810"N 80°47'17.5930"W
Patterson 342 (RKB) to Ground level (At Slot: Slot #02)	25ft				
Mean Sea Level to Ground level (At Slot: Slot #02)	-743ft				
Patterson 342 (RKB) to Mean Sea Level	768ft				

Well Data			
Slot	Well	Wellbore	Wellpath
Slot #02	Stampede Unit 3H	Stampede Unit 3H AWB	Stampede Unit 3H AWP Proj: 18390'
Slot #02	Stampede Unit 3H	Stampede Unit 3H PWB	Stampede Unit 3H PWP Rev-B.0

Gyrodata MS Gyro <17-1/2">(100'-380') : 0.27° Inc, 100.00ft MD, 100.00ft TVD, 0.17ft VS
 Gyrodata MS Gyro <12-1/4">(380')(471'-650') : 0.59° Inc, 471.00ft MD, 470.99ft TVD, 2.73ft VS
 APS EM <12-1/4">(650')(776'-2566') : 2.01° Inc, 776.00ft MD, 775.93ft TVD, 5.85ft VS

Well Profile Data							
Design Comment	MD (ft)	Inc (°)	Az (°)	TVD (ft)	Local N (ft)	Local E (ft)	VS (ft)
Tie On	2586.00	9.230	299.270	2545.12	104.09	-233.58	-172.13
Pro ₁ to Bottom	2640.00	9.230	299.270	2618.16	109.89	-243.94	-180.89
Drill Out Csg.	2740.00	9.230	299.270	2716.88	117.79	-257.93	-192.73
End of 3D Arc	2770.18	9.773	300.863	2746.82	120.23	-262.24	-196.45
Curve KOP	5880.39	9.773	300.863	5814.80	373.65	-686.29	-570.15
POE	6893.13	74.514	170.000	6381.00	-153.80	-673.05	-65.20
Landing Pt.	6886.70	90.000	170.000	6407.00	-342.11	-639.85	124.03
On Azimuth	7163.19	90.000	181.708	6407.00	-606.68	-572.33	396.65
BHL	18410.50	90.000	181.708	6407.00	-11288.80	2958.20	11646.68

BH NaviTrak <8-3/4">(2566')(2645'-5576') : 9.37° Inc, 2645.00ft MD, 2623.08ft TVD, -181.57ft VS

Marcellus POE: 6688' MD : 73.07° Inc, 6688.00ft MD, 6376.38ft TVD, -74.06ft VS

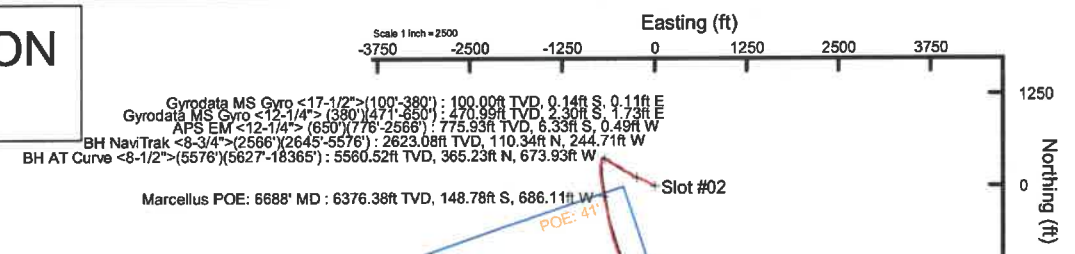
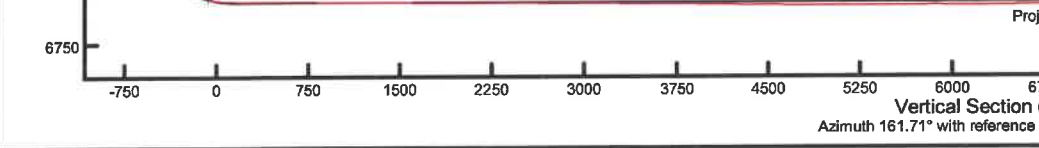
Projected MD at TD: 18390' MD : 90.15° Inc, 18390.00ft MD, 6425.34ft TVD, 11606.04ft VS



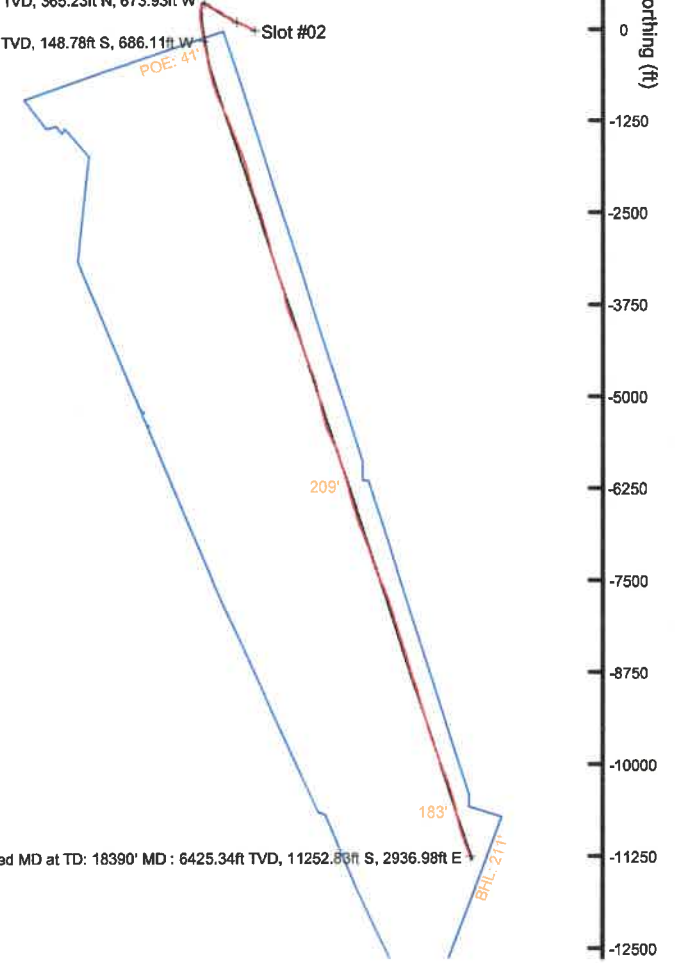
BH AT Curve <8-1/2">(5576')(5627'-18365') : 7.52° Inc, 5627.00ft MD, 5560.52ft TVD, -558.27ft VS

Projected MD at TD: 18390' MD : 90.15° Inc, 18390.00ft MD, 6425.34ft TVD, 11606.04ft VS

Projected MD at TD: 18390' MD : 90.15° Inc, 18390.00ft MD, 6425.34ft TVD, 11606.04ft VS



API: 47-095-02647-0000
 BHI Job #: 11013130B
 Rig: Patterson 342
 Duration: 11/15/2020-01/16/2020



Hydraulic Fracturing Fluid Product Component Information Disclosure

Job Start Date:	4/26/2020
Job End Date:	5/12/2020
State:	West Virginia
County:	Tyler
API Number:	47-095-02647-00-00
Operator Name:	Antero Resources Corporation
Well Name and Number:	Stampede 3H
Latitude:	39.40297000
Longitude:	-80.78822000
Datum:	NAD83
Federal Well:	NO
Indian Well:	NO
True Vertical Depth:	6,441
Total Base Water Volume (gal):	17,774,236
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	86.42818	Density = 8.50
Ingredients	Listed Above	Listed Above					
			Water	7732-18-5	100.00000	0.17160	

LD-2950	MultiChem	Friction Reducer					
				Listed Below			
HYDROCHLORIC ACID, 22 BAUME	Halliburton	Solvent					
				Listed Below			
Legend LD-2990	MultiChem	Friction Reducer					
				Listed Below			
MC B-8614	Halliburton	Biocide					
				Listed Below			
OPTIFLO-II DELAYED RELEASE BREAKER	Halliburton	Breaker					
				Listed Below			
Enviro Energy Solutions EES 2800	EnviroEnergy Solutions	Additive					
				Listed Below			
Legend LD-2555	MultiChem	Additive					
				Listed Below			
HAI-501	Halliburton	Acid Corrosion Inhibitor					
				Listed Below			

Excelerate LX-15	Halliburton	Friction Reducer					
				Listed Below			
WG-36 GELLING AGENT	Halliburton	Gelling Agent					
				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	13.37242	
			Hydrochloric acid	7647-01-0	30.00000	0.03876	
			Complex Amine Compound	Proprietary	60.00000	0.01751	
			Hydrotreated light petroleum distillate	64742-47-8	30.00000	0.01418	
			Complex Amine Compound	Proprietary	60.00000	0.00732	
			Guar gum	9000-30-0	100.00000	0.00424	
			Complex Amine Compound	Proprietary	60.00000	0.00353	
			Glutaraldehyde	111-30-8	30.00000	0.00248	
			Sorbitan, mono-9-octadecenoate, (Z)	1338-43-8	5.00000	0.00175	
			Polyethoxylated fatty amine salt	61791-26-2	30.00000	0.00173	
			Surfactant	Proprietary	5.00000	0.00146	
			Distillates (petroleum), hydrotreated light	64742-47-8	30.00000	0.00128	
			Ethoxylated alcohols	Proprietary	5.00000	0.00061	
			Quaternary ammonium compounds, benzyl-C12-16-alkyldimethyl chlorides	68424-85-1	5.00000	0.00041	

			Methanol	67-56-1	100.00000	0.00032
			Surfactant	Proprietary	5.00000	0.00029
			Organic chloride compound	Proprietary	1.00000	0.00029
			Alkoxyated polyhydric alcohol	Proprietary	1.00000	0.00029
			Ethoxylated alcohols	Proprietary	1.00000	0.00029
			Alcohols, C11-14-iso, C-13-rich, ethoxylated	78330-21-9	5.00000	0.00021
			Ammonium persulfate	7727-54-0	100.00000	0.00018
			Poly(oxy-1,2-ethanediyl), alpha-tridecyl-omega-hydroxy-, branched	69011-36-5	1.00000	0.00012
			Adipic acid	124-04-9	1.00000	0.00012
			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	0.00007
			Modified thiourea polymer	Proprietary	30.00000	0.00007
			Ethoxylated alcohols	Proprietary	5.00000	0.00007
			Alkoxyated polyhydric alcohol	Proprietary	1.00000	0.00006
			Organic chloride compound	Proprietary	1.00000	0.00006
			Oxylated phenolic resin	Proprietary	30.00000	0.00005
			Acrylamide	79-06-1	0.10000	0.00003
			Organic salt #1	Proprietary	0.10000	0.00003
			Propargyl alcohol	107-19-7	5.00000	0.00001
			Hexadecene	629-73-2	5.00000	0.00001
			Phosphoric acid	7664-38-2	0.10000	0.00001
			Formaldehyde	50-00-0	0.01000	0.00000
			Sodium hydroxide	1310-73-2	0.01000	0.00000
			Sodium glycollate	2836-32-0	0.01000	0.00000
			Nitrated acetate salt	Proprietary	0.01000	0.00000

			Organic salt #3	Proprietary	0.01000	0.00000	
			Organic salt #2	Proprietary	0.01000	0.00000	
			C.I. pigment Orange 5	3468-63-1	1.00000	0.00000	
			Nitrated acetate salt	Proprietary	0.01000	0.00000	
			Organic salt #2	Proprietary	0.01000	0.00000	
			Sodium glycolate	2836-32-0	0.01000	0.00000	
			Organic salt #1	Proprietary	0.01000	0.00000	
			Ethylene oxide	75-21-8	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)

LATITUDE 39°25'00"

10,800'

LATITUDE 39°22'30" 7,895' TO BOTTOM HOLE

1,074' TO BOTTOM HOLE

4,990'

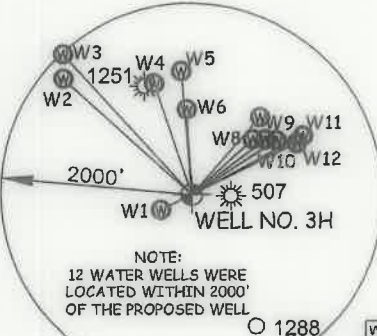
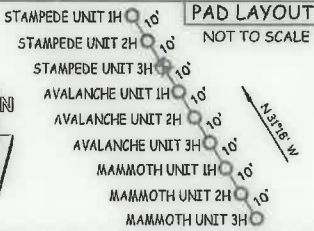
LONGITUDE 80°45'00"

LONGITUDE 80°45'00"

Antero Resources Corporation
Well No. Stampede Unit 3H

AS DRILLED DATA:
WELL 3H TOP HOLE INFORMATION:
N: 331,489ft E: 1,635,986ft
LAT: 39°24'10.68" LON: 80°47'17.59"
BOTTOM HOLE INFORMATION:
N: 320,189ft E: 1,638,735ft
LAT: 39°22'19.40" LON: 80°46'40.54"
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 3H TOP HOLE INFORMATION:
N: 4,361,526m E: 518,249m
BOTTOM HOLE INFORMATION:
N: 4,358,098m E: 519,144m



W1	S 63°23' W	359.2'
W2	N 47°45' W	1801.9'
W3	N 42°23' W	1983.8'
W4	N 18°18' W	1224.0'
W5	N 04°30' W	1295.6'
W6	N 02°57' W	893.2'
W7	N 41°39' E	1085.6'
W8	N 48°02' E	866.0'
W9	N 53°22' E	966.3'
W10	N 57°24' E	1057.5'
W11	N 62°09' E	1320.5'
W12	N 63°56' E	1228.5'

McElroy District - Tyler County	
TM-Par	Surface Owner
16-08	June Griffin
16-8.1	Roger Griffin
16-8.2	Roger Griffin
16-16	Harry Vanna
16-17	Charles Straight
16-17.3	Charles Kimball
16-18	Albert Bebee
16-19	Todd Orr
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19-03	Larry Stevens
19-04	John Owens
19-05	Paul Weekley
19-06	Paul Weekley
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19-08	John Lewis Jr.
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22-08	George Kithau
22-10	Thomas Allen
22-12	Terry Dotson
22-12.1	Margaret Dotson
22-13	Warren Putnam
22-13.1	Jacqueline Wichman
01-01	Grant District - Doddridge County
01-01	Steven Reed
04-01	Warren Putnam

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.

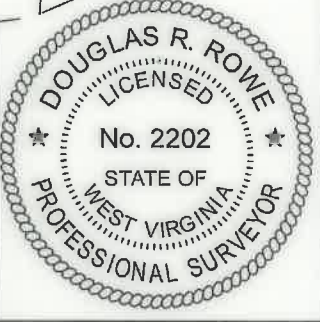


STATE OF WEST VIRGINIA, DIVISION OF ENVIRONMENTAL PROTECTION, OFFICE OF OIL AND GAS
WILLOW LAND SURVEYING PLLC
220 MASONIC AVE. PENNSBORO WEST VIRGINIA 26415

JOB # 19-001WA
DRAWING # STAMPEDE3HAD
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 +/-
○ Proposed Well Path
○ As Drilled Well Path
DOUGLAS R. ROWE P.S. 2202
DATE 09/03/20
OPERATOR'S WELL# STAMPEDE UNIT #3H

NOTE
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 INACCURACIES WITH THE DATA AND INFORMATION THAT HAS BEEN PROVIDED.



WELL TYPE: OIL GAS X LIQUID INJECTION WASTE DISPOSAL 47 - 095 - 02647
(IF "GAS") PRODUCTION X STORAGE DEEP SHALLOW X STATE COUNTY PERMIT
LOCATION: ELEVATION 743' - AS BUILT WATERSHED McELROY CREEK
QUADRANGLE TH-SHIRLEY 7.5' BH - WEST UNION 7.5' DISTRICT McELROY COUNTY TYLER
SURFACE OWNER ANTERO RESOURCES CORPORATION ACREAGE 127.86 ACRES +/-
OIL & GAS ROYALTY OWNER B.F. REED ET UX; KENNETH ORR ET AL; VICTOR I. KESTOR ET AL; LEASE ACREAGE 130 AC.±; 85 AC.±; 50 AC.±;
KENNETH ORR ET AL; FANNY D. DAVIS ET AL; ENID McCULLOUGH ET VIR; 70 AC.±; 74 AC.±; 103 AC.±;
W.S. WRIGHT ET AL; CATHERINE DOTSON 73 AC.±; 157.75 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 6.425' TVD 18.390' 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

COUNTY NAME PERMIT

LATITUDE 39°25'00"

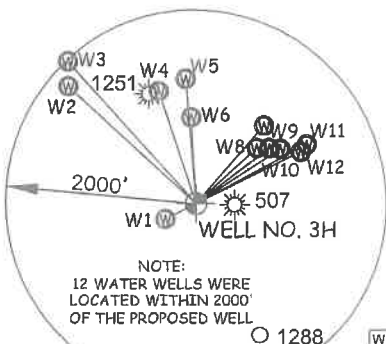
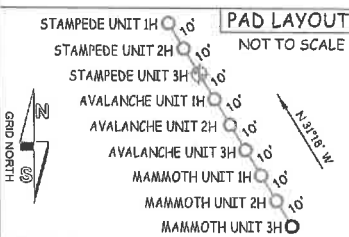
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LATITUDE 39°22'30" 7,895' TO BOTTOM HOLE

Antero Resources Corporation Well No. Stampede Unit 3H

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STATE OF WEST VIRGINIA DEPARTMENT OF ENERGY DIVISION OF OIL AND GAS

LEGEND

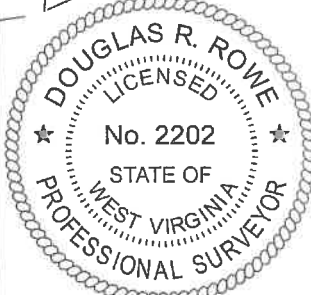
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DOUGLAS R. ROWE P.S. 2202

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OPERATOR'S WELL# STAMPEDE UNIT #3H

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1,074' TO BOTTOM HOLE LONGITUDE 80°45'00"

4,990' LONGITUDE 80°45'00"

COUNTY NAME PERMIT