

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

API 47-095-02655 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 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 4361529m Easting 518247m
Landing Point of Curve Northing 4361148.19m Easting 517911.04m
Bottom Hole Northing 4357799m Easting 519028m

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

Date permit issued 9/16/2019 Date drilling commenced 11/16/2019 Date drilling ceased 1/28/2020
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 RECEIVED
Office of Oil and Gas

Please note: Operator is required to submit a plugging application within 5 days of verbal permission to plug

JAN 04 2020

Freshwater depth(s) ft 235', 241', 298' Open mine(s) (Y/N) depths ----- WV Department of
Salt water depth(s) ft 970' Void(s) encountered (Y/N) depths No Environmental Protection
Coal depth(s) ft None Identified Cavern(s) encountered (Y/N) depths No
Is coal being mined in area (Y/N) No

Reviewed by:

JCB
1/27/2021

API 47-095 - 02655 Farm name Antero Resources Corporation Well number Stampede 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"	430'	New	54.5#, J-55	N/A	Y
Coal							
Intermediate 1	12-1/4"	9-5/8"	2649'	New	36#, J-55	N/A	Y
Intermediate 2							
Intermediate 3							
Production	8-3/4"/8-1/2"	5-1/2"	19306'	New	23#, HCP-110	N/A	Y
Tubing		2-3/8"	6786'		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	920 sx	15.6	1.19	1082	0'	8 Hrs.
Intermediate 2							
Intermediate 3							
Production	Class H	792 sx (Lead) 3020 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) 19325' MD, 6416' TVD (BHL), 6430' (Deepest Point Drilled) Loggers TD (ft) 19325' MD
 Deepest formation penetrated Marcellus Plug back to (ft) N/A
 Plug back procedure N/A

Kick off depth (ft) 5796'

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 - 02655 Farm name Antero Resources Corporation Well number Stampede Unit 2H

PRODUCING FORMATION(S)	DEPTHS		
<u>Marcellus</u>	<u>6342' (TOP)</u>	<u>TVD</u>	<u>6820' (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 3108 mcfpd Oil 326 bpd NGL --- bpd Water 123 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 _____

API 47-095-02655 Farm Name Antero Resources Corporation Well Number Stampede Unit 2H

Stage No.	Perforation Date	Perforated from MD ft.	Perforated to MD ft.	Number of Perforations	Formations
1	4/26/2020	19201.1	19157.8	60	Marcellus
2	4/26/2020	19120.22404	18954.3443	60	Marcellus
3	4/27/2020	18918.76831	18752.8885	60	Marcellus
4	4/27/2020	18717.31257	18551.4328	60	Marcellus
5	4/27/2020	18515.85683	18349.977	60	Marcellus
6	4/27/2020	18314.40109	18148.5213	60	Marcellus
7	4/28/2020	18112.94536	17947.0656	60	Marcellus
8	4/28/2020	17911.48962	17745.6098	60	Marcellus
9	4/28/2020	17710.03388	17544.1541	60	Marcellus
10	4/28/2020	17508.57814	17342.6984	60	Marcellus
11	4/28/2020	17307.1224	17141.2426	60	Marcellus
12	4/29/2020	17105.66667	16939.7869	60	Marcellus
13	4/29/2020	16904.21093	16738.3311	60	Marcellus
14	4/29/2020	16702.75519	16536.8754	60	Marcellus
15	4/30/2020	16501.29945	16335.4197	60	Marcellus
16	4/30/2020	16299.84372	16133.9639	60	Marcellus
17	4/30/2020	16098.38798	15932.5082	60	Marcellus
18	5/1/2020	15896.93224	15731.0525	60	Marcellus
19	5/1/2020	15695.4765	15529.5967	60	Marcellus
20	5/1/2020	15494.02077	15328.141	60	Marcellus
21	5/2/2020	15292.56503	15126.6852	60	Marcellus
22	5/2/2020	15091.10929	14925.2295	60	Marcellus
23	5/2/2020	14889.65355	14723.7738	60	Marcellus
24	5/2/2020	14688.19781	14522.318	60	Marcellus
25	5/3/2020	14486.74208	14320.8623	60	Marcellus
26	5/3/2020	14285.28634	14119.4066	60	Marcellus
27	5/3/2020	14083.8306	13917.9508	60	Marcellus
28	5/4/2020	13882.37486	13716.4951	60	Marcellus
29	5/4/2020	13680.91913	13515.0393	60	Marcellus
30	5/4/2020	13479.46339	13313.5836	60	Marcellus
31	5/5/2020	13278.00765	13112.1279	60	Marcellus
32	5/5/2020	13076.55191	12910.6721	60	Marcellus
33	5/5/2020	12875.09617	12709.2164	60	Marcellus
34	5/5/2020	12673.64044	12507.7607	60	Marcellus
35	5/6/2020	12472.1847	12306.3049	60	Marcellus
36	5/6/2020	12270.72896	12104.8492	60	Marcellus
37	5/6/2020	12069.27322	11903.3934	60	Marcellus
38	5/7/2020	11867.81749	11701.9377	60	Marcellus
39	5/7/2020	11666.36175	11500.482	60	Marcellus
40	5/7/2020	11464.90601	11299.0262	60	Marcellus
41	5/7/2020	11263.45027	11097.5705	60	Marcellus
42	5/8/2020	11061.99454	10896.1148	60	Marcellus
43	5/8/2020	10860.5388	10694.659	60	Marcellus
44	5/8/2020	10659.08306	10493.2033	60	Marcellus
45	5/8/2020	10457.62732	10291.7475	60	Marcellus
46	5/9/2020	10256.17158	10090.2918	60	Marcellus
47	5/9/2020	10054.71585	9888.83607	60	Marcellus
48	5/10/2020	9853.260109	9687.38033	60	Marcellus
49	5/10/2020	9651.804372	9485.92459	60	Marcellus
50	5/10/2020	9450.348634	9284.46885	60	Marcellus
51	5/10/2020	9248.892896	9083.01311	60	Marcellus
52	5/11/2020	9047.437158	8881.55738	60	Marcellus
53	5/11/2020	8845.981421	8680.10164	60	Marcellus
54	5/11/2020	8644.525683	8478.6459	60	Marcellus
55	5/11/2020	8443.069945	8277.19016	60	Marcellus
56	5/12/2020	8241.614208	8075.73443	60	Marcellus
57	5/12/2020	8040.15847	7874.27869	60	Marcellus
58	5/12/2020	7838.702732	7672.82295	60	Marcellus
59	5/12/2020	7637.246995	7471.36721	60	Marcellus
60	5/13/2020	7435.791257	7269.91148	60	Marcellus
61	5/13/2020	7234.335519	7068.45574	60	Marcellus
62	5/13/2020	7032.879781	6867	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	80.26	8529	7953	4430	182660	5036.405	N/A
2	4/26/2020	85.89	8644	6336	4600	405980	7154.119	N/A
3	4/27/2020	85.56	8621	6734	4640	404280	7147.667	N/A
4	4/27/2020	85.03	8504	6014	4328	409540	7222.5	N/A
5	4/27/2020	80.45	8316	6261	4424	405220	7215.833	N/A
6	4/27/2020	85.77	8573	6536	4297	406680	7167.5	N/A
7	4/28/2020	85.27	8758	6425	4183	409240	7167.5	N/A
8	4/28/2020	95.65	8773	6357	4303	407780	7147.381	N/A
9	4/28/2020	85.93	8518	5742	4127	405100	7151.833	N/A
10	4/28/2020	94.93	8709	6182	4494	408040	7217.714	N/A
11	4/28/2020	90.71	8578	6109	4382	405320	7366.857	N/A
12	4/29/2020	90.7	8582	6110	4312	408960	7182.762	N/A
13	4/29/2020	95.89	8408	5064	4598	407420	7163.143	N/A
14	4/29/2020	90.44	8489	5687	4721	406120	7068.357	N/A
15	4/30/2020	95.32	8510	5802	4655	408860	7134.429	N/A
16	4/30/2020	85.58	8421	6131	4174	409460	7056.19	N/A
17	4/30/2020	95.01	8588	5294	4342	405720	7151.952	N/A
18	5/1/2020	95.71	8640	5860	4413	406400	7126.31	N/A
19	5/1/2020	94.37	8571	5855	4511	407760	7094.833	N/A
20	5/1/2020	94.26	8405	5601	4462	410880	7125.595	N/A
21	5/2/2020	90.87	8712	6096	4651	409080	7119.214	N/A
22	5/2/2020	93.45	8498	5076	4522	405900	7066.071	N/A
23	5/2/2020	92.42	8530	5959	4867	408520	7056.024	N/A
24	5/2/2020	94.31	8706	6410	4622	407760	7066.143	N/A
25	5/3/2020	92.89	8792	5377	4595	406180	7090.048	N/A
26	5/3/2020	94.49	8414	5600	4794	405660	7002.167	N/A
27	5/3/2020	95.79	8570	5689	4522	408500	7044.833	N/A
28	5/4/2020	95.73	8700	5487	4375	409720	7046.286	N/A
29	5/4/2020	95.92	8460	6595	4563	408180	7005.595	N/A
30	5/4/2020	95.77	8456	5643	3692	408940	6986.31	N/A
31	5/5/2020	95.8	8532	5841	4194	406680	6892.524	N/A
32	5/5/2020	95.55	8420	5525	4470	408920	6837.714	N/A
33	5/5/2020	93.06	8453	5599	4622	407540	6884.238	N/A
34	5/5/2020	92.77	8502	4662	4662	408300	6953.071	N/A
35	5/6/2020	95.87	8364	5454	4754	406120	6815.429	N/A
36	5/6/2020	95.83	8332	5468	4598	406820	6772.524	N/A
37	5/6/2020	95.9	8174	5569	4470	405460	6769.881	N/A
38	5/7/2020	95.84	8108	6538	4260	407380	6896.381	N/A
39	5/7/2020	95.23	8111	5715	4424	405300	6736.833	N/A
40	5/7/2020	95.64	8175	6215	4477	407700	6753.976	N/A
41	5/7/2020	95.84	8155	6200	4252	407400	6844.762	N/A
42	5/8/2020	95.92	8507	6494	3985	404000	6750.833	N/A
43	5/8/2020	95.94	8472	6369	3984	406600	6804.81	N/A
44	5/8/2020	95.81	8358	5819	4033	408380	6796.476	N/A
45	5/8/2020	95.88	8382	5675	4040	406240	6785.929	N/A
46	5/9/2020	92.35	8422	6445	3961	407920	7857.5	N/A
47	5/9/2020	95.94	8221	5852	3995	406760	6789.286	N/A
48	5/10/2020	95.78	8270	6550	3886	408940	6805.071	N/A
49	5/10/2020	95.97	8097	6171	3820	405940	6723.167	N/A
50	5/10/2020	95.38	8035	6143	3747	407080	6662.881	N/A
51	5/10/2020	95.94	7941	6134	4153	406500	6802.048	N/A
52	5/11/2020	95.88	7891	5735	4202	407600	6772.31	N/A
53	5/11/2020	93.57	7652	6281	4131	405160	6700.833	N/A
54	5/11/2020	95.56	7916	6124	4028	408220	6710.595	N/A
55	5/11/2020	95.13	7676	6466	3884	406640	6768.929	N/A
56	5/12/2020	95.44	7976	6541	4212	409160	6802.881	N/A
57	5/12/2020	95.15	7931	7271	4016	406940	6706.452	N/A
58	5/12/2020	93.67	7519	6365	4377	408080	6667.619	N/A
59	5/12/2020	95.92	7557	5952	4703	408460	6724.976	N/A
60	5/13/2020	95.93	7529	5890	4410	406400	6686.048	N/A
61	5/13/2020	95.84	7329	5524	4177	406420	6524.214	N/A
62	5/13/2020	94.88	7364	5814	4202	407600	6830.762	N/A
	AVG=	93	8,312	6,006	4,334	25,026,520	429,413	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	1,642	1,510	1,663
Big Lime	1,642	2,347	1,663	2,404
Fifty Foot Sandstone	2,347	2,449	2,404	2,509
Gordon	2,449	2,727	2,509	2,801
Fifth Sandstone	2,727	2,770	2,801	2,846
Bayard	2,770	3,586	2,846	3,707
Speechley	3,586	3,819	3,707	3,945
Balltown	3,819	4,313	3,945	4,459
Bradford	4,313	4,731	4,459	4,900
Benson	4,731	4,995	4,900	5,172
Alexander	4,995	6,159	5,172	6,424
Sycamore	5,973	6,134	6,226	6,399
Middlesex	6,134	6,267	6,424	6,616
Burkett	6,267	6,295	6,641	6,681
Tully	6,295	6,342	6,706	6,820
Marcellus	6,342	NA	6,820	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

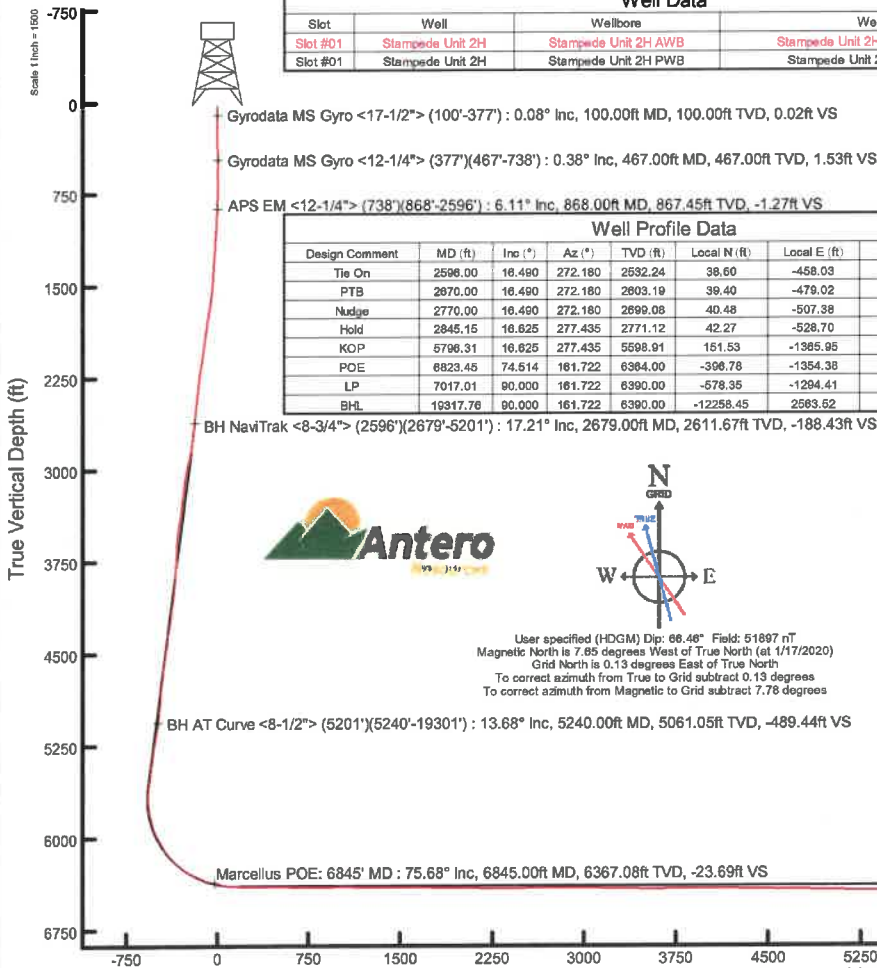
Location: Tyler County, WV
 Field: Tyler
 Facility: Colorado East Pad

Slot: Slot #01
 Well: Stampede Unit 2H
 Wellbore: Stampede Unit 2H PWB

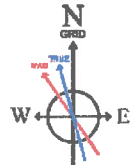
Plot reference wellpath is Stampede Unit 2H PWP Rev-C.0	Grid System: NAD27 / UTM Zone 17 North, US feet
True vertical depths are referenced to Patterson 342 (RKB)	North Reference: Grid north
Reference wellpath measured depths are referenced to Patterson 342 (RKB)	Scale: True distance
Patterson 342 (RKB) to Mean Sea Level: 769 feet	Coordinates are in feet referenced to Slot
Mean Sea Level to Ground level (At Slot: Slot #01): -743 feet	Depth are in feet
Offset wellpath MDs are referenced to each path's default MD datum	Created by: dolanet on 2020-01-29; Database: WA_MPL_EasternKJS_Datm

Location Information					
Facility Name	Grid East (US ft)	Grid North (US ft)	Latitude	Longitude	
Colorado East Pad	1700250.690	14308700.560	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)	Latitude
Slot #01	33.83	-21.33	1700235.360	14308734.380	30°24'10.7650"N
Patterson 342 (RKB) to Ground level (At Slot: Slot #01)					26ft
Mean Sea Level to Ground level (At Slot: Slot #01)					-743ft
Patterson 342 (RKB) to Mean Sea Level					768ft

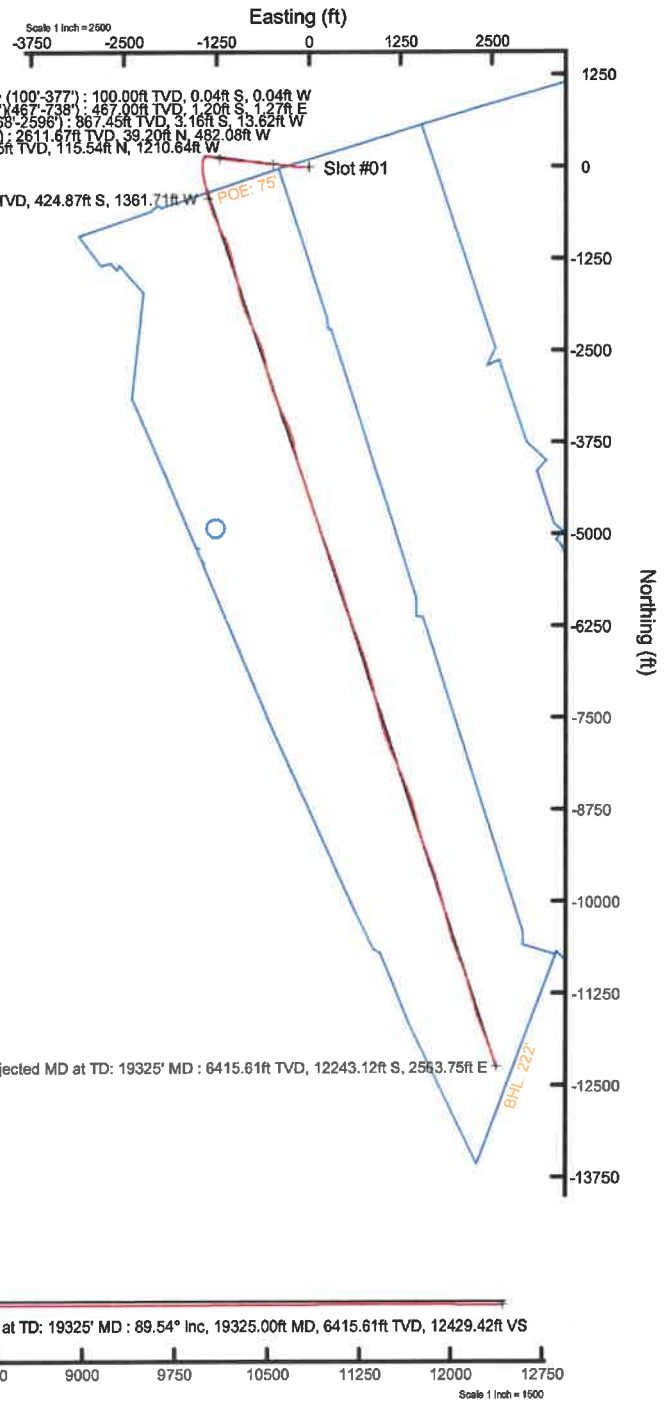
Well Data			
Slot	Well	Wellbore	Wellpath
Slot #01	Stampede Unit 2H	Stampede Unit 2H AWB	Stampede Unit 2H AWP Proj: 19325'
Slot #01	Stampede Unit 2H	Stampede Unit 2H PWB	Stampede Unit 2H PWP Rev-C.0



Well Profile Data							
Design Comment	MD (ft)	Inc (°)	Az (°)	TVD (ft)	Local N (ft)	Local E (ft)	VS (ft)
Tie On	2598.00	16.490	272.180	2532.24	38.60	-458.03	-180.31
PTB	2670.00	16.490	272.180	2603.19	39.40	-479.02	0.00
Nudge	2770.00	16.490	272.180	2699.08	40.48	-507.38	0.00
Hold	2845.15	16.625	277.435	2771.12	42.27	-528.70	2.00
KOP	5796.31	16.625	277.435	5598.91	161.53	-1385.95	0.00
POE	6823.45	74.514	161.722	6364.00	-396.78	-1354.38	8.00
LP	7017.01	90.000	161.722	6390.00	-578.35	-1294.41	8.00
BHL	19317.76	90.000	161.722	6390.00	-12258.45	2583.52	0.00



User specified (HDGM) Dip: 66.46° Field: 51897 nT
 Magnetic North is 7.85 degrees West of True North (at 1/17/2020)
 Grid North is 0.13 degrees East of True North
 To correct azimuth from True to Grid subtract 0.13 degrees
 To correct azimuth from Magnetic to Grid subtract 7.78 degrees



API: 47-095-02655-0000
 BHI Job #: 11013160B
 Rig: Patterson 342
 Duration: 11/17/2019-01/25/2020

Projected MD at TD: 19325' MD : 6415.61ft TVD, 12243.12ft S, 2563.75ft E

Projected MD at TD: 19325' MD : 89.54° Inc, 19325.00ft MD, 6415.61ft TVD, 12429.42ft VS

Vertical Section (ft)
 Azimuth 161.72° with reference 0.00 N, 0.00 E

Scale 1 inch = 1500

Hydraulic Fracturing Fluid Product Component Information Disclosure

Job Start Date:	4/26/2020
Job End Date:	5/15/2020
State:	West Virginia
County:	Tyler
API Number:	47-095-02655-00-00
Operator Name:	Antero Resources Corporation
Well Name and Number:	Stampede 2H
Latitude:	39.40299000
Longitude:	-80.78824000
Datum:	NAD83
Federal Well:	NO
Indian Well:	NO
True Vertical Depth:	6,430
Total Base Water Volume (gal):	18,928,099
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	86.36464	Density = 8.50
Ingredients	Listed Above	Listed Above					
			Water	7732-18-5	100.00000	0.17360	

WG-36 GELLING AGENT	Halliburton	Gelling Agent					
				Listed Below			
Excelerate LX-15	Halliburton	Friction Reducer					
				Listed Below			
Enviro Energy Solutions EES 2800	EnviroEnergy Solutions	Additive					
				Listed Below			
MC B-8614	Halliburton	Biocide					
				Listed Below			
LD-2950	MultiChem	Friction Reducer					
				Listed Below			
HYDROCHLORIC ACID, 22 BAUME	Halliburton	Solvent					
				Listed Below			
Legend LD-2555	MultiChem	Additive					
				Listed Below			
Sand-Common White-100 Mesh, SSA-2	Halliburton	Proppant					
				Listed Below			

OPTIFLO-II DELAYED RELEASE BREAKER	Halliburton	Breaker					
				Listed Below			
HAI-501	Halliburton	Acid Corrosion Inhibitor					
				Listed Below			
Legend LD-2990	MultiChem	Friction Reducer					
				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	13.43418	
			Hydrochloric acid	7647-01-0	30.00000	0.03883	
			Complex Amine Compound	Proprietary	60.00000	0.01726	
			Hydrotreated light petroleum distillate	64742-47-8	30.00000	0.01513	
			Complex Amine Compound	Proprietary	60.00000	0.00882	
			Guar gum	9000-30-0	100.00000	0.00422	
			Complex Amine Compound	Proprietary	60.00000	0.00418	
			Glutaraldehyde	111-30-8	30.00000	0.00246	
			Sorbitan, mono-9- octadecenoate, (Z)	1338-43-8	5.00000	0.00179	
			Polyethoxylated fatty amine salt	61791-26-2	30.00000	0.00171	
			Surfactant	Proprietary	5.00000	0.00144	
			Distillates (petroleum), hydrotreated light	64742-47-8	30.00000	0.00084	
			Ethoxylated alcohols	Proprietary	5.00000	0.00074	

			Quaternary ammonium compounds, benzyl-C12-16-alkyldimethyl chlorides	68424-85-1	5.00000	0.00041	
			Surfactant	Proprietary	5.00000	0.00035	
			Methanol	67-56-1	100.00000	0.00032	
			Alkoxyated polyhydric alcohol	Proprietary	1.00000	0.00029	
			Ethoxylated alcohols	Proprietary	1.00000	0.00029	
			Organic chloride compound	Proprietary	1.00000	0.00029	
			Ammonium persulfate	7727-54-0	100.00000	0.00018	
			Adipic acid	124-04-9	1.00000	0.00015	
			Poly(oxy-1,2-ethanediyl), alpha-tridecyl-omega-hydroxy-, branched	69011-36-5	1.00000	0.00015	
			Alcohols, C11-14-iso, C-13-rich, ethoxylated	78330-21-9	5.00000	0.00014	
			Ethanol	64-17-5	1.00000	0.00008	
			Ethoxylated alcohols	Proprietary	5.00000	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	
			Alkoxyated polyhydric alcohol	Proprietary	1.00000	0.00007	
			Organic chloride compound	Proprietary	1.00000	0.00007	
			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	
			Organic salt #2	Proprietary	0.01000	0.00000	
			Nitrated acetate salt	Proprietary	0.01000	0.00000	
			Organic salt #3	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	
			Organic salt #1	Proprietary	0.01000	0.00000	
			Sodium glycolate	2836-32-0	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"

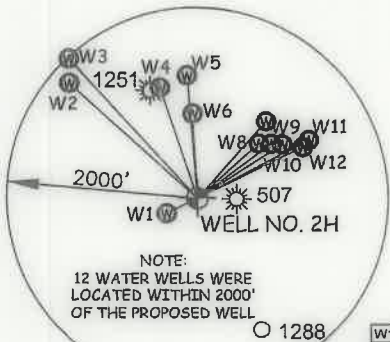
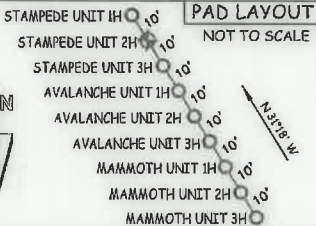
10,806'

LATITUDE 39°22'30" 8,276' TO BOTTOM HOLE

Antero Resources Corporation
Well No. Stampede Unit 2H

AS DRILLED DATA:
WELL 2H TOP HOLE INFORMATION:
N: 331,498ft E: 1,635,981ft
LAT: 39°24'10.77" LON: 80°47'17.66"
BOTTOM HOLE INFORMATION:
N: 319,214ft E: 1,638,340ft
LAT: 39°22'09.70" LON: 80°46'45.39"
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 2H TOP HOLE INFORMATION:
N: 4,361,529m E: 518,247m
BOTTOM HOLE INFORMATION:
N: 4,357,799m E: 519,028m



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	1085.0'
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	1226.5'

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.



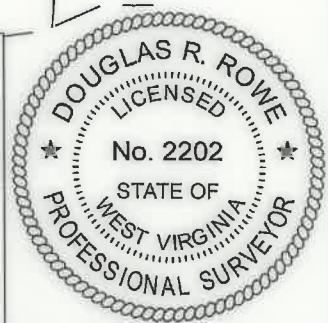
STATE OF WEST VIRGINIA, DIVISION OF ENVIRONMENTAL PROTECTION, OFFICE OF OIL AND GAS

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

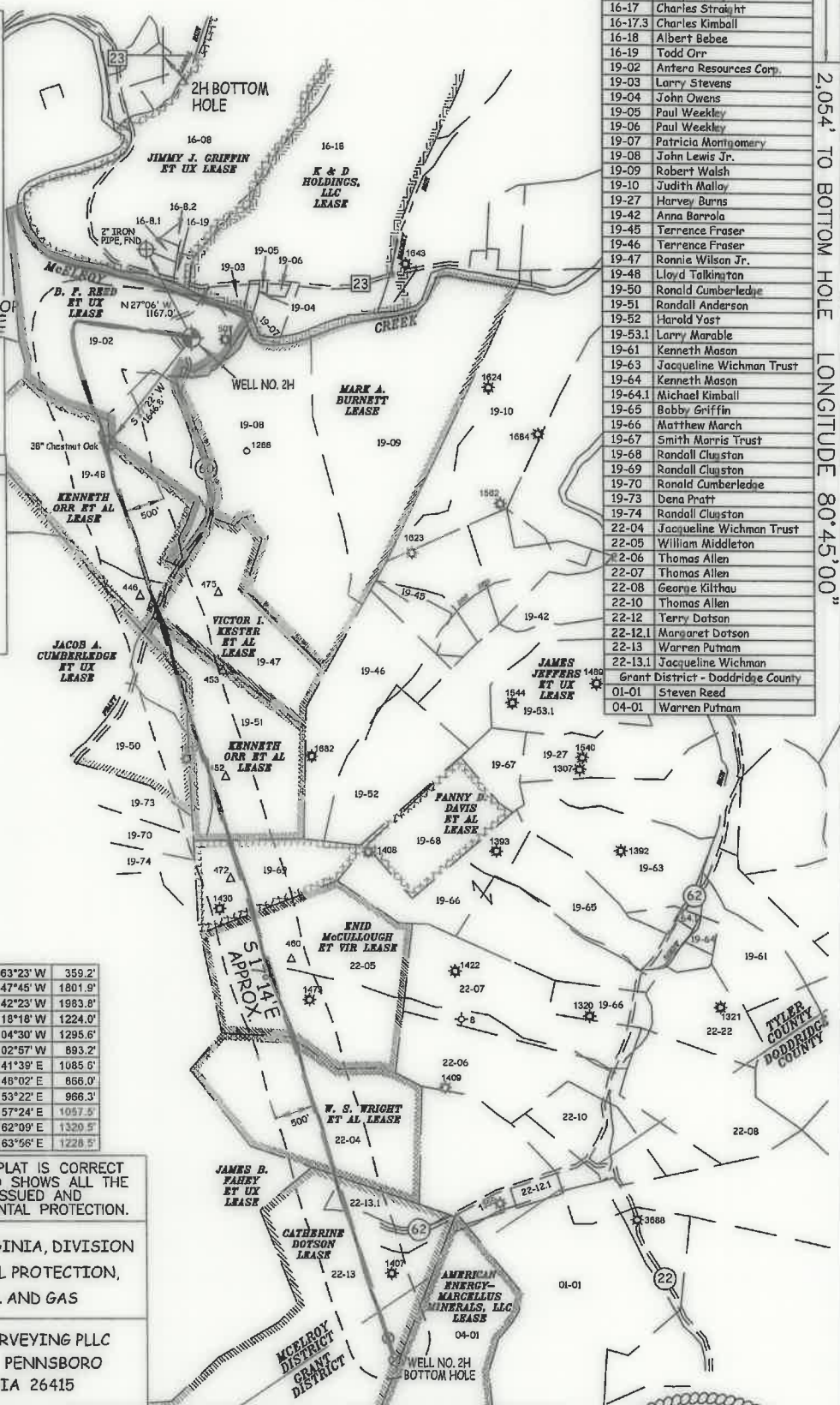
JOB # 19-001WA
DRAWING # STAMPEDE2HAD
SCALE 1" = 2000'
MINIMUM DEGREE OF ACCURACY SUBMETER
PROVEN SOURCE OF ELEV. SUBMETER MAPPING GRADE GPS
STATE OF WEST VIRGINIA DEPARTMENT OF ENERGY DIVISION OF OIL AND GAS

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 #2H

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.



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 Vannoy
16-17	Charles Straight
16-17.3	Charles Kimball
16-18	Albert Bebee
16-19	Todd Orr
19-02	Antero Resources Corp.
19-03	Larry Stevens
19-04	John Owens
19-05	Paul Weekley
19-06	Paul Weekley
19-07	Patricia Montgomery
19-08	John Lewis Jr.
19-09	Robert Walsh
19-10	Judith Malloy
19-27	Harvey Burns
19-42	Anna Barola
19-45	Terrence Fraser
19-46	Terrence Fraser
19-47	Ronnie Wilson Jr.
19-48	Lloyd Talkington
19-50	Ronald Cumberledge
19-51	Randall Anderson
19-52	Harold Vost
19-53.1	Larry Marable
19-61	Kenneth Mason
19-63	Jacqueline Wichman Trust
19-64	Kenneth Mason
19-64.1	Michael Kimball
19-66	Bobby Griffin
19-66	Matthew March
19-67	Smith Morris Trust
19-68	Randall Clugston
19-69	Randall Clugston
19-70	Randall Cumberledge
19-73	Dena Pratt
19-74	Randall Clugston
22-04	Jacqueline Wichman Trust
22-05	William Middleton
22-06	Thomas Allen
22-07	Thomas Allen
22-08	George Kilthau
22-10	Thomas Allen
22-12	Terry Dotson
22-12.1	Margaret Dotson
22-13	Warren Putnam
22-13.1	Jacqueline Wichman
Grant District - Doddridge County	
01-01	Steven Reed
04-01	Warren Putnam



WELL TYPE: OIL GAS LIQUID INJECTION WASTE DISPOSAL 47 - 095 - 02655
(IF "GAS") PRODUCTION STORAGE DEEP SHALLOW
LOCATION: ELEVATION 743' - AS BUILT WATERSHED McELROY CREEK STATE COUNTY PERMIT
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; JACOB A. CUMBERLEDGE ET UX; FANNY D. DAVIS ET AL; ENID McCULLOUGH ET VIR; 70 AC.±; 225 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 6.416' TVD 19,325' 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

WV NORTH ZONE
GRID NORTH

2,054' TO BOTTOM HOLE
LONGITUDE 80°45'00"

4,981'
LONGITUDE 80°45'00"

LATITUDE 39°25'00"

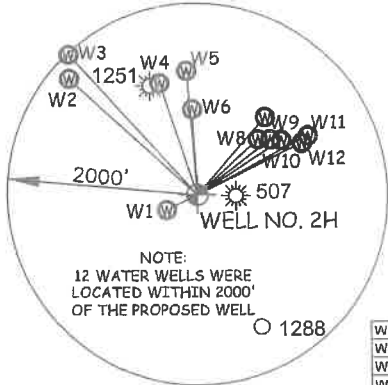
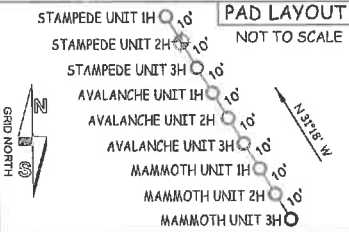
10,806'

LATITUDE 39°22'30" 8,276' TO BOTTOM HOLE

Antero Resources Corporation Well No. Stampede Unit 2H

AS DRILLED DATA: WELL 2H TOP HOLE INFORMATION: N: 331,498ft E: 1,635,981ft LAT: 39°24'10.77" LON: 80°47'17.66" BOTTOM HOLE INFORMATION: N: 319,214ft E: 1,638,340ft LAT: 39°22'09.70" LON: 80°46'45.39" 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 2H TOP HOLE INFORMATION: N: 4,361,529m E: 518,247m BOTTOM HOLE INFORMATION: N: 4,357,799m E: 519,028m



NOTE: 12 WATER WELLS WERE LOCATED WITHIN 2000' OF THE PROPOSED WELL

Table with 3 columns: Well ID, S/E coordinates, and distance. Lists wells W1 through W12.

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 # STAMPEDE2HAD 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 #2H

- NOTE: 1. NO OCCUPIED DWELLINGS OR BUILDINGS TWO THOUSAND FIVE HUNDRED (2,500) SQUARE FEET OR LARGER... 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.

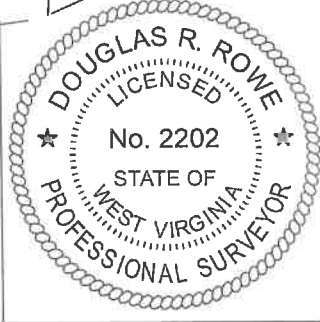
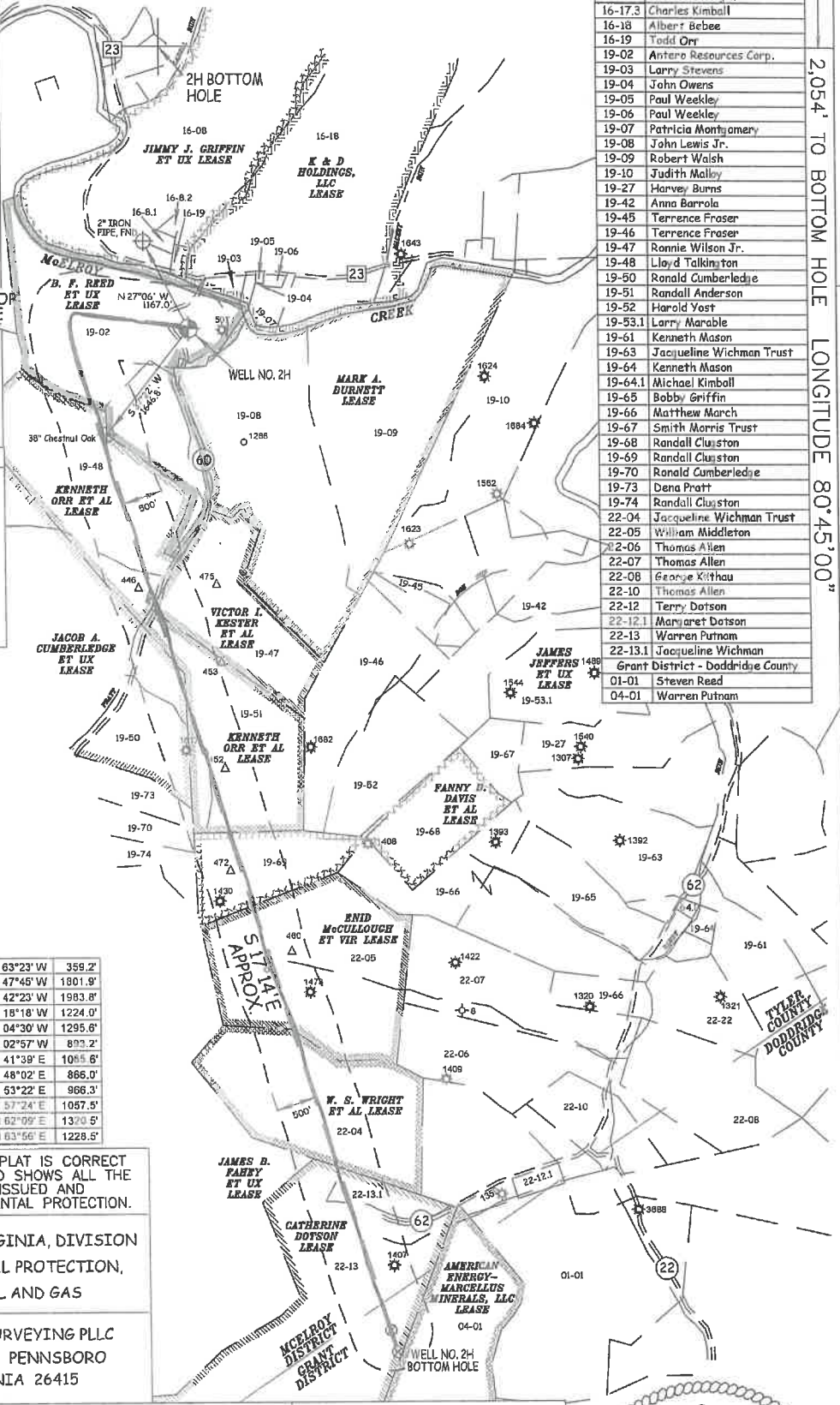


Table listing lease owners and well numbers for the McElroy District in Tyler County, West Virginia.



Form containing well type, location, owner information, and proposed work details.

COUNTY NAME PERMIT