

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

API 47 - 017 - 06823 County Doddridge District West Union
 Quad West Union 7.5' Pad Name Middle Pad Field/Pool Name ----
 Farm name Antero Resources Corporation Well Number Jay 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 4352585.341m Easting 516699.204m
 Landing Point of Curve Northing 4352828.36m Easting 517157.99m
 Bottom Hole Northing 4355772.406m Easting 515883.072m

Elevation (ft) 843' 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 6/19/2017 Date drilling commenced 9/29/2017 Date drilling ceased 2/25/2018
 Date completion activities began 6/5/2018 Date completion activities ceased 9/15/2018
 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 None Identified Open mine(s) (Y/N) depths No
 Salt water depth(s) ft None Identified 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:

WR-35
Rev. 8/23/13

API 47-017 - 06823 Farm name Antero Resources Corporation Well number Jay 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"	95'	New	94#, H-40	N/A	Y
Surface	17-1/2"	13-3/8"	531'	New	54#, J-55	N/A	Y
Coal							
Intermediate 1	12-1/4"	9-5/8"	2651'	New	36#, J-55	N/A	Y
Intermediate 2							
Intermediate 3							
Production	8-3/4"/8-1/2"	5-1/2"	17713'	New	23#, HCP-110	N/A	Y
Tubing		2-3/8"	6861'		4.7#, L-80		
Packer type and depth set		N/A					

Comment Details _____

CEMENT DATA	Class/Type of Cement	Number of Sacks	Slurry wt (ppg)	Yield (ft ³ /sks)	Volume (ft ³)	Cement Top (MD)	WOC (hrs)
Conductor	Class A	204 sx	15.6	1.18	241	0'	8 Hrs.
Surface	Class A	480 sx	15.6	1.21	581	0'	8 Hrs.
Coal							
Intermediate 1	Class A	885 sx	15.6	1.22	1080	0'	8 Hrs.
Intermediate 2							
Intermediate 3							
Production	Class H	665 sx (Lead) 1725 sx (Tail)	13.5(Lead), 15.2 (Tail)	1.53 (Lead), 1.83 (Tail)	4174	-500' into Intermediate Casing	8 Hrs.
Tubing							

Drillers TD (ft) 17713' MD, 6424' TVD (BHL), 6453' (Deepest Point Drilled) Loggers TD (ft) 17713' MD

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

Plug back procedure N/A

Kick off depth (ft) 6153'

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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PRODUCING FORMATION(S)	DEPTHS		
Marcellus	6378' (TOP)	TVD	6910' (TOP) MD

Please insert additional pages as applicable.

GAS TEST Build up Drawdown Open Flow OIL TEST Flow Pump

SHUT-IN PRESSURE Surface 3600 psi Bottom Hole --- psi DURATION OF TEST --- hrs

OPEN FLOW Gas 13225.09 mcfpd Oil 114.31 bpd NGL --- bpd Water 639.22 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 Frontier Drilling LLC
Address 562 Spring Run Road City Pennsboro State WV Zip 26415

Logging Company Nine Energy Service
Address 125 Museum Rd City Washington State PA Zip 15301

Cementing Company C&J Energy Services
Address 1650 Hackers Creek City Lane Jew State WV Zip 26378

Stimulating Company Halliburton
Address 121 Champion Way City Canonsburg State PA Zip 15317

Please insert additional pages as applicable.

Completed by Karin Cox Telephone 303-357-6820
Signature  Title Permitting Agent Date 1/23/2019

API 47-017-06823 Farm Name Antero Resources Corp Well Number Jay Unit 2H					
EXHIBIT 1					
Stage No.	Perforation Date	Perforated from MD ft.	Perforated to MD ft.	Number of Perforations	Formations
1	6/5/2018	17509.5	17608.8	60	Marcellus
2	6/6/2018	17310.492	17478.332	60	Marcellus
3	6/6/2018	17111.484	17279.324	60	Marcellus
4	6/6/2018	16912.476	17080.316	60	Marcellus
5	6/7/2018	16713.468	16881.308	60	Marcellus
6	6/7/2018	16514.46	16682.3	60	Marcellus
7	6/28/2018	16315.452	16483.292	60	Marcellus
8	6/29/2018	16116.444	16284.284	60	Marcellus
9	6/29/2018	15917.436	16085.276	60	Marcellus
10	6/29/2018	15718.428	15886.268	60	Marcellus
11	6/30/2018	15519.42	15687.26	60	Marcellus
12	6/30/2018	15320.412	15488.252	60	Marcellus
13	6/30/2018	15121.404	15289.244	60	Marcellus
14	7/1/2018	14922.396	15090.236	60	Marcellus
15	7/1/2018	14723.388	14891.228	60	Marcellus
16	7/2/2018	14524.38	14692.22	60	Marcellus
17	7/2/2018	14325.372	14493.212	60	Marcellus
18	7/2/2018	14126.364	14294.204	60	Marcellus
19	7/3/2018	13927.356	14095.196	60	Marcellus
20	7/3/2018	13728.348	13896.188	60	Marcellus
21	7/3/2018	13529.34	13697.18	60	Marcellus
22	7/4/2018	13330.332	13498.172	60	Marcellus
23	7/4/2018	13131.324	13299.164	60	Marcellus
24	7/4/2018	12932.316	13100.156	60	Marcellus
25	7/5/2018	12733.308	12901.148	60	Marcellus
26	7/5/2018	12534.3	12702.14	60	Marcellus
27	7/5/2018	12335.292	12503.132	60	Marcellus
28	7/5/2018	12136.284	12304.124	60	Marcellus
29	7/6/2018	11937.276	12105.116	60	Marcellus
30	7/6/2018	11738.268	11906.108	60	Marcellus
31	7/6/2018	11539.26	11707.1	60	Marcellus
32	7/7/2018	11340.252	11508.092	60	Marcellus
33	7/7/2018	11141.244	11309.084	60	Marcellus
34	7/7/2018	10942.236	11110.076	60	Marcellus
35	7/8/2018	10743.228	10911.068	60	Marcellus
36	7/9/2018	10544.22	10712.06	60	Marcellus
37	7/9/2018	10345.212	10513.052	60	Marcellus
38	7/9/2018	10146.204	10314.044	60	Marcellus
39	7/10/2018	9947.196	10115.036	60	Marcellus
40	7/10/2018	9748.188	9916.028	60	Marcellus
41	7/10/2018	9549.18	9717.02	60	Marcellus
42	7/11/2018	9350.172	9518.012	60	Marcellus
43	7/11/2018	9151.164	9319.004	60	Marcellus
44	7/11/2018	8952.156	9119.996	60	Marcellus
45	7/11/2018	8753.148	8920.988	60	Marcellus
46	7/12/2018	8554.14	8721.98	60	Marcellus
47	7/12/2018	8355.132	8522.972	60	Marcellus
48	7/13/2018	8156.124	8323.964	60	Marcellus
49	7/13/2018	7957.116	8124.956	60	Marcellus
50	7/13/2018	7758.108	7925.948	60	Marcellus
51	7/13/2018	7559.1	7726.94	60	Marcellus
52	7/14/2018	7360.092	7527.932	60	Marcellus
53	7/14/2018	7161.084	7328.924	60	Marcellus
54	7/14/2018	6962.076	7129.916	60	Marcellus

API 47-017-06823 Farm Name Antero Resources Corp Well Number Jay Unit 2H

EXHIBIT 2

Stage No.	Stimulations Date	Avg Pump Rate	Avg Treatment Pressure (PSI)	Max Breakdown Pressure (PSI)	ISIP (PSI)	Amount of Proppant (lbs)	Amount of Water (bbls)	Amount of Nitrogen/ other (units)
1	6/5/2018	69.3	7568	5397	3373	261020	8695	N/A
2	6/6/2018	71.07	7674	5706	5115	404320	8107	N/A
3	6/6/2018	73.8	8051	4819	3466	402760	8110	N/A
4	6/6/2018	77.59	8015	6034	4236	398760	8059	N/A
5	6/7/2018	75.1	8027	5425	4041	396800	7968	N/A
6	6/7/2018	74.03	7943	5787	4082	394060	8295	N/A
7	6/28/2018	66.41	7667	5731	5109	404060	8920	N/A
8	6/29/2018	76.73	7824	5091	4339	399640	8813	N/A
9	6/29/2018	78.03	8085	6003	4979	394320	9074	N/A
10	6/29/2018	72.13	7525	5760	3870	397100	11404	N/A
11	6/30/2018	78.07	7505	5566	4696	404140	8470	N/A
12	6/30/2018	72.48	7145	4862	4948	399680	8318	N/A
13	6/30/2018	67.72	6803	5445	5039	400520	8389	N/A
14	7/1/2018	76.04	7113	5307	5159	400160	8378	N/A
15	7/1/2018	73.77	7291	3850	4865	401480	8617	N/A
16	7/2/2018	72.9	7527	6086	4100	400060	8437	N/A
17	7/2/2018	72	7516	4938	5179	401080	8564	N/A
18	7/2/2018	70.54	7201	6629	4756	400620	8485	N/A
19	7/3/2018	74	7424	4838	4919	397420	8456	N/A
20	7/3/2018	71.3	7360	5309	4440	413280	8346	N/A
21	7/3/2018	72.4	7569	6225	4969	398320	8540	N/A
22	7/4/2018	75	7371	5997	5147	399140	8250	N/A
23	7/4/2018	71.51	7205	5619	4853	398600	8241	N/A
24	7/4/2018	73.4	7456	5711	5277	403300	9978	N/A
25	7/5/2018	76	7588	4804	5011	403670	8311	N/A
26	7/5/2018	75.58	7168	5545	4375	404320	8252	N/A
27	7/5/2018	72.54	7079	5773	4264	407900	8244	N/A
28	7/5/2018	76.7	7438	5285	4688	402860	7884	N/A
29	7/6/2018	77.55	7292	5616	5023	398880	8138	N/A
30	7/6/2018	75.21	7130	4918	4882	395180	8119	N/A
31	7/6/2018	75.6	7174	5547	4278	399980	8215	N/A
32	7/7/2018	77.3	7234	4428	5112	401540	8225	N/A
33	7/7/2018	76.89	7168	5803	4728	395460	8209	N/A
34	7/7/2018	71.78	7266	5801	4244	404440	9870	N/A
35	7/8/2018	78	7383	5826	4763	396800	8174	N/A
36	7/9/2018	77.47	7229	5707	4605	405660	8282	N/A
37	7/9/2018	70.1	6937	6024	4300	404280	8230	N/A
38	7/9/2018	73.96	7474	6033	4241	394480	8111	N/A
39	7/10/2018	70.8	7227	4269	4905	394800	7927	N/A
40	7/10/2018	75.01	7346	6089	4440	406330	8298	N/A
41	7/10/2018	73.95	7048	6018	3931	401280	7964	N/A
42	7/11/2018	74.53	7183	5707	5098	399740	7874	N/A
43	7/11/2018	76.8	7029	6051	3955	396520	8027	N/A
44	7/11/2018	74.88	7323	6498	4843	401920	8078	N/A
45	7/11/2018	76.72	7513	6338	5167	406080	8303	N/A
46	7/12/2018	70.91	6998	5803	5100	408960	9509	N/A
47	7/12/2018	74.3	6973	5871	5176	403000	8084	N/A
48	7/13/2018	72.11	7484	6147	4690	410220	10383	N/A
49	7/13/2018	73.59	7147	6061	4211	407920	7908	N/A
50	7/13/2018	74.8	6991	5768	4155	405980	8050	N/A
51	7/13/2018	66.19	7429	6486	4549	408360	10583	N/A
52	7/14/2018	77.94	6492	6423	4085	411480	8082	N/A
53	7/14/2018	78.46	6700	6199	4546	411000	8062	N/A
54	7/14/2018	78.44	6695	5802	3922	413620	8041	N/A
	AVG=	74	7,333	5,644	4,597	21,573,300	458,351	TOTAL

API 47-017-06823 Farm Name Antero Resources Corp Well Number Jay Unit 2H				
EXHIBIT 3				
LITHOLOGY/ FORMATION	TOP DEPTH (TVD)	BOTTOM DEPTH (TVD)	TOP DEPTH (MD)	BOTTOM DEPTH (MD)
	From Surface	From Surface	From Surface	From Surface
Sandstone	0	177	0	177
Sandstone tr coal	est. 177	217	est. 177	217
Sandy shale	est. 217	232	est. 217	232
Calcareous Shale	est. 232	319	est. 232	319
Sandstone	est. 319	373	est. 319	373
Calcareous Shale	est. 373	1,065	est. 373	1,065
Silty Sandstone	est. 1065	1,137	est. 1065	1,137
Silty shale	est. 1137	1,287	est. 1137	1,287
Sandy Shale	est. 1287	1,357	est. 1287	1,357
Shale	est. 1357	1,563	est. 1357	1,579
Big Lime	1,563	2,212	1,579	2,254
Fifty Foot Sandstone	2,212	2,465	2,254	2,515
Gordon	2,465	2,667	2,515	2,723
Fifth Sandstone	2,667	2,731	2,723	2,790
Bayard	2,731	3,514	2,790	3,630
Speechley	3,514	3,836	3,630	3,976
Balltown	3,836	4,326	3,976	4,503
Bradford	4,326	4,756	4,503	4,968
Benson	4,756	5,008	4,968	5,243
Alexander	5,008	5,997	5,243	6,324
Sycamore	5,997	6,180	6,324	6,550
Middlesex	6,180	6,307	6,550	6,753
Burkett	6,307	6,335	6,753	6,808
Tully	6,335	6,378	6,808	6,910
Marcellus	6,378	NA	6,910	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:	6/5/2018
Job End Date:	7/15/2018
State:	West Virginia
County:	Doddridge
API Number:	47-017-06823-00-00
Operator Name:	Antero Resources Corporation
Well Name and Number:	Jay 2H
Latitude:	39.32244444
Longitude:	-80.80644444
Datum:	NAD83
Federal Well:	NO
Indian Well:	NO
True Vertical Depth:	6,452
Total Base Water Volume (gal):	19,860,208
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
Fresh Water	Operator	Base Fluid					
			Water	7732-18-5	100.00000	88.26614	Density = 8.330
Ingredients	Listed Above	Listed Above					
			Water	7732-18-5	100.00000	0.16937	

HAL-OS ACID INHIBITOR	Halliburton	Corrosion Inhibitor			Listed Below			
EXCELERATE PS-2	Halliburton	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		11.50829	
			Guar gum	9000-30-0	100.00000		0.02539	
			Hydrochloric acid	7647-01-0	15.00000		0.01785	
			Inorganic salt	Proprietary	30.00000		0.01710	
			Hydrotreated light petroleum distillate	64742-47-8	30.00000		0.01710	
			Acrylamide acrylate polymer	Proprietary	30.00000		0.01710	Denise Tuck, Halliburton, 3000 N. Sam Houston Pkwy E., Houston, TX 77032, 281-871-6226
			Ethylene glycol	107-21-1	60.00000		0.00844	
			Glutaraldehyde	111-30-8	30.00000		0.00279	
			Teimer	Proprietary	10.00000		0.00141	
			Sodium persulfate	7775-27-1	100.00000		0.00057	
			Quaternary ammonium compounds, benzyl-C12-16-alkyldimethyl chlorides	68424-85-1	5.00000		0.00047	
			Methanol	67-56-1	60.00000		0.00014	
			Sodium polyacrylate	9003-04-7	1.00000		0.00014	
			Ethanol	64-17-5	1.00000		0.00009	
			Ethoxylated alcohols	Proprietary	30.00000		0.00007	
			Modified thiourea polymer	Proprietary	30.00000		0.00007	

			Fatty acids, tall oil	Proprietary	30.00000	0.00007
			Olefins	Proprietary	5.00000	0.00003
			Propargyl alcohol	107-19-7	10.00000	0.00002
			Phosphoric acid	7664-38-2	0.10000	0.00001
			Acrylic acid	79-10-7	0.01000	0.00000
			Sodium sulfate	7757-82-6	0.10000	0.00000

* Total Water Volume sources may include various types of water including fresh water, produced water, and recycled water

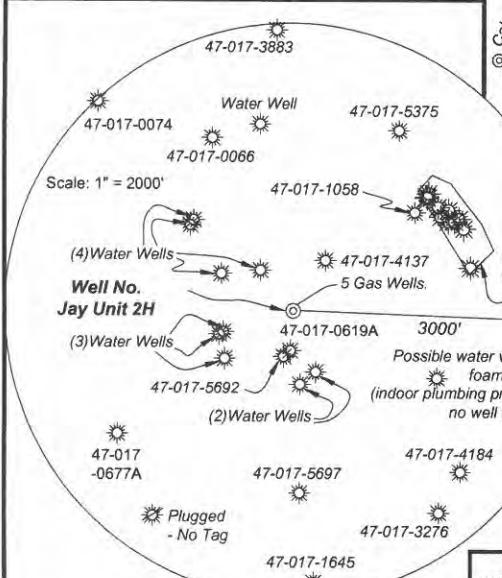
** Information is based on the maximum potential for concentration and thus the total may be over 100%

*** 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)

TM/Par	Bk / Pg	Acres	Owner(s)
1	6/2.5	253/222	8.66 William R. Lynch/Dixie J. Craig
2	6/1	258/546	80.4 Randall Lynch & Dixie Craig
3	6/2.6	266/36	3.52 Dominion Field Services, Inc.
4	6/1.3	305/416	4.68 Equitrans, L.P.
5	3/17.1	358/652	9.90 Antero Resources Corporation
6	6/2.3	197/659	6.00 Carol & Alfreda Painter
7	4/28	WB 28/314	357.75 John Paul Strickling, et al
8	6/7	AP 35/212	3.46 Debra L. Stout
9	7/4.2	293/340	4.19 Joseph D. & Brittany McConnell
10	29/46	- / -	Lot 231 Crystal Lake Club
11	29/46.2	302/278	p/o Lot 231 Ronald O. & Barbara C. Moran
12	29/90	249/639	Lot 204 Shaun L. & Mary K. Cass
13	29/91	256/408	Lot 205 Janet M. Esposito & Scarlett C. Dennison
14	29/92	260/127	Lot 206 James L. & Patricia Reed
15	29/93	162/328	Lot 207 Douglas L. & Joyce M. Hall
16	29/94	219/583	Lot 208 Ralph P. McCutchan, et al
17	29/95	219/583	Lot 209 Mary M. Welch Lease
18	3/23	WB 47/723	3.00 Connie Ruckman
19	3/19.1	265/582	7.00 Glen H. Montgomery, et al
20	3/10.1	259/312	0.25 James W. & Lynda S. Beatty
21	6/2	214/279	32.19 William R. Lynch & Dixie J. Craig
22	6/2.7	294/473	2.16 Randy K. Smith
23	7/5	167/782	176.5 Joel W. & Bonnie Ostroff
24	3/17	349/553	25.9 Antero Resources Corporation
25	3/11	283/682	43.0 Ronald Perry Gains, Perry Blackburn, Ryan Webb
26	3/19	WB 47/333	21.64 Skylar Ora & Clifford Warren Montgomery, et al
27	3/20	AP 41/150	25.5 Robert Goddard, et al
28	3/10	259/310	75.0 James W. & Lynda Beatty, et al
29	3/18	228/723	6.84 Thomas K. Jr. & Penny A. Porter
30	7/1	96/487	6.54 Mason Memorial Park
31	7/4.1	301/466	5.49 Robert P. Holden & Sherri Bailey
32	1/4.1	261/268	11.17 Steven R. Chippis, et al
33	3/5	170/587	53.0 Dale Bradford / Dewight R. Husk
34	3/18.2	232/135	6.00 David J. & Debra S. Smith

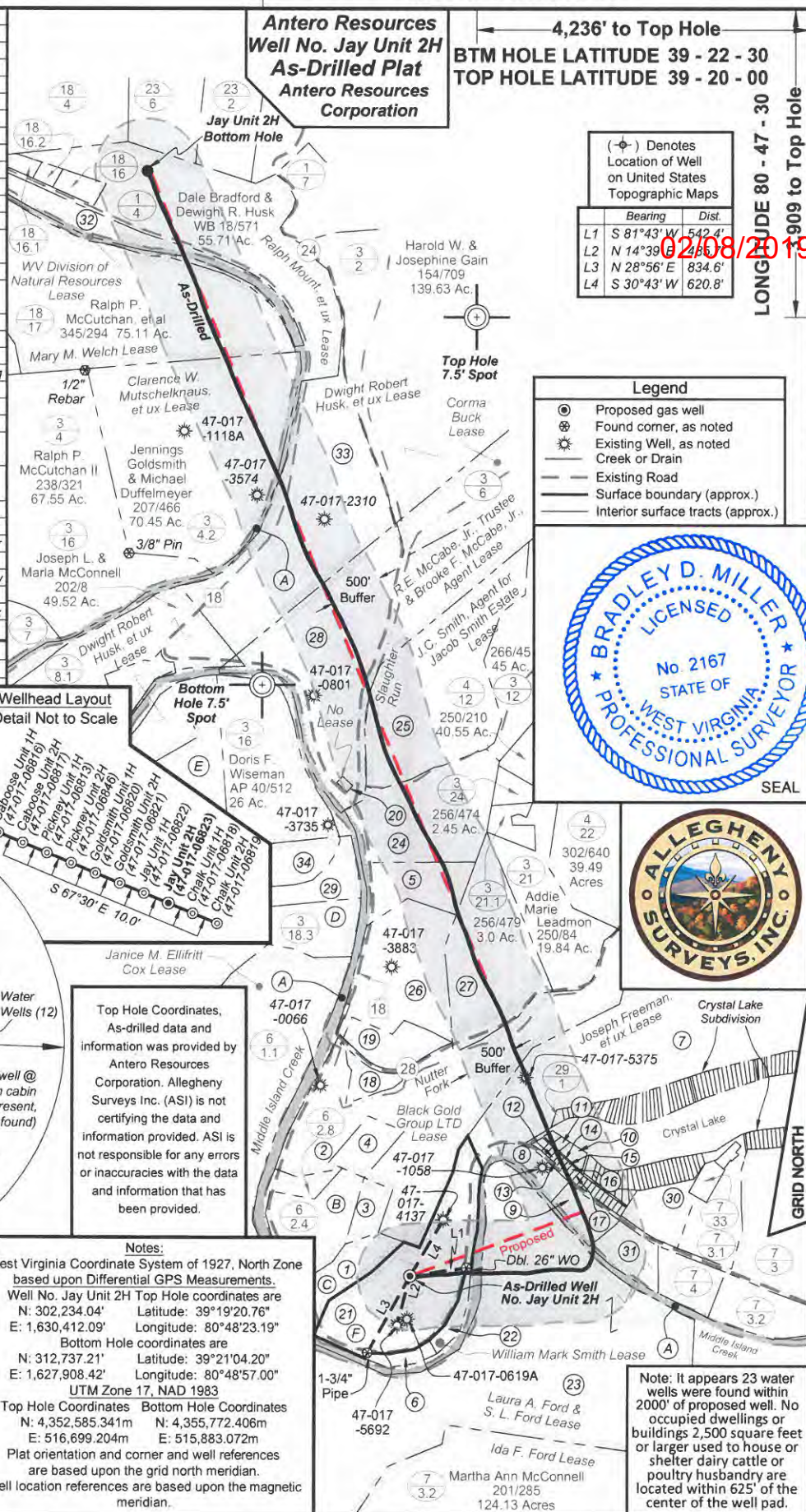
Lessors
A WV Division of Natural Resources Lease
B William Mark Smith Lease
C William Randall Lynch, et ux, Memorandum of Oil & Gas Lease
D James Douglas White Lease
E Lewis Maxwell, et al Lease
F William Randall Lynch & Dixie Craig Lease



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: 36-30-WU-15
DRAWING NO: Jay 2H As-Drilled Well Plat
SCALE: 1" = 1500'
MINIMUM DEGREE OF ACCURACY: Submeter
PROVEN SOURCE OF ELEVATION: CORS, Marietta, OH



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

DATE: January 16 2019
Operator's Well No. Jay Unit 2H
API WELL NO
47 - 017 - 06823
STATE COUNTY PERMIT

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

LOCATION: ELEVATION: As-Drilled Grade - 843' WATERSHED: Headwaters Middle Island Creek QUADRANGLE: West Union
DISTRICT: West Union William (2) WV Div. of Natural Resources; Ralph Mount, et ux; Joseph Freeman, et ux; William Randall Lynch & Dixie Craig; COUNTY: Doddridge 5.15; 68; 32.15; 53;
SURFACE OWNER: Randall Lynch & Dixie Craig Dwight Robert Husk, et ux; William Mark Smith; Mary W. Welch; J. C. Smith, Agent for Jacob Smith Estate; Clarence W. Mustchelknaus, et ux; ACREAGE: 32.19 82.21; 290;
ROYALTY OWNER: R.E. McCabe Jr., Trustee & Brooke F. McCabe Jr. Agent; Black Gold Group, LTD; LEASE NO: ACREAGE: 20.49; 600;

PROPOSED WORK: DRILL CONVERT DRILL DEEPER FRACTURE OR STIMULATE PLUG OFF OLD FORMATION
 PERFORATE NEW FORMATION OTHER PHYSICAL CHANGE IN WELL (SPECIFY) As-Drilled 6,424' TVD
 PLUG AND ABANDON CLEAN OUT AND REPLUG TARGET FORMATION: Marcellus Shale ESTIMATED DEPTH: 17,713' 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