

**Reviewed**  
*[Signature]*  
12/19/18

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

API 47-017-06792 County Doddridge District Central  
Quad West Union 7.5' Pad Name Balli Pad Field/Pool Name -----  
Farm name Jeffrey K. Jones Sr. et al Well Number Hawk 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 4350343m Easting 513479m  
Landing Point of Curve Northing 4350572.58m Easting 513522.96m  
Bottom Hole Northing 4354429m Easting 512265m

Elevation (ft) 1135.5' 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 2/7/2017 Date drilling commenced 2/10/2017 Date drilling ceased 7/4/2017  
Date completion activities began 12/20/2017 Date completion activities ceased 3/28/2018  
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 107', 192' Open mine(s) (Y/N) depths No  
Salt water depth(s) ft 737' 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

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WR-35  
Rev. 8/23/13

API 47-017 - 06792 Farm name Jeffrey K. Jones Sr. et al Well number Hawk 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"	72'	New	94#, H-40	N/A	Y
Surface	17-1/2"	13-3/8"	372'	New	54#, J-55	N/A	Y
Coal							
Intermediate 1	12-1/4"	9-5/8"	2616'	New	36#, J-55	N/A	Y
Intermediate 2							
Intermediate 3							
Production	8-3/4"/8-1/2"	5-1/2"	21040'	New	23#, P-110	N/A	Y
Tubing		2-3/8"	6842'		4.7#, N-80		
Packer type and depth set		N/A					

Comment Details \_\_\_\_\_

CEMENT DATA	Class/Type of Cement	Number of Sacks	Slurry wt (ppg)	Yield (ft <sup>3</sup> /sks)	Volume (ft <sup>3</sup> )	Cement Top (MD)	WOC (hrs)
Conductor	Class A	102 sx	15.6	1.18	120	0'	8 Hrs.
Surface	Class A	318 sx	15.6	1.19	378	0'	8 Hrs.
Coal							
Intermediate 1	Class A	932 sx	15.6	1.18	1100	0'	8 Hrs.
Intermediate 2							
Intermediate 3							
Production	Class H	805sx (Lead) 2085sx (Tail)	13.5(Load), 15.2 (Tail)	1.44 (Load), 1.87 (Tail)	5058	-500' into Intermediate Casing	8 Hrs.
Tubing							

Drillers TD (ft) 21040' MD, 6607' TVD (BHL), 6628' (Deepest Point Drilled) Loggers TD (ft) 21040' MD

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

Plug back procedure N/A

Kick off depth (ft) 5917

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 \_\_\_\_\_

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WAS WELL COMPLETED OPEN HOLE?  Yes  No DETAILS \_\_\_\_\_

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WERE TRACERS USED  Yes  No TYPE OF TRACER(S) USED N/A

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API 47-017-06792 Farm Name Jeffrey K. Jones Sr. et al Well Number Hawk Unit 1H					
EXHIBIT 1					
Stage No.	Perforation Date	Perforated from MD ft.	Perforated to MD ft.	Number of Perforations	Formations
1	12/20/2017	20841	0	48	Marcellus
2	12/20/2017	20641	20810	48	Marcellus
3	12/21/2017	20440	20609	48	Marcellus
4	12/22/2017	20239	20409	48	Marcellus
5	12/22/2017	20039	20208	48	Marcellus
6	12/23/2017	19838	20007	48	Marcellus
7	12/23/2017	19637	19807	48	Marcellus
8	12/24/2017	19437	19606	48	Marcellus
9	12/27/2017	19236	19405	48	Marcellus
10	12/27/2017	19035	19205	48	Marcellus
11	12/28/2017	18835	19004	48	Marcellus
12	12/28/2017	18634	18803	48	Marcellus
13	12/29/2017	18433	18603	48	Marcellus
14	12/29/2017	18233	18402	48	Marcellus
15	12/30/2017	18032	18201	48	Marcellus
16	12/31/2017	17831	18001	48	Marcellus
17	12/31/2018	17631	17800	48	Marcellus
18	1/1/2018	17430	17599	48	Marcellus
19	1/2/2018	17229	17399	48	Marcellus
20	1/2/2018	17029	17198	48	Marcellus
21	1/3/2018	16828	16997	48	Marcellus
22	1/5/2018	16627	16797	48	Marcellus
23	1/7/2018	16427	16596	48	Marcellus
24	1/8/2018	16226	16395	48	Marcellus
25	1/9/2018	16025	16195	48	Marcellus
26	1/9/2018	15825	15994	48	Marcellus
27	1/10/2018	15624	15793	48	Marcellus
28	1/10/2018	15423	15593	48	Marcellus
29	1/11/2018	15223	15392	48	Marcellus
30	1/11/2018	15022	15191	48	Marcellus
31	1/15/2018	14821	14991	48	Marcellus
32	1/17/2018	14621	14790	48	Marcellus
33	1/17/2018	14420	14589	48	Marcellus
34	1/17/2018	14219	14389	48	Marcellus
35	1/18/2018	14019	14188	48	Marcellus
36	1/18/2018	13818	13987	48	Marcellus
37	1/19/2018	13617	13787	48	Marcellus
38	1/20/2018	13417	13586	48	Marcellus
39	1/20/2018	13216	13385	48	Marcellus
40	1/21/2018	13016	13185	48	Marcellus
41	1/21/2018	12815	12984	48	Marcellus
42	1/22/2018	12614	12783	48	Marcellus
43	1/22/2018	12414	12583	48	Marcellus
44	1/23/2018	12213	12382	48	Marcellus
45	1/23/2018	12012	12181	48	Marcellus
46	1/24/2018	11812	11981	48	Marcellus
47	1/24/2018	11611	11780	48	Marcellus
48	1/25/2018	11410	11579	48	Marcellus
49	1/25/2018	11210	11379	48	Marcellus
50	1/26/2018	11009	11178	48	Marcellus
51	1/26/2018	10808	10977	48	Marcellus
52	1/27/2018	10608	10777	48	Marcellus
53	1/27/2018	10407	10576	48	Marcellus
54	1/27/2018	10206	10375	48	Marcellus
55	1/28/2018	10006	10175	48	Marcellus
56	1/28/2018	9805	9974	48	Marcellus
57	1/28/2018	9604	9773	48	Marcellus
58	1/29/2018	9404	9573	48	Marcellus
59	1/29/2018	9203	9372	48	Marcellus
60	1/29/2018	9002	9171	48	Marcellus
61	1/29/2018	8802	8971	48	Marcellus
62	1/30/2018	8601	8770	48	Marcellus
63	1/30/2018	8400	8569	48	Marcellus
64	1/30/2018	8200	8369	48	Marcellus
65	1/31/2018	7999	8168	48	Marcellus
66	1/31/2018	7798	7967	48	Marcellus
67	1/31/2018	7598	7767	48	Marcellus
68	1/31/2018	7397	7566	48	Marcellus
69	1/31/2018	7196	7365	48	Marcellus
70	2/1/2018	6996	7165	48	Marcellus

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API 47-017-06792 Farm Name Jeffrey K. Jones Sr. et al Well Number Hawk Unit 1H								
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 (bbbls)	Amount of Nitrogen/ other (units)
1	12/20/2017	54	8203	7395	3287	409650	20663	N/A
2	12/20/2017	60.7	7952	7132	3630	406150	9708	N/A
3	12/21/2017	66	8071	6278	4078	406550	9199	N/A
4	12/22/2017	72.3	8363	6422	3443	405250	9307	N/A
5	12/22/2017	70.7	8038	6624	3529	405850	9299	N/A
6	12/23/2017	70.7	8133	5978	3402	406050	8789	N/A
7	12/23/2017	69.1	7994	6243	3994	405550	8920	N/A
8	12/24/2017	71.1	8239	7140	3427	406650	8860	N/A
9	12/27/2017	72.8	8070	6379	4122	405350	10794	N/A
10	12/27/2017	72.2	8296	6573	3695	406450	8858	N/A
11	12/28/2017	75.3	8029	6124	4116	407200	9123	N/A
12	12/28/2017	71.3	8125	5798	3854	406150	8842	N/A
13	12/29/2017	72.5	8140	6236	4452	405550	9043	N/A
14	12/29/2017	68.2	8311	6250	4824	404800	8852	N/A
15	12/30/2017	75.4	7959	5937	5301	405750	8826	N/A
16	12/31/2017	77.4	8066	6063	4152	406250	8906	N/A
17	12/31/2018	77.3	8190	6225	3625	405450	8772	N/A
18	1/1/2018	73	7994	5528	4969	405700	8835	N/A
19	1/2/2018	71.2	7961	6476	4969	406050	8731	N/A
20	1/2/2018	68.3	8202	5811	4222	405000	8610	N/A
21	1/3/2018	76	8157	5746	4363	407050	9007	N/A
22	1/5/2018	72.1	7927	6325	5173	405950	8967	N/A
23	1/7/2018	74.8	7906	5682	5216	406300	8782	N/A
24	1/8/2018	69.4	7968	6193	4166	405450	8706	N/A
25	1/9/2018	71.1	7844	6288	5019	406450	8806	N/A
26	1/9/2018	73.3	7873	7035	5006	406250	10094	N/A
27	1/10/2018	69.4	7960	6588	5140	405700	10709	N/A
28	1/10/2018	70.8	7659	6333	4465	405750	8741	N/A
29	1/11/2018	73.6	7616	6081	5323	406000	9063	N/A
30	1/11/2018	59.2	7773	6092	4836	404950	13179	N/A
31	1/15/2018	77.4	7161	6392	5082	406500	8753	N/A
32	1/17/2018	77.7	7503	6003	5185	405600	8516	N/A
33	1/17/2018	80.6	7950	6231	5211	405600	8618	N/A
34	1/17/2018	76.8	7343	8401	5289	404900	8577	N/A
35	1/18/2018	78.3	7420	6397	5424	405600	8553	N/A
36	1/18/2018	76.4	7805	6143	5260	405500	10555	N/A
37	1/19/2018	77.3	7521	6108	5140	406050	8455	N/A
38	1/20/2018	76.8	7714	6364	5015	405750	8561	N/A
39	1/20/2018	78	7521	6994	4803	405150	8515	N/A
40	1/21/2018	77.6	7800	6733	4515	405900	8452	N/A
41	1/21/2018	78.1	7778	6274	4857	404700	8370	N/A
42	1/22/2018	79.1	7614	5819	4740	405850	8378	N/A
43	1/22/2018	78	7396	6190	5237	404900	8412	N/A
44	1/23/2018	77.5	7420	6090	4231	405750	8569	N/A
45	1/23/2018	76.3	7713	6637	4142	404800	8573	N/A
46	1/24/2018	77.9	7354	6151	4293	405150	8490	N/A
47	1/24/2018	79.7	7499	6180	4480	404450	8396	N/A
48	1/25/2018	78.7	7595	6915	5288	406850	8532	N/A
49	1/25/2018	80.4	7727	6001	5228	404500	8806	N/A
50	1/26/2018	78.4	7395	6309	5240	405650	8410	N/A
51	1/26/2018	79.7	7495	6039	4797	405700	8469	N/A
52	1/27/2018	77.2	7227	6457	4867	407050	8466	N/A
53	1/27/2018	80.3	7744	6419	4774	406100	8518	N/A
54	1/27/2018	78.9	7060	6325	5300	406500	8508	N/A
55	1/28/2018	78.7	7295	6809	4180	313420	8343	N/A
56	1/28/2018	80	7586	6116	5008	405550	9390	N/A
57	1/28/2018	79.2	7327	6825	5520	405850	8410	N/A
58	1/29/2018	77.3	6932	5890	5480	406250	8449	N/A
59	1/29/2018	80.5	7245	6625	5252	405750	8278	N/A
60	1/29/2018	79.2	7153	6876	4340	406050	8514	N/A
61	1/29/2018	78.1	7168	6015	5440	405550	8504	N/A
62	1/30/2018	79.1	7619	6072	5453	405500	8211	N/A
63	1/30/2018	73.8	7745	6356	5013	405750	9563	N/A
64	1/30/2018	75.9	6895	6675	5511	405200	8279	N/A
65	1/31/2018	75.9	6828	5743	5640	405250	8358	N/A
66	1/31/2018	80.5	7036	6302	5268	406550	8286	N/A
67	1/31/2018	80.1	7043	5803	5199	405000	9304	N/A
68	1/31/2018	80.5	6852	6522	5026	405800	8328	N/A
69	1/31/2018	76.6	6777	6772	4661	405300	8256	N/A
70	2/1/2018	77.9	6877	4948	4278	405500	8759	N/A
	AVG=	75	7,659	6,327	4,707	28,314,020	632,675	TOTAL

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API 47-017-06792 Farm Name Jeffrey K. Jones Sr. et al Well Number Hawk Unit 1H				
EXHIBIT 3				
LITHOLOGY/ FORMATION	TOP DEPTH (TVD)		BOTTOM DEPTH (MD)	
	From Surface	From Surface	From Surface	From Surface
Freshwater	107'	N/A	107'	N/A
Freshwater	192'	N/A	192'	N/A
Siltstone/Sandstone	0	147	0	147
Sandstone	est. 147	205	est. 147	205
Sandstone/Siltstone/Shale	est. 205	327	est. 205	327
Sandstone/Shale/Trace Coal	est. 327	447	est. 327	447
Sandstone	est. 447	547	est. 447	547
Sandstone/Shale	est. 547	607	est. 547	607
Sandstone	est. 607	687	est. 607	687
Siltstone	est. 687	727	est. 687	727
Shale	est. 727	767	est. 727	767
Limestone	est. 767	787	est. 767	787
Siltstone	est. 787	907	est. 787	907
Shale	est. 907	1,147	est. 907	1,147
Shale/Tr Coal	est. 1147	1,167	est. 1147	1,167
Shale	est. 1167	1,207	est. 1167	1,207
Sandstone	est. 1207	1,227	est. 1207	1,227
Shale	est. 1227	1,245	est. 1227	1,245
Sandstone	est. 1245	1,307	est. 1245	1,307
Shale/Siltstone	est. 1307	1,367	est. 1307	1,367
Limestone	est. 1367	1,387	est. 1367	1,387
Sandstone	est. 1387	1,447	est. 1387	1,447
Siltstone	est. 1447	1,489	est. 1447	1,489
Sandstone/Shale/Siltstone	est. 1489	2,023	est. 1489	2,026
Big Lime	2,023	2,693	2,026	2,696
Fifty Foot Sandstone	2,693	2,738	2,696	2,741
Gordon	2,738	3,106	2,741	3,110
Fifth Sandstone	3,106	3,122	3,110	3,127
Bayard	3,122	3,760	3,127	3,775
Speechley	3,760	4,142	3,775	4,169
Balltown	4,142	4,534	4,169	4,572
Bradford	4,534	5,018	4,572	5,071
Benson	5,018	5,287	5,071	5,348
Alexander	5,287	6,224	5,348	6,316
Sycamore	6,224	6,391	6,316	6,532
Middlesex	6,391	6,511	6,532	6,744
Burkett	6,511	6,566	6,744	6,819
Tully	6,566	6,575	6,819	6,944
Marcellus	6,575	NA	6,944	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.

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## Hydraulic Fracturing Fluid Product Component Information Disclosure

Job Start Date:	1/9/2017
Job End Date:	2/1/2018
State:	West Virginia
County:	Doddridge
API Number:	47-017-06792-00-00
Operator Name:	Antero Resources Corporation
Well Name and Number:	Hawk 1H
Latitude:	39.30222222
Longitude:	-80.84388889
Datum:	NAD83
Federal Well:	NO
Indian Well:	NO
True Vertical Depth:	6,608
Total Base Water Volume (gal):	27,788,935
Total Base Non Water Volume:	0



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### 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
Water	Supplied by Operator	Base Fluid					
			Water	7732-18-5	70.00000	88.76724	
DWP-641	CWS	Friction Reducer					
				Listed Below			

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Sand (Proppant)	CWS	Propping Agent					
				Listed Below			
Calbreak 5501	CWS	Breaker					
				Listed Below			
Hydrochloric Acid	CWS	Clean Perforations					
				Listed Below			
SANIFRAC 8844	CWS	Biocide					
				Listed Below			
CI-9100G	CWS	Corrosion Inhibitor					
				Listed Below			
DAP-902	CWS	Scale Inhibitor					
				Listed Below			
DWP-111	CWS	Gel Slurry					
				Listed Below			
DAP-103	CWS	Iron Control					
				Listed Below			
Other Chemical (s)	Listed Above	See Trade Name (s) List					

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				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	10.88245	
			Calcite	471-34-1	1.00000	0.07895	
			Hydrochloric acid	7647-01-0	37.00000	0.05335	
			Guar gum	9000-30-0	60.00000	0.03057	
			Distillates (petroleum), hydrotreated middle	64742-46-7	60.00000	0.03057	
			Illite	12173-60-3	1.00000	0.02985	
			Polymer	26100-47-0	45.00000	0.02912	
			Distillates (petroleum), hydrotreated light	64742-47-8	30.00000	0.01942	
			Goethite	1310-14-1	0.10000	0.01088	
			Biotite	1302-27-8	0.10000	0.01088	
			Apatite	64476-38-6	0.10000	0.01088	
			Ammonium chloride	12125-02-9	11.00000	0.00712	
			Ammonium Persulfate	64742-47-8	100.00000	0.00686	
			Polyethylene glycol mixture	25322-68-3	54.50000	0.00619	
			2-Propenoic acid, homopolymer, sodium salt	9003-04-7	40.00000	0.00601	
			Ilmenite	98072-94-7	0.10000	0.00299	
			Sorbitan monooleate	1338-43-8	4.00000	0.00259	
			Quaternary ammonium compounds, bis (hydrogenated tallow alkyl)dimethyl, salts with bentonite	68953-58-2	5.00000	0.00255	
			2,2-Dibromo-3-Nitrilopropionamide	10222-01-2	20.00000	0.00227	
			Polyethylene glycol monooleate	9004-96-0	3.00000	0.00194	
			1,2-Propanediol	57-55-6	10.00000	0.00150	

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			Vinylidene chloride-methyl acrylate copolymer	69418-26-4	20.00000	0.00137	
			Sorbitol tetraoleate	61723-83-9	2.00000	0.00129	
			Oxirane, 2-methyl-, polymer with oxirane, monodecyl ether	37251-67-5	1.50000	0.00076	
			Amines, tallow alkyl, ethoxylated	61791-26-2	1.00000	0.00065	
			Citric acid	77-92-9	60.00000	0.00048	
			Sodium bromide	7647-15-6	4.00000	0.00045	
			Dibromoacetonitrile	3252-43-5	3.00000	0.00034	
			Alkyloxypolyethyleneoxy ethanol	84133-50-6	0.50000	0.00032	
			Acrylamide	79-06-1	0.10000	0.00006	
			Ethylene glycol	107-21-1	40.00000	0.00003	
			Tar bases, quinolone derivs, benzyl chloride- quatenized	72480-70-7	10.00000	0.00001	
			Isopropanol	67-63-0	5.00000	0.00001	
			Cinnamaldehyde	104-55-2	10.00000	0.00001	
			Ethoxylated alcohols	Proprietary	10.00000	0.00001	Proprietary CAS
			Tar bases, quinolone derivs	68513-87-1	1.00000	0.00001	
			Formic Acid	64-18-6	10.00000	0.00001	
			Diethylene glycol	111-46-6	1.00000	0.00001	
			Diethylene glycol (mono) methyl ether	34590-94-8	20.00000	0.00001	

\* 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)

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SEP 10 2018

WV Department of  
Environmental Protection

LATITUDE 39°20'00"

2,976'

6,933' TO BOTTOM HOLE  
LATITUDE 39°22'30"

LONGITUDE 80°50'00"

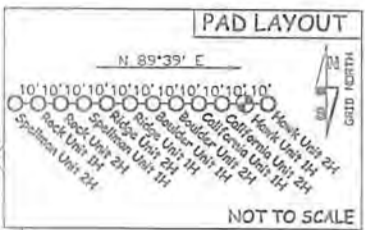
13,067' TO BOTTOM HOLE

LONGITUDE 80°50'00"

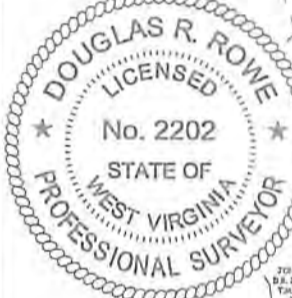
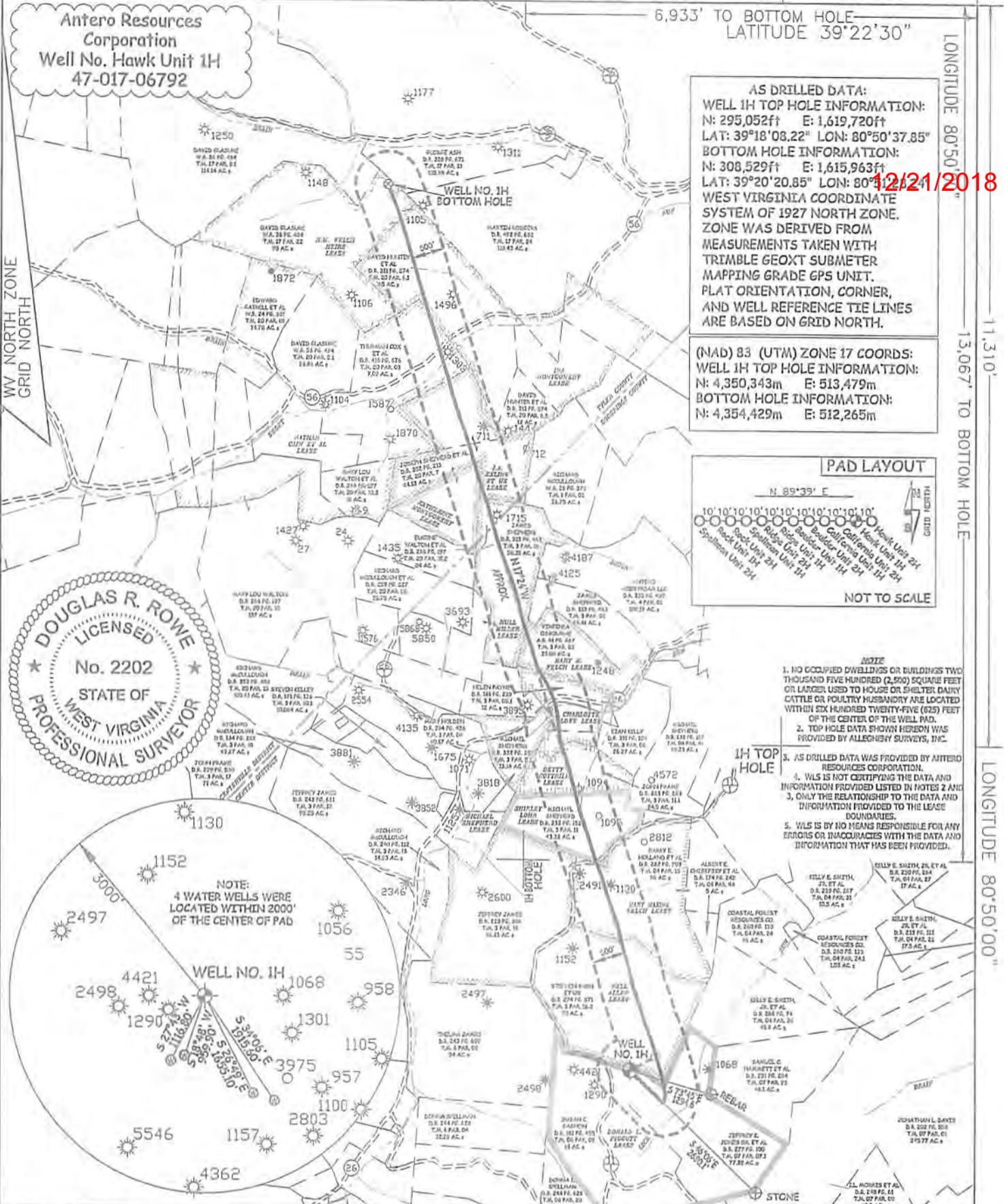
Antero Resources Corporation  
Well No. Hawk Unit 1H  
47-017-06792

AS DRILLED DATA:  
WELL 1H TOP HOLE INFORMATION:  
N: 295,052ft E: 1,619,720ft  
LAT: 39°18'08.22" LON: 80°50'37.85"  
BOTTOM HOLE INFORMATION:  
N: 308,529ft E: 1,615,963ft  
LAT: 39°20'20.85" LON: 80°51'12.21"  
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 1H TOP HOLE INFORMATION:  
N: 4,350,343m E: 513,479m  
BOTTOM HOLE INFORMATION:  
N: 4,354,429m E: 512,265m



- 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 ALLEGHENY SURVEYS, INC.
  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.



JOB # 16-059WA  
DRAWING # HAWK1HAD  
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

WELL TYPE: OIL  GAS  LIQUID INJECTION  WASTE DISPOSAL   
(IF "GAS") PRODUCTION  STORAGE  DEEP  SHALLOW   
LOCATION: ELEVATION 1,135.5' AS BUILT

QUADRANGLE WEST UNION 7.5 DISTRICT CENTRAL COUNTY DODDRIDGE  
SURFACE OWNER JEFFREY K. JONES SR. ET AL ACREAGE 77.32 ACRES +/-  
OIL & GAS ROYALTY OWNER DONALD L. PIGGOTT; NELL ALLEN; MARY MAXINE WELCH; LEASE ACREAGE 81 AC±; 178 AC±; 95 AC±;  
SHIRLEY LOHR; BETTY COTTRILL; CHARLOTTE LOWE; MARY M. WELCH; HULL MILLER; J.A. EXLINE ET UX; 30.38 AC±; 24.5 AC±; 24.5 AC±; 29.08 AC±; 53.8 AC±; 60 AC±;  
KATERINE MONTGOMERY; NATHAN CAIN ET AL; INA MONTGOMERY; N.M. WELCH HEIRS 26.13 AC±; 278 AC±; 142.25 AC±; 95 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  
TARGET FORMATION MARCELLUS  
WELL OPERATOR ANTERO RESOURCES CORP. ESTIMATED DEPTH 6,607' TVD 21,040' MD  
ADDRESS 1615 WYNKOOP STREET DESIGNATED AGENT DIANNA STAMPER - CT CORPORATION SYSTEM  
DENVER, CO 80202 ADDRESS 5400 D BIG TYLER ROAD CHARLESTON, WV 25313

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

LEGEND

- Surface Owner Boundary Lines +/-
- - - Interior Surface Tracts +/-
- Proposed Well Path
- ⊙ As Drilled Well Path

DOUGLAS R. ROWE P.S. 2202

DATE 07/17/18

OPERATOR'S WELL# HAWK UNIT #1H

API WELL # 47 - 017 - 06792

STATE COUNTY PERMIT

COUNTY NAME

PERMIT

12/21/2018

WV Department of  
Environmental Protection

SEP 10 2018

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Office of Oil and Gas



