

APPROVED

WR-35
Rev. 8/23/13

NAME: Chad G...

Page ___ of ___

DATE 6/14/17

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

API 47 - 017 - 06719 County Doddridge District Central
Quad West Union 7.5' Pad Name Rock Run Pad Field/Pool Name ----
Farm name George D. Lambert Well Number Devonian 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 4360635m Easting 515982m
Landing Point of Curve Northing 4350834.223m Easting 515975.638m
Bottom Hole Northing 4353813m Easting 514752m

Elevation (ft) 1171' 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 6/10/2015 Date drilling commenced 06/12/2015 Date drilling ceased 9/12/2015
Date completion activities began 8/3/2016 Date completion activities ceased 10/21/2016
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 112', 147', 295' Open mine(s) (Y/N) depths No
Salt water depth(s) ft 750', 987' Void(s) encountered (Y/N) depths No
Coal depth(s) ft 1580' Cavern(s) encountered (Y/N) depths No
Is coal being mined in area (Y/N) No

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API 47-017 - 06719 Farm name George D. Lambert Well number Devonian 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	32"	26"	40'	New	94#, J-55	N/A	Y
Surface	17-1/2"	18-5/8"	370'	New	87#, J-55	N/A	Y
Coal							
Intermediate 1	12-1/4"	13-3/8"	2480'	New	61#, J-55	N/A	Y
Intermediate 2							
Intermediate 3							
Production	8-3/4"/8-1/2"	5-1/2"	17736'	New	23#, P-110	N/A	Y
Tubing		2-3/8"	6822'		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 ³ /sks)	Volume (ft ³)	Cement Top (MD)	WOC (hrs)
Conductor	Class A	113 sx	15.6	1.18	38	0'	8 Hrs.
Surface	Class A	396 sx	15.6	1.18	257	0'	8 Hrs.
Coal							
Intermediate 1	Class A	396 sx	15.6	1.18	777	0'	8 Hrs.
Intermediate 2							
Intermediate 3							
Production	Class H	2166 sx (Lead) 1685 sx (Tail)	13.57 (Lead), 15.2 (Tail)	1.44 (Lead), 1.84 (Tail)	3610	-500' into Intermediate Casing	8 Hrs.
Tubing							

Drillers TD (ft) 17736' MD, 6725' TVD (BHL) & 6749' TVD (Deepest Point Drilled) Loggers TD (ft) 17679' MD
 Deepest formation penetrated Marcellus Plug back to (ft) N/A
 Plug back procedure N/A

Kick off depth (ft) 6099'

** This is a subsequent well. Antero only runs wireline logs on one well on a multi-well pad (Wentz Unit 1H API #47-017-06476). Please reference the wireline logs submitted with Form WR-35 for Wentz Unit 1H. A Cement Bond Log has been included with this submittal.

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

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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

API 47- 017 - 06719 Farm name George D. Lambert Well number Devonian Unit 2H

PRODUCING FORMATION(S)	DEPTHS	
Marcellus	6693' (TOP) TVD	6856' (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 13883 mcfpd Oil 111 bpd NGL --- bpd Water 316 bpd GAS MEASURED BY Estimated Orifice Pilot

LITHOLOGY/ FORMATION	TOP DEPTH IN FT NAME TVD	BOTTOM DEPTH IN FT TVD	TOP DEPTH IN FT MD	BOTTOM DEPTH IN FT MD	DESCRIBE ROCK TYPE AND RECORD QUANTITY AND TYPE OF FLUID (FRESHWATER, BRINE, OIL, GAS, H ₂ S, ETC)
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***PLEASE SEE ATTACHED EXHIBIT 3**

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Please insert additional pages as applicable.

Drilling Contractor Patterson - UTI Drilling Company, LLC
 Address 207 Carlton Dr. City Eighty Four State PA Zip 15330

Logging Company Allied Horizontal Wireline Services
 Address 381 Colonial Manor Rd. City North Huntingdon State PA Zip 15642

Cementing Company Nabors Completion & Production Services, Co.
 Address 1650 Hackers Creek City Jane Lew State WV Zip 26378

Stimulating Company Cal Frac Well Services
 Address 717 17th Street Suite 1448 City Denver State CO Zip 80202

Please insert additional pages as applicable.

Completed by Samantha Klaas Telephone 303-357-6759
 Signature *Samantha Klaas* Title Permitting Agent Date 05/05/2017

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

EXHIBIT 1

Stage No.	Perforation Date	Perforated from MD ft.	Perforated to MD ft.	Number of Perforations	Formations
1	8/3/2016	17478	17621	60	Marcellus
2	8/22/2016	17278	17447	60	Marcellus
3	8/23/2016	17079	17247	60	Marcellus
4	8/23/2016	16879	17047	60	Marcellus
5	8/24/2016	16680	16848	60	Marcellus
6	8/24/2016	16480	16648	60	Marcellus
7	8/25/2016	16280	16449	60	Marcellus
8	8/26/2016	16081	16249	60	Marcellus
9	8/26/2016	15881	16050	60	Marcellus
10	8/26/2016	15682	15850	60	Marcellus
11	8/27/2016	15482	15651	60	Marcellus
12	8/27/2016	15283	15451	60	Marcellus
13	8/28/2016	15083	15251	60	Marcellus
14	8/29/2016	14884	15052	60	Marcellus
15	8/30/2016	14684	14852	60	Marcellus
16	8/30/2016	14484	14653	60	Marcellus
17	8/31/2016	14285	14453	60	Marcellus
18	9/1/2016	14085	14254	60	Marcellus
19	9/1/2016	13886	14054	60	Marcellus
20	9/1/2016	13686	13854	60	Marcellus
21	9/2/2016	13487	13655	60	Marcellus
22	9/3/2016	13287	13455	60	Marcellus
23	9/3/2016	13087	13256	60	Marcellus
24	9/3/2016	12888	13056	60	Marcellus
25	9/4/2016	12688	12857	60	Marcellus
26	9/4/2016	12489	12657	60	Marcellus
27	9/5/2016	12289	12458	60	Marcellus
28	9/5/2016	12090	12258	60	Marcellus
29	9/6/2016	11890	12058	60	Marcellus
30	9/6/2016	11691	11859	60	Marcellus
31	9/7/2016	11491	11659	60	Marcellus
32	9/7/2016	11291	11460	60	Marcellus
33	9/8/2016	11092	11260	60	Marcellus
34	9/8/2016	10892	11061	60	Marcellus
35	9/9/2016	10693	10861	60	Marcellus
36	9/9/2016	10493	10662	60	Marcellus
37	9/9/2016	10294	10462	60	Marcellus
38	9/10/2016	10094	10262	60	Marcellus
39	9/10/2016	9895	10063	60	Marcellus
40	9/10/2016	9695	9863	60	Marcellus
41	9/11/2016	9495	9664	60	Marcellus
42	9/11/2016	9296	9464	60	Marcellus
43	9/11/2016	9096	9265	60	Marcellus
44	9/12/2016	8897	9065	60	Marcellus
45	9/12/2016	8697	8865	60	Marcellus
46	9/12/2016	8498	8666	60	Marcellus
47	9/13/2016	8298	8466	60	Marcellus
48	9/13/2016	8098	8267	60	Marcellus
49	9/13/2016	7899	8067	60	Marcellus
50	9/13/2016	7699	7868	60	Marcellus
51	9/14/2016	7500	7668	60	Marcellus
52	9/14/2016	7300	7469	60	Marcellus
53	9/14/2016	7101	7269	60	Marcellus
54	9/14/2016	6901	7069	60	Marcellus

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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	8/22/2016	68.6	7980	6574	4362	351850	8490	N/A
2	8/22/2016	60.2	7128	5545	4789	351000	8311	N/A
3	8/23/2016	60.4	7207	5453	4877	351400	8287	N/A
4	8/23/2016	72.5	7639	5364	4767	351600	9127	N/A
5	8/24/2016	61.6	7930	5329	4563	219650	9898	N/A
6	8/24/2016	78.7	7834	5356	3896	351050	8400	N/A
7	8/25/2016	69.4	7339	5283	4621	353000	8381	N/A
8	8/26/2016	79.0	7629	5268	4106	351950	8447	N/A
9	8/26/2016	78.0	7502	5164	4578	352000	8340	N/A
10	8/26/2016	76.6	7900	5294	5213	351400	9636	N/A
11	8/27/2016	77.1	7612	5372	4103	352100	8284	N/A
12	8/27/2016	78.2	7687	5571	4998	351600	8227	N/A
13	8/28/2016	80.1	7797	5359	4841	352100	8227	N/A
14	8/29/2016	78.2	7752	5222	4980	351600	8095	N/A
15	8/30/2016	80.9	7397	5206	4747	353600	8146	N/A
16	8/30/2016	83.1	7353	5187	4888	351700	8061	N/A
17	8/31/2016	79.0	7279	5323	4866	351600	8011	N/A
18	9/1/2016	84.9	7380	5142	5387	352200	8215	N/A
19	9/1/2016	80.6	7665	5316	4295	325450	9195	N/A
20	9/1/2016	84.0	7220	5217	4639	351600	8359	N/A
21	9/2/2016	78.2	7261	5281	4737	245950	8153	N/A
22	9/3/2016	84.5	7417	5313	5135	351950	8119	N/A
23	9/3/2016	86.7	7443	5179	5021	352200	8101	N/A
24	9/3/2016	84.8	7453	5017	4834	352200	8349	N/A
25	9/4/2016	83.1	7175	5168	5435	351650	7956	N/A
26	9/4/2016	81.9	7174	5400	4567	351350	8370	N/A
27	9/5/2016	80.0	7223	5278	4979	352000	8134	N/A
28	9/5/2016	83.6	6960	5217	4540	352350	8140	N/A
29	9/6/2016	82.6	7043	5091	4475	349350	7895	N/A
30	9/6/2016	84.4	6878	5286	4787	351400	8168	N/A
31	9/7/2016	83.0	7211	5254	4017	351200	9620	N/A
32	9/7/2016	83.8	6831	5228	5000	354900	8393	N/A
33	9/8/2016	83.1	6898	5157	4800	352300	8338	N/A
34	9/8/2016	83.0	6819	5319	4937	351800	8508	N/A
35	9/9/2016	83.9	6950	5165	4881	351650	8512	N/A
36	9/9/2016	83.5	6999	5303	4943	351800	7747	N/A
37	9/9/2016	80.3	6767	5291	4510	335300	7912	N/A
38	9/10/2016	83.9	7037	5277	4942	352350	8315	N/A
39	9/10/2016	83.0	7095	5351	5231	351500	8217	N/A
40	9/10/2016	84.0	6864	5225	4702	351350	8377	N/A
41	9/11/2016	85.6	6924	5247	4982	352300	8096	N/A
42	9/11/2016	84.5	6893	5094	5110	351550	8042	N/A
43	9/11/2016	81.7	6751	5267	5015	351400	9571	N/A
44	9/12/2016	84.3	7005	5595	5034	352000	8282	N/A
45	9/12/2016	84.7	6845	5046	4899	351700	8196	N/A
46	9/12/2016	84.9	6828	5356	4961	351050	8262	N/A
47	9/13/2016	83.1	6819	5411	4359	351450	8136	N/A
48	9/13/2016	84.9	6602	5336	4941	351350	8109	N/A
49	9/13/2016	84.2	6542	5146	4577	351050	8186	N/A
50	9/13/2016	85.6	6444	5285	5026	352150	8099	N/A
51	9/14/2016	84.2	6498	5724	5042	352350	8095	N/A
52	9/14/2016	85.9	6559	5763	5195	352350	8072	N/A
53	9/14/2016	81.0	6497	5396	5340	350800	8065	N/A
54	9/14/2016	79.7	6850	5704	3737	355030	7622	N/A
AVG=		80.5	7,163	5,328	4,782	18,719,530	8,339	TOTAL

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EXHIBIT 3

LITHOLOGY/ FORMATION	TOP DEPTH (TVD) From Surface	BOTTOM DEPTH (TVD) From Surface	TOP DEPTH (MD) From Surface	BOTTOM DEPTH (MD) From Surface
Fresh Water	112'	N/A	112'	N/A
Fresh Water	147'	N/A	147'	N/A
Fresh Water	295'	N/A	295'	N/A
Sandstone	0	97	0	97
Shale	est. 97	577	est. 97	577
Sandstone	est. 577	777	est. 577	777
Shale	est. 777	1,017	est. 777	1,017
Sandstone	est. 1017	1097	est. 1017	1097
Shale	est. 1097	1177	est. 1097	1177
Sandstone	est. 1177	1217	est. 1177	1217
Shale	est. 1217	1317	est. 1217	1317
Sandstone/siltstone	est. 1317	1357	est. 1317	1357
Shale	est. 1357	1417	est. 1357	1417
Sandstone	est. 1417	1557	est. 1417	1557
Trace Coal/Sandstone	est. 1557	1597	est. 1557	1597
Sandstone	est. 1597	1737	est. 1597	1737
Shale	est. 1737	1837	est. 1737	1837
Sandstone	est. 1837	1877	est. 1837	1877
Shale	est.1877	1637	est.1877	1637
Sandstone	est. 1637	1997	est. 1637	1997
Shale	est. 1997	2093	est. 1997	2093
Big Lime	2093	2602	2093	2602
Gantz Sand	2602	2730	2602	2730
Fifty Foot Sandstone	2730	2815	2730	2815
Gordon	2815	3153	2815	3153
Fifth Sandstone	3153	3810	3153	3810
Speechley	3810	4159	3810	4159
Baltown	4159	4626	4159	4626
Bradford	4626	5064	4626	5064
Benson	5064	5362	5064	5362
Alexander	5362	5508	5362	5508
Elk	5508	6018	5508	6018
Rhinestreet	6018	6332	6018	6344
Sycamore	6332	6501	6344	6532
Middlesex	6501	6626	6532	6702
Burkett	6626	6,654	6702	6,756
Tully	6654	6693	6756	6856
Marcellus	6693	N/A	6856	N/A

*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:	8/22/2016
Job End Date:	9/14/2016
State:	West Virginia
County:	Doddridge
API Number:	47-017-06719-00-00
Operator Name:	Antero Resources Corporation
Well Name and Number:	Devonian Unit 2H
Latitude:	39.30487220
Longitude:	-80.81480830
Datum:	NAD83
Federal Well:	NO
Indian Well:	NO
True Vertical Depth:	6,977
Total Base Water Volume (gal):	19,599,812
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	100.00000	89.55966	
DWP-975	CWS	Breaker					
				Listed Below			

DWP-641	CWS	Friction Reducer					
				Listed Below			
DAP-103	CWS	Iron Control					
				Listed Below			
DWP-844	CWS	Microbiocide					
				Listed Below			
Sand (Proppant)	CWS	Propping Agent					
				Listed Below			
Acetic Acid	CWS	Acid					
				Listed Below			
DWP-111	CWS	Gel Slurry					
				Listed Below			
DAP-925	CWS	Acid Corrosion Inhibitor					
				Listed Below			
DAP-902	CWS	Scale Inhibitor					
				Listed Below			
DWP-901	CWS	Breaker					

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				Listed Below			
Other Chemical (s)	Listed Above	See Trade Name (s) List					
				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	10.20967	
			Hydrochloric acid	7647-01-0	37.00000	0.05533	
			Polymer	26100-47-0	45.00000	0.03106	
			Distillates (petroleum), hydrotreated middle	64742-46-7	60.00000	0.02809	
			Guar gum	9000-30-0	60.00000	0.02809	
			Paraffinic hydrocarbon solvent	64742-47-8	30.00000	0.02071	
			Calcite	471-34-1	1.00000	0.01930	
			Ammonium chloride	12125-02-9	11.00000	0.00759	
			2-Propenoic acid, homopolymer, sodium salt	9003-04-7	40.00000	0.00641	
			Polyethylene glycol mixture	25322-68-3	54.50000	0.00600	
			Goethite	1310-14-1	0.10000	0.00381	
			Illite	12173-60-3	1.00000	0.00283	
			Sorbitan monooleate	1338-43-8	4.00000	0.00276	
			Quaternary ammonium compounds, bis (hydrogenated tallow alkyl)dimethyl, salts with bentonite	68953-58-2	5.00000	0.00234	
			2,2-Dibromo-3-Nitrilopropionamide	10222-01-2	20.00000	0.00220	
			Polyethylene glycol monooleate	9004-96-0	3.00000	0.00207	
			Apatite	64476-38-6	0.10000	0.00197	
			Biotite	1302-27-8	0.10000	0.00197	
			1,2-Propanediol	57-55-6	10.00000	0.00160	

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DATE	DESCRIPTION	AMOUNT	BALANCE
10/1/17
10/2/17
10/3/17
10/4/17
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			Sorbitol tetraoleate	61723-83-9	2.00000	0.00138	
			Ilmenite	98072-94-7	0.10000	0.00105	
			Ammonium Persulfate	7727-54-0	100.00000	0.00076	
			Oxirane, 2-methyl-, polymer with oxirane, monodecyl ether	37251-67-5	1.50000	0.00070	
			Amines, tallow alkyl, ethoxylated	61791-26-2	1.00000	0.00069	
			Citric acid	77-92-9	60.00000	0.00052	
			Sodium bromide	7647-15-6	4.00000	0.00044	
			Alcohols, C12-14, ethoxylated	84133-50-6	0.50000	0.00035	
			Dibromoacetonitrile	3252-43-5	3.00000	0.00033	
			Vinylidene chloride-methyl acrylate copolymer	25038-72-6	30.00000	0.00013	
			Acrylamide	79-06-1	0.10000	0.00007	
			Methanol	67-56-1	60.00000	0.00004	
			Poly(tetrafluoroethylene)	9002-84-0	1.00000	0.00002	
			Hydrated magnesium silicate	14807-96-6	1.00000	0.00002	
			Fatty acids, tall-oil	61790-12-3	30.00000	0.00002	
			Modified thiourea polymer	68527-49-1	30.00000	0.00002	
			Alcohols, C14-15, ethoxylated	68951-67-7	30.00000	0.00002	
			Formaldehyde	50-00-0	0.10000	0.00001	
			Propargyl Alcohol	107-19-7	10.00000	0.00001	
			Sodium chloride	7647-14-5	1.00000	0.00001	
			Alkenes, C>10 a-	64743-02-8	5.00000	0.00001	

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* 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°20'00"

6,549'

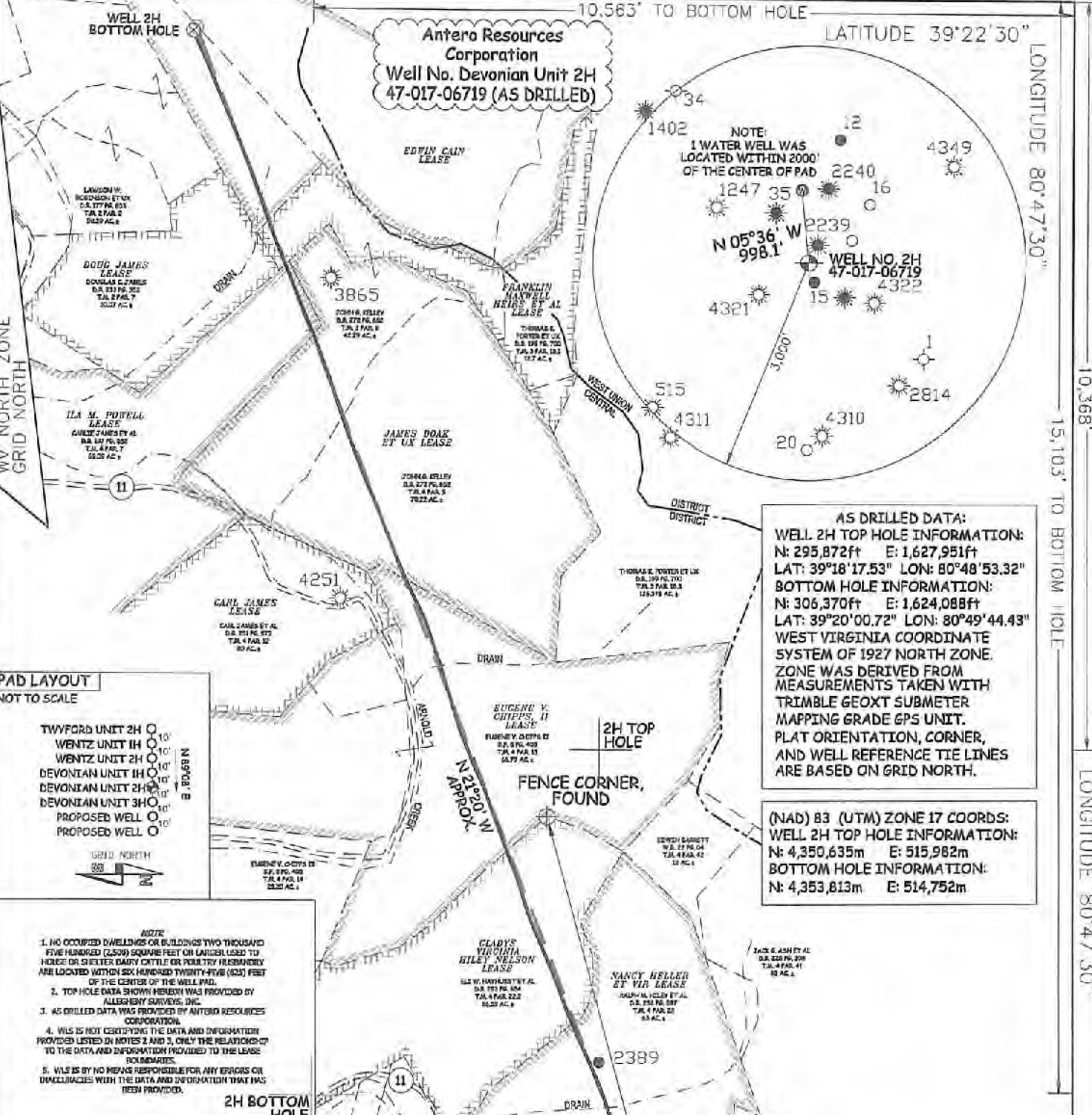
LATITUDE 39°22'30"

LONGITUDE 80°47'30"

10,368'

LONGITUDE 80°47'30"

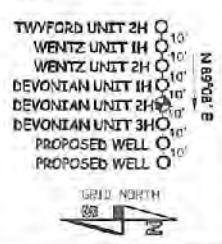
Antero Resources Corporation
Well No. Devonian Unit 2H
47-017-06719 (AS DRILLED)



AS DRILLED DATA:
WELL 2H TOP HOLE INFORMATION:
N: 295,872ft E: 1,627,951ft
LAT: 39°18'17.53" LON: 80°48'53.32"
BOTTOM HOLE INFORMATION:
N: 306,370ft E: 1,624,088ft
LAT: 39°20'00.72" LON: 80°49'44.43"
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: 4,350,635m E: 515,982m
BOTTOM HOLE INFORMATION:
N: 4,353,813m E: 514,752m

PAD LAYOUT
NOT TO SCALE



- NOTE
- 1. NO OCCUPIED DWELLINGS OR BUILDINGS TWO THOUSAND FIVE HUNDRED (2,500) SQUARE FEET OR LARGER USED TO HOUSE OR SHEPHERD BARRY CATTLE OR POULTRY HERDSHEPHERY ARE LOCATED WITHIN 250 HUNDRED TWENTY-FIVE (250) 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 RELATIONS OF THE DATA AND INFORMATION PROVIDED TO THE LEASE BOUNDARIES.
 - 5. WLS IS BY NO MEANS RESPONSIBLE FOR ANY ERRORS OR UNACCURACIES WITH THE DATA AND INFORMATION THAT HAS BEEN PROVIDED.



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 # 15-003WA
DRAWING # DEVONIAN2HAD
SCALE 1" = 1000'
MINIMUM DEGREE OF ACCURACY SUBMETER
PROVEN SOURCE OF ELEV. SUBMETER MAPPING GRADE OPS
STATE OF WEST VIRGINIA DEPARTMENT OF ENERGY DIVISION OF OIL AND GAS

LEGEND
- - - Surfaces Owner Boundary Lines +/-
- - - Interior Surface Tracts +/-
⊕ Found monument, as noted
○ Proposed Well Path
⊙ As Drilled Well Path
DATE 01/08/15
OPERATOR'S WELL# DEVONIAN UNIT #2H

WELL TYPE: OIL ___ GAS X LIQUID INJECTION ___ WASTE DISPOSAL ___
(IF "GAS") PRODUCTION ___ STORAGE ___ DEEP ___ SHALLOW X
LOCATION: ELEVATION 1,161' ORIGINAL - 1,171' AS-DRILLED WATERSHED HEADWATERS MIDDLE ISLAND CREEK
QUADRANGLE WEST UNION 7.5' DISTRICT CENTRAL COUNTY DODDRIDGE
SURFACE OWNER GEORGE D. LAMBERT ACREAGE 37.51 ACRES +/-
OIL & GAS ROYALTY OWNER FLORA SWEENEY ET AL; G.W. PIGGOTT ET UX; JONATHAN DAVIS ET AL; LEASE ACREAGE 103 ACRES±; 124.5 ACRES±; 52 ACRES±;
NANCY HELLER ET VIR; GLADYS VIRGINIA HILEY NELSON; EUGENE V. CHIPPS; JAMES DOAK ET UX; ILA M. POWELL; FRANKLIN MAXWELL HERS ET AL; EDWIN CAIN 69 ACRES±; 60.55 ACRES±; 120 ACRES±; 80 ACRES±; 69 ACRES±; 105 ACRES±; 121 ACRES±
PROPOSED WORK: DRILL ___ CONVERT ___ DRILL DEEPER ___ REDRILL ___ FRACTURE OR STIMULATE ___
PLUG OFF OLD FORMATION ___ PERFORATE NEW FORMATION ___ OTHER PHYSICAL CHANGE IN WELL
(SPECIFY) (X) AS DRILLED ___ PLUG & ABANDON ___ CLEAN OUT & REPLUG ___
TARGET FORMATION MARCELLUS ESTIMATED DEPTH 6,725' TVD 17,736' MD
WELL OPERATOR ANTERO RESOURCES CORP. DESIGNATED AGENT DIANNA STAMPER - CT CORPORATION SYSTEM
ADDRESS 1615 WYNNKOOP STREET ADDRESS 5400 D BIG TYLER ROAD
DENVER, CO 80202 CHARLESTON, WV 25313

09/15/2017



STATE OF WEST VIRGINIA, DIVISION
 OFFICE OF ENVIRONMENTAL PROTECTION,
 WILLow LAND SURVEYING PLLC
 220 MASONIC AVE. PENNSBORO
 WEST VIRGINIA 26415

JOB # 15-003WA	DRAWING # DEVONIAN#HAD	SCALE 1" = 1000'	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
DATE 01/08/15	OPERATOR'S WELL# DEVONIAN UNIT#2H	WASTE DISPOSAL			

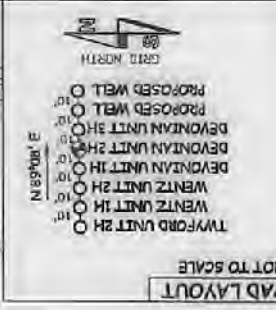
(F "GAS") PRODUCTION X STORAGE LOCATION: ELEVATION 1,177 AS-DILLED QUADRANGLE WEST UNION 7.5 DISTRICT CENTRAL SURFACE OWNER GEORGE D. LAMBERT OIL & GAS ROYALTY OWNER FLORENCE SWEENEY ET AL.; G.W. PIGGOTT ET UX; JONATHAN DAVIS ET AL. LEASE ACRES: 103 ACRES#; 124.5 ACRES#; 52 ACRES#; 69 ACRES#; 0.75 ACRES#; 120 ACRES#; 80 ACRES#; 106 ACRES#; 121 ACRES# COUNTY NAME PERMIT COUNTY STATE COUNTY PERMIT 0719 - 017 - 47 - 08719	WELT TYPE: OIL GAS X LIQUID INJECTION (F "GAS") PRODUCTION X STORAGE DEEP SHALLOW X WASTE DISPOSAL
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FORM FW-6	DENVER, CO 80202	CHARLESTON, WV 25313
ADDRESS 1615 WYNKOOP STREET	ADDRESS 5400 D BIG TYLER ROAD	ADDRESS 5400 D BIG TYLER ROAD
WELL OPERATOR ANTERO RESOURCES CORP.	DESIGNATED AGENT DIANNA STAMER - CT CORPORATION SYSTEM	DESIGNATED AGENT DIANNA STAMER - CT CORPORATION SYSTEM
TARGET FORMATION MARCELLUS	ESTIMATED DEPTH 6,725 TVD 17,736 MD	ESTIMATED DEPTH 6,725 TVD 17,736 MD
(SPECIFY) (X) AS DRILLED	PLUG & ABANDON	PLUG & ABANDON
PROPOSED WORK: DRILL	CONVERT	CONVERT
DRILL DEEPER	REDRILL	REDRILL
PERFORATE NEW FORMATION	OTHER PHYSICAL CHANGE IN WELL	OTHER PHYSICAL CHANGE IN WELL
FRACURE OR STIMULATE		



AS DRILLED DATA:
 WELL 2H TOP HOLE INFORMATION:
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 WELL 2H TOP HOLE INFORMATION:
 N: 4,360,630m E: 519,982m
 BOTTOM HOLE INFORMATION:
 N: 4,353,813m E: 514,752m



1. NO EXISTING BUILDINGS OR BUILDINGS TWO THOUSAND FEET OR GREATER FROM THE WELL PAD OR LARGER USED TO HOUSE OR STORE MATERIALS OR EQUIPMENT SHALL BE USED TO LOCATE OR IDENTIFY THE WELL PAD. (SEE NOTE 1)
 2. THE WELL PAD SHALL BE IDENTIFIED BY A PERMANENT MARKER LOCATED WITHIN SIX HUNDRED TWENTY-FIVE (625) FEET OF THE CENTER OF THE WELL PAD.
 3. THE WELL PAD SHALL BE IDENTIFIED BY A PERMANENT MARKER LOCATED WITHIN SIX HUNDRED TWENTY-FIVE (625) FEET OF THE CENTER OF THE WELL PAD.
 4. THIS IS NOT A SURVEYING DOCUMENT AND DOES NOT PROVIDE A LEGAL DESCRIPTION OF THE WELL PAD OR THE SURROUNDING LANDS.
 5. THIS IS NOT A LEGAL DESCRIPTION OF THE WELL PAD OR THE SURROUNDING LANDS.
 6. THIS IS NOT A LEGAL DESCRIPTION OF THE WELL PAD OR THE SURROUNDING LANDS.
 7. THIS IS NOT A LEGAL DESCRIPTION OF THE WELL PAD OR THE SURROUNDING LANDS.
 8. THIS IS NOT A LEGAL DESCRIPTION OF THE WELL PAD OR THE SURROUNDING LANDS.
 9. THIS IS NOT A LEGAL DESCRIPTION OF THE WELL PAD OR THE SURROUNDING LANDS.
 10. THIS IS NOT A LEGAL DESCRIPTION OF THE WELL PAD OR THE SURROUNDING LANDS.

LONGITUDE 80°47'30" (vertical)

LONGITUDE 80°47'30" (horizontal)

LONGITUDE 80°47'30" (horizontal)

LONGITUDE 80°47'30" (horizontal)

17/01/2017

Antero Resources Corporation
 Well No. Devonian Unit 2H
 47-017-06719 (AS DRILLED)

