

APPROVED

WR-35
Rev. 8/23/13

Page ___ of ___

NAME: Antero

DATE: 11/3/17

State of West Virginia

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

API 47-017-06626 County Doddridge District Central
Quad West Union 7.5' Pad Name McGill Pad Field/Pool Name -----
Farm name Mary F. Brown Well Number Wilhelm 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 4347281m Easting 513048m
Landing Point of Curve Northing 4347420.417m Easting 512872.476m
Bottom Hole Northing 4350219m Easting 511970m

Elevation (ft) 1165' 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 12/05/2014 Date drilling commenced 12/06/2014 Date drilling ceased 03/26/2016
Date completion activities began 03/29/2017 Date completion activities ceased 06/24/2017
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 200' Open mine(s) (Y/N) depths No
Salt water depth(s) ft 1835' Void(s) encountered (Y/N) depths No
Coal depth(s) ft 1195', 1355', 2005' Cavern(s) encountered (Y/N) depths No
Is coal being mined in area (Y/N) No

Reviewed by:

01/05/2018

API 47-017 - 06626 Farm name Mary F. Brown Well number Wilhelm Unit 1H

CASING STRINGS	Hole Size	Casing Size	Depth	New or Used	Grade w/ft	Basket Depth(s)	Did cement circulate (Y/ N) * Provide details below*
Conductor	30"	20"	59'	New	94#, H-40	N/A	Y
Surface	17-1/2"	13-3/8"	380'	New	48#, H-40	N/A	Y
Coal							
Intermediate 1	12-1/4"	9-5/8"	2561'	New	36#, J-55	N/A	Y
Intermediate 2							
Intermediate 3							
Production	8-3/4"/8-1/2"	5-1/2"	16831'	New	23#, P-110	N/A	Y
Tubing		2-3/8"	6793'		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	150 sx	15.6	1.18	177	0'	8 Hrs.
Surface	Class A	456 sx	15.6	1.18	538	0'	8 Hrs.
Coal							
Intermediate 1	Class A	944 sx	15.6	1.18	1114	0'	8 Hrs.
Intermediate 2							
Intermediate 3							
Production	Class H	991 sx (Lead) 1550 sx (Tail)	14.5 (Lead), 15.2 (Tail)	1.33 (Lead), 1.83 (Tail)	4155	-500' into Intermediate Casing	8 Hrs.
Tubing							

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Drillers TD (ft) 16831' MD, 6612' TVD (BHL), 6701' TVD (Deepest Point Drilled) Loggers TD (ft) 16782' MD
 Deepest formation penetrated Marcellus Plug back to (ft) N/A
 Plug back procedure N/A

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Kick off depth (ft) 6037'

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

** This is a subsequent well. Antero only runs wireline logs on one well on a multi-well pad (Nero Unit 1H API #47-017-06211). Please reference the wireline logs submitted with Form WR-35 for Nero Unit 1H. A Cement Bond Log has been included with this submittal.

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- 017 - 06626 Farm name Mary F. Brown Well number Wilhelm Unit 1H

<u>PRODUCING FORMATION(S)</u>	<u>DEPTHS</u>		
<u>Marcellus</u>	<u>6662' (TOP)</u>	<u>TVD</u>	<u>6889' (TOP) MD</u>
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____

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 4494 mcfpd Oil 6 bpd NGL --- bpd Water 17 bpd GAS MEASURED BY Estimated Orifice Pilot

<u>LITHOLOGY/ FORMATION</u>	<u>TOP</u>		<u>BOTTOM</u>		<u>DESCRIBE ROCK TYPE AND RECORD QUANTITY AND TYPE OF FLUID (FRESHWATER, BRINE, OIL, GAS, H₂S, ETC)</u>
	<u>DEPTH IN FT NAME TVD</u>	<u>DEPTH IN FT TVD</u>	<u>DEPTH IN FT MD</u>	<u>DEPTH IN FT MD</u>	

***PLEASE SEE ATTACHED EXHIBIT 3**

Please insert additional pages as applicable.

Drilling Contractor Precision Drilling Company, LP
Address 2640 Reach Road City Williamsport State PA Zip 17701

Logging Company Clutch Energy Services LLC
Address 2154 Greensburg Road City New Kensington State PA Zip 15068

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

Stimulating Company US Well Services
Address 533 Industrial Park Dr. City Jane Lew State WV Zip 26378

Please insert additional pages as applicable.

Completed by Samantha Klaas Telephone 303-357-6759
Signature [Signature] Title Permitting Agent Date 11/01/2017

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

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EXHIBIT 1

Stage No.	Perforation Date	Perforated from MD ft.	Perforated to MD ft.	Number of Perforations	Formations
1	3/29/2017	16560	16729	60	Marcellus
2	5/11/2017	16359	16528	60	Marcellus
3	5/11/2017	16158	16328	60	Marcellus
4	5/12/2017	15958	16127	60	Marcellus
5	5/12/2017	15757	15926	60	Marcellus
6	5/13/2017	15556	15726	60	Marcellus
7	5/13/2017	15356	15525	60	Marcellus
8	5/13/2017	15155	15324	60	Marcellus
9	5/13/2017	14954	15124	60	Marcellus
10	5/14/2017	14754	14923	60	Marcellus
11	5/14/2017	14553	14722	60	Marcellus
12	5/15/2017	14352	14522	60	Marcellus
13	5/15/2017	14152	14321	60	Marcellus
14	5/15/2017	13951	14120	60	Marcellus
15	5/16/2017	13750	13920	60	Marcellus
16	5/16/2017	13550	13719	60	Marcellus
17	5/16/2017	13349	13518	60	Marcellus
18	5/17/2017	13148	13318	60	Marcellus
19	5/17/2017	12948	13117	60	Marcellus
20	5/17/2017	12747	12916	60	Marcellus
21	5/18/2017	12546	12716	60	Marcellus
22	5/18/2017	12346	12515	60	Marcellus
23	5/18/2017	12145	12314	60	Marcellus
24	5/19/2017	11944	12114	60	Marcellus
25	5/19/2017	11744	11913	60	Marcellus
26	5/19/2017	11543	11712	60	Marcellus
27	5/19/2017	11342	11512	60	Marcellus
28	5/20/2017	11142	11311	60	Marcellus
29	5/20/2017	10941	11110	60	Marcellus
30	5/20/2017	10740	10910	60	Marcellus
31	5/21/2017	10540	10709	60	Marcellus
32	5/21/2017	10339	10508	60	Marcellus
33	5/21/2017	10138	10308	60	Marcellus
34	5/22/2017	9938	10107	60	Marcellus
35	5/22/2017	9737	9906	60	Marcellus
36	5/22/2017	9536	9706	60	Marcellus
37	5/23/2017	9336	9505	60	Marcellus
38	5/23/2017	9135	9304	60	Marcellus
39	5/23/2017	8934	9104	60	Marcellus
40	5/24/2017	8734	8903	60	Marcellus
41	5/24/2017	8533	8702	60	Marcellus
42	5/24/2017	8332	8502	60	Marcellus
43	5/25/2017	8132	8301	60	Marcellus
44	5/25/2017	7931	8100	60	Marcellus
45	5/25/2017	7730	7900	60	Marcellus
46	5/26/2017	7530	7699	60	Marcellus
47	5/26/2017	7329	7498	60	Marcellus
48	5/26/2017	7128	7298	60	Marcellus
49	5/27/2017	6928	7097	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	5/11/2017	79.5	7697	5482	3984	395220	8986	N/A
2	5/11/2017	79.8	8008	5529	5550	395760	8426	N/A
3	5/11/2017	79.4	7591	5386	5089	396000	8436	N/A
4	5/12/2017	80.0	7661	5407	4821	399120	8539	N/A
5	5/12/2017	70.2	7138	5604	4932	394840	8377	N/A
6	5/13/2017	75.5	7494	5264	4549	397700	8437	N/A
7	5/13/2017	80.1	7795	5268	4052	396060	9485	N/A
8	5/13/2017	78.3	7437	5175	4900	394520	8373	N/A
9	5/13/2017	77.1	7204	5271	4435	393940	8361	N/A
10	5/14/2017	79.4	7687	5289	4363	375260	8171	N/A
11	5/14/2017	79.2	7706	5225	4327	394170	8795	N/A
12	5/15/2017	76.7	7584	5432	4592	394840	8366	N/A
13	5/15/2017	80.4	7796	5676	3587	394750	8729	N/A
14	5/15/2017	80.5	7688	5711	4127	394420	8378	N/A
15	5/16/2017	79.7	7686	5175	4474	394000	8388	N/A
16	5/16/2017	79.7	7774	5293	4141	395850	8416	N/A
17	5/16/2017	78.4	7584	5597	3717	392910	8931	N/A
18	5/17/2017	78.4	7748	5518	3712	394070	8306	N/A
19	5/17/2017	78.5	7975	5275	3483	395350	8145	N/A
20	5/17/2017	78.1	7949	5364	4020	393450	10067	N/A
21	5/18/2017	79.2	7659	5468	4950	393480	8262	N/A
22	5/18/2017	76.1	7476	5225	5071	395750	8212	N/A
23	5/18/2017	74.4	7535	5497	5271	395820	8189	N/A
24	5/19/2017	77.6	7666	5608	4478	394440	8188	N/A
25	5/19/2017	75.8	7938	5633	5103	395830	8852	N/A
26	5/19/2017	77.4	7354	5153	5343	396260	8235	N/A
27	5/19/2017	79.9	7510	5329	4832	393820	8195	N/A
28	5/20/2017	78.5	7596	5361	4038	395870	8192	N/A
29	5/20/2017	72.0	7306	5497	3698	393000	8164	N/A
30	5/20/2017	76.7	7584	5708	3648	394450	8135	N/A
31	5/21/2017	77.0	7426	5919	3605	393500	8038	N/A
32	5/21/2017	75.0	7939	6495	3637	395500	7978	N/A
33	5/21/2017	79.5	7780	5894	4048	393650	8131	N/A
34	5/22/2017	75.0	8086	5833	3955	395000	9619	N/A
35	5/22/2017	76.0	7454	5686	3805	393500	8118	N/A
36	5/22/2017	74.6	7813	6427	3755	394260	8113	N/A
37	5/23/2017	75.5	7307	5182	4013	393630	8134	N/A
38	5/23/2017	74.0	7586	6124	3700	393500	8084	N/A
39	5/23/2017	74.6	7768	5853	3573	393430	7913	N/A
40	5/24/2017	74.2	7595	6312	3676	393890	7911	N/A
41	5/24/2017	73.0	7520	6373	3673	393500	7991	N/A
42	5/24/2017	69.2	7763	6173	3626	393420	8984	N/A
43	5/25/2017	73.0	7140	5983	3909	394690	8029	N/A
44	5/25/2017	74.1	7174	6698	3651	393695	7872	N/A
45	5/25/2017	73.7	7576	6970	3612	393390	8364	N/A
46	5/26/2017	72.0	7493	6748	3898	394000	9183	N/A
47	5/26/2017	69.0	7141	6677	3596	394500	7850	N/A
48	5/26/2017	68.6	7175	7167	3780	397820	8602	N/A
49	5/27/2017	72.9	7559	6866	3723	409280	7867	N/A
AVG=		76.3	7,594	5,751	4,174	19,335,105	411,517	TOTAL

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EXHIBIT 3

LITHOLOGY/ FORMATION	TOP DEPTH (TVD)	BOTTOM DEPTH (TVD)	TOP DEPTH (MD)	BOTTOM DEPTH (MD)
	From Surface	From Surface	From Surface	From Surface
Fresh Water	200'	N/A	200'	N/A
Shale/ Sandstone	est. 0	205	est. 0	205
Sandstone	est. 205	655	est. 205	655
Siltstone	est. 655	715	est. 655	715
Sandstone	est. 715	835	est. 715	835
Sandstone/ Limestone	est. 835	875	est. 835	875
Sandstone	est. 875	1035	est. 875	1035
Siltstone/ Limestone	est. 035	1145	est. 035	1145
Sandstone	est. 1145	1195	est. 1145	1195
Sandstone/ Trace Coal	est. 1195	1235	est. 1195	1235
Siltstone/ Limestone	est. 1235	1318	est. 1235	1318
Shale/Siltstone	est. 1318	1325	est. 1318	1325
Sandstone	est. 1325	1355	est. 1325	1355
Sandstone/ Trace Coal	est. 1355	1435	est. 1355	1435
Sandstone/ Siltstone	est. 1435	2005	est. 1435	2005
Sandstone/ Trace Coal	est. 2005	2035	est. 2005	2035
Sandstone	est. 2035	2124	est. 2035	2132
Big Lime	2124	2230	2132	2239
Big Injun	2230	2626	2239	2635
Gantz Sand	2626	2778	2635	2787
Fifty Foot Sandstone	2778	2867	2787	2876
Gordon	2867	3183	2876	3192
Fifth Sandstone	3183	3215	3192	3224
Bayard	3215	3595	3224	3604
Warren	3595	3954	3604	3963
Speechley	3954	4241	3963	4250
Baltown	4241	4692	4250	4701
Bradford	4692	5110	4701	5119
Benson	5110	5394	5119	5403
Alexander	5394	5543	5403	5552
Elk	5543	6039	5552	6048
Rhinestreet	6039	6323	6048	6354
Sycamore	6323	6484	6354	6543
Middlesex	6484	6603	6543	6726
Burkett	6603	6631	6726	6790
Tully	6631	6662	6790	6889
Marcellus	6662	NA	6889	NA

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*Please note Antero determines formation tops based on mud logs that are only run on one well on a multi-well pad. The WV Department of Environmental Protection measured depth (MD) data on subsequent wells may be slightly different due to the well's unique departure.

01/05/2018

Hydraulic Fracturing Fluid Product Component Information Disclosure



Job Start Date:	5/11/2017
Job End Date:	5/27/2017
State:	West Virginia
County:	Doddridge
API Number:	47-017-06626-00-00
Operator Name:	Antero Resources Corporation
Well Name and Number:	Wilhelm 1H
Latitude:	39.27469722
Longitude:	-80.84890000
Datum:	NAD83
Federal Well:	NO
Indian Well:	NO
True Vertical Depth:	6,701
Total Base Water Volume (gal):	17,794,826
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
Water	Antero Resources	Carrier/Base Fluid					
			Water	7732-18-5	100.00000	88.22398	
Sand	U.S. Well Services, LLC	Proppant					
			Crystalline Silica, quartz	14808-60-7	100.00000	11.49406	
HCL Acid (12.6%-17.5%)	U.S. Well Services, LLC	Bulk Acid					
			Water	7732-18-5	87.40000	0.12121	
			Hydrogen Chloride	7647-01-0	17.50000	0.02818	
LGC-15	U.S. Well Services, LLC	Gelling Agents					
			Guar Gum	9000-30-0	50.00000	0.03847	
			Petroleum Distillates	64742-47-8	60.00000	0.03643	
			Suspending agent (solid)	14808-60-7	3.00000	0.00588	
			Surfactant	68439-51-0	3.00000	0.00231	
WFRA-405	U.S. Well Services, LLC	Friction Reducer					
			2-Propenoic acid, polymer with 29 propenamide	9003-06-9	30.00000	0.01487	
			Hydrated light distillate (petroleum)	64742-47-8	30.00000	0.01197	

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WFRA-500	U.S. Well Services, LLC	Friction Reducer				
			2-Propenoic acid, polymer with 29003-06-9 propenamide		30.00000	0.00778
			Hydrated light distillate (petroleum)	64742-47-8	30.00000	0.00626
Bioclear 2000	U.S. Well Services, LLC	Anti-Bacterial Agent				
			2,2-dibromo-3-nitrilopropionamide	10222-01-2	20.00000	0.00411
			Deionized Water	7732-18-5	28.00000	0.00235
AP One	U.S. Well Services, LLC	Gel Breakers				
			Ammonium Persulfate	7727-54-0	100.00000	0.00133
SI-1200s	U.S. Well Services, LLC	Scale Inhibitor				
			Alkyl Phosphonic Acid	Proprietary	5.00000	0.00063
			Ammonia	7664-41-7	0.50000	0.00010
AI-303	U.S. Well Services, LLC	Acid Corrosion Inhibitors				
			Ethylene glycol	107-21-1	40.00000	0.00004
			Formic acid	64-18-6	20.00000	0.00001
			Cinnamaldehyde	104-55-2	20.00000	0.00001
			Butyl cellosolve	111-76-2	20.00000	0.00001
			Polyether	60828-78-6	10.00000	0.00001
			Acetophenone,thiourea,formaldehyde polymer	68527-49-1	5.00000	0.00000

Ingredients shown above are subject to 29 CFR 1910.1200(i) and appear on Material Safety Data Sheets (MSDS). Ingredients shown below are Non-MSDS.

* Total Water Volume sources may include fresh water, produced water, and/or recycled water

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

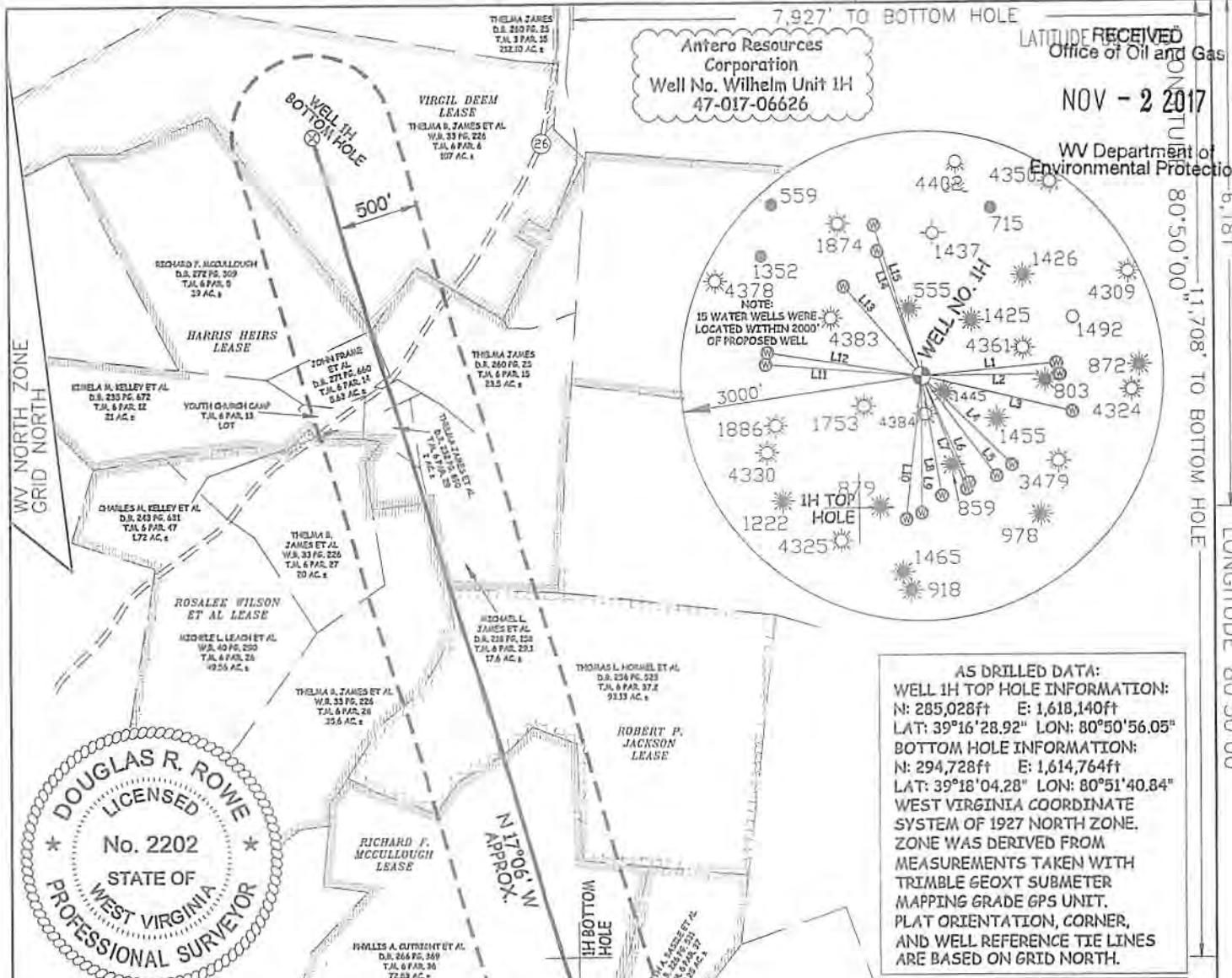
Note: For Field Development Products (products that begin with FDP), MSDS level only information has been provided.

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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LATITUDE 39°17'30"

4,407'



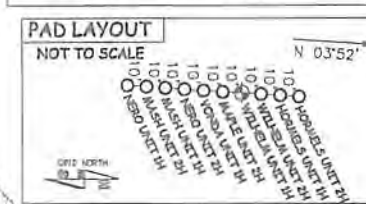
Antero Resources Corporation
Well No. Wilhelm Unit 1H
47-017-06626

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AS DRILLED DATA:
WELL 1H TOP HOLE INFORMATION:
N: 285,028ft E: 1,618,140ft
LAT: 39°16'28.92" LON: 80°50'56.05"
BOTTOM HOLE INFORMATION:
N: 294,728ft E: 1,614,764ft
LAT: 39°18'04.28" LON: 80°51'40.84"
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: 4,347,281m E: 513,048m
BOTTOM HOLE INFORMATION:
N: 4,350,219m E: 511,970m



- 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. WAS 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. WAS IS BY NO MEANS RESPONSIBLE FOR ANY ERRORS OR INACCURACIES WITH THE DATA AND INFORMATION THAT HAS BEEN PROVIDED.

LINE	BEARING	DISTANCE
L1	N 84°43' E	1679.3
L2	N 89°29' E	1715.1
L3	S 76°43' E	1919.4
L4	S 45°39' E	1550.1
L5	S 37°02' E	1534.8
L6	S 24°03' E	1429.7
L7	S 21°49' E	1493.3
L8	S 09°34' E	1487.9
L9	S 00°08' W	1687.8
L10	S 06°20' W	1776.6
L11	N 85°41' W	1949.7
L12	N 85°41' W	1949.7
L13	N 41°09' W	1469.7
L14	N 19°34' W	1630.7
L15	N 17°34' W	1946.0



JOB # 12-103WA
DRAWING # WILHELM1HAD
SCALE 1" = 1000'
MINIMUM DEGREE OF ACCURACY SUBMETER
PROVEN SOURCE OF ELEV. SUBMETER MAPPING GRADE GPS

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

DOUGLAS R. ROWE P.S. 2202
DATE 10/17/17
OPERATOR'S WELL # WILHELM UNIT #1H
API WELL # 47 - 017 - 06626
STATE COUNTY PERMIT

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

STATE OF WEST VIRGINIA DEPT. OF ENERGY DIVISION OF OIL AND GAS
WELL TYPE: OIL GAS LIQUID INJECTION WASTE DISPOSAL (IF "GAS") PRODUCTION STORAGE DEEP SHALLOW
LOCATION: ELEVATION 1,165' WATERSHED HEADWATERS MIDDLE ISLAND CREEK
QUADRANGLE WEST UNION 7.5' DISTRICT CENTRAL COUNTY DODDRIE
SURFACE OWNER MARY F. BROWN ACREAGE 49.43 ACRES +/-
OIL & GAS ROYALTY OWNER MARY F. BROWN; PATRICK A. WRIGHT; WYSLA; THE STATE OF WEST VIRGINIA DEPT. OF MILITARY AFFAIRS, REGIONAL JAIL AND CORRECTIONAL FACILITY AUTHORITY; THELMA PRIMM ET AL; KEY OIL COMPANY; RICHARD F. MCCULLOUGH; ROBERT P. JACKSON; ROSALEE WILSON ET AL; HARRIS HEIRS; VIRGIL DEEM 78.04 AC±; 17 AC±; 72.83 AC±; 94 AC±; 100 AC±; 187 AC±; 107 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 ESTIMATED DEPTH 6,612' TVD 16,831' MD
WELL OPERATOR ANTERO RESOURCES CORP. DESIGNATED AGENT DIANNA STAMPER
ADDRESS 1615 WYNKOOP STREET ADDRESS CT CORPORATION SYSTEM
FORM WW-6 DENVER, CO 80202 CHARLESTON, WV 25313

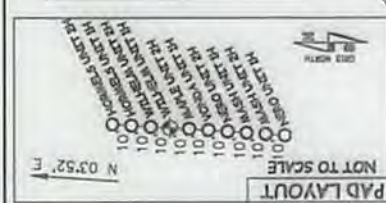
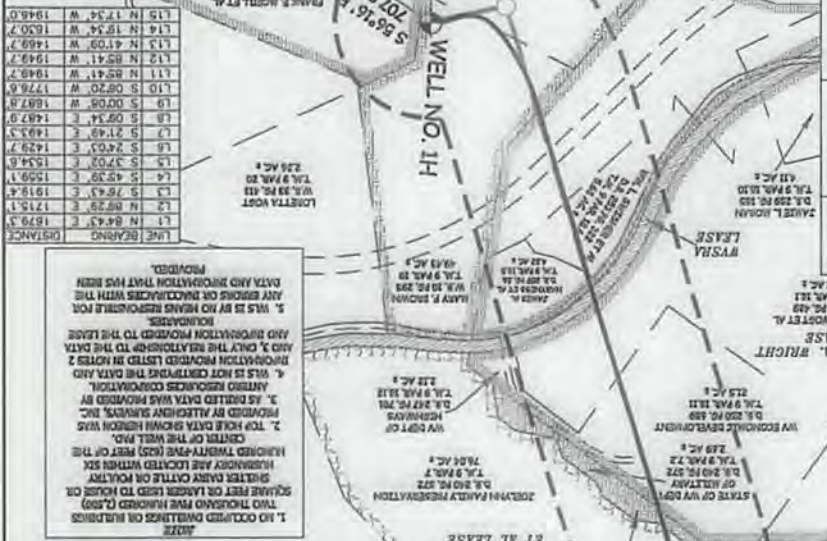
01/05/2018

WELL OPERATOR: ANTERO RESOURCES CORP.
 DESIGNATED AGENT: DIANNA STAMPER
 TARGET FORMATION: MARCELLUS
 ESTIMATED DEPTH: 6,612' TVD 16,831' MD
 PLUG & ABANDON: PLUG & ABANDON
 CLEAN OUT & REPLUG: CLEAN OUT & REPLUG
 PROPOSED WORK: DRILL CONVERT
 PLUG OFF OLD FORMATION: PERFORATE NEW FORMATION
 (SPECIFY) AS DRILLED
 SURFACE OWNER: MARY F. BROWN
 LEASE ACRES +/-: 49.43 ACRES +/-
 COUNTY NAME: DISTRICT CENTRAL COUNTY DODDRIDGE

LOCATION: ELEVATION 1,165' WATERSHED HEADWATERS MIDDLE ISLAND CREEK
 QUADRANGLE WEST UNION 7.5
 STATE OF WEST VIRGINIA DEPT. OF ENERGY DIVISION OF OIL AND GAS
 WELL TYPE: OIL GAS X LIQUID INJECTION WASTE DISPOSAL
 (IF "GAS") PRODUCTION X STORAGE DEEP SHALLOW X

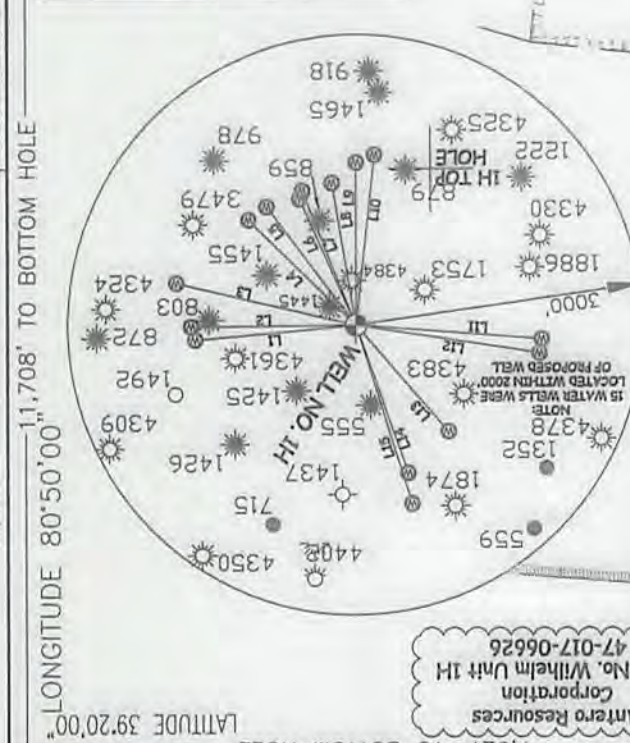


STATE OF WEST VIRGINIA, DIVISION
 OF ENVIRONMENTAL PROTECTION,
 OFFICE OF OIL AND GAS
 WILLOW LAND SURVEYING PLLC
 220 MASONIC AVE. PENNSBORO
 WEST VIRGINIA 26415



AS DRILLED DATA:
 WELL 1H TOP HOLE INFORMATION:
 N: 285,028ft E: 1,618,140ft
 LAT: 39°18'04.28" LON: 80°51'40.84"
 WEST VIRGINIA COORDINATE
 SYSTEM OF 1927 NORTH ZONE.
 MEASUREMENTS TAKEN WITH
 TRIMBLE GEOXT SUBMETER
 MAPPING GRADE GPS UNIT.
 PLAT ORIENTATION, CORNER,
 AND WELL REFERENCE LINES
 ARE BASED ON GRID NORTH.

(NAD) 83 (UTM) ZONE 17 COORDS:
 WELL 1H TOP HOLE INFORMATION:
 N: 4,247,281m E: 513,048m
 BOTTOM HOLE INFORMATION:
 N: 4,350,219m E: 511,970m



Antero Resources
 Corporation
 Well No. Wilhelm Unit 1H
 47-017-06626

LATITUDE 39°17'30" LONGITUDE 80°50'00" TO BOTTOM HOLE 7,927'
 LATITUDE 39°20'00" LONGITUDE 80°50'00" TO BOTTOM HOLE 11,708'
 LONGITUDE 80°50'00" TO BOTTOM HOLE 6,181'

LEGEND

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

DATE 10/17/17
 OPERATOR'S WELL # WILHELM UNIT 1H
 API WELL # 47 - 017 - 06626
 STATE COUNTY PERMIT

JOB # 12-103WA
 DRAWING # WILHELM1HAD
 SCALE 1" = 100'
 MINIMUM DEGREE OF ACCURACY
 PROVEN SOURCE OF ELEV. SUBMETER MAPPING GRADE GPS
 SUBMETER



01/05/2018