

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

Received
Office of Oil & Gas
MAY 18 2015

API 47 - 017 - 06245 County Doddridge District Greenbrier
Quad Salem & Big Isaac Pad Name Plaugher North Pad Field/Pool Name _____
Farm name Plaugher, Carolyn Well Number Irons 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 4,346,899.010m Easting 533,742.220m
Landing Point of Curve Northing 4,346,731.02m Easting 533,984.50m
Bottom Hole Northing 4,344,373.193m Easting 535,759.591m

Elevation (ft) 1364' 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 6/13/2013 Date drilling commenced 1/12/2014 Date drilling ceased 2/15/2014
Date completion activities began 3/21/2014 Date completion activities ceased 6/13/2014
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 144' Open mine(s) (Y/N) depths N
Salt water depth(s) ft 1887', 2308' Void(s) encountered (Y/N) depths N
Coal depth(s) ft 2315' Cavern(s) encountered (Y/N) depths N
Is coal being mined in area (Y/N) N

Reviewed by:
A.L. S/26/15 ✓
W.S. 06/05/2015

API 47-017 - 06245 Farm name Plaughter, Carolyn Well number Irons 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"	40'	New	94#/H-40	N/A	Y
Surface	17-1/2"	13-3/8"	396'	New	54.5#/J-55	N/A	Y
Coal							
Intermediate 1	12-1/4"	9-5/8"	2543'	New	36#/J-55	N/A	Y
Intermediate 2							
Intermediate 3							
Production	8-3/4"/8-1/2"	5-1/2"	17,634'	New	23#/P-110	N/A	Y
Tubing		2-3/8"	7612'	New	4.7#/N-80	N/A	N/A
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	200 sx	15.6	1.18	38 Cu. Ft.	0'	8 hrs
Surface	Class A	430 sx	15.6	1.18	275 Cu. Ft.	0'	8 hrs
Coal							
Intermediate 1	Class A	957 sx	15.6	1.18	796 Cu. Ft.	0'	8 hrs
Intermediate 2							
Intermediate 3							
Production	Class H	1197 sx (Lead), 1541 sx (Tail)	13.5 (Lead), 15.2 (Tail)	1.44 (Lead), 1.60 (Tail)	3572 Cu. Ft.	-500' into Intermediate Casing	8 hrs
Tubing							

Drillers TD (ft) 17,634' MD, 7466' TVD (BHL), 7541' TVD (Deepest Point Drilled) Loggers TD (ft) 17,586' MD

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

Plug back procedure N/A

Kick off depth (ft) 7266'

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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PERFORATION RECORD

Stage No.	Perforation date	Perforated from MD ft.	Perforated to MD ft.	Number of Perforations	Formation(s)

*PLEASE SEE ATTACHED EXHIBIT 1

Please insert additional pages as applicable.

STIMULATION INFORMATION PER STAGE

Complete a separate record for each stimulation stage.

Stage No.	Stimulations Date	Ave Pump Rate (BPM)	Ave Treatment Pressure (PSI)	Max Breakdown Pressure (PSI)	ISIP (PSI)	Amount of Proppant (lbs)	Amount of Water (bbls)	Amount of Nitrogen/other (units)

*PLEASE SEE ATTACHED EXHIBIT 2

Please insert additional pages as applicable.

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PRODUCING FORMATION(S)	DEPTHS		
Marcellus	7456' (Top)	TVD	7677' (Top) MD

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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 8124 mcfpd Oil --- bpd NGL --- bpd Water 853 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	
	0		0		

***PLEASE SEE ATTACHED EXHIBIT 3**

Please insert additional pages as applicable.

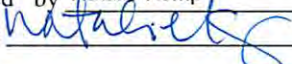
Drilling Contractor Frontier Drilling LLC
Address 562 Spring Run Road City Pennsboro State WV Zip 26415

Logging Company Rush Wellsite Services
Address 600 Alpha Drive City Canonsburg State PA Zip 15317

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

Stimulating Company U.S. Well Services
Address 533 Industrial Park Drive City Jane Lew State WV Zip 26378

Please insert additional pages as applicable.

Completed by Natalie Komp Telephone 303-357-6820
Signature  Title Permitting Agent Date 3/26/2015

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

06/05/2015

API 47-017-06245 Farm Name Plaugher, Carolyn Well Number Irons Unit 1H

EXHIBIT 1

Stage No.	Perforation Date	Perforated from MD ft.	Perforated to MD ft.	Number of Perforations	Formations
1	21-Mar-14	17373'	17542'	60	Marcellus
2	30-Apr-14	17171'	17341'	60	Marcellus
3	1-May-14	16970'	17140'	60	Marcellus
4	1-May-14	16769'	16939'	60	Marcellus
5	1-May-14	16568'	16738'	60	Marcellus
6	1-May-14	16367'	16537'	60	Marcellus
7	2-May-14	16166'	16336'	60	Marcellus
8	2-May-14	15965'	16135'	60	Marcellus
9	2-May-14	15764'	15934'	60	Marcellus
10	2-May-14	15563'	15733'	60	Marcellus
11	3-May-14	15362'	15532'	60	Marcellus
12	3-May-14	15161'	15330'	60	Marcellus
13	3-May-14	14960'	15129'	60	Marcellus
14	3-May-14	14759'	14928'	60	Marcellus
15	4-May-14	14558'	14727'	60	Marcellus
16	4-May-14	14357'	14526'	60	Marcellus
17	4-May-14	14156'	14325'	60	Marcellus
18	4-May-14	13955'	14124'	60	Marcellus
19	4-May-14	13753'	13923'	60	Marcellus
20	5-May-14	13552'	13722'	60	Marcellus
21	5-May-14	13351'	13521'	60	Marcellus
22	11-May-14	13150'	13320'	60	Marcellus
23	11-May-14	12949'	13119'	60	Marcellus
24	11-May-14	12748'	12918'	60	Marcellus
25	11-May-14	12547'	12717'	60	Marcellus
26	12-May-14	12346'	12516'	60	Marcellus
27	12-May-14	12145'	12315'	60	Marcellus
28	12-May-14	11944'	12113'	60	Marcellus
29	12-May-14	11743'	11912'	60	Marcellus
30	13-May-14	11542'	11711'	60	Marcellus
31	13-May-14	11341'	11510'	60	Marcellus
32	13-May-14	11140'	11309'	60	Marcellus
33	13-May-14	10939'	11108'	60	Marcellus
34	14-May-14	10738'	10907'	60	Marcellus
35	14-May-14	10537'	10706'	60	Marcellus
36	18-May-14	10335'	10505'	60	Marcellus
37	18-May-14	10134'	10304'	60	Marcellus
38	18-May-14	9933'	10103'	60	Marcellus
39	19-May-14	9732'	9902'	60	Marcellus
40	19-May-14	9531'	9701'	60	Marcellus
41	19-May-14	9330'	9500'	60	Marcellus
42	19-May-14	9129'	9299'	60	Marcellus
43	19-May-14	8928'	9098'	60	Marcellus
44	20-May-14	8727'	8897'	60	Marcellus
45	20-May-14	8526'	8695'	60	Marcellus
46	20-May-14	8325'	8494'	60	Marcellus
47	20-May-14	8124'	8293'	60	Marcellus
48	20-May-14	7923'	8092'	60	Marcellus
49	21-May-14	7722'	7891'	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	30-Apr-14	69.0	8,423	7,407	4,846	232,460	6,760	N/A
2	30-Apr-14	71.0	8,067	6,483	4,286	227,426	6,185	N/A
3	1-May-14	70.0	8,061	6,424	5,085	229,900	6,161	N/A
4	1-May-14	72.0	7,901	5,667	5,061	230,800	6,185	N/A
5	1-May-14	73.0	7,835	5,661	4,393	228,920	6,116	N/A
6	1-May-14	72.0	8,025	5,856	4,848	230,440	6,135	N/A
7	2-May-14	72.0	8,062	5,794	4,709	227,500	5,977	N/A
8	2-May-14	70.0	7,722	5,810	5,589	177,800	5,231	N/A
9	2-May-14	74.0	7,786	5,886	5,603	230,060	6,177	N/A
10	2-May-14	73.0	8,038	5,792	5,492	229,480	6,066	N/A
11	3-May-14	75.0	8,053	5,811	5,864	230,920	6,031	N/A
12	3-May-14	72.0	7,722	5,822	5,371	227,400	6,008	N/A
13	3-May-14	72.0	7,890	5,968	4,822	227,400	6,122	N/A
14	3-May-14	69.0	7,998	5,796	5,555	175,050	6,499	N/A
15	4-May-14	69.0	8,009	5,895	5,062	177,730	6,458	N/A
16	4-May-14	71.0	7,432	5,711	5,033	227,300	5,981	N/A
17	4-May-14	71.0	7,528	5,754	5,876	227,000	5,972	N/A
18	4-May-14	73.0	7,841	5,885	5,040	230,480	5,950	N/A
19	4-May-14	75.0	7,820	5,805	5,394	229,800	5,941	N/A
20	5-May-14	73.0	7,715	5,934	5,436	227,100	5,979	N/A
21	5-May-14	74.0	7,780	5,710	5,382	225,800	5,933	N/A
22	11-May-14	76.8	7,792	5,685	5,268	230,600	5,888	N/A
23	11-May-14	75.0	7,841	5,765	5,033	225,740	5,912	N/A
24	11-May-14	73.0	7,727	5,952	5,283	225,000	5,886	N/A
25	11-May-14	72.9	8,085	6,357	5,152	228,120	5,846	N/A
26	12-May-14	72.1	8,037	6,249	5,086	225,130	5,855	N/A
27	12-May-14	71.0	7,952	6,447	5,527	229,280	5,848	N/A
28	12-May-14	76.0	7,838	5,806	5,011	229,300	5,828	N/A
29	12-May-14	75.4	7,989	5,887	5,157	228,360	5,883	N/A
30	13-May-14	74.0	7,768	5,790	4,715	230,470	5,810	N/A
31	13-May-14	75.0	7,700	5,810	5,378	229,820	5,797	N/A
32	13-May-14	76.9	7,872	5,878	4,781	223,790	5,488	N/A
33	13-May-14	76.5	7,876	5,715	4,765	195,450	5,911	N/A
34	14-May-14	73.0	7,747	5,994	5,203	228,060	5,772	N/A
35	14-May-14	74.0	7,764	6,001	4,808	230,420	5,743	N/A
36	18-May-14	75.0	7,705	5,643	5,208	230,600	5,739	N/A
37	18-May-14	75.0	7,686	5,926	5,078	230,460	5,732	N/A
38	18-May-14	78.3	7,754	5,721	4,851	221,360	5,772	N/A
39	19-May-14	79.5	7,790	5,709	4,892	227,460	5,812	N/A
40	19-May-14	76.0	7,696	5,826	5,339	229,420	5,683	N/A
41	19-May-14	72.0	7,756	5,703	4,973	185,584	6,120	N/A
42	19-May-14	76.0	7,606	5,743	5,209	230,210	5,676	N/A
43	19-May-14	80.0	7,660	5,982	5,311	226,000	5,662	N/A
44	20-May-14	78.0	7,772	5,941	5,292	222,500	5,648	N/A
45	20-May-14	80.0	7,663	6,190	5,289	223,500	5,633	N/A
46	20-May-14	75.0	7,778	5,989	5,008	228,200	5,605	N/A
47	20-May-14	76.0	7,736	5,846	5,233	226,120	5,601	N/A
48	20-May-14	79.0	7,347	5,818	5,154	225,500	5,578	N/A
49	21-May-14	78.0	7,401	6,735	5,239	226,500	5,636	N/A
	AVG=	74.1	7,817	5,938	5,143	10,943,720	289,231	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
Freshwater	144	NA	144	NA
Shale	0	65	0	65
Shale w/ Trace Coal	65	95	65	95
Sand/Siltstone/Shale	95	215	95	215
Sand/Siltstone w/ Trace Coal	215	695	215	695
Shale	695	725	695	725
Sand/Siltstone/Shale	725	845	725	845
Sand/Siltstone w/ Trace Coal	845	875	845	875
Sand/Siltstone/Shale	875	1,445	875	1,445
Sand/Silt/Limestone w/Trace Coal	1,445	1,475	1,445	1,475
Sand/Silt/Limestone	1,475	1,655	1,475	1,655
Sand/Siltstone w/ Trace Coal	1,655	1,745	1,655	1,745
Shale/Siltstone	1,745	1,775	1,745	1,775
Sandstone	1,775	1,925	1,775	1,925
Sand/Siltstone/Shale	1,925	2,315	1,925	2,315
Coal	2,315	2,345	2,315	2,345
Sand/Siltstone/Shale	2,345	2,414	2,345	2,416
Big Lime	2,414	2,525	2,416	2,526
Big Injun	2,525	2,871	2,526	2,873
Gantz Sand	2,871	2,979	2,873	2,981
Fifty Foot Sandstone	2,979	3,173	2,981	3,175
Gordon	3,173	3,443	3,175	3,445
Fifth Sandstone	3,443	3,513	3,445	3,515
Bayard	3,513	3,782	3,515	3,784
Warren	3,782	4,017	3,784	4,019
Speechley	4,017	4,355	4,019	4,356
Baltown	4,355	4,882	4,356	4,884
Bradford	4,882	5,387	4,884	5,389
Benson	5,387	5,663	5,389	5,665
Alexander	5,663	5,885	5,665	5,887
Elk	5,885	6,435	5,887	6,444
Rhinestreet	6,435	6,915	6,444	6,960
Sycamore	6,915	7,160	6,960	7,226
Middlesex	7,160	7,300	7,226	7,394
Burkett	7,300	7,333	7,394	7,437
Tully	7,333	7,456	7,437	7,677
Marcellus	7,456	NA	7,677	NA

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Hydraulic Fracturing Fluid Product Component Information Disclosure

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Job Start Date:	4/30/2014
Job End Date:	5/21/2014
State:	West Virginia
County:	Doddridge
API Number:	47-017-06245-00-00
Operator Name:	Antero Resources Corporation
Well Name and Number:	Irons Unit 1H
Longitude:	-80.60883900
Latitude:	39.27078100
Datum:	NAD83
Federal/Tribal Well:	NO
True Vertical Depth:	7,540
Total Base Water Volume (gal):	12,147,702
Total Base Non Water Volume:	542,573

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	Base Fluid	Water	7732-18-5	100.00000	90.00037	
Sand	U.S. Well Services, LLC	Proppant	Crystalline Silica, quartz	14808-60-7	100.00000	9.72185	
HCL Acid (12.6%-18.0%)	U.S. Well Services, LLC	Bulk Acid	Water	7732-18-5	87.50000	0.09067	
			Hydrogen Chloride	7647-01-0	18.00000	0.02166	
W/FRA-405	U.S. Well Services, LLC	Friction Reducer	Water	7732-18-5	40.00000	0.02457	
			Anionic Polyacrylamide	Proprietary		0.02457	
			Petroleum Distillates	64742-47-8	22.00000	0.01978	
			Crystalline Salt	12125-02-9	5.00000	0.00307	
			Ethoxylated alcohol blend	Proprietary	5.00000	0.00307	
LGC-15	U.S. Well Services, LLC	Gelling Agents	Guar Gum	9000-30-0	50.00000	0.03255	
			Petroleum Distillates	64742-47-8	60.00000	0.03083	
			Suspending agent (solid)	14808-60-7	3.00000	0.00498	

SI-1000	U.S. Well Services, LLC	Scale Inhibitor	Surfactant	68439-51-0	3.00000	0.00195
			Anionic Copolymer	Proprietary		0.00407
			Ethylene Glycol	107-21-1	20.00000	0.00368
			Water	7732-18-5	30.00000	0.00307
K-BAC 1020	U.S. Well Services, LLC	Anti-Bacterial Agent	2,2-dibromo-3-nitropropionamide	10222-01-2	20.00000	0.00464
			Deionized Water	7732-18-5	28.00000	0.00265
AP One	U.S. Well Services, LLC	Gel Breakers	Ammonium Persulfate	7727-54-0	100.00000	0.00142
AI-300	U.S. Well Services, LLC	Acid Corrosion Inhibitors	Ethylene Glycol	107-21-1	31.00000	0.00024
			N,N-Dimethylformamide	68-12-2	15.00000	0.00007
			2-Butoxyethanol	111-76-2	7.00000	0.00006
			Tar bases, quinoline derivs, benzyl chloride-quaternized	72480-70-7	13.00000	0.00006
			Cinnamalddehyde	104-55-2	5.00000	0.00006
			Ethoxylated Nonylphenol	68412-54-4	5.00000	0.00002
			Water	7732-18-5	20.00000	0.00002
			Isopropyl Alcohol	67-63-0	3.00000	0.00001
			Triethyl Phosphate	78-40-0	3.00000	0.00001

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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697' to Bottom Hole

7,362' to Top Hole

TOP HOLE LATITUDE 39 - 17 - 30
BOTTOM HOLE LATITUDE 39 - 15 - 00

Bottom Hole
7.5' Spot

LONGITUDE 80 - 35 - 00

774' to Bottom Hole

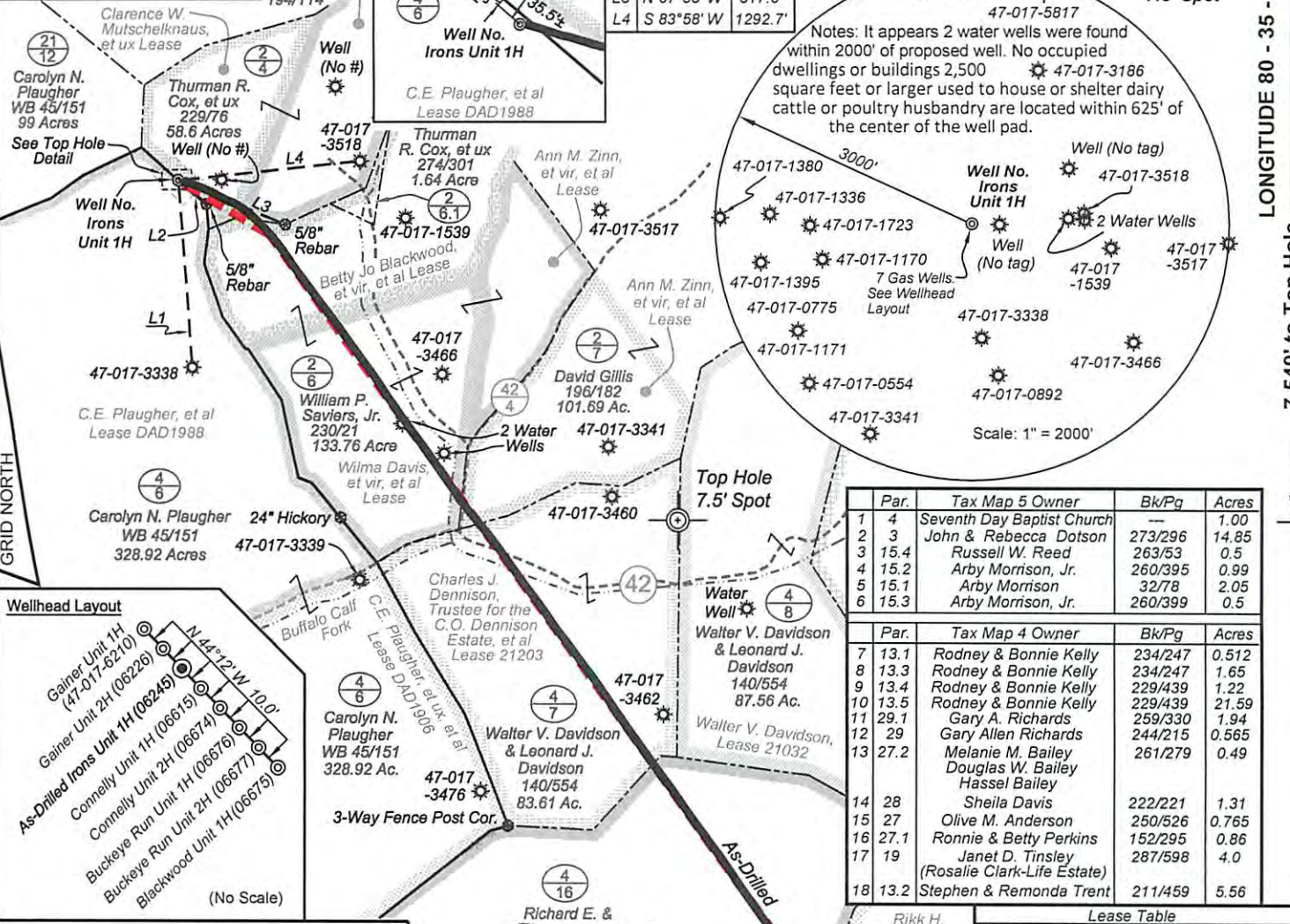
7,549' to Top Hole

Antero Resources
Well No. Irons Unit 1H
As-Drilled Plat
Antero Resources
Corporation

James L. Pearcy,
et ux, et al Lease
47-017-3186
21
13
194/114

Top Hole Detail

	Bearing	Dist.
L1	N 04°11' W	1314.5'
L2	N 49°26' W	260.2'
L3	N 67°38' W	817.6'
L4	S 83°58' W	1292.7'



Notes: It appears 2 water wells were found within 2000' of proposed well. No occupied dwellings or buildings 2,500 square feet or larger used to house or shelter dairy cattle or poultry husbandry are located within 625' of the center of the well pad.

Par.	Tax Map 5 Owner	Bk/Pg	Acres
1	4	Seventh Day Baptist Church	1.00
2	3	John & Rebecca Dotson	14.85
3	15.4	Russell W. Reed	0.5
4	15.2	Arby Morrison, Jr.	0.99
5	15.1	Arby Morrison	2.05
6	15.3	Arby Morrison, Jr.	0.5

Par.	Tax Map 4 Owner	Bk/Pg	Acres
7	13.1	Rodney & Bonnie Kelly	0.512
8	13.3	Rodney & Bonnie Kelly	1.65
9	13.4	Rodney & Bonnie Kelly	1.22
10	13.5	Rodney & Bonnie Kelly	21.59
11	29.1	Gary A. Richards	1.94
12	29	Gary Allen Richards	0.565
13	27.2	Melanie M. Bailey Douglas W. Bailey Hassel Bailey	0.49
14	28	Sheila Davis	1.31
15	27	Olive M. Anderson	0.765
16	27.1	Ronnie & Betty Perkins	0.86
17	19	Janet D. Tinsley (Rosalee Clark-Life Estate)	4.0
18	13.2	Stephen & Remonda Trent	5.56

Lease Table

A	Richard and Rosalie Clark Lease
B	Gerald Maxson, et ux Lease
C	Salem Seventh Day Baptist Church Lease

(-o-) Denotes Location of Well on United States Topographic Maps

Notes:
West Virginia Coordinate System of 1927, North Zone based upon Differential GPS Measurements.
Well No. Irons Unit 1H Top Hole coordinates are
N: 282,640.22' Latitude: 39°16'14.50"
E: 1,686,027.59' Longitude: 80°36'32.45"
Bottom Hole coordinates are
N: 274,241.25' Latitude: 39°14'52.27"
E: 1,692,509.46' Longitude: 80°35'08.75"
UTM Zone 17, NAD 1983
Top Hole Coordinates Bottom Hole Coordinates
N: 4,346,899.010m N: 4,344,373.193m
E: 533,742.220m E: 535,759.591m
Plat orientation and corner and well references are based upon the grid north meridian.
Well location references are based upon the magnetic meridian.

Received
Office of Oil & Gas
MAY 18 2015

Legend

- Proposed gas well
- Found corner, as noted
- Creek or Drain
- Existing Road
- Surface boundary (approx.)
- Interior surface tracts (approx.)



Top Hole coordinates verified by survey grade GPS. As-drilled data and information was provided by Antero Resources Corporation. Allegheny Surveys, Inc. (ASI) is not certifying the data and information provided. ASI is not responsible for any errors or inaccuracies with the data and information that has been provided.

FILE NO: 44-30-G-13
DRAWING NO: Irons 1H Well Plat_As-Drilled
SCALE: 1" = 1200'
MINIMUM DEGREE OF ACCURACY: Submeter
PROVEN SOURCE OF ELEVATION: WVDOT, Bridgeport, WV

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

DATE: February 19 2015
OPERATOR'S WELL NO. Irons Unit 1H
API WELL NO
47 - 017 - 06245
STATE COUNTY PERMIT

WELL TYPE: OIL GAS LIQUID INJECTION WASTE DISPOSAL
(IF GAS) PRODUCTION: STORAGE DEEP SHALLOW
LOCATION: ELEVATION: 1364' WATERSHED: Headwaters Middle Island Creek QUADRANGLE: Salem & Big Isaac
DISTRICT: Greenbrier COUNTY: Doddridge
SURFACE OWNER: Carolyn N. Plaughter
ROYALTY OWNER: Charles J. Dennison, Trustee for the C.O. Dennison Estate, et al
C.E. Plaughter, et al; Mary Maxine Welch; Clarence W. Mutschelknaus, et ux
LEASE NO: DAD1988; 21203; 1227 ACREAGE: 165; 350; 49.5; 90; 84
PROPOSED WORK: DRILL CONVERT DRILL DEEPER FRACTURE OR STIMULATE PLUG OFF OLD FORMATION
 PERFORATE NEW FORMATION OTHER PHYSICAL CHANGE IN WELL (SPECIFY) As-Drilled
 PLUG AND ABANDON CLEAN OUT AND REPLUG TARGET FORMATION: Marcellus Shale DEPTH: 7,466' TVD 17,634' 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