

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

API 47 - 033 - 05698 County Harrison District Tenmile
Quad Salem Pad Name Hubert Pad Field/Pool Name _____
Farm name Bland, Hubert Jr. and Lorena Well Number Ruth 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 4,345,008.146m Easting 537,940.485m
Landing Point of Curve Northing 4,344,463.28m Easting 537,778.56m
Bottom Hole Northing 4,342,891.654m Easting 539,554.563m

Elevation (ft) 1376' 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 12/19/2012 Date drilling commenced 5/11/2013 Date drilling ceased 6/24/2013
Date completion activities began 10/6/2013 Date completion activities ceased 12/31/2013
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 367' Open mine(s) (Y/N) depths N
Salt water depth(s) ft None Identified Void(s) encountered (Y/N) depths N
Coal depth(s) ft 1760' Cavern(s) encountered (Y/N) depths N
Is coal being mined in area (Y/N) N

Reviewed by:
AL 5/26/15
W.S. 6/02/15
06/12/2015
Office of Oil and Gas
WV Dept. of Environmental Protection
APR 27 2015

API 47-033 - 05698 Farm name Bland, Hubert Jr. and Lorena Well number Ruth 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	30"	20"	40'	New	94#/H-40	N/A	Y
Surface	17-1/2"	13-3/8"	476'	New	48#/H-40	N/A	Y
Coal							
Intermediate 1	12-1/4"	9-5/8"	2583'	New	36#/J-55	N/A	Y
Intermediate 2							
Intermediate 3							
Production	8-3/4"/8-1/2"	5-1/2"	15,936'	New	20#/P-110	N/A	Y
Tubing		2-3/8"	7869'	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	226 sx	15.6	1.18	311 Cu. Ft.	0'	8 hrs
Coal							
Intermediate 1	Class A	951 sx	15.6	1.18	809 Cu. Ft.	0'	8 hrs
Intermediate 2							
Intermediate 3							
Production	Class H	1103 sx (Lead), 1245 sx (Tail)	13.5 (Lead), 15.2 (Tail)	1.44 (Lead), 1.80 (Tail)	3174 Cu. Ft.	~500' into Intermediate Casing	8 hrs
Tubing							

Drillers TD (ft) 15,954' MD, 7386' TVD (BHL), 7472' TVD (Deepest Point Drilled) Loggers TD (ft) 15,954' MD
 Deepest formation penetrated Marcellus Plug back to (ft) N/A
 Plug back procedure N/A

Kick off depth (ft) 7320'

** This is a subsequent well. Antero only runs wireline logs on one well on a multi-well pad (Nellie Unit 2H API# 47-033-05687). Please reference the wireline logs submitted with Form WR-35 for the Nellie Unit 2H. 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

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

Inspected

WAS WELL COMPLETED AS SHOT HOLE Yes No DETAILS APR 27 2015

WAS WELL COMPLETED OPEN HOLE? Yes No DETAILS Office of Oil and Gas
WV Dept of Environmental Protection

WERE TRACERS USED Yes No TYPE OF TRACER(S) USED Radioactive & Chemical

API 47- 033 - 05698 Farm name Bland, Hubert Jr. and Lorena Well number Ruth Unit 2H

PRODUCING FORMATION(S)	DEPTHS	
Marcellus	7425' (Top) TVD	7953' (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 3804 mcfpd Oil --- bpd NGL --- bpd Water --- 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

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Department of Environmental Protection

Please insert additional pages as applicable.

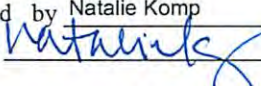
Drilling Contractor Patterson - UTI Drilling Company, LLC
 Address 207 Carlton Drive City Eighty Four State PA Zip 15330

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

Cementing Company Allied Oil & Gas Services, LLC
 Address 1036 East Main Street City Bridgeport State WV Zip 26330

Stimulating Company Nabors Completion & Production Services, Co.
 Address 1650 Hackers Creek 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 4/23/2015

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

06/12/2015

API 47-033-05698 Farm Name Bland, Hubert Jr. and Lorena Well Number Ruth Unit 2H

EXHIBIT 1

Stage No.	Perforation Date	Perforated from MD ft.	Perforated to MD ft.	Number of Perforations	Formations
1	6-Oct-13	15711'	15882'	60	Marcellus
2	11-Oct-13	15508'	15679'	60	Marcellus
3	11-Oct-13	15305'	15476'	60	Marcellus
4	11-Oct-13	15102'	15273'	60	Marcellus
5	12-Oct-13	14899'	15070'	60	Marcellus
6	12-Oct-13	14696'	14867'	60	Marcellus
7	12-Oct-13	14493'	14664'	60	Marcellus
8	12-Oct-13	14290'	14461'	60	Marcellus
9	13-Oct-13	14087'	14258'	60	Marcellus
10	13-Oct-13	13884'	14055'	60	Marcellus
11	13-Oct-13	13681'	13852'	60	Marcellus
12	13-Oct-13	13478'	13649'	60	Marcellus
13	13-Oct-13	13275'	13446'	60	Marcellus
14	14-Oct-13	13072'	13243'	60	Marcellus
15	14-Oct-13	12869'	13040'	60	Marcellus
16	14-Oct-13	12666'	12837'	60	Marcellus
17	14-Oct-13	12463'	12634'	60	Marcellus
18	14-Oct-13	12260'	12431'	60	Marcellus
19	15-Oct-13	12057'	12228'	60	Marcellus
20	15-Oct-13	11854'	12025'	60	Marcellus
21	16-Oct-13	11651'	11822'	60	Marcellus
22	16-Oct-13	11448'	11619'	60	Marcellus
23	16-Oct-13	11245'	11416'	60	Marcellus
24	16-Oct-13	11042'	11213'	60	Marcellus
25	16-Oct-13	10839'	11010'	60	Marcellus
26	17-Oct-13	10636'	10807'	60	Marcellus
27	17-Oct-13	10433'	10604'	60	Marcellus
28	17-Oct-13	10230'	10401'	60	Marcellus
29	17-Oct-13	10027'	10198'	60	Marcellus
30	17-Oct-13	9824'	9995'	60	Marcellus
31	18-Oct-13	9621'	9792'	60	Marcellus
32	18-Oct-13	9418'	9589'	60	Marcellus
33	18-Oct-13	9215'	9386'	60	Marcellus
34	18-Oct-13	9011'	9183'	60	Marcellus
35	18-Oct-13	8808'	8980'	60	Marcellus
36	19-Oct-13	8605'	8777'	60	Marcellus
37	19-Oct-13	8402'	8574'	60	Marcellus
38	19-Oct-13	8199'	8371'	60	Marcellus
39	20-Oct-13	7996'	8168'	60	Marcellus

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API 47-033-05698 Farm Name Bland, Hubert Jr. and Lorena, Well Number Ruth 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	10-Oct-13	61.4	8,206	7,818	3,208	167,400	6,748	N/A
2	11-Oct-13	63.8	7,875	6,908	2,988	175,100	6,525	N/A
3	11-Oct-13	77.8	8,085	6,515	3,378	240,100	5,871	N/A
4	11-Oct-13	75.7	8,196	6,507	3,257	230,400	6,081	N/A
5	12-Oct-13	73.0	7,739	6,881	3,062	239,800	6,502	N/A
6	12-Oct-13	75.7	8,053	6,262	3,252	235,800	5,708	N/A
7	12-Oct-13	72.0	7,943	6,178	3,228	210,200	6,067	N/A
8	12-Oct-13	74.0	8,011	6,478	3,356	230,600	6,035	N/A
9	13-Oct-13	75.0	7,999	6,637	3,464	232,400	6,155	N/A
10	13-Oct-13	72.1	8,195	6,130	3,105	234,800	5,679	N/A
11	13-Oct-13	76.1	7,862	7,007	3,245	234,300	6,220	N/A
12	13-Oct-13	74.5	8,019	6,144	3,266	99,300	5,942	N/A
13	13-Oct-13	75.5	7,838	6,449	3,303	230,900	5,965	N/A
14	14-Oct-13	77.7	7,915	6,318	3,230	238,600	6,084	N/A
15	14-Oct-13	79.3	8,062	5,720	3,362	232,100	5,439	N/A
16	14-Oct-13	79.7	7,956	6,021	3,545	17,311	6,442	N/A
17	14-Oct-13	73.3	7,852	6,413	3,582	178,200	6,532	N/A
18	14-Oct-13	71.3	7,846	6,555	3,906	180,200	6,524	N/A
19	15-Oct-13	75.6	7,715	5,246	3,581	228,500	5,833	N/A
20	15-Oct-13	78.2	7,342	5,554	3,659	230,800	5,927	N/A
21	16-Oct-13	78.4	7,322	5,627	3,552	233,200	5,966	N/A
22	16-Oct-13	81.2	7,568	5,552	3,303	232,600	5,947	N/A
23	16-Oct-13	80.2	7,514	5,641	3,552	230,800	5,905	N/A
24	16-Oct-13	77.6	7,663	5,583	3,602	232,900	5,694	N/A
25	16-Oct-13	76.9	7,805	5,834	3,536	213,000	5,548	N/A
26	17-Oct-13	80.6	7,678	5,664	3,354	234,700	5,837	N/A
27	17-Oct-13	80.8	7,542	5,874	3,472	235,600	5,813	N/A
28	17-Oct-13	78.3	7,670	5,924	3,494	231,300	5,825	N/A
29	17-Oct-13	78.8	7,454	5,713	3,510	230,300	5,706	N/A
30	17-Oct-13	77.7	7,541	4,845	3,342	230,900	5,676	N/A
31	18-Oct-13	73.2	7,558	5,817	3,527	232,400	5,855	N/A
32	18-Oct-13	72.5	7,186	5,055	3,578	232,700	5,805	N/A
33	18-Oct-13	76.6	7,506	6,002	3,062	232,900	5,771	N/A
34	18-Oct-13	76.3	7,621	5,975	3,203	138,800	5,903	N/A
35	18-Oct-13	76.6	7,112	4,945	3,484	227,000	5,656	N/A
36	19-Oct-13	76.3	7,793	6,013	3,267	125,900	6,035	N/A
37	19-Oct-13	62.0	7,714	6,412	3,246	111,800	6,207	N/A
38	19-Oct-13	82.0	7,333	5,729	3,391	240,000	5,832	N/A
39	20-Oct-13	79.3	7,636	5,934	3,192	161,200	6,106	N/A
AVG=		75.7	7,816	6,133	3,390	6,372,111	180,196	TOTAL

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Office of Oil and Gas
West Virginia Department of Environmental Protection

06/12/2015

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	367'	NA	NA	NA
Siltstone	0	97	0	97
Sandy Shale	97	317	97	317
Sandstone	317	507	317	507
Silty Sandstone	507	657	507	657
Sandstone	657	1027	657	1027
Limestone/Dolomite	1,027	1,117	1,027	1,117
Siltstone	1,117	1,297	1,117	1,297
Sandstone	1,297	1,327	1,297	1,327
Limey Siltstone	1,327	1,477	1,327	1,477
Sandstone	1,477	1,597	1,477	1,597
Sandy Siltstone	1,597	1,737	1,597	1,737
Coal	1,737	1757	1,737	1757
Sandstone	1,757	1797	1,757	1797
Siltstone	1,797	1817	1,797	1817
Sandstone	1,817	2097	1,817	2097
Limey Shale	2,097	2280	2,097	2280
Big Lime	2,280	2,470	2,280	2,470
Big Injun	2,470	2,757	2,470	2,757
Gantz Sand	2,757	2,843	2,757	2,843
Fifty Foot Sandstone	2,843	2,966	2,843	2,966
Gordon	2,966	3,294	2,966	3,294
Fifth Sandstone	3,294	3,324	3,294	3,324
Bayard	3,324	3,667	3,324	3,668
Warren	3,667	3,887	3,668	3,891
Speechley	3,887	4,422	3,891	4,458
Baltown	4,422	4,743	4,458	4,811
Bradford	4,743	5,264	4,811	5,389
Benson	5,264	5,539	5,389	5,698
Alexander	5,539	5,753	5,698	5,939
Elk	5,753	6,392	5,939	6,647
Rhinestreet	6,392	6,875	6,647	7,184
Sycamore	6,875	7,103	7,184	7,446
Middlesex	7,103	7,247	7,446	7,615
Burkett	7,247	7,275	7,615	7,650
Tully	7,275	7,425	7,650	7,953
Marcellus	7,425	NA	7,953	NA

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WV Dept. of Environmental Protection

06/12/2015



Antero Resources
1615 Wynkoop Street
Denver, CO 80202
Office 303.357.7310
Fax 303.357.7315

April 24, 2015

West Virginia Department of Environmental Protection
Office of Oil and Gas
Attn: Justin Nottingham
601 57th Street
Charleston, WV 25304

Mr. Nottingham:

Please find enclosed the Well Operator's Report of Well Work, Form WR-35 (including As-Drilled Survey Plat, Directional Survey and FracFocus report), Discharge Monitoring Report Form WR-34 and corresponding logs for the following wells:

*I pulled these.
K*

- ~~Rufus Unit 1H (API# 47-085-10046) – Ness Pad~~
- ~~Deberry Unit 1H (API# 47-085-09999) – Ness Pad~~
- ~~Ireland Unit 1H (API# 47-085-10005) – Ness Pad~~
- ~~Norris Unit 1H (API# 47-033-05699) – Hubert Pad~~
- ~~Norris Unit 2H (API# 47-033-05701) – Hubert Pad~~
- ~~Ruth Unit 2H (API# 47-033-05698) – Hubert Pad~~

If you have any questions please feel free to contact me at (303) 357-6820.

Sincerely,

A handwritten signature in blue ink that reads "Natalie Komp".

Natalie Komp
Permitting Agent
Antero Resources Corporation

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Office of Oil and Gas
WV Dept. of Environmental Protection

Enclosures

06/12/2015

Hydraulic Fracturing Fluid Product Component Information Disclosure

Job Start Date:	10/10/2013
Job End Date:	10/20/2013
State:	West Virginia
County:	Harrison
API Number:	47-033-05698-00-00
Operator Name:	Antero Resources Corporation
Well Name and Number:	Ruth Unit 2H
Longitude:	-80.56045560
Latitude:	39.25348060
Datum:	NAD27
Federal/Tribal Well:	NO
True Vertical Depth:	7,472
Total Base Water Volume (gal):	12,568,626
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	ANTERO RESOURCES	Water	Water	7732-18-5	100.00000	92.37590	
Sand	Nabors Completion and Production Services	Sand - Bulk - West Virginia	Crystalline Silica, quartz	14808-60-7	99.90000	4.32733	
			Aluminum Oxide	1344-28-1	1.10000	0.04765	
			Titanium Oxide	13463-67-7	0.10000	0.00433	
			Iron Oxide	1309-37-1	0.10000	0.00433	
Sand	Nabors Completion and Production Services	Sand - Bulk - West Virginia	Crystalline Silica, quartz	14808-60-7	99.90000	2.47167	
			Aluminum Oxide	1344-28-1	1.10000	0.02722	
			Titanium Oxide	13463-67-7	0.10000	0.00247	
			Iron Oxide	1309-37-1	0.10000	0.00247	
Sand	Nabors Completion and Production Services	Sand - Bulk - West Virginia	Crystalline Silica, quartz	14808-60-7	99.90000	0.50516	
			Aluminum Oxide	1344-28-1	1.10000	0.00556	

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				Iron Oxide	1309-37-1	0.10000	0.00051	
LSG-100L	Nabors Completion and Production Services	Gelling Agents		Titanium Oxide	13463-67-7	0.10000	0.00051	
HCl Acid (12.5%-18.0%)	Nabors Completion and Production Services	Bulk Acid		Petroleum Distillates	64742-47-8	70.00000	0.03255	
WFR-3B	Nabors Completion and Production Services	Friction Reducer		Hydrogen Chloride	7647-01-0	18.00000	0.03195	
				Hydrotreated light distillates, non-aromatic, BTEX free	64742-47-8	30.00000	0.01522	
				Ethoxylated alcohols	68002-97-1	15.00000	0.00761	
Super GREEN SOLV	Nabors Completion and Production Services	Paraffin & Scale Additives		Ethoxylated oleylamine	26635-93-8	5.00000	0.00254	
KR-153SL	Nabors Completion and Production Services	Biocides		BTEX Free Aliphatic Hydrocarbon	64742-96-7	100.00000	0.00917	
				Polyethylene-Glycol	25322-68-3	50.00000	0.00512	
SUPER TSC-LTS	Nabors Completion and Production Services	Paraffin & Scale Additives		2,2-dibromo-3-nitropropionamide	10222-01-2	20.00000	0.00205	
OB-2 LT	Nabors Completion and Production Services	Gel Breakers		Water	7732-18-5	60.00000	0.00682	
				Ammonium Persulfate	7727-54-0	85.00000	0.00533	
Acid Inhibitor 2 (AI-2)	Nabors Completion and Production Services	Acid Corrosion Inhibitors		Crystalline Silica (in the form of quartz)	14808-60-7	10.00000	0.00063	
				Propargyl Alcohol	107-19-7	40.00000	0.00013	
				Glycol Ethers	111-46-6	40.00000	0.00013	
				Isopropyl Alcohol	67-63-0	40.00000	0.00013	
				Ethoxylated Nonylphenol	68412-54-4	13.00000	0.00004	
EB-4L	Nabors Completion and Production Services	Gel Breakers		Tar bases, quinoline derivs, benzyl chloride-quaternized	72480-70-7	10.00000	0.00003	
PH-14	Nabors Completion and Production Services	pH Control Additives		Ethylene Glycol	107-21-1	40.00000	0.00016	

Other Ingredients		Sodium Carbonate	497-19-8	100.00000	0.00013
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.					
Nabors Completion and Production Services	Other Ingredients				
		Water	7732-18-5	87.50000	0.15531
		guar gum	9000-30-0	50.00000	0.02325
		Anionic Polyacrylamide	910644-97-2	40.00000	0.02030
		Water	7732-18-5	40.00000	0.02030
		Water	7732-18-5	80.00000	0.00819
		Propylene glycol	57-55-6	15.00000	0.00761
		Proprietary	Proprietary	15.00000	0.00170
		Proprietary	Proprietary	15.00000	0.00170
		Proprietary	Proprietary	15.00000	0.00170
		Proprietary	Proprietary	2.00000	0.00102
		Alkali Chloride salt	Proprietary	15.00000	0.00094
		Surfactant	68439-51-0	2.00000	0.00093
		Crystalline Silica (in the form of quartz)	14808-60-7	2.00000	0.00093
		Sugar	57-50-1	100.00000	0.00040
		Proprietary	Proprietary	100.00000	0.00040
		Water	7732-18-5	100.00000	0.00020
		Water	7732-18-5	48.00000	0.00016
		2-Butoxyethanol	111-76-2	13.00000	0.00004
		Proprietary	Proprietary	1.00000	0.00000
		Proprietary	Proprietary	1.00000	0.00000
		Proprietary	Proprietary	1.00000	0.00000
		Proprietary	Proprietary	1.00000	0.00000
		Dioxane	123-91-1	1.00000	0.00000
		Organophylic Clay	68953-58-2		

* 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%

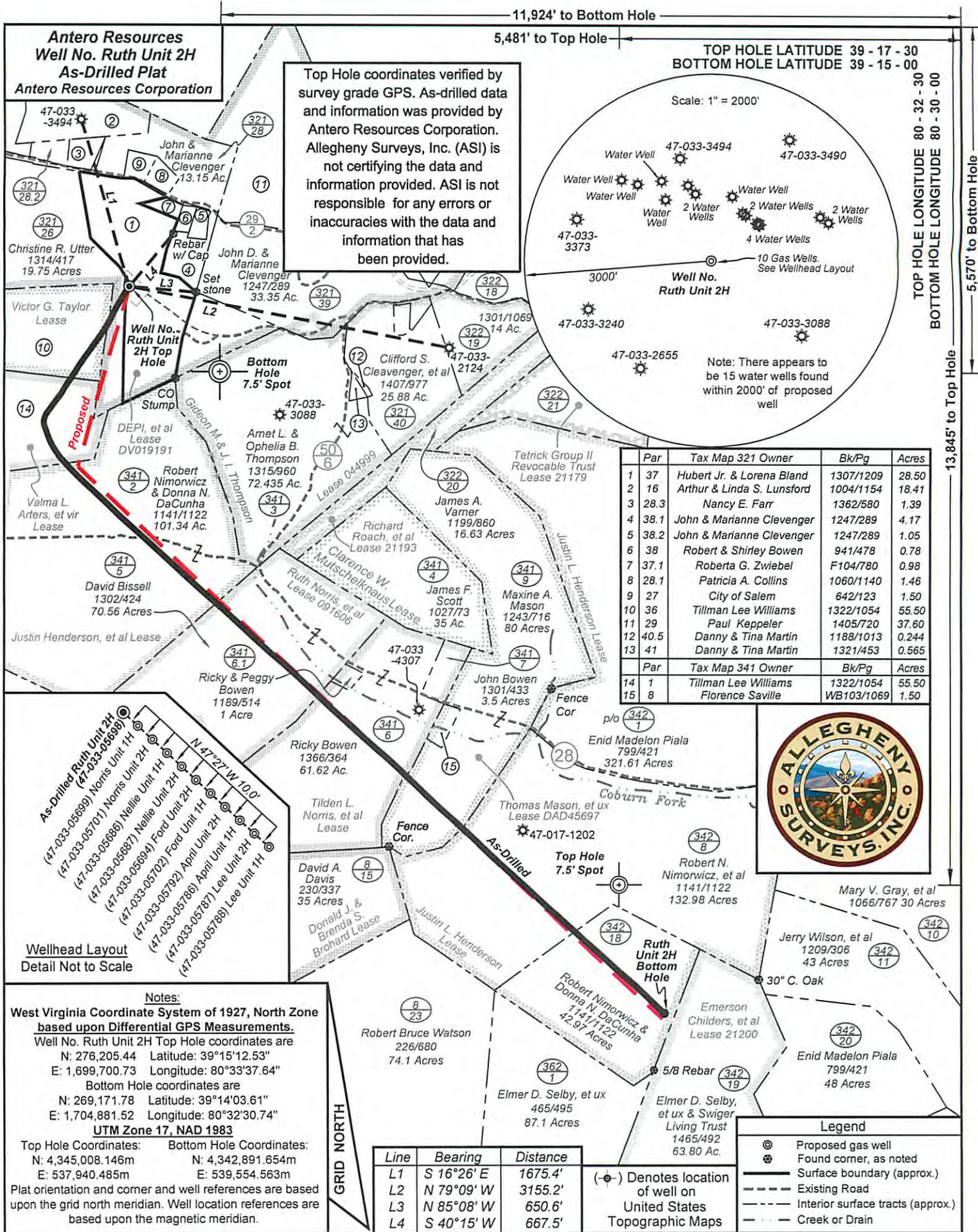
Note: For Field Development Products (products that begin with FDP), MSDS level only information has been provided. Ingredient information for chemicals subject to 29 CFR 1910.1200(i) and Appendix D are obtained from suppliers Material Safety Data Sheets (MSDS)

Received

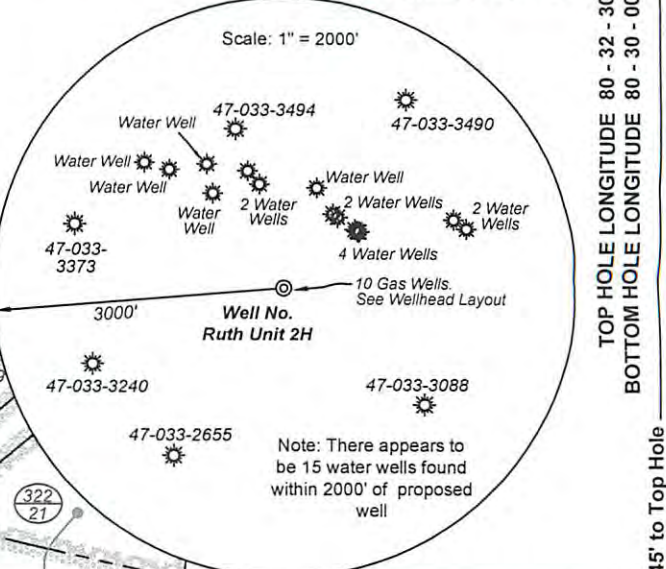
APR 27 2015

Division of Oil and Gas
Environmental Protection

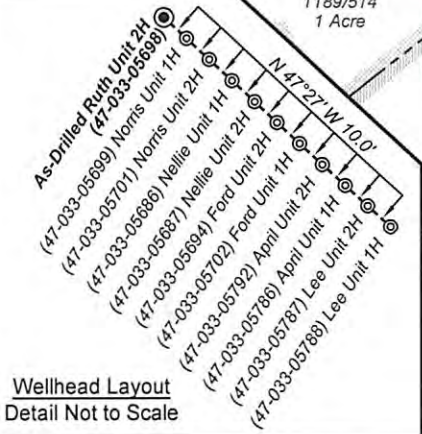
06/12/2015



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.



Par	Tax Map 321 Owner	Bk/Pg	Acres
1	37 Hubert Jr. & Lorena Bland	1307/1209	28.50
2	16 Arthur & Linda S. Lunsford	1004/1154	18.41
3	28.3 Nancy E. Farr	1362/580	1.39
4	38.1 John & Marianne Clevenger	1247/289	4.17
5	38.2 John & Marianne Clevenger	1247/289	1.05
6	38 Robert & Shirley Bowen	941/478	0.78
7	37.1 Roberta G. Zwiebel	F104/780	0.98
8	28.1 Patricia A. Collins	1060/1140	1.46
9	27 City of Salem	642/123	1.50
10	36 Tillman Lee Williams	1322/1054	55.50
11	29 Paul Keppeler	1405/720	37.60
12	40.5 Danny & Tina Martin	1188/1013	0.244
13	41 Danny & Tina Martin	1321/453	0.565
Par	Tax Map 341 Owner	Bk/Pg	Acres
14	1 Tillman Lee Williams	1322/1054	55.50
15	8 Florence Saville	WB103/1069	1.50



Notes:
 West Virginia Coordinate System of 1927, North Zone based upon Differential GPS Measurements.
 Well No. Ruth Unit 2H Top Hole coordinates are
 N: 276,205.44 Latitude: 39°15'12.53"
 E: 1,699,700.73 Longitude: 80°33'37.64"
 Bottom Hole coordinates are
 N: 269,171.78 Latitude: 39°14'03.61"
 E: 1,704,881.52 Longitude: 80°32'30.74"
 UTM Zone 17, NAD 1983
 Top Hole Coordinates: Bottom Hole Coordinates:
 N: 4,345,008.146m N: 4,342,891.654m
 E: 537,940.485m E: 539,554.563m
 Plat orientation and corner and well references are based upon the grid north meridian. Well location references are based upon the magnetic meridian.

Line	Bearing	Distance
L1	S 16°26' E	1675.4'
L2	N 79°09' W	3155.2'
L3	N 85°08' W	650.6'
L4	S 40°15' W	667.5'

Legend

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

(-⊙-) Denotes location of well on United States Topographic Maps

FILE NO: 243-36-TM-12
 DRAWING NO: Ruth 2H As-Drilled Plat
 SCALE: 1" = 1200'
 MINIMUM DEGREE OF ACCURACY: Submeter
 PROVEN SOURCE OF ELEVATION: WVDOT, Bridgeport, WV

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

DATE: April 14 2015
 OPERATOR'S WELL NO. Ruth Unit 2H
 API WELL NO:
 47 - 033 - 05698
 STATE COUNTY PERMIT

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

LOCATION: ELEVATION: Original Grade - 1402' Existing Grade - 1376' WATERSHED: Tenmile Creek QUADRANGLE: Salem & Big Isaac
 DISTRICT: Tenmile COUNTY: Harrison

SURFACE OWNER: Hubert Jr. & Lorena Bland Thomas Mason, et ux; Justin Henderson, et al;
 ROYALTY OWNER: DEPI, et al; Valma L. Arters, et vir; Tilden L. Norris, et al Ruth Norris, et al; Victor G. Taylor, Justin L. Henderson;
 LEASE NO: DAD45697; 091606 ACREAGE: 81.5; 283; 55; 66.12

PROPOSED WORK: DRILL CONVERT DRILL DEEPER FRACTURE OR STIMULATE PLUG OFF OLD FORMATION
 PERFORATE NEW FORMATION OTHER PHYSICAL CHANGE IN WELL (SPECIFY) As-Drilled TVD 7,386'
 PLUG AND ABANDON CLEAN OUT AND REPLUG TARGET FORMATION: Marcellus Shale DEPTH: MD 15,954'

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