

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

RECEIVED
Office of Oil and Gas
OCT 12 2017
WV Department of
Environmental Protection

API 47-095-02250 County Tyler District Meade
Quad Pennsboro 7.5' Pad Name Hartley East Pad Field/Pool Name -----
Farm name David M. Hartley Well Number Woodworth Unit 3H
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 4357326m Easting 500600m
Landing Point of Curve Northing 4357609.903m Easting 501109.317m
Bottom Hole Northing 4359780m Easting 500261m

Elevation (ft) 1021' 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 05/15/2015 Date drilling commenced 05/27/2015 Date drilling ceased 12/29/2015
Date completion activities began 11/02/2016 Date completion activities ceased 03/12/2017
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 76', 135', 162' Open mine(s) (Y/N) depths No
Salt water depth(s) ft 846' Void(s) encountered (Y/N) depths No
Coal depth(s) ft 196', 1136', 1716' Cavern(s) encountered (Y/N) depths No
Is coal being mined in area (Y/N) No

APPROVED
NAME: [Signature]
DATE: 10-25-17

Reviewed by: _____

API 47-095 - 02250

Farm name David M. Hartley

Well number Woodworth Unit 3H

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#, J-55	N/A	Y
Surface	17-1/2"	13-3/8"	399'	New	48#, H-40	N/A	Y
Coal							
Intermediate 1	12-1/4"	9-5/8"	2557'	New	36#, J-55	N/A	Y
Intermediate 2							
Intermediate 3							
Production	8-3/4"/8-1/2"	5-1/2"	14778'	New	23#, P-110	N/A	Y
Tubing		2-3/8"	6688'		4.00#, 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	162 sx	15.6	1.20	194	0'	8 Hrs.
Surface	Class A	471 sx	15.6	1.20	565	0'	8 Hrs.
Coal							
Intermediate 1	Class A	1008 sx	15.6	1.18	1189	0'	8 Hrs.
Intermediate 2							
Intermediate 3							
Production	Class H	868 sx (Lead) 1299 sx (Tail)	13.5 (Lead), 15.2 (Tail)	1.44 (Lead), 1.83 (Tail)	3627	-500' into Intermediate Casing	8 Hrs.
Tubing							

Drillers TD (ft) 14778' MD, 5928' TVD (BHL), 6282' (Deepest Point Drilled)

Loggers TD (ft) 14729' MD

Deepest formation penetrated Marcellus

Plug back to (ft) N/A

Plug back procedure N/A

Kick off depth (ft) 6057'

** This is a subsequent well. Antero only runs wireline logs on one well on a multi-well pad (Freeland Unit 2H API #47-095-02127). Please reference the wireline logs submitted with Form WR-35 for Freeland 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 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 _____

API 47- 095 - 02250 Farm name David M. Hartley Well number Woodworth Unit 3H

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.

API 47- 095 - 02250 Farm name David M. Hartley Well number Woodworth Unit 3H

<u>PRODUCING FORMATION(S)</u>	<u>DEPTHS</u>	
<u>Marcellus</u>	<u>6243' (TOP)</u> TVD	<u>6835' (TOP)</u> MD
_____	_____	_____
_____	_____	_____
_____	_____	_____

Please insert additional pages as applicable.

GAS TEST Build up Drawdown Open Flow OIL TEST Flow Pump

SHUT-IN PRESSURE Surface 3000 psi Bottom Hole --- psi DURATION OF TEST --- hrs

OPEN FLOW Gas 10768 mcfpd Oil 204 bpd NGL --- bpd Water 637 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**

Please insert additional pages as applicable.

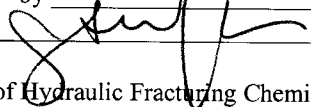
Drilling Contractor Precision Drilling Company, LP
Address 2640 Reach Road City Williamsport State PA Zip 17701

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

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

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  Title Permitting Agent Date 10/11/2017

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

API 47-095-02250 Farm Name David M. Hartley Well Number Woodworth Unit 3H

EXHIBIT 1

Stage No.	Perforation Date	Perforated from MD ft.	Perforated to MD ft.	Number of Perforations	Formations
1	11/2/2016	14412	14580	60	Marcellus
2	1/8/2017	14213	14381	60	Marcellus
3	1/8/2017	14015	14182	60	Marcellus
4	1/9/2017	13816	13983	60	Marcellus
5	1/9/2017	13617	13784	60	Marcellus
6	1/9/2017	13418	13586	60	Marcellus
7	1/9/2017	13219	13387	60	Marcellus
8	1/10/2017	13020	13188	60	Marcellus
9	1/10/2017	12821	12989	60	Marcellus
10	1/10/2017	12622	12790	60	Marcellus
11	1/11/2017	12424	12591	60	Marcellus
12	1/11/2017	12225	12392	60	Marcellus
13	1/11/2017	12026	12193	60	Marcellus
14	1/11/2017	11827	11995	60	Marcellus
15	1/11/2017	11628	11796	60	Marcellus
16	1/11/2017	11429	11597	60	Marcellus
17	1/12/2017	11230	11398	60	Marcellus
18	1/18/2017	11031	11199	60	Marcellus
19	1/19/2017	10833	11000	60	Marcellus
20	1/19/2017	10634	10801	60	Marcellus
21	1/19/2017	10435	10602	60	Marcellus
22	1/19/2017	10236	10404	60	Marcellus
23	1/19/2017	10037	10205	60	Marcellus
24	1/20/2017	9838	10006	60	Marcellus
25	1/20/2017	9639	9807	60	Marcellus
26	1/20/2017	9440	9608	60	Marcellus
27	1/22/2017	9242	9409	60	Marcellus
28	1/22/2017	9043	9210	60	Marcellus
29	1/22/2017	8844	9011	60	Marcellus
30	1/22/2017	8645	8813	60	Marcellus
31	1/23/2017	8446	8614	60	Marcellus
32	1/23/2017	8247	8415	60	Marcellus
33	1/23/2017	8048	8216	60	Marcellus
34	1/24/2017	7849	8017	60	Marcellus
35	1/24/2017	7651	7818	60	Marcellus
36	1/24/2017	7452	7619	60	Marcellus
37	1/24/2017	7253	7420	60	Marcellus
38	1/24/2017	7054	7222	60	Marcellus
39	1/25/2017	6855	7023	60	Marcellus

API 47-095-02250 Farm Name David M. Hartley Well Number Woodworth Unit 3H

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	1/8/2017	70.6	7454	5951	4467	308050	8245.0	N/A
2	1/8/2017	69.6	7128	6530	4842	307950	7186.0	N/A
3	1/8/2017	69.1	7067	6627	4771	307750	7122.0	N/A
4	1/9/2017	69.3	6982	6577	4170	306200	7135.0	N/A
5	1/9/2017	69.5	7023	6069	4789	306300	7110.0	N/A
6	1/9/2017	69.9	6949	5507	4731	310060	7041.0	N/A
7	1/9/2017	69.4	7049	5518	4635	307410	7146.0	N/A
8	1/10/2017	69.4	7123	5400	4413	307400	6941.0	N/A
9	1/10/2017	70.5	6976	5772	4585	308400	6964.0	N/A
10	1/10/2017	69.4	6830	6942	3766	307750	6968.0	N/A
11	1/11/2017	69.2	6903	7478	3462	307670	7075.0	N/A
12	1/11/2017	69.3	6805	6865	3405	308450	6970.0	N/A
13	1/11/2017	69.8	6743	6477	4427	307800	6897.0	N/A
14	1/11/2017	70.1	6733	6877	3655	308450	6890.0	N/A
15	1/11/2017	69.1	6753	5751	4431	307800	6918.0	N/A
16	1/11/2017	69.5	6788	5332	3465	307650	6974.0	N/A
17	1/12/2017	69.5	6738	5593	3158	308150	7000.0	N/A
18	1/18/2017	68.9	6865	5550	4048	306250	6888.0	N/A
19	1/19/2017	69.8	6761	5050	4191	307000	6986.0	N/A
20	1/19/2017	75.0	7101	5257	4613	308100	6911.0	N/A
21	1/19/2017	71.1	6800	5143	4549	307700	6892.0	N/A
22	1/19/2017	71.0	6669	5257	4706	312390	6866.0	N/A
23	1/19/2017	69.2	6744	5386	4241	298200	7469.0	N/A
24	1/20/2017	72.7	6579	5028	3580	307740	6913.0	N/A
25	1/20/2017	70.2	6583	5929	6276	301630	8978.0	N/A
26	1/20/2017	69.4	6453	5393	4531	309660	6968.0	N/A
27	1/22/2017	70.9	6310	5322	3691	308600	6925.0	N/A
28	1/22/2017	70.8	6337	5593	3805	306240	6913.0	N/A
29	1/22/2017	69.7	6268	5908	3476	306940	6852.0	N/A
30	1/22/2017	70.4	6411	6280	3701	311650	6838.0	N/A
31	1/23/2017	72.6	6361	5711	4334	307850	6997.0	N/A
32	1/23/2017	71.5	6248	6688	3333	308360	7004.0	N/A
33	1/23/2017	71.5	6239	5754	3515	309090	7084.0	N/A
34	1/24/2017	70.4	6371	5193	4131	308100	6797.0	N/A
35	1/24/2017	70.2	6328	5068	3791	307990	6807.0	N/A
36	1/24/2017	71.6	6215	5772	3773	307690	6965.0	N/A
37	1/24/2017	71.7	6208	6167	3494	308240	6923.0	N/A
38	1/24/2017	68.6	6486	5412	4567	304320	7882.0	N/A
39	1/25/2017	69.3	5973	5343	3297	303260	6930.0	N/A
	AVG=	70.2	6,676	5,833	4,123	11,990,240	276,370	TOTAL

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	76'	N/A	76'	N/A
Fresh Water	135'	N/A	135'	N/A
Fresh Water	162'	N/A	162'	N/A
Shale/ Sandstone	est. -11	196	est. -11	196
Shale/ Trace Coal	est. 196	236	est. 196	236
Sandstone	est. 236	456	est. 236	456
Shale/ Limestone	est. 456	556	est. 456	556
Sandstone	est. 556	616	est. 556	616
Shale/ Trace Limestone	est. 616	776	est. 616	776
Siltstone	est. 776	801	est. 776	801
Shale/ Limestone	est. 801	956	est. 801	956
Sandstone	est. 956	1036	est. 956	1036
Shale/ Limestone	est. 1036	1136	est. 1036	1136
Shale/ Trace Coal	est. 1136	1176	est. 1136	1176
Sandstone/ Trace Coal	est. 1176	1236	est. 1176	1236
Shale/ Trace Limestone	est. 1236	1316	est. 1236	1316
Sandstone/ Shale	est. 1316	1416	est. 1316	1416
Sanstone/ Coal	est. 1416	1556	est. 1416	1556
Shale/ Trace Coal	est. 1556	1716	est. 1556	1716
Siltstone/ Trace Coal	est. 1716	1951	est. 1716	1977
Big Lime	1951	2809	1977	2848
Fifth Sandstone	2809	3397	2848	3465
Bayard	3397	3944	3465	4078
Speechley	3944	4232	4078	4402
Baltown	4232	4619	4402	4835
Bradford	4619	4949	4835	5198
Benson	4949	5157	5198	5424
Alexander	5157	5386	5424	5676
Elk	5386	5696	5676	6015
Rhinestreet	5696	6033	6015	6404
Sycamore	6033	6130	6404	6555
Middlesex	6130	6219	6555	6762
Burkett	6219	6231	6762	6798
Tully	6231	6243	6798	6835
Marcellus	6243	NA	6835	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.

Hydraulic Fracturing Fluid Product Component Information Disclosure

Job Start Date:	1/8/2017
Job End Date:	1/25/2017
State:	West Virginia
County:	Tyler
API Number:	47-095-02250-00-00
Operator Name:	Antero Resources Corporation
Well Name and Number:	Woodworth 3H
Latitude:	39.36533889
Longitude:	-80.99320000
Datum:	NAD83
Federal Well:	NO
Indian Well:	NO
True Vertical Depth:	6,282
Total Base Water Volume (gal):	12,104,122
Total Base Non Water Volume:	0



Hydraulic Fracturing Fluid Composition:

Trade Name	Supplier	Purpose	Ingredients	Chemical Service Abstract 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	89.13240	
Sand	J.S. Well Services, LLC	Proppant					
HCL Acid (12.6%-17.5%)	J.S. Well Services, LLC	Bulk Acid	Crystalline Silica, quartz	14808-60-7	100.00000	10.58679	
LGC-15	J.S. Well Services, LLC	Gelling Agents	Water Hydrogen Chloride	7732-18-5 7647-01-0	87.40000 17.50000	0.14788 0.03438	
WFRA-405	J.S. Well Services, LLC	Friction Reducer	Guar Gum Petroleum Distillates Suspending agent (solid) Surfactant	9000-30-0 64742-47-8 14808-60-7 68439-51-0	50.00000 60.00000 3.00000 3.00000	0.02584 0.02447 0.00395 0.00155	
			2-Propenoic acid, polymer with propanamide Hydrated light distillate (petroleum)	29003-06-9 64742-47-8	30.00000 30.00000	0.01464 0.01179	

SI-1100	U.S. Well Services, LLC	Scale Inhibitor						
		Ethylene Glycol	107-21-1			40.00000		0.00700
		Copolymer of Maleic and Acrylic acid	2255-49-9			10.00000		0.00144
		Potassium salt of diethylene triamine penta (methylene phosphonic acid)	15827-60-8			3.00000		0.00050
		Phosphino carboxylic acid polymer	71050-62-9			3.00000		0.00048
		Hexamethylene tramine penta (methylene phosphonic acid)	34690-00-1			3.00000		0.00048
Bioclear 2000	U.S. Well Services, LLC	Anti-Bacterial Agent						
		2,2-dibromo-3-nitropropionamide	10222-01-2			20.00000		0.00400
		Deionized Water	7732-18-5			28.00000		0.00229
AI-303	U.S. Well Services, LLC	Acid Corrosion Inhibitors						
		Ethylene glycol	107-21-1			40.00000		0.00006
		Cinnamaldehyde	104-55-2			20.00000		0.00002
		Formic acid	64-18-6			20.00000		0.00002
		Butyl cellosolve	111-76-2			20.00000		0.00002
		Polyether	Proprietary			10.00000		0.00001
		Acetophenone, thiourea, formaldehyde polymer	68527-49-1			5.00000		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)

LATITUDE 39°22'30"

9,860'

10,966' TO BOTTOM HOLE

LATITUDE 39°25'00"

LONGITUDE 80°57'30"

3,528'

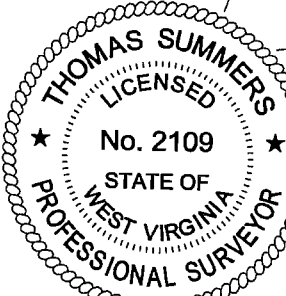
LONGITUDE 80°57'30"

Antero Resources Corporation
Well No. Woodworth Unit 3H
47-095-02250 AS DRILLED

AS DRILLED DATA:
WELL 3H TOP HOLE INFORMATION:
N: 318,673ft E: 1,577,840ft
LAT: 39°21'55.13" LON: 80°59'35.55"
BOTTOM HOLE INFORMATION:
N: 326,744ft E: 1,576,865ft
LAT: 39°23'14.73" LON: 80°59'49.67"
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.

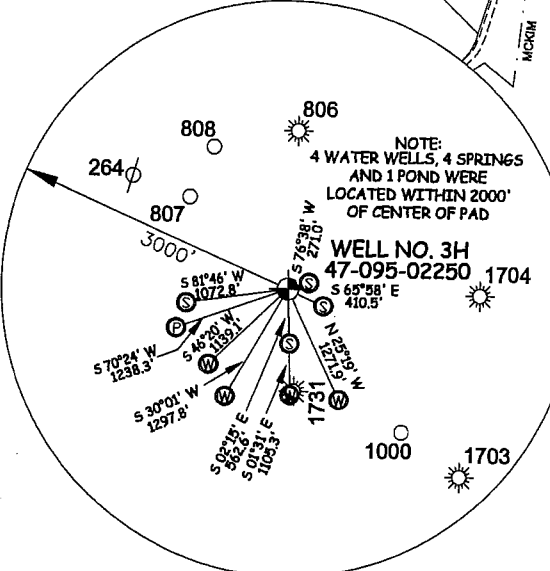
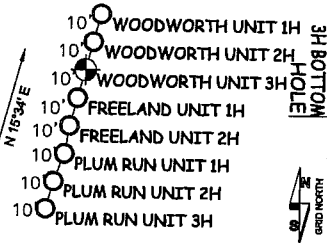
(NAD) 83 (UTM) ZONE 17 COORDS:
WELL 3H TOP HOLE INFORMATION:
N: 4,357,326m E: 500,600m
BOTTOM HOLE INFORMATION:
N: 4,359,780m E: 500,261m

- NOTE**
1. NO OCCUPIED DWELLINGS OR BUILDINGS TWO THOUSAND FIVE HUNDRED (2,500) SQUARE FEET OR LARGER USED OR POULTRY 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 AND BOUNDARIES.
 5. WLS IS BY NO MEANS RESPONSIBLE FOR ANY ERRORS OR INACCURACIES WITH THE DATA AND INFORMATION THAT HAS BEEN PROVIDED.



I THE UNDERSIGNED, HEREBY CERTIFY THAT THIS PLAN IS CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF AND SHOWS ALL THEIR INFORMATION REQUIRED BY LAW AND THE RULES ISSUED AND PERSCRIBED BY THE DEPARTMENT OF ENVIRONMENTAL PROTECTION.

PAD LAYOUT NOT TO SCALE



THOMAS SUMMERS P.S. 2109



STATE OF WEST VIRGINIA, DIVISION OF ENVIRONMENTAL PROTECTION, OFFICE OF OIL AND GAS

WILLOW LAND SURVEYING PLLC

LEGEND

- Surface Owner Boundary Lines +/-
- - - Interior Surface Tracts +/-
- X Existing Fence
- Found monument, as noted
- Proposed Well Path
- ⊗ As Drilled Well Path

DATE 07/26/17

JOB # 13-081WA
DRAWING # WOODWORTH3HADR
SCALE 1" = 1000'
MINIMUM DEGREE OF ACCURACY SUBMETER
PROVEN SOURCE OF ELEV. SUBMETER MAPPING GRADE GPS
STATE OF WEST VIRGINIA

LATITUDE 39°22'30"

9,860'

10,966' TO BOTTOM HOLE

LATITUDE 39°25'00"

LONGITUDE 80°57'30"

3,528'

LONGITUDE 80°57'30"

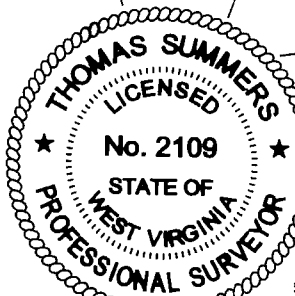
10,651' TO BOTTOM HOLE

Antero Resources Corporation
Well No. Woodworth Unit 3H
47-095-02250 AS DRILLED

AS DRILLED DATA:
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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.

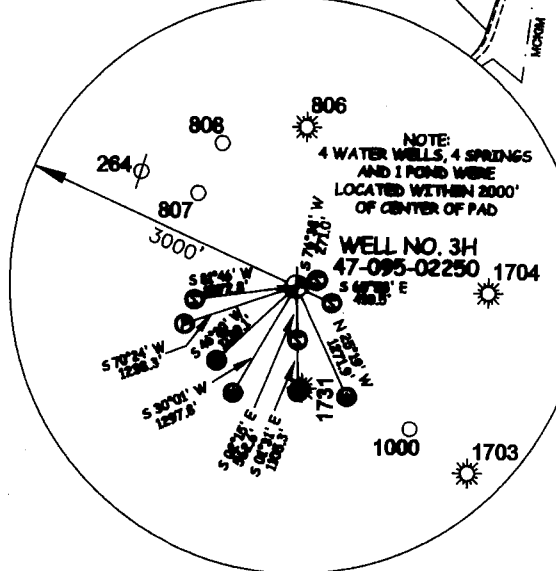
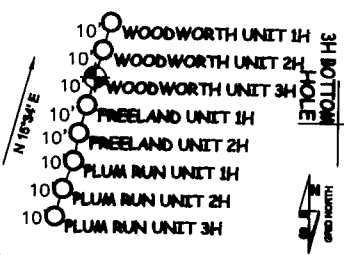
(NAD) 83 (UTM) ZONE 17 COORDS:
WELL 3H TOP HOLE INFORMATION:
N: 4,357,326m E: 500,600m
BOTTOM HOLE INFORMATION:
N: 4,359,780m E: 500,261m

- NOTE
1. NO OCCUPIED BUILDINGS OR BUILDINGS TWO THOUSAND FIVE HUNDRED (2000) SQUARE FEET OR LARGER USED TO PRODUCE OR SHEDDER BERRY CATTLE OR POULTRY. HARBORERS ARE LOCATED WITHIN SIX HUNDRED (600) FEET PERCENT OF THE CORNER OF THE WELL PAD.
 2. TOP HOLE DATA SHOWN HEREON WAS PROVIDED BY ALABAMA SURVEYING, INC.
 3. AS DRILLED DATA WAS PROVIDED BY ANTERO RESOURCES CORPORATION.
 4. THIS IS NOT A SURVEY OF THE DATA AND INFORMATION SHOWN HEREON UNDER 2 AND 3, ONLY THE RELATIONSHIP TO THE DATA AND INFORMATION PROVIDED TO THE ENGINEER.
 5. THIS IS BY NO MEANS RESPONSIBLE FOR ANY ERRORS OR OMISSIONS WITHIN THE DATA AND INFORMATION THAT HAS BEEN PROVIDED.



I THE UNDERSIGNED, HEREBY CERTIFY THAT THIS PLAN IS CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF AND SHOWS ALL INFORMATION REQUIRED BY LAW AND THE RULES ISSUED AND PERSCRIBED BY THE DEPARTMENT OF ENVIRONMENTAL PROTECTION.

PAD LAYOUT NOT TO SCALE



JOB # 13-081WA
DRAWING # WOODWORTHINADR
SCALE 1" = 1000'
MINIMUM DEGREE OF ACCURACY SUBMETER
PROVEN SOURCE OF ELEV. SUBMETER MAPPING GRADE GPS
STATE OF WEST VIRGINIA

THOMAS SUMMERS P.S. 2109



STATE OF WEST VIRGINIA, DIVISION OF ENVIRONMENTAL PROTECTION, OFFICE OF OIL AND GAS

WILLOW LAND SURVEYING PLLC
320 MAGNOLIA AVE. BRIDGEPORT, WV 26305

LEGEND

- Surface Owner Boundary Lines +/-
- - - Interior Surface Tracts +/-
- X Existing Fence
- Found monument, as noted
- Proposed Well Path
- ⊗ As Drilled Well Path

DATE 07/26/17