

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 47-095-02222 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 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 4357332m Easting 500601m  
Landing Point of Curve Northing 4357551.307m Easting 500504.296m  
Bottom Hole Northing 4359195m Easting 499843m

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 03/30/2015 Date drilling commenced 04/26/2015 Date drilling ceased 01/18/2016  
Date completion activities began 10/14/2016 Date completion activities ceased 03/01/2017  
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 - 02222 Farm name David M. Hartley Well number Woodworth 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#, K-55	N/A	Y
Surface	17-1/2"	13-3/8"	349'	New	48#, J-55	N/A	Y
Coal							
Intermediate 1	12-1/4"	9-5/8"	2524'	New	36#, J-55	N/A	Y
Intermediate 2							
Intermediate 3							
Production	8-3/4"/8-1/2"	5-1/2"	12615'	New	20#, P-110	N/A	Y
Tubing		2-3/8"	6383'		4#, 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 <sup>3</sup> /sks)	Volume (ft <sup>3</sup> )	Cement Top (MD)	WOC (hrs)
Conductor	Class A	393 sx	15.6	1.18	464	0'	8 Hrs.
Surface	Class A	414 sx	15.6	1.18	489	0'	8 Hrs.
Coal							
Intermediate 1	Class A	990 sx	15.6	1.18	1168	0'	8 Hrs.
Intermediate 2							
Intermediate 3							
Production	Class H	850 sx (Lead) 987 sx (Tail)	13.76 (Lead), 15.2 (Tail)	1.44 (Lead), 1.83 (Tail)	3030	~500' into Intermediate Casing	8 Hrs.
Tubing							

Drillers TD (ft) 12615' MD, 6250' TVD (BHL), 6280' (Deepest Point Drilled) Loggers TD (ft) 12566' MD

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

Plug back procedure N/A

Kick off depth (ft) 5750'

Check all wireline logs run  caliper  density  deviated/directional  induction  temperature  neutron  resistivity  gamma ray  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 \_\_\_\_\_

\*\* 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.

API 47- 095 - 02222 Farm name David M. Hartley Well number Woodworth Unit 1H

PERFORATION RECORD

Stage No.	Perforation date	Perforated from MD ft.	Perforated to MD ft.	Number of Perforations	Formation(s)
<b>*PLEASE SEE ATTACHED EXHIBIT 1</b>					

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)
<b>*PLEASE SEE ATTACHED EXHIBIT 2</b>								

Please insert additional pages as applicable.

API 47- 095 - 02222 Farm name David M. Hartley Well number Woodworth Unit 1H

<u>PRODUCING FORMATION(S)</u>	<u>DEPTHS</u>	
<u>Marcellus</u>	<u>6229' (TOP)</u> TVD	<u>6344' (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 11022 mcfpd Oil 182 bpd NGL --- bpd Water 726 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 <sub>2</sub> S, ETC)
	DEPTH IN FT NAME TVD	DEPTH IN FT TVD	DEPTH IN FT MD	DEPTH IN FT MD	

**\*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 [Signature] Title Permitting Agent Date 10/11/2017

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

API 47-095-02222 Farm Name David M. Hartley Well Number Woodworth Unit 1H

**EXHIBIT 1**

Stage No.	Perforation Date	Perforated from MD ft.	Perforated to MD ft.	Number of Perforations	Formations
1	12/21/2016	12333	12501	60	Marcellus
2	12/22/2016	12134	12302	60	Marcellus
3	12/22/2016	11935	12103	60	Marcellus
4	12/22/2016	11736	11904	60	Marcellus
5	12/22/2016	11537	11705	60	Marcellus
6	12/22/2016	11338	11506	60	Marcellus
7	12/23/2016	11139	11307	60	Marcellus
8	12/23/2016	10940	11108	60	Marcellus
9	12/23/2016	10741	10909	60	Marcellus
10	12/23/2016	10542	10710	60	Marcellus
11	12/23/2016	10343	10511	60	Marcellus
12	12/26/2016	10144	10312	60	Marcellus
13	12/26/2016	9946	10113	60	Marcellus
14	12/26/2016	9747	9914	60	Marcellus
15	12/26/2016	9548	9715	60	Marcellus
16	12/27/2016	9349	9516	60	Marcellus
17	12/27/2016	9150	9317	60	Marcellus
18	12/27/2016	8951	9118	60	Marcellus
19	12/27/2016	8752	8919	60	Marcellus
20	12/27/2016	8553	8721	60	Marcellus
21	12/27/2016	8354	8522	60	Marcellus
22	12/28/2016	8155	8323	60	Marcellus
23	12/28/2016	7956	8124	60	Marcellus
24	12/28/2016	7757	7925	60	Marcellus
25	12/29/2016	7558	7726	60	Marcellus
26	12/29/2016	7359	7527	60	Marcellus
27	12/29/2016	7160	7328	60	Marcellus
28	12/29/2016	6961	7129	60	Marcellus
29	12/29/2016	6762	6930	60	Marcellus
30	12/30/2016	6563	6731	60	Marcellus
31	12/30/2016	6364	6532	60	Marcellus

API 47-095-02222 Farm Name David M. Hartley Well Number Woodworth Unit 1H

**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	12/21/2016	69.7	6692	0	4617	306650	6860.0	N/A
2	12/22/2016	69.6	6539	5904	4621	306100	6871.0	N/A
3	12/22/2016	69.4	6765	5629	4803	305190	6836.0	N/A
4	12/22/2016	69.5	6598	5758	3684	304690	6813.0	N/A
5	12/22/2016	69.7	6632	6777	3648	307640	7729.0	N/A
6	12/22/2016	70.8	6548	5658	4721	305970	6686.0	N/A
7	12/23/2016	70.2	6314	5955	4324	305640	6668.0	N/A
8	12/23/2016	69.6	6448	6137	4971	307160	6667.0	N/A
9	12/23/2016	69.4	6422	6330	4324	306810	6734.0	N/A
10	12/23/2016	69.3	6405	5225	4613	308780	6643.0	N/A
11	12/23/2016	73.6	6505	5869	4760	306100	6634.0	N/A
12	12/26/2016	68.9	6915	5797	4885	305000	6638.0	N/A
13	12/26/2016	69.4	6468	5111	4545	304500	7035.0	N/A
14	12/26/2016	69.1	6359	5153	4642	307000	6605.0	N/A
15	12/26/2016	70.6	6468	5175	4603	306000	6599.0	N/A
16	12/27/2016	70.6	6482	5107	4685	305940	6593.0	N/A
17	12/27/2016	70.5	6391	5050	4814	304500	6612.0	N/A
18	12/27/2016	69.3	6438	5779	3759	305850	6594.0	N/A
19	12/27/2016	69.6	6363	5490	4503	304700	6568.0	N/A
20	12/27/2016	71.3	6159	5186	4184	305740	6557.0	N/A
21	12/27/2016	70.7	6101	6806	4621	305860	6558.0	N/A
22	12/28/2016	71.6	6262	6495	4181	307350	6580.0	N/A
23	12/28/2016	69.4	6227	5686	4921	306750	6553.0	N/A
24	12/28/2016	69.2	6181	5600	4935	306100	6604.0	N/A
25	12/29/2016	71.6	6235	5579	4245	309000	6516.0	N/A
26	12/29/2016	71.0	6249	6087	4495	308400	6514.0	N/A
27	12/29/2016	70.2	6164	5454	3669	306600	6513.0	N/A
28	12/29/2016	69.7	6195	5865	4463	306350	6486.0	N/A
29	12/29/2016	79.3	6399	5200	4692	305800	6508.0	N/A
30	12/30/2016	79.4	6373	5661	4699	306050	6469.0	N/A
31	12/30/2016	79.1	6164	5336	3723	307130	6518.0	N/A
	<b>AVG=</b>	<b>71.0</b>	<b>6,402</b>	<b>5,512</b>	<b>4,463</b>	<b>9,495,350</b>	<b>206,761</b>	<b>TOTAL</b>

**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	1932	est. 1716	1932
Big Lime	1932	2815	1932	2816
Fifth Sandstone	2815	3402	2816	3404
Bayard	3402	3938	3404	3940
Speechley	3938	4267	3940	4269
Baltown	4267	4653	4269	4655
Bradford	4653	4990	4655	4992
Benson	4990	5216	4992	5217
Alexander	5216	5457	5217	5459
Elk	5457	5765	5459	5766
Rhinestreet	5765	6033	5766	6054
Sycamore	6033	6129	6054	6171
Middlesex	6129	6217	6171	6307
Burkett	6217	6229	6307	6330
Tully	6229	6229	6330	6344
Marcellus	6229	NA	6344	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:	12/21/2016
Job End Date:	12/30/2016
State:	West Virginia
County:	Tyler
API Number:	47-095-02222-00-00
Operator Name:	Antero Resources Corporation
Well Name and Number:	Woodworth 1H
Latitude:	39.36536667
Longitude:	-80.99319167
Datum:	NAD83
Federal Well:	NO
Indian Well:	NO
True Vertical Depth:	6,279
Total Base Water Volume (gal):	8,937,668
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	88.44315	
Sand	U.S. Well Services, LLC	Proppant					
HCL Acid (12.6%-17.5%)	U.S. Well Services, LLC	Bulk Acid	Crystalline Silica, quartz	14808-60-7	100.00000	11.26377	
			Water	7732-18-5	87.40000	0.16416	
			Hydrogen Chloride	7647-01-0	17.50000	0.03817	
LGC-15	U.S. Well Services, LLC	Gelling Agents					
			Guar Gum	9000-30-0	50.00000	0.02185	
			Petroleum Distillates	64742-47-8	60.00000	0.02070	
			Suspending agent (solid)	14808-60-7	3.00000	0.00334	
			Surfactant	68439-51-0	3.00000	0.00131	
WFRA-405	U.S. Well Services, LLC	Friction Reducer					
			2-Propanoic acid, polymer with 2-propenamide	29003-06-9	30.00000	0.01500	
			Hydrated light distillate (petroleum)	64742-47-8	30.00000	0.01208	



SI-1100	U.S. Well Services, LLC	Scale Inhibitor	Ethylene Glycol	107-21-1	40.00000	0.00705
			Copolymer of Maleic and Acrylic acid	62255-49-9	10.00000	0.00145
			Potassium salt of diethylene triamine penta (methylene phosphonic acid)	15827-60-8	3.00000	0.00050
			Hexamethylene tramine penta (methylene phosphonic acid)	34690-00-1	3.00000	0.00048
			Phosphino carboxylic acid polymer	71050-62-9	3.00000	0.00048
Bioclear 2000	U.S. Well Services, LLC	Anti-Bacterial Agent	2,2-dibromo-3-nitropropionamide	10222-01-2	20.00000	0.00406
			Deionized Water	7732-18-5	28.00000	0.00232
AI-303	U.S. Well Services, LLC	Acid Corrosion Inhibitors	Ethylene glycol	107-21-1	40.00000	0.00006
			Formic acid	64-18-6	20.00000	0.00002
			Cinnamaldehyde	104-55-2	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" 9,855'

563' TO BOTTOM HOLE  
LATITUDE 39°25'00"

LONGITUDE 81°00'00"

3,509'

LONGITUDE 80°57'30"

12,570' TO BOTTOM HOLE

Antero Resources Corporation  
Well No. Woodworth Unit 1H  
47-095-02222 (AS DRILLED)

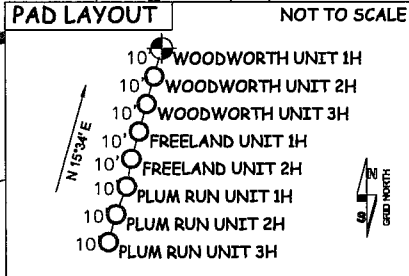
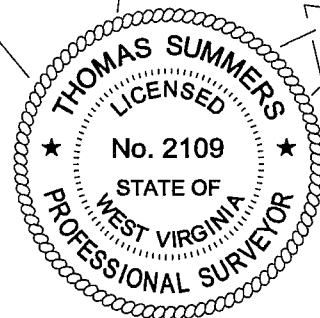
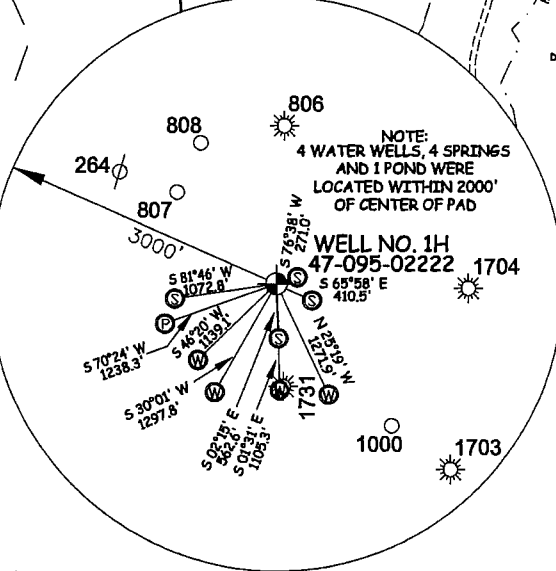
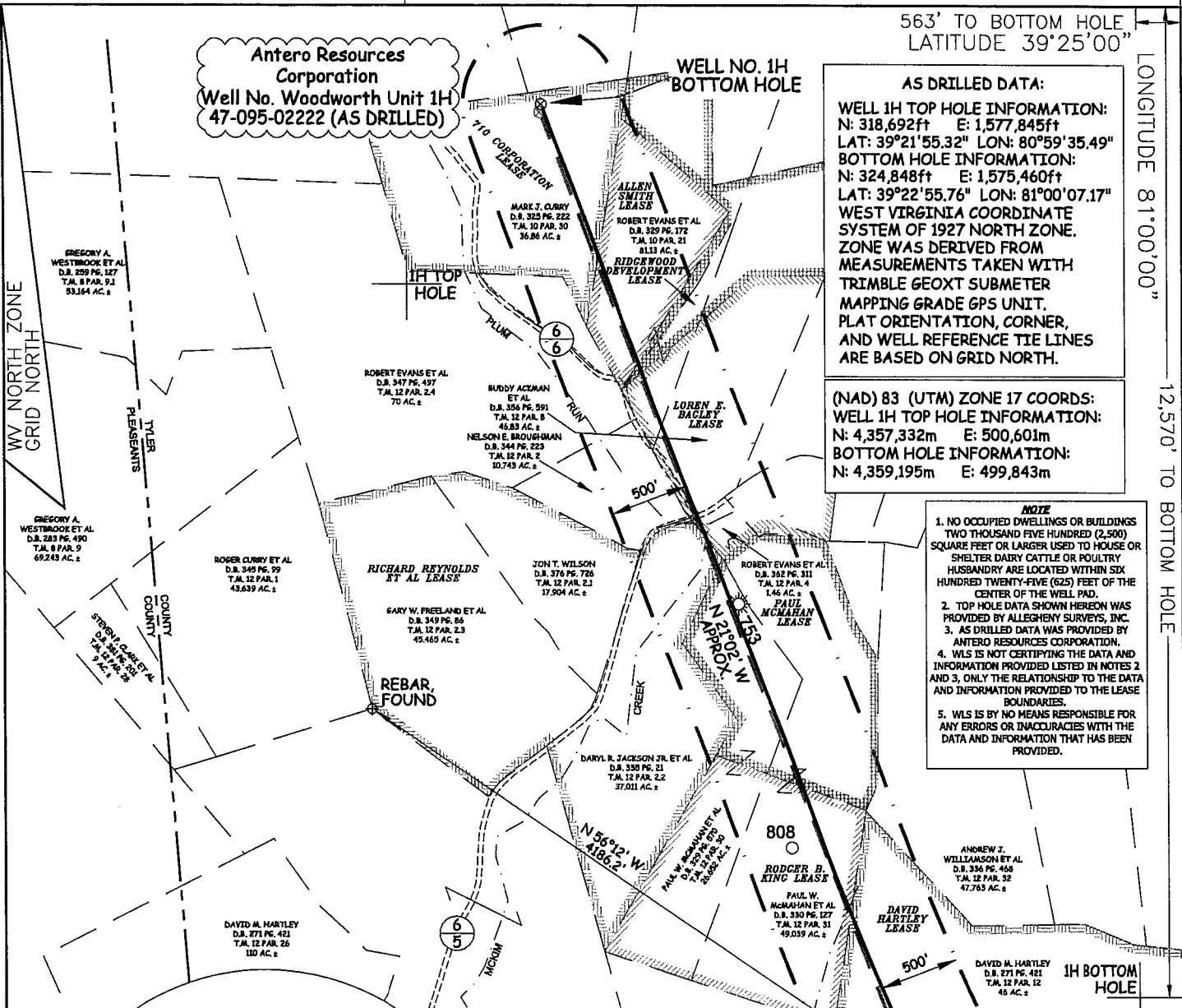
WELL NO. 1H  
BOTTOM HOLE

**AS DRILLED DATA:**  
**WELL 1H TOP HOLE INFORMATION:**  
N: 318,692ft E: 1,577,845ft  
LAT: 39°21'55.32" LON: 80°59'35.49"  
**BOTTOM HOLE INFORMATION:**  
N: 324,848ft E: 1,575,460ft  
LAT: 39°22'55.76" LON: 81°00'07.17"  
**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: 4,357,332m E: 500,601m  
**BOTTOM HOLE INFORMATION:**  
N: 4,359,195m E: 499,843m

**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. 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 BOUNDARIES.
5. WLS IS BY NO MEANS RESPONSIBLE FOR ANY ERRORS OR INACCURACIES WITH THE DATA AND INFORMATION THAT HAS BEEN PROVIDED.



JOB # 13-081WA  
DRAWING # WOODWORTH1HADR  
SCALE 1" = 1000'  
MINIMUM DEGREE OF ACCURACY SUBMETER  
PROVEN SOURCE OF ELEV. SUBMETER MAPPING GRADE GPS  
STATE OF WEST VIRGINIA

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 PRESCRIBED BY THE DEPARTMENT OF ENVIRONMENTAL PROTECTION.



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

*Thomas Summers*  
THOMAS SUMMERS P.S. 2109

LATITUDE 39°22'30"

9,855'

563' TO BOTTOM HOLE  
LATITUDE 39°25'00"

LONGITUDE 81°00'00"

3,509'

LONGITUDE 80°57'30"

Antero Resources Corporation  
Well No. Woodward Unit 1H  
47-095-02222 (AS DRILLED)

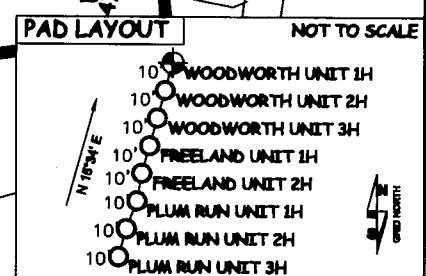
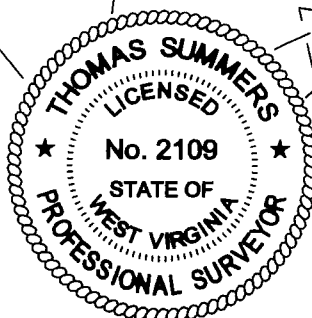
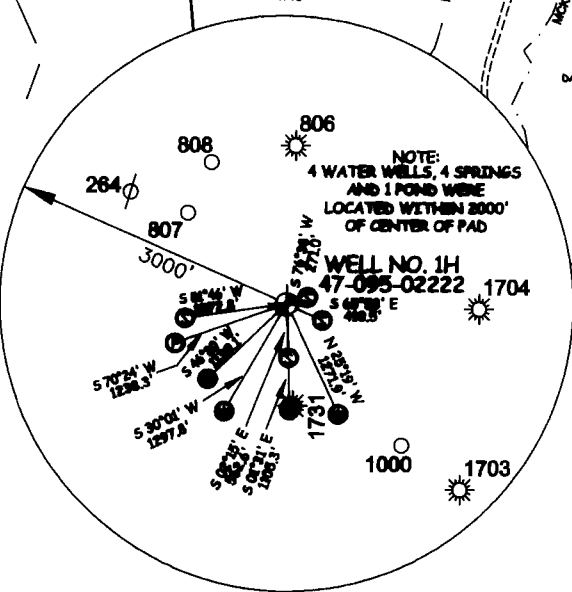
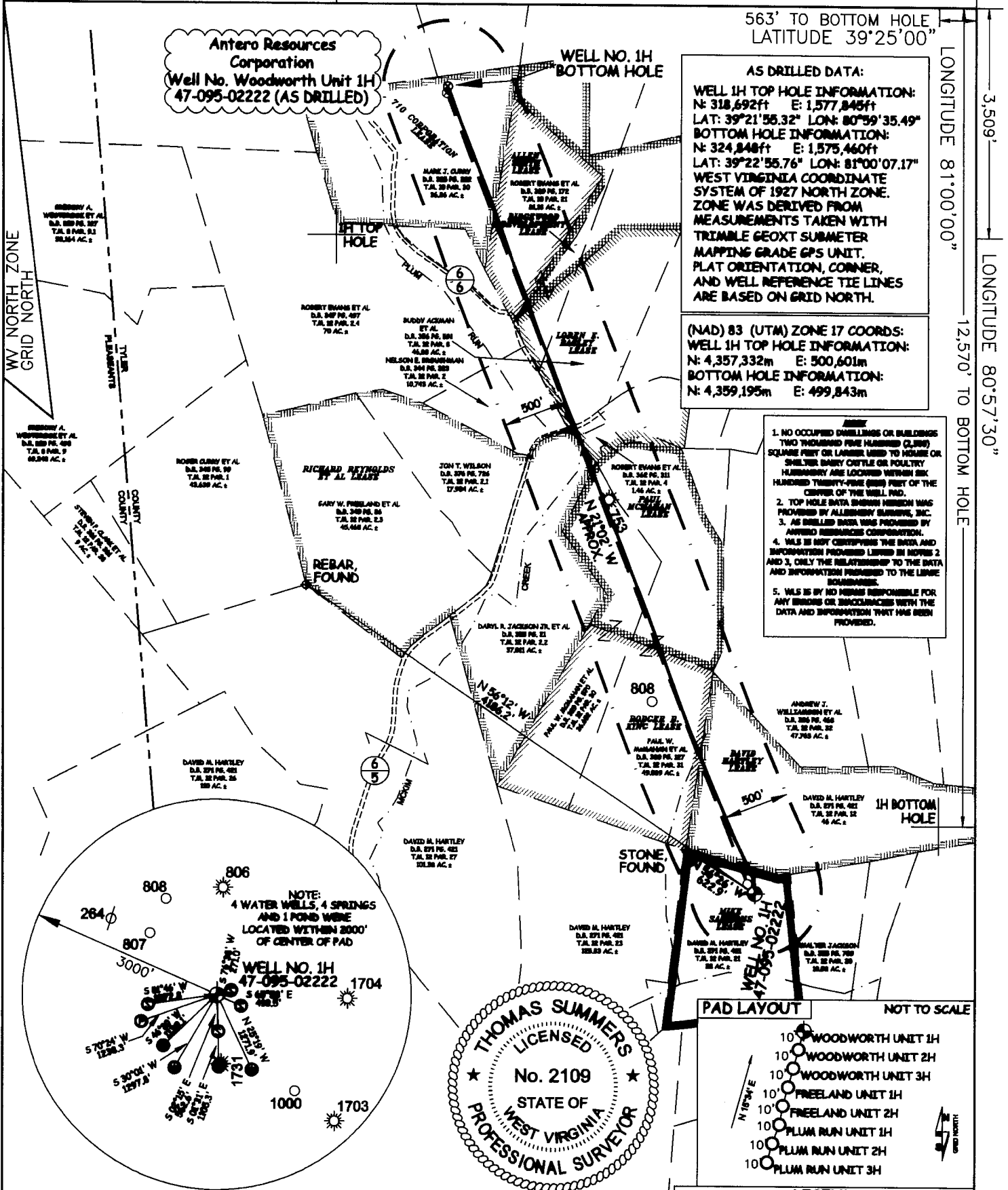
WELL NO. 1H  
BOTTOM HOLE

AS DRILLED DATA:

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LAT: 39°21'55.32" LON: 80°59'35.49"  
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N: 324,848ft E: 1,575,460ft  
LAT: 39°22'55.76" LON: 81°00'07.17"  
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: 4,357,332m E: 500,601m  
BOTTOM HOLE INFORMATION:  
N: 4,359,195m E: 499,843m

- NO OCCUPIED DWELLINGS OR BUILDINGS TWO THOUSAND FIVE HUNDRED (2,000) SQUARE FEET OR LARGER USED TO HOUSE OR SHELTER BARNY CATTLE OR POULTRY HERDS OR ARE LOCATED WITHIN SIX HUNDRED THIRTY-FIVE (635) FEET OF THE CENTER OF THE WELL PAD.
- TOP HOLE DATA SHOWN HEREIN WAS PROVIDED BY ALBERICI SURVING, INC.
- AS DRILLED DATA WAS PROVIDED BY ANTERO RESOURCES CORPORATION.
- WLS IS NOT CERTIFYING THE DATA AND INFORMATION PROVIDED LISTED IN NOTES 2 AND 3, ONLY THE RELIABILITY OF THE DATA AND INFORMATION PROVIDED TO THE LICENSEE THEREON.
- WLS IS BY NO MEANS RESPONSIBLE FOR ANY ERRORS OR DISCREPANCIES WITH THE DATA AND INFORMATION THAT HAS BEEN PROVIDED.



JOB # 13-081WA  
DRAWING # WOODWORTH1HADR  
SCALE 1" = 1000'  
MINIMUM DEGREE OF ACCURACY SUBMETER  
PROVEN SOURCE OF ELEV. SUBMETER MAPPING GRADE GPS  
STATE OF WEST VIRGINIA

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

LEGEND

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

THOMAS SUMMERS P.S. 2109