

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

API 47 - 033 - 05694 County Harrison District Tenmile
Quad Salem 7.5' Pad Name Hubert Pad Field/Pool Name -----
Farm name Hubert Jr. & Lorena Bland Well Number Ford 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 4344997.783m Easting 537951.671m
Landing Point of Curve Northing 4345645.045m Easting 538307.437m
Bottom Hole Northing 4347859.090m Easting 537622.779m

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

APPROVED
NAME: S. D. Clarratt
DATE: 10/13/2017

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Date permit issued 12/26/2012 Date drilling commenced 03/22/2014 Date drilling ceased 07/17/2014
Date completion activities began 09/13/2014 Date completion activities ceased 06/19/2017
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 364', 367' Open mine(s) (Y/N) depths No
Salt water depth(s) ft None Identified Void(s) encountered (Y/N) depths No
Coal depth(s) ft 1737' Cavern(s) encountered (Y/N) depths No
Is coal being mined in area (Y/N) No

Reviewed by: _____

API 47-033 - 05694 Farm name Hubert Jr. & Lorena Bland Well number Ford 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	24"	20"	40'	New	94#, H-40	N/A	Y
Surface	17-1/2"	13-3/8"	486'	New	48#, H-40	N/A	Y
Coal							
Intermediate 1	12-1/4"	9-5/8"	2606'	New	36#, J-55	N/A	Y
Intermediate 2							
Intermediate 3							
Production	8-3/4"/8-1/2"	5-1/2"	17184'	New	23#, P-110	N/A	Y
Tubing		2-3/8"	7925'		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	185 sx	15.6	1.18	218	0'	8 Hrs.
Surface	Class A	571 sx	15.6	1.18	674	0'	8 Hrs.
Coal							
Intermediate 1	Class A	951 sx	15.6	1.18	1122	0'	8 Hrs.
Intermediate 2							
Intermediate 3							
Production	Class H	758 sx (Lead), 1787 sx (Tail)	14.5 (Lead), 15.2 (Tail)	1.3 (Lead), 1.86 (Tail)	4309	-500' into Intermediate Casing	8 Hrs.
Tubing							

Drillers TD (ft) 17184' MD, 7559' TVD (BHL & Deepest Point Drilled) Loggers TD (ft) 17136' MD
 Deepest formation penetrated Marcellus Plug back to (ft) N/A
 Plug back procedure N/A

Kick off depth (ft) 7252'

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

*** 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 submission.
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API 47-033 - 05694 Farm name Hubert Jr. & Lorena Bland Well number Ford Unit 2H

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								

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API 47- 033 - 05694 Farm name Hubert Jr. & Lorena Bland Well number Ford Unit 2H

<u>PRODUCING FORMATION(S)</u>	<u>DEPTHS</u>	
<u>Marcellus</u>	<u>7427' (TOP)</u> TVD	<u>8004' (TOP)</u> 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 15077 mcfpd Oil 2 bpd NGL --- bpd Water 306 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 Patterson – UTI Drilling Company LLC
Address 207 Carlton Drive City Eighty Four State PA Zip 15330

Logging Company STRC
Address 1560 Good Hope Pike City Clarksburg State WV Zip 26301

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 Drive City Jane Lew State WV Zip 26378

Please insert additional pages as applicable.

Completed by Samantha Klaas Telephone 303-357-6759
Signature *Samantha Klaas* Title Permitting Agent Date 09/27/2017

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	9/13/2014	16923	17093	40	Marcellus
2	4/21/2017	16721	16891	40	Marcellus
3	4/22/2017	16519	16689	40	Marcellus
4	4/22/2017	16317	16488	40	Marcellus
5	4/22/2017	16116	16286	40	Marcellus
6	4/23/2017	15914	16084	40	Marcellus
7	4/23/2017	15712	15882	40	Marcellus
8	4/23/2017	15511	15681	40	Marcellus
9	4/23/2017	15309	15479	40	Marcellus
10	4/24/2017	15107	15277	40	Marcellus
11	4/24/2017	14906	15076	40	Marcellus
12	4/24/2017	14704	14874	40	Marcellus
13	4/24/2017	14502	14672	40	Marcellus
14	4/24/2017	14301	14471	40	Marcellus
15	4/25/2017	14099	14269	40	Marcellus
16	4/25/2017	13897	14067	40	Marcellus
17	4/25/2017	13695	13866	40	Marcellus
18	4/25/2017	13494	13664	40	Marcellus
19	4/26/2017	13292	13462	40	Marcellus
20	4/26/2017	13090	13260	40	Marcellus
21	4/26/2017	12889	13059	40	Marcellus
22	4/26/2017	12687	12857	40	Marcellus
23	4/27/2017	12485	12655	40	Marcellus
24	4/27/2017	12284	12454	40	Marcellus
25	4/27/2017	12082	12252	40	Marcellus
26	4/27/2017	11880	12050	40	Marcellus
27	4/28/2017	11679	11849	40	Marcellus
28	4/28/2017	11477	11647	40	Marcellus
29	4/28/2017	11275	11445	40	Marcellus
30	4/28/2017	11074	11244	40	Marcellus
31	4/28/2017	10872	11042	40	Marcellus
32	4/29/2017	10670	10840	40	Marcellus
33	4/29/2017	10468	10639	40	Marcellus
34	4/29/2017	10267	10437	40	Marcellus
35	4/30/2017	10065	10235	40	Marcellus
36	4/30/2017	9863	10033	40	Marcellus
37	4/30/2017	9662	9832	40	Marcellus
38	4/30/2017	9460	9630	40	Marcellus
39	5/1/2017	9258	9428	40	Marcellus
40	5/1/2017	9057	9227	40	Marcellus
41	5/1/2017	8855	9025	40	Marcellus
42	5/1/2017	8653	8823	40	Marcellus
43	5/1/2017	8452	8622	40	Marcellus
44	5/2/2017	8250	8420	40	Marcellus
45	5/2/2017	8048	8218	40	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	4/21/2017	65.8	7584	0	4998	356300	7661	N/A
2	4/21/2017	72.0	7898	5865	5435	357920	8779	N/A
3	4/22/2017	74.8	8048	0	5545	355730	8514	N/A
4	4/22/2017	73.0	8101	6314	5294	355417	10510	N/A
5	4/22/2017	72.0	7882	6441	4435	356730	7608	N/A
6	4/23/2017	74.0	7886	6198	4713	354960	7445	N/A
7	4/23/2017	66.6	8208	6110	4527	355920	9149	N/A
8	4/23/2017	74.1	7711	6422	4609	355510	7523	N/A
9	4/23/2017	75.0	7730	6473	4761	354580	7433	N/A
10	4/24/2017	75.0	7763	6290	4667	355010	7430	N/A
11	4/24/2017	70.1	7941	6017	4770	357080	9665	N/A
12	4/24/2017	77.1	7691	6341	4787	355950	7401	N/A
13	4/24/2017	78.3	8077	6563	4580	356500	7749	N/A
14	4/24/2017	73.0	7818	6247	4520	355020	9026	N/A
15	4/25/2017	73.1	7759	6366	4856	359480	7350	N/A
16	4/25/2017	80.4	7793	6496	4808	356580	7356	N/A
17	4/25/2017	80.3	7762	6281	4582	356880	7348	N/A
18	4/25/2017	74.7	7568	6392	4910	355250	7360	N/A
19	4/26/2017	71.4	7704	6742	4861	360890	8096	N/A
20	4/26/2017	77.6	7884	6896	4793	356440	8240	N/A
21	4/26/2017	80.4	7742	6456	4700	356680	7315	N/A
22	4/26/2017	80.1	7582	6336	4850	356580	7297	N/A
23	4/27/2017	79.3	7725	6192	4558	359560	7295	N/A
24	4/27/2017	74.3	7828	6706	5058	358000	8310	N/A
25	4/27/2017	76.2	7706	6596	5082	358720	7277	N/A
26	4/27/2017	78.0	7468	7575	3824	357210	7279	N/A
27	4/28/2017	79.0	7860	7185	4723	357170	7254	N/A
28	4/28/2017	80.1	7694	6727	5455	356690	7256	N/A
29	4/28/2017	80.1	7779	6648	4710	356100	7859	N/A
30	4/28/2017	79.4	7590	6214	4482	350320	7199	N/A
31	4/28/2017	76.9	7941	6139	4444	356923	9261	N/A
32	4/29/2017	75.1	7893	7297	4668	358230	7660	N/A
33	4/29/2017	75.8	7606	7623	5248	354750	7210	N/A
34	4/29/2017	72.3	7868	7110	4900	354440	7822	N/A
35	4/30/2017	79.0	7768	6976	4779	354530	7190	N/A
36	4/30/2017	81.4	7527	6115	5604	357030	7671	N/A
37	4/30/2017	80.2	7563	6352	4608	356280	7663	N/A
38	4/30/2017	75.5	7338	7156	4957	360930	9809	N/A
39	5/1/2017	76.2	7737	6556	4849	355380	8413	N/A
40	5/1/2017	82.0	7217	7013	4748	356300	7335	N/A
41	5/1/2017	81.0	7169	6240	5101	355690	7143	N/A
42	5/1/2017	76.9	7446	6993	4303	356590	7599	N/A
43	5/1/2017	81.5	7210	6757	4604	354560	7129	N/A
44	5/2/2017	81.5	7123	7217	4884	358150	7104	N/A
45	5/2/2017	81.0	7058	6206	4561	357340	7504	N/A
AVG=		76.5	7,694	6,285	4,803	16,042,300	352,497	TOTAL

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LITHOLOGY/ FORMATION	TOP DEPTH (TVD)	BOTTOM DEPTH (TVD)	TOP DEPTH (MD)	BOTTOM DEPTH (MD)
	From Surface	From Surface	From Surface	From Surface
Fresh Water	364'	N/A	364'	N/A
Fresh Water	367'	N/A	367'	N/A
Siltstone	0	97	0	97
Sandy shale	est. 97	317	est. 97	317
Sandstone	est. 317	507	est. 317	507
Silty Sandstone	est. 507	657	est. 507	657
Sandstone	est. 657	1027	est. 657	1027
Limestone/Dolomite	est. 1027	1117	est. 1027	1117
Siltstone	est. 1117	1297	est. 1117	1297
Sandstone	est. 1297	1327	est. 1297	1327
Limey siltstone	est. 1327	1477	est. 1327	1477
Sandstone	est. 1477	1597	est. 1477	1597
Sandy Siltstone	est. 1597	1737	est. 1597	1737
Coal	est. 1737	1757	est. 1737	1757
Sandstone	est. 1757	1797	est. 1757	1797
Siltstone	est. 1797	1817	est. 1797	1817
Sandstone	est. 1817	2097	est. 1817	2097
Limey Shale	est. 2097	2329	est. 2097	2329
Big Lime	2329	2463	2329	2463
Big Injun	2463	2804	2463	2804
Gantz Sand	2804	2904	2804	2904
Fifty Foot Sandstone	2904	3026	2904	3026
Gordon	3026	3351	3026	3351
Fifth Sandstone	3351	3391	3351	3391
Bayard	3391	3729	3391	3730
Warren	3729	3972	3730	3974
Speechley	3972	4469	3974	4485
Baltown	4469	4731	4485	4819
Bradford	4731	5332	4819	5397
Benson	5332	5615	5397	5722
Alexander	5615	5805	5722	5941
Elk	5805	6432	5941	6664
Rhinestreet	6432	6870	6664	7185
Sycamore	6870	7090	7185	7451
Middlesex	7090	7242	7451	7649
Burkett	7242	7268	7649	7686
Tully	7268	7427	7686	8004
Marcellus	7427	NA	8004	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.

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Ford Unit 2H
Harrison County West Virginia
Northing: 14254497.48
Easting: 1764882.44
As Drilled



To convert Magnetic North to Grid, Subtract 8.89°
 To convert True North to Grid, Subtract 0.28°

Azimuths to Grid North
 True North: -0.28°
 Magnetic North: -8.89°

Magnetic Field
 Strength: 52234.2snT
 Dip Angle: 66.83°
 Date: 4/11/2014
 Model: BGGM2014

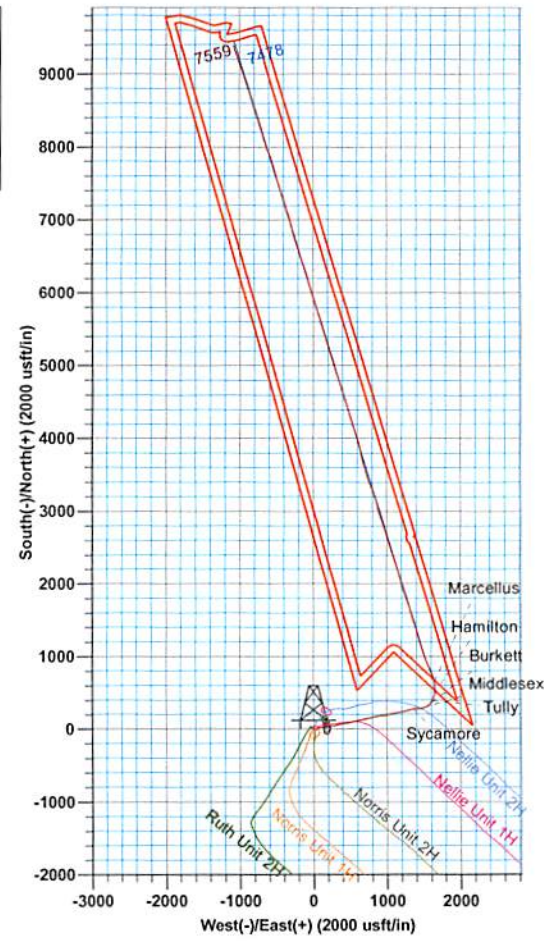
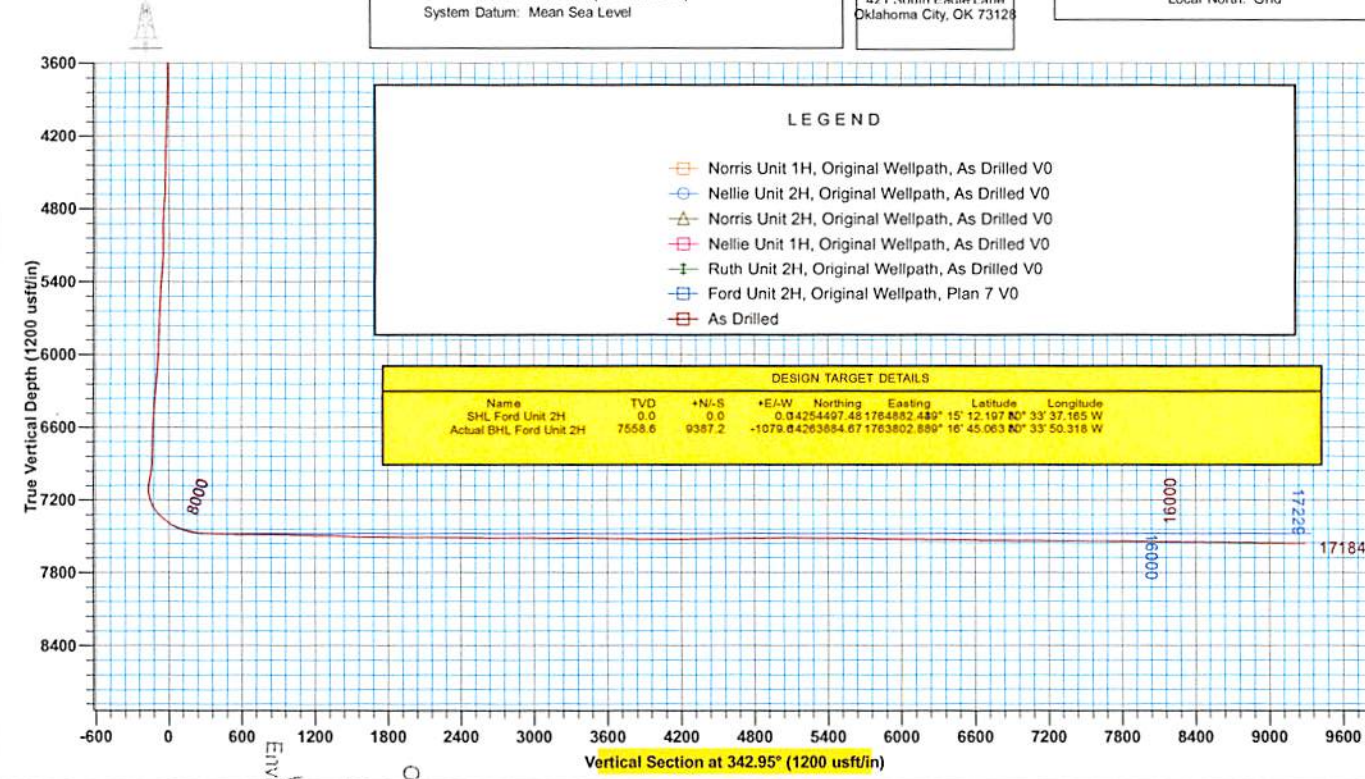
WELL DETAILS Ford Unit 2H						
Ground Level: 1374.0						
+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	
0.0	0.0	14254497.48	1764882.44	39° 15' 12.197 N	80° 33' 37.165 W	

SITE DETAILS: Ruth/Norris/Nellie/Ford Pad	
Site Center: Ruth Unit 2H	
Site Centre Northing:	14254530.66
Easting:	1764845.07
Positional Uncertainty:	2.0
Convergence:	0.28
Local North:	Grid

PROJECT DETAILS: Harrison County West Virginia	
Geodetic System: Universal Transverse Mercator (US Survey Feet)	
Datum: NAD 1927 (NADCON CONUS)	
Ellipsoid: Clarke 1866	
Zone: Zone 17N (84 W to 78 W)	
System Datum: Mean Sea Level	

Genie Lightfoot
13.56, July 29 2014
Scientific Drilling
421 South Eagle Lane
Oklahoma City, OK 73128

Patterson 340: GL 1374' + 24' RKB @ 1398.0usft
 1374.0



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Company:	Antero Resources	Local Co-ordinate Reference:	Well Ford Unit 2H
Project:	Harrison County West Virginia	TVD Reference:	Patterson 340: GL 1374' + 24' RKB @ 1398.0usft
Site:	Ruth/Norris/Nellie/Ford Pad	MD Reference:	Patterson 340: GL 1374' + 24' RKB @ 1398.0usft
Well:	Ford Unit 2H	North Reference:	Grid
Wellbore:	Original Wellpath	Survey Calculation Method:	Minimum Curvature
Design:	As Drilled	Database:	Oklahoma District

Project	Harrison County West Virginia, Harrison County, USA		
Map System:	Universal Transverse Mercator (US Survey Feet)	System Datum:	Mean Sea Level
Geo Datum:	NAD 1927 (NADCON CONUS)		
Map Zone:	Zone 17N (84 W to 78 W)		

Site	Ruth/Norris/Nellie/Ford Pad		
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Site Position:		Northing:	14,254,530.66 usft	Latitude:	39° 15' 12.526 N
From:	Map	Easting:	1,764,845.07 usft	Longitude:	80° 33' 37.638 W
Position Uncertainty:	2.0 usft	Slot Radius:	13-3/16"	Grid Convergence:	0.28 °

Well	Ford Unit 2H, Marcellus					
Well Position	+N/-S	0.0 usft	Northing:	14,254,497.48 usft	Latitude:	39° 15' 12.197 N
	+E/-W	0.0 usft	Easting:	1,764,882.44 usft	Longitude:	80° 33' 37.165 W
Position Uncertainty	2.0 usft		Wellhead Elevation:	1,398.0 usft	Ground Level:	1,374.0 usft

Wellbore	Original Wellpath				
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Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	BGGM2014	4/11/2014	-8.62	66.83	52,234

Design	As Drilled				
---------------	------------	--	--	--	--

Audit Notes:					
Version:	1.0	Phase:	ACTUAL	Tie On Depth:	0.0
Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)	
	0.0	0.0	0.0	342.95	

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Survey Program	Date	From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description
	7/31/2014	100.0	1,110.1	Survey #2 Def Gyro (Original Wellpath)	SDI Standard Keeper	Scientific Drilling Intl. Standard Wireline Keeper
		1,110.8	2,548.2	Survey #4 Def Gyro to Int (Original Wellpa	SDI Standard Keeper	Scientific Drilling Intl. Standard Wireline Keeper
		2,573.2	3,490.4	Survey #6 Def Gyro to KOP (Original Well	SDI Standard Keeper	Scientific Drilling Intl. Standard Wireline Keeper
		3,500.1	7,070.3	Survey #8 EOTang to Curve KOP (Origina	SDI Standard Keeper	Scientific Drilling Intl. Standard Wireline Keeper
		7,192.0	17,184.0	Survey #9 MWD (Original Wellpath)	SDI MWD	Scientific Drilling Intl. MWD - Standard ver 1.0.1

MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	N/S (usft)	E/W (usft)	V. Sec (usft)	DLeg (°/100usft)
0.0	0.00	0.00	0.0	0.0	0.0	0.0	0.00
100.0	0.04	61.40	100.0	0.0	0.0	0.0	0.04
200.0	0.05	22.79	200.0	0.1	0.1	0.0	0.03
300.0	0.11	56.05	300.0	0.2	0.2	0.1	0.07
400.0	0.05	172.63	400.0	0.2	0.3	0.1	0.14
500.0	0.08	130.08	500.0	0.1	0.3	0.0	0.05
600.0	0.05	198.23	600.0	0.0	0.4	-0.1	0.08
700.0	0.10	135.94	700.0	-0.1	0.4	-0.2	0.09



Company:	Antero Resources	Local Co-ordinate Reference:	Well Ford Unit 2H
Project:	Harrison County West Virginia	TVD Reference:	Patterson 340: GL 1374' + 24' RKB @ 1398.0usft
Site:	Ruth/Norris/Nellie/Ford Pad	MD Reference:	Patterson 340: GL 1374' + 24' RKB @ 1398.0usft
Well:	Ford Unit 2H	North Reference:	Grid
Wellbore:	Original Wellpath	Survey Calculation Method:	Minimum Curvature
Design:	As Drilled	Database:	Oklahoma District

Survey

MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	N/S (usft)	E/W (usft)	V. Sec (usft)	DLeg (°/100usft)
800.0	0.13	151.38	800.0	-0.3	0.5	-0.4	0.04
900.0	0.13	199.68	900.0	-0.5	0.5	-0.6	0.11
1,000.0	0.06	272.20	1,000.0	-0.6	0.4	-0.7	0.13
1,100.0	0.04	201.74	1,100.0	-0.6	0.4	-0.7	0.06
1,110.1	0.05	216.89	1,110.1	-0.6	0.4	-0.7	0.15
1,110.8	0.05	216.89	1,110.8	-0.6	0.4	-0.7	0.00
1,135.8	0.05	167.18	1,135.8	-0.6	0.4	-0.7	0.17
1,160.8	0.07	233.26	1,160.8	-0.7	0.4	-0.7	0.27
1,185.8	0.09	219.37	1,185.8	-0.7	0.3	-0.7	0.11
1,210.8	0.06	200.44	1,210.8	-0.7	0.3	-0.8	0.15
1,235.8	0.32	77.84	1,235.8	-0.7	0.4	-0.8	1.42
1,260.8	1.08	68.35	1,260.8	-0.6	0.7	-0.8	3.06
1,285.8	1.91	66.75	1,285.8	-0.3	1.3	-0.7	3.32
1,310.8	2.50	67.96	1,310.8	0.0	2.2	-0.6	2.37
1,335.8	2.85	69.29	1,335.7	0.4	3.2	-0.5	1.42
1,360.8	2.96	70.44	1,360.7	0.9	4.4	-0.5	0.50
1,385.8	3.02	69.90	1,385.7	1.3	5.7	-0.4	0.27
1,410.8	3.06	69.61	1,410.6	1.8	6.9	-0.3	0.17
1,435.8	3.13	70.91	1,435.6	2.2	8.2	-0.3	0.40
1,460.8	3.21	71.75	1,460.6	2.7	9.5	-0.2	0.37
1,485.8	3.26	74.05	1,485.5	3.1	10.8	-0.2	0.56
1,510.8	3.38	78.21	1,510.5	3.4	12.2	-0.3	1.08
1,535.8	3.38	80.29	1,535.4	3.7	13.7	-0.5	0.49
1,560.8	3.27	80.62	1,560.4	4.0	15.1	-0.7	0.45
1,585.8	3.21	81.64	1,585.4	4.2	16.5	-0.9	0.33
1,610.8	2.94	81.99	1,610.3	4.4	17.8	-1.1	1.08
1,635.8	2.63	82.27	1,635.3	4.5	19.0	-1.3	1.24
1,660.8	2.49	82.65	1,660.3	4.7	20.2	-1.4	0.56
1,685.8	2.22	83.80	1,685.2	4.8	21.2	-1.6	1.10
1,710.8	2.00	84.49	1,710.2	4.9	22.1	-1.8	0.89
1,735.8	1.82	84.38	1,735.2	5.0	22.9	-2.0	0.72
1,760.8	1.61	86.24	1,760.2	5.0	23.7	-2.1	0.87
1,785.8	1.51	87.45	1,785.2	5.1	24.3	-2.3	0.42
1,810.8	1.33	87.19	1,810.2	5.1	25.0	-2.4	0.72
1,835.8	1.17	89.07	1,835.2	5.1	25.5	-2.6	0.66
1,860.8	1.05	89.39	1,860.2	5.1	26.0	-2.7	0.48
1,885.8	0.93	88.94	1,885.2	5.1	26.4	-2.8	0.48
1,910.8	0.77	92.00	1,910.2	5.1	26.8	-2.9	0.67
1,935.8	0.71	92.16	1,935.2	5.1	27.1	-3.1	0.24
1,960.8	0.58	93.05	1,960.2	5.1	27.4	-3.1	0.52
1,985.8	0.50	95.59	1,985.2	5.1	27.6	-3.2	0.33
2,010.8	0.48	96.15	2,010.2	5.1	27.8	-3.3	0.08
2,035.8	0.41	105.42	2,035.2	5.0	28.0	-3.4	0.40
2,060.8	0.44	111.18	2,060.2	5.0	28.2	-3.5	0.21

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EOW Completion Report



Company:	Antero Resources	Local Co-ordinate Reference:	Well Ford Unit 2H
Project:	Harrison County West Virginia	TVD Reference:	Patterson 340: GL 1374' + 24' RKB @ 1398.0usft
Site:	Ruth/Norris/Nellie/Ford Pad	MD Reference:	Patterson 340: GL 1374' + 24' RKB @ 1398.0usft
Well:	Ford Unit 2H	North Reference:	Grid
Wellbore:	Original Wellpath	Survey Calculation Method:	Minimum Curvature
Design:	As Drilled	Database:	Oklahoma District

Survey							
MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	N/S (usft)	E/W (usft)	V. Sec (usft)	DLeg (°/100usft)
2,085.8	0.46	105.96	2,085.2	4.9	28.4	-3.6	0.18
2,110.8	0.49	105.15	2,110.2	4.9	28.6	-3.7	0.12
2,135.8	0.47	106.71	2,135.2	4.8	28.8	-3.9	0.10
2,160.8	0.42	105.66	2,160.2	4.7	29.0	-4.0	0.20
2,185.8	0.37	110.90	2,185.2	4.7	29.1	-4.1	0.25
2,210.8	0.32	113.69	2,210.2	4.6	29.3	-4.2	0.21
2,235.8	0.31	108.38	2,235.2	4.6	29.4	-4.2	0.12
2,260.8	0.27	106.47	2,260.2	4.5	29.5	-4.3	0.16
2,285.8	0.23	112.63	2,285.2	4.5	29.6	-4.4	0.19
2,310.8	0.18	119.79	2,310.2	4.5	29.7	-4.4	0.22
2,335.8	0.22	115.03	2,335.2	4.4	29.8	-4.5	0.17
2,360.8	0.20	124.41	2,360.2	4.4	29.9	-4.6	0.16
2,385.8	0.12	139.17	2,385.2	4.3	29.9	-4.6	0.36
2,410.8	0.11	142.83	2,410.2	4.3	30.0	-4.7	0.05
2,435.8	0.13	156.15	2,435.2	4.3	30.0	-4.7	0.14
2,460.8	0.19	150.98	2,460.2	4.2	30.0	-4.8	0.25
2,485.8	0.24	137.73	2,485.2	4.1	30.1	-4.9	0.28
2,510.8	0.28	130.37	2,510.2	4.0	30.2	-5.0	0.21
2,535.8	0.28	118.83	2,535.2	4.0	30.3	-5.1	0.23
2,548.2	0.29	111.55	2,547.6	4.0	30.3	-5.1	0.30
2,573.2	0.27	125.29	2,572.6	3.9	30.4	-5.2	0.28
2,598.2	0.23	122.73	2,597.6	3.8	30.5	-5.3	0.17
2,623.2	0.30	123.07	2,622.6	3.8	30.6	-5.4	0.28
2,648.2	0.30	125.73	2,647.6	3.7	30.7	-5.5	0.06
2,673.2	0.27	113.72	2,672.6	3.6	30.8	-5.6	0.27
2,698.2	0.31	116.66	2,697.6	3.6	30.9	-5.6	0.17
2,723.2	0.32	118.88	2,722.6	3.5	31.1	-5.7	0.06
2,748.2	0.35	100.25	2,747.6	3.5	31.2	-5.8	0.45
2,773.2	0.30	113.64	2,772.6	3.4	31.3	-5.9	0.36
2,798.2	0.30	110.25	2,797.6	3.4	31.5	-6.0	0.07
2,823.2	0.37	115.16	2,822.6	3.3	31.6	-6.1	0.30
2,848.2	0.37	116.90	2,847.6	3.3	31.7	-6.2	0.04
2,873.2	0.48	128.65	2,872.6	3.1	31.9	-6.3	0.56
2,898.2	0.58	130.29	2,897.6	3.0	32.1	-6.5	0.40
2,923.2	0.67	119.92	2,922.5	2.8	32.3	-6.7	0.58
2,948.2	0.64	114.18	2,947.5	2.7	32.5	-6.9	0.29
2,973.2	0.51	124.05	2,972.5	2.6	32.8	-7.1	0.65
2,998.2	0.50	113.93	2,997.5	2.5	33.0	-7.3	0.36
3,023.2	0.39	119.20	3,022.5	2.4	33.1	-7.4	0.47
3,048.2	0.37	123.15	3,047.5	2.3	33.3	-7.5	0.13
3,073.2	0.43	125.61	3,072.5	2.2	33.4	-7.7	0.25
3,098.2	0.38	152.69	3,097.5	2.1	33.5	-7.8	0.78
3,123.2	0.42	126.50	3,122.5	2.0	33.6	-8.0	0.74
3,148.2	0.44	135.51	3,147.5	1.8	33.8	-8.1	0.28

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Company:	Antero Resources	Local Co-ordinate Reference:	Well Ford Unit 2H
Project:	Harrison County West Virginia	TVD Reference:	Patterson 340: GL 1374' + 24' RKB @ 1398.0usft
Site:	Ruth/Norris/Nellie/Ford Pad	MD Reference:	Patterson 340: GL 1374' + 24' RKB @ 1398.0usft
Well:	Ford Unit 2H	North Reference:	Grid
Wellbore:	Original Wellpath	Survey Calculation Method:	Minimum Curvature
Design:	As Drilled	Database:	Oklahoma District

Survey

MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	N/S (usft)	E/W (usft)	V. Sec (usft)	DLeg (°/100usft)
3,173.2	0.44	141.90	3,172.5	1.7	33.9	-8.3	0.20
3,198.2	0.44	139.10	3,197.5	1.5	34.0	-8.5	0.09
3,223.2	0.48	142.69	3,222.5	1.4	34.2	-8.7	0.20
3,248.2	0.46	137.93	3,247.5	1.2	34.3	-8.9	0.18
3,273.2	0.37	132.40	3,272.5	1.1	34.4	-9.0	0.39
3,298.2	0.35	127.62	3,297.5	1.0	34.5	-9.2	0.14
3,323.2	0.39	121.60	3,322.5	0.9	34.7	-9.3	0.22
3,348.2	0.33	119.56	3,347.5	0.8	34.8	-9.4	0.25
3,373.2	0.38	117.14	3,372.5	0.8	34.9	-9.5	0.21
3,398.2	0.44	168.79	3,397.5	0.6	35.0	-9.7	1.45
3,423.2	0.35	138.30	3,422.5	0.5	35.1	-9.8	0.90
3,448.2	0.33	120.70	3,447.5	0.4	35.2	-10.0	0.42
3,473.2	0.29	126.64	3,472.5	0.3	35.3	-10.1	0.21
3,490.4	0.40	123.11	3,489.7	0.3	35.4	-10.1	0.65
3,500.1	0.45	117.70	3,499.4	0.2	35.5	-10.2	0.66
3,525.2	0.37	121.27	3,524.5	0.1	35.6	-10.3	0.33
3,550.8	0.42	117.73	3,550.1	0.0	35.8	-10.5	0.22
3,575.0	0.46	107.12	3,574.3	0.0	36.0	-10.6	0.37
3,600.2	0.63	93.61	3,599.5	-0.1	36.2	-10.7	0.84
3,625.6	1.29	92.91	3,625.0	-0.1	36.6	-10.8	2.59
3,651.4	1.91	81.52	3,650.7	0.0	37.3	-11.0	2.70
3,675.1	2.38	73.91	3,674.4	0.2	38.2	-11.1	2.31
3,700.6	2.74	72.88	3,699.9	0.5	39.3	-11.1	1.42
3,726.3	3.23	74.66	3,725.6	0.9	40.6	-11.1	1.94
3,750.7	4.09	71.85	3,749.8	1.3	42.1	-11.1	3.61
3,775.4	4.17	71.15	3,774.6	1.9	43.7	-11.0	0.38
3,800.4	4.62	70.02	3,799.5	2.5	45.6	-11.0	1.83
3,826.6	5.05	69.75	3,825.6	3.3	47.6	-10.8	1.64
3,851.1	5.53	73.07	3,849.9	4.0	49.8	-10.8	2.33
3,876.0	6.27	76.17	3,874.7	4.7	52.2	-10.9	3.23
3,901.5	6.65	76.34	3,900.1	5.3	55.0	-11.0	1.49
3,926.2	7.40	79.27	3,924.6	6.0	58.0	-11.3	3.37
3,950.9	8.13	81.24	3,949.0	6.5	61.3	-11.7	3.14
3,976.1	8.83	82.43	3,974.0	7.1	64.9	-12.3	2.86
4,001.1	9.67	83.67	3,998.6	7.5	68.9	-13.0	3.46
4,025.3	10.12	83.35	4,022.5	8.0	73.1	-13.8	1.87
4,051.0	10.76	83.68	4,047.8	8.5	77.7	-14.6	2.50
4,075.7	11.25	84.12	4,072.0	9.0	82.4	-15.5	2.01
4,101.0	11.59	84.44	4,096.8	9.5	87.4	-16.5	1.37
4,125.9	11.81	84.66	4,121.2	10.0	92.4	-17.5	0.90
4,151.0	12.24	83.59	4,145.8	10.6	97.6	-18.5	1.93
4,175.5	12.43	83.72	4,169.7	11.1	102.8	-19.5	0.78
4,200.3	12.81	82.36	4,193.9	11.8	108.2	-20.4	1.94
4,226.0	13.11	80.60	4,218.9	12.6	113.9	-21.3	1.93

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Company:	Antero Resources	Local Co-ordinate Reference:	Well Ford Unit 2H
Project:	Harrison County West Virginia	TVD Reference:	Patterson 340: GL 1374' + 24' RKB @ 1398.0usft
Site:	Ruth/Norris/Nellie/Ford Pad	MD Reference:	Patterson 340: GL 1374' + 24' RKB @ 1398.0usft
Well:	Ford Unit 2H	North Reference:	Grid
Wellbore:	Original Wellpath	Survey Calculation Method:	Minimum Curvature
Design:	As Drilled	Database:	Oklahoma District

Survey								
MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	N/S (usft)	E/W (usft)	V. Sec (usft)	DLeg (°/100usft)	
4,250.1	13.73	77.60	4,242.4	13.7	119.4	-21.9	3.86	
4,275.4	14.38	76.47	4,266.9	15.1	125.3	-22.3	2.80	
4,300.6	14.63	76.54	4,291.3	16.6	131.5	-22.7	0.99	
4,325.3	15.04	77.86	4,315.1	18.0	137.6	-23.2	2.15	
4,351.0	15.36	79.64	4,340.0	19.3	144.3	-23.9	2.20	
4,375.4	15.47	80.11	4,363.5	20.4	150.7	-24.7	0.68	
4,400.1	15.53	80.15	4,387.3	21.5	157.1	-25.5	0.25	
4,425.7	15.70	79.68	4,411.9	22.7	163.9	-26.3	0.83	
4,450.1	15.80	79.55	4,435.4	23.9	170.4	-27.1	0.43	
4,475.3	15.86	79.28	4,459.7	25.2	177.2	-27.9	0.38	
4,500.9	15.87	78.32	4,484.3	26.6	184.1	-28.6	1.03	
4,525.7	15.70	75.90	4,508.2	28.1	190.6	-29.1	2.74	
4,550.6	15.64	73.94	4,532.1	29.8	197.1	-29.3	2.14	
4,575.0	15.56	73.47	4,555.7	31.7	203.4	-29.4	0.61	
4,600.4	15.61	73.58	4,580.1	33.6	210.0	-29.4	0.23	
4,625.6	15.65	73.97	4,604.4	35.5	216.5	-29.5	0.45	
4,650.2	15.65	76.43	4,628.1	37.2	222.9	-29.8	2.70	
4,675.6	15.57	79.41	4,652.5	38.6	229.6	-30.4	3.18	
4,700.2	15.44	83.19	4,676.2	39.6	236.1	-31.3	4.14	
4,726.0	15.36	87.55	4,701.1	40.2	242.9	-32.8	4.49	
4,750.6	15.16	91.77	4,724.9	40.2	249.4	-34.7	4.58	
4,775.4	15.33	92.31	4,748.8	40.0	255.9	-36.8	0.89	
4,800.1	15.36	90.33	4,772.6	39.8	262.4	-38.9	2.12	
4,825.0	15.41	86.89	4,796.6	40.0	269.0	-40.7	3.67	
4,850.2	15.60	84.51	4,820.9	40.5	275.8	-42.1	2.63	
4,875.4	15.71	82.26	4,845.1	41.3	282.5	-43.4	2.46	
4,900.5	16.12	80.36	4,869.3	42.3	289.3	-44.4	2.64	
4,925.5	16.64	78.32	4,893.3	43.6	296.2	-45.2	3.10	
4,950.7	17.13	76.58	4,917.4	45.2	303.4	-45.7	2.80	
4,975.1	17.64	74.96	4,940.7	47.0	310.4	-46.1	2.88	
5,000.4	18.24	72.54	4,964.8	49.2	317.9	-46.2	3.78	
5,025.5	18.95	70.77	4,988.5	51.7	325.5	-46.0	3.62	
5,050.8	19.22	70.09	5,012.4	54.5	333.3	-45.6	1.38	
5,076.1	19.50	71.17	5,036.3	57.3	341.2	-45.3	1.80	
5,100.1	19.56	72.24	5,059.0	59.8	348.9	-45.1	1.51	
5,125.4	19.95	74.68	5,082.7	62.2	357.0	-45.2	3.61	
5,151.0	20.17	75.17	5,106.8	64.5	365.5	-45.5	1.08	
5,175.5	20.41	76.16	5,129.8	66.6	373.7	-45.9	1.71	
5,200.8	20.72	76.35	5,153.4	68.7	382.4	-46.4	1.25	
5,225.8	21.20	76.60	5,176.8	70.8	391.1	-47.0	1.95	
5,250.3	21.96	77.48	5,199.6	72.8	399.9	-47.6	3.37	
5,275.3	22.80	79.15	5,222.7	74.7	409.2	-48.5	4.22	
5,301.0	23.68	80.50	5,246.3	76.5	419.2	-49.7	4.00	
5,326.1	24.93	81.35	5,269.2	78.2	429.1	-51.2	5.17	
5,351.2	26.21	81.59	5,291.9	79.8	440.1	-52.8	5.11	

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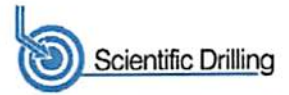
EOW Completion Report



Company: Antero Resources	Local Co-ordinate Reference: Well Ford Unit 2H
Project: Harrison County West Virginia	TVD Reference: Patterson 340: GL 1374' + 24' RKB @ 1398.0usft
Site: Ruth/Norris/Nellie/Ford Pad	MD Reference: Patterson 340: GL 1374' + 24' RKB @ 1398.0usft
Well: Ford Unit 2H	North Reference: Grid
Wellbore: Original Wellpath	Survey Calculation Method: Minimum Curvature
Design: As Drilled	Database: Oklahoma District

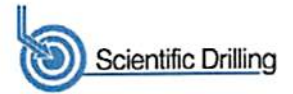
Survey							
MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	N/S (usft)	E/W (usft)	V. Sec (usft)	DLeg (°/100usft)
5,375.6	27.87	80.89	5,313.6	81.5	451.0	-54.4	6.93
5,400.4	29.57	80.64	5,335.3	83.4	462.8	-56.0	6.87
5,425.7	30.79	80.29	5,357.2	85.5	475.3	-57.6	4.88
5,450.8	31.44	79.50	5,378.7	87.8	488.1	-59.2	3.06
5,475.2	31.05	79.32	5,399.5	90.1	500.6	-60.6	1.64
5,501.2	30.33	79.02	5,421.9	92.6	513.6	-62.1	2.83
5,525.8	30.10	77.82	5,443.1	95.1	525.7	-63.3	2.63
5,550.4	30.09	77.01	5,464.4	97.7	537.7	-64.2	1.65
5,576.0	29.76	76.46	5,486.7	100.7	550.2	-65.1	1.67
5,600.7	29.34	76.43	5,508.1	103.5	562.0	-65.8	1.71
5,625.4	29.30	76.54	5,529.6	106.4	573.8	-66.5	0.27
5,651.1	28.74	76.54	5,552.1	109.3	585.9	-67.3	2.17
5,675.9	27.98	76.60	5,573.9	112.0	597.3	-68.1	3.07
5,700.5	27.59	76.68	5,595.7	114.6	608.5	-68.8	1.59
5,726.3	27.76	76.66	5,618.6	117.4	620.2	-69.6	0.66
5,750.6	28.50	76.77	5,640.0	120.0	631.3	-70.3	3.05
5,775.7	28.92	76.79	5,662.0	122.8	643.1	-71.1	1.68
5,800.5	29.04	76.87	5,683.7	125.5	654.8	-72.0	0.51
5,825.4	29.44	76.70	5,705.4	128.3	666.6	-72.8	1.64
5,850.4	30.42	77.22	5,727.1	131.1	678.8	-73.6	4.05
5,875.8	30.71	77.19	5,749.0	134.0	691.4	-74.6	1.14
5,900.8	30.30	76.53	5,770.5	136.9	703.7	-75.5	2.12
5,926.1	30.07	76.30	5,792.4	139.9	716.1	-76.2	1.02
5,951.0	30.20	76.37	5,813.9	142.8	728.2	-77.0	0.54
5,975.6	30.01	76.55	5,835.2	145.7	740.2	-77.7	0.85
6,000.4	30.04	76.84	5,856.7	148.6	752.3	-78.5	0.60
6,025.7	30.44	77.16	5,878.5	151.4	764.7	-79.4	1.70
6,050.4	30.39	77.40	5,899.8	154.2	776.9	-80.4	0.53
6,075.4	29.45	77.59	5,921.4	156.9	789.1	-81.4	3.79
6,100.6	28.57	77.28	5,943.5	159.5	801.0	-82.3	3.54
6,125.4	28.80	77.79	5,965.3	162.1	812.6	-83.3	1.35
6,150.1	28.58	79.04	5,986.9	164.5	824.2	-84.4	2.59
6,176.1	28.15	80.03	6,009.8	166.7	836.4	-85.8	2.45
6,200.6	27.91	80.26	6,031.4	168.7	847.7	-87.3	1.07
6,225.2	27.64	79.15	6,053.2	170.8	859.0	-88.6	2.37
6,250.7	27.16	78.68	6,075.9	173.0	870.5	-89.8	2.07
6,275.9	26.85	79.85	6,098.3	175.1	881.8	-91.1	2.44
6,300.1	27.19	80.27	6,119.8	177.0	892.6	-92.5	1.62
6,326.0	27.66	81.21	6,142.9	179.0	904.4	-94.1	2.46
6,350.9	28.15	82.14	6,164.9	180.6	915.9	-95.8	2.63
6,375.2	28.46	82.71	6,186.2	182.2	927.3	-97.7	1.70
6,400.2	28.99	82.64	6,208.2	183.7	939.2	-99.8	2.12
6,425.4	29.24	82.23	6,230.2	185.3	951.4	-101.8	1.27
6,450.7	29.67	81.42	6,252.2	187.1	963.7	-103.7	2.32

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Company:	Antero Resources	Local Co-ordinate Reference:	Well Ford Unit 2H
Project:	Harrison County West Virginia	TVD Reference:	Patterson 340: GL 1374' + 24' RKB @ 1398.0usft
Site:	Ruth/Norris/Nellie/Ford Pad	MD Reference:	Patterson 340: GL 1374' + 24' RKB @ 1398.0usft
Well:	Ford Unit 2H	North Reference:	Grid
Wellbore:	Original Wellpath	Survey Calculation Method:	Minimum Curvature
Design:	As Drilled	Database:	Oklahoma District

Survey							
MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	N/S (usft)	E/W (usft)	V. Sec (usft)	DLeg (°/100usft)
6,475.9	30.19	80.83	6,274.1	189.0	976.1	-105.5	2.37
6,501.8	30.67	80.75	6,296.4	191.1	989.1	-107.3	1.86
6,526.0	31.69	80.54	6,317.1	193.2	1,001.4	-109.0	4.24
6,550.1	32.60	80.48	6,337.5	195.3	1,014.1	-110.7	3.77
6,575.8	33.91	80.26	6,359.0	197.6	1,028.0	-112.5	5.13
6,600.4	34.51	79.98	6,379.3	200.0	1,041.6	-114.2	2.52
6,625.6	34.18	79.52	6,400.2	202.5	1,055.6	-115.9	1.66
6,650.8	33.48	78.80	6,421.1	205.2	1,069.4	-117.4	3.20
6,675.0	33.95	78.41	6,441.3	207.8	1,082.6	-118.7	2.14
6,700.7	34.50	77.72	6,462.5	210.8	1,096.7	-120.0	2.62
6,726.1	33.69	77.54	6,483.5	213.9	1,110.6	-121.2	3.22
6,750.4	33.07	77.46	6,503.8	216.8	1,123.6	-122.2	2.56
6,775.9	32.84	77.02	6,525.1	219.8	1,137.2	-123.3	1.30
6,801.0	32.98	76.62	6,546.2	222.9	1,150.4	-124.2	1.03
6,825.9	32.93	76.46	6,567.2	226.1	1,163.7	-125.0	0.40
6,851.2	32.45	76.42	6,588.4	229.3	1,176.9	-125.9	1.90
6,875.4	31.65	77.33	6,609.0	232.2	1,189.4	-126.7	3.85
6,900.5	31.39	78.39	6,630.4	235.0	1,202.3	-127.9	2.44
6,926.1	31.91	79.03	6,652.2	237.6	1,215.4	-129.2	2.42
6,950.8	32.35	78.94	6,673.1	240.1	1,228.3	-130.6	1.79
6,975.7	32.95	78.21	6,694.0	242.8	1,241.5	-131.9	2.89
7,000.6	32.54	77.47	6,715.0	245.6	1,254.7	-133.1	2.30
7,025.7	32.11	76.54	6,736.2	248.6	1,267.8	-134.0	2.62
7,050.6	32.63	75.47	6,757.2	251.9	1,280.7	-134.7	3.11
7,070.3	33.07	74.90	6,773.7	254.6	1,291.0	-135.1	2.74
7,192.0	26.82	74.17	6,879.2	270.7	1,349.5	-136.9	5.14
7,208.0	26.68	75.43	6,893.4	272.6	1,356.5	-137.1	3.65
Sycamore							
7,222.0	26.56	76.54	6,906.0	274.1	1,362.6	-137.4	3.65
7,252.0	28.23	81.55	6,932.6	276.7	1,376.1	-138.9	9.48
7,282.0	29.53	86.93	6,958.9	278.2	1,390.5	-141.7	9.68
7,312.0	31.90	89.81	6,984.7	278.6	1,405.8	-145.8	9.30
7,342.0	34.32	89.87	7,009.8	278.6	1,422.2	-150.6	8.07
7,372.0	37.11	88.50	7,034.1	278.9	1,439.7	-155.5	9.67
7,402.0	39.22	85.24	7,057.7	279.9	1,458.2	-159.9	9.72
7,432.0	40.27	79.97	7,080.8	282.4	1,477.2	-163.1	11.76
7,462.0	40.80	74.52	7,103.6	286.7	1,496.2	-164.6	11.94
7,474.0	40.56	72.38	7,112.7	288.9	1,503.7	-164.7	11.78
Middlesex							
7,492.0	40.28	69.14	7,126.4	292.8	1,514.7	-164.2	11.78
7,522.0	39.20	61.81	7,149.5	300.7	1,532.2	-161.7	16.02
7,552.0	38.32	55.74	7,172.9	310.4	1,548.2	-157.2	13.00
7,582.0	38.94	49.81	7,196.3	321.8	1,563.1	-150.7	12.51
7,612.0	40.10	44.11	7,219.5	334.8	1,577.0	-142.3	12.69



Company:	Antero Resources	Local Co-ordinate Reference:	Well Ford Unit 2H
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Site:	Ruth/Norris/Nellie/Ford Pad	MD Reference:	Patterson 340: GL 1374' + 24' RKB @ 1398.0usft
Well:	Ford Unit 2H	North Reference:	Grid
Wellbore:	Original Wellpath	Survey Calculation Method:	Minimum Curvature
Design:	As Drilled	Database:	Oklahoma District

Survey								
MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	N/S (usft)	E/W (usft)	V. Sec (usft)	DLeg (°/100usft)	
7,642.0	41.21	38.37	7,242.3	349.5	1,589.9	-132.1	13.00	
7,672.0	42.92	33.18	7,264.5	365.8	1,601.6	-119.9	12.91	
Burkett								
7,702.0	44.74	28.11	7,286.2	383.7	1,612.2	-105.9	13.18	
7,709.0	45.25	27.04	7,291.1	388.0	1,614.5	-102.4	13.06	
Tully								
7,732.0	47.00	23.65	7,307.1	403.0	1,621.6	-90.1	13.06	
7,762.0	49.61	19.65	7,327.0	423.8	1,629.8	-72.7	13.22	
7,792.0	51.83	16.63	7,346.0	445.9	1,637.0	-53.7	10.74	
7,822.0	53.96	10.96	7,364.1	469.1	1,642.7	-33.2	16.66	
7,845.0	56.62	8.74	7,377.2	487.7	1,646.0	-16.3	14.03	
Hamilton								
7,852.0	57.44	8.09	7,381.0	493.6	1,646.8	-11.0	14.03	
7,882.0	61.11	5.31	7,396.4	519.2	1,649.8	12.6	14.60	
7,912.0	64.65	2.41	7,410.1	545.8	1,651.6	37.6	14.60	
7,942.0	67.68	359.60	7,422.2	573.2	1,652.1	63.6	13.24	
7,972.0	70.05	356.12	7,433.0	601.2	1,651.0	90.7	13.40	
8,002.0	71.98	352.32	7,442.8	629.4	1,648.2	118.5	13.60	
8,027.0	73.64	349.45	7,450.1	653.0	1,644.4	142.1	12.83	
Marcellus								
8,032.0	73.98	348.88	7,451.5	657.7	1,643.5	146.9	12.83	
8,062.0	77.17	345.83	7,459.0	686.0	1,637.1	175.9	14.49	
8,092.0	80.20	342.68	7,464.9	714.3	1,629.1	205.3	14.42	
8,115.0	82.70	340.58	7,468.3	735.9	1,622.0	228.0	14.13	
8,167.0	86.23	335.63	7,473.3	783.9	1,602.7	279.6	11.65	
8,240.0	89.10	335.45	7,476.3	850.3	1,572.5	351.9	3.94	
8,355.0	88.39	339.11	7,478.8	956.3	1,528.1	466.3	3.24	
8,448.0	88.86	343.02	7,481.1	1,044.3	1,497.9	559.2	4.23	
8,543.0	89.16	343.36	7,482.7	1,135.2	1,470.4	654.2	0.48	
8,637.0	89.26	342.83	7,484.0	1,225.1	1,443.1	748.2	0.57	
8,731.0	89.63	343.00	7,484.9	1,315.0	1,415.5	842.1	0.43	
8,825.0	89.43	342.81	7,485.7	1,404.8	1,387.8	936.1	0.29	
8,920.0	88.62	343.29	7,487.3	1,495.7	1,360.2	1,031.1	0.99	
9,014.0	88.56	343.25	7,489.6	1,585.7	1,333.1	1,125.1	0.08	
9,108.0	88.42	342.26	7,492.1	1,675.4	1,305.2	1,219.1	1.06	
9,202.0	88.09	340.83	7,495.0	1,764.5	1,275.5	1,313.0	1.56	
9,296.0	88.46	343.76	7,497.8	1,854.0	1,246.9	1,406.9	3.14	
9,389.0	87.65	342.53	7,500.9	1,943.0	1,220.0	1,499.9	1.58	
9,483.0	89.66	343.58	7,503.1	2,032.9	1,192.6	1,593.8	2.41	
9,577.0	90.03	344.45	7,503.4	2,123.2	1,166.7	1,687.8	1.01	
9,670.0	90.20	344.10	7,503.2	2,212.7	1,141.5	1,780.8	0.42	
9,764.0	89.40	340.89	7,503.5	2,302.4	1,113.2	1,874.8	3.52	
9,859.0	88.96	340.90	7,504.9	2,392.1	1,082.1	1,969.7	0.46	
9,953.0	89.29	342.75	7,506.3	2,481.4	1,052.8	2,063.7	2.00	
10,046.0	89.70	344.48	7,507.2	2,570.7	1,026.6	2,156.7	1.91	

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Company:	Antero Resources	Local Co-ordinate Reference:	Well Ford Unit 2H
Project:	Harrison County West Virginia	TVD Reference:	Patterson 340: GL 1374' + 24' RKB @ 1398.0usft
Site:	Ruth/Norris/Nellie/Ford Pad	MD Reference:	Patterson 340: GL 1374' + 24' RKB @ 1398.0usft
Well:	Ford Unit 2H	North Reference:	Grid
Wellbore:	Original Wellpath	Survey Calculation Method:	Minimum Curvature
Design:	As Drilled	Database:	Oklahoma District

Survey								
MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	N/S (usft)	E/W (usft)	V. Sec (usft)	DLeg (°/100usft)	
10,139.0	89.56	343.03	7,507.8	2,659.9	1,000.6	2,249.6	1.57	
10,231.0	89.70	340.78	7,508.4	2,747.4	972.0	2,341.6	2.45	
10,326.0	88.99	341.59	7,509.4	2,837.3	941.4	2,436.6	1.13	
10,420.0	89.63	343.55	7,510.6	2,927.0	913.2	2,530.6	2.19	
10,514.0	90.00	344.82	7,510.9	3,017.4	887.6	2,624.5	1.41	
10,608.0	90.70	345.78	7,510.3	3,108.3	863.8	2,718.5	1.26	
10,702.0	89.63	342.11	7,510.0	3,198.6	837.8	2,812.4	4.07	
10,796.0	90.03	339.00	7,510.3	3,287.3	806.5	2,906.3	3.34	
10,890.0	88.72	338.12	7,511.3	3,374.8	772.1	3,000.0	1.68	
10,984.0	88.66	341.48	7,513.5	3,462.9	739.7	3,093.9	3.57	
11,077.0	90.03	344.39	7,514.5	3,551.8	712.4	3,186.8	3.46	
11,172.0	91.01	344.94	7,513.7	3,643.4	687.3	3,281.8	1.18	
11,266.0	90.20	347.58	7,512.7	3,734.7	664.9	3,375.6	2.94	
11,360.0	89.53	346.80	7,512.9	3,826.4	644.1	3,469.4	1.09	
11,456.0	88.52	345.14	7,514.5	3,919.5	620.8	3,565.2	2.02	
11,547.0	88.83	342.92	7,516.7	4,007.0	595.8	3,656.2	2.46	
11,641.0	88.83	342.33	7,518.6	4,096.7	567.7	3,750.1	0.63	
11,735.0	88.62	343.47	7,520.7	4,186.5	540.1	3,844.1	1.23	
11,829.0	90.07	343.00	7,521.7	4,276.5	513.0	3,938.1	1.62	
11,923.0	90.10	341.97	7,521.6	4,366.1	484.7	4,032.1	1.10	
12,017.0	90.20	342.49	7,521.4	4,455.6	456.0	4,126.1	0.56	
12,111.0	90.67	343.09	7,520.6	4,545.4	428.2	4,220.1	0.81	
12,204.0	90.44	340.72	7,519.7	4,633.8	399.3	4,313.1	2.56	
12,295.0	91.01	341.11	7,518.6	4,719.8	369.6	4,404.0	0.76	
12,385.0	91.31	343.36	7,516.8	4,805.5	342.1	4,494.0	2.52	
12,477.0	90.20	345.02	7,515.5	4,894.0	317.1	4,585.9	2.17	
12,568.0	89.93	343.14	7,515.4	4,981.5	292.1	4,676.9	2.09	
12,659.0	90.57	341.27	7,515.0	5,068.1	264.3	4,767.9	2.17	
12,749.0	91.24	344.59	7,513.6	5,154.2	237.9	4,857.9	3.76	
12,840.0	90.64	343.36	7,512.1	5,241.6	212.8	4,948.8	1.50	
12,931.0	90.60	343.32	7,511.1	5,328.8	186.7	5,039.8	0.06	
13,021.0	90.13	342.69	7,510.6	5,414.8	160.4	5,129.8	0.87	
13,112.0	88.69	341.62	7,511.5	5,501.5	132.5	5,220.8	1.97	
13,204.0	88.62	341.90	7,513.7	5,588.8	103.7	5,312.8	0.31	
13,294.0	90.91	343.35	7,514.0	5,674.7	76.8	5,402.8	3.01	
13,389.0	89.56	344.01	7,513.7	5,765.9	50.1	5,497.8	1.58	
13,483.0	88.83	343.17	7,515.0	5,856.0	23.6	5,591.7	1.18	
13,577.0	89.20	344.01	7,516.6	5,946.2	-3.0	5,685.7	0.98	
13,671.0	89.50	344.31	7,517.7	6,036.6	-28.6	5,779.7	0.45	
13,765.0	89.36	345.15	7,518.6	6,127.3	-53.4	5,873.6	0.91	
13,859.0	89.50	344.09	7,519.5	6,217.9	-78.3	5,967.6	1.14	
13,953.0	88.93	341.45	7,520.8	6,307.7	-106.2	6,061.6	2.87	
14,049.0	88.69	340.71	7,522.8	6,398.5	-137.3	6,157.5	0.81	
14,142.0	89.03	342.06	7,524.7	6,486.6	-167.0	6,250.4	1.50	

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Wellbore:	Original Wellpath	Survey Calculation Method:	Minimum Curvature
Design:	As Drilled	Database:	Oklahoma District

Survey							
MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	N/S (usft)	E/W (usft)	V. Sec (usft)	DLeg (°/100usft)
14,236.0	89.36	341.15	7,526.0	6,575.8	-196.6	6,344.4	1.03
14,329.0	89.03	341.40	7,527.3	6,663.8	-226.5	6,437.4	0.45
14,423.0	89.63	343.98	7,528.4	6,753.6	-254.4	6,531.3	2.82
14,517.0	89.97	345.77	7,528.7	6,844.3	-279.0	6,625.3	1.94
14,611.0	89.33	344.65	7,529.3	6,935.2	-303.0	6,719.2	1.37
14,705.0	89.83	344.41	7,530.0	7,025.8	-328.0	6,813.2	0.59
14,799.0	88.93	341.88	7,531.0	7,115.7	-355.3	6,907.2	2.86
14,894.0	89.40	342.89	7,532.4	7,206.3	-384.0	7,002.1	1.17
14,988.0	90.27	343.51	7,532.6	7,296.3	-411.2	7,096.1	1.14
15,081.0	89.10	342.31	7,533.2	7,385.1	-438.5	7,189.1	1.80
15,176.0	88.56	342.57	7,535.1	7,475.7	-467.2	7,284.1	0.63
15,269.0	89.63	343.90	7,536.6	7,564.7	-494.0	7,377.1	1.84
15,363.0	90.07	344.30	7,536.8	7,655.1	-519.7	7,471.1	0.63
15,457.0	89.19	342.68	7,537.4	7,745.2	-546.5	7,565.1	1.96
15,551.0	88.63	340.99	7,539.2	7,834.5	-575.8	7,659.0	1.89
15,645.0	88.93	339.93	7,541.2	7,923.1	-607.2	7,752.9	1.17
15,738.0	89.63	341.73	7,542.4	8,010.9	-637.7	7,845.8	2.08
15,833.0	90.03	341.84	7,542.7	8,101.2	-667.4	7,940.8	0.44
15,927.0	89.06	343.19	7,543.4	8,190.8	-695.7	8,034.8	1.77
16,020.0	89.87	342.24	7,544.3	8,279.6	-723.3	8,127.8	1.34
16,115.0	88.56	342.63	7,545.6	8,370.2	-752.0	8,222.8	1.44
16,209.0	88.79	343.67	7,547.8	8,460.1	-779.2	8,316.8	1.13
16,303.0	88.83	342.49	7,549.7	8,550.0	-806.5	8,410.7	1.26
16,397.0	89.76	343.39	7,550.9	8,639.9	-834.1	8,504.7	1.38
16,491.0	89.66	341.97	7,551.3	8,729.6	-862.1	8,598.7	1.51
16,585.0	89.16	343.63	7,552.3	8,819.4	-889.9	8,692.7	1.84
16,679.0	89.36	342.55	7,553.5	8,909.3	-917.2	8,786.7	1.17
16,773.0	89.09	339.95	7,554.8	8,998.3	-947.5	8,880.6	2.78
16,867.0	89.93	339.45	7,555.6	9,086.5	-980.1	8,974.5	1.04
16,961.0	88.86	339.15	7,556.6	9,174.4	-1,013.3	9,068.3	1.18
17,056.0	89.46	342.19	7,558.0	9,264.0	-1,044.7	9,163.2	3.26
17,126.0	89.83	344.96	7,558.4	9,331.2	-1,064.5	9,233.2	3.99
17,184.0	89.83	344.96	7,558.6	9,387.2	-1,079.6	9,291.2	0.00

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Bioclear 2000	U.S. Well Services, LLC	Anti-Bacterial Agent					
			2,2-dibromo-3-nitrilopropionamide	10222-01-2	20.00000	0.00406	
			Deionized Water	7732-18-5	28.00000	0.00232	
SI-1200s	U.S. Well Services, LLC	Scale Inhibitor					
			Alkyl Phosphonic Acid	Proprietary	5.00000	0.00064	
			Ammonia	7664-41-7	0.50000	0.00010	
AP One	U.S. Well Services, LLC	Gel Breakers					
			Ammonium Persulfate	7727-54-0	100.00000	0.00070	
AI-303	U.S. Well Services, LLC	Acid Corrosion Inhibitors					
			Ethylene glycol	107-21-1	40.00000	0.00004	
			Cinnamaldehyde	104-55-2	20.00000	0.00002	
			Formic acid	64-18-6	20.00000	0.00002	
			Butyl cellosolve	111-76-2	20.00000	0.00001	
			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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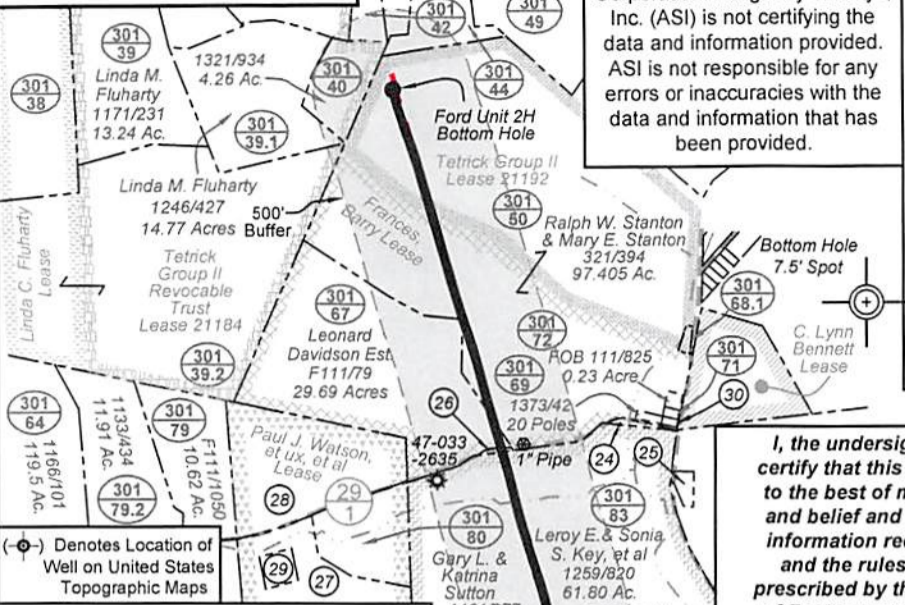
Antero Resources
Well No. Ford Unit 2H
As-Drilled Plat
Antero Resources Corporation

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.

6,368' to Bottom Hole
 5,445' to Top Hole
TOP & BOTTOM HOLE LATITUDE 39 - 17 - 30

Notes:
 West Virginia Coordinate System of 1927, North Zone based upon Differential GPS Measurements.
 Well No. Ford Unit 2H Top Hole coordinates are
 N: 276,170.82' Latitude: 39°15'12.19"
 E: 1,699,736.87' Longitude: 80°33'37.17"
 Bottom Hole coordinates are
 N: 285,578.20' Latitude: 39°16'45.06"
 E: 1,698,814.00' Longitude: 80°33'50.32"
UTM Zone 17, NAD 1983
 Top Hole Coordinates Bottom Hole Coordinates
 N: 4,344,997.783m N: 4,347,859.090m
 E: 537,951.671m E: 537,622.779m
 Plat orientation and corner and well references are based upon the grid north meridian.
 Well location references are based upon the magnetic meridian.

TOP & BOTTOM HOLE LONGITUDE 80 - 32 - 30
 4,472' to Bottom Hole
 13,879' to Top Hole
GRID NORTH



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.

Kenneth J. Plum
Kenneth J. Plum, P.S. 2216



Tax Map 321 Parcels

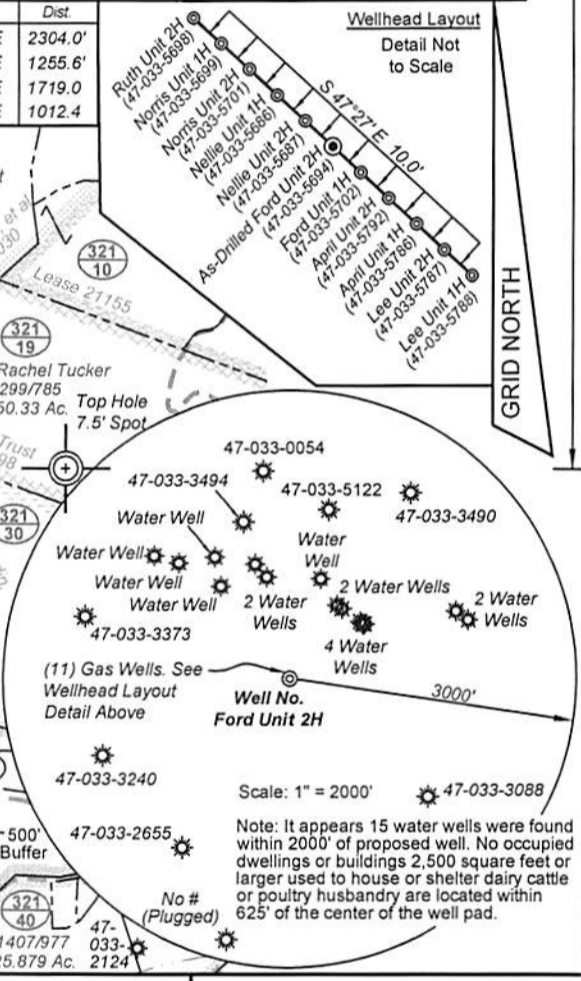
Par	Owner	DB/Pg	Acres
1	Christine R. Utter	1314/417	19.75
2	Hubert Jr. & Lorena Bland	1307/1209	28.50
3	Paul J. Ball	1354/948	4.87
4	John & Marianne Clevenger	1247/289	33.35
5	Tillman Lee Williams	1322/1054	9.35
6	John D. & Theresa Ritter	1362/590	3.00
7	Carl H. Jr. & Jeanne Adkins	1356/1050	2.35
8	Loren Brad Strother	1296/353	1.39
9	Nancy E. Farr	1362/580	1.99
10	Nancy E. Farr	1439/36	0.18
11	John & Marianne Clevenger	1247/289	4.17
12	City of Salem	642/123	1.50
13	Patricia A. Collins	1060/1140	1.46
14	Roberta G. Zwiebel	F104/780	0.98
15	Robert & Shirley Bowen	941/478	0.78
16	John & Marianne Clevenger	1247/289	1.05
17	Mark A. & Gayle E. Sprouse	1244/264	0.29
18	Ralph D. & Barbara Brown	1283/627	38.13
19	Sharon Jo/Edward Morgan	1401/654	38.13
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28	John Jr. & Linda K. Marks	1243/881	19.06
29	William & Barbara McClain	1154/342	0.98
30	Mike Stephen/Victoria Davis	1255/102	0.11

Wellhead Layout
 Detail Not to Scale

Line	Bearing	Dist
L1	S 32°25' E	2304.0'
L2	S 24°55' E	1255.6'
L3	S 17°15' E	1719.0'
L4	S 77°05' E	1012.4'



Legend

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

FILE NO: 11-36-TM-12
 DRAWING NO: Ford 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
OIL AND GAS DIVISION

DATE: August 28 2017
 OPERATOR'S WELL NO. Ford Unit 2H
 API WELL NO
 47 - 033 - 05694
 STATE COUNTY PERMIT

WELL TYPE: OIL GAS LIQUID INJECTION WASTE DISPOSAL
 (IF GAS) PRODUCTION: STORAGE DEEP SHALLOW
 LOCATION: ELEVATION: Original Grade - 1395' Existing Grade - 1376' WATERSHED: Tenmile Creek QUADRANGLE: Salem COUNTY: Harrison
 DISTRICT: Tenmile SURFACE OWNER: Hubert Jr. & Lorena Bland, Frances Barry, Tetrack Group II ACREAGE: 28.50
 ROYALTY OWNER: DEPI, et al; J. Moses Raad, et al; George W. Robinson, et al LEASE NO: DV019191; 21030 ACREAGE: 283; 447; 70.866
 PROPOSED WORK: DRILL CONVERT DRILL DEEPER FRACTURE OR STIMULATE PLUG OFF OLD FORMATION
 PERFORATE NEW FORMATION OTHER PHYSICAL CHANGE IN WELL (SPECIFY) _____
 PLUG AND ABANDON CLEAN OUT AND REPLUG TARGET FORMATION: Marcellus Shale DEPTH: 7,559' TVD 17,184' 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

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 Office of Oil and Gas
 SEP 29 2017
 WV Department of Environmental Protection

Antero Resources
Well No. Ford Unit 2H
As-Drilled Plat
Antero Resources Corporation

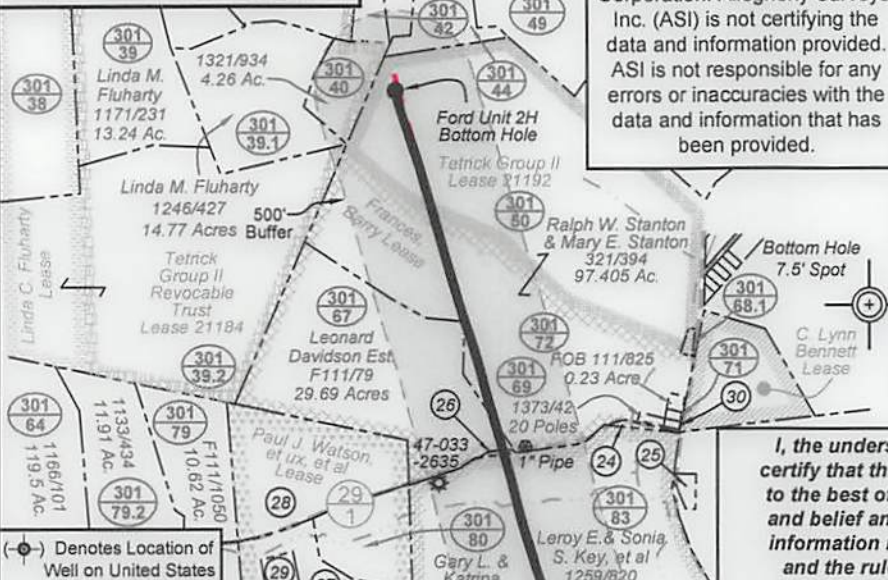
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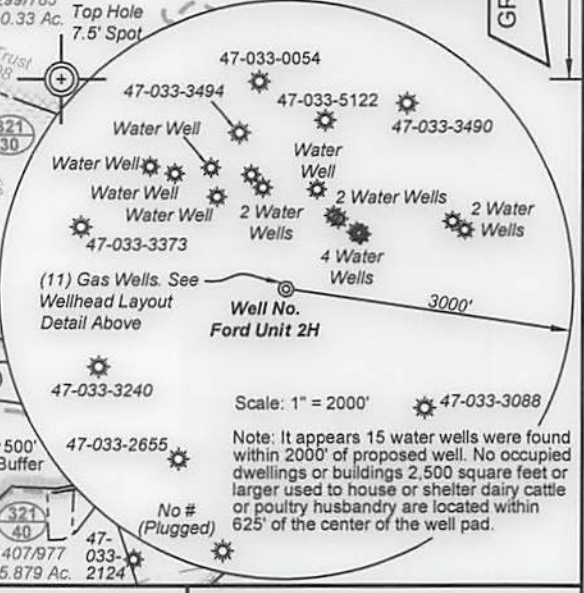
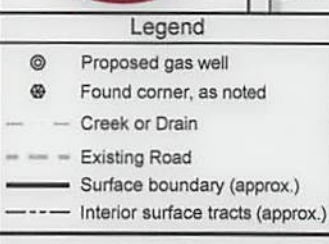
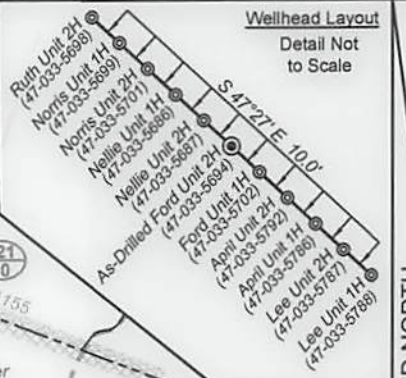
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