

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

API 47 - 017 - 06471 County Doddridge District Greenbrier
Quad New Milton 7.5' Pad Name Trent Pad Field/Pool Name ---
Farm name Trent, Clarence, Jr., et al Well Number Life Unit 2H
Operator (as registered with the OOG) Antero Resources Corportion
Address 1615 Wynkoop St. 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 4340086m Easting 532025m
Landing Point of Curve Northing 4340356.75m Easting 532111.96m
Bottom Hole Northing 4343231m Easting 531184m

Elevation (ft) 1409' 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

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Date permit issued 3/19/2014 Date drilling commenced 3/30/2014 Date drilling ceased 10/15/2014
Date completion activities began 11/18/2014 Date completion activities ceased 4/4/2015
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 77', 112' 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 None Identified Cavern(s) encountered (Y/N) depths No
Is coal being mined in area (Y/N) No

Reviewed by:
[Signature]
10/23/2015

API 47-017 - 06471 Farm name Trent, Clarence, Jr., et al Well number Life 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	133# J-55	N/A	Y
Surface	17- 1/2"	13- 3/8"	346'	New	48# H-40	N/A	Y
Coal							
Intermediate 1	12-1/4"	9-5/8"	2513'	New	36# K-55	N/A	Y*
Intermediate 2							
Intermediate 3							
Production	8-3/4" & 8-1/2"	5-1/2"	17967'	New	23# P-110	N/A	Y
Tubing		2-3/8"	7583'		4.7# N-80	N/A	
Packer type and depth set		N/A					

Comment Details No returns on first attempt (622 sx). Performed grout job (223 sx) down backside, bringing returns to surface.

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	100 sx	15.6	1.18	38	0'	8 Hrs.
Surface	Class A	425 sx	15.6	1.18	240	0'	8 Hrs.
Coal							
Intermediate 1	Class A	845 sx	15.6	1.18	787	0'	8 Hrs.
Intermediate 2							
Intermediate 3							
Production	Class H	1137 sx (Lead) 1646 sx (Tail)	14.5 Lead 15.2 Tail	1.3 Lead 1.86 Tail	3655	~500' into Intermediate Casing	8 Hrs.
Tubing							

Drillers TD (ft) 17967 MD, 7455' TVD (BHL); 7477' TVD (Deepest point drilled) Loggers TD (ft) 17967
 Deepest formation penetrated Marcellus Plug back to (ft) N/A
 Plug back procedure N/A

Kick off depth (ft) 6689'

** This is a subsequent well. Antero only runs wireline logs on one well on a multi-well pad (Bowen Unit 2H API #47-017-06167). Please reference the wireline logs submitted with Form WR-35 for Bowen Unit 2H. A Cement Bond Log has been included with this submittal.

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 _____

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API 47- 017 - 06471 Farm name Trent, Clarence, Jr., et al Well number Life 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- 017 - 06471 Farm name Trent, Clarence, Jr., et al Well number Life Unit 2H

PRODUCING FORMATION(S)	DEPTHS	
<u>Marcellus</u>	<u>7397' (TOP)</u> TVD	<u>7717' (TOP)</u> MD
_____	_____	_____
_____	_____	_____
_____	_____	_____

Please insert additional pages as applicable.

GAS TEST Build up Drawdown Open Flow OIL TEST Flow Pump
 SHUT-IN PRESSURE Surface 3950 psi Bottom Hole --- psi DURATION OF TEST --- hrs
 OPEN FLOW Gas 11821 mcfpd Oil 2 bpd NGL --- bpd Water 73 bpd GAS MEASURED BY Estimated Orifice Pilot

LITHOLOGY/ FORMATION TOP DEPTH IN FT BOTTOM DEPTH IN FT TOP DEPTH IN FT BOTTOM DEPTH IN FT DESCRIBE ROCK TYPE AND RECORD QUANTITY AND TYPE OF FLUID (FRESHWATER, BRINE, OIL, GAS, H₂S, ETC)

LITHOLOGY/ FORMATION	TOP DEPTH IN FT	BOTTOM DEPTH IN FT	TOP DEPTH IN FT	BOTTOM DEPTH IN FT	DESCRIBE ROCK TYPE AND RECORD QUANTITY AND TYPE OF FLUID (FRESHWATER, BRINE, OIL, GAS, H ₂ S, ETC)
	<u>0</u>		<u>0</u>		

***PLEASE SEE ATTACHED EXHIBIT 3**

Please insert additional pages as applicable.

Drilling Contractor Precision Drilling Company, LP
 Address 2640 Reach Rd. City Williamsport State PA Zip 17701
 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 Dr. City Jane Lew State WV Zip 26378

Please insert additional pages as applicable.

Completed by Kara Quackenbush Telephone 303-357-7233
 Signature [Signature] Title Permit Representative Date 8/11/2015

Submittal of Hydraulic Fracturing Chemical Disclosure Information Attach copy of FRACFOCUS Registry
 WV Department of Environmental Protection
 10/23/2015

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EXHIBIT 1

Stage No.	Perforation Date	Perforated from MD ft.	Perforated to MD ft.	Number of Perforations	Formations
1	18-Nov-14	17,705	17,873	60	Marcellus
2	16-Jan-15	17,506	17,674	60	Marcellus
3	16-Jan-15	17,307	17,475	60	Marcellus
4	17-Jan-15	17,108	17,276	60	Marcellus
5	17-Jan-15	16,909	17,077	60	Marcellus
6	17-Jan-15	16,710	16,878	60	Marcellus
7	18-Jan-15	16,511	16,679	60	Marcellus
8	18-Jan-15	16,312	16,480	60	Marcellus
9	18-Jan-15	16,113	16,281	60	Marcellus
10	18-Jan-15	15,914	16,082	60	Marcellus
11	19-Jan-15	15,715	15,883	60	Marcellus
12	19-Jan-15	15,516	15,684	60	Marcellus
13	19-Jan-15	15,317	15,485	60	Marcellus
14	20-Jan-15	15,118	15,286	60	Marcellus
15	20-Jan-15	14,919	15,087	60	Marcellus
16	20-Jan-15	14,720	14,888	60	Marcellus
17	21-Jan-15	14,521	14,689	60	Marcellus
18	21-Jan-15	14,322	14,490	60	Marcellus
19	21-Jan-15	14,123	14,291	60	Marcellus
20	22-Jan-15	13,924	14,092	60	Marcellus
21	22-Jan-15	13,725	13,893	60	Marcellus
22	22-Jan-15	13,526	13,694	60	Marcellus
23	22-Jan-15	13,327	13,495	60	Marcellus
24	23-Jan-15	13,128	13,296	60	Marcellus
25	23-Jan-15	12,929	13,097	60	Marcellus
26	23-Jan-15	12,730	12,898	60	Marcellus
27	23-Jan-15	12,531	12,699	60	Marcellus
28	24-Jan-15	12,332	12,500	60	Marcellus
29	24-Jan-15	12,133	12,301	60	Marcellus
30	24-Jan-15	11,934	12,102	60	Marcellus
31	25-Jan-15	11,735	11,903	60	Marcellus
32	25-Jan-15	11,536	11,704	60	Marcellus
33	25-Jan-15	11,337	11,505	60	Marcellus
34	26-Jan-15	11,138	11,306	60	Marcellus
35	26-Jan-15	10,939	11,107	60	Marcellus
36	26-Jan-15	10,740	10,908	60	Marcellus
37	26-Jan-15	10,541	10,709	60	Marcellus
38	27-Jan-15	10,342	10,510	60	Marcellus
39	27-Jan-15	10,143	10,311	60	Marcellus
40	27-Jan-15	9,945	10,112	60	Marcellus
41	28-Jan-15	9,746	9,913	60	Marcellus
42	28-Jan-15	9,547	9,714	60	Marcellus
43	28-Jan-15	9,348	9,515	60	Marcellus
44	28-Jan-15	9,149	9,316	60	Marcellus
45	29-Jan-15	8,950	9,117	60	Marcellus
46	29-Jan-15	8,751	8,918	60	Marcellus
47	29-Jan-15	8,552	8,719	60	Marcellus
48	29-Jan-15	8,353	8,520	60	Marcellus
49	29-Jan-15	8,154	8,321	60	Marcellus
50	30-Jan-15	7,955	8,122	60	Marcellus
51	30-Jan-15	7,756	7,923	60	Marcellus

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EXHIBIT 2

Stage No.	Stimulations Date	Avg Pump Rate	Avg Treatment Pressure (PSI)	Max Breakdown Pressure (PSI)	ISIP (PSI)	Amount of Proppant (lbs)	Amount of Water (bbbls)	Amount of Nitrogen/ other (units)
1	15-Jan-15	55.4	7,463	6,723	5,103	169,900	7,342	N/A
2	16-Jan-15	58.0	7,747	6,455	5,522	178,270	5,916	N/A
3	16-Jan-15	58.7	7,368	6,276	5,908	238,050	6,937	N/A
4	17-Jan-15	55.9	7,176	6,073	6,126	242,650	7,042	N/A
5	17-Jan-15	61.0	7,407	5,697	5,425	243,250	6,931	N/A
6	17-Jan-15	59.8	7,278	5,890	5,625	241,720	6,581	N/A
7	18-Jan-15	62.3	7,402	5,414	6,126	240,120	6,507	N/A
8	18-Jan-15	63.0	7,495	5,690	5,164	241,200	6,547	N/A
9	18-Jan-15	62.7	7,386	5,475	6,566	241,500	6,528	N/A
10	18-Jan-15	60.9	7,239	5,554	6,205	241,375	6,509	N/A
11	19-Jan-15	64.0	7,429	5,497	5,146	241,900	6,566	N/A
12	19-Jan-15	63.0	7,445	5,779	4,846	242,230	6,480	N/A
13	19-Jan-15	63.0	7,607	5,446	4,885	242,570	6,460	N/A
14	20-Jan-15	62.0	7,461	5,529	5,128	228,170	6,337	N/A
15	20-Jan-15	63.0	7,586	5,901	5,400	231,320	6,291	N/A
16	20-Jan-15	62.5	7,506	5,783	4,803	212,220	6,990	N/A
17	21-Jan-15	63.0	6,998	5,761	5,354	240,920	6,481	N/A
18	21-Jan-15	64.0	7,421	5,600	5,111	240,710	6,376	N/A
19	21-Jan-15	63.6	7,325	5,472	5,007	242,960	6,376	N/A
20	22-Jan-15	65.3	7,455	5,572	4,950	242,010	6,346	N/A
21	22-Jan-15	64.0	7,204	5,500	5,404	212,490	6,801	N/A
22	22-Jan-15	65.0	7,074	5,325	5,593	233,430	6,277	N/A
23	22-Jan-15	63.7	6,976	5,497	4,767	242,230	6,294	N/A
24	23-Jan-15	64.0	6,976	5,467	5,304	242,360	6,271	N/A
25	23-Jan-15	64.0	7,192	5,665	4,849	233,850	6,180	N/A
26	23-Jan-15	63.4	7,091	5,465	4,553	241,730	6,241	N/A
27	23-Jan-15	64.7	6,935	5,572	4,946	243,030	6,223	N/A
28	24-Jan-15	65.0	6,925	5,497	5,586	241,770	6,204	N/A
29	24-Jan-15	65.0	6,856	5,304	4,978	242,810	6,184	N/A
30	24-Jan-15	64.1	7,045	5,511	4,392	242,550	6,176	N/A
31	25-Jan-15	65.0	6,799	5,279	5,232	242,650	6,156	N/A
32	25-Jan-15	65.3	6,814	5,286	4,710	242,690	6,136	N/A
33	25-Jan-15	65.2	7,393	5,647	4,542	226,450	6,749	N/A
34	26-Jan-15	62.4	7,058	5,471	5,304	243,350	6,106	N/A
35	26-Jan-15	63.5	6,923	5,794	5,336	211,395	6,472	N/A
36	26-Jan-15	64.8	6,737	5,515	4,624	241,720	6,071	N/A
37	26-Jan-15	63.7	7,078	5,736	4,835	243,050	6,071	N/A
38	27-Jan-15	61.9	7,133	5,641	5,493	242,560	6,118	N/A
39	27-Jan-15	63.1	6,855	5,776	5,071	241,990	6,009	N/A
40	27-Jan-15	64.8	7,087	5,490	5,189	242,150	6,004	N/A
41	28-Jan-15	63.9	6,884	5,425	4,581	244,200	5,984	N/A
42	28-Jan-15	64.3	6,939	5,372	6,015	242,820	5,967	N/A
43	28-Jan-15	63.9	6,929	5,543	5,894	238,985	5,888	N/A
44	28-Jan-15	63.4	6,713	5,618	4,857	242,150	5,937	N/A
45	29-Jan-15	63.5	6,906	5,671	4,992	242,010	5,952	N/A
46	29-Jan-15	63.1	6,672	5,493	5,482	220,800	5,700	N/A
47	29-Jan-15	63.5	6,553	124	6,022	241,330	5,892	N/A
48	29-Jan-15	63.8	6,654	5,457	5,125	240,850	5,874	N/A
49	29-Jan-15	64.0	6,505	5,389	5,161	241,220	5,881	N/A
50	30-Jan-15	64.3	6,477	5,640	5,543	243,175	5,910	N/A
51	30-Jan-15	64.2	7,065	5,826	5,203	199,500	6,009	N/A
AVG=		63.1	7,111	5,521	5,255	11,994,340	321,277	TOTAL

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EXHIBIT 3

LITHOLOGY/ FORMATION	TOP DEPTH (TVD) From Surface	BOTTOM DEPTH (TVD) From Surface	TOP DEPTH (MD) From Surface	BOTTOM DEPTH (MD) From Surface
Fresh Water	77'	N/A	77'	N/A
Fresh Water	112'	N/A	112'	N/A
Sandstone	0	77	0	77
Shale	est. 77	632	est. 77	632
Sandstone	est. 632	697	est. 632	697
Shale and Limestone	est. 697	877	est. 697	877
Sandstone	est. 877	907	est. 877	907
Shale	est. 907	1037	est. 907	1037
Sandstone and Coal	est. 1037	1087	est. 1037	1087
Shale	est. 1087	1237	est. 1087	1237
Sandstone	est. 1237	1267	est. 1237	1267
Shale	est. 1267	1767	est. 1267	1767
Sandstone	est. 1767	1897	est. 1767	1897
Shale	est. 1897	1957	est. 1897	1957
Sandstone and Coal	est. 1957	1987	est. 1957	1987
Shale	est. 1987	2077	est. 1987	2077
Sandstone	est. 2077	2147	est. 2077	2147
Shale	est. 2147	2441	est. 2147	2441
Big Lime	2441	2564	2441	2564
Big Injun	2564	2807	2564	2807
Gantz Sand	2807	2893	2807	2893
Fifty Foot Sandstone	2893	3099	2893	3099
Gordon	3099	3398	3099	3398
Fifth Sandstone	3398	3450	3398	3450
Bayard	3450	3789	3450	3789
Warren	3789	4107	3789	4107
Speechley	4107	4289	4107	4290
Baltown	4289	4880	4290	4883
Bradford	4880	5408	4883	5411
Benson	5408	5663	5411	5666
Alexander	5663	5909	5666	5912
Elk	5909	6396	5912	6399
Rhinestreet	6396	6933	6399	6953
Sycamore	6933	7100	6953	7172
Middlesex	7100	7249	7172	7383
Burkett	7249	7274	7383	7424
Tully	7274	7397	7424	7717
Marcellus	7397	NA	7717	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.

17-06471



Antero Resources

Doddridge County WV
Trent Pad: Bowen/Cox/Life/Baker/Nestor
Life Unit 2H
Original Wellpath

Design: As Drilled

EOW Completion Report

14 October, 2014



Scientific Drilling

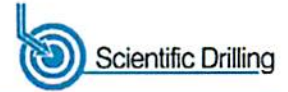
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EOW Completion Report



Company:	Antero Resources	Local Co-ordinate Reference:	Well Life Unit 2H
Project:	Doddridge County WV	TVD Reference:	Precision 525 GL 1407 + 19' RKB @ 1426.0usft
Site:	Trent Pad: Bowen/Cox/Life/Baker/Nestor	MD Reference:	Precision 525 GL 1407 + 19' RKB @ 1426.0usft
Well:	Life Unit 2H	North Reference:	Grid
Wellbore:	Original Wellpath	Survey Calculation Method:	Minimum Curvature
Design:	As Drilled	Database:	Oklahoma District

Project	Doddridge County WV, McClellan District		
Map System:	Universal Transverse Mercator (US Survey Fee	System Datum:	Mean Sea Level
Geo Datum:	NAD 1927 (NADCON CONUS)		
Map Zone:	Zone 17N (84 W to 78 W)		

Site	Trent Pad: Bowen/Cox/Life/Baker/Nestor				
Site Position:		Northing:	14,238,330.29usft	Latitude:	39° 12' 33.204 N
From:	Map	Easting:	1,745,410.61usft	Longitude:	80° 37' 45.625 W
Position Uncertainty:	0.0 usft	Slot Radius:	13-3/16"	Grid Convergence:	0.23 °

Well	Life Unit 2H, Marcellus					
Well Position	+N/-S	0.0 usft	Northing:	14,238,384.71 usft	Latitude:	39° 12' 33.741 N
	+E/-W	0.0 usft	Easting:	1,745,436.70 usft	Longitude:	80° 37' 45.290 W
Position Uncertainty		2.0 usft	Wellhead Elevation:	1,426.0 usft	Ground Level:	1,407.0 usft

Wellbore	Original Wellpath				
-----------------	-------------------	--	--	--	--

Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	3/20/2014	-8.55	66.75	52,263

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	342.20

Survey Program	Date 10/14/2014				
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description	
106.0	6,650.3	Survey #6 Final Gyro (Original Wellpath)	SDI Standard Keeper	Scientific Drilling Intl. Standard Wireline Keeper	
6,689.0	17,967.0	Survey #7 MWD (Original Wellpath)	MWD SDI	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
106.0	0.16	267.72	106.0	0.0	-0.1	0.0	0.15
206.0	0.31	281.12	206.0	0.0	-0.6	0.2	0.16
306.0	0.35	247.73	306.0	0.0	-1.1	0.3	0.19
406.0	0.47	244.82	406.0	-0.3	-1.8	0.2	0.12
506.0	0.31	222.78	506.0	-0.7	-2.3	0.1	0.22
606.0	0.33	241.13	606.0	-1.0	-2.7	-0.1	0.10
706.0	0.14	244.65	706.0	-1.2	-3.1	-0.2	0.19
806.0	0.19	242.22	806.0	-1.3	-3.4	-0.3	0.05
906.0	0.10	305.21	906.0	-1.4	-3.6	-0.2	0.17
1,006.0	0.23	168.26	1,006.0	-1.5	-3.6	-0.3	0.31

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EOW Completion Report



Company:	Antero Resources	Local Co-ordinate Reference:	Well Life Unit 2H
Project:	Doddridge County WV	TVD Reference:	Precision 525 GL 1407 + 19' RKB @ 1426.0usft
Site:	Trent Pad:Bowen/Cox/Life/Baker/Nestor	MD Reference:	Precision 525 GL 1407 + 19' RKB @ 1426.0usft
Well:	Life 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)	EW (usft)	V. Sec (usft)	DLeg (°/100usft)
1,106.0	0.13	151.42	1,106.0	-1.8	-3.5	-0.7	0.11
1,206.0	0.28	180.97	1,206.0	-2.2	-3.5	-1.0	0.18
1,306.0	0.12	226.48	1,306.0	-2.5	-3.5	-1.3	0.21
1,406.0	0.25	158.42	1,406.0	-2.7	-3.5	-1.5	0.23
1,506.0	0.15	160.70	1,506.0	-3.1	-3.4	-1.9	0.10
1,606.0	0.30	155.57	1,606.0	-3.4	-3.3	-2.3	0.15
1,706.0	0.26	115.99	1,706.0	-3.8	-3.0	-2.7	0.19
1,806.0	0.38	126.12	1,806.0	-4.1	-2.5	-3.1	0.13
1,906.0	0.31	109.50	1,906.0	-4.4	-2.0	-3.5	0.12
2,006.0	0.44	121.87	2,006.0	-4.6	-1.4	-4.0	0.15
2,106.0	0.45	117.35	2,106.0	-5.0	-0.7	-4.6	0.04
2,206.0	0.58	99.25	2,206.0	-5.3	0.1	-5.1	0.21
2,306.0	0.73	94.98	2,306.0	-5.4	1.3	-5.6	0.16
2,406.0	0.40	97.27	2,406.0	-5.5	2.3	-6.0	0.33
2,506.0	0.35	67.34	2,506.0	-5.5	2.9	-6.1	0.20
2,606.0	0.03	154.24	2,606.0	-5.4	3.2	-6.1	0.35
2,706.0	0.15	20.15	2,706.0	-5.3	3.2	-6.0	0.17
2,806.0	0.23	283.39	2,806.0	-5.1	3.1	-5.8	0.29
2,906.0	0.05	323.86	2,906.0	-5.0	2.9	-5.6	0.19
3,006.0	0.15	281.15	3,006.0	-5.0	2.7	-5.5	0.12
3,106.0	0.13	343.64	3,106.0	-4.8	2.5	-5.4	0.15
3,206.0	0.13	269.69	3,206.0	-4.7	2.4	-5.2	0.16
3,306.0	0.09	320.39	3,306.0	-4.6	2.2	-5.1	0.10
3,406.0	0.05	253.14	3,406.0	-4.6	2.1	-5.0	0.08
3,506.0	0.24	352.80	3,506.0	-4.4	2.1	-4.8	0.25
3,606.0	0.12	72.31	3,606.0	-4.2	2.2	-4.6	0.25
3,706.0	0.19	7.75	3,706.0	-4.0	2.3	-4.5	0.18
3,806.0	0.25	91.57	3,806.0	-3.8	2.5	-4.4	0.30
3,906.0	0.12	356.53	3,906.0	-3.7	2.7	-4.4	0.29
4,006.0	0.16	103.97	4,006.0	-3.6	2.9	-4.3	0.23
4,106.0	3.74	322.39	4,105.9	-1.1	1.0	-1.3	3.87
4,206.0	4.01	349.56	4,205.7	4.9	-1.6	5.2	1.84
4,306.0	5.04	9.78	4,305.4	12.7	-1.5	12.6	1.88
4,406.0	5.04	355.83	4,405.0	21.4	-1.1	20.7	1.22
4,506.0	5.15	2.56	4,504.6	30.3	-1.2	29.2	0.61
4,606.0	5.26	0.41	4,604.2	39.3	-1.0	37.8	0.22
4,706.0	4.66	10.79	4,703.8	47.9	-0.2	45.7	1.08
4,806.0	3.22	13.08	4,803.6	54.6	1.2	51.7	1.45
4,906.0	2.55	12.91	4,903.4	59.5	2.4	56.0	0.67
5,006.0	1.98	9.22	5,003.4	63.4	3.1	59.4	0.59
5,106.0	1.71	8.51	5,103.3	66.6	3.6	62.3	0.27
5,206.0	1.76	11.07	5,203.3	69.6	4.1	65.0	0.09
5,306.0	1.69	13.40	5,303.2	72.5	4.8	67.6	0.10
5,406.0	1.49	10.17	5,403.2	75.2	5.3	70.0	0.22

17-06471



EOW Completion Report



Company:	Antero Resources	Local Co-ordinate Reference:	Well Life Unit 2H
Project:	Doddridge County WV	TVD Reference:	Precision 525 GL 1407 + 19' RKB @ 1426.0usft
Site:	Trent Pad:Bowen/Cox/Life/Baker/Nestor	MD Reference:	Precision 525 GL 1407 + 19' RKB @ 1426.0usft
Well:	Life 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)
5,506.0	1.49	6.54	5,503.1	77.8	5.7	72.3	0.09
5,606.0	1.96	13.72	5,603.1	80.8	6.3	75.0	0.52
5,706.0	2.20	16.83	5,703.0	84.3	7.2	78.0	0.27
5,806.0	1.95	20.11	5,803.0	87.7	8.4	80.9	0.28
5,906.0	1.56	25.23	5,902.9	90.5	9.5	83.3	0.42
6,006.0	1.16	26.10	6,002.9	92.7	10.6	85.0	0.40
6,106.0	0.91	32.04	6,102.9	94.2	11.4	86.2	0.27
6,206.0	0.95	40.21	6,202.9	95.6	12.4	87.2	0.14
6,306.0	0.51	35.66	6,302.8	96.5	13.2	87.9	0.44
6,406.0	0.59	45.72	6,402.8	97.3	13.8	88.4	0.13
6,506.0	0.36	75.73	6,502.8	97.7	14.5	88.6	0.33
6,606.0	0.30	56.11	6,602.8	97.9	15.0	88.7	0.13
6,650.3	0.48	123.50	6,647.1	97.9	15.3	88.5	1.03
6,689.0	0.50	76.77	6,685.8	97.8	15.6	88.4	1.01
6,734.0	4.67	75.92	6,730.8	98.3	17.5	88.3	9.27
6,778.0	12.83	69.32	6,774.2	100.5	23.9	88.4	18.66
6,823.0	17.96	62.97	6,817.6	105.4	34.7	89.8	11.98
6,868.0	22.58	66.34	6,859.8	112.0	48.8	91.8	10.59
6,913.0	26.43	70.25	6,900.7	118.9	66.2	93.0	9.28
6,958.0	30.25	73.99	6,940.4	125.4	86.5	93.0	9.36
6,972.0	31.61	74.58	6,952.4	127.4	93.4	92.7	9.97
Sycamore							
7,002.0	34.54	75.71	6,977.5	131.5	109.2	91.9	9.97
7,047.0	38.99	74.60	7,013.5	138.5	135.3	90.5	10.00
7,092.0	43.01	74.59	7,047.5	146.3	163.7	89.2	8.93
7,137.0	43.18	68.80	7,080.4	156.0	192.9	89.5	8.80
7,182.0	43.00	60.79	7,113.3	169.0	220.7	93.5	12.16
7,191.0	42.99	58.89	7,119.8	172.1	226.0	94.8	14.36
Middlesex							
7,227.0	43.26	51.34	7,146.1	186.2	246.1	102.0	14.36
7,271.0	44.31	42.80	7,177.9	206.9	268.4	114.9	13.63
7,316.0	45.64	34.98	7,209.8	231.6	288.3	132.4	12.63
7,361.0	47.63	28.68	7,240.7	259.4	305.5	153.6	11.09
7,406.0	50.50	22.66	7,270.2	290.0	320.2	178.3	11.95
7,443.0	52.91	18.22	7,293.1	317.2	330.3	201.1	11.45
Tully							
7,450.0	53.38	17.41	7,297.3	322.5	332.0	205.6	11.45
7,495.0	57.16	12.73	7,323.0	358.2	341.6	236.7	11.98
7,540.0	60.36	8.71	7,346.3	396.0	348.7	270.5	10.43
7,585.0	64.89	4.96	7,367.0	435.7	353.4	306.8	12.49
7,630.0	68.98	2.14	7,384.6	477.0	356.0	345.4	10.76
7,675.0	72.27	358.97	7,399.6	519.4	356.4	385.6	9.88
7,720.0	75.23	356.12	7,412.2	562.6	354.5	427.3	8.96
7,736.0	76.40	355.07	7,416.1	578.1	353.3	442.4	9.70
Marcellus							

17.06471



EOW Completion Report



Company:	Antero Resources	Local Co-ordinate Reference:	Well Life Unit 2H
Project:	Doddridge County WV	TVD Reference:	Precision 525 GL 1407 + 19' RKB @ 1426.0usft
Site:	Trent Pad: Bowen/Cox/Life/Baker/Nestor	MD Reference:	Precision 525 GL 1407 + 19' RKB @ 1426.0usft
Well:	Life Unit 2H	North Reference:	Grid
Wellbore:	Original Wellpath	Survey Calculation Method:	Minimum Curvature
Design:	As Drilled	Database:	Oklahoma District

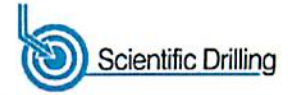
Survey

MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	N/S (usft)	E/W (usft)	V. Sec (usft)	DLeg (°/100usft)
7,764.0	78.47	353.27	7,422.2	605.2	350.5	469.1	9.70
7,809.0	82.15	350.54	7,429.7	649.1	344.3	512.8	10.13
7,854.0	83.98	347.94	7,435.2	693.0	336.0	557.2	7.03
7,898.0	86.17	345.92	7,438.9	735.7	326.0	600.8	6.76
7,919.0	87.49	345.83	7,440.1	756.1	320.9	621.8	6.30
7,964.0	89.08	345.31	7,441.5	799.6	309.7	666.7	3.72
8,054.0	90.40	344.34	7,441.9	886.5	286.2	756.6	1.82
8,143.0	90.22	344.16	7,441.4	972.1	262.0	845.5	0.29
8,233.0	87.76	341.35	7,443.0	1,058.1	235.3	935.5	4.15
8,322.0	87.67	341.18	7,446.5	1,142.3	206.8	1,024.4	0.22
8,412.0	88.99	340.74	7,449.1	1,227.3	177.4	1,114.3	1.55
8,501.0	89.43	340.74	7,450.4	1,311.3	148.1	1,203.3	0.49
8,591.0	89.52	340.82	7,451.2	1,396.3	118.4	1,293.3	0.13
8,681.0	89.60	341.44	7,451.9	1,481.5	89.3	1,383.2	0.69
8,770.0	90.13	340.65	7,452.1	1,565.6	60.4	1,472.2	1.07
8,860.0	89.08	341.53	7,452.7	1,650.8	31.3	1,562.2	1.52
8,949.0	89.34	341.26	7,453.9	1,735.1	2.9	1,651.2	0.42
9,039.0	89.96	341.18	7,454.5	1,820.3	-26.1	1,741.2	0.69
9,129.0	89.52	343.55	7,454.9	1,906.1	-53.4	1,831.2	2.68
9,218.0	89.96	343.55	7,455.3	1,991.4	-78.6	1,920.1	0.49
9,308.0	88.64	341.70	7,456.4	2,077.3	-105.5	2,010.1	2.52
9,398.0	88.81	341.44	7,458.4	2,162.7	-133.9	2,100.1	0.35
9,487.0	89.16	342.23	7,460.0	2,247.2	-161.6	2,189.1	0.97
9,577.0	89.16	342.85	7,461.3	2,333.1	-188.6	2,279.1	0.69
9,667.0	89.43	342.32	7,462.4	2,418.9	-215.6	2,369.1	0.66
9,757.0	89.34	342.93	7,463.4	2,504.8	-242.4	2,459.0	0.69
9,846.0	88.37	343.29	7,465.2	2,590.0	-268.3	2,548.0	1.16
9,936.0	88.55	343.55	7,467.6	2,676.2	-294.0	2,638.0	0.35
10,026.0	88.64	343.11	7,469.8	2,762.4	-319.8	2,727.9	0.50
10,115.0	88.81	342.85	7,471.8	2,847.5	-345.8	2,816.9	0.35
10,205.0	88.99	343.11	7,473.5	2,933.5	-372.2	2,906.9	0.35
10,295.0	88.46	341.62	7,475.5	3,019.3	-399.4	2,996.8	1.76
10,385.0	89.87	343.20	7,476.8	3,105.0	-426.6	3,086.8	2.35
10,474.0	90.75	344.08	7,476.3	3,190.4	-451.7	3,175.8	1.40
10,564.0	89.96	341.26	7,475.8	3,276.3	-478.5	3,265.8	3.25
10,654.0	90.04	341.62	7,475.8	3,361.7	-507.1	3,355.8	0.41
10,743.0	90.40	342.32	7,475.4	3,446.3	-534.7	3,444.8	0.88
10,833.0	89.25	341.35	7,475.7	3,531.8	-562.7	3,534.8	1.67
10,923.0	89.60	341.26	7,476.6	3,617.0	-591.6	3,624.7	0.40
11,012.0	90.13	341.53	7,476.8	3,701.4	-620.0	3,713.7	0.67
11,102.0	91.10	344.08	7,475.8	3,787.4	-646.6	3,803.7	3.03
11,192.0	90.66	343.55	7,474.5	3,873.8	-671.7	3,893.7	0.77
11,282.0	90.84	342.14	7,473.3	3,959.8	-698.2	3,983.7	1.58
11,376.0	90.84	341.18	7,471.9	4,049.0	-727.8	4,077.6	1.02

17-06471



EOW Completion Report



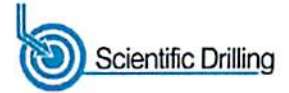
Company:	Antero Resources	Local Co-ordinate Reference:	Well Life Unit 2H
Project:	Doddridge County WV	TVD Reference:	Precision 525 GL 1407 + 19' RKB @ 1426.0usft
Site:	Trent Pad:Bowen/Cox/Life/Baker/Nestor	MD Reference:	Precision 525 GL 1407 + 19' RKB @ 1426.0usft
Well:	Life Unit 2H	North Reference:	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)	
11,469.0	90.22	341.79	341.79	7,471.0	4,137.2	-757.3	4,170.6	0.94	
11,563.0	90.48	341.26	341.26	7,470.5	4,226.3	-787.1	4,264.6	0.63	
11,657.0	90.66	341.18	341.18	7,469.5	4,315.3	-817.4	4,358.6	0.21	
11,751.0	91.36	343.20	343.20	7,467.9	4,404.8	-846.1	4,452.6	2.27	
11,845.0	90.75	341.09	341.09	7,466.1	4,494.2	-874.9	4,546.6	2.34	
11,938.0	90.66	341.09	341.09	7,465.0	4,582.2	-905.1	4,639.5	0.10	
12,032.0	90.57	341.35	341.35	7,464.0	4,671.2	-935.3	4,733.5	0.29	
12,126.0	91.54	342.06	342.06	7,462.3	4,760.4	-964.8	4,827.5	1.28	
12,220.0	92.15	342.06	342.06	7,459.2	4,849.8	-993.8	4,921.4	0.65	
12,313.0	91.10	342.85	342.85	7,456.6	4,938.5	-1,021.8	5,014.4	1.41	
12,407.0	90.04	342.06	342.06	7,455.7	5,028.1	-1,050.1	5,108.4	1.41	
12,497.0	89.52	341.70	341.70	7,456.0	5,113.6	-1,078.1	5,198.4	0.70	
12,587.0	89.60	340.65	340.65	7,456.7	5,198.8	-1,107.1	5,288.4	1.17	
12,676.0	90.04	340.21	340.21	7,457.0	5,282.6	-1,137.0	5,377.3	0.70	
12,766.0	89.96	341.18	341.18	7,457.0	5,367.6	-1,166.7	5,467.3	1.08	
12,855.0	90.04	340.74	340.74	7,457.0	5,451.7	-1,195.7	5,556.3	0.50	
12,945.0	90.57	340.47	340.47	7,456.5	5,536.6	-1,225.6	5,646.2	0.66	
13,035.0	89.43	339.95	339.95	7,456.5	5,621.3	-1,256.1	5,736.2	1.39	
13,124.0	90.31	342.41	342.41	7,456.7	5,705.5	-1,284.8	5,825.2	2.94	
13,214.0	90.13	343.90	343.90	7,456.4	5,791.7	-1,310.9	5,915.1	1.67	
13,304.0	89.25	344.43	344.43	7,456.8	5,878.2	-1,335.5	6,005.1	1.14	
13,393.0	89.78	343.73	343.73	7,457.6	5,963.8	-1,359.9	6,094.0	0.99	
13,483.0	90.13	343.90	343.90	7,457.7	6,050.3	-1,384.9	6,184.0	0.43	
13,573.0	90.31	344.08	344.08	7,457.3	6,136.8	-1,409.8	6,274.0	0.28	
13,662.0	89.25	342.76	342.76	7,457.7	6,222.1	-1,435.2	6,362.9	1.90	
13,752.0	89.52	342.76	342.76	7,458.6	6,308.0	-1,461.8	6,452.9	0.30	
13,842.0	89.78	342.41	342.41	7,459.2	6,393.9	-1,488.8	6,542.9	0.48	
13,932.0	90.40	343.02	343.02	7,459.0	6,479.8	-1,515.5	6,632.9	0.97	
14,021.0	89.43	341.70	341.70	7,459.2	6,564.6	-1,542.5	6,721.9	1.84	
14,111.0	89.60	341.97	341.97	7,459.9	6,650.1	-1,570.5	6,811.9	0.35	
14,201.0	90.04	342.32	342.32	7,460.2	6,735.8	-1,598.1	6,901.9	0.62	
14,291.0	90.40	341.62	341.62	7,459.9	6,821.4	-1,626.0	6,991.9	0.87	
14,380.0	90.75	341.70	341.70	7,459.0	6,905.9	-1,654.0	7,080.9	0.40	
14,470.0	89.69	341.88	341.88	7,458.6	6,991.4	-1,682.1	7,170.9	1.19	
14,560.0	90.04	341.53	341.53	7,458.8	7,076.8	-1,710.4	7,260.9	0.55	
14,649.0	90.13	341.53	341.53	7,458.7	7,161.2	-1,738.6	7,349.9	0.10	
14,739.0	90.20	342.22	342.22	7,458.5	7,246.8	-1,766.6	7,439.9	0.77	
14,829.0	89.69	342.85	342.85	7,458.5	7,332.6	-1,793.6	7,529.9	0.90	
14,919.0	90.04	342.49	342.49	7,458.8	7,418.5	-1,820.4	7,619.9	0.56	
15,008.0	89.60	342.67	342.67	7,459.0	7,503.4	-1,847.0	7,708.9	0.53	
15,098.0	90.13	342.58	342.58	7,459.2	7,589.3	-1,873.9	7,798.9	0.60	
15,187.0	89.87	343.20	343.20	7,459.2	7,674.4	-1,900.1	7,887.9	0.76	
15,277.0	90.48	343.64	343.64	7,459.0	7,760.6	-1,925.8	7,977.8	0.84	
15,367.0	89.08	342.49	342.49	7,459.3	7,846.7	-1,952.0	8,067.8	2.01	
15,456.0	89.43	343.02	343.02	7,460.5	7,931.7	-1,978.4	8,156.8	0.71	

17-06471



EOW Completion Report



Company:	Antero Resources	Local Co-ordinate Reference:	Well Life Unit 2H
Project:	Doddridge County WV	TVD Reference:	Precision 525 GL 1407 + 19' RKB @ 1426.0usft
Site:	Trent Pad:Bowen/Cox/Life/Baker/Nestor	MD Reference:	Precision 525 GL 1407 + 19' RKB @ 1426.0usft
Well:	Life 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)
15,546.0	90.04	342.58	7,460.9	8,017.7	-2,005.0	8,246.8	0.84
15,636.0	89.23	342.93	7,461.5	8,103.7	-2,031.7	8,336.8	0.98
15,726.0	89.69	344.69	7,462.3	8,190.1	-2,056.8	8,426.8	2.02
15,815.0	88.62	342.36	7,463.6	8,275.4	-2,082.0	8,515.7	2.88
15,905.0	89.16	342.06	7,465.4	8,361.1	-2,109.5	8,605.7	0.69
15,995.0	89.52	341.88	7,466.4	8,446.7	-2,137.3	8,695.7	0.45
16,084.0	90.48	341.26	7,466.4	8,531.1	-2,165.5	8,784.7	1.28
16,174.0	91.10	341.26	7,465.2	8,616.3	-2,194.4	8,874.7	0.69
16,264.0	90.22	342.14	7,464.1	8,701.8	-2,222.6	8,964.6	1.38
16,353.0	90.84	341.53	7,463.3	8,786.3	-2,250.4	9,053.6	0.98
16,443.0	90.40	341.79	7,462.3	8,871.7	-2,278.7	9,143.6	0.57
16,533.0	90.84	343.46	7,461.4	8,957.6	-2,305.6	9,233.6	1.92
16,623.0	89.16	341.18	7,461.4	9,043.4	-2,332.9	9,323.6	3.15
16,713.0	89.25	340.82	7,462.6	9,128.5	-2,362.2	9,413.6	0.41
16,802.0	90.31	342.58	7,462.9	9,212.9	-2,390.1	9,502.6	2.31
16,892.0	90.66	342.14	7,462.2	9,298.7	-2,417.4	9,592.6	0.62
16,981.0	89.60	342.58	7,462.0	9,383.5	-2,444.4	9,681.6	1.29
17,071.0	89.87	343.81	7,462.4	9,469.7	-2,470.4	9,771.6	1.40
17,161.0	89.43	342.06	7,462.9	9,555.7	-2,496.8	9,861.5	2.00
17,250.0	89.96	343.37	7,463.4	9,640.7	-2,523.3	9,950.5	1.59
17,340.0	89.90	342.25	7,463.5	9,726.7	-2,549.9	10,040.5	1.25
17,430.0	90.40	341.53	7,463.3	9,812.2	-2,577.8	10,130.5	0.97
17,519.0	90.92	341.53	7,462.3	9,896.6	-2,606.0	10,219.5	0.58
17,609.0	91.28	341.09	7,460.5	9,981.9	-2,634.9	10,309.5	0.63
17,699.0	90.66	340.12	7,459.0	10,066.7	-2,664.7	10,399.4	1.28
17,789.0	91.44	339.73	7,457.4	10,151.3	-2,695.6	10,489.3	0.97
17,878.0	90.57	339.77	7,455.8	10,234.7	-2,726.4	10,578.3	0.98
17,909.0	90.71	339.73	7,455.5	10,263.8	-2,737.2	10,609.2	0.47
17,967.0	90.71	339.73	7,454.7	10,318.2	-2,757.3	10,667.2	0.00

Design Annotations

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
6,972.0	6,952.4	127.4	93.4	Sycamore
7,191.0	7,119.8	172.1	226.0	Middlesex
7,443.0	7,293.1	317.2	330.3	Tully
7,736.0	7,416.1	578.1	353.3	Marcellus

Checked By: _____ Approved By: _____ Date: _____

Hydraulic Fracturing Fluid Product Component Information Disclosure

Job Start Date:	1/15/2015
Job End Date:	1/30/2015
State:	West Virginia
County:	Doddridge
API Number:	47-017-06471-00-00
Operator Name:	Antero Resources Corporation
Well Name and Number:	Life Unit 2H
Longitude:	-80.62906700
Latitude:	39.20945600
Datum:	NAD83
Federal/Tribal Well:	NO
True Vertical Depth:	7,477
Total Base Water Volume (gal):	14,529,460
Total Base Non Water Volume:	624,319



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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	Base Fluid	Water	7732-18-5	100.00000	90.59098	
Sand	U.S. Well Services	Proppant	Crystalline Silica, quartz	14808-60-7	100.00000	8.96697	
HCL Acid (12.6%-18.0%)	U.S. Well Services	Bulk Acid	Water	7732-18-5	87.50000	0.15805	
			Hydrogen Chloride	7647-01-0	18.00000	0.03775	
LGC-15	U.S. Well Services	Gelling Agents	Guar Gum	9000-30-0	50.00000	0.05839	
			Petroleum Distillates	64742-47-8	60.00000	0.05529	
			Suspending agent (solid)	14808-60-7	3.00000	0.00893	
			Surfactant	68439-51-0	3.00000	0.00350	
WFRA-405	U.S. Well Services	Friction Reducer	Anionic Polyacrylamide	Proprietary	40.00000	0.02872	
			Water	7732-18-5	40.00000	0.02872	
			Petroleum Distillates	64742-47-8	40.00000	0.02312	
			Crystalline Salt	12125-02-9	5.00000	0.00359	
			Ethoxylated alcohol blend	Proprietary	5.00000	0.00359	
SI-1100	U.S. Well Services	Scale Inhibitor					

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			Di Water	7732-18-5	80.00000	0.00995
			Ethylene Glycol	107-21-1	40.00000	0.00562
			Potassium salt of diethylene triamine penta (methylene phosphonic acid)	15827-60-8	10.00000	0.00168
			2-Phosphonobutane 1,2,4 tricarboxylic salt	37971-36-1	10.00000	0.00160
			hexamethylenediamine tetra (methylene phosphonic acid)	38820-59-6	10.00000	0.00155
			Copolymer of Maleic and Acrylic acid	26677-99-6	10.00000	0.00147
			bis (hexamethylene) tramine penta (methylene phosphonic acid) - phosphate acid	40623-75-4	10.00000	0.00143
			Acrylic polymer	52255-49-9	5.00000	0.00062
K-BAC 1020	U.S. Well Services	Anti-Bacterial Agent				
			2,2-dibromo-3-nitropropionamide	10222-01-2	20.00000	0.00403
			Deionized Water	7732-18-5	28.00000	0.00230
AP One	U.S. Well Services	Gel Breakers				
			Ammonium Persulfate	7727-54-0	100.00000	0.00182
AI-301	U.S. Well Services	Acid Corrosion Inhibitors				
			Diethylene Glycol	111-46-6	30.00000	0.00012
			Methenamine	100-97-0	20.00000	0.00010
			Polyethylene polyamine	68603-67-8	10.00000	0.00004
			Hydrogen Chloride	7647-01-0	10.00000	0.00004
			Coco amine	61791-14-8	5.00000	0.00002

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)

RECEIVED
 Office of Oil and Gas
 AUG 24 2015
 WV Department of
 Environmental Protection

LATITUDE 39°15'00" | 1,204'

LATITUDE 39°15'00"

LONGITUDE 80°37'30"

4,465' TO BOTTOM HOLE

14,798'

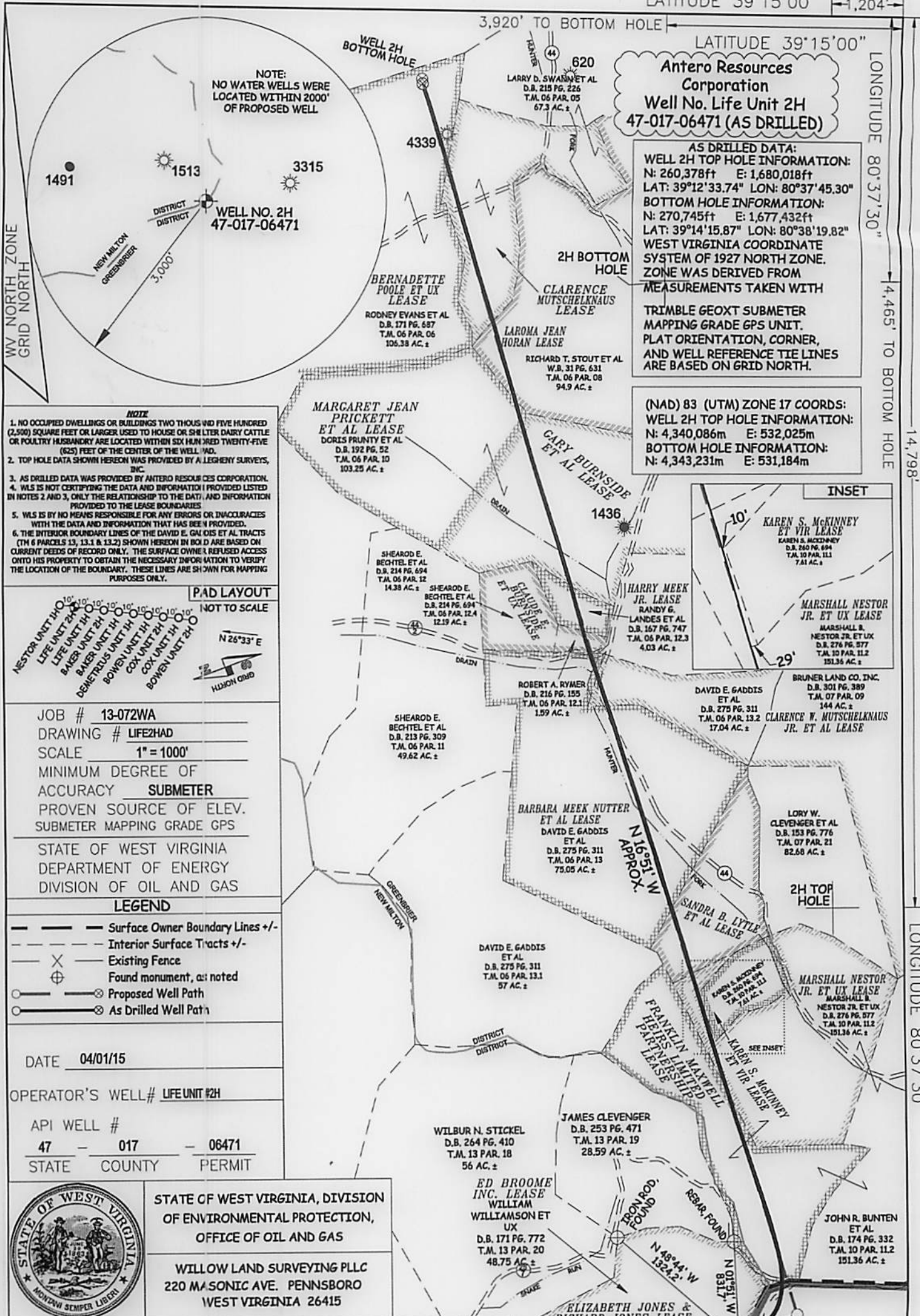
LONGITUDE 80°37'30"

COUNTY NAME PERMIT

Antero Resources Corporation Well No. Life Unit 2H 47-017-06471 (AS DRILLED)

AS DRILLED DATA:
WELL 2H TOP HOLE INFORMATION:
N: 260,378ft E: 1,680,018ft
LAT: 39°12'33.74" LON: 80°37'45.30"
BOTTOM HOLE INFORMATION:
N: 270,745ft E: 1,677,432ft
LAT: 39°14'15.87" LON: 80°38'19.82"
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 2H TOP HOLE INFORMATION:
N: 4,340,086m E: 532,025m
BOTTOM HOLE INFORMATION:
N: 4,343,231m E: 531,184m



NOTE:
NO WATER WELLS WERE LOCATED WITHIN 2000' OF PROPOSED WELL.

- NOTE**
- NO OCCUPIED DWELLINGS OR BUILDINGS TWO THOUSAND FIVE HUNDRED (2,500) SQUARE FEET OR LARGER USED TO HOUSE OR SHUTTER DAIRY CATTLE OR POULTRY HUSBANDRY ARE LOCATED WITHIN SIX HUNDRED TWENTY-FIVE (625) FEET OF THE CENTER OF THE WELL. AND.
 - TOP HOLE DATA SHOWN HEREON WAS PROVIDED BY A LEGHNEY SURVEYS, 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 RELATIONSHIP TO THE DATA AND INFORMATION PROVIDED TO THE LEASE BOUNDARIES.
 - WLS IS BY NO MEANS RESPONSIBLE FOR ANY ERRORS OR INACCURACIES WITH THE DATA AND INFORMATION THAT HAS BEEN PROVIDED.
 - THE INTERIOR BOUNDARY LINES OF THE DAVID E. GADDIS ET AL TRACTS (TH 6 PARCELS 13, 13.1 & 13.2) SHOWN HEREON IN BOX D ARE BASED ON CURRENT DEEDS OF RECORD ONLY. THE SURFACE OWNER REFUSED ACCESS ONTO HIS PROPERTY TO OBTAIN THE NECESSARY INFORMATION TO VERIFY THE LOCATION OF THE BOUNDARY. THESE LINES ARE SHOWN FOR MAPPING PURPOSES ONLY.



JOB # 13-072WA
DRAWING # LIFE2HAD
SCALE 1" = 1000'
MINIMUM DEGREE OF ACCURACY SUBMETER
PROVEN SOURCE OF ELEV. SUBMETER MAPPING GRADE GPS
STATE OF WEST VIRGINIA
DEPARTMENT OF ENERGY
DIVISION OF OIL AND GAS

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

DATE 04/01/15
OPERATOR'S WELL # LIFE UNIT #2H
API WELL # 47-017-06471
STATE COUNTY PERMIT



STATE OF WEST VIRGINIA, DIVISION OF ENVIRONMENTAL PROTECTION, OFFICE OF OIL AND GAS
WILLOW LAND SURVEYING PLLC
220 MASONIC AVE. PENNSBORO WEST VIRGINIA 26415

WELL TYPE: OIL GAS X LIQUID INJECTION WASTE DISPOSAL
(IF "GAS") PRODUCTION X STORAGE DEEP SHALLOW X
LOCATION: ELEVATION 1,420' ORIGINAL - 1,409' AS DRILLED WATERSHED HEADWATERS MIDDLE ISLAND CREEK
QUADRANGLE NEW MILTON 7.5' DISTRICT GREENBRIER COUNTY DODDRIDGE ACREAGE 155 ACRES +/-
SURFACE OWNER CLARENCE TRENT, JR. ET AL

OIL & GAS ROYALTY OWNER ELIZABETH JONES & RICHARD JONES; ED BROOME INC.; FRANKLIN MAXWELL HEIRS LIMITED PARTNERSHIP; MARSHALL NESTOR JR. ET UX; SANDRA B. LYTLE ET AL; BARBARA MEEK NUTTER ET AL; CLARENCE W. MUTSCHELKNAUS JR. ET AL; CLAUDE E. BURROUSE ET UX; HARRY MEEK, JR.; GARY BURNSIDE ET AL; MARGARET JEAN PRICKETT ET AL; LAROMA JEAN HORAN; CLARENCE MUTSCHELKNAUS; BERNADETTE POOLE ET UX LEASE. ACREAGE 155 AC ±; 40.75 AC ±; 44.8 AC ±; 42.89 AC ±; 19.75 AC ±; 75.95 AC ±; 100 AC ±; 13.70 AC ±; 4.106 AC ±; 84 AC ±; 38.5 AC ±; 94.9 AC ±; 31 AC ±; 106 AC ±
PROPOSED WORK: DRILL CONVERT DRILL DEEPER REDRILL FRACTURE OR STIMULATE
PLUG OFF OLD FORMATION PERFORATE NEW FORMATION OTHER PHYSICAL CHANGE IN WELL (SPECIFY) (X) AS DRILLED PLUG & ABANDON CLEAN OUT & REPLUG
TARGET FORMATION MARCELLUS ESTIMATED DEPTH 7,455' TVD 17,967' MD
WELL OPERATOR ANTERO RESOURCES CORPORATION DESIGNATED AGENT DIANNA STAMPER
ADDRESS 1615 WYNKOOP STREET ADDRESS 5400 D BIG TYLER ROAD
FORM WW-6 DENVER, CO 80202 CHARLESTON, WV 25313