



Precision 523; OL 814; +KB 18' @ 833.0usft  
 GR: 814.0

**Hawkeye Unit 3H**  
**Tyler County WV**  
**Northing: 14331712.20**  
**Easting: 1681956.94**  
**As Drilled**



WELL DETAILS		Hawkeye Unit 3H	
+N/-S	0.0	Ground Level	814.0
+E/-W	0.0	Latitude	38.315880°
		Longitude	81.125110° W
		Northing	14331712.20
		Easting	1681956.94

**PROJECT DETAILS:** Tyler County WV

**Geoid:** System: Universal Transverse Mercator (US Survey Feet)  
 Datum: NAD 1983 (NADCON CONUS)  
 Ellipsoid: Clarke 1866  
 Zone: Zone 17N (84 W to 78 W)  
 System Datum: Mean Sea Level

**SITE DETAILS:** Weigle East Pad: Dean/Goodfellow/Hawkeye/Scardina

Site Centre Northing: 14331712.20  
 Easting: 1681956.94

Positional Uncertainty: 0.0  
 Convergence: 0.09  
 Local North: Grid

Genie Lightfoot  
 13-48, June 01 2015  
 Scientific Drilling  
 11220 NW 10th Street  
 Yukon OK 73099

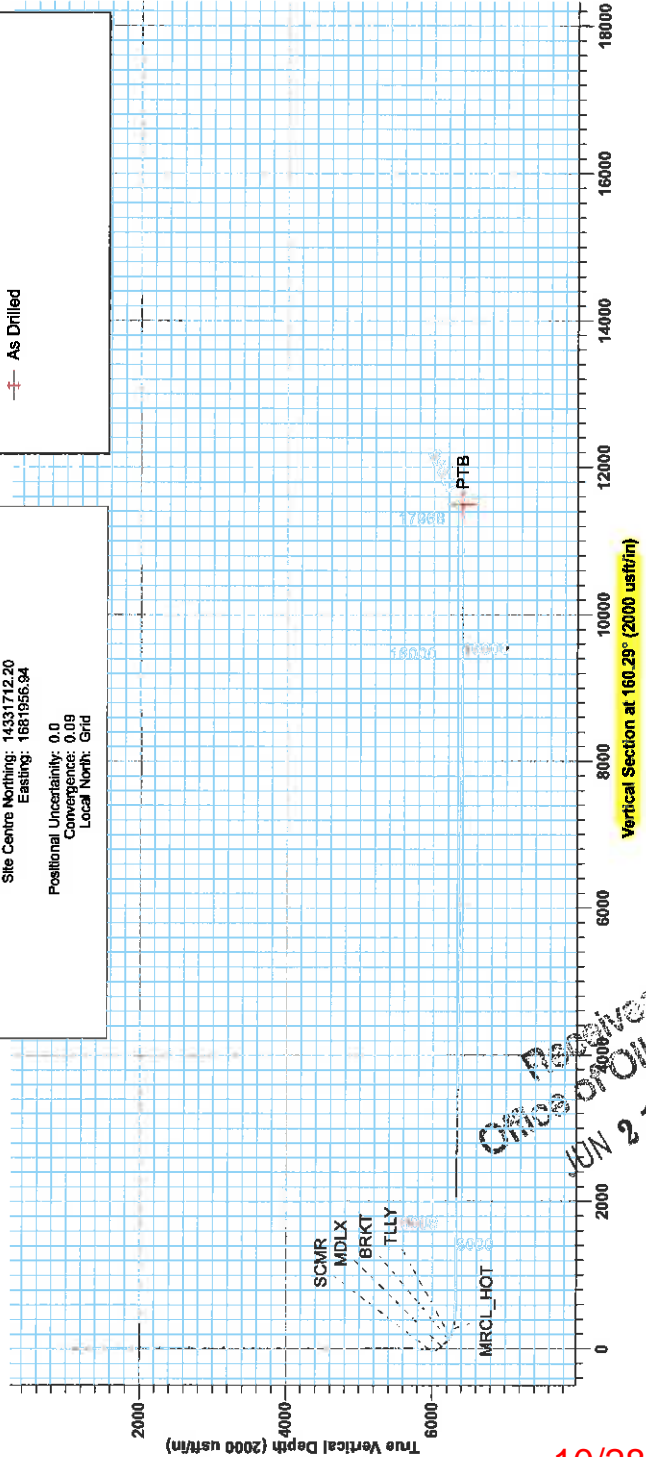
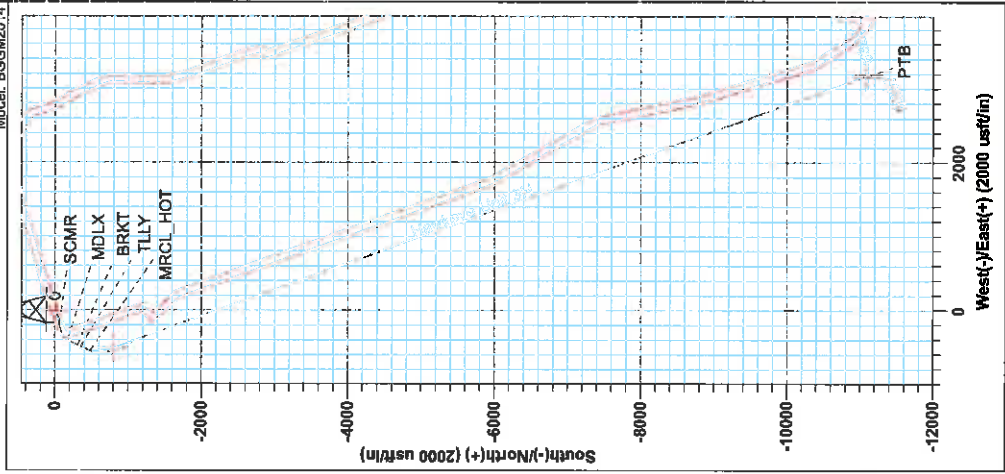
**LEGEND**

- Hawkeye Unit 3H, Original Wellpath, Plan 6 V0
- As Drilled

**Asimuths to Grid North:**  
 True North: -0.09°  
 Magnetic North: -8.56°

**Magnetic Field**  
 Strength: 52245.45rT  
 Dip Angle: 66.94°  
 Date: 5/12/2015  
 Model: BGGNM2014

To convert Magnetic North to Grid, Subtract 8.56°  
 To convert True North to Grid, Subtract 0.09°



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 JUN 21 2016

10/28/2016



# Antero

Tyler County WV  
Weigle East Pad: Dean/Goodfellow/Hawkeye/Scardina  
Hawkeye Unit 3H  
Original Wellpath

Design: As Drilled

## EOW Completion Report

01 June, 2015

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<b>Company:</b> Antero	<b>Local Co-ordinate Reference:</b> Well Hawkeye Unit 3H
<b>Project:</b> Tyler County WV	<b>TVD Reference:</b> Precision 523 GL 814' + KB 19' @ 833 0usft
<b>Site:</b> Weigle East Pad Dean/Goodfellow/Hawkeye/Sc	<b>MD Reference:</b> Precision 523 GL 814' + KB 19' @ 833 0usft
<b>Well:</b> Hawkeye Unit 3H	<b>North Reference:</b> Grid
<b>Wellbore:</b> Original Wellpath	<b>Survey Calculation Method:</b> Minimum Curvature
<b>Design:</b> As Drilled	<b>Database:</b> Oklahoma District

<b>Project</b>	Tyler County WV, Tyler Co West Virginia		
<b>Map System:</b>	Universal Transverse Mercator (US Survey Fee	<b>System Datum:</b>	Mean Sea Level
<b>Geo Datum:</b>	NAD 1927 (NADCON CONUS)		
<b>Map Zone:</b>	Zone 17N (84 W to 78 W)		

<b>Site</b>	Weigle East Pad Dean/Goodfellow/Hawkeye/Scardina				
<b>Site Position:</b>	<b>Northing:</b>	14,331,712.20 usft	<b>Latitude:</b>	39° 27' 58.315 N	
<b>From:</b> Map	<b>Easting:</b>	1,681,956.94 usft	<b>Longitude:</b>	80° 51' 10.125 W	
<b>Position Uncertainty:</b>	0.0 usft	<b>Slot Radius:</b>	13-3/16"	<b>Grid Convergence:</b>	0.09 °

<b>Well</b>	Hawkeye Unit 3H, Marcellus				
<b>Well Position</b>	<b>+N/-S</b>	0.0 usft	<b>Northing:</b>	14,331,712.20 usft	
	<b>+E/-W</b>	0.0 usft	<b>Easting:</b>	1,681,956.94 usft	
<b>Position Uncertainty</b>	2.0 usft	<b>Wellhead Elevation:</b>	833.0 usft	<b>Ground Level:</b>	814.0 usft

<b>Wellbore</b>	Original Wellpath				
<b>Magnetics</b>	<b>Model Name</b>	<b>Sample Date</b>	<b>Declination (°)</b>	<b>Dip Angle (°)</b>	<b>Field Strength (nT)</b>
	BGGM2014	5/1/2015	-8.47	66.94	52,245

<b>Design</b>	As Drilled				
<b>Audit Notes:</b>					
<b>Version:</b>	1.0	<b>Phase:</b>	ACTUAL	<b>Tie On Depth:</b>	0.0
<b>Vertical Section:</b>	<b>Depth From (TVD) (usft)</b>	<b>+N/-S (usft)</b>	<b>+E/-W (usft)</b>	<b>Direction (°)</b>	
	0.0	0.0	0.0	160.29	

<b>Survey Program</b>	Date 6/1/2015				
<b>From (usft)</b>	<b>To (usft)</b>	<b>Survey (Wellbore)</b>	<b>Tool Name</b>	<b>Description</b>	
106.0	5,490.5	Survey #4 Final Gyro KOP (Original Wellp	Standard Keeper 104	Standard Wireline Keeper ver 1.0.4	
5,490.5	17,955.0	Survey #5 SDI 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
106.0	0.06	349.57	106.0	0.1	0.0	0.0	0.06
131.0	0.02	319.17	131.0	0.1	0.0	-0.1	0.18
156.0	0.02	230.63	156.0	0.1	0.0	-0.1	0.11
181.0	0.02	324.15	181.0	0.1	0.0	-0.1	0.12
206.0	0.04	75.16	206.0	0.1	0.0	-0.1	0.20
231.0	0.06	105.82	231.0	0.1	0.0	-0.1	0.13
256.0	0.15	127.57	256.0	0.1	0.0	0.0	0.39
281.0	0.12	151.22	281.0	0.0	0.1	0.0	0.25
306.0	0.20	161.78	306.0	-0.1	0.1	0.1	0.34
331.0	0.18	147.93	331.0	-0.1	0.1	0.2	0.20

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<b>Company:</b>	Antero	<b>Local Co-ordinate Reference:</b>	Well Hawkeye Unit 3H
<b>Project:</b>	Tyler County WV	<b>TVD Reference:</b>	Precision 523. GL 814' + KB 19' @ 833.0usft
<b>Site:</b>	Weigle East Pad. Dean/Goodfellow/Hawkeye/Sc	<b>MD Reference:</b>	Precision 523. GL 814' + KB 19' @ 833.0usft
<b>Well:</b>	Hawkeye Unit 3H	<b>North Reference:</b>	Grid
<b>Wellbore:</b>	Original Wellpath	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	As Drilled	<b>Database:</b>	Oklahoma District

Survey

MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	N/S (usft)	E/W (usft)	V. Sec (usft)	DLeg (°/100usft)
356.0	0.17	179.46	356.0	-0.2	0.2	0.2	0.38
381.0	0.17	210.97	381.0	-0.3	0.1	0.3	0.37
406.0	0.17	226.36	406.0	-0.3	0.1	0.3	0.18
431.0	0.21	215.64	431.0	-0.4	0.0	0.4	0.21
456.0	0.05	325.48	456.0	-0.4	0.0	0.4	0.93
481.0	0.10	198.25	481.0	-0.4	0.0	0.4	0.54
506.0	0.12	184.34	506.0	-0.5	0.0	0.4	0.13
531.0	0.24	191.53	531.0	-0.6	0.0	0.5	0.49
556.0	0.58	207.59	556.0	-0.7	-0.1	0.6	1.42
581.0	1.12	212.95	581.0	-1.0	-0.3	0.9	2.18
606.0	1.61	219.39	606.0	-1.5	-0.6	1.2	2.05
631.0	2.01	221.01	631.0	-2.1	-1.2	1.6	1.61
656.0	2.31	222.38	656.0	-2.8	-1.8	2.0	1.22
681.0	2.81	227.95	680.9	-3.6	-2.6	2.5	2.23
706.0	3.38	233.36	705.9	-4.4	-3.6	3.0	2.56
731.0	3.79	235.90	730.8	-5.4	-4.9	3.4	1.76
756.0	4.14	237.58	755.8	-6.3	-6.3	3.8	1.47
781.0	4.49	238.48	780.7	-7.3	-7.9	4.2	1.43
806.0	5.02	236.95	805.6	-8.4	-9.7	4.6	2.18
831.0	5.15	236.93	830.5	-9.6	-11.5	5.2	0.52
856.0	5.33	235.33	855.4	-10.9	-13.4	5.7	0.93
881.0	5.57	233.68	880.3	-12.3	-15.4	6.4	1.15
906.0	5.65	233.74	905.2	-13.7	-17.3	7.1	0.32
931.0	5.65	234.31	930.1	-15.2	-19.3	7.7	0.22
956.0	5.07	232.27	955.0	-16.5	-21.2	8.4	2.44
981.0	4.50	228.11	979.9	-17.9	-22.8	9.1	2.67
1,006.0	4.22	228.29	1,004.8	-19.1	-24.2	9.9	1.12
1,031.0	3.92	228.53	1,029.7	-20.3	-25.6	10.5	1.20
1,056.0	3.54	228.27	1,054.7	-21.4	-26.8	11.1	1.52
1,081.0	3.37	227.15	1,079.6	-22.4	-27.9	11.7	0.73
1,106.0	3.09	227.38	1,104.6	-23.4	-28.9	12.2	1.12
1,131.0	2.81	226.42	1,129.6	-24.3	-29.9	12.8	1.14
1,156.0	2.40	225.84	1,154.5	-25.0	-30.7	13.2	1.64
1,181.0	2.14	226.21	1,179.5	-25.7	-31.4	13.6	1.04
1,206.0	2.01	223.50	1,204.5	-26.4	-32.0	14.0	0.65
1,231.0	1.77	224.34	1,229.5	-27.0	-32.6	14.4	0.97
1,256.0	1.69	224.11	1,254.5	-27.5	-33.1	14.7	0.32
1,281.0	1.41	227.52	1,279.5	-28.0	-33.6	15.0	1.18
1,306.0	1.31	228.26	1,304.5	-28.4	-34.1	15.2	0.41
1,331.0	1.28	232.04	1,329.5	-28.7	-34.5	15.4	0.36
1,356.0	1.22	230.70	1,354.5	-29.1	-34.9	15.6	0.27
1,381.0	0.98	235.99	1,379.5	-29.4	-35.3	15.7	1.04
1,406.0	0.87	236.39	1,404.4	-29.6	-35.6	15.8	0.44
1,431.0	0.85	235.25	1,429.4	-29.8	-35.9	15.9	0.11

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<b>Wellbore:</b> Original Wellpath	<b>Survey Calculation Method:</b> Minimum Curvature
<b>Design:</b> As Drilled	<b>Database:</b> Oklahoma District

Survey

MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	N/S (usft)	E/W (usft)	V. Sec (usft)	DLeg (°/100usft)
1,456.0	0.72	232.09	1,454.4	-30.0	-36.2	16.0	0.55
1,481.0	0.59	230.53	1,479.4	-30.2	-36.4	16.1	0.52
1,506.0	0.64	219.56	1,504.4	-30.4	-36.6	16.2	0.51
1,531.0	0.65	223.41	1,529.4	-30.6	-36.8	16.4	0.18
1,556.0	0.63	216.43	1,554.4	-30.8	-37.0	16.5	0.32
1,581.0	0.59	215.64	1,579.4	-31.0	-37.2	16.7	0.16
1,606.0	0.48	222.48	1,604.4	-31.2	-37.3	16.8	0.51
1,631.0	0.38	233.23	1,629.4	-31.3	-37.4	16.9	0.51
1,656.0	0.35	240.37	1,654.4	-31.4	-37.6	16.9	0.22
1,681.0	0.29	256.12	1,679.4	-31.5	-37.7	16.9	0.42
1,706.0	0.21	263.66	1,704.4	-31.5	-37.8	16.9	0.35
1,731.0	0.15	242.51	1,729.4	-31.5	-37.9	16.9	0.35
1,756.0	0.15	230.74	1,754.4	-31.5	-37.9	16.9	0.12
1,781.0	0.19	223.79	1,779.4	-31.6	-38.0	16.9	0.18
1,806.0	0.22	233.12	1,804.4	-31.6	-38.1	17.0	0.18
1,831.0	0.23	245.42	1,829.4	-31.7	-38.1	17.0	0.20
1,856.0	0.18	249.51	1,854.4	-31.7	-38.2	17.0	0.21
1,881.0	0.20	283.59	1,879.4	-31.7	-38.3	17.0	0.45
1,906.0	0.17	280.75	1,904.4	-31.7	-38.4	16.9	0.13
1,931.0	0.13	279.28	1,929.4	-31.7	-38.4	16.9	0.16
1,956.0	0.12	317.88	1,954.4	-31.7	-38.5	16.8	0.33
1,981.0	0.09	219.90	1,979.4	-31.7	-38.5	16.8	0.64
2,006.0	0.09	228.31	2,004.4	-31.7	-38.5	16.8	0.05
2,031.0	0.20	226.74	2,029.4	-31.7	-38.6	16.9	0.44
2,056.0	0.24	273.13	2,054.4	-31.8	-38.7	16.9	0.71
2,081.0	0.23	294.76	2,079.4	-31.7	-38.8	16.8	0.35
2,106.0	0.11	337.11	2,104.4	-31.7	-38.8	16.8	0.66
2,131.0	0.10	316.34	2,129.4	-31.7	-38.9	16.7	0.16
2,156.0	0.05	339.05	2,154.4	-31.6	-38.9	16.7	0.23
2,181.0	0.16	197.30	2,179.4	-31.7	-38.9	16.7	0.81
2,206.0	0.24	247.38	2,204.4	-31.7	-38.9	16.7	0.74
2,231.0	0.06	278.20	2,229.4	-31.7	-39.0	16.7	0.76
2,256.0	0.20	276.22	2,254.4	-31.7	-39.1	16.7	0.56
2,281.0	0.20	305.60	2,279.4	-31.7	-39.1	16.6	0.41
2,306.0	0.17	306.29	2,304.4	-31.7	-39.2	16.6	0.12
2,331.0	0.11	266.67	2,329.4	-31.6	-39.3	16.5	0.44
2,356.0	0.14	245.59	2,354.4	-31.6	-39.3	16.5	0.22
2,381.0	0.17	308.81	2,379.4	-31.6	-39.4	16.5	0.66
2,406.0	0.05	205.45	2,404.4	-31.6	-39.4	16.5	0.75
2,431.0	0.04	280.53	2,429.4	-31.6	-39.4	16.5	0.22
2,456.0	0.13	285.53	2,454.4	-31.6	-39.5	16.5	0.36
2,481.0	0.09	199.08	2,479.4	-31.6	-39.5	16.5	0.61
2,506.0	0.17	254.81	2,504.4	-31.7	-39.5	16.5	0.56
2,531.0	0.16	263.20	2,529.4	-31.7	-39.6	16.5	0.10
2,556.0	0.17	259.03	2,554.4	-31.7	-39.7	16.4	0.06

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<b>Company:</b> Antero	<b>Local Co-ordinate Reference:</b> Well Hawkeye Unit 3H
<b>Project:</b> Tyler County WV	<b>TVD Reference:</b> Precision 523 GL 814' + KB 19' @ 833 0usft
<b>Site:</b> Weigle East Pad: Dean/Goodfellow/Hawkeye/Sci	<b>MD Reference:</b> Precision 523 GL 814' + KB 19' @ 833 0usft
<b>Well:</b> Hawkeye Unit 3H	<b>North Reference:</b> Grid
<b>Wellbore:</b> Original Wellpath	<b>Survey Calculation Method:</b> Minimum Curvature
<b>Design:</b> As Drilled	<b>Database:</b> Oklahoma District

**Survey**

MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	N/S (usft)	E/W (usft)	V. Sec (usft)	DLeg (°/100usft)
2,581.0	0.13	308.62	2,579.4	-31.7	-39.7	16.4	0.52
2,606.0	0.16	276.07	2,604.4	-31.7	-39.8	16.4	0.34
2,631.0	0.16	287.17	2,629.4	-31.6	-39.9	16.3	0.12
2,656.0	0.12	277.78	2,654.4	-31.6	-39.9	16.3	0.18
2,681.0	0.14	284.36	2,679.4	-31.6	-40.0	16.3	0.10
2,706.0	0.15	280.04	2,704.4	-31.6	-40.0	16.2	0.06
2,731.0	0.18	284.75	2,729.4	-31.6	-40.1	16.2	0.13
2,756.0	0.21	279.07	2,754.4	-31.6	-40.2	16.2	0.14
2,781.0	0.26	277.85	2,779.4	-31.6	-40.3	16.1	0.20
2,806.0	0.28	295.05	2,804.4	-31.5	-40.4	16.0	0.33
2,831.0	0.27	273.95	2,829.4	-31.5	-40.5	16.0	0.40
2,856.0	0.27	271.91	2,854.4	-31.5	-40.6	15.9	0.04
2,881.0	0.31	286.34	2,879.4	-31.5	-40.8	15.9	0.33
2,906.0	0.33	285.03	2,904.4	-31.4	-40.9	15.8	0.09
2,931.0	0.26	290.00	2,929.4	-31.4	-41.0	15.7	0.30
2,956.0	0.28	290.19	2,954.4	-31.3	-41.1	15.6	0.08
2,981.0	0.24	286.54	2,979.4	-31.3	-41.2	15.6	0.17
3,006.0	0.29	292.79	3,004.4	-31.3	-41.3	15.5	0.23
3,031.0	0.31	289.14	3,029.4	-31.2	-41.5	15.4	0.11
3,056.0	0.30	283.93	3,054.4	-31.2	-41.6	15.3	0.12
3,081.0	0.34	281.70	3,079.4	-31.2	-41.7	15.3	0.17
3,106.0	0.28	281.49	3,104.4	-31.1	-41.9	15.2	0.24
3,131.0	0.38	276.68	3,129.4	-31.1	-42.0	15.1	0.41
3,156.0	0.40	284.88	3,154.4	-31.1	-42.2	15.0	0.24
3,181.0	0.36	286.58	3,179.4	-31.0	-42.3	14.9	0.17
3,206.0	0.37	289.55	3,204.4	-31.0	-42.5	14.8	0.09
3,231.0	0.33	293.40	3,229.4	-30.9	-42.6	14.7	0.19
3,256.0	0.33	285.24	3,254.4	-30.9	-42.8	14.6	0.19
3,281.0	0.38	294.78	3,279.4	-30.8	-42.9	14.5	0.31
3,306.0	0.36	288.11	3,304.4	-30.8	-43.0	14.4	0.19
3,331.0	0.36	276.30	3,329.4	-30.7	-43.2	14.4	0.30
3,356.0	0.39	283.02	3,354.4	-30.7	-43.4	14.3	0.21
3,381.0	0.39	278.02	3,379.4	-30.7	-43.5	14.2	0.14
3,406.0	0.39	286.15	3,404.4	-30.6	-43.7	14.1	0.22
3,431.0	0.45	278.32	3,429.4	-30.6	-43.9	14.0	0.33
3,456.0	0.49	292.21	3,454.4	-30.5	-44.1	13.9	0.48
3,481.0	0.48	281.79	3,479.4	-30.5	-44.3	13.8	0.35
3,506.0	0.42	285.82	3,504.4	-30.4	-44.5	13.7	0.27
3,531.0	0.41	286.73	3,529.4	-30.4	-44.6	13.6	0.05
3,556.0	0.45	290.67	3,554.4	-30.3	-44.8	13.4	0.20
3,581.0	0.42	291.40	3,579.4	-30.3	-45.0	13.3	0.12
3,606.0	0.41	287.56	3,604.4	-30.2	-45.2	13.2	0.12
3,631.0	0.43	279.96	3,629.4	-30.2	-45.3	13.1	0.24
3,656.0	0.42	281.40	3,654.4	-30.1	-45.5	13.0	0.06

Received  
Office of Oil & Gas  
JUL 21 2016



<b>Company:</b>	Antero	<b>Local Co-ordinate Reference:</b>	Well Hawkeye Unit 3H
<b>Project:</b>	Tyler County WV	<b>TVD Reference:</b>	Precision 523 GL 814' + KB 19' @ 833 0usft
<b>Site:</b>	Weigle East Pad Dean/Goodfellow/Hawkeye/Sc	<b>MD Reference:</b>	Precision 523 GL 814' + KB 19' @ 833 0usft
<b>Well:</b>	Hawkeye Unit 3H	<b>North Reference:</b>	Grid
<b>Wellbore:</b>	Original Wellpath	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	As Drilled	<b>Database:</b>	Oklahoma District

Survey

MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	N/S (usft)	E/W (usft)	V. Sec (usft)	DLeg (°/100usft)
3,681.0	0.45	280.10	3,679.4	-30.1	-45.7	12.9	0.13
3,706.0	0.43	286.11	3,704.4	-30.0	-45.9	12.8	0.20
3,731.0	0.46	281.89	3,729.4	-30.0	-46.1	12.7	0.18
3,756.0	0.45	280.44	3,754.4	-30.0	-46.3	12.6	0.06
3,781.0	0.47	287.69	3,779.4	-29.9	-46.5	12.5	0.25
3,806.0	0.50	283.14	3,804.4	-29.8	-46.7	12.4	0.20
3,831.0	0.48	290.60	3,829.4	-29.8	-46.9	12.2	0.27
3,856.0	0.42	290.62	3,854.4	-29.7	-47.1	12.1	0.24
3,881.0	0.36	290.58	3,879.4	-29.7	-47.2	12.0	0.24
3,906.0	0.38	281.08	3,904.4	-29.6	-47.4	11.9	0.26
3,931.0	0.35	283.56	3,929.4	-29.6	-47.5	11.8	0.14
3,956.0	0.32	286.01	3,954.4	-29.5	-47.7	11.7	0.13
3,981.0	0.35	276.00	3,979.4	-29.5	-47.8	11.7	0.26
4,006.0	0.32	283.66	4,004.4	-29.5	-48.0	11.6	0.22
4,031.0	0.27	285.74	4,029.4	-29.5	-48.1	11.5	0.20
4,056.0	0.30	291.66	4,054.4	-29.4	-48.2	11.4	0.17
4,081.0	0.29	297.84	4,079.4	-29.4	-48.3	11.4	0.13
4,106.0	0.30	273.25	4,104.4	-29.3	-48.4	11.3	0.50
4,131.0	0.30	281.52	4,129.4	-29.3	-48.6	11.2	0.17
4,156.0	0.24	269.53	4,154.4	-29.3	-48.7	11.2	0.33
4,181.0	0.32	272.32	4,179.4	-29.3	-48.8	11.1	0.32
4,206.0	0.33	269.67	4,204.4	-29.3	-48.9	11.1	0.07
4,231.0	0.35	261.68	4,229.4	-29.3	-49.1	11.0	0.21
4,256.0	0.34	265.35	4,254.4	-29.3	-49.2	11.0	0.10
4,281.0	0.25	253.64	4,279.4	-29.3	-49.4	11.0	0.43
4,306.0	0.24	256.07	4,304.4	-29.4	-49.5	11.0	0.06
4,331.0	0.22	249.22	4,329.4	-29.4	-49.6	11.0	0.14
4,356.0	0.23	233.73	4,354.4	-29.5	-49.7	11.0	0.25
4,381.0	0.20	250.59	4,379.4	-29.5	-49.7	11.0	0.28
4,406.0	0.23	246.06	4,404.4	-29.5	-49.8	11.0	0.14
4,431.0	0.22	225.65	4,429.4	-29.6	-49.9	11.0	0.32
4,456.0	0.25	238.96	4,454.4	-29.6	-50.0	11.1	0.25
4,481.0	0.27	231.13	4,479.4	-29.7	-50.1	11.1	0.16
4,506.0	0.25	229.22	4,504.4	-29.8	-50.2	11.1	0.09
4,531.0	0.27	232.64	4,529.4	-29.9	-50.3	11.1	0.10
4,556.0	0.26	228.55	4,554.4	-29.9	-50.3	11.1	0.09
4,581.0	0.28	222.61	4,579.4	-30.0	-50.4	11.2	0.14
4,606.0	0.27	226.11	4,604.4	-30.1	-50.5	11.3	0.08
4,631.0	0.31	228.95	4,629.4	-30.2	-50.6	11.3	0.17
4,656.0	0.26	244.75	4,654.4	-30.3	-50.7	11.4	0.37
4,681.0	0.30	236.80	4,679.4	-30.3	-50.8	11.4	0.22
4,706.0	0.31	241.37	4,704.4	-30.4	-50.9	11.4	0.11
4,731.0	0.30	243.46	4,729.4	-30.4	-51.0	11.4	0.06
4,756.0	0.30	244.10	4,754.4	-30.5	-51.2	11.5	0.01

Received  
Office of Oil & Gas  
JUN 21 2016

<b>Company:</b>	Antero	<b>Local Co-ordinate Reference:</b>	Well Hawkeye Unit 3H
<b>Project:</b>	Tyler County WV	<b>TVD Reference:</b>	Precision 523 GL 814' + KB 19' @ 833 0usft
<b>Site:</b>	Weigle East Pad Dean/Goodfellow/Hawkeye/Sc	<b>MD Reference:</b>	Precision 523 GL 814' + KB 19' @ 833 0usft
<b>Well:</b>	Hawkeye Unit 3H	<b>North Reference:</b>	Grid
<b>Wellbore:</b>	Original Wellpath	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	As Drilled	<b>Database:</b>	Oklahoma District

Survey

MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	N/S (usft)	E/W (usft)	V. Sec (usft)	DLeg (°/100usft)
4,781.0	0.26	246.11	4,779.4	-30.6	-51.3	11.5	0.16
4,806.0	0.31	239.74	4,804.4	-30.6	-51.4	11.5	0.24
4,831.0	0.32	233.93	4,829.4	-30.7	-51.5	11.5	0.13
4,856.0	0.27	245.38	4,854.4	-30.7	-51.6	11.5	0.31
4,881.0	0.28	242.22	4,879.4	-30.8	-51.7	11.6	0.07
4,906.0	0.33	236.87	4,904.4	-30.9	-51.8	11.6	0.23
4,931.0	0.32	228.09	4,929.4	-31.0	-51.9	11.6	0.20
4,956.0	0.26	231.30	4,954.4	-31.0	-52.0	11.7	0.25
4,981.0	0.34	231.14	4,979.4	-31.1	-52.1	11.7	0.32
5,006.0	0.36	226.14	5,004.4	-31.2	-52.3	11.8	0.15
5,031.0	0.29	233.40	5,029.4	-31.3	-52.4	11.8	0.32
5,056.0	0.34	224.25	5,054.4	-31.4	-52.5	11.9	0.28
5,081.0	0.41	215.03	5,079.4	-31.5	-52.6	12.0	0.37
5,106.0	0.37	224.17	5,104.4	-31.7	-52.7	12.0	0.30
5,131.0	0.33	254.80	5,129.4	-31.7	-52.8	12.1	0.76
5,156.0	0.44	238.81	5,154.4	-31.8	-53.0	12.1	0.61
5,181.0	0.39	249.28	5,179.4	-31.9	-53.1	12.1	0.36
5,206.0	0.33	230.54	5,204.4	-32.0	-53.3	12.1	0.53
5,231.0	0.28	239.20	5,229.4	-32.0	-53.4	12.2	0.27
5,256.0	0.39	258.63	5,254.4	-32.1	-53.5	12.2	0.63
5,281.0	0.26	274.45	5,279.4	-32.1	-53.6	12.1	0.63
5,306.0	0.35	244.52	5,304.4	-32.1	-53.8	12.1	0.72
5,331.0	0.21	261.14	5,329.4	-32.2	-53.9	12.1	0.64
5,356.0	0.30	237.91	5,354.4	-32.2	-54.0	12.1	0.54
5,381.0	0.35	250.95	5,379.4	-32.3	-54.1	12.1	0.36
5,406.0	0.32	227.68	5,404.4	-32.3	-54.2	12.2	0.55
5,431.0	0.21	245.23	5,429.4	-32.4	-54.3	12.2	0.54
5,456.0	0.34	225.05	5,454.4	-32.5	-54.4	12.2	0.64
5,481.0	0.33	267.52	5,479.4	-32.5	-54.5	12.2	0.97
5,490.5	0.26	254.50	5,488.8	-32.5	-54.6	12.2	1.02
5,530.0	0.53	257.13	5,528.4	-32.6	-54.9	12.2	0.68
5,560.0	0.51	258.70	5,558.4	-32.7	-55.1	12.2	0.08
5,590.0	0.84	300.14	5,588.4	-32.6	-55.4	12.0	1.90
5,620.0	2.34	262.60	5,618.4	-32.5	-56.2	11.7	5.83
5,650.0	5.17	261.77	5,648.3	-32.8	-58.2	10.7	9.43
5,680.0	7.88	258.58	5,678.1	-33.4	-61.5	9.9	9.11
5,709.0	11.34	261.15	5,706.7	-34.3	-66.3	8.4	12.02
5,739.0	14.34	261.33	5,735.9	-35.3	-72.9	7.0	10.00
5,769.0	17.50	262.10	5,764.8	-36.4	-81.0	7.0	10.56
5,799.0	20.45	261.42	5,793.1	-37.9	-90.7	5.0	9.86
5,829.0	23.57	258.70	5,821.0	-39.8	-101.8	3.2	10.94
5,859.0	25.98	258.20	5,848.2	-42.3	-114.1	1.4	8.06
5,888.0	28.69	259.54	5,874.0	-44.9	-127.1	-0.6	9.58
5,918.0	31.74	258.90	5,899.9	-47.7	-142.0	-3.0	10.22

Received  
Office of Oil & Gas  
JUN 21 2016



<b>Company:</b>	Antero	<b>Local Co-ordinate Reference:</b>	Well Hawkeye Unit 3H
<b>Project:</b>	Tyler County WV	<b>TVD Reference:</b>	Precision 523. GL 814' + KB 19' @ 833.0usft
<b>Site:</b>	Weigle East Pad Dean/Goodfellow/Hawkeye/Sc	<b>MD Reference:</b>	Precision 523. GL 814' + KB 19' @ 833.0usft
<b>Well:</b>	Hawkeye Unit 3H	<b>North Reference:</b>	Grid
<b>Wellbore:</b>	Original Wellpath	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	As Drilled	<b>Database:</b>	Oklahoma District

Survey

MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	N/S (usft)	E/W (usft)	V. Sec (usft)	DLeg (°/100usft)
5,948.0	34.96	259.25	5,924.9	-50.8	-158.2	-5.5	10.75
5,978.0	37.94	259.33	5,949.1	-54.2	-175.7	-8.3	9.93
5,999.0	40.93	259.40	5,965.3	-56.6	-188.8	-10.4	14.23
<b>SCMR</b>							
6,008.0	42.21	259.43	5,972.0	-57.7	-194.6	-11.3	14.23
6,038.0	47.37	258.02	5,993.3	-61.9	-215.4	-14.4	17.51
6,067.0	52.99	256.91	6,011.9	-66.7	-237.1	-17.2	19.60
6,097.0	58.82	255.01	6,028.7	-72.7	-261.2	-19.6	20.13
6,127.0	60.49	249.07	6,043.8	-80.7	-285.8	-20.4	17.97
6,157.0	60.01	242.39	6,058.7	-91.4	-309.5	-18.3	19.40
6,187.0	59.65	236.14	6,073.8	-104.7	-331.8	-13.4	18.05
6,217.0	58.96	229.10	6,089.2	-120.3	-352.3	-5.6	20.31
6,254.0	57.22	220.47	6,108.7	-142.5	-374.4	7.9	20.34
6,283.0	57.04	217.64	6,124.5	-161.5	-389.7	20.6	8.22
6,303.0	57.30	218.37	6,135.3	-174.7	-400.1	29.5	3.35
<b>MDLX</b>							
6,313.0	57.43	218.74	6,140.7	-181.3	-405.3	34.0	3.35
6,343.0	58.18	220.86	6,156.7	-200.8	-421.6	46.8	6.48
6,373.0	58.61	217.68	6,172.4	-220.6	-437.7	60.0	9.14
6,403.0	58.43	213.83	6,188.1	-241.3	-452.7	74.5	10.96
6,433.0	59.14	209.72	6,203.6	-263.1	-466.2	90.5	11.95
6,462.0	60.53	206.27	6,218.2	-285.3	-478.0	107.3	11.35
6,487.0	62.33	205.79	6,230.2	-305.0	-487.6	122.7	7.39
<b>BRKT</b>							
6,492.0	62.69	205.70	6,232.5	-309.0	-489.5	125.8	7.39
6,522.0	65.22	205.86	6,245.7	-333.2	-501.2	144.7	8.45
6,541.0	66.94	204.68	6,253.4	-349.0	-508.6	157.0	10.69
<b>TLLY</b>							
6,552.0	67.94	204.01	6,257.6	-358.2	-512.8	164.3	10.69
6,582.0	70.65	201.68	6,268.2	-384.1	-523.7	184.9	11.59
6,612.0	72.98	198.61	6,277.6	-410.8	-533.5	206.8	12.44
6,642.0	75.47	196.63	6,285.7	-438.3	-542.3	229.8	10.45
6,672.0	78.84	194.63	6,292.4	-466.5	-550.1	253.6	12.98
6,688.0	80.50	194.05	6,295.2	-481.7	-554.0	266.7	10.97
<b>MRCL_HOT</b>							
6,702.0	81.95	193.54	6,297.4	-495.2	-557.3	278.2	10.97
6,731.0	84.41	192.03	6,300.8	-523.3	-563.7	302.5	9.93
6,761.0	85.01	188.66	6,303.6	-552.6	-569.1	328.3	11.36
6,791.0	86.52	185.86	6,305.8	-582.3	-572.9	355.0	10.58
6,821.0	87.86	182.62	6,307.3	-612.2	-575.1	382.4	11.67
6,851.0	88.50	179.93	6,308.2	-642.2	-575.7	410.4	9.21
6,881.0	88.92	175.35	6,308.9	-672.1	-574.5	439.0	15.33
6,910.0	89.56	172.39	6,309.3	-701.0	-571.4	467.2	10.44
6,940.0	89.16	168.66	6,309.6	-730.5	-566.5	496.7	12.50
6,970.0	87.79	165.26	6,310.4	-759.8	-559.7	526.5	12.21

COMPASS 8000 Build 74  
 10/28/2016  
 JUN 21 2016  
 Checked by: [illegible]  
 Date of file: 10/28/2016

<b>Company:</b>	Antero	<b>Local Co-ordinate Reference:</b>	Well Hawkeye Unit 3H
<b>Project:</b>	Tyler County WV	<b>TVD Reference:</b>	Precision 523 GL 814' + KB 19' @ 833 0usft
<b>Site:</b>	Weigle East Pad Dean/Goodfellow/Hawkeye/Sc	<b>MD Reference:</b>	Precision 523 GL 814' + KB 19' @ 833 0usft
<b>Well:</b>	Hawkeye Unit 3H	<b>North Reference:</b>	Grid
<b>Wellbore:</b>	Original Wellpath	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	As Drilled	<b>Database:</b>	Oklahoma District

Survey

MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	N/S (usft)	E/W (usft)	V. Sec (usft)	DLeg (°/100usft)
7,000.0	86.78	162.22	6,311.8	-788.5	-551.3	556.4	10.67
7,089.0	87.58	155.79	6,316.2	-871.5	-519.5	645.2	7.27
7,179.0	89.93	157.03	6,318.2	-953.9	-483.5	735.0	2.95
7,268.0	89.90	155.32	6,318.3	-1,035.3	-447.5	823.7	1.92
7,358.0	88.96	154.83	6,319.2	-1,116.9	-409.6	913.4	1.18
7,448.0	90.17	155.83	6,319.9	-1,198.7	-372.0	1,003.0	1.74
7,537.0	90.23	155.59	6,319.6	-1,279.8	-335.4	1,091.7	0.28
7,626.0	89.66	159.54	6,319.7	-1,362.1	-301.5	1,180.6	4.48
7,716.0	89.40	161.59	6,320.4	-1,447.0	-271.5	1,270.6	2.30
7,805.0	89.76	161.86	6,321.1	-1,531.5	-243.6	1,359.6	0.51
7,895.0	90.24	162.57	6,321.1	-1,617.2	-216.1	1,449.5	0.95
7,984.0	88.72	159.37	6,321.9	-1,701.3	-187.1	1,538.5	3.98
8,074.0	88.69	159.57	6,323.9	-1,785.5	-155.6	1,628.5	0.22
8,164.0	90.37	160.09	6,324.6	-1,870.0	-124.5	1,718.5	1.95
8,253.0	90.03	160.20	6,324.3	-1,953.7	-94.3	1,807.5	0.40
8,343.0	90.17	160.79	6,324.2	-2,038.6	-64.2	1,897.5	0.67
8,432.0	88.66	158.57	6,325.1	-2,122.0	-33.3	1,986.4	3.02
8,522.0	88.72	158.22	6,327.1	-2,205.7	-0.2	2,076.4	0.39
8,611.0	89.70	160.22	6,328.4	-2,288.9	31.4	2,165.3	2.50
8,701.0	89.73	160.84	6,328.8	-2,373.7	61.4	2,255.3	0.69
8,790.0	89.09	160.88	6,329.7	-2,457.8	90.5	2,344.3	0.72
8,880.0	89.56	162.20	6,330.8	-2,543.1	119.0	2,434.3	1.56
8,969.0	88.66	160.24	6,332.2	-2,627.4	147.7	2,523.3	2.42
9,059.0	89.03	160.19	6,334.0	-2,712.1	178.1	2,613.2	0.41
9,149.0	89.73	161.14	6,335.0	-2,797.0	207.9	2,703.2	1.31
9,238.0	88.99	160.20	6,336.0	-2,881.0	237.4	2,792.2	1.34
9,328.0	90.03	161.84	6,336.7	-2,966.1	266.7	2,882.2	2.16
9,417.0	88.62	159.45	6,337.8	-3,050.0	296.1	2,971.2	3.12
9,507.0	89.40	160.43	6,339.3	-3,134.5	327.0	3,061.2	1.39
9,597.0	89.93	158.87	6,339.9	-3,218.9	358.3	3,151.2	1.83
9,686.0	89.40	159.26	6,340.4	-3,302.0	390.1	3,240.1	0.74
9,776.0	89.63	159.09	6,341.1	-3,386.2	422.1	3,330.1	0.32
9,866.0	89.90	158.89	6,341.5	-3,470.2	454.4	3,420.1	0.37
9,955.0	88.76	159.98	6,342.5	-3,553.5	485.6	3,509.1	1.77
10,045.0	89.06	159.67	6,344.3	-3,638.0	516.7	3,599.1	1.48
10,134.0	89.43	161.10	6,345.4	-3,721.8	546.5	3,688.1	1.66
10,224.0	89.40	160.78	6,346.4	-3,806.8	575.9	3,778.0	0.36
10,313.0	89.20	160.94	6,347.4	-3,890.9	605.1	3,867.0	0.29
10,403.0	89.26	160.43	6,348.6	-3,975.8	634.9	3,957.0	0.57
10,493.0	89.90	161.33	6,349.3	-4,060.9	664.3	4,047.0	1.23
10,582.0	90.60	160.91	6,348.9	-4,145.1	693.1	4,136.0	0.92
10,672.0	89.93	159.26	6,348.5	-4,229.7	723.8	4,226.0	1.98
10,761.0	88.59	158.66	6,349.7	-4,312.8	755.8	4,315.0	1.65
10,851.0	88.45	158.38	6,352.0	-4,396.5	788.7	4,404.9	0.35

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<b>Company:</b>	Antero	<b>Local Co-ordinate Reference:</b>	Well Hawkeye Unit 3H
<b>Project:</b>	Tyler County WV	<b>TVD Reference:</b>	Precision 523 GL 814' + KB 19' @ 833 0usft
<b>Site:</b>	Weigle East Pad Dean/Goodfellow/Hawkeye/Sc	<b>MD Reference:</b>	Precision 523 GL 814' + KB 19' @ 833 0usft
<b>Well:</b>	Hawkeye Unit 3H	<b>North Reference:</b>	Grid
<b>Wellbore:</b>	Original Wellpath	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	As Drilled	<b>Database:</b>	Oklahoma District

**Survey**

MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	N/S (usft)	E/W (usft)	V. Sec (usft)	DLeg (°/100usft)
10,940.0	89.70	158.83	6,353.4	-4,479.3	821.2	4,493.8	1.49
11,030.0	89.06	160.12	6,354.4	-4,563.6	852.7	4,583.8	1.60
11,120.0	89.23	160.10	6,355.7	-4,648.2	883.3	4,673.8	0.19
11,209.0	89.19	161.12	6,357.0	-4,732.2	912.9	4,762.8	1.15
11,299.0	88.37	160.12	6,358.9	-4,817.1	942.7	4,852.8	1.44
11,388.0	89.43	160.23	6,360.6	-4,900.8	972.9	4,941.8	1.20
11,478.0	88.99	161.52	6,361.8	-4,985.8	1,002.4	5,031.7	1.51
11,567.0	89.56	161.60	6,363.0	-5,070.2	1,030.5	5,120.7	0.65
11,656.0	90.17	161.03	6,363.2	-5,154.5	1,059.1	5,209.7	0.94
11,746.0	90.30	160.68	6,362.8	-5,239.5	1,088.6	5,299.7	0.41
11,836.0	89.93	160.01	6,362.6	-5,324.3	1,118.8	5,389.7	0.85
11,925.0	89.40	158.38	6,363.1	-5,407.5	1,150.5	5,478.7	1.93
12,015.0	89.83	160.98	6,363.7	-5,491.9	1,181.7	5,568.7	2.93
12,104.0	89.43	158.73	6,364.3	-5,575.4	1,212.3	5,657.6	2.57
12,194.0	89.93	161.31	6,364.8	-5,660.0	1,243.1	5,747.6	2.92
12,284.0	89.53	158.91	6,365.2	-5,744.6	1,273.7	5,837.6	2.70
12,373.0	90.40	160.46	6,365.3	-5,828.1	1,304.6	5,926.6	2.00
12,463.0	89.83	161.86	6,365.1	-5,913.3	1,333.7	6,016.6	1.68
12,552.0	90.30	162.00	6,365.0	-5,997.9	1,361.3	6,105.6	0.55
12,642.0	90.40	162.56	6,364.5	-6,083.6	1,388.7	6,195.5	0.63
12,732.0	90.03	160.51	6,364.1	-6,169.0	1,417.2	6,285.5	2.31
12,821.0	89.29	159.45	6,364.7	-6,252.6	1,447.6	6,374.5	1.45
12,911.0	89.33	159.38	6,365.7	-6,336.8	1,479.3	6,464.5	0.09
13,000.0	89.63	160.04	6,366.5	-6,420.3	1,510.1	6,553.5	0.81
13,090.0	89.77	159.14	6,367.0	-6,504.6	1,541.5	6,643.4	1.01
13,180.0	89.90	158.34	6,367.3	-6,588.5	1,574.2	6,733.4	0.90
13,269.0	88.76	160.89	6,368.3	-6,671.9	1,605.2	6,822.4	3.14
13,359.0	89.66	161.93	6,369.6	-6,757.2	1,633.9	6,912.4	1.53
13,448.0	88.72	161.49	6,370.8	-6,841.7	1,661.8	7,001.3	1.17
13,538.0	88.86	160.87	6,372.7	-6,926.9	1,690.8	7,091.3	0.71
13,627.0	88.46	160.40	6,374.8	-7,010.8	1,720.3	7,180.3	0.69
13,717.0	89.36	162.00	6,376.5	-7,096.0	1,749.3	7,270.2	2.04
13,806.0	89.50	163.33	6,377.4	-7,181.0	1,775.8	7,359.2	1.50
13,896.0	88.76	161.12	6,378.8	-7,266.6	1,803.3	7,449.1	2.59
13,986.0	89.50	160.57	6,380.1	-7,351.7	1,832.8	7,539.1	1.02
14,075.0	89.33	158.49	6,381.0	-7,435.0	1,863.9	7,628.8	2.34
14,165.0	88.56	157.45	6,382.7	-7,518.4	1,897.7	7,718.0	1.44
14,255.0	88.81	160.45	6,384.8	-7,602.4	1,930.0	7,807.9	3.34
14,344.0	89.16	160.42	6,386.3	-7,686.2	1,959.8	7,896.9	0.39
14,433.0	88.26	160.17	6,388.3	-7,770.0	1,989.8	7,985.9	1.05
14,523.0	89.93	160.87	6,389.8	-7,854.8	2,019.8	8,075.8	2.01
14,612.0	90.30	159.96	6,389.6	-7,938.7	2,049.6	8,164.8	1.10
14,702.0	89.23	158.65	6,389.9	-8,022.9	2,081.5	8,254.8	1.88
14,791.0	88.23	157.19	6,391.9	-8,105.3	2,114.9	8,343.7	1.99

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<b>Company:</b>	Antero	<b>Local Co-ordinate Reference:</b>	Well Hawkeye Unit 3H
<b>Project:</b>	Tyler County WV	<b>TVD Reference:</b>	Precision 523. GL 814' + KB 19' @ 833.0usft
<b>Site:</b>	Weigle East Pad. Dean/Goodfellow/Hawkeye/Sc	<b>MD Reference:</b>	Precision 523. GL 814' + KB 19' @ 833.0usft
<b>Well:</b>	Hawkeye Unit 3H	<b>North Reference:</b>	Grid
<b>Wellbore:</b>	Original Wellpath	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	As Drilled	<b>Database:</b>	Oklahoma District

Survey

MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	N/S (usft)	E/W (usft)	V. Sec (usft)	DLeg (°/100usft)
14,881.0	89.67	159.44	6,393.6	-8,188.9	2,148.1	8,433.7	2.97
14,971.0	90.03	161.81	6,393.8	-8,273.8	2,178.0	8,523.6	2.66
15,060.0	90.24	160.83	6,393.6	-8,358.2	2,206.5	8,612.6	1.13
15,150.0	89.63	163.27	6,393.7	-8,443.8	2,234.2	8,702.6	2.79
15,239.0	89.60	161.76	6,394.3	-8,528.6	2,261.0	8,791.5	1.70
15,329.0	90.17	162.81	6,394.5	-8,614.4	2,288.4	8,881.4	1.33
15,418.0	90.57	162.56	6,393.9	-8,699.3	2,314.8	8,970.4	0.53
15,508.0	89.06	158.69	6,394.2	-8,784.2	2,344.7	9,060.3	4.62
15,597.0	90.13	159.74	6,394.8	-8,867.4	2,376.3	9,149.3	1.68
15,687.0	90.24	158.92	6,394.5	-8,951.6	2,408.0	9,239.3	0.92
15,777.0	89.13	156.49	6,395.0	-9,034.9	2,442.2	9,329.2	2.97
15,866.0	89.43	160.09	6,396.1	-9,117.6	2,475.1	9,418.1	4.06
15,956.0	90.64	162.78	6,396.1	-9,202.9	2,503.8	9,508.1	3.28
16,046.0	90.91	162.18	6,394.9	-9,288.7	2,530.8	9,598.0	0.73
16,135.0	89.93	160.59	6,394.2	-9,373.0	2,559.3	9,687.0	2.10
16,225.0	89.67	159.35	6,394.5	-9,457.6	2,590.1	9,777.0	1.41
16,314.0	91.10	159.66	6,393.9	-9,540.9	2,621.2	9,866.0	1.64
16,404.0	91.04	158.13	6,392.3	-9,624.9	2,653.6	9,956.0	1.70
16,493.0	91.44	158.53	6,390.3	-9,707.6	2,686.5	10,044.9	0.64
16,583.0	90.10	160.10	6,389.1	-9,791.8	2,718.3	10,134.9	2.29
16,672.0	90.24	160.44	6,388.9	-9,875.5	2,748.3	10,223.9	0.41
16,762.0	89.13	159.40	6,389.4	-9,960.1	2,779.2	10,313.8	1.69
16,852.0	89.87	160.86	6,390.1	-10,044.7	2,809.8	10,403.8	1.82
16,941.0	89.97	161.02	6,390.3	-10,128.8	2,838.9	10,492.8	0.21
17,031.0	89.97	160.28	6,390.3	-10,213.7	2,868.7	10,582.8	0.82
17,121.0	88.62	160.01	6,391.4	-10,298.4	2,899.3	10,672.8	1.53
17,210.0	89.26	162.29	6,393.1	-10,382.6	2,928.0	10,761.8	2.66
17,300.0	89.56	162.42	6,394.0	-10,468.3	2,955.3	10,851.7	0.36
17,390.0	89.83	163.57	6,394.5	-10,554.4	2,981.6	10,941.6	1.31
17,479.0	89.40	161.98	6,395.1	-10,639.4	3,008.0	11,030.5	1.85
17,569.0	89.36	159.61	6,396.0	-10,724.4	3,037.6	11,120.5	2.63
17,658.0	89.57	160.16	6,396.9	-10,808.0	3,068.2	11,209.5	0.66
17,747.0	89.83	159.21	6,397.3	-10,891.4	3,099.1	11,298.5	1.11
17,837.0	90.03	159.38	6,397.4	-10,975.6	3,130.9	11,388.5	0.29
17,896.0	90.27	159.05	6,397.3	-11,030.8	3,151.8	11,447.5	0.69
17,955.0	90.60	159.05	6,396.8	-11,085.9	3,172.9	11,506.5	0.56

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<b>Company:</b>	Antero	<b>Local Co-ordinate Reference:</b>	Well Hawkeye Unit 3H
<b>Project:</b>	Tyler County WV	<b>TVD Reference:</b>	Precision 523: GL 814' + KB 19' @ 833.0usft
<b>Site:</b>	Weigle East Pad: Dean/Goodfellow/Hawkeye/Sc	<b>MD Reference:</b>	Precision 523: GL 814' + KB 19' @ 833.0usft
<b>Well:</b>	Hawkeye Unit 3H	<b>North Reference:</b>	Grid
<b>Wellbore:</b>	Original Wellpath	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	As Drilled	<b>Database:</b>	Oklahoma District

Design Annotations

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
5,999.0	5,965.3	-56.6	-188.8	SCMR
6,303.0	6,135.3	-174.7	-400.1	MDLX
6,487.0	6,230.2	-305.0	-487.6	BRKT
6,541.0	6,253.4	-349.0	-508.6	TLLY
6,688.0	6,295.2	-481.7	-554.0	MRCL_HOT
17,955.0	6,396.8	-11,085.9	3,172.9	PTB

Checked By: \_\_\_\_\_ Approved By: \_\_\_\_\_ Date: \_\_\_\_\_

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