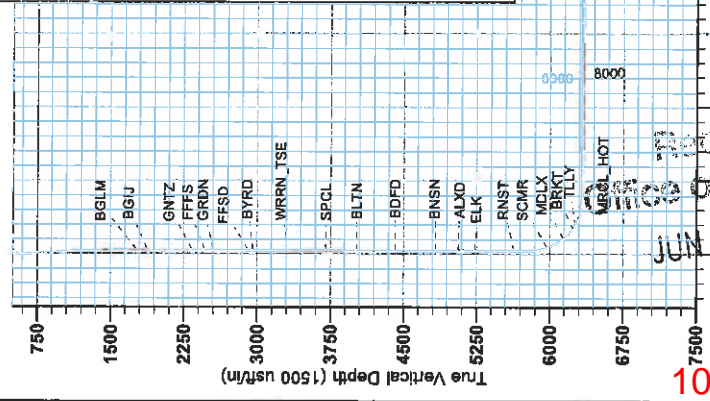




Antero  
 Scardina Unit 1H  
 Tyler County WV  
 Northing: 14331674.49  
 Easting: 1681971.56  
 As Drilled



**WELL DETAILS: Scardina Unit 1H**  
 Ground Level: 814.0  
 Elevation: 57.820 N  
 Longitude: 80° 51' 0.820 W  
 Northing: 14331674.49  
 Easting: 1681971.56

**REFERENCE INFORMATION**  
 Coordinates (NAD 83) referenced to Well Survey: U.S. Grid North  
 Vertical (US) referenced to Mean Sea Level: 833.0 usft  
 Station (US) referenced to Mean Sea Level: 833.0 usft  
 Horizontal Method: Minimum Curvature  
 Calculation Method: Minimum Curvature

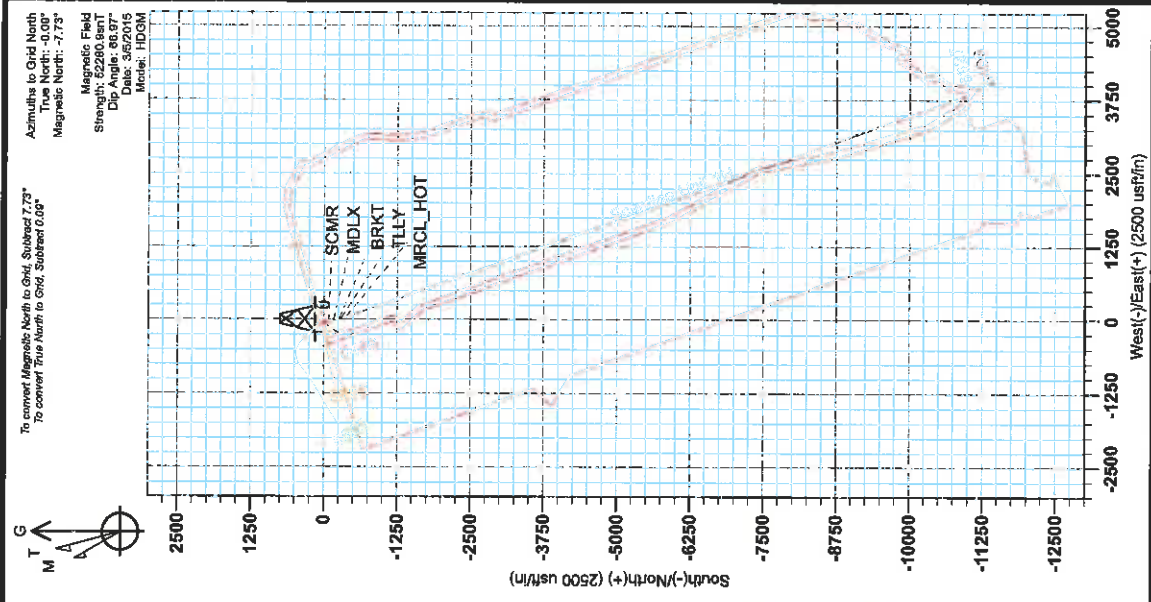
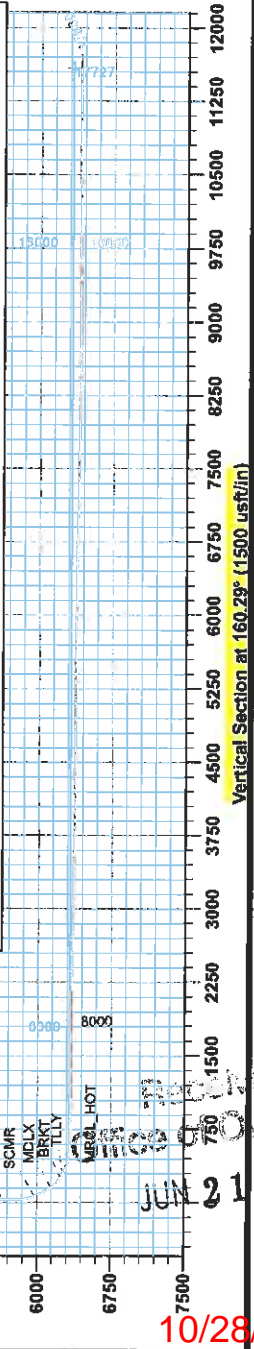
**PROJECT DETAILS: Tyler County WV**  
 Geodetic System: Universal Transverse Mercator (US Survey Feet)  
 Datum: NAD 1983 (NAD80 CONUS)  
 Ellipsoid: Clarke 1866 (84 W to 78 W)  
 Spheroid: Zone 17N (84 W to 78 W)  
 System Datum: Mean Sea Level

**LEGEND**

- +— Hawkeye Unit 3H, Original Wellpath, As Drilled V0
- o— Hawkeye Unit 2H, Original Wellpath, As Drilled V0
- x— Hawkeye Unit 1H, Original Wellpath, As Drilled V0
- △— Scardina Unit 1H, Original Wellpath, Plan 8 V0
- +— As Drilled

**DESIGN TARGET DETAILS**

Name	TVD	+N/S	+E/W	Northing	Easting	Latitude	Longitude
SH-L Scardina Unit 1H	0.0	0.0	0.0	14331674.49	1681971.56	39° 27' 57.820" N	80° 51' 0.820" W
Apx BH-L Scardina Unit 1B403.1	-10938.5	-10938.5	3822.514320735.96	1685794.08	39° 26' 0.724" N	80° 50' 21.420" W	



Azimuths to Grid North  
 True North: 0.00°  
 Magnetic North: 7.73°  
 Magnetic Field  
 Strength: 52280.8nT  
 Dip Angle: 66.97°  
 Date: 3/5/2015  
 Units: HIGSON

To convert Magnetic North to Grid, Subtract 7.73°  
 To convert True North to Grid, Subtract 0.00°

10/28/2016  
 JUN 21 2016  
 Oil & Gas



# **Antero**

**Tyler County WV**

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

**Scardina Unit 1H**

**Original Wellpath**

**Design: As Drilled**

## **EOW Completion Report**

**07 April, 2015**



**Scientific Drilling**

Office of Oil & Gas

JUN 21 2016

**10/28/2016**



<b>Company:</b>	Antero	<b>Local Co-ordinate Reference:</b>	Well Scardina Unit 1H
<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>	Scardina Unit 1H	<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>	Scardina Unit 1H, Marcellus					
<b>Well Position</b>	<b>+N/-S</b>	0.0 usft	<b>Northing:</b>	14,331,674.49 usft	<b>Latitude:</b>	39° 27' 57.942 N
	<b>+E/-W</b>	0.0 usft	<b>Easting:</b>	1,681,971.56 usft	<b>Longitude:</b>	80° 51' 9.939 W
<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				
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Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	HDGM	3/5/2015	-7.63	66.97	52,281

<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 4/7/2015				
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description	
106.7	5,728.8	Survey #4 Def Gyro to KOP (Original Well	Standard Keeper 104	Standard Wireline Keeper ver 1.0.4	
5,765.0	17,660.0	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
106.6	0.38	316.39	106.6	0.3	-0.2	-0.3	0.36
131.4	0.29	321.07	131.4	0.4	-0.3	-0.5	0.38
156.2	0.24	308.34	156.2	0.4	-0.4	-0.6	0.31
182.7	0.20	336.81	182.7	0.5	-0.5	-0.7	0.43
207.9	0.27	314.63	207.9	0.6	-0.5	-0.8	0.45
232.7	0.12	343.98	232.7	0.7	-0.6	-0.8	0.71
258.1	0.18	32.40	258.1	0.7	-0.6	-0.9	0.53
283.4	0.19	53.51	283.4	0.8	-0.5	-0.9	0.27
308.4	0.17	46.92	308.4	0.8	-0.5	-0.9	0.16
331.6	0.23	58.43	331.6	0.9	-0.4	-0.9	0.31

Received  
Office of Oil & Gas  
JUN 21 2016



EOW Completion Report



<b>Company:</b> Antero	<b>Local Co-ordinate Reference:</b> Well Scardina Unit 1H
<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/Scardina	<b>MD Reference:</b> Precision 523 GL 814' + KB 19' @ 833.0usft
<b>Well:</b> Scardina Unit 1H	<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)
357.1	0.18	60.70	357.1	0.9	-0.3	-1.0	0.20
382.7	0.22	72.65	382.7	1.0	-0.2	-1.0	0.22
408.4	0.28	103.46	408.4	1.0	-0.1	-1.0	0.56
431.6	0.27	77.79	431.6	1.0	0.0	-0.9	0.53
457.4	0.31	116.43	457.4	0.9	0.1	-0.9	0.76
483.3	0.22	94.76	483.3	0.9	0.2	-0.8	0.51
506.6	0.25	99.76	506.6	0.9	0.3	-0.7	0.16
532.6	0.24	95.37	532.6	0.9	0.4	-0.7	0.08
558.7	0.37	99.86	558.7	0.9	0.6	-0.6	0.51
581.4	1.14	101.25	581.4	0.8	0.9	-0.5	3.39
607.7	1.65	102.01	607.6	0.7	1.5	-0.1	1.95
633.6	1.97	109.94	633.6	0.4	2.3	0.3	1.56
656.8	2.31	122.51	656.8	0.1	3.0	1.0	2.49
682.7	2.65	135.77	682.6	-0.6	3.9	1.9	2.57
706.1	2.98	147.89	706.1	-1.6	4.6	3.0	2.89
732.4	3.55	157.02	732.2	-2.9	5.3	4.5	2.93
756.1	4.03	165.11	755.9	-4.4	5.8	6.1	3.02
782.5	4.67	174.44	782.3	-6.3	6.1	8.0	3.60
807.2	5.13	183.95	806.9	-8.4	6.1	10.0	3.77
831.6	5.29	185.42	831.1	-10.6	6.0	12.0	0.86
857.6	5.48	192.15	857.0	-13.0	5.6	14.2	2.53
881.9	5.84	200.50	881.2	-15.3	4.9	16.1	3.70
907.3	5.89	201.65	906.5	-17.8	4.0	18.1	0.50
933.1	6.00	201.57	932.2	-20.2	3.0	20.1	0.43
956.4	5.89	206.07	955.3	-22.4	2.0	21.8	2.06
981.8	5.81	211.17	980.6	-24.7	0.8	23.5	2.07
1,006.9	5.91	210.53	1,005.5	-26.9	-0.5	25.2	0.48
1,032.2	5.87	211.54	1,030.7	-29.1	-1.9	26.8	0.44
1,058.0	5.07	214.37	1,056.4	-31.2	-3.2	28.3	3.27
1,083.1	4.82	214.24	1,081.4	-33.0	-4.4	29.6	1.00
1,106.2	4.71	217.54	1,104.5	-34.6	-5.6	30.7	1.28
1,131.7	4.31	216.81	1,129.8	-36.1	-6.8	31.7	1.59
1,156.8	3.84	215.99	1,154.9	-37.6	-7.8	32.7	1.89
1,182.6	3.45	216.05	1,180.7	-38.9	-8.8	33.7	1.51
1,208.0	3.16	216.97	1,206.0	-40.1	-9.7	34.5	1.16
1,232.7	2.90	218.85	1,230.7	-41.1	-10.5	35.2	1.13
1,258.5	2.70	218.03	1,256.4	-42.1	-11.2	35.8	0.79
1,281.3	2.38	219.30	1,279.2	-42.9	-11.9	36.4	1.42
1,306.7	2.11	220.73	1,304.6	-43.7	-12.5	36.9	1.09
1,332.1	1.92	220.56	1,329.9	-44.3	-13.1	37.3	0.75
1,357.0	1.87	221.59	1,354.8	-45.0	-13.6	37.7	0.24
1,382.3	1.62	222.06	1,380.2	-45.5	-14.2	38.1	0.99
1,407.8	1.60	224.90	1,405.7	-46.0	-14.6	38.4	0.32
1,433.4	1.46	221.72	1,431.2	-46.5	-15.1	38.7	0.64

Received  
Office of Oil & Gas



<b>Company:</b> Antero	<b>Local Co-ordinate Reference:</b> Well Scardina Unit 1H
<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> Scardina Unit 1H	<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)
1,456.5	1.29	218.80	1,454.3	-47.0	-15.5	39.0	0.80
1,482.0	1.18	218.13	1,479.8	-47.4	-15.8	39.3	0.44
1,507.4	1.01	217.45	1,505.2	-47.8	-16.1	39.5	0.67
1,532.9	0.90	218.10	1,530.7	-48.1	-16.4	39.8	0.43
1,558.9	0.81	215.15	1,556.7	-48.4	-16.6	40.0	0.39
1,581.5	0.79	219.81	1,579.3	-48.7	-16.8	40.2	0.30
1,607.7	0.57	224.69	1,605.5	-48.9	-17.0	40.3	0.87
1,633.2	0.47	231.14	1,631.0	-49.1	-17.2	40.4	0.45
1,656.4	0.39	232.65	1,654.2	-49.2	-17.3	40.5	0.35
1,681.9	0.35	247.14	1,679.7	-49.3	-17.5	40.5	0.40
1,707.1	0.27	241.71	1,704.9	-49.3	-17.6	40.5	0.34
1,732.6	0.16	222.35	1,730.4	-49.4	-17.7	40.5	0.51
1,758.1	0.22	255.39	1,755.9	-49.4	-17.7	40.5	0.48
1,766.0	0.21	248.37	1,763.8	-49.4	-17.8	40.5	0.36
<b>BGLM</b>							
1,783.2	0.20	231.41	1,781.0	-49.4	-17.8	40.5	0.36
1,807.8	0.21	258.25	1,805.6	-49.5	-17.9	40.6	0.39
1,832.1	0.18	260.54	1,829.9	-49.5	-18.0	40.5	0.13
1,857.1	0.16	273.03	1,854.9	-49.5	-18.0	40.5	0.17
1,875.0	0.17	290.22	1,872.8	-49.5	-18.1	40.5	0.28
<b>BGIJ</b>							
1,883.3	0.18	297.26	1,881.1	-49.5	-18.1	40.5	0.28
1,906.9	0.18	278.16	1,904.7	-49.5	-18.2	40.4	0.25
1,932.9	0.17	291.73	1,930.7	-49.4	-18.3	40.4	0.16
1,956.4	0.19	284.39	1,954.2	-49.4	-18.3	40.3	0.13
1,982.8	0.20	287.59	1,980.6	-49.4	-18.4	40.3	0.06
2,008.9	0.23	279.26	2,006.7	-49.4	-18.5	40.2	0.17
2,032.5	0.17	302.04	2,030.3	-49.3	-18.6	40.2	0.42
2,056.2	0.24	283.47	2,054.0	-49.3	-18.7	40.1	0.40
2,082.4	0.20	284.70	2,080.2	-49.3	-18.8	40.1	0.15
2,106.1	0.28	308.70	2,103.9	-49.2	-18.8	40.0	0.53
2,132.5	0.25	283.00	2,130.3	-49.2	-19.0	39.9	0.46
2,156.1	0.24	271.78	2,153.9	-49.2	-19.1	39.9	0.21
2,182.0	0.22	289.64	2,179.8	-49.2	-19.2	39.8	0.29
2,208.3	0.25	277.82	2,206.1	-49.1	-19.3	39.8	0.22
2,232.1	0.25	292.49	2,229.9	-49.1	-19.4	39.7	0.27
2,258.6	0.14	282.38	2,256.4	-49.1	-19.4	39.6	0.43
2,282.5	0.19	267.29	2,280.3	-49.1	-19.5	39.6	0.28
2,306.4	0.28	274.25	2,304.2	-49.1	-19.6	39.6	0.39
2,333.0	0.20	253.78	2,330.8	-49.1	-19.7	39.6	0.44
<b>GNTZ</b>							
2,356.6	0.18	267.27	2,354.4	-49.1	-19.8	39.5	0.21
2,383.4	0.20	249.99	2,381.2	-49.1	-19.9	39.5	0.23
2,407.5	0.14	223.39	2,405.3	-49.1	-19.9	39.5	0.41
2,431.3	0.20	222.27	2,429.1	-49.2	-20.0	39.6	0.23

39.5  
39.6  
Office of Oil & Gas  
COMPASS 5000.1 Build 74  
JUN 21 2018  
10/28/2016



<b>Company:</b>	Antero	<b>Local Co-ordinate Reference:</b>	Well Scardina Unit 1H
<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/Scardina	<b>MD Reference:</b>	Precision 523' GL 814' + KB 19' @ 833.0usft
<b>Well:</b>	Scardina Unit 1H	<b>North Reference:</b>	Grd
<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)
2,458.1	0.13	214.16	2,455.9	-49.3	-20.0	39.6	0.27
2,464.0	0.12	218.78	2,461.8	-49.3	-20.0	39.6	0.26
<b>FFFS</b>							
2,483.2	0.09	241.24	2,481.0	-49.3	-20.1	39.6	0.26
2,506.0	0.16	246.34	2,503.8	-49.3	-20.1	39.6	0.31
2,531.0	0.21	250.71	2,528.8	-49.3	-20.2	39.6	0.21
2,551.0	0.20	250.97	2,548.8	-49.4	-20.3	39.6	0.04
<b>GRDN</b>							
2,556.0	0.20	251.04	2,553.8	-49.4	-20.3	39.6	0.04
2,581.0	0.20	247.72	2,578.8	-49.4	-20.4	39.6	0.05
2,606.0	0.20	254.90	2,603.8	-49.4	-20.4	39.6	0.10
2,631.0	0.22	254.47	2,628.8	-49.5	-20.5	39.6	0.08
2,656.0	0.22	247.54	2,653.8	-49.5	-20.6	39.6	0.11
2,681.0	0.18	252.87	2,678.8	-49.5	-20.7	39.6	0.18
2,706.0	0.21	259.88	2,703.8	-49.5	-20.8	39.6	0.15
2,731.0	0.27	272.22	2,728.8	-49.5	-20.9	39.6	0.32
2,756.0	0.26	269.64	2,753.8	-49.5	-21.0	39.6	0.06
2,781.0	0.28	260.38	2,778.8	-49.5	-21.1	39.5	0.19
2,806.0	0.36	279.82	2,803.8	-49.5	-21.3	39.5	0.54
2,831.0	0.31	282.34	2,828.8	-49.5	-21.4	39.4	0.21
2,856.0	0.31	271.25	2,853.8	-49.5	-21.5	39.3	0.24
2,881.0	0.29	287.51	2,878.8	-49.5	-21.7	39.3	0.35
2,905.0	0.29	285.94	2,902.8	-49.4	-21.8	39.2	0.03
<b>FFSD</b>							
2,906.0	0.29	285.87	2,903.8	-49.4	-21.8	39.2	0.03
2,931.0	0.33	283.16	2,928.8	-49.4	-21.9	39.1	0.17
2,956.0	0.26	279.00	2,953.8	-49.4	-22.0	39.1	0.29
2,958.0	0.26	281.05	2,955.8	-49.4	-22.0	39.1	0.53
<b>BYRD</b>							
2,981.0	0.34	299.43	2,978.8	-49.3	-22.2	39.0	0.53
3,006.0	0.28	291.37	3,003.8	-49.3	-22.3	38.9	0.30
3,031.0	0.30	290.89	3,028.8	-49.2	-22.4	38.8	0.08
3,056.0	0.24	291.92	3,053.8	-49.2	-22.5	38.7	0.24
3,081.0	0.29	285.89	3,078.8	-49.2	-22.6	38.6	0.23
3,106.0	0.26	280.69	3,103.8	-49.1	-22.7	38.6	0.16
3,131.0	0.26	276.75	3,128.8	-49.1	-22.8	38.5	0.07
3,156.0	0.31	277.27	3,153.8	-49.1	-23.0	38.5	0.20
3,181.0	0.32	265.61	3,178.8	-49.1	-23.1	38.4	0.26
3,206.0	0.31	271.41	3,203.8	-49.1	-23.2	38.4	0.13
3,231.0	0.35	274.13	3,228.8	-49.1	-23.4	38.3	0.17
3,256.0	0.36	274.74	3,253.8	-49.1	-23.5	38.3	0.04
3,281.0	0.41	275.97	3,278.8	-49.1	-23.7	38.2	0.20
3,305.0	0.42	285.19	3,302.8	-49.0	-23.9	38.1	0.28
<b>WRRN_TSE</b>							
3,306.0	0.42	285.56	3,303.8	-49.0	-23.9	38.1	0.28



<b>Company:</b> Antero	<b>Local Co-ordinate Reference:</b> Well Scardina Unit 1H
<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> Scardina Unit 1H	<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)
3,331.0	0.41	289.91	3,328.8	-49.0	-24.1	38.0	0.13
3,356.0	0.41	288.68	3,353.8	-48.9	-24.2	37.9	0.04
3,381.0	0.38	287.84	3,378.8	-48.9	-24.4	37.8	0.12
3,406.0	0.36	297.88	3,403.8	-48.8	-24.5	37.7	0.27
3,431.0	0.37	288.04	3,428.8	-48.7	-24.7	37.6	0.25
3,456.0	0.40	285.07	3,453.8	-48.7	-24.8	37.5	0.14
3,481.0	0.36	276.03	3,478.8	-48.7	-25.0	37.4	0.29
3,506.0	0.44	288.36	3,503.8	-48.6	-25.2	37.3	0.47
3,531.0	0.43	273.58	3,528.8	-48.6	-25.4	37.2	0.45
3,556.0	0.44	282.68	3,553.8	-48.6	-25.6	37.1	0.28
3,581.0	0.39	275.39	3,578.8	-48.5	-25.7	37.0	0.29
3,606.0	0.55	289.86	3,603.8	-48.5	-25.9	36.9	0.79
3,631.0	0.51	276.87	3,628.8	-48.4	-26.2	36.8	0.51
3,656.0	0.47	286.64	3,653.8	-48.4	-26.4	36.7	0.37
3,681.0	0.47	291.69	3,678.8	-48.3	-26.6	36.5	0.17
3,703.0	0.44	297.19	3,700.8	-48.2	-26.7	36.4	0.23
<b>SPCL</b>							
3,706.0	0.44	297.99	3,703.8	-48.2	-26.7	36.4	0.23
3,731.0	0.43	287.97	3,728.8	-48.2	-26.9	36.3	0.31
3,756.0	0.44	289.19	3,753.8	-48.1	-27.1	36.1	0.05
3,781.0	0.40	284.23	3,778.8	-48.0	-27.3	36.0	0.22
3,806.0	0.39	282.29	3,803.8	-48.0	-27.4	35.9	0.07
3,831.0	0.43	280.43	3,828.8	-48.0	-27.6	35.8	0.17
3,856.0	0.45	284.69	3,853.8	-47.9	-27.8	35.7	0.15
3,881.0	0.34	261.19	3,878.8	-47.9	-28.0	35.7	0.77
3,906.0	0.43	260.19	3,903.8	-47.9	-28.1	35.6	0.36
3,931.0	0.45	257.50	3,928.8	-48.0	-28.3	35.6	0.11
3,956.0	0.38	249.47	3,953.8	-48.0	-28.5	35.6	0.36
3,981.0	0.41	249.89	3,978.8	-48.1	-28.6	35.6	0.12
4,006.0	0.38	251.00	4,003.8	-48.1	-28.8	35.6	0.12
4,019.0	0.41	258.21	4,016.8	-48.2	-28.9	35.6	0.44
<b>BLTN</b>							
4,031.0	0.44	263.96	4,028.8	-48.2	-29.0	35.6	0.44
4,056.0	0.42	259.62	4,053.8	-48.2	-29.2	35.5	0.15
4,081.0	0.43	256.04	4,078.8	-48.2	-29.4	35.5	0.11
4,106.0	0.43	269.80	4,103.8	-48.3	-29.5	35.5	0.41
4,131.0	0.38	247.42	4,128.8	-48.3	-29.7	35.5	0.66
4,156.0	0.35	252.36	4,153.8	-48.4	-29.9	35.5	0.17
4,181.0	0.37	245.38	4,178.8	-48.4	-30.0	35.5	0.19
4,206.0	0.31	256.52	4,203.8	-48.5	-30.1	35.5	0.36
4,231.0	0.26	258.38	4,228.8	-48.5	-30.3	35.4	0.20
4,256.0	0.32	257.90	4,253.8	-48.5	-30.4	35.4	0.24
4,281.0	0.30	249.22	4,278.8	-48.6	-30.5	35.4	0.20
4,306.0	0.26	259.35	4,303.8	-48.6	-30.6	35.4	0.25
4,331.0	0.31	250.29	4,328.8	-48.6	-30.8	35.4	0.27

Received  
COMPASS 5000.1 Build 74  
2016  
10/28/2016



<b>Company:</b>	Antero	<b>Local Co-ordinate Reference:</b>	Well Scardina Unit 1H
<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/Scardina	<b>MD Reference:</b>	Precision 523 GL 814' + KB 19' @ 833.0usft
<b>Well:</b>	Scardina Unit 1H	<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)
4,356.0	0.25	253.23	4,353.8	-48.7	-30.9	35.4	0.25
4,381.0	0.29	255.75	4,378.8	-48.7	-31.0	35.4	0.17
4,406.0	0.26	272.36	4,403.8	-48.7	-31.1	35.4	0.34
4,415.0	0.27	260.98	4,412.8	-48.7	-31.1	35.4	0.59
<b>BDFD</b>							
4,431.0	0.31	243.86	4,428.7	-48.7	-31.2	35.3	0.59
4,456.0	0.27	258.33	4,453.7	-48.8	-31.3	35.3	0.33
4,481.0	0.31	257.26	4,478.7	-48.8	-31.5	35.3	0.16
4,506.0	0.29	254.91	4,503.7	-48.8	-31.6	35.3	0.09
4,531.0	0.25	255.99	4,528.7	-48.9	-31.7	35.3	0.16
4,556.0	0.36	229.17	4,553.7	-48.9	-31.8	35.3	0.71
4,581.0	0.31	237.05	4,578.7	-49.0	-31.9	35.4	0.27
4,606.0	0.33	228.65	4,603.7	-49.1	-32.0	35.4	0.20
4,631.0	0.27	232.56	4,628.7	-49.2	-32.1	35.5	0.25
4,656.0	0.33	233.96	4,653.7	-49.3	-32.2	35.5	0.24
4,681.0	0.24	237.31	4,678.7	-49.3	-32.3	35.5	0.37
4,706.0	0.24	232.79	4,703.7	-49.4	-32.4	35.6	0.08
4,731.0	0.19	228.14	4,728.7	-49.4	-32.5	35.6	0.21
4,756.0	0.23	224.14	4,753.7	-49.5	-32.6	35.6	0.17
4,781.0	0.13	226.21	4,778.7	-49.6	-32.6	35.7	0.40
4,806.0	0.19	207.39	4,803.7	-49.6	-32.7	35.7	0.32
4,830.0	0.26	209.17	4,827.7	-49.7	-32.7	35.8	0.28
<b>BNSN</b>							
4,831.0	0.26	209.22	4,828.7	-49.7	-32.7	35.8	0.28
4,856.0	0.22	226.76	4,853.7	-49.8	-32.8	35.8	0.33
4,881.0	0.25	213.04	4,878.7	-49.9	-32.8	35.9	0.25
4,906.0	0.27	219.17	4,903.7	-50.0	-32.9	35.9	0.14
4,931.0	0.16	213.77	4,928.7	-50.0	-33.0	36.0	0.45
4,956.0	0.25	212.68	4,953.7	-50.1	-33.0	36.0	0.36
4,981.0	0.25	218.96	4,978.7	-50.2	-33.1	36.1	0.11
5,006.0	0.24	219.39	5,003.7	-50.3	-33.1	36.2	0.04
5,031.0	0.30	226.74	5,028.7	-50.4	-33.2	36.2	0.28
5,056.0	0.25	222.83	5,053.7	-50.5	-33.3	36.3	0.21
5,081.0	0.25	221.02	5,058.7	-50.5	-33.3	36.3	0.16
<b>ALXD</b>							
5,081.0	0.24	213.46	5,078.7	-50.5	-33.4	36.3	0.16
5,106.0	0.29	221.60	5,103.7	-50.6	-33.4	36.4	0.25
5,131.0	0.29	228.09	5,128.7	-50.7	-33.5	36.4	0.13
5,156.0	0.16	237.91	5,153.7	-50.8	-33.6	36.5	0.54
5,181.0	0.27	235.77	5,178.7	-50.8	-33.7	36.5	0.44
5,206.0	0.25	225.95	5,203.7	-50.9	-33.8	36.5	0.20
5,231.0	0.26	233.72	5,228.7	-51.0	-33.9	36.6	0.14
5,238.0	0.27	232.69	5,235.7	-51.0	-33.9	36.6	0.17
<b>ELK</b>							
5,256.0	0.30	230.40	5,253.7	-51.0	-34.0	36.6	0.17

Antero Energy Services  
 JUN 21 2016  
 Gas





EOW Completion Report



<b>Company:</b> Antero	<b>Local Co-ordinate Reference:</b> Well Scardina Unit 1H
<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/Scardina	<b>MD Reference:</b> Precision 523: GL 814' + KB 19' @ 833.0usft
<b>Well:</b> Scardina Unit 1H	<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)
5,281.0	0.23	222.49	5,278.7	-51.1	-34.0	36.7	0.32
5,306.0	0.21	236.22	5,303.7	-51.2	-34.1	36.7	0.22
5,331.0	0.29	228.64	5,328.7	-51.3	-34.2	36.7	0.35
5,356.0	0.25	260.46	5,353.7	-51.3	-34.3	36.7	0.61
5,381.0	0.18	218.81	5,378.7	-51.3	-34.4	36.7	0.67
5,406.0	0.20	216.46	5,403.7	-51.4	-34.4	36.8	0.09
5,431.0	0.23	241.42	5,428.7	-51.5	-34.5	36.8	0.39
5,456.0	0.24	228.80	5,453.7	-51.5	-34.6	36.8	0.21
5,481.0	0.01	336.37	5,478.7	-51.6	-34.6	36.9	0.97
5,506.0	0.22	235.95	5,503.7	-51.6	-34.7	36.9	0.89
5,531.0	0.20	259.01	5,528.7	-51.6	-34.7	36.9	0.34
5,556.0	0.23	272.10	5,553.7	-51.6	-34.8	36.9	0.23
5,581.0	0.22	257.69	5,578.7	-51.6	-34.9	36.8	0.23
5,606.0	0.21	263.38	5,603.7	-51.7	-35.0	36.8	0.09
5,630.0	0.22	241.34	5,627.7	-51.7	-35.1	36.8	0.34
<b>RNST</b>							
5,631.0	0.22	240.48	5,628.7	-51.7	-35.1	36.8	0.34
5,656.0	0.28	246.12	5,653.7	-51.7	-35.2	36.8	0.26
5,681.0	0.36	262.50	5,678.7	-51.8	-35.4	36.8	0.48
5,706.0	0.29	293.58	5,703.7	-51.8	-35.5	36.8	0.75
5,728.8	0.13	274.58	5,726.5	-51.7	-35.6	36.7	0.76
5,765.0	0.38	238.13	5,762.7	-51.8	-35.7	36.7	0.79
5,795.0	0.17	249.21	5,792.7	-51.9	-35.8	36.7	0.72
5,825.0	1.40	160.00	5,822.7	-52.2	-35.8	37.1	4.69
5,855.0	5.86	164.60	5,852.7	-54.0	-35.2	39.0	14.89
5,885.0	11.49	166.12	5,882.3	-58.4	-34.1	43.5	18.78
5,915.0	15.80	167.74	5,911.5	-65.3	-32.5	50.5	14.42
5,944.0	18.53	166.30	5,939.2	-73.6	-30.6	59.0	9.53
5,971.0	19.20	166.61	5,964.7	-82.1	-28.5	67.7	2.49
<b>SCMR</b>							
5,974.0	19.27	166.64	5,967.5	-83.1	-28.3	68.7	2.49
6,004.0	22.47	166.50	5,995.6	-93.5	-25.8	79.3	10.67
6,034.0	24.25	166.53	6,023.1	-105.1	-23.0	91.1	5.93
6,064.0	26.72	166.23	6,050.2	-117.6	-20.0	104.0	8.24
6,094.0	29.02	166.72	6,076.7	-131.2	-16.7	117.9	7.70
6,124.0	31.39	166.67	6,102.6	-145.9	-13.3	132.9	7.90
6,154.0	35.45	167.73	6,127.7	-162.0	-9.6	149.3	13.67
6,167.0	37.48	167.81	6,138.1	-169.6	-8.0	157.0	15.64
<b>MDLX</b>							
6,184.0	40.14	167.91	6,151.4	-180.0	-5.7	167.5	15.64
6,213.0	43.58	168.23	6,173.0	-198.9	-1.7	186.7	11.88
6,243.0	46.44	167.13	6,194.2	-219.7	2.8	207.7	9.88
6,273.0	49.13	165.38	6,214.3	-241.2	8.1	229.8	9.95
6,302.0	52.82	164.15	6,232.6	-263.0	14.0	252.3	13.14



<b>Company:</b>	Antero	<b>Local Co-ordinate Reference:</b>	Well Scardina Unit 1H
<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>	Scardina Unit 1H	<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)
6,305.0	53.26	164.06	6,234.4	-265.3	14.7	254.7	14.90
<b>BRKT</b>							
6,332.0	57.24	163.33	6,249.8	-286.6	20.9	276.8	14.90
6,350.0	59.11	163.23	6,259.3	-301.2	25.3	292.1	10.38
<b>TLLY</b>							
6,362.0	60.35	163.17	6,265.3	-311.1	28.3	302.4	10.38
6,392.0	63.16	163.05	6,279.5	-336.4	36.0	328.8	9.37
6,422.0	67.70	162.59	6,292.0	-362.5	44.0	356.1	15.20
6,452.0	72.31	162.10	6,302.2	-389.3	52.6	384.2	15.44
6,453.0	72.45	162.09	6,302.5	-390.2	52.9	385.2	13.58
<b>MRCL_HOT</b>							
6,482.0	76.38	161.95	6,310.3	-416.8	61.5	413.1	13.58
6,512.0	81.64	161.04	6,316.1	-444.7	70.8	442.5	17.78
6,542.0	85.09	162.07	6,319.5	-473.0	80.3	472.3	11.99
6,572.0	86.00	162.01	6,321.8	-501.4	89.5	502.2	3.04
6,587.0	86.13	162.03	6,322.9	-515.7	94.1	517.2	0.88
6,614.0	85.87	161.48	6,324.8	-541.2	102.5	544.1	2.25
6,703.0	88.19	160.19	6,329.4	-625.2	131.7	633.0	2.98
6,793.0	88.63	158.65	6,331.9	-709.4	163.3	722.9	1.78
6,882.0	88.99	161.20	6,333.7	-793.0	193.9	811.9	2.89
6,972.0	89.53	162.24	6,334.9	-878.4	222.1	901.9	1.30
7,061.0	89.09	161.10	6,336.0	-962.9	250.1	990.8	1.37
7,151.0	89.83	160.73	6,336.8	-1,048.0	279.5	1,080.8	0.92
7,240.0	90.20	159.66	6,336.8	-1,131.7	309.7	1,169.8	1.27
7,330.0	89.76	160.26	6,336.8	-1,216.2	340.5	1,259.8	0.83
7,419.0	89.87	159.84	6,337.1	-1,299.9	370.9	1,348.8	0.49
7,508.0	89.23	158.45	6,337.8	-1,383.1	402.6	1,437.8	1.72
7,598.0	89.10	158.49	6,339.1	-1,466.8	435.6	1,527.7	0.15
7,687.0	89.09	159.80	6,340.5	-1,549.9	467.3	1,616.7	1.47
7,777.0	89.46	159.65	6,341.7	-1,634.3	498.4	1,706.7	0.44
7,866.0	89.77	161.69	6,342.2	-1,718.3	527.9	1,795.7	2.32
7,956.0	90.34	162.02	6,342.2	-1,803.8	555.9	1,885.7	0.73
8,046.0	90.54	160.52	6,341.5	-1,889.1	584.8	1,975.6	1.68
8,135.0	89.53	160.88	6,341.4	-1,973.1	614.2	2,064.6	1.20
8,225.0	90.07	161.99	6,341.7	-2,058.4	642.9	2,154.6	1.37
8,314.0	88.35	161.18	6,343.0	-2,142.8	671.0	2,243.6	2.14
8,404.0	89.80	161.18	6,344.4	-2,228.0	700.0	2,333.6	1.61
8,493.0	89.63	159.62	6,344.9	-2,311.8	729.9	2,422.5	1.76
8,583.0	89.36	160.24	6,345.6	-2,396.4	760.8	2,512.5	0.75
8,672.0	88.35	159.80	6,347.4	-2,480.0	791.2	2,601.5	1.24
8,762.0	88.32	159.65	6,350.0	-2,564.4	822.4	2,691.5	0.17
8,851.0	89.90	161.43	6,351.4	-2,648.3	852.0	2,780.5	2.67
8,941.0	90.67	161.95	6,351.0	-2,733.7	880.3	2,870.4	1.03
9,030.0	89.36	161.28	6,351.0	-2,818.2	908.3	2,959.4	1.65
9,120.0	88.25	161.61	6,352.8	-2,903.5	937.0	3,049.4	1.29



EOW Completion Report



<b>Company:</b>	Antero	<b>Local Co-ordinate Reference:</b>	Well Scardina Unit 1H
<b>Project:</b>	Tyler County WV	<b>TVD Reference:</b>	Precision 523 GL 814' + KB 19' @ 833 Ousft
<b>Site:</b>	Weigle East Pad Dean/Goodfellow/Hawkeye/Sc	<b>MD Reference:</b>	Precision 523 GL 814' + KB 19' @ 833 Ousft
<b>Well:</b>	Scardina Unit 1H	<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)
9,209.0	88.05	158.87	6,355.7	-2,987.2	967.0	3,138.3	3.09
9,299.0	88.59	157.44	6,358.3	-3,070.7	1,000.5	3,228.2	1.70
9,388.0	88.69	156.98	6,360.5	-3,152.7	1,035.0	3,317.1	0.53
9,478.0	89.40	155.89	6,362.0	-3,235.2	1,071.0	3,406.8	1.45
9,568.0	88.96	158.28	6,363.2	-3,318.1	1,106.0	3,496.7	2.70
9,657.0	88.76	160.80	6,365.0	-3,401.4	1,137.1	3,585.6	2.84
9,747.0	88.46	159.34	6,367.2	-3,486.0	1,167.8	3,675.6	1.66
9,837.0	89.53	161.02	6,368.8	-3,570.7	1,198.3	3,765.6	2.21
9,926.0	89.16	159.30	6,369.8	-3,654.4	1,228.5	3,854.6	1.98
10,015.0	90.17	160.46	6,370.3	-3,737.9	1,259.1	3,943.6	1.73
10,105.0	88.59	160.08	6,371.3	-3,822.7	1,289.5	4,033.6	1.81
10,194.0	90.77	161.77	6,371.8	-3,906.8	1,318.6	4,122.6	3.10
10,284.0	90.57	160.99	6,370.7	-3,992.0	1,347.3	4,212.5	0.89
10,374.0	90.57	161.43	6,369.8	-4,077.2	1,376.3	4,302.5	0.49
10,463.0	89.87	161.47	6,369.5	-4,161.6	1,404.6	4,391.5	0.79
10,553.0	89.33	159.89	6,370.1	-4,246.5	1,434.4	4,481.5	1.86
10,642.0	90.13	161.04	6,370.5	-4,330.4	1,464.1	4,570.5	1.57
10,732.0	89.50	158.63	6,370.8	-4,414.9	1,495.1	4,660.5	2.77
10,821.0	90.23	160.27	6,371.0	-4,498.2	1,526.4	4,749.5	2.02
10,911.0	90.03	160.19	6,370.8	-4,582.9	1,556.8	4,839.5	0.24
11,001.0	90.64	162.51	6,370.3	-4,668.2	1,585.6	4,929.4	2.67
11,090.0	90.97	162.06	6,369.1	-4,753.0	1,612.7	5,018.4	0.63
11,180.0	88.72	160.97	6,369.3	-4,838.3	1,641.2	5,108.4	2.78
11,270.0	89.46	162.03	6,370.7	-4,923.6	1,669.8	5,198.3	1.44
11,359.0	89.93	161.03	6,371.2	-5,008.1	1,698.0	5,287.3	1.24
11,449.0	89.87	161.36	6,371.4	-5,093.2	1,727.0	5,377.3	0.37
11,538.0	88.96	158.73	6,372.3	-5,176.9	1,757.3	5,466.3	3.13
11,628.0	89.13	160.18	6,373.8	-5,261.2	1,788.9	5,556.2	1.62
11,717.0	89.97	161.36	6,374.5	-5,345.2	1,818.2	5,645.2	1.63
11,807.0	89.93	161.45	6,374.6	-5,430.5	1,846.9	5,735.2	0.11
11,897.0	90.27	159.12	6,374.4	-5,515.2	1,877.3	5,825.2	2.62
11,986.0	90.13	159.37	6,374.1	-5,598.4	1,908.8	5,914.2	0.32
12,076.0	89.23	159.80	6,374.6	-5,682.8	1,940.2	6,004.2	1.11
12,165.0	89.03	159.32	6,375.9	-5,766.2	1,971.3	6,093.2	0.58
12,255.0	89.40	158.78	6,377.2	-5,850.2	2,003.5	6,183.1	0.73
12,344.0	88.89	160.14	6,378.5	-5,933.5	2,034.7	6,272.1	1.63
12,434.0	89.33	160.40	6,379.9	-6,018.2	2,065.1	6,362.1	0.57
12,524.0	89.73	159.69	6,380.6	-6,102.8	2,095.8	6,452.1	0.91
12,613.0	88.49	159.78	6,382.0	-6,186.3	2,126.6	6,541.1	1.40
12,703.0	88.39	159.67	6,384.5	-6,270.7	2,157.8	6,631.0	0.17
12,792.0	89.46	160.52	6,386.1	-6,354.4	2,188.1	6,720.0	1.54
12,882.0	89.73	159.70	6,386.8	-6,439.0	2,218.7	6,810.0	0.96
12,971.0	89.23	160.36	6,387.6	-6,522.6	2,249.0	6,899.0	0.93
13,061.0	89.33	159.80	6,388.7	-6,607.2	2,279.8	6,988.0	0.63

6,810.0 Gas  
6,899.0  
6,988.0  
JUN 21 2016



<b>Company:</b> Antero	<b>Local Co-ordinate Reference:</b> Well Scardina Unit 1H
<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/Scardina	<b>MD Reference:</b> Precision 523: GL 814' + KB 19' @ 833.0usft
<b>Well:</b> Scardina Unit 1H	<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

MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	N/S (usft)	E/W (usft)	V. Sec (usft)	DLeg (°/100usft)
13,151.0	88.32	159.88	6,390.6	-6,691.7	2,310.8	7,079.0	1.13
13,240.0	88.89	160.61	6,392.7	-6,775.5	2,340.8	7,168.0	1.04
13,330.0	89.13	160.06	6,394.3	-6,860.2	2,371.1	7,257.9	0.67
13,419.0	89.09	159.80	6,395.7	-6,943.8	2,401.7	7,346.9	0.30
13,509.0	89.26	159.54	6,397.0	-7,028.2	2,432.9	7,436.9	0.35
13,599.0	89.06	160.38	6,398.3	-7,112.7	2,463.8	7,526.9	0.96
13,688.0	89.09	160.07	6,399.7	-7,196.4	2,493.9	7,615.9	0.35
13,778.0	88.89	160.14	6,401.3	-7,281.1	2,524.5	7,705.9	0.24
13,867.0	88.22	158.48	6,403.5	-7,364.3	2,555.9	7,794.8	2.01
13,957.0	89.40	159.46	6,405.4	-7,448.3	2,588.2	7,884.8	1.70
14,047.0	89.93	160.72	6,405.9	-7,532.9	2,618.9	7,974.8	1.52
14,136.0	89.70	161.53	6,406.2	-7,617.1	2,647.7	8,063.8	0.95
14,226.0	90.13	161.45	6,406.4	-7,702.4	2,676.2	8,153.8	0.49
14,315.0	89.40	161.08	6,406.7	-7,786.7	2,704.8	8,242.7	0.92
14,405.0	89.73	161.55	6,407.4	-7,872.0	2,733.7	8,332.7	0.64
14,495.0	88.32	162.66	6,408.9	-7,957.6	2,761.3	8,422.7	1.99
14,584.0	89.09	160.03	6,411.0	-8,041.9	2,789.8	8,511.6	3.08
14,674.0	91.28	161.42	6,410.7	-8,126.9	2,819.5	8,601.6	2.88
14,763.0	89.36	159.90	6,410.2	-8,210.8	2,848.9	8,690.6	2.75
14,853.0	90.50	159.95	6,410.3	-8,295.4	2,879.8	8,780.6	1.27
14,942.0	90.27	158.03	6,409.7	-8,378.4	2,911.7	8,869.6	2.17
15,032.0	89.76	159.61	6,409.7	-8,462.3	2,944.3	8,959.5	1.84
15,122.0	90.00	158.58	6,409.8	-8,546.4	2,976.4	9,049.5	1.18
15,211.0	89.80	161.94	6,410.0	-8,630.2	3,006.4	9,138.5	3.78
15,301.0	90.44	161.07	6,409.8	-8,715.5	3,035.0	9,228.5	1.20
15,390.0	90.07	158.72	6,409.4	-8,799.1	3,065.6	9,317.5	2.67
15,480.0	90.07	160.29	6,409.3	-8,883.4	3,097.1	9,407.5	1.74
15,569.0	89.60	159.66	6,409.6	-8,967.0	3,127.5	9,496.5	0.88
15,659.0	90.03	159.39	6,409.9	-9,051.3	3,159.0	9,586.4	0.56
15,749.0	90.87	160.32	6,409.1	-9,135.8	3,190.0	9,676.4	1.39
15,838.0	89.87	159.49	6,408.6	-9,219.4	3,220.6	9,765.4	1.46
15,927.0	90.74	161.89	6,408.1	-9,303.4	3,250.0	9,854.4	2.87
16,017.0	90.77	164.06	6,406.9	-9,389.4	3,276.4	9,944.3	2.41
16,106.0	90.10	161.00	6,406.2	-9,474.3	3,303.1	10,033.2	3.52
16,196.0	89.97	161.33	6,406.2	-9,559.5	3,332.1	10,123.2	0.39
16,286.0	90.94	159.42	6,405.5	-9,644.3	3,362.4	10,213.2	2.38
16,375.0	90.91	159.59	6,404.0	-9,727.6	3,393.5	10,302.2	0.19
16,465.0	90.30	157.61	6,403.1	-9,811.4	3,426.4	10,392.1	2.30
16,554.0	90.34	159.98	6,402.6	-9,894.4	3,458.6	10,481.1	2.66
16,644.0	90.30	161.87	6,402.1	-9,979.4	3,488.0	10,571.1	2.10
16,733.0	90.13	162.02	6,401.7	-10,064.0	3,515.5	10,660.1	0.25
16,823.0	90.27	161.87	6,401.4	-10,149.6	3,543.4	10,750.0	0.23
16,913.0	90.30	162.10	6,401.0	-10,235.2	3,571.3	10,840.0	0.26
17,002.0	88.49	161.29	6,401.9	-10,319.7	3,599.2	10,928.9	2.23



<b>Company:</b> Antero	<b>Local Co-ordinate Reference:</b> Well Scardina Unit 1H
<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/Scardina	<b>MD Reference:</b> Precision 523: GL 814' + KB 19' @ 833.0usft
<b>Well:</b> Scardina Unit 1H	<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)
17,092.0	89.33	161.33	6,403.6	-10,404.9	3,628.1	11,018.9	0.93
17,181.0	88.92	160.92	6,405.0	-10,489.1	3,656.8	11,107.9	0.65
17,270.0	90.70	159.53	6,405.3	-10,572.9	3,687.0	11,196.9	2.54
17,360.0	90.94	159.43	6,404.0	-10,657.1	3,718.5	11,286.9	0.29
17,450.0	89.83	159.37	6,403.4	-10,741.4	3,750.2	11,376.8	1.24
17,544.0	90.07	159.75	6,403.5	-10,829.5	3,783.0	11,470.8	0.48
17,602.0	90.22	160.19	6,403.3	-10,884.0	3,802.9	11,528.8	0.80
17,660.0	90.22	160.19	6,403.1	-10,938.5	3,822.5	11,586.8	0.00

**Design Annotations**

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
1,766.0	1,763.8	-49.4	-17.8	BGLM
1,875.0	1,872.8	-49.5	-18.1	BGIJ
2,333.0	2,330.8	-49.1	-19.7	GNTZ
2,464.0	2,461.8	-49.3	-20.0	FFFS
2,551.0	2,548.8	-49.4	-20.3	GRDN
2,905.0	2,902.8	-49.4	-21.8	FFSD
2,958.0	2,955.8	-49.4	-22.0	BYRD
3,305.0	3,302.8	-49.0	-23.9	WRRN_TSE
3,703.0	3,700.8	-48.2	-26.7	SPCL
4,019.0	4,016.8	-48.2	-28.9	BLTN
4,415.0	4,412.8	-48.7	-31.1	BDFD
4,830.0	4,827.7	-49.7	-32.7	BNSN
5,061.0	5,058.7	-50.5	-33.3	ALXD
5,238.0	5,235.7	-51.0	-33.9	ELK
5,630.0	5,627.7	-51.7	-35.1	RNST
5,971.0	5,964.7	-82.1	-28.5	SCMR
6,167.0	6,138.1	-169.6	-8.0	MDLX
6,305.0	6,234.4	-265.3	14.7	BRKT
6,350.0	6,259.3	-301.2	25.3	TLLY
6,453.0	6,302.5	-390.2	52.9	MRCL_HOT

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