





## **Antero**

**Doddridge County WV  
Fritz Pad: Hayden/Washington/Sheep/Hileman  
Sheep Run Unit 2H  
Original Wellpath**

**Design: As Drilled**

## **EOW Completion Report**

**20 May, 2015**







EOW Completion Report



<b>Company:</b> Antero	<b>Local Co-ordinate Reference:</b> Well Sheep Run Unit 2H
<b>Project:</b> Doddridge County WV	<b>TVD Reference:</b> Frontier 22: GL 1053' + KB 25' @ 1078.0usft
<b>Site:</b> Fritz Pad: Hayden/Washington/Sheep/Hileman	<b>MD Reference:</b> Frontier 22: GL 1053' + KB 25' @ 1078.0usft
<b>Well:</b> Sheep Run Unit 2H	<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>	Doddridge County WV, McClellan District		
<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>	Fritz Pad: Hayden/Washington/Sheep/Hileman				
<b>Site Position:</b>	<b>Map</b>	<b>Northing:</b>	14,247,222.50 usft	<b>Latitude:</b>	39° 14' 2.856 N
<b>From:</b>		<b>Easting:</b>	1,685,696.44 usft	<b>Longitude:</b>	80° 50' 24.332 W
<b>Position Uncertainty:</b>	2.0 usft	<b>Slot Radius:</b>	13-3/16"	<b>Grid Convergence:</b>	0.10 °

<b>Well</b>	Sheep Run Unit 2H, Marcellus					
<b>Well Position</b>	<b>+N/-S</b>	0.0 usft	<b>Northing:</b>	14,247,186.93 usft	<b>Latitude:</b>	39° 14' 2.505 N
	<b>+E/-W</b>	0.0 usft	<b>Easting:</b>	1,685,662.04 usft	<b>Longitude:</b>	80° 50' 24.770 W
<b>Position Uncertainty</b>		2.0 usft	<b>Wellhead Elevation:</b>	1,078.0 usft	<b>Ground Level:</b>	1,053.0 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	4/12/2015	-8.44	66.76	52,133

<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	154.14

<b>Survey Program</b>	Date 5/20/2015				
<b>From (usft)</b>	<b>To (usft)</b>	<b>Survey (Wellbore)</b>	<b>Tool Name</b>	<b>Description</b>	
25.0	5,451.0	Survey #8 Final KOP Gyro (Original Wellp	Standard Keeper 104	Standard Wireline Keeper ver 1.0.4	
5,451.0	13,273.0	Survey #9 SDI 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
25.0	0.02	187.68	25.0	0.0	0.0	0.0	0.08
50.0	0.04	187.68	50.0	0.0	0.0	0.0	0.08
75.0	0.05	187.68	75.0	0.0	0.0	0.0	0.04
100.0	0.07	187.68	100.0	-0.1	0.0	0.1	0.08
125.0	0.10	100.24	125.0	-0.1	0.0	0.1	0.48
150.0	0.13	157.49	150.0	-0.1	0.0	0.1	0.45
175.0	0.16	179.37	175.0	-0.2	0.1	0.2	0.25
200.0	0.13	192.97	200.0	-0.2	0.0	0.2	0.18
225.0	0.17	154.03	225.0	-0.3	0.1	0.3	0.43
250.0	0.25	159.49	250.0	-0.4	0.1	0.4	0.33



EOW Completion Report



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<b>Project:</b>	Doddridge County WV	<b>TVD Reference:</b>	Frontier 22: GL 1053' + KB 25' @ 1078.0usft
<b>Site:</b>	Fritz Pad: Hayden/Washington/Sheep/Hileman	<b>MD Reference:</b>	Frontier 22: GL 1053' + KB 25' @ 1078.0usft
<b>Well:</b>	Sheep Run Unit 2H	<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

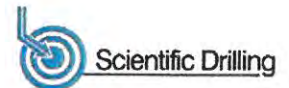
Survey

MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	N/S (usft)	E/W (usft)	V. Sec (usft)	DLeg (°/100usft)
275.0	0.20	95.84	275.0	-0.4	0.2	0.5	0.96
300.0	0.19	126.26	300.0	-0.5	0.2	0.5	0.41
325.0	0.29	141.76	325.0	-0.5	0.3	0.6	0.47
350.0	0.40	147.64	350.0	-0.7	0.4	0.8	0.46
375.0	0.37	136.09	375.0	-0.8	0.5	0.9	0.33
400.0	0.45	125.73	400.0	-0.9	0.6	1.1	0.44
425.0	0.15	149.13	425.0	-1.0	0.7	1.2	1.27
450.0	0.05	161.09	450.0	-1.0	0.7	1.3	0.41
475.0	0.33	325.42	475.0	-1.0	0.7	1.2	1.51
500.0	0.84	340.80	500.0	-0.8	0.6	0.9	2.12
525.0	1.26	336.04	525.0	-0.3	0.4	0.5	1.71
550.0	1.76	339.85	550.0	0.3	0.2	-0.2	2.04
575.0	2.67	332.54	575.0	1.2	-0.2	-1.1	3.80
600.0	3.21	332.17	599.9	2.3	-0.8	-2.4	2.16
625.0	3.71	328.53	624.9	3.6	-1.6	-3.9	2.18
650.0	4.25	329.84	649.8	5.1	-2.4	-5.6	2.19
675.0	4.53	330.31	674.8	6.8	-3.4	-7.6	1.13
700.0	4.70	330.00	699.7	8.5	-4.4	-9.6	0.69
725.0	4.75	330.29	724.6	10.3	-5.4	-11.6	0.22
750.0	4.86	329.44	749.5	12.1	-6.5	-13.7	0.52
775.0	5.13	329.62	774.4	14.0	-7.6	-15.9	1.08
800.0	5.34	329.19	799.3	15.9	-8.7	-18.2	0.85
825.0	5.45	329.46	824.2	18.0	-9.9	-20.5	0.45
850.0	5.56	330.12	849.1	20.0	-11.1	-22.9	0.51
875.0	5.95	328.39	873.9	22.2	-12.4	-25.4	1.71
900.0	6.23	327.64	898.8	24.4	-13.8	-28.0	1.16
925.0	6.25	328.18	923.7	26.7	-15.3	-30.7	0.25
950.0	6.30	327.22	948.5	29.0	-16.7	-33.4	0.46
975.0	6.65	327.28	973.3	31.4	-18.3	-36.2	1.40
1,000.0	6.63	327.06	998.2	33.8	-19.8	-39.1	0.13
1,025.0	6.74	326.57	1,023.0	36.3	-21.4	-42.0	0.50
1,050.0	6.70	326.77	1,047.8	38.7	-23.0	-44.9	0.19
1,075.0	6.44	325.63	1,072.7	41.1	-24.6	-47.7	1.16
1,100.0	6.11	324.56	1,097.5	43.3	-26.2	-50.4	1.40
1,125.0	5.70	324.39	1,122.4	45.4	-27.7	-53.0	1.64
1,150.0	5.08	323.96	1,147.3	47.3	-29.0	-55.3	2.49
1,175.0	4.74	326.22	1,172.2	49.1	-30.3	-57.4	1.56
1,200.0	4.26	328.20	1,197.1	50.7	-31.3	-59.3	2.02
1,225.0	4.06	327.83	1,222.0	52.3	-32.3	-61.1	0.81
1,250.0	3.79	328.35	1,247.0	53.7	-33.2	-62.8	1.09
1,275.0	3.36	331.02	1,271.9	55.1	-34.0	-64.4	1.84
1,300.0	3.11	329.53	1,296.9	56.3	-34.7	-65.8	1.05
1,325.0	2.91	328.80	1,321.9	57.4	-35.4	-67.1	0.81
1,350.0	2.57	332.31	1,346.8	58.5	-36.0	-68.3	1.52





EOW Completion Report



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**Design:** As Drilled

**Local Co-ordinate Reference:** Well Sheep Run Unit 2H  
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**MD Reference:** Frontier 22: GL 1053' + KB 25' @ 1078.0usft  
**North Reference:** Grid  
**Survey Calculation Method:** Minimum Curvature  
**Database:** Oklahoma District

Survey

MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	N/S (usft)	E/W (usft)	V. Sec (usft)	DLeg (°/100usft)
1,375.0	2.34	332.40	1,371.8	59.4	-36.4	-69.4	0.92
1,400.0	2.26	330.00	1,396.8	60.3	-36.9	-70.4	0.50
1,425.0	2.02	330.20	1,421.8	61.1	-37.4	-71.3	0.96
1,450.0	1.80	332.42	1,446.8	61.8	-37.8	-72.1	0.93
1,475.0	1.69	331.65	1,471.7	62.5	-38.2	-72.9	0.45
1,500.0	1.50	331.16	1,496.7	63.1	-38.5	-73.6	0.76
1,525.0	1.26	333.62	1,521.7	63.7	-38.8	-74.2	0.99
1,550.0	1.21	329.68	1,546.7	64.1	-39.0	-74.7	0.39
1,575.0	1.07	335.91	1,571.7	64.6	-39.3	-75.2	0.75
1,600.0	0.97	331.18	1,596.7	65.0	-39.4	-75.7	0.52
1,625.0	0.86	337.65	1,621.7	65.3	-39.6	-76.1	0.60
1,650.0	0.73	341.41	1,646.7	65.6	-39.7	-76.4	0.56
1,675.0	0.58	355.14	1,671.7	65.9	-39.8	-76.7	0.86
1,700.0	0.49	352.94	1,696.7	66.2	-39.8	-76.9	0.37
1,725.0	0.32	15.50	1,721.7	66.3	-39.8	-77.1	0.92
1,750.0	0.26	47.84	1,746.7	66.4	-39.8	-77.1	0.69
1,775.0	0.28	36.64	1,771.7	66.5	-39.7	-77.2	0.23
1,800.0	0.27	32.80	1,796.7	66.6	-39.6	-77.2	0.08
1,825.0	0.34	27.22	1,821.7	66.7	-39.6	-77.3	0.30
1,850.0	0.21	41.72	1,846.7	66.8	-39.5	-77.4	0.59
1,875.0	0.21	79.23	1,871.7	66.9	-39.4	-77.4	0.54
1,900.0	0.15	80.50	1,896.7	66.9	-39.3	-77.4	0.24
1,925.0	0.22	63.75	1,921.7	66.9	-39.3	-77.3	0.35
1,950.0	0.29	82.33	1,946.7	67.0	-39.2	-77.3	0.43
1,975.0	0.13	74.93	1,971.7	67.0	-39.1	-77.3	0.65
2,000.0	0.27	76.39	1,996.7	67.0	-39.0	-77.3	0.56
2,025.0	0.41	93.61	2,021.7	67.0	-38.8	-77.2	0.69
2,050.0	0.42	79.91	2,046.7	67.0	-38.7	-77.2	0.40
2,075.0	0.25	104.32	2,071.7	67.0	-38.5	-77.1	0.87
2,100.0	0.24	91.57	2,096.7	67.0	-38.4	-77.0	0.22
2,125.0	0.30	121.88	2,121.7	67.0	-38.3	-77.0	0.61
2,150.0	0.33	108.66	2,146.7	66.9	-38.2	-76.9	0.31
2,175.0	0.24	90.97	2,171.7	66.9	-38.1	-76.8	0.50
2,200.0	0.32	89.55	2,196.7	66.9	-37.9	-76.7	0.32
2,225.0	0.39	103.15	2,221.7	66.9	-37.8	-76.6	0.44
2,250.0	0.36	82.75	2,246.7	66.8	-37.6	-76.6	0.54
2,275.0	0.25	93.38	2,271.7	66.9	-37.5	-76.5	0.49
2,300.0	0.29	113.85	2,296.7	66.8	-37.4	-76.4	0.41
2,325.0	0.37	117.47	2,321.7	66.8	-37.2	-76.3	0.33
2,350.0	0.34	87.63	2,346.7	66.7	-37.1	-76.2	0.74
2,375.0	0.41	102.28	2,371.7	66.7	-36.9	-76.1	0.47
2,400.0	0.31	106.63	2,396.7	66.7	-36.8	-76.0	0.41
2,425.0	0.34	103.26	2,421.7	66.6	-36.6	-75.9	0.14
2,450.0	0.28	123.74	2,446.7	66.6	-36.5	-75.9	0.50
2,475.0	0.48	125.68	2,471.7	66.5	-36.4	-75.7	0.80



EOW Completion Report



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Survey

MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	N/S (usft)	E/W (usft)	V. Sec (usft)	DLeg (°/100usft)
2,500.0	0.55	112.58	2,496.7	66.4	-36.2	-75.5	0.55
2,525.0	0.63	107.07	2,521.7	66.3	-35.9	-75.3	0.39
2,550.0	0.47	117.84	2,546.7	66.2	-35.7	-75.2	0.76
2,575.0	0.58	135.75	2,571.7	66.1	-35.5	-75.0	0.79
2,600.0	0.94	137.08	2,596.7	65.8	-35.3	-74.6	1.44
2,625.0	2.27	158.78	2,621.7	65.2	-35.0	-74.0	5.76
2,650.0	2.79	158.02	2,646.7	64.2	-34.6	-72.9	2.08
2,675.0	3.13	141.75	2,671.6	63.1	-33.9	-71.6	3.61
2,700.0	4.12	123.21	2,696.6	62.1	-32.8	-70.1	6.09
2,725.0	4.29	120.40	2,721.5	61.1	-31.2	-68.6	1.07
2,750.0	4.47	115.85	2,746.4	60.2	-29.5	-67.1	1.56
2,775.0	4.50	104.09	2,771.4	59.5	-27.7	-65.7	3.67
2,800.0	4.74	95.96	2,796.3	59.2	-25.7	-64.5	2.79
2,825.0	4.78	93.28	2,821.2	59.0	-23.7	-63.4	0.90
2,850.0	4.85	92.64	2,846.1	58.9	-21.6	-62.4	0.35
2,875.0	5.29	91.73	2,871.0	58.8	-19.4	-61.4	1.79
2,900.0	6.32	91.95	2,895.9	58.8	-16.8	-60.2	4.12
2,925.0	6.59	92.48	2,920.7	58.6	-14.0	-58.9	1.11
2,950.0	6.90	91.56	2,945.5	58.5	-11.1	-57.5	1.31
2,975.0	7.72	88.39	2,970.3	58.5	-7.9	-56.1	3.65
3,000.0	9.26	83.05	2,995.1	58.8	-4.2	-54.8	6.91
3,025.0	11.16	78.21	3,019.7	59.6	0.1	-53.5	8.33
3,050.0	12.98	75.56	3,044.1	60.8	5.2	-52.4	7.61
3,075.0	15.08	70.57	3,068.4	62.6	11.0	-51.5	9.69
3,100.0	16.75	67.94	3,092.4	65.0	17.4	-50.9	7.27
3,125.0	18.29	65.39	3,116.3	68.0	24.3	-50.6	6.88
3,150.0	19.75	63.55	3,139.9	71.5	31.7	-50.5	6.31
3,175.0	20.42	65.45	3,163.4	75.2	39.4	-50.5	3.74
3,200.0	20.29	67.15	3,186.8	78.7	47.4	-50.1	2.42
3,225.0	19.59	67.20	3,210.3	82.0	55.2	-49.7	2.80
3,250.0	19.12	65.93	3,233.9	85.3	62.8	-49.3	2.52
3,275.0	18.85	64.27	3,257.5	88.7	70.2	-49.2	2.41
3,300.0	18.27	63.09	3,281.2	92.2	77.4	-49.3	2.76
3,325.0	17.07	61.88	3,305.1	95.7	84.1	-49.5	5.02
3,350.0	17.19	61.12	3,328.9	99.2	90.6	-49.8	1.02
3,375.0	18.09	60.73	3,352.8	102.9	97.2	-50.2	3.63
3,400.0	19.66	61.05	3,376.4	106.9	104.2	-50.7	6.29
3,425.0	21.37	61.47	3,399.8	111.1	111.9	-51.1	6.87
3,450.0	22.11	61.70	3,423.1	115.5	120.1	-51.5	2.98
3,475.0	23.26	63.22	3,446.1	119.9	128.6	-51.8	5.16
3,500.0	23.96	63.64	3,469.0	124.4	137.6	-51.9	2.88
3,525.0	24.73	64.76	3,491.8	128.9	146.9	-51.9	3.59
3,550.0	25.97	66.56	3,514.4	133.3	156.6	-51.6	5.84
3,575.0	27.08	69.19	3,536.8	137.5	166.9	-50.9	6.46





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3,600.0	27.64	69.90	3,559.0	141.5	177.7	-49.8	2.59
3,625.0	28.54	70.76	3,581.0	145.5	188.8	-48.6	3.95
3,650.0	29.29	70.61	3,602.9	149.5	200.2	-47.2	3.01
3,675.0	29.41	70.47	3,624.7	153.6	211.8	-45.8	0.55
3,700.0	28.59	68.92	3,646.6	157.8	223.1	-44.6	4.45
3,725.0	27.68	67.68	3,668.6	162.1	234.1	-43.8	4.33
3,750.0	26.95	66.63	3,690.8	166.6	244.7	-43.2	3.50
3,775.0	26.23	65.92	3,713.2	171.1	254.9	-42.8	3.15
3,800.0	25.63	65.19	3,735.7	175.6	264.8	-42.5	2.72
3,825.0	25.33	64.79	3,758.2	180.1	274.6	-42.3	1.38
3,850.0	25.85	65.22	3,780.8	184.7	284.4	-42.2	2.21
3,875.0	26.64	65.24	3,803.2	189.3	294.4	-42.0	3.16
3,900.0	27.06	65.41	3,825.5	194.1	304.7	-41.7	1.71
3,925.0	27.85	65.39	3,847.7	198.8	315.2	-41.5	3.16
3,950.0	28.83	65.74	3,869.7	203.8	326.0	-41.2	3.98
3,975.0	29.04	65.77	3,891.6	208.7	337.0	-40.8	0.84
4,000.0	29.03	65.57	3,913.4	213.7	348.0	-40.5	0.39
4,025.0	29.04	65.81	3,935.3	218.7	359.1	-40.2	0.47
4,050.0	30.09	67.22	3,957.0	223.6	370.4	-39.7	5.04
4,075.0	30.50	67.44	3,978.6	228.5	382.1	-39.0	1.70
4,100.0	30.29	67.33	4,000.2	233.4	393.7	-38.3	0.87
4,125.0	30.49	67.42	4,021.8	238.2	405.4	-37.5	0.82
4,150.0	31.00	68.30	4,043.2	243.0	417.2	-36.7	2.72
4,175.0	30.68	68.06	4,064.7	247.8	429.1	-35.8	1.37
4,200.0	29.98	67.35	4,086.3	252.6	440.8	-35.0	3.15
4,225.0	29.33	66.64	4,108.0	257.4	452.2	-34.4	2.96
4,250.0	28.68	66.07	4,129.9	262.3	463.3	-33.9	2.83
4,275.0	27.54	65.70	4,151.9	267.1	474.1	-33.6	4.61
4,300.0	26.90	65.83	4,174.2	271.8	484.5	-33.3	2.57
4,325.0	27.15	69.02	4,196.4	276.1	495.0	-32.6	5.88
4,350.0	27.45	72.09	4,218.6	280.0	505.8	-31.3	5.76
4,375.0	27.31	73.09	4,240.8	283.4	516.8	-29.6	1.92
4,400.0	27.09	72.97	4,263.1	286.7	527.7	-27.9	0.91
4,425.0	27.63	73.32	4,285.3	290.1	538.7	-26.1	2.25
4,450.0	28.17	73.00	4,307.4	293.5	549.9	-24.2	2.24
4,475.0	28.12	72.90	4,329.4	296.9	561.2	-22.4	0.27
4,500.0	27.99	72.61	4,351.5	300.4	572.4	-20.7	0.75
4,525.0	28.74	72.75	4,373.5	303.9	583.7	-18.9	3.01
4,550.0	28.93	72.77	4,395.4	307.5	595.2	-17.1	0.76
4,575.0	28.60	72.32	4,417.3	311.1	606.7	-15.3	1.58
4,600.0	28.41	71.50	4,439.3	314.8	618.1	-13.7	1.74
4,625.0	28.81	71.58	4,461.2	318.6	629.4	-12.2	1.61
4,650.0	29.05	71.18	4,483.1	322.5	640.9	-10.7	1.23
4,675.0	29.00	70.25	4,505.0	326.5	652.3	-9.3	1.82



EOW Completion Report



**Company:** Antero  
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**Site:** Fritz Pad: Hayden/Washington/Sheep/Hileman  
**Well:** Sheep Run Unit 2H  
**Wellbore:** Original Wellpath  
**Design:** As Drilled

**Local Co-ordinate Reference:** Well Sheep Run Unit 2H  
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**Survey Calculation Method:** Minimum Curvature  
**Database:** Oklahoma District

Survey

MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	N/S (usft)	E/W (usft)	V. Sec (usft)	DLeg (°/100usft)
4,700.0	29.25	69.30	4,526.8	330.7	663.7	-8.1	2.10
4,725.0	30.38	68.99	4,548.5	335.1	675.4	-7.0	4.56
4,750.0	30.94	68.71	4,570.0	339.7	687.2	-5.9	2.31
4,775.0	30.53	68.22	4,591.5	344.4	699.1	-5.0	1.92
4,800.0	29.87	67.78	4,613.1	349.1	710.8	-4.1	2.78
4,825.0	28.92	67.16	4,634.9	353.8	722.1	-3.4	3.99
4,850.0	28.02	66.34	4,656.8	358.5	733.1	-2.9	3.92
4,875.0	26.94	65.78	4,679.0	363.2	743.6	-2.5	4.44
4,900.0	26.16	65.30	4,701.4	367.8	753.8	-2.2	3.24
4,925.0	25.51	64.41	4,723.9	372.5	763.6	-2.1	3.03
4,950.0	24.78	63.37	4,746.5	377.1	773.2	-2.1	3.41
4,975.0	24.51	63.16	4,769.2	381.8	782.5	-2.3	1.14
5,000.0	24.94	64.52	4,791.9	386.4	791.9	-2.3	2.85
5,025.0	25.67	66.44	4,814.5	390.9	801.6	-2.1	4.39
5,050.0	26.33	67.06	4,837.0	395.2	811.7	-1.6	2.86
5,075.0	26.67	67.70	4,859.4	399.5	822.0	-0.9	1.78
5,100.0	27.45	68.26	4,881.7	403.7	832.5	-0.2	3.28
5,125.0	28.17	69.14	4,903.8	408.0	843.4	0.7	3.32
5,150.0	28.79	69.94	4,925.7	412.1	854.6	1.9	2.91
5,175.0	29.14	70.34	4,947.6	416.2	865.9	3.1	1.60
5,200.0	30.20	71.03	4,969.3	420.3	877.6	4.5	4.45
5,225.0	31.38	71.66	4,990.8	424.4	889.7	6.1	4.89
5,250.0	31.73	72.12	5,012.1	428.5	902.2	7.9	1.70
5,275.0	31.03	71.81	5,033.5	432.5	914.6	9.7	2.87
5,300.0	29.84	71.45	5,055.0	436.5	926.6	11.3	4.82
5,325.0	28.58	70.96	5,076.8	440.5	938.1	12.8	5.13
5,350.0	27.51	69.91	5,098.9	444.4	949.2	14.1	4.71
5,375.0	26.40	68.90	5,121.2	448.4	959.8	15.2	4.80
5,400.0	25.87	68.14	5,143.6	452.4	970.1	16.0	2.51
5,425.0	26.49	68.19	5,166.1	456.5	980.3	16.8	2.48
5,450.0	26.81	68.09	5,188.4	460.7	990.7	17.6	1.29
5,451.0	26.82	68.09	5,189.3	460.8	991.1	17.6	1.01
5,610.0	25.15	66.70	5,332.2	487.6	1,055.4	21.6	1.12
5,642.0	24.22	65.70	5,361.3	493.0	1,067.7	22.1	3.19
5,674.0	24.36	65.98	5,390.5	498.4	1,079.7	22.5	0.57
5,706.0	24.66	66.80	5,419.6	503.7	1,091.8	23.0	1.42
5,738.0	25.06	67.46	5,448.6	508.9	1,104.2	23.7	1.52
5,770.0	25.91	69.12	5,477.5	514.0	1,117.0	24.7	3.47
5,802.0	26.82	69.93	5,506.2	519.0	1,130.3	26.0	3.06
5,834.0	25.95	70.11	5,534.8	523.8	1,143.7	27.5	2.73
5,866.0	25.14	70.32	5,563.7	528.5	1,156.7	28.9	2.55
5,898.0	24.90	70.61	5,592.7	533.0	1,169.4	30.4	0.84
5,930.0	24.74	69.76	5,621.8	537.6	1,182.1	31.8	1.22
5,963.0	25.03	69.05	5,651.7	542.5	1,195.1	33.1	1.26





EOW Completion Report



**Company:** Antero  
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**Site:** Fritz Pad: Hayden/Washington/Sheep/Hileman  
**Well:** Sheep Run Unit 2H  
**Wellbore:** Original Wellpath  
**Design:** As Drilled

**Local Co-ordinate Reference:** Well Sheep Run Unit 2H  
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**Survey Calculation Method:** Minimum Curvature  
**Database:** Oklahoma District

Survey

MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	N/S (usft)	E/W (usft)	V. Sec (usft)	DLeg (°/100usft)
5,995.0	25.16	67.95	5,680.7	547.4	1,207.7	34.1	1.51
6,027.0	25.27	67.71	5,709.6	552.6	1,220.3	35.0	0.47
6,059.0	25.45	68.58	5,738.5	557.7	1,233.0	36.0	1.29
6,091.0	25.94	68.24	5,767.4	562.8	1,245.9	37.0	1.60
6,123.0	26.58	67.79	5,796.1	568.1	1,259.1	38.0	2.09
6,156.0	26.77	67.01	5,825.6	573.8	1,272.8	38.8	1.21
6,188.0	27.24	65.84	5,854.1	579.6	1,286.1	39.4	2.22
6,220.0	28.26	65.00	5,882.4	585.8	1,299.6	39.7	3.41
6,252.0	29.41	64.82	5,910.4	592.3	1,313.6	39.9	3.60
6,284.0	30.05	62.86	5,938.2	599.3	1,327.8	39.8	3.64
6,316.0	30.01	58.65	5,965.9	607.2	1,341.8	38.9	6.58
6,348.0	29.66	54.29	5,993.7	616.0	1,355.1	36.8	6.86
6,380.0	29.86	48.25	6,021.5	625.9	1,367.4	33.2	9.39
6,412.0	30.66	46.04	6,049.1	636.8	1,379.3	28.5	4.28
6,444.0	30.89	48.03	6,076.6	648.0	1,391.2	23.7	3.26
6,476.0	30.93	51.86	6,104.1	658.6	1,403.8	19.7	6.15
6,508.0	31.83	57.18	6,131.4	668.2	1,417.4	16.9	9.10
6,540.0	32.83	64.30	6,158.4	676.6	1,432.3	15.9	12.30
6,572.0	33.48	71.10	6,185.2	683.2	1,448.5	17.0	11.79
6,578.0	33.72	72.17	6,190.2	684.2	1,451.6	17.4	10.62
<b>SCMR</b>							
6,604.0	34.85	76.64	6,211.7	688.2	1,465.7	20.0	10.62
6,636.0	36.80	81.12	6,237.7	691.8	1,484.1	24.8	10.21
6,668.0	37.40	87.39	6,263.2	693.7	1,503.3	31.5	11.96
6,700.0	37.66	94.04	6,288.6	693.4	1,522.7	40.2	12.68
6,732.0	37.38	101.48	6,314.0	690.8	1,542.0	50.9	14.18
6,764.0	38.39	107.44	6,339.2	685.9	1,561.0	63.7	11.86
6,796.0	38.66	113.14	6,364.3	679.0	1,579.7	78.0	11.12
<b>MDLX</b>							
6,828.0	40.42	117.69	6,389.0	670.2	1,598.1	93.9	10.59
6,861.0	43.42	120.34	6,413.5	659.5	1,617.3	111.9	10.55
6,893.0	46.47	122.44	6,436.2	647.8	1,636.6	131.0	10.60
6,925.0	49.87	125.42	6,457.5	634.4	1,656.4	151.6	12.69
6,956.0	53.66	127.29	6,476.7	620.0	1,676.0	173.1	13.11
6,970.0	55.37	127.61	6,484.8	613.1	1,685.1	183.3	12.36
<b>BRKT</b>							
6,988.0	57.57	128.01	6,494.8	603.9	1,696.9	196.7	12.36
7,020.0	62.10	128.99	6,510.8	586.6	1,718.5	221.7	14.40
7,021.0	62.25	129.01	6,511.3	586.1	1,719.2	222.5	14.66
<b>TLLY</b>							
7,052.0	66.75	129.67	6,524.6	568.4	1,740.9	247.9	14.66
7,084.0	70.89	131.75	6,536.2	548.9	1,763.5	275.3	14.29
7,086.0	71.09	131.89	6,536.9	547.6	1,764.9	277.0	12.16
<b>HMLN</b>							



EOW Completion Report



**Company:** Antero  
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7,101.0	72.63	132.92	6,541.5	538.0	1,775.4	290.2	12.16
<b>MRCL_HOT</b>							
7,117.0	74.28	134.00	6,546.1	527.5	1,786.5	304.6	12.16
7,149.0	77.86	136.87	6,553.8	505.3	1,808.3	334.0	14.17
7,181.0	81.50	138.78	6,559.5	482.0	1,829.5	364.2	12.80
7,204.0	84.90	139.85	6,562.2	464.7	1,844.3	386.3	15.49
7,271.0	91.48	141.31	6,564.4	413.0	1,886.8	451.3	10.06
7,367.0	91.07	143.29	6,562.2	337.1	1,945.5	545.3	2.11
7,463.0	91.08	143.80	6,560.4	259.9	2,002.6	639.6	0.53
7,559.0	91.85	145.06	6,558.0	181.8	2,058.4	734.2	1.54
7,656.0	93.05	145.24	6,553.8	102.3	2,113.8	829.9	1.25
7,749.0	92.39	146.32	6,549.4	25.5	2,166.0	921.8	1.36
7,844.0	92.42	146.94	6,545.4	-53.8	2,218.2	1,015.9	0.65
7,939.0	91.01	149.41	6,542.6	-134.5	2,268.3	1,110.4	2.99
8,035.0	90.03	151.10	6,541.7	-217.8	2,315.9	1,206.1	2.03
8,131.0	91.34	153.71	6,540.6	-302.9	2,360.4	1,302.1	3.04
8,227.0	90.84	154.79	6,538.7	-389.3	2,402.1	1,398.1	1.24
8,323.0	90.57	157.30	6,537.5	-477.1	2,441.0	1,494.0	2.63
8,419.0	91.21	161.20	6,536.1	-566.8	2,475.0	1,589.6	4.12
8,514.0	90.91	161.09	6,534.3	-656.7	2,505.7	1,683.9	0.34
8,610.0	90.94	161.69	6,532.7	-747.7	2,536.4	1,779.1	0.63
8,706.0	90.81	162.16	6,531.3	-838.9	2,566.1	1,874.2	0.51
8,802.0	91.34	159.05	6,529.5	-929.4	2,598.0	1,969.5	3.29
8,899.0	90.84	156.52	6,527.6	-1,019.2	2,634.7	2,066.3	2.66
8,995.0	91.78	154.32	6,525.4	-1,106.5	2,674.6	2,162.3	2.49
9,091.0	91.04	152.98	6,523.1	-1,192.5	2,717.2	2,258.2	1.59
9,187.0	92.08	153.78	6,520.5	-1,278.3	2,760.2	2,354.2	1.37
9,283.0	92.62	155.61	6,516.5	-1,365.0	2,801.2	2,450.1	1.99
9,380.0	92.15	156.39	6,512.5	-1,453.5	2,840.6	2,547.0	0.94
9,475.0	92.22	157.40	6,508.9	-1,540.8	2,877.9	2,641.8	1.06
9,572.0	90.07	158.24	6,506.9	-1,630.6	2,914.5	2,738.6	2.38
9,668.0	91.88	158.18	6,505.3	-1,719.8	2,950.1	2,834.3	1.89
9,764.0	91.74	157.59	6,502.3	-1,808.6	2,986.2	2,930.0	0.63
9,860.0	90.10	156.34	6,500.7	-1,897.0	3,023.8	3,025.9	2.15
9,956.0	89.50	156.82	6,501.1	-1,985.1	3,061.9	3,121.8	0.80
10,052.0	89.80	155.62	6,501.6	-2,072.9	3,100.6	3,217.8	1.29
10,148.0	90.87	156.01	6,501.1	-2,160.5	3,140.0	3,313.7	1.19
10,244.0	90.44	155.94	6,500.0	-2,248.2	3,179.0	3,409.7	0.45
10,339.0	89.76	156.81	6,499.8	-2,335.2	3,217.1	3,504.6	1.16
10,435.0	92.66	158.17	6,497.8	-2,423.8	3,253.9	3,600.4	3.34
10,531.0	92.52	158.13	6,493.5	-2,512.9	3,289.6	3,696.0	0.15
10,628.0	90.37	157.07	6,491.0	-2,602.5	3,326.5	3,792.8	2.47
10,724.0	90.30	156.20	6,490.4	-2,690.6	3,364.6	3,888.7	0.91
10,820.0	89.66	156.76	6,490.5	-2,778.7	3,402.9	3,984.7	0.89
10,917.0	89.63	156.11	6,491.1	-2,867.6	3,441.7	4,081.6	0.67





EOW Completion Report



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11,013.0	90.77	154.78	6,490.7	-2,954.9	3,481.6	4,177.5	1.82
11,108.0	90.50	153.90	6,489.7	-3,040.5	3,522.7	4,272.5	0.97
11,204.0	90.03	153.18	6,489.2	-3,126.4	3,565.5	4,368.5	0.90
11,300.0	90.60	153.59	6,488.7	-3,212.3	3,608.5	4,464.5	0.73
11,397.0	90.03	154.16	6,488.2	-3,299.4	3,651.2	4,561.5	0.83
11,493.0	92.05	155.07	6,486.4	-3,386.1	3,692.3	4,657.5	2.31
11,589.0	91.78	155.46	6,483.2	-3,473.2	3,732.5	4,753.4	0.49
11,685.0	90.80	155.12	6,481.1	-3,560.4	3,772.6	4,849.4	1.08
11,781.0	90.00	155.62	6,480.4	-3,647.7	3,812.6	4,945.4	0.98
11,877.0	89.36	154.53	6,480.9	-3,734.7	3,853.1	5,041.3	1.32
11,973.0	89.43	155.60	6,482.0	-3,821.8	3,893.5	5,137.3	1.12
12,069.0	90.07	157.22	6,482.4	-3,909.7	3,931.9	5,233.2	1.81
12,165.0	89.30	157.77	6,482.9	-3,998.4	3,968.7	5,329.1	0.99
12,261.0	89.26	157.54	6,484.1	-4,087.2	4,005.2	5,424.9	0.24
12,357.0	89.63	156.55	6,485.0	-4,175.6	4,042.6	5,520.8	1.10
12,452.0	90.64	156.50	6,484.8	-4,262.7	4,080.5	5,615.7	1.06
12,548.0	90.17	156.44	6,484.1	-4,350.8	4,118.8	5,711.6	0.49
12,643.0	90.27	156.71	6,483.8	-4,437.9	4,156.6	5,806.5	0.30
12,740.0	90.03	157.59	6,483.5	-4,527.3	4,194.2	5,903.4	0.94
12,835.0	89.83	157.06	6,483.6	-4,615.0	4,230.8	5,998.2	0.60
12,892.0	89.83	156.77	6,483.8	-4,667.4	4,253.2	6,055.1	0.51
12,932.0	89.46	156.16	6,484.0	-4,704.1	4,269.2	6,095.1	1.78
13,027.0	89.36	155.31	6,485.0	-4,790.7	4,308.2	6,190.1	0.90
13,124.0	90.80	155.88	6,484.9	-4,879.0	4,348.3	6,287.0	1.60
13,216.0	89.66	156.84	6,484.5	-4,963.3	4,385.2	6,379.0	1.62
13,273.0	89.66	156.84	6,484.9	-5,015.7	4,407.6	6,435.9	0.00

PTB

Design Annotations

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
6,578.0	6,190.2	684.2	1,451.6	SCMR
6,796.0	6,364.3	679.0	1,579.7	MDLX
6,970.0	6,484.8	613.1	1,685.1	BRKT
7,021.0	6,511.3	586.1	1,719.2	TLLY
7,086.0	6,536.9	547.6	1,764.9	HMLN
7,101.0	6,541.5	538.0	1,775.4	MRCL_HOT
13,273.0	6,484.9	-5,015.7	4,407.6	PTB

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