



**Bierstadt Unit 2H**  
**Doddridge County WV**  
**Northing: 14249817.34**  
**Easting: 1682065.95**  
**As Drilled**



Azimuths to Grid North  
 True North: -0.09°  
 Magnetic North: -8.53°  
 Magnetic Field  
 Strength: 52137.7 nT  
 Dip Angle: 68.77°  
 Date: 4/15/2015  
 Model: BGGM2014

To convert Magnetic North to Grid, Subtract 8.53°  
 To convert True North to Grid, Subtract 0.09°

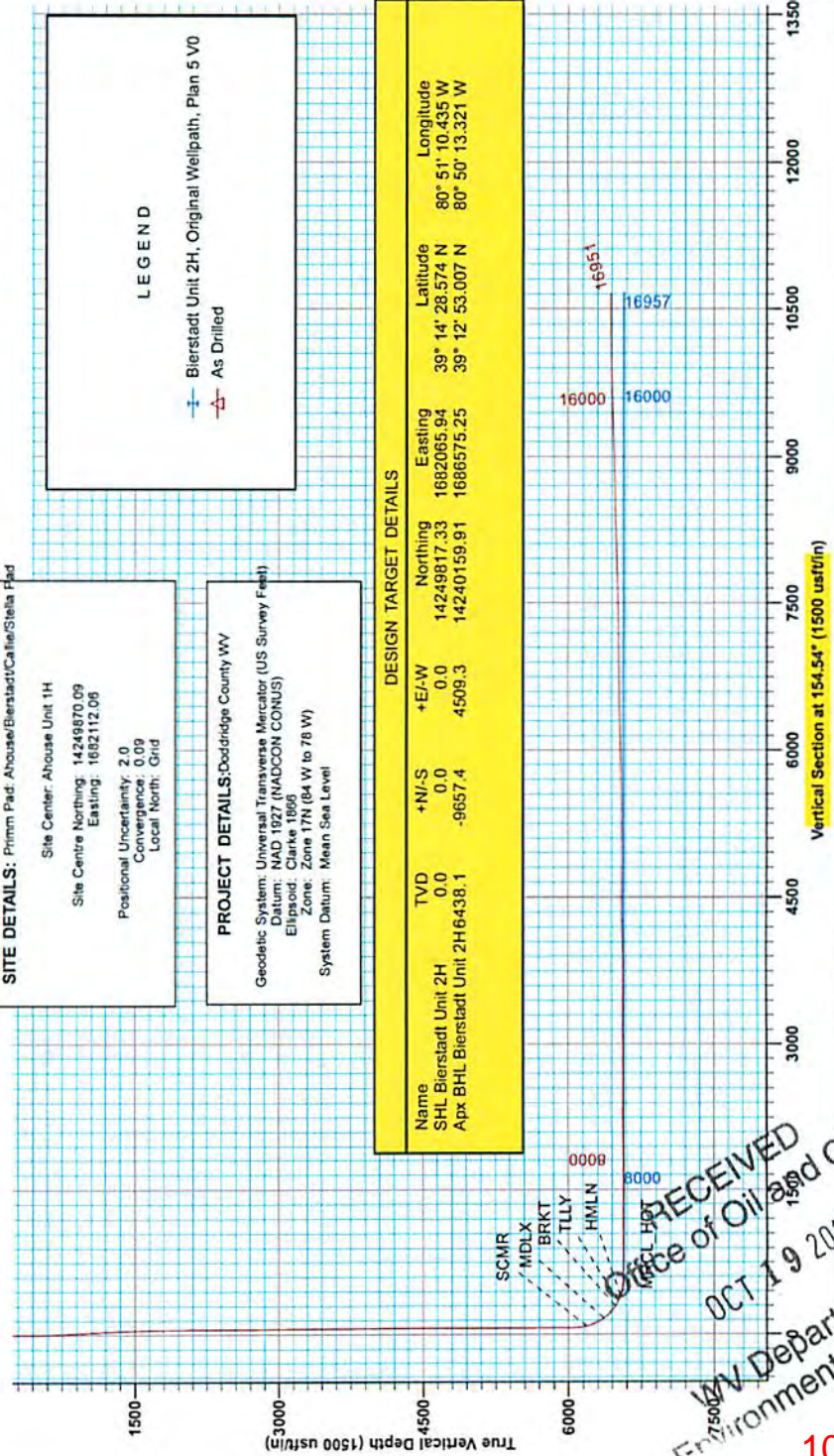
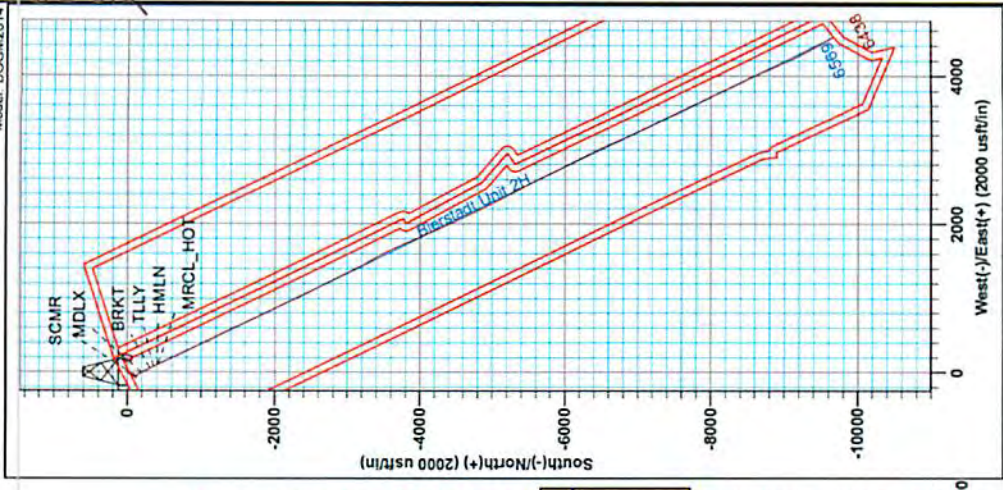
Gene Lightfoot  
 13.56, April 29 2015  
 Scientific Drilling  
 11220 NW 10th Street  
 Yukon OK 73099

**WELL DETAILS** Bierstadt Unit 2H  
 Ground Level: 1008.0  
 Site Centre Northing: 14249817.34  
 Easting: 1682065.95  
 Latitude: 39° 14' 28.574 N  
 Longitude: 80° 51' 10.435 W

**SITE DETAILS:** Pimm Pad, Ahouse/Bierstadt/Calle/Stella Pad  
 Site Center: Ahouse Unit 1H  
 Site Centre Northing: 14249870.09  
 Easting: 1682112.06  
 Positional Uncertainty: 2.0  
 Convergence: 0.09  
 Local North: Grid

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

DESIGN TARGET DETAILS					
Name	TVD	+N/-S	+E/-W	Northing	Longitude
SHL Bierstadt Unit 2H	0.0	0.0	0.0	14249817.33	39° 14' 28.574 N
ApX BHL Bierstadt Unit 2H	6438.1	-9657.4	4509.3	14240159.91	80° 50' 13.321 W
				1686575.25	80° 51' 10.435 W



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17-06562

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# Antero

Doddridge County WV  
Primm Pad: Ahouse/Bierstadt/Callie/Stella Pad  
Bierstadt Unit 2H  
Original Wellpath

Design: As Drilled

## EOW Completion Report

29 April, 2015



Scientific Drilling

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17-06562

EOW Completion Report



<b>Company:</b>	Antero	<b>Local Co-ordinate Reference:</b>	Well Bierstadt Unit 2H
<b>Project:</b>	Doddridge County WV	<b>TVD Reference:</b>	Precision 525: GL 1008' + KB 19' @ 1027.0usft
<b>Site:</b>	Primm Pad: Ahouse/Bierstadt/Callie/Stella Pad	<b>MD Reference:</b>	Precision 525: GL 1008' + KB 19' @ 1027.0usft
<b>Well:</b>	Bierstadt 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 Feet)	<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>	Primm Pad: Ahouse/Bierstadt/Callie/Stella Pad				
<b>Site Position:</b>	<b>Northing:</b>	14,249,870.09 usft	<b>Latitude:</b>	39° 14' 29.095 N	
<b>From:</b> Map	<b>Easting:</b>	1,682,112.06 usft	<b>Longitude:</b>	80° 51' 9.848 W	
<b>Position Uncertainty:</b>	2.0 usft	<b>Slot Radius:</b>	13-3/16"	<b>Grid Convergence:</b>	0.09 °

<b>Well</b>	Bierstadt Unit 2H, Marcellus				
<b>Well Position</b>	<b>+N/-S</b>	0.0 usft	<b>Northing:</b>	14,249,817.34 usft	
	<b>+E/-W</b>	0.0 usft	<b>Easting:</b>	1,682,065.95 usft	
<b>Position Uncertainty</b>	2.0 usft	<b>Wellhead Elevation:</b>	1,027.0 usft	<b>Ground Level:</b>	1,008.0 usft

<b>Wellbore</b>	Original Wellpath			
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Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	BGGM2014	4/15/2015	-8.43	66.77	52,138

<b>Design</b>	As Drilled			
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<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	154.54	

<b>Survey Program</b>	Date 4/29/2015			
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description
106.0	2,506.0	Survey #4 Def Int Gyro (Original Wellpath)	Standard Keeper 104	Standard Wireline Keeper ver 1.0.4
2,602.0	16,951.0	Survey #5 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	0.28	196.27	106.0	-0.2	-0.1	0.3	0.26
131.0	0.47	186.02	131.0	-0.4	-0.1	0.5	0.80
156.0	0.30	192.33	156.0	-0.6	-0.1	0.5	0.70
181.0	0.36	189.89	181.0	-0.7	-0.2	0.6	0.25
206.0	0.43	193.68	206.0	-0.9	-0.2	0.9	0.30
231.0	0.31	178.05	231.0	-1.0	-0.2	1.0	0.41
256.0	0.33	196.05	256.0	-1.2	-0.2	1.0	0.59
281.0	0.22	216.73	281.0	-1.3	-0.3	1.0	0.70
306.0	0.30	181.26	306.0	-1.4	-0.3	1.3	0.78
331.0	0.47	196.22	331.0	-1.6	-0.3		

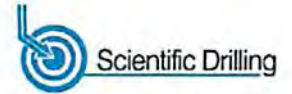
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17-06562

EOW Completion Report



<b>Company:</b>	Antero	<b>Local Co-ordinate Reference:</b>	Well Bierstadt Unit 2H
<b>Project:</b>	Doddridge County WV	<b>TVD Reference:</b>	Precision 525: GL 1008' + KB 19' @ 1027.0usft
<b>Site:</b>	Primm Pad: Ahouse/Bierstadt/Callie/Stella Pad	<b>MD Reference:</b>	Precision 525: GL 1008' + KB 19' @ 1027.0usft
<b>Well:</b>	Bierstadt 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)	
356.0	0.38	193.86	356.0	-1.7	-0.4	1.4	0.37	
381.0	0.32	215.13	381.0	-1.9	-0.4	1.5	0.57	
406.0	0.28	225.80	406.0	-2.0	-0.5	1.6	0.27	
431.0	0.31	208.22	431.0	-2.1	-0.6	1.6	0.38	
456.0	0.43	192.45	456.0	-2.2	-0.7	1.7	0.63	
481.0	0.47	201.84	481.0	-2.4	-0.7	1.9	0.34	
506.0	1.04	201.05	506.0	-2.7	-0.8	2.1	2.28	
528.5	1.65	201.57	528.5	-3.2	-1.0	2.5	2.71	
553.9	2.30	204.10	553.9	-4.0	-1.4	3.0	2.58	
579.3	2.68	205.51	579.3	-5.0	-1.8	3.7	1.51	
604.7	2.92	208.48	604.6	-6.1	-2.4	4.5	1.11	
630.0	3.22	210.66	629.9	-7.3	-3.1	5.3	1.27	
655.4	3.20	211.09	655.2	-8.5	-3.8	6.1	0.12	
680.7	3.56	213.32	680.5	-9.8	-4.6	6.9	1.51	
703.2	4.38	215.90	702.9	-11.1	-5.5	7.6	3.73	
729.1	4.63	217.19	728.7	-12.7	-6.7	8.6	1.04	
753.3	5.23	216.44	752.9	-14.4	-7.9	9.6	2.49	
780.9	6.09	217.18	780.4	-16.5	-9.6	10.8	3.13	
805.7	6.34	217.64	805.0	-18.7	-11.2	12.0	1.03	
830.4	7.19	219.12	829.6	-21.0	-13.0	13.3	3.51	
855.3	7.60	218.70	854.2	-23.4	-15.0	14.7	1.66	
880.0	7.66	218.51	878.7	-26.0	-17.1	16.1	0.26	
904.8	7.74	218.76	903.2	-28.6	-19.1	17.6	0.35	
929.5	7.82	217.90	927.8	-31.2	-21.2	19.1	0.57	
954.3	7.82	216.85	952.3	-33.9	-23.3	20.6	0.58	
979.0	7.50	216.04	976.8	-36.6	-25.2	22.2	1.36	
1,003.8	7.24	216.71	1,001.4	-39.1	-27.1	23.7	1.11	
1,028.5	6.93	216.76	1,025.9	-41.6	-28.9	25.1	1.25	
1,056.0	6.52	216.60	1,053.2	-44.1	-30.8	26.6	1.50	
1,080.6	6.47	216.87	1,077.7	-46.4	-32.5	27.9	0.24	
1,105.5	6.30	216.71	1,102.4	-48.6	-34.2	29.2	0.69	
1,130.1	6.22	216.70	1,126.9	-50.7	-35.8	30.4	0.32	
1,155.0	5.93	216.33	1,151.6	-52.9	-37.3	31.7	1.18	
1,179.6	5.70	216.66	1,176.1	-54.9	-38.8	32.8	0.95	
1,204.5	5.69	216.15	1,200.9	-56.9	-40.3	34.0	0.21	
1,229.1	5.41	216.16	1,225.4	-58.8	-41.7	35.1	1.14	
1,254.1	5.06	215.65	1,250.2	-60.6	-43.0	36.2	1.42	
1,278.7	4.85	215.99	1,274.7	-62.3	-44.3	37.2	0.86	
1,303.6	4.61	215.78	1,299.5	-64.0	-45.5	38.2	0.97	
1,328.7	4.57	216.75	1,324.6	-65.6	-46.7	39.2	0.35	
1,355.7	4.44	216.70	1,351.5	-67.3	-47.9	40.2	0.30	
1,380.5	4.13	216.83	1,376.2	-68.8	-49.0	41.0	1.25	
1,405.7	3.95	217.69	1,401.3	-70.2	-50.1	41.9	1.75	
1,428.3	3.81	217.74	1,423.9	-71.4	-51.1	42.5	0.62	

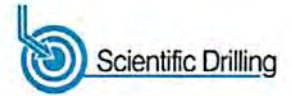
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EOW Completion Report



<b>Company:</b> Antero	<b>Local Co-ordinate Reference:</b> Well Bierstadt Unit 2H
<b>Project:</b> Doddridge County WV	<b>TVD Reference:</b> Precision 525: GL 1008' + KB 19' @ 1027.0usft
<b>Site:</b> Primm Pad: Ahouse/Bierstadt/Callie/Stella Pad	<b>MD Reference:</b> Precision 525: GL 1008' + KB 19' @ 1027.0usft
<b>Well:</b> Bierstadt 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)
1,453.7	3.60	218.75	1,449.3	-72.7	-52.1	43.3	0.86
1,478.5	3.44	218.30	1,474.1	-73.9	-53.0	43.9	0.65
1,503.7	3.29	219.44	1,499.2	-75.1	-54.0	44.6	0.65
1,528.5	3.17	220.17	1,523.9	-76.1	-54.8	45.2	0.51
1,553.6	2.96	219.53	1,549.0	-77.2	-55.7	45.7	0.85
1,578.5	2.71	220.33	1,573.8	-78.1	-56.5	46.2	1.02
1,603.6	2.57	221.23	1,599.0	-79.0	-57.3	46.7	0.58
1,628.5	2.34	219.85	1,623.8	-79.8	-57.9	47.1	0.96
1,653.6	2.13	220.77	1,648.9	-80.5	-58.6	47.5	0.85
1,678.5	1.89	217.58	1,673.8	-81.2	-59.1	47.9	1.06
1,703.6	1.79	217.30	1,698.9	-81.9	-59.6	48.3	0.40
1,728.5	1.62	216.85	1,723.7	-82.4	-60.1	48.6	0.69
1,753.6	1.40	213.30	1,748.9	-83.0	-60.4	48.9	0.95
1,778.5	1.28	214.09	1,773.8	-83.5	-60.8	49.2	0.49
1,803.6	1.16	210.05	1,798.8	-83.9	-61.1	49.5	0.59
1,828.5	1.09	212.15	1,823.7	-84.3	-61.3	49.8	0.33
1,853.6	0.92	204.13	1,848.8	-84.7	-61.5	50.1	0.88
1,878.5	0.84	202.01	1,873.7	-85.1	-61.7	50.3	0.35
1,903.5	0.94	206.46	1,898.8	-85.4	-61.8	50.6	0.48
1,928.4	0.83	201.52	1,923.7	-85.8	-62.0	50.8	0.54
1,953.5	0.83	204.90	1,948.8	-86.1	-62.1	51.1	0.20
1,978.4	0.83	206.22	1,973.7	-86.4	-62.3	51.3	0.08
2,003.4	0.86	197.32	1,998.6	-86.8	-62.4	51.5	0.54
2,028.3	0.85	201.73	2,023.5	-87.1	-62.5	51.8	0.27
2,053.5	0.70	201.48	2,048.7	-87.5	-62.7	52.0	0.60
2,078.4	0.72	210.07	2,073.6	-87.7	-62.8	52.2	0.43
2,103.5	0.66	209.32	2,098.7	-88.0	-63.0	52.4	0.24
2,128.4	0.51	209.73	2,123.6	-88.2	-63.1	52.5	0.60
2,155.9	0.42	192.19	2,151.1	-88.4	-63.2	52.7	0.61
2,180.3	0.42	202.93	2,175.5	-88.6	-63.2	52.8	0.32
2,204.8	0.57	203.66	2,200.0	-88.8	-63.3	53.0	0.61
2,229.1	0.37	200.62	2,224.3	-89.0	-63.4	53.1	0.83
2,253.6	0.41	190.46	2,248.8	-89.1	-63.4	53.2	0.33
2,280.7	0.41	213.33	2,275.9	-89.3	-63.5	53.3	0.60
2,304.9	0.39	193.22	2,300.1	-89.5	-63.6	53.4	0.58
2,329.5	0.28	179.68	2,324.7	-89.6	-63.6	53.6	0.55
2,353.7	0.44	198.78	2,348.9	-89.7	-63.6	53.7	0.82
2,380.9	0.39	202.29	2,376.1	-89.9	-63.7	53.8	0.21
2,405.3	0.36	207.70	2,400.5	-90.1	-63.7	53.9	0.19
2,429.7	0.40	199.89	2,424.9	-90.2	-63.8	54.0	0.27
2,454.1	0.44	196.04	2,449.3	-90.4	-63.9	54.2	0.20
2,478.5	0.49	191.45	2,473.7	-90.6	-63.9	54.3	0.26
2,506.0	0.49	199.42	2,501.2	-90.8	-64.0	54.5	0.25
2,602.0	0.71	174.83	2,597.2	-91.8	-64.0	58.3	0.35
2,691.0	0.64	196.97	2,686.2	-92.8	-64.1	56.2	0.30

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EOW Completion Report



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<b>Project:</b>	Doddridge County WV	<b>TVD Reference:</b>	Precision 525: GL 1008' + KB 19' @ 1027.0usft
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<b>Well:</b>	Bierstadt 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)	
2,781.0	0.58	205.29	2,776.2	-93.7	-64.5	56.9	0.12	
2,871.0	0.56	205.66	2,866.2	-94.5	-64.9	57.5	0.02	
2,960.0	0.38	213.05	2,955.2	-95.2	-65.2	57.9	0.21	
3,050.0	0.40	211.43	3,045.2	-95.7	-65.5	58.2	0.03	
3,139.0	0.43	175.65	3,134.2	-96.3	-65.7	58.7	0.29	
3,229.0	0.59	167.14	3,224.2	-97.1	-65.6	59.5	0.20	
3,318.0	0.42	188.05	3,313.2	-97.8	-65.5	60.2	0.28	
3,408.0	0.54	192.96	3,403.2	-98.6	-65.6	60.8	0.14	
3,498.0	0.61	196.97	3,493.1	-99.4	-65.9	61.5	0.09	
3,588.0	0.38	196.46	3,583.1	-100.2	-66.1	62.0	0.26	
3,677.0	0.71	200.05	3,672.1	-101.0	-66.4	62.6	0.37	
3,767.0	0.54	184.46	3,762.1	-101.9	-66.6	63.4	0.27	
3,857.0	0.45	206.54	3,852.1	-102.7	-66.8	64.0	0.23	
3,946.0	0.56	198.86	3,941.1	-103.4	-67.1	64.5	0.14	
4,036.0	0.88	193.14	4,031.1	-104.5	-67.4	65.4	0.36	
4,126.0	0.55	187.88	4,121.1	-105.6	-67.6	66.3	0.37	
4,215.0	0.71	179.56	4,210.1	-106.6	-67.7	67.1	0.21	
4,305.0	1.21	194.89	4,300.1	-108.0	-67.9	68.4	0.62	
4,395.0	0.50	242.45	4,390.1	-109.1	-68.5	69.1	1.05	
4,484.0	0.27	303.52	4,479.1	-109.2	-69.0	68.9	0.49	
4,574.0	0.63	261.46	4,569.1	-109.2	-69.7	68.6	0.52	
4,664.0	0.68	261.12	4,659.1	-109.3	-70.7	68.3	0.06	
4,754.0	0.58	260.62	4,749.1	-109.5	-71.7	68.0	0.11	
4,843.0	0.50	250.71	4,838.1	-109.7	-72.5	67.9	0.14	
4,933.0	0.47	275.65	4,928.1	-109.8	-73.2	67.6	0.23	
5,022.0	0.64	270.62	5,017.1	-109.7	-74.1	67.2	0.20	
5,112.0	0.66	265.65	5,107.1	-109.8	-75.1	66.8	0.07	
5,202.0	0.72	247.18	5,197.0	-110.0	-76.1	66.6	0.25	
5,292.0	1.07	220.71	5,287.0	-110.9	-77.2	66.9	0.59	
5,381.0	0.74	227.45	5,376.0	-111.9	-78.2	67.4	0.39	
5,471.0	0.83	221.19	5,466.0	-112.8	-79.0	67.9	0.14	
5,561.0	0.74	154.88	5,556.0	-113.8	-79.2	68.7	0.96	
5,650.0	0.64	182.72	5,645.0	-114.8	-79.0	69.7	0.39	
5,740.0	0.41	224.42	5,735.0	-115.5	-79.2	70.3	0.48	
5,830.0	0.67	226.14	5,825.0	-116.1	-79.8	70.5	0.29	
5,920.0	0.96	256.48	5,915.0	-116.7	-81.0	70.5	0.57	
5,964.0	1.02	254.10	5,959.0	-116.9	-81.7	70.4	0.17	
6,009.0	0.92	258.10	6,004.0	-117.1	-82.4	70.3	0.27	
6,054.0	4.03	83.21	6,048.9	-116.9	-81.2	70.2	10.99	
6,099.0	7.04	86.47	6,093.7	-116.6	-76.9	70.1	6.72	
6,144.0	11.43	109.52	6,138.1	-117.9	-69.9	70.0	12.57	
6,188.0	16.86	119.91	6,180.8	-122.5	-60.3	70.0	13.58	
6,198.0	17.70	122.58	6,190.4	-124.1	-57.7	70.0	13.86	

SCMR

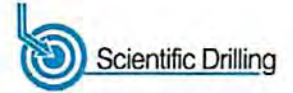
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17-06562

EOW Completion Report



<b>Company:</b> Antero	<b>Local Co-ordinate Reference:</b> Well Bierstadt Unit 2H
<b>Project:</b> Doddridge County WV	<b>TVD Reference:</b> Precision 525: GL 1008' + KB 19' @ 1027.0usft
<b>Site:</b> Primm Pad: Ahouse/Bierstadt/Callie/Stella Pad	<b>MD Reference:</b> Precision 525: GL 1008' + KB 19' @ 1027.0usft
<b>Well:</b> Bierstadt 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

MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	N/S (usft)	E/W (usft)	V. Sec (usft)	DLeg (°/100usft)
6,233.0	20.88	130.18	6,223.4	-131.0	-48.5	97.4	11.56
6,278.0	25.41	137.73	6,264.8	-143.3	-35.9	114.0	12.02
6,323.0	29.24	147.60	6,304.8	-159.7	-23.5	134.1	13.16
6,368.0	32.97	152.78	6,343.3	-179.9	-12.0	157.3	10.19
6,393.0	35.71	153.28	6,363.9	-192.5	-5.6	171.4	11.01
<b>MDLX</b>							
6,413.0	37.90	153.64	6,379.9	-203.2	-0.2	183.4	11.01
6,458.0	43.65	153.15	6,414.0	-229.5	12.9	212.8	12.80
6,502.0	49.64	153.04	6,444.2	-258.0	27.4	244.7	13.61
6,547.0	55.26	152.90	6,471.6	-289.8	43.6	280.4	12.49
6,571.0	57.91	153.18	6,484.8	-307.6	52.7	300.4	11.06
<b>BRKT</b>							
6,592.0	60.22	153.41	6,495.6	-323.7	60.8	318.4	11.06
6,629.0	63.78	153.67	6,513.0	-352.9	75.4	351.1	9.64
<b>TLLY</b>							
6,637.0	64.55	153.73	6,516.5	-359.4	78.5	358.3	9.64
6,682.0	69.25	154.21	6,534.1	-396.6	96.7	399.7	10.49
6,689.0	69.89	154.20	6,536.6	-402.5	99.6	406.2	9.18
<b>HMLN</b>							
6,709.0	71.73	154.19	6,543.1	-419.5	107.8	425.1	9.18
<b>MRCL_HOT</b>							
6,726.0	73.29	154.17	6,548.3	-434.1	114.8	441.3	9.18
6,771.0	79.94	154.95	6,558.7	-473.6	133.6	485.1	14.87
6,816.0	84.02	155.20	6,564.9	-514.0	152.4	529.6	9.08
6,840.0	86.44	155.40	6,566.9	-535.7	162.4	553.5	10.12
6,885.0	89.66	155.04	6,568.5	-576.6	181.2	598.5	7.20
6,975.0	88.59	154.68	6,569.8	-658.0	219.5	688.5	1.25
7,064.0	89.43	154.76	6,571.4	-738.5	257.5	777.5	0.95
7,154.0	89.80	154.01	6,572.0	-819.6	296.4	867.4	0.93
7,244.0	92.02	153.43	6,570.6	-900.3	336.2	957.4	2.55
7,333.0	91.51	154.75	6,567.8	-980.3	375.1	1,046.4	1.59
7,423.0	90.47	154.01	6,566.3	-1,061.5	414.0	1,136.4	1.42
7,513.0	89.97	155.00	6,565.9	-1,142.7	452.7	1,226.4	1.23
7,602.0	89.73	152.84	6,566.1	-1,222.6	491.9	1,315.3	2.44
7,692.0	88.29	151.82	6,567.7	-1,302.3	533.6	1,405.3	1.96
7,782.0	89.03	153.37	6,569.8	-1,382.2	575.1	1,495.2	1.91
7,871.0	90.57	156.55	6,570.1	-1,462.8	612.7	1,584.2	3.97
7,961.0	89.80	155.36	6,569.8	-1,545.0	649.4	1,674.7	1.57
8,051.0	90.07	156.04	6,569.9	-1,627.0	686.4	1,765.1	0.81
8,140.0	90.87	155.72	6,569.2	-1,708.3	722.8	1,853.1	0.97
8,230.0	89.63	154.39	6,568.8	-1,789.9	760.8	1,943.1	2.03
8,320.0	90.74	154.16	6,568.5	-1,870.9	799.8	2,033.1	2.26
8,410.0	90.03	154.83	6,567.9	-1,952.2	838.6	2,123.1	1.08
8,499.0	89.33	153.82	6,568.4	-2,032.4	877.1	2,212.1	1.38
8,589.0	89.46	155.04	6,569.4	-2,113.6	916.0	2,302.1	1.36

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17-06562

EOW Completion Report



<b>Company:</b>	Antero	<b>Local Co-ordinate Reference:</b>	Well Bierstadt Unit 2H
<b>Project:</b>	Doddridge County WV	<b>TVD Reference:</b>	Precision 525: GL 1008' + KB 19' @ 1027.0usft
<b>Site:</b>	Primm Pad: Ahouse/Bierstadt/Callie/Stella Pad	<b>MD Reference:</b>	Precision 525: GL 1008' + KB 19' @ 1027.0usft
<b>Well:</b>	Bierstadt 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)
8,678.0	89.63	155.97	6,570.1	-2,194.5	952.9	2,391.0	1.06
8,768.0	89.83	155.72	6,570.5	-2,276.7	989.7	2,481.0	0.36
8,858.0	91.14	156.67	6,569.7	-2,359.0	1,026.0	2,571.0	1.80
8,947.0	90.27	152.97	6,568.6	-2,439.5	1,063.9	2,660.0	4.27
9,037.0	90.13	152.96	6,568.3	-2,519.7	1,104.8	2,749.9	0.16
9,127.0	90.07	152.57	6,568.2	-2,599.7	1,146.0	2,839.9	0.44
9,216.0	91.78	151.05	6,566.7	-2,678.1	1,188.0	2,928.8	2.57
9,306.0	91.85	153.57	6,563.9	-2,757.8	1,229.8	3,018.6	2.80
9,396.0	90.30	155.59	6,562.2	-2,839.1	1,268.4	3,108.6	2.83
9,486.0	89.10	155.16	6,562.7	-2,920.9	1,305.9	3,198.6	1.42
9,575.0	89.83	154.29	6,563.5	-3,001.3	1,343.9	3,287.6	1.28
9,665.0	89.90	155.45	6,563.7	-3,082.8	1,382.1	3,377.6	1.29
9,755.0	89.76	153.67	6,564.0	-3,164.1	1,420.8	3,467.6	1.98
9,843.0	88.15	150.65	6,565.6	-3,241.9	1,461.9	3,555.5	3.89
9,933.0	89.60	149.37	6,567.3	-3,319.8	1,506.9	3,645.2	2.15
10,023.0	90.77	151.17	6,567.0	-3,398.0	1,551.5	3,734.9	2.39
10,112.0	91.38	154.62	6,565.4	-3,477.2	1,592.0	3,823.9	3.94
10,202.0	90.37	154.03	6,564.0	-3,558.3	1,631.0	3,913.8	1.30
10,292.0	91.72	155.15	6,562.4	-3,639.5	1,669.6	4,003.8	1.95
10,382.0	93.22	157.70	6,558.5	-3,721.9	1,705.6	4,093.7	3.28
10,471.0	92.95	157.50	6,553.7	-3,804.1	1,739.5	4,182.4	0.38
10,561.0	90.84	157.87	6,550.7	-3,887.3	1,773.6	4,272.2	2.38
10,651.0	90.74	157.56	6,549.5	-3,970.6	1,807.7	4,362.1	0.36
10,740.0	90.10	157.51	6,548.8	-4,052.8	1,841.7	4,451.0	0.72
10,830.0	89.80	157.35	6,548.9	-4,135.9	1,876.3	4,540.9	0.38
10,920.0	90.47	156.99	6,548.7	-4,218.9	1,911.2	4,630.8	0.85
11,009.0	89.73	157.17	6,548.5	-4,300.9	1,945.9	4,719.7	0.86
11,099.0	90.97	156.11	6,548.0	-4,383.5	1,981.5	4,809.6	1.81
11,189.0	89.30	156.40	6,547.8	-4,465.9	2,017.8	4,899.6	1.88
11,279.0	89.93	155.54	6,548.4	-4,548.1	2,054.4	4,989.5	1.18
11,368.0	89.06	154.75	6,549.2	-4,628.8	2,091.8	5,078.5	1.32
11,458.0	89.46	154.31	6,550.3	-4,710.0	2,130.5	5,168.5	0.66
11,548.0	90.30	155.03	6,550.5	-4,791.4	2,169.0	5,258.5	1.23
11,637.0	90.30	155.23	6,550.0	-4,872.1	2,206.5	5,347.5	0.22
11,727.0	91.82	154.00	6,548.4	-4,953.4	2,245.0	5,437.5	2.17
11,817.0	90.80	152.96	6,546.3	-5,033.9	2,285.2	5,527.4	1.62
11,906.0	90.97	150.63	6,545.0	-5,112.4	2,327.3	5,616.3	2.62
11,996.0	91.14	153.35	6,543.3	-5,191.8	2,369.5	5,706.2	3.03
12,086.0	90.74	152.55	6,541.8	-5,271.9	2,410.5	5,796.2	0.99
12,175.0	90.98	153.24	6,540.5	-5,351.2	2,451.0	5,885.9	0.82
12,265.0	90.17	153.38	6,539.6	-5,431.6	2,491.4	5,975.1	0.91
12,355.0	91.38	153.99	6,538.4	-5,512.2	2,531.3	6,065.1	0.97
12,445.0	91.41	152.17	6,536.2	-5,592.4	2,572.0	6,155.1	2.02
12,534.0	92.11	153.17	6,533.4	-5,671.5	2,612.9	6,243.9	1.37

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17-06562

EOW Completion Report



<b>Company:</b>	Antero	<b>Local Co-ordinate Reference:</b>	Well Bierstadt Unit 2H
<b>Project:</b>	Doddridge County WV	<b>TVD Reference:</b>	Precision 525: GL 1008' + KB 19' @ 1027.0usft
<b>Site:</b>	Primm Pad: Ahouse/Bierstadt/Callie/Stella Pad	<b>MD Reference:</b>	Precision 525: GL 1008' + KB 19' @ 1027.0usft
<b>Well:</b>	Bierstadt 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)
12,624.0	91.30	154.39	6,530.8	-5,752.2	2,652.6	6,333.9	1.63
12,714.0	90.23	155.23	6,529.6	-5,833.6	2,690.9	6,423.9	1.51
12,803.0	90.64	153.75	6,528.9	-5,913.9	2,729.3	6,512.9	1.73
12,893.0	89.76	153.27	6,528.6	-5,994.5	2,769.4	6,602.8	1.11
12,983.0	91.81	152.14	6,527.3	-6,074.4	2,810.7	6,692.8	2.60
13,072.0	91.11	152.93	6,525.1	-6,153.4	2,851.7	6,781.7	1.19
13,162.0	90.23	153.92	6,524.0	-6,233.9	2,892.0	6,871.7	1.47
13,252.0	91.71	152.62	6,522.5	-6,314.2	2,932.4	6,961.6	2.19
13,342.0	91.33	154.44	6,520.1	-6,394.8	2,972.5	7,051.6	2.07
13,431.0	90.77	153.62	6,518.5	-6,474.8	3,011.5	7,140.6	1.12
13,521.0	90.54	155.95	6,517.4	-6,556.2	3,049.8	7,230.5	2.60
13,611.0	92.11	157.36	6,515.4	-6,638.8	3,085.5	7,320.5	2.34
13,701.0	91.31	156.46	6,512.7	-6,721.5	3,120.8	7,410.3	1.34
13,790.0	91.75	155.22	6,510.3	-6,802.7	3,157.2	7,499.3	1.48
13,880.0	90.74	155.22	6,508.3	-6,884.4	3,194.9	7,589.3	1.12
13,970.0	91.91	154.98	6,506.3	-6,966.0	3,232.8	7,679.2	1.33
14,059.0	91.34	154.64	6,503.7	-7,046.5	3,270.6	7,768.2	0.75
14,149.0	92.15	153.90	6,501.0	-7,127.6	3,309.7	7,858.1	1.22
14,239.0	91.79	155.22	6,497.9	-7,208.8	3,348.3	7,948.1	1.52
14,329.0	90.91	155.23	6,495.8	-7,290.5	3,386.0	8,038.1	0.98
14,418.0	91.55	154.17	6,493.9	-7,370.9	3,424.1	8,127.0	1.39
14,508.0	91.11	153.34	6,491.8	-7,451.6	3,463.9	8,217.0	1.04
14,598.0	92.09	153.62	6,489.3	-7,532.1	3,504.0	8,306.9	1.13
14,688.0	91.04	154.47	6,486.8	-7,613.0	3,543.4	8,396.9	1.50
14,777.0	92.01	153.97	6,484.4	-7,693.1	3,582.1	8,485.9	1.23
14,867.0	91.57	155.25	6,481.6	-7,774.4	3,620.7	8,575.8	1.50
14,957.0	90.67	156.02	6,479.9	-7,856.3	3,657.8	8,665.8	1.32
15,046.0	91.65	155.06	6,478.1	-7,937.3	3,694.6	8,754.8	1.54
15,136.0	91.04	155.42	6,476.0	-8,019.0	3,732.3	8,844.7	0.79
15,226.0	91.98	154.08	6,473.6	-8,100.4	3,770.7	8,934.7	1.82
15,315.0	90.84	155.50	6,471.4	-8,180.9	3,808.6	9,023.7	2.05
15,405.0	92.11	155.04	6,469.1	-8,262.6	3,846.2	9,113.6	1.50
15,495.0	91.21	154.61	6,466.5	-8,344.0	3,884.5	9,203.6	1.11
15,585.0	91.51	153.64	6,464.3	-8,425.0	3,923.7	9,293.5	1.13
15,674.0	91.15	153.42	6,462.3	-8,504.6	3,963.4	9,382.5	0.47
15,764.0	93.90	157.30	6,458.3	-8,586.3	4,000.9	9,472.4	5.28
15,854.0	92.08	156.38	6,453.6	-8,669.0	4,036.2	9,562.2	2.27
15,943.0	91.58	157.67	6,450.8	-8,750.9	4,071.0	9,651.1	1.55
16,033.0	90.80	158.72	6,448.9	-8,834.4	4,104.4	9,740.9	1.45
16,123.0	91.24	156.60	6,447.3	-8,917.6	4,138.6	9,830.7	2.41
16,212.0	90.67	156.87	6,445.8	-8,999.4	4,173.7	9,919.6	1.41
16,302.0	90.70	155.60	6,444.7	-9,081.7	4,210.0	10,009.5	1.41
16,392.0	90.88	152.86	6,443.5	-9,162.8	4,249.1	10,099.6	3.05
16,481.0	91.91	153.61	6,441.3	-9,242.2	4,289.2	10,188.5	1.43

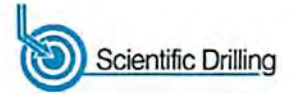
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17-06562

EOW Completion Report



<b>Company:</b>	Antero	<b>Local Co-ordinate Reference:</b>	Well Bierstadt Unit 2H
<b>Project:</b>	Doddridge County WV	<b>TVD Reference:</b>	Precision 525: GL 1008' + KB 19' @ 1027.0usft
<b>Site:</b>	Primm Pad: Ahouse/Bierstadt/Callie/Stella Pad	<b>MD Reference:</b>	Precision 525: GL 1008' + KB 19' @ 1027.0usft
<b>Well:</b>	Bierstadt 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

MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	N/S (usft)	E/W (usft)	V. Sec (usft)	DLeg (°/100usft)
16,571.0	89.76	151.54	6,440.0	-9,322.1	4,330.6	10,278.4	3.32
16,660.0	90.64	151.98	6,439.7	-9,400.5	4,372.7	10,367.3	1.11
16,750.0	89.60	153.06	6,439.5	-9,480.3	4,414.3	10,457.3	1.67
16,840.0	90.78	151.62	6,439.2	-9,560.0	4,456.0	10,547.2	2.07
16,892.0	90.50	151.23	6,438.6	-9,605.7	4,480.9	10,599.1	0.92
16,951.0	90.50	151.23	6,438.1	-9,657.4	4,509.3	10,658.0	0.00

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/S (usft)	+E/W (usft)	
6,198.0	6,190.4	-124.1	-57.7	SCMR
6,393.0	6,363.9	-192.5	-5.6	MDLX
6,571.0	6,484.8	-307.6	52.7	BRKT
6,629.0	6,513.0	-352.9	75.4	TLLY
6,689.0	6,536.6	-402.5	99.6	HMLN
6,709.0	6,543.1	-419.5	107.8	MRCL_HOT

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

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