



Bill Barrett Corporation

Bill Barrett Corp.

Weld County, CO NAD 83

Anschutz State 5-62-22_23 NWNW Pad

Anschutz State 5-62-22-1609B2

OH

Design: OH

Standard Survey Report

29 October, 2015



Scientific Drilling

www.scientificdrilling.com



Company:	Bill Barrett Corp.	Local Co-ordinate Reference:	Well Anschutz State 5-62-22-1609B2
Project:	Weld County, CO NAD 83	TVD Reference:	GL 4730' & KB 16' @ 4746.00ft (Cade 24)
Site:	Anschutz State 5-62-22_23 NWNW Pad	MD Reference:	GL 4730' & KB 16' @ 4746.00ft (Cade 24)
Well:	Anschutz State 5-62-22-1609B2	North Reference:	True
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	OH	Database:	Casper District

Project	Weld County, CO NAD 83		
Map System:	US State Plane 1983	System Datum:	Mean Sea Level
Geo Datum:	North American Datum 1983		
Map Zone:	Colorado Northern Zone		

Site	Anschutz State 5-62-22_23 NWNW Pad, Site Center: AS 5-62-22-1609B2				
Site Position:		Northing:	1,387,395.10 usft	Latitude:	40° 23' 26.801 N
From:	Lat/Long	Easting:	3,329,229.54 usft	Longitude:	104° 19' 4.861 W
Position Uncertainty:	0.00 ft	Slot Radius:	13.200 in	Grid Convergence:	0.76 °

Well	Anschutz State 5-62-22-1609B2, 660' FNL 500' FWL Sec 22 T5N R62W					
Well Position	+N/-S	0.00 ft	Northing:	1,387,395.03 usft	Latitude:	40° 23' 26.800 N
	+E/-W	0.00 ft	Easting:	3,329,229.54 usft	Longitude:	104° 19' 4.861 W
Position Uncertainty		0.00 ft	Wellhead Elevation:	0.00 ft	Ground Level:	4,730.00 ft

Wellbore	OH				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	BGGM2015	10/12/2015	8.27	67.03	52,649

Design	OH				
Audit Notes:					
Version:	1.0	Phase:	ACTUAL	Tie On Depth:	0.00
Vertical Section:	Depth From (TVD) (ft)	+N/-S (ft)	+E/-W (ft)	Direction (°)	
	0.00	0.00	0.00	88.90	

Survey Program	Date	10/29/2015			
From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description	
100.00	723.00	Survey #1 - Surface (OH)	NS-GYRO-MS	North sensing gyrocompassing m/s	
885.00	6,634.00	Survey #2 - Vertical / Curve (OH)	SDI MWD	SDI MWD - Standard ver 1.0.1	
6,700.00	16,391.00	Survey #3 - Lateral (OH)	SDI MWD	SDI MWD - Standard ver 1.0.1	

Survey										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
100.00	0.30	89.11	100.00	0.00	0.26	0.26	0.30	0.30	0.00	
First MS Survey										
200.00	0.17	178.62	200.00	-0.14	0.53	0.52	0.34	-0.13	89.51	
300.00	1.00	326.64	299.99	0.44	0.05	0.06	1.15	0.83	148.02	
400.00	0.89	321.10	399.98	1.77	-0.92	-0.88	0.14	-0.11	-5.54	
500.00	0.82	316.87	499.97	2.90	-1.89	-1.84	0.09	-0.07	-4.23	
600.00	0.23	302.71	599.97	3.53	-2.55	-2.48	0.60	-0.59	-14.16	
700.00	0.23	250.44	699.96	3.57	-2.91	-2.84	0.20	0.00	-52.27	

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Well:	Anschutz State 5-62-22-1609B2	North Reference:	True
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	OH	Database:	Casper District

Survey										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	
723.00	0.36	265.47	722.96	3.55	-3.03	-2.96	0.65	0.57	65.35	
Last MS Survey										
885.00	0.85	290.93	884.95	3.94	-4.65	-4.58	0.34	0.30	15.72	
First SDI MWD Survey										
977.00	0.85	291.69	976.94	4.44	-5.93	-5.84	0.01	0.00	0.83	
1,069.00	2.14	252.78	1,068.91	4.18	-8.20	-8.12	1.71	1.40	-42.29	
1,161.00	4.78	217.74	1,160.75	0.64	-12.19	-12.17	3.55	2.87	-38.09	
1,252.00	5.95	207.10	1,251.35	-6.56	-16.66	-16.78	1.68	1.29	-11.69	
1,344.00	6.91	211.83	1,342.77	-15.51	-21.75	-22.04	1.19	1.04	5.14	
1,436.00	7.78	218.39	1,434.01	-25.09	-28.54	-29.01	1.31	0.95	7.13	
1,527.00	8.47	218.62	1,524.10	-35.15	-36.54	-37.21	0.76	0.76	0.25	
1,619.00	7.55	221.65	1,615.20	-44.96	-44.79	-45.64	1.10	-1.00	3.29	
1,710.00	7.30	221.12	1,705.44	-53.79	-52.57	-53.59	0.28	-0.27	-0.58	
1,801.00	6.70	225.58	1,795.76	-61.86	-60.16	-61.34	0.89	-0.66	4.90	
1,893.00	6.38	230.45	1,887.16	-68.87	-67.93	-69.24	0.70	-0.35	5.29	
1,985.00	5.25	229.18	1,978.69	-74.87	-75.06	-76.48	1.24	-1.23	-1.38	
2,077.00	5.42	226.44	2,070.29	-80.62	-81.39	-82.93	0.33	0.18	-2.98	
2,168.00	6.63	232.45	2,160.79	-86.78	-88.67	-90.32	1.50	1.33	6.60	
2,260.00	6.64	231.25	2,252.17	-93.35	-97.03	-98.81	0.15	0.01	-1.30	
2,352.00	5.91	225.31	2,343.62	-100.01	-104.55	-106.45	1.06	-0.79	-6.46	
2,446.00	7.82	230.99	2,436.94	-107.44	-112.96	-115.00	2.15	2.03	6.04	
2,540.00	7.74	230.35	2,530.08	-115.50	-122.80	-125.00	0.13	-0.09	-0.68	
2,635.00	7.31	231.06	2,624.26	-123.38	-132.43	-134.77	0.46	-0.45	0.75	
2,729.00	6.86	228.64	2,717.54	-130.85	-141.29	-143.78	0.57	-0.48	-2.57	
2,823.00	6.93	231.27	2,810.86	-138.11	-149.93	-152.55	0.34	0.07	2.80	
2,918.00	6.28	229.55	2,905.23	-145.07	-158.36	-161.11	0.72	-0.68	-1.81	
3,012.00	6.94	226.63	2,998.61	-152.30	-166.40	-169.29	0.79	0.70	-3.11	
3,106.00	6.86	218.83	3,091.93	-160.58	-174.04	-177.10	1.00	-0.09	-8.30	
3,200.00	6.49	218.81	3,185.29	-169.09	-180.89	-184.11	0.39	-0.39	-0.02	
3,294.00	7.26	225.21	3,278.61	-177.41	-188.44	-191.81	1.15	0.82	6.81	
3,388.00	6.59	219.69	3,371.93	-185.75	-196.10	-199.63	1.00	-0.71	-5.87	
3,483.00	7.67	223.60	3,466.19	-194.53	-203.95	-207.65	1.25	1.14	4.12	
3,577.00	9.60	221.95	3,559.12	-204.91	-213.52	-217.41	2.07	2.05	-1.76	
3,671.00	10.94	226.59	3,651.62	-216.87	-225.24	-229.36	1.67	1.43	4.94	
3,766.00	11.50	227.85	3,744.80	-229.42	-238.81	-243.17	0.64	0.59	1.33	
3,861.00	11.26	224.33	3,837.93	-242.41	-252.31	-256.92	0.77	-0.25	-3.71	
3,955.00	10.04	229.49	3,930.32	-254.29	-264.96	-269.79	1.65	-1.30	5.49	
4,050.00	8.51	226.40	4,024.07	-264.52	-276.34	-281.37	1.69	-1.61	-3.25	
4,144.00	7.04	222.24	4,117.21	-273.58	-285.25	-290.45	1.67	-1.56	-4.43	
4,239.00	5.76	236.10	4,211.62	-280.55	-293.12	-298.45	2.10	-1.35	14.59	
4,333.00	6.06	240.24	4,305.12	-285.65	-301.35	-306.77	0.55	0.32	4.40	
4,427.00	5.66	241.45	4,398.63	-290.33	-309.72	-315.24	0.45	-0.43	1.29	
4,522.00	6.04	239.54	4,493.13	-295.10	-318.15	-323.75	0.45	0.40	-2.01	
4,616.00	7.11	235.49	4,586.51	-300.90	-327.21	-332.92	1.24	1.14	-4.31	

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Well:	Anschutz State 5-62-22-1609B2	North Reference:	True
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	OH	Database:	Casper District

Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
4,710.00	6.77	229.49	4,679.83	-307.80	-336.21	-342.06	0.85	-0.36	-6.38
4,804.00	6.48	227.68	4,773.20	-314.97	-344.35	-350.33	0.38	-0.31	-1.93
4,899.00	6.65	227.65	4,867.57	-322.28	-352.37	-358.50	0.18	0.18	-0.03
4,994.00	4.88	220.73	4,962.09	-329.05	-359.08	-365.33	2.00	-1.86	-7.28
5,089.00	2.75	211.28	5,056.88	-334.06	-362.90	-369.24	2.33	-2.24	-9.95
5,183.00	1.52	195.11	5,150.81	-337.19	-364.39	-370.80	1.44	-1.31	-17.20
5,278.00	0.93	166.02	5,245.79	-339.16	-364.54	-370.98	0.88	-0.62	-30.62
5,373.00	0.96	161.16	5,340.78	-340.66	-364.09	-370.56	0.09	0.03	-5.12
5,467.00	1.02	138.71	5,434.76	-342.03	-363.29	-369.79	0.41	0.06	-23.88
5,562.00	1.13	140.33	5,529.75	-343.39	-362.13	-368.66	0.12	0.12	1.71
5,657.00	0.71	153.44	5,624.73	-344.63	-361.27	-367.82	0.49	-0.44	13.80
5,751.00	0.41	161.00	5,718.73	-345.47	-360.90	-367.46	0.33	-0.32	8.04
5,846.00	0.19	84.27	5,813.73	-345.78	-360.63	-367.20	0.43	-0.23	-80.77
5,941.00	7.83	58.96	5,908.43	-342.42	-354.92	-361.43	8.06	8.04	-26.64
6,035.00	20.87	69.13	5,999.31	-333.11	-333.70	-340.03	14.08	13.87	10.82
6,130.00	29.53	83.68	6,085.27	-324.48	-294.50	-300.68	11.15	9.12	15.32
6,225.00	40.79	92.83	6,162.86	-323.43	-240.03	-246.19	13.06	11.85	9.63
6,320.00	50.41	93.04	6,229.25	-326.92	-172.32	-178.57	10.13	10.13	0.22
6,414.00	56.67	92.86	6,285.08	-330.80	-96.86	-103.19	6.66	6.66	-0.19
6,509.00	65.03	86.86	6,331.35	-330.42	-14.02	-20.36	10.38	8.80	-6.32
6,603.00	81.07	85.75	6,358.67	-324.61	75.41	69.17	17.10	17.06	-1.18
6,634.00	86.87	86.57	6,361.92	-322.55	106.16	99.95	18.89	18.71	2.65
Last SDI MWD Curve Survey									
6,700.00	91.19	88.25	6,363.04	-319.56	172.06	165.90	7.02	6.55	2.55
First SDI MWD Lateral Survey									
6,795.00	89.96	89.65	6,362.08	-317.82	267.04	260.89	1.96	-1.29	1.47
6,890.00	90.04	89.92	6,362.08	-317.47	362.04	355.88	0.30	0.08	0.28
6,984.00	91.01	89.74	6,361.22	-317.19	456.03	449.86	1.05	1.03	-0.19
7,079.00	88.37	89.39	6,361.74	-316.47	551.02	544.84	2.80	-2.78	-0.37
7,173.00	88.16	89.71	6,364.58	-315.73	644.97	638.79	0.41	-0.22	0.34
7,268.00	89.33	90.57	6,366.66	-315.96	739.95	733.75	1.53	1.23	0.91
7,362.00	89.25	90.09	6,367.83	-316.50	833.94	827.71	0.52	-0.09	-0.51
7,457.00	89.87	89.65	6,368.56	-316.29	928.94	922.69	0.80	0.65	-0.46
7,552.00	90.84	87.98	6,367.97	-314.32	1,023.91	1,017.69	2.03	1.02	-1.76
7,646.00	90.84	88.16	6,366.59	-311.16	1,117.85	1,111.67	0.19	0.00	0.19
7,741.00	90.66	88.69	6,365.35	-308.55	1,212.80	1,206.65	0.59	-0.19	0.56
7,835.00	91.10	89.22	6,363.90	-306.83	1,306.77	1,300.64	0.73	0.47	0.56
7,930.00	91.98	89.92	6,361.35	-306.12	1,401.74	1,395.60	1.18	0.93	0.74
8,025.00	91.10	88.51	6,358.80	-304.82	1,496.69	1,490.56	1.75	-0.93	-1.48
8,119.00	90.66	88.95	6,357.35	-302.74	1,590.65	1,584.55	0.66	-0.47	0.47
8,212.00	89.87	89.30	6,356.92	-301.32	1,683.64	1,677.55	0.93	-0.85	0.38
8,306.00	88.99	89.39	6,357.86	-300.24	1,777.63	1,771.54	0.94	-0.94	0.10
8,401.00	89.43	88.60	6,359.17	-298.57	1,872.61	1,866.53	0.95	0.46	-0.83

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8,496.00	89.60	88.95	6,359.97	-296.54	1,967.58	1,961.52	0.41	0.18	0.37	
8,589.00	90.22	89.65	6,360.12	-295.41	2,060.57	2,054.52	1.01	0.67	0.75	
8,683.00	92.42	90.45	6,357.95	-295.49	2,154.54	2,148.47	2.49	2.34	0.85	
8,778.00	91.54	88.07	6,354.67	-294.26	2,249.47	2,243.40	2.67	-0.93	-2.51	
8,872.00	91.10	88.07	6,352.51	-291.10	2,343.39	2,337.37	0.47	-0.47	0.00	
8,968.00	91.01	88.86	6,350.74	-288.53	2,439.34	2,433.35	0.83	-0.09	0.82	
9,060.00	91.10	88.51	6,349.04	-286.42	2,531.30	2,525.33	0.39	0.10	-0.38	
9,155.00	90.57	88.86	6,347.66	-284.24	2,626.26	2,620.32	0.67	-0.56	0.37	
9,251.00	89.43	88.78	6,347.66	-282.26	2,722.24	2,716.32	1.19	-1.19	-0.08	
9,345.00	90.40	88.95	6,347.80	-280.40	2,816.22	2,810.32	1.05	1.03	0.18	
9,439.00	90.92	89.57	6,346.72	-279.18	2,910.21	2,904.31	0.86	0.55	0.66	
9,534.00	90.04	90.09	6,345.92	-278.90	3,005.20	2,999.29	1.08	-0.93	0.55	
9,629.00	90.75	91.06	6,345.27	-279.85	3,100.19	3,094.25	1.27	0.75	1.02	
9,723.00	89.34	88.69	6,345.19	-279.65	3,194.18	3,188.23	2.93	-1.50	-2.52	
9,818.00	90.92	87.55	6,344.98	-276.53	3,289.13	3,283.21	2.05	1.66	-1.20	
9,912.00	90.31	88.51	6,343.97	-273.30	3,383.06	3,377.19	1.21	-0.65	1.02	
10,006.00	90.84	88.07	6,343.02	-270.50	3,477.02	3,471.18	0.73	0.56	-0.47	
10,101.00	91.28	89.30	6,341.27	-268.32	3,571.97	3,566.16	1.37	0.46	1.29	
10,195.00	90.75	89.83	6,339.60	-267.60	3,665.96	3,660.14	0.80	-0.56	0.56	
10,289.00	90.48	93.08	6,338.59	-269.99	3,759.91	3,754.03	3.47	-0.29	3.46	
10,384.00	89.16	94.23	6,338.89	-276.05	3,854.71	3,848.70	1.84	-1.39	1.21	
10,476.00	89.08	91.50	6,340.30	-280.64	3,946.58	3,940.46	2.97	-0.09	-2.97	
10,568.00	88.99	89.74	6,341.85	-281.64	4,038.55	4,032.40	1.92	-0.10	-1.91	
10,659.00	88.90	87.46	6,343.53	-279.42	4,129.50	4,123.38	2.51	-0.10	-2.51	
10,751.00	90.22	86.14	6,344.24	-274.28	4,221.35	4,215.31	2.03	1.43	-1.43	
10,843.00	91.36	85.88	6,342.97	-267.88	4,313.12	4,307.18	1.27	1.24	-0.28	
10,934.00	90.66	87.98	6,341.36	-263.01	4,403.97	4,398.11	2.43	-0.77	2.31	
11,026.00	90.22	87.90	6,340.66	-259.70	4,495.91	4,490.09	0.49	-0.48	-0.09	
11,117.00	91.28	87.37	6,339.47	-255.95	4,586.82	4,581.06	1.30	1.16	-0.58	
11,209.00	91.19	87.28	6,337.48	-251.65	4,678.70	4,673.01	0.14	-0.10	-0.10	
11,301.00	90.57	85.00	6,336.07	-245.46	4,770.47	4,764.88	2.57	-0.67	-2.48	
11,393.00	90.13	87.37	6,335.51	-239.34	4,862.26	4,856.77	2.62	-0.48	2.58	
11,484.00	91.01	88.25	6,334.60	-235.86	4,953.19	4,947.75	1.37	0.97	0.97	
11,576.00	91.19	88.78	6,332.84	-233.48	5,045.14	5,039.73	0.61	0.20	0.58	
11,668.00	91.36	90.80	6,330.79	-233.14	5,137.11	5,131.69	2.20	0.18	2.20	
11,759.00	90.84	90.27	6,329.04	-233.99	5,228.09	5,222.64	0.82	-0.57	-0.58	
11,851.00	90.66	90.53	6,327.84	-234.63	5,320.08	5,314.60	0.34	-0.20	0.28	
11,942.00	89.34	88.78	6,327.84	-234.09	5,411.07	5,405.58	2.41	-1.45	-1.92	
12,034.00	91.36	89.13	6,327.28	-232.41	5,503.05	5,497.58	2.23	2.20	0.38	
12,126.00	89.96	88.16	6,326.22	-230.23	5,595.02	5,589.57	1.85	-1.52	-1.05	
12,217.00	90.92	87.90	6,325.52	-227.10	5,685.96	5,680.55	1.09	1.05	-0.29	
12,309.00	90.84	88.95	6,324.10	-224.58	5,777.91	5,772.54	1.14	-0.09	1.14	
12,401.00	90.22	89.22	6,323.25	-223.11	5,869.90	5,864.53	0.74	-0.67	0.29	
12,492.00	90.92	89.39	6,322.35	-222.00	5,960.88	5,955.52	0.79	0.77	0.19	

Company:	Bill Barrett Corp.	Local Co-ordinate Reference:	Well Anschutz State 5-62-22-1609B2
Project:	Weld County, CO NAD 83	TVD Reference:	GL 4730' & KB 16' @ 4746.00ft (Cade 24)
Site:	Anschutz State 5-62-22_23 NWNW Pad	MD Reference:	GL 4730' & KB 16' @ 4746.00ft (Cade 24)
Well:	Anschutz State 5-62-22-1609B2	North Reference:	True
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	OH	Database:	Casper District

Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
12,584.00	90.48	89.83	6,321.22	-221.38	6,052.87	6,047.51	0.68	-0.48	0.48
12,676.00	89.52	89.13	6,321.22	-220.54	6,144.87	6,139.50	1.29	-1.04	-0.76
12,768.00	91.10	89.22	6,320.73	-219.22	6,236.86	6,231.50	1.72	1.72	0.10
12,860.00	91.01	89.83	6,319.03	-218.46	6,328.84	6,323.48	0.67	-0.10	0.66
12,951.00	91.01	89.57	6,317.43	-217.98	6,419.82	6,414.45	0.29	0.00	-0.29
13,043.00	90.31	88.86	6,316.37	-216.72	6,511.80	6,506.44	1.08	-0.76	-0.77
13,134.00	90.04	88.95	6,316.09	-214.98	6,602.79	6,597.44	0.31	-0.30	0.10
13,226.00	91.10	88.51	6,315.18	-212.94	6,694.76	6,689.44	1.25	1.15	-0.48
13,318.00	91.10	90.18	6,313.41	-211.89	6,786.73	6,781.41	1.81	0.00	1.82
13,410.00	88.72	90.18	6,313.55	-212.18	6,878.73	6,873.38	2.59	-2.59	0.00
13,501.00	90.22	88.95	6,314.40	-211.49	6,969.71	6,964.37	2.13	1.65	-1.35
13,593.00	89.60	88.60	6,314.54	-209.52	7,061.69	7,056.37	0.77	-0.67	-0.38
13,684.00	90.40	88.60	6,314.54	-207.30	7,152.66	7,147.37	0.88	0.88	0.00
13,776.00	89.34	89.04	6,314.75	-205.40	7,244.64	7,239.37	1.25	-1.15	0.48
13,867.00	90.04	87.63	6,315.24	-202.76	7,335.60	7,330.36	1.73	0.77	-1.55
13,959.00	92.33	87.98	6,313.34	-199.24	7,427.51	7,422.31	2.52	2.49	0.38
14,050.00	91.63	87.46	6,310.19	-195.62	7,518.38	7,513.24	0.96	-0.77	-0.57
14,142.00	91.80	87.11	6,307.44	-191.26	7,610.24	7,605.16	0.42	0.18	-0.38
14,234.00	90.66	87.98	6,305.47	-187.32	7,702.13	7,697.11	1.56	-1.24	0.95
14,325.00	90.04	88.60	6,304.91	-184.61	7,793.08	7,788.10	0.96	-0.68	0.68
14,417.00	90.57	90.01	6,304.42	-183.49	7,885.07	7,880.10	1.64	0.58	1.53
14,508.00	89.69	89.22	6,304.21	-182.88	7,976.07	7,971.09	1.30	-0.97	-0.87
14,600.00	90.13	89.39	6,304.36	-181.76	8,068.06	8,063.09	0.51	0.48	0.18
14,691.00	90.40	90.89	6,303.94	-181.99	8,159.06	8,154.06	1.67	0.30	1.65
14,783.00	89.08	89.83	6,304.35	-182.56	8,251.05	8,246.03	1.84	-1.43	-1.15
14,875.00	89.34	88.51	6,305.62	-181.23	8,343.03	8,338.02	1.46	0.28	-1.43
14,967.00	90.66	87.72	6,305.62	-178.21	8,434.98	8,430.00	1.67	1.43	-0.86
15,058.00	91.28	87.81	6,304.08	-174.66	8,525.90	8,520.97	0.69	0.68	0.10
15,150.00	92.24	86.84	6,301.26	-170.37	8,617.75	8,612.89	1.48	1.04	-1.05
15,241.00	90.75	89.04	6,298.88	-167.10	8,708.65	8,703.84	2.92	-1.64	2.42
15,333.00	90.22	88.16	6,298.10	-164.85	8,800.62	8,795.83	1.12	-0.58	-0.96
15,425.00	90.75	89.30	6,297.33	-162.81	8,892.59	8,887.83	1.37	0.58	1.24
15,516.00	91.36	88.60	6,295.65	-161.14	8,983.56	8,978.81	1.02	0.67	-0.77
15,607.00	90.57	89.13	6,294.12	-159.34	9,074.53	9,069.80	1.05	-0.87	0.58
15,701.00	88.64	89.83	6,294.77	-158.49	9,168.52	9,163.79	2.18	-2.05	0.74
15,796.00	88.72	89.30	6,296.95	-157.77	9,263.49	9,258.75	0.56	0.08	-0.56
15,891.00	89.25	88.78	6,298.64	-156.17	9,358.46	9,353.74	0.78	0.56	-0.55
15,985.00	90.75	87.81	6,298.64	-153.38	9,452.42	9,447.73	1.90	1.60	-1.03
16,079.00	90.40	87.81	6,297.69	-149.79	9,546.34	9,541.71	0.37	-0.37	0.00
16,174.00	90.04	87.72	6,297.33	-146.08	9,641.27	9,636.69	0.39	-0.38	-0.09
16,269.00	90.22	87.28	6,297.11	-141.94	9,736.18	9,731.66	0.50	0.19	-0.46
16,332.00	89.78	87.19	6,297.11	-138.90	9,799.11	9,794.63	0.71	-0.70	-0.14
Last SDI MWD Survey									

Company:	Bill Barrett Corp.	Local Co-ordinate Reference:	Well Anschutz State 5-62-22-1609B2
Project:	Weld County, CO NAD 83	TVD Reference:	GL 4730' & KB 16' @ 4746.00ft (Cade 24)
Site:	Anschutz State 5-62-22_23 NWNW Pad	MD Reference:	GL 4730' & KB 16' @ 4746.00ft (Cade 24)
Well:	Anschutz State 5-62-22-1609B2	North Reference:	True
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	OH	Database:	Casper District

Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
16,391.00	89.78	87.19	6,297.34	-136.01	9,858.03	9,853.61	0.00	0.00	0.00
Projection to TD									

Design Annotations					
Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates			
		+N/-S (ft)	+E/-W (ft)	Comment	
100.00	100.00	0.00	0.26	First MS Survey	
723.00	722.96	3.55	-3.03	Last MS Survey	
885.00	884.95	3.94	-4.65	First SDI MWD Survey	
6,634.00	6,361.92	-322.55	106.16	Last SDI MWD Curve Survey	
6,700.00	6,363.04	-319.56	172.06	First SDI MWD Lateral Survey	
16,332.00	6,297.11	-138.90	9,799.11	Last SDI MWD Survey	
16,391.00	6,297.34	-136.01	9,858.03	Projection to TD	

Checked By: _____	Approved By: _____	Date: _____
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