



Bill Barrett Corporation

Bill Barrett Corp.

Weld County, CO NAD 83

Anschutz State 5-62-22_23 NWNW Pad

Anschutz State 5-62-22-0108C2B

OH

Design: OH

Standard Survey Report

18 November, 2015



Scientific Drilling

www.scientificdrilling.com



Company:	Bill Barrett Corp.	Local Co-ordinate Reference:	Well Anschutz State 5-62-22-0108C2B
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 5-62-22-0108C2B	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 5-62-22-0108C2B, 615' FNL 375' FWL Sec 22 T5N R62W					
Well Position	+N/-S	0.00 ft	Northing:	1,387,440.57 usft	Latitude:	40° 23' 27.250 N
	+E/-W	0.00 ft	Easting:	3,329,229.77 usft	Longitude:	104° 19' 4.850 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	10/13/2015	8.27	67.03	52,648

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	88.95	

Survey Program	Date	11/18/2015			
From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description	
100.00	721.00	Survey #1 - Surface (OH)	NS-GYRO-MS	North sensing gyrocompassing m/s	
886.00	6,779.00	Survey #2 - Vertical / Curve (OH)	SDI MWD	SDI MWD - Standard ver 1.0.1	
6,886.00	16,564.00	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	0.34	324.64	100.00	0.24	-0.17	-0.17	0.34	0.34	0.00	
First MS Survey										
200.00	0.57	297.84	200.00	0.72	-0.78	-0.77	0.31	0.23	-26.80	
300.00	0.42	251.27	299.99	0.83	-1.57	-1.55	0.41	-0.15	-46.57	
400.00	0.25	247.97	399.99	0.63	-2.12	-2.11	0.17	-0.17	-3.30	
500.00	0.50	257.32	499.99	0.45	-2.75	-2.74	0.26	0.25	9.35	
600.00	0.31	256.32	599.99	0.29	-3.44	-3.43	0.19	-0.19	-1.00	
700.00	0.54	285.49	699.98	0.36	-4.15	-4.15	0.31	0.23	29.17	

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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)	
721.00	0.49	288.81	720.98	0.41	-4.33	-4.33	0.28	-0.24	15.81	
Last MS Survey										
886.00	0.35	287.67	885.98	0.79	-5.48	-5.47	0.08	-0.08	-0.69	
First SDI MWD Survey										
978.00	1.76	340.75	977.96	2.21	-6.21	-6.17	1.71	1.53	57.70	
1,069.00	4.66	325.46	1,068.81	6.58	-8.77	-8.65	3.29	3.19	-16.80	
1,161.00	7.47	319.83	1,160.29	14.23	-14.75	-14.49	3.12	3.05	-6.12	
1,253.00	8.35	320.89	1,251.41	23.98	-22.82	-22.38	0.97	0.96	1.15	
1,344.00	8.53	320.36	1,341.43	34.30	-31.30	-30.66	0.22	0.20	-0.58	
1,436.00	8.97	328.09	1,432.36	45.65	-39.44	-38.60	1.36	0.48	8.40	
1,527.00	9.58	327.92	1,522.17	58.08	-47.21	-46.14	0.67	0.67	-0.19	
1,619.00	9.23	324.32	1,612.93	70.56	-55.58	-54.28	0.74	-0.38	-3.91	
1,710.00	8.00	334.25	1,702.91	82.20	-62.59	-61.07	2.12	-1.35	10.91	
1,802.00	9.06	337.85	1,793.89	94.67	-68.10	-66.36	1.29	1.15	3.91	
1,894.00	8.62	333.81	1,884.80	107.57	-73.88	-71.89	0.83	-0.48	-4.39	
1,985.00	9.32	333.90	1,974.68	120.31	-80.13	-77.91	0.77	0.77	0.10	
2,077.00	8.44	330.91	2,065.58	132.90	-86.69	-84.24	1.08	-0.96	-3.25	
2,169.00	9.76	333.90	2,156.42	145.80	-93.40	-90.71	1.52	1.43	3.25	
2,261.00	9.58	329.85	2,247.12	159.42	-100.68	-97.74	0.76	-0.20	-4.40	
2,352.00	10.55	333.81	2,336.71	173.45	-108.16	-104.96	1.31	1.07	4.35	
2,446.00	10.46	332.40	2,429.14	188.73	-115.91	-112.43	0.29	-0.10	-1.50	
2,541.00	9.41	330.56	2,522.71	203.14	-123.72	-119.98	1.15	-1.11	-1.94	
2,636.00	10.55	338.47	2,616.28	217.99	-130.73	-126.71	1.87	1.20	8.33	
2,730.00	10.11	335.39	2,708.76	233.50	-137.32	-133.02	0.75	-0.47	-3.28	
2,824.00	9.85	333.63	2,801.33	248.20	-144.33	-139.76	0.43	-0.28	-1.87	
2,918.00	9.23	330.56	2,894.03	261.97	-151.61	-146.78	0.85	-0.66	-3.27	
3,012.00	9.41	334.34	2,986.79	275.46	-158.64	-153.57	0.68	0.19	4.02	
3,106.00	8.27	331.35	3,079.68	288.32	-165.21	-159.90	1.31	-1.21	-3.18	
3,200.00	9.06	333.63	3,172.60	300.89	-171.74	-166.20	0.92	0.84	2.43	
3,295.00	8.27	329.06	3,266.52	313.45	-178.57	-172.80	1.10	-0.83	-4.81	
3,389.00	9.41	331.87	3,359.40	326.02	-185.67	-179.67	1.30	1.21	2.99	
3,483.00	10.64	328.27	3,451.97	340.18	-193.86	-187.59	1.47	1.31	-3.83	
3,578.00	11.70	326.51	3,545.16	355.67	-203.79	-197.24	1.17	1.12	-1.85	
3,672.00	12.05	327.04	3,637.15	371.86	-214.39	-207.54	0.39	0.37	0.56	
3,766.00	12.57	326.34	3,728.99	388.60	-225.39	-218.23	0.58	0.55	-0.74	
3,862.00	11.26	329.50	3,822.92	405.37	-235.94	-228.47	1.52	-1.36	3.29	
3,956.00	10.20	329.85	3,915.28	420.48	-244.78	-237.03	1.13	-1.13	0.37	
4,050.00	9.94	331.43	4,007.83	434.80	-252.84	-244.83	0.40	-0.28	1.68	
4,145.00	8.44	330.12	4,101.61	448.05	-260.23	-251.98	1.59	-1.58	-1.38	
4,239.00	9.23	331.00	4,194.49	460.62	-267.33	-258.84	0.85	0.84	0.94	
4,333.00	9.50	329.68	4,287.24	473.91	-274.90	-266.17	0.37	0.29	-1.40	
4,428.00	9.41	329.59	4,380.95	487.38	-282.79	-273.81	0.10	-0.09	-0.09	
4,522.00	7.56	333.81	4,473.92	499.56	-289.41	-280.20	2.08	-1.97	4.49	
4,616.00	8.97	333.37	4,566.94	511.66	-295.42	-285.99	1.50	1.50	-0.47	

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Survey									
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4,711.00	8.44	330.38	4,660.84	524.34	-302.18	-292.53	0.73	-0.56	-3.15
4,806.00	8.83	331.26	4,754.77	536.79	-309.14	-299.25	0.43	0.41	0.93
4,900.00	8.71	333.72	4,847.67	549.50	-315.76	-305.63	0.42	-0.13	2.62
4,994.00	7.91	333.81	4,940.68	561.68	-321.76	-311.42	0.85	-0.85	0.10
5,089.00	6.60	336.01	5,034.92	572.54	-326.87	-316.32	1.41	-1.38	2.32
5,183.00	5.19	340.31	5,128.42	581.48	-330.50	-319.79	1.57	-1.50	4.57
5,278.00	5.45	335.48	5,223.01	589.63	-333.82	-322.96	0.54	0.27	-5.08
5,372.00	4.57	337.32	5,316.65	597.14	-337.11	-326.11	0.95	-0.94	1.96
5,468.00	3.08	325.90	5,412.43	602.81	-340.03	-328.93	1.74	-1.55	-11.90
5,562.00	1.06	336.27	5,506.37	605.70	-341.80	-330.64	2.18	-2.15	11.03
5,657.00	0.44	349.54	5,601.36	606.86	-342.22	-331.04	0.67	-0.65	13.97
5,752.00	0.26	49.04	5,696.36	607.36	-342.12	-330.94	0.40	-0.19	62.63
5,846.00	1.14	72.77	5,790.35	607.78	-341.07	-329.87	0.97	0.94	25.24
5,941.00	1.23	170.86	5,885.34	607.05	-340.00	-328.82	1.89	0.09	103.25
6,036.00	1.23	172.35	5,980.32	605.03	-339.71	-328.56	0.03	0.00	1.57
6,131.00	9.85	109.60	6,074.81	601.29	-331.90	-320.82	9.84	9.07	-66.05
6,225.00	20.58	87.10	6,165.46	599.42	-307.74	-296.70	12.83	11.41	-23.94
6,320.00	29.28	87.10	6,251.52	601.44	-267.78	-256.71	9.16	9.16	0.00
6,415.00	39.22	84.90	6,329.95	605.30	-214.53	-203.40	10.54	10.46	-2.32
6,509.00	45.99	89.30	6,399.12	608.36	-151.04	-139.87	7.86	7.20	4.68
6,604.00	57.33	86.22	6,457.96	611.42	-76.73	-65.51	12.20	11.94	-3.24
6,699.00	71.67	87.01	6,498.75	616.44	8.65	19.94	15.11	15.09	0.83
6,779.00	85.42	89.97	6,514.61	618.45	86.83	98.15	17.56	17.19	3.70
Last SDI MWD Curve Survey									
6,886.00	89.96	90.35	6,518.92	618.15	193.71	205.01	4.26	4.24	0.36
First SDI MWD Lateral Survey									
6,980.00	90.57	90.09	6,518.48	617.79	287.71	298.98	0.71	0.65	-0.28
7,075.00	90.92	88.15	6,517.25	619.25	382.69	393.97	2.07	0.37	-2.04
7,169.00	90.57	87.27	6,516.02	623.00	476.60	487.94	1.01	-0.37	-0.94
7,263.00	94.00	90.00	6,512.28	625.24	570.48	581.84	4.66	3.65	2.90
7,358.00	92.51	89.65	6,506.88	625.53	665.32	676.67	1.61	-1.57	-0.37
7,453.00	92.68	89.21	6,502.58	626.47	760.22	771.57	0.50	0.18	-0.46
7,548.00	90.57	88.68	6,499.89	628.22	855.16	866.53	2.29	-2.22	-0.56
7,642.00	91.28	87.36	6,498.37	631.47	949.09	960.50	1.59	0.76	-1.40
7,737.00	92.33	88.07	6,495.38	635.26	1,043.97	1,055.43	1.33	1.11	0.75
7,832.00	91.63	90.18	6,492.09	636.71	1,138.89	1,150.37	2.34	-0.74	2.22
7,927.00	91.10	92.20	6,489.83	634.73	1,233.84	1,245.26	2.20	-0.56	2.13
8,021.00	89.43	90.18	6,489.40	632.78	1,327.81	1,339.18	2.79	-1.78	-2.15
8,116.00	89.60	88.07	6,490.20	634.23	1,422.79	1,434.17	2.23	0.18	-2.22
8,209.00	91.63	88.59	6,489.20	636.94	1,515.74	1,527.16	2.25	2.18	0.56
8,303.00	92.95	88.24	6,485.45	639.54	1,609.63	1,621.08	1.45	1.40	-0.37
8,398.00	93.03	89.03	6,480.49	641.80	1,704.47	1,715.94	0.83	0.08	0.83
8,492.00	91.10	89.30	6,477.10	643.17	1,798.39	1,809.88	2.07	-2.05	0.29

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Design:	OH	Database:	Casper District

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8,586.00	90.57	89.30	6,475.73	644.32	1,892.38	1,903.87	0.56	-0.56	0.00	
8,680.00	90.40	89.21	6,474.94	645.54	1,986.36	1,997.86	0.20	-0.18	-0.10	
8,775.00	90.92	89.12	6,473.84	646.92	2,081.35	2,092.85	0.56	0.55	-0.09	
8,869.00	90.40	88.68	6,472.76	648.73	2,175.32	2,186.85	0.72	-0.55	-0.47	
8,964.00	91.01	88.51	6,471.59	651.06	2,270.29	2,281.84	0.67	0.64	-0.18	
9,057.00	90.13	88.51	6,470.67	653.48	2,363.25	2,374.83	0.95	-0.95	0.00	
9,152.00	92.07	89.30	6,468.84	655.29	2,458.21	2,469.81	2.20	2.04	0.83	
9,247.00	91.28	88.86	6,466.07	656.82	2,553.16	2,564.76	0.95	-0.83	-0.46	
9,342.00	91.10	89.03	6,464.09	658.56	2,648.12	2,659.74	0.26	-0.19	0.18	
9,436.00	90.31	88.24	6,462.94	660.80	2,742.08	2,753.73	1.19	-0.84	-0.84	
9,531.00	89.60	88.07	6,463.01	663.86	2,837.03	2,848.72	0.77	-0.75	-0.18	
9,626.00	90.57	88.86	6,462.87	666.41	2,932.00	2,943.72	1.32	1.02	0.83	
9,720.00	90.22	89.03	6,462.22	668.14	3,025.98	3,037.72	0.41	-0.37	0.18	
9,815.00	90.22	88.77	6,461.86	669.96	3,120.96	3,132.72	0.27	0.00	-0.27	
9,909.00	92.15	89.65	6,459.91	671.26	3,214.93	3,226.69	2.26	2.05	0.94	
10,003.00	91.54	89.74	6,456.89	671.76	3,308.88	3,320.63	0.66	-0.65	0.10	
10,098.00	91.19	90.44	6,454.63	671.61	3,403.85	3,415.59	0.82	-0.37	0.74	
10,192.00	89.16	89.21	6,454.34	671.89	3,497.84	3,509.57	2.53	-2.16	-1.31	
10,286.00	89.60	88.68	6,455.36	673.63	3,591.82	3,603.56	0.73	0.47	-0.56	
10,381.00	90.48	90.26	6,455.29	674.50	3,686.81	3,698.55	1.90	0.93	1.66	
10,472.00	90.13	88.94	6,454.80	675.14	3,777.81	3,789.54	1.50	-0.38	-1.45	
10,564.00	89.78	87.63	6,454.88	677.89	3,869.76	3,881.54	1.47	-0.38	-1.42	
10,656.00	91.01	87.98	6,454.24	681.42	3,961.69	3,973.51	1.39	1.34	0.38	
10,747.00	91.19	89.03	6,452.50	683.79	4,052.64	4,064.49	1.17	0.20	1.15	
10,839.00	90.66	88.94	6,451.01	685.42	4,144.62	4,156.48	0.58	-0.58	-0.10	
10,931.00	90.22	88.51	6,450.30	687.47	4,236.59	4,248.48	0.67	-0.48	-0.47	
11,023.00	89.96	88.42	6,450.16	689.93	4,328.56	4,340.47	0.30	-0.28	-0.10	
11,115.00	92.24	90.26	6,448.39	690.99	4,420.52	4,432.44	3.18	2.48	2.00	
11,206.00	92.33	90.18	6,444.76	690.64	4,511.45	4,523.35	0.13	0.10	-0.09	
11,298.00	91.01	90.18	6,442.08	690.35	4,603.41	4,615.29	1.43	-1.43	0.00	
11,390.00	90.40	89.56	6,440.95	690.56	4,695.40	4,707.27	0.95	-0.66	-0.67	
11,481.00	89.69	89.12	6,440.88	691.61	4,786.39	4,798.26	0.92	-0.78	-0.48	
11,573.00	90.48	88.07	6,440.74	693.87	4,878.36	4,890.26	1.43	0.86	-1.14	
11,664.00	91.36	89.03	6,439.28	696.17	4,969.32	4,981.24	1.43	0.97	1.05	
11,756.00	91.10	89.30	6,437.31	697.51	5,061.29	5,073.22	0.41	-0.28	0.29	
11,847.00	90.48	89.21	6,436.05	698.69	5,152.27	5,164.21	0.69	-0.68	-0.10	
11,939.00	89.60	89.38	6,435.99	699.82	5,244.27	5,256.21	0.97	-0.96	0.18	
12,031.00	91.01	88.59	6,435.50	701.45	5,336.25	5,348.20	1.76	1.53	-0.86	
12,122.00	90.13	88.51	6,434.59	703.76	5,427.21	5,439.20	0.97	-0.97	-0.09	
12,214.00	91.36	88.51	6,433.40	706.15	5,519.17	5,531.18	1.34	1.34	0.00	
12,306.00	91.01	88.42	6,431.50	708.61	5,611.12	5,623.16	0.39	-0.38	-0.10	
12,398.00	90.04	87.63	6,430.65	711.78	5,703.06	5,715.14	1.36	-1.05	-0.86	
12,489.00	91.63	88.68	6,429.33	714.71	5,794.00	5,806.12	2.09	1.75	1.15	
12,581.00	90.04	87.19	6,427.99	718.03	5,885.92	5,898.09	2.37	-1.73	-1.62	

Company:	Bill Barrett Corp.	Local Co-ordinate Reference:	Well Anschutz State 5-62-22-0108C2B
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 5-62-22-0108C2B	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)
12,673.00	90.92	87.10	6,427.21	722.61	5,977.80	5,990.04	0.96	0.96	-0.10
12,765.00	91.36	87.89	6,425.38	726.63	6,069.70	6,081.99	0.98	0.48	0.86
12,856.00	91.63	87.71	6,423.01	730.12	6,160.60	6,172.94	0.36	0.30	-0.20
12,948.00	90.48	88.68	6,421.32	733.02	6,252.53	6,264.92	1.64	-1.25	1.05
13,040.00	90.48	89.21	6,420.55	734.71	6,344.52	6,356.91	0.58	0.00	0.58
13,132.00	91.01	88.86	6,419.35	736.26	6,436.49	6,448.91	0.69	0.58	-0.38
13,223.00	91.71	89.91	6,417.19	737.24	6,527.46	6,539.88	1.39	0.77	1.15
13,315.00	90.48	89.47	6,415.43	737.74	6,619.44	6,631.85	1.42	-1.34	-0.48
13,407.00	89.60	88.94	6,415.37	739.01	6,711.43	6,723.85	1.12	-0.96	-0.58
13,499.00	89.34	88.77	6,416.22	740.85	6,803.41	6,815.84	0.34	-0.28	-0.18
13,590.00	91.10	88.15	6,415.87	743.30	6,894.37	6,906.83	2.05	1.93	-0.68
13,682.00	92.07	87.36	6,413.32	746.90	6,986.26	6,998.78	1.36	1.05	-0.86
13,773.00	90.13	88.24	6,411.58	750.39	7,077.17	7,089.74	2.34	-2.13	0.97
13,956.00	89.34	89.12	6,412.42	754.61	7,260.12	7,272.73	0.65	-0.43	0.48
14,048.00	89.87	88.51	6,413.06	756.51	7,352.10	7,364.73	0.88	0.58	-0.66
14,139.00	89.87	87.98	6,413.26	759.30	7,443.05	7,455.72	0.58	0.00	-0.58
14,231.00	90.75	88.33	6,412.77	762.26	7,535.00	7,547.71	1.03	0.96	0.38
14,322.00	90.57	89.03	6,411.72	764.35	7,625.97	7,638.70	0.79	-0.20	0.77
14,414.00	90.31	87.98	6,411.01	766.75	7,717.94	7,730.69	1.18	-0.28	-1.14
14,506.00	90.40	87.10	6,410.44	770.70	7,809.85	7,822.66	0.96	0.10	-0.96
14,597.00	90.13	86.48	6,410.02	775.80	7,900.71	7,913.60	0.74	-0.30	-0.68
14,689.00	91.28	90.79	6,408.89	777.99	7,992.65	8,005.57	4.85	1.25	4.68
14,781.00	91.28	90.35	6,406.83	777.07	8,084.62	8,097.51	0.48	0.00	-0.48
14,872.00	90.66	88.68	6,405.29	777.84	8,175.60	8,188.48	1.96	-0.68	-1.84
14,964.00	90.31	86.66	6,404.51	781.58	8,267.52	8,280.45	2.23	-0.38	-2.20
15,055.00	90.48	88.51	6,403.89	785.42	8,358.43	8,371.42	2.04	0.19	2.03
15,147.00	90.75	89.38	6,402.90	787.11	8,450.41	8,463.41	0.99	0.29	0.95
15,239.00	90.92	89.47	6,401.56	788.04	8,542.40	8,555.40	0.21	0.18	0.10
15,330.00	91.54	89.12	6,399.60	789.15	8,633.37	8,646.38	0.78	0.68	-0.38
15,422.00	89.87	89.74	6,398.47	790.07	8,725.35	8,738.36	1.94	-1.82	0.67
15,513.00	89.60	88.68	6,398.89	791.32	8,816.34	8,829.36	1.20	-0.30	-1.16
15,605.00	89.96	89.65	6,399.25	792.67	8,908.33	8,921.36	1.12	0.39	1.05
15,699.00	89.69	88.51	6,399.53	794.17	9,002.31	9,015.36	1.25	-0.29	-1.21
15,793.00	91.19	89.74	6,398.81	795.61	9,096.30	9,109.35	2.06	1.60	1.31
15,888.00	90.92	89.12	6,397.06	796.55	9,191.28	9,204.33	0.71	-0.28	-0.65
15,982.00	91.28	88.24	6,395.26	798.72	9,285.23	9,298.31	1.01	0.38	-0.94
16,076.00	90.92	88.07	6,393.45	801.75	9,379.17	9,392.28	0.42	-0.38	-0.18
16,171.00	90.75	88.59	6,392.07	804.51	9,474.11	9,487.27	0.58	-0.18	0.55
16,266.00	91.01	88.51	6,390.61	806.92	9,569.07	9,582.25	0.29	0.27	-0.08
16,360.00	90.57	87.54	6,389.31	810.16	9,663.01	9,676.23	1.13	-0.47	-1.03
16,454.00	91.19	86.48	6,387.87	815.06	9,756.87	9,770.16	1.31	0.66	-1.13
16,506.00	91.28	86.66	6,386.75	818.17	9,808.76	9,822.11	0.39	0.17	0.35
Last SDI MWD Survey									

Company:	Bill Barrett Corp.	Local Co-ordinate Reference:	Well Anschutz State 5-62-22-0108C2B
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 5-62-22-0108C2B	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)
16,564.00	91.28	86.66	6,385.45	821.55	9,866.65	9,880.05	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	0.24	-0.17	First MS Survey	
721.00	720.98	0.41	-4.33	Last MS Survey	
886.00	885.98	0.79	-5.48	First SDI MWD Survey	
6,779.00	6,514.61	618.45	86.83	Last SDI MWD Curve Survey	
6,886.00	6,518.92	618.15	193.71	First SDI MWD Lateral Survey	
16,506.00	6,386.75	818.17	9,808.76	Last SDI MWD Survey	
16,564.00	6,385.45	821.55	9,866.65	Projection to TD	

Checked By: _____ Approved By: _____ Date: _____

WELL DETAILS: Anschutz State 5-62-22-0108C2B

PROJECT DETAILS: Weld County, CO NAD 83

Geodetic System: US State Plane 1983
Datum: North American Datum 1983
Ellipsoid: GRS 1980
Zone: Colorado Northern Zone

System Datum: Mean Sea Level
Local North: True

GL 4730' & KB 16' @ 4746.00ft (Cade 24) 4730.00
Northing Easting Latitude Longitude
1387440.57 3329229.77 40° 23' 27.250 N 104° 19' 4.850 W

