

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

Project: Weld County, CO NAD 83  
 Site: RSU Anschutz Fed 4-61-4 NW Pad  
 Well: RSU Anschutz Fed 4-61-05-4040C  
 Wellbore: OH  
 Design: Plan 1



Azimuths to True North  
 Magnetic North: 8.22°



Magnetic Field  
 Strength: 52299.6snT  
 Dip Angle: 67.00°  
 Date: 2/12/2018  
 Model: HDGM

Plan: Plan 1 (RSU Anschutz Fed 4-61-05-4040C/OH)

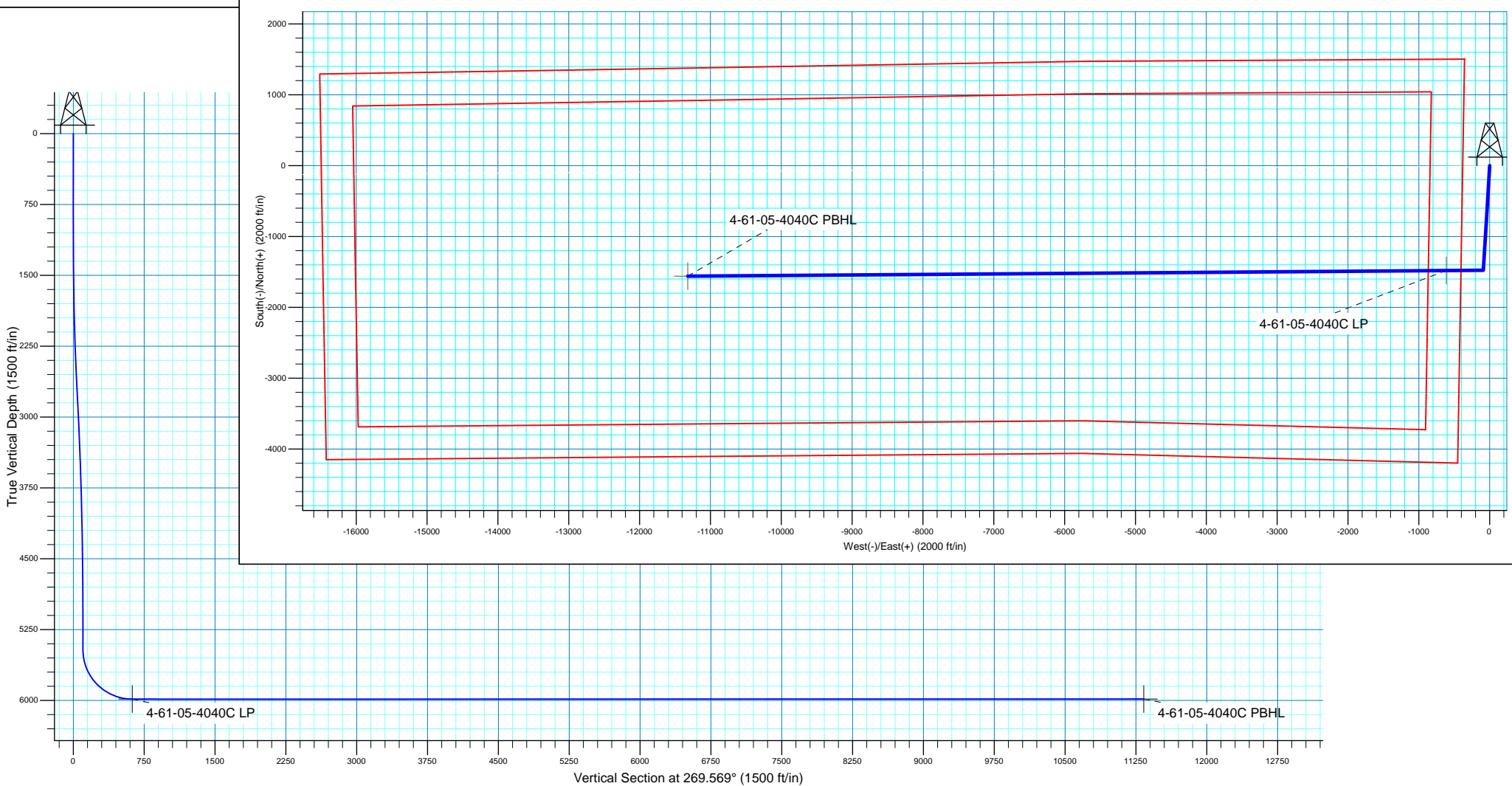
Created By: Seth Burstad

SECTION DETAILS

MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSect
0.00	0.00	0.000	0.00	0.00	0.00	0.00	0.00	0.00
1000.00	0.00	0.000	1000.00	0.00	0.00	0.00	0.00	0.00
2817.32	36.35	183.551	2697.86	-556.28	-34.52	2.00	183.55	38.70
3117.37	36.35	183.551	2939.54	-733.77	-45.53	0.00	0.00	51.05
5540.46	0.00	0.000	5203.35	-1475.47	-91.55	1.50	180.00	102.65
5801.24	0.00	0.000	5464.13	-1475.47	-91.55	0.00	0.00	102.65
6619.42	90.00	269.569	5985.00	-1479.38	-612.41	11.00	269.57	623.52
17327.95	90.00	269.569	5985.00	-1559.85	-11320.63	0.00	0.00	11332.05

WELL DETAILS: RSU Anschutz Fed 4-61-05-4040C

		GL 4501.5' & KB 20' @ 4521.50ft		4501.50	Longitude
+N/-S	+E/-W	Northing	Easting	Latitude	
0.00	0.00	1371393.59	3355586.11	40° 20' 45.078 N	104° 13' 27.235 W





**Bill Barrett Corporation**

## **Bill Barrett Corp.**

Weld County, CO NAD 83

RSU Anschutz Fed 4-61-4 NW Pad

RSU Anschutz Fed 4-61-05-4040C

OH

Plan: Plan 1

## **Standard Planning Report**

13 February, 2018



**Scientific Drilling**

[www.scientificdrilling.com](http://www.scientificdrilling.com)



<b>Database:</b>	Casper District	<b>Local Co-ordinate Reference:</b>	Well RSU Anschutz Fed 4-61-05-4040C
<b>Company:</b>	Bill Barrett Corp.	<b>TVD Reference:</b>	GL 4501.5' & KB 20' @ 4521.50ft
<b>Project:</b>	Weld County, CO NAD 83	<b>MD Reference:</b>	GL 4501.5' & KB 20' @ 4521.50ft
<b>Site:</b>	RSU Anschutz Fed 4-61-4 NW Pad	<b>North Reference:</b>	True
<b>Well:</b>	RSU Anschutz Fed 4-61-05-4040C	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	OH		
<b>Design:</b>	Plan 1		

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

Site	RSU Anschutz Fed 4-61-4 NW Pad, Site Center : RSU Anschutz Fed 4-61-04-0808C				
Site Position:		Northing:	1,371,469.36 usft	Latitude:	40° 20' 45.852 N
From:	Lat/Long	Easting:	3,355,406.34 usft	Longitude:	104° 13' 29.543 W
Position Uncertainty:	0.00 ft	Slot Radius:	13.200 in	Grid Convergence:	0.82

Well	RSU Anschutz Fed 4-61-05-4040C, 1506' FNL 385' FWL Sec 4 T4N R61W					
Well Position	+N-S	-78.34 ft	Northing:	1,371,393.59 usft	Latitude:	40° 20' 45.078 N
	+E-W	178.67 ft	Easting:	3,355,586.11 usft	Longitude:	104° 13' 27.235 W
Position Uncertainty		0.00 ft	Wellhead Elevation:	0.00 ft	Ground Level:	4,501.50 ft

<b>Wellbore</b>	OH				
<b>Magnetics</b>	<b>Model Name</b>	<b>Sample Date</b>	<b>Declination (°)</b>	<b>Dip Angle (°)</b>	<b>Field Strength (nT)</b>
	HDGM	2/12/2018	8.22	67.00	52,300

<b>Design</b>	Plan 1			
<b>Audit Notes:</b>				
<b>Version:</b>	<b>Phase:</b>	PLAN	<b>Tie On Depth:</b>	0.00
<b>Vertical Section:</b>	<b>Depth From (TVD) (ft)</b>	<b>+N/-S (ft)</b>	<b>+E/-W (ft)</b>	<b>Direction (°)</b>
	0.00	0.00	0.00	269.569

<b>Plan Sections</b>										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	TFO (°)	Target
0.00	0.00	0.000	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
1,000.00	0.00	0.000	1,000.00	0.00	0.00	0.00	0.00	0.00	0.00	
2,817.32	36.35	183.551	2,697.86	-556.28	-34.52	2.00	2.00	0.00	183.55	
3,117.37	36.35	183.551	2,939.54	-733.77	-45.53	0.00	0.00	0.00	0.00	
5,540.46	0.00	0.000	5,203.35	-1,475.47	-91.55	1.50	-1.50	0.00	180.00	
5,801.24	0.00	0.000	5,464.13	-1,475.47	-91.55	0.00	0.00	0.00	0.00	
6,619.42	90.00	269.569	5,985.00	-1,479.38	-612.41	11.00	11.00	-11.05	269.57	
17,327.95	90.00	269.569	5,985.00	-1,559.85	-11,320.63	0.00	0.00	0.00	0.00	4-61-05-4040C PBHL

<b>Database:</b>	Casper District	<b>Local Co-ordinate Reference:</b>	Well RSU Anschutz Fed 4-61-05-4040C
<b>Company:</b>	Bill Barrett Corp.	<b>TVD Reference:</b>	GL 4501.5' & KB 20' @ 4521.50ft
<b>Project:</b>	Weld County, CO NAD 83	<b>MD Reference:</b>	GL 4501.5' & KB 20' @ 4521.50ft
<b>Site:</b>	RSU Anschutz Fed 4-61-4 NW Pad	<b>North Reference:</b>	True
<b>Well:</b>	RSU Anschutz Fed 4-61-05-4040C	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	OH		
<b>Design:</b>	Plan 1		

Planned 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	0.000	0.00	0.00	0.00	0.00	0.00	0.00	0.00
100.00	0.00	0.000	100.00	0.00	0.00	0.00	0.00	0.00	0.00
200.00	0.00	0.000	200.00	0.00	0.00	0.00	0.00	0.00	0.00
300.00	0.00	0.000	300.00	0.00	0.00	0.00	0.00	0.00	0.00
400.00	0.00	0.000	400.00	0.00	0.00	0.00	0.00	0.00	0.00
500.00	0.00	0.000	500.00	0.00	0.00	0.00	0.00	0.00	0.00
600.00	0.00	0.000	600.00	0.00	0.00	0.00	0.00	0.00	0.00
700.00	0.00	0.000	700.00	0.00	0.00	0.00	0.00	0.00	0.00
800.00	0.00	0.000	800.00	0.00	0.00	0.00	0.00	0.00	0.00
900.00	0.00	0.000	900.00	0.00	0.00	0.00	0.00	0.00	0.00
1,000.00	0.00	0.000	1,000.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Start Build 2.00</b>									
1,100.00	2.00	183.551	1,099.98	-1.74	-0.11	0.12	2.00	2.00	0.00
1,200.00	4.00	183.551	1,199.84	-6.97	-0.43	0.48	2.00	2.00	0.00
1,300.00	6.00	183.551	1,299.45	-15.66	-0.97	1.09	2.00	2.00	0.00
1,400.00	8.00	183.551	1,398.70	-27.83	-1.73	1.94	2.00	2.00	0.00
1,500.00	10.00	183.551	1,497.47	-43.44	-2.70	3.02	2.00	2.00	0.00
1,600.00	12.00	183.551	1,595.62	-62.48	-3.88	4.35	2.00	2.00	0.00
1,700.00	14.00	183.551	1,693.06	-84.93	-5.27	5.91	2.00	2.00	0.00
1,800.00	16.00	183.551	1,789.64	-110.76	-6.87	7.71	2.00	2.00	0.00
1,900.00	18.00	183.551	1,885.27	-139.94	-8.68	9.74	2.00	2.00	0.00
2,000.00	20.00	183.551	1,979.82	-172.44	-10.70	12.00	2.00	2.00	0.00
2,100.00	22.00	183.551	2,073.17	-208.20	-12.92	14.48	2.00	2.00	0.00
2,200.00	24.00	183.551	2,165.21	-247.20	-15.34	17.20	2.00	2.00	0.00
2,300.00	26.00	183.551	2,255.84	-289.38	-17.96	20.13	2.00	2.00	0.00
2,400.00	28.00	183.551	2,344.94	-334.69	-20.77	23.28	2.00	2.00	0.00
2,500.00	30.00	183.551	2,432.39	-383.07	-23.77	26.65	2.00	2.00	0.00
2,600.00	32.00	183.551	2,518.11	-434.47	-26.96	30.23	2.00	2.00	0.00
2,700.00	34.00	183.551	2,601.97	-488.83	-30.33	34.01	2.00	2.00	0.00
2,800.00	36.00	183.551	2,683.88	-546.08	-33.88	37.99	2.00	2.00	0.00
2,817.32	36.35	183.551	2,697.86	-556.28	-34.52	38.70	2.00	2.00	0.00
<b>Start 300.05 hold at 2817.32 MD</b>									
2,900.00	36.35	183.551	2,764.46	-605.19	-37.55	42.10	0.00	0.00	0.00
3,000.00	36.35	183.551	2,845.00	-664.34	-41.22	46.22	0.00	0.00	0.00
3,100.00	36.35	183.551	2,925.55	-723.49	-44.89	50.33	0.00	0.00	0.00
3,117.37	36.35	183.551	2,939.54	-733.77	-45.53	51.05	0.00	0.00	0.00
<b>Start Drop -1.50</b>									
3,200.00	35.11	183.551	3,006.62	-781.92	-48.52	54.40	1.50	-1.50	0.00
3,300.00	33.61	183.551	3,089.17	-838.25	-52.01	58.32	1.50	-1.50	0.00
3,400.00	32.11	183.551	3,173.17	-892.40	-55.37	62.08	1.50	-1.50	0.00
3,500.00	30.61	183.551	3,258.56	-944.33	-58.59	65.70	1.50	-1.50	0.00
3,600.00	29.11	183.551	3,345.28	-994.02	-61.68	69.15	1.50	-1.50	0.00
3,700.00	27.61	183.551	3,433.28	-1,041.42	-64.62	72.45	1.50	-1.50	0.00
3,800.00	26.11	183.551	3,522.49	-1,086.51	-67.42	75.59	1.50	-1.50	0.00
3,900.00	24.61	183.551	3,612.86	-1,129.25	-70.07	78.56	1.50	-1.50	0.00
4,000.00	23.11	183.551	3,704.31	-1,169.62	-72.57	81.37	1.50	-1.50	0.00
4,100.00	21.61	183.551	3,796.79	-1,207.58	-74.93	84.01	1.50	-1.50	0.00
4,200.00	20.11	183.551	3,890.23	-1,243.12	-77.13	86.48	1.50	-1.50	0.00
4,300.00	18.61	183.551	3,984.58	-1,276.20	-79.19	88.78	1.50	-1.50	0.00
4,400.00	17.11	183.551	4,079.76	-1,306.80	-81.08	90.91	1.50	-1.50	0.00
4,500.00	15.61	183.551	4,175.71	-1,334.91	-82.83	92.87	1.50	-1.50	0.00
4,600.00	14.11	183.551	4,272.36	-1,360.50	-84.42	94.65	1.50	-1.50	0.00
4,700.00	12.61	183.551	4,369.66	-1,383.56	-85.85	96.25	1.50	-1.50	0.00

<b>Database:</b>	Casper District	<b>Local Co-ordinate Reference:</b>	Well RSU Anschutz Fed 4-61-05-4040C
<b>Company:</b>	Bill Barrett Corp.	<b>TVD Reference:</b>	GL 4501.5' & KB 20' @ 4521.50ft
<b>Project:</b>	Weld County, CO NAD 83	<b>MD Reference:</b>	GL 4501.5' & KB 20' @ 4521.50ft
<b>Site:</b>	RSU Anschutz Fed 4-61-4 NW Pad	<b>North Reference:</b>	True
<b>Well:</b>	RSU Anschutz Fed 4-61-05-4040C	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	OH		
<b>Design:</b>	Plan 1		

Planned 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)
4,800.00	11.11	183.551	4,467.52	-1,404.06	-87.12	97.68	1.50	-1.50	0.00
4,900.00	9.61	183.551	4,565.89	-1,422.00	-88.23	98.93	1.50	-1.50	0.00
5,000.00	8.11	183.551	4,664.69	-1,437.37	-89.19	100.00	1.50	-1.50	0.00
5,100.00	6.61	183.551	4,763.87	-1,450.15	-89.98	100.88	1.50	-1.50	0.00
5,200.00	5.11	183.551	4,863.34	-1,460.34	-90.61	101.59	1.50	-1.50	0.00
5,300.00	3.61	183.551	4,963.05	-1,467.92	-91.08	102.12	1.50	-1.50	0.00
5,400.00	2.11	183.551	5,062.92	-1,472.89	-91.39	102.47	1.50	-1.50	0.00
5,500.00	0.61	183.551	5,162.89	-1,475.26	-91.54	102.63	1.50	-1.50	0.00
5,540.46	0.00	0.000	5,203.35	-1,475.47	-91.55	102.65	1.50	-1.50	0.00
<b>Start 260.78 hold at 5540.46 MD</b>									
5,600.00	0.00	0.000	5,262.89	-1,475.47	-91.55	102.65	0.00	0.00	0.00
5,700.00	0.00	0.000	5,362.89	-1,475.47	-91.55	102.65	0.00	0.00	0.00
5,800.00	0.00	0.000	5,462.89	-1,475.47	-91.55	102.65	0.00	0.00	0.00
5,801.24	0.00	0.000	5,464.13	-1,475.47	-91.55	102.65	0.00	0.00	0.00
<b>Start DLS 11.00 TFO 269.57</b>									
5,900.00	10.86	269.569	5,562.30	-1,475.54	-100.88	111.98	11.00	11.00	0.00
6,000.00	21.86	269.569	5,658.10	-1,475.75	-129.01	140.11	11.00	11.00	0.00
6,100.00	32.86	269.569	5,746.78	-1,476.10	-174.91	186.00	11.00	11.00	0.00
6,200.00	43.86	269.569	5,825.06	-1,476.56	-236.87	247.97	11.00	11.00	0.00
6,300.00	54.86	269.569	5,890.09	-1,477.13	-312.64	323.74	11.00	11.00	0.00
6,400.00	65.86	269.569	5,939.46	-1,477.78	-399.42	410.53	11.00	11.00	0.00
6,500.00	76.86	269.569	5,971.37	-1,478.49	-494.03	505.14	11.00	11.00	0.00
6,600.00	87.86	269.569	5,984.64	-1,479.24	-592.99	604.10	11.00	11.00	0.00
6,619.42	90.00	269.569	5,985.00	-1,479.38	-612.41	623.52	11.00	11.00	0.00
<b>Start 10708.53 hold at 6619.42 MD</b>									
6,700.00	90.00	269.569	5,985.00	-1,479.99	-692.98	704.10	0.00	0.00	0.00
6,800.00	90.00	269.569	5,985.00	-1,480.74	-792.98	804.10	0.00	0.00	0.00
6,900.00	90.00	269.569	5,985.00	-1,481.49	-892.98	904.10	0.00	0.00	0.00
7,000.00	90.00	269.569	5,985.00	-1,482.24	-992.97	1,004.10	0.00	0.00	0.00
7,100.00	90.00	269.569	5,985.00	-1,482.99	-1,092.97	1,104.10	0.00	0.00	0.00
7,200.00	90.00	269.569	5,985.00	-1,483.75	-1,192.97	1,204.10	0.00	0.00	0.00
7,300.00	90.00	269.569	5,985.00	-1,484.50	-1,292.97	1,304.10	0.00	0.00	0.00
7,400.00	90.00	269.569	5,985.00	-1,485.25	-1,392.96	1,404.10	0.00	0.00	0.00
7,500.00	90.00	269.569	5,985.00	-1,486.00	-1,492.96	1,504.10	0.00	0.00	0.00
7,600.00	90.00	269.569	5,985.00	-1,486.75	-1,592.96	1,604.10	0.00	0.00	0.00
7,700.00	90.00	269.569	5,985.00	-1,487.50	-1,692.95	1,704.10	0.00	0.00	0.00
7,800.00	90.00	269.569	5,985.00	-1,488.25	-1,792.95	1,804.10	0.00	0.00	0.00
7,900.00	90.00	269.569	5,985.00	-1,489.01	-1,892.95	1,904.10	0.00	0.00	0.00
8,000.00	90.00	269.569	5,985.00	-1,489.76	-1,992.95	2,004.10	0.00	0.00	0.00
8,100.00	90.00	269.569	5,985.00	-1,490.51	-2,092.94	2,104.10	0.00	0.00	0.00
8,200.00	90.00	269.569	5,985.00	-1,491.26	-2,192.94	2,204.10	0.00	0.00	0.00
8,300.00	90.00	269.569	5,985.00	-1,492.01	-2,292.94	2,304.10	0.00	0.00	0.00
8,400.00	90.00	269.569	5,985.00	-1,492.76	-2,392.93	2,404.10	0.00	0.00	0.00
8,500.00	90.00	269.569	5,985.00	-1,493.51	-2,492.93	2,504.10	0.00	0.00	0.00
8,600.00	90.00	269.569	5,985.00	-1,494.27	-2,592.93	2,604.10	0.00	0.00	0.00
8,700.00	90.00	269.569	5,985.00	-1,495.02	-2,692.93	2,704.10	0.00	0.00	0.00
8,800.00	90.00	269.569	5,985.00	-1,495.77	-2,792.92	2,804.10	0.00	0.00	0.00
8,900.00	90.00	269.569	5,985.00	-1,496.52	-2,892.92	2,904.10	0.00	0.00	0.00
9,000.00	90.00	269.569	5,985.00	-1,497.27	-2,992.92	3,004.10	0.00	0.00	0.00
9,100.00	90.00	269.569	5,985.00	-1,498.02	-3,092.91	3,104.10	0.00	0.00	0.00
9,200.00	90.00	269.569	5,985.00	-1,498.77	-3,192.91	3,204.10	0.00	0.00	0.00
9,300.00	90.00	269.569	5,985.00	-1,499.53	-3,292.91	3,304.10	0.00	0.00	0.00
9,400.00	90.00	269.569	5,985.00	-1,500.28	-3,392.91	3,404.10	0.00	0.00	0.00

<b>Database:</b>	Casper District	<b>Local Co-ordinate Reference:</b>	Well RSU Anschutz Fed 4-61-05-4040C
<b>Company:</b>	Bill Barrett Corp.	<b>TVD Reference:</b>	GL 4501.5' & KB 20' @ 4521.50ft
<b>Project:</b>	Weld County, CO NAD 83	<b>MD Reference:</b>	GL 4501.5' & KB 20' @ 4521.50ft
<b>Site:</b>	RSU Anschutz Fed 4-61-4 NW Pad	<b>North Reference:</b>	True
<b>Well:</b>	RSU Anschutz Fed 4-61-05-4040C	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	OH		
<b>Design:</b>	Plan 1		

Planned 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)	
9,500.00	90.00	269.569	5,985.00	-1,501.03	-3,492.90	3,504.10	0.00	0.00	0.00	
9,600.00	90.00	269.569	5,985.00	-1,501.78	-3,592.90	3,604.10	0.00	0.00	0.00	
9,700.00	90.00	269.569	5,985.00	-1,502.53	-3,692.90	3,704.10	0.00	0.00	0.00	
9,800.00	90.00	269.569	5,985.00	-1,503.28	-3,792.89	3,804.10	0.00	0.00	0.00	
9,900.00	90.00	269.569	5,985.00	-1,504.03	-3,892.89	3,904.10	0.00	0.00	0.00	
10,000.00	90.00	269.569	5,985.00	-1,504.78	-3,992.89	4,004.10	0.00	0.00	0.00	
10,100.00	90.00	269.569	5,985.00	-1,505.54	-4,092.89	4,104.10	0.00	0.00	0.00	
10,200.00	90.00	269.569	5,985.00	-1,506.29	-4,192.88	4,204.10	0.00	0.00	0.00	
10,300.00	90.00	269.569	5,985.00	-1,507.04	-4,292.88	4,304.10	0.00	0.00	0.00	
10,400.00	90.00	269.569	5,985.00	-1,507.79	-4,392.88	4,404.10	0.00	0.00	0.00	
10,500.00	90.00	269.569	5,985.00	-1,508.54	-4,492.87	4,504.10	0.00	0.00	0.00	
10,600.00	90.00	269.569	5,985.00	-1,509.29	-4,592.87	4,604.10	0.00	0.00	0.00	
10,700.00	90.00	269.569	5,985.00	-1,510.04	-4,692.87	4,704.10	0.00	0.00	0.00	
10,800.00	90.00	269.569	5,985.00	-1,510.80	-4,792.87	4,804.10	0.00	0.00	0.00	
10,900.00	90.00	269.569	5,985.00	-1,511.55	-4,892.86	4,904.10	0.00	0.00	0.00	
11,000.00	90.00	269.569	5,985.00	-1,512.30	-4,992.86	5,004.10	0.00	0.00	0.00	
11,100.00	90.00	269.569	5,985.00	-1,513.05	-5,092.86	5,104.10	0.00	0.00	0.00	
11,200.00	90.00	269.569	5,985.00	-1,513.80	-5,192.86	5,204.10	0.00	0.00	0.00	
11,300.00	90.00	269.569	5,985.00	-1,514.55	-5,292.85	5,304.10	0.00	0.00	0.00	
11,400.00	90.00	269.569	5,985.00	-1,515.30	-5,392.85	5,404.10	0.00	0.00	0.00	
11,500.00	90.00	269.569	5,985.00	-1,516.06	-5,492.85	5,504.10	0.00	0.00	0.00	
11,600.00	90.00	269.569	5,985.00	-1,516.81	-5,592.84	5,604.10	0.00	0.00	0.00	
11,700.00	90.00	269.569	5,985.00	-1,517.56	-5,692.84	5,704.10	0.00	0.00	0.00	
11,800.00	90.00	269.569	5,985.00	-1,518.31	-5,792.84	5,804.10	0.00	0.00	0.00	
11,900.00	90.00	269.569	5,985.00	-1,519.06	-5,892.84	5,904.10	0.00	0.00	0.00	
12,000.00	90.00	269.569	5,985.00	-1,519.81	-5,992.83	6,004.10	0.00	0.00	0.00	
12,100.00	90.00	269.569	5,985.00	-1,520.56	-6,092.83	6,104.10	0.00	0.00	0.00	
12,200.00	90.00	269.569	5,985.00	-1,521.31	-6,192.83	6,204.10	0.00	0.00	0.00	
12,300.00	90.00	269.569	5,985.00	-1,522.07	-6,292.82	6,304.10	0.00	0.00	0.00	
12,400.00	90.00	269.569	5,985.00	-1,522.82	-6,392.82	6,404.10	0.00	0.00	0.00	
12,500.00	90.00	269.569	5,985.00	-1,523.57	-6,492.82	6,504.10	0.00	0.00	0.00	
12,600.00	90.00	269.569	5,985.00	-1,524.32	-6,592.82	6,604.10	0.00	0.00	0.00	
12,700.00	90.00	269.569	5,985.00	-1,525.07	-6,692.81	6,704.10	0.00	0.00	0.00	
12,800.00	90.00	269.569	5,985.00	-1,525.82	-6,792.81	6,804.10	0.00	0.00	0.00	
12,900.00	90.00	269.569	5,985.00	-1,526.57	-6,892.81	6,904.10	0.00	0.00	0.00	
13,000.00	90.00	269.569	5,985.00	-1,527.33	-6,992.80	7,004.10	0.00	0.00	0.00	
13,100.00	90.00	269.569	5,985.00	-1,528.08	-7,092.80	7,104.10	0.00	0.00	0.00	
13,200.00	90.00	269.569	5,985.00	-1,528.83	-7,192.80	7,204.10	0.00	0.00	0.00	
13,300.00	90.00	269.569	5,985.00	-1,529.58	-7,292.80	7,304.10	0.00	0.00	0.00	
13,400.00	90.00	269.569	5,985.00	-1,530.33	-7,392.79	7,404.10	0.00	0.00	0.00	
13,500.00	90.00	269.569	5,985.00	-1,531.08	-7,492.79	7,504.10	0.00	0.00	0.00	
13,600.00	90.00	269.569	5,985.00	-1,531.83	-7,592.79	7,604.10	0.00	0.00	0.00	
13,700.00	90.00	269.569	5,985.00	-1,532.59	-7,692.78	7,704.10	0.00	0.00	0.00	
13,800.00	90.00	269.569	5,985.00	-1,533.34	-7,792.78	7,804.10	0.00	0.00	0.00	
13,900.00	90.00	269.569	5,985.00	-1,534.09	-7,892.78	7,904.10	0.00	0.00	0.00	
14,000.00	90.00	269.569	5,985.00	-1,534.84	-7,992.78	8,004.10	0.00	0.00	0.00	
14,100.00	90.00	269.569	5,985.00	-1,535.59	-8,092.77	8,104.10	0.00	0.00	0.00	
14,200.00	90.00	269.569	5,985.00	-1,536.34	-8,192.77	8,204.10	0.00	0.00	0.00	
14,300.00	90.00	269.569	5,985.00	-1,537.09	-8,292.77	8,304.10	0.00	0.00	0.00	
14,400.00	90.00	269.569	5,985.00	-1,537.85	-8,392.76	8,404.10	0.00	0.00	0.00	
14,500.00	90.00	269.569	5,985.00	-1,538.60	-8,492.76	8,504.10	0.00	0.00	0.00	
14,600.00	90.00	269.569	5,985.00	-1,539.35	-8,592.76	8,604.10	0.00	0.00	0.00	
14,700.00	90.00	269.569	5,985.00	-1,540.10	-8,692.76	8,704.10	0.00	0.00	0.00	
14,800.00	90.00	269.569	5,985.00	-1,540.85	-8,792.75	8,804.10	0.00	0.00	0.00	

<b>Database:</b>	Casper District	<b>Local Co-ordinate Reference:</b>	Well RSU Anschutz Fed 4-61-05-4040C
<b>Company:</b>	Bill Barrett Corp.	<b>TVD Reference:</b>	GL 4501.5' & KB 20' @ 4521.50ft
<b>Project:</b>	Weld County, CO NAD 83	<b>MD Reference:</b>	GL 4501.5' & KB 20' @ 4521.50ft
<b>Site:</b>	RSU Anschutz Fed 4-61-4 NW Pad	<b>North Reference:</b>	True
<b>Well:</b>	RSU Anschutz Fed 4-61-05-4040C	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	OH		
<b>Design:</b>	Plan 1		

Planned 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)
14,900.00	90.00	269.569	5,985.00	-1,541.60	-8,892.75	8,904.10	0.00	0.00	0.00
15,000.00	90.00	269.569	5,985.00	-1,542.35	-8,992.75	9,004.10	0.00	0.00	0.00
15,100.00	90.00	269.569	5,985.00	-1,543.10	-9,092.75	9,104.10	0.00	0.00	0.00
15,200.00	90.00	269.569	5,985.00	-1,543.86	-9,192.74	9,204.10	0.00	0.00	0.00
15,300.00	90.00	269.569	5,985.00	-1,544.61	-9,292.74	9,304.10	0.00	0.00	0.00
15,400.00	90.00	269.569	5,985.00	-1,545.36	-9,392.74	9,404.10	0.00	0.00	0.00
15,500.00	90.00	269.569	5,985.00	-1,546.11	-9,492.73	9,504.10	0.00	0.00	0.00
15,600.00	90.00	269.569	5,985.00	-1,546.86	-9,592.73	9,604.10	0.00	0.00	0.00
15,700.00	90.00	269.569	5,985.00	-1,547.61	-9,692.73	9,704.10	0.00	0.00	0.00
15,800.00	90.00	269.569	5,985.00	-1,548.36	-9,792.73	9,804.10	0.00	0.00	0.00
15,900.00	90.00	269.569	5,985.00	-1,549.12	-9,892.72	9,904.10	0.00	0.00	0.00
16,000.00	90.00	269.569	5,985.00	-1,549.87	-9,992.72	10,004.10	0.00	0.00	0.00
16,100.00	90.00	269.569	5,985.00	-1,550.62	-10,092.72	10,104.10	0.00	0.00	0.00
16,200.00	90.00	269.569	5,985.00	-1,551.37	-10,192.71	10,204.10	0.00	0.00	0.00
16,300.00	90.00	269.569	5,985.00	-1,552.12	-10,292.71	10,304.10	0.00	0.00	0.00
16,400.00	90.00	269.569	5,985.00	-1,552.87	-10,392.71	10,404.10	0.00	0.00	0.00
16,500.00	90.00	269.569	5,985.00	-1,553.62	-10,492.71	10,504.10	0.00	0.00	0.00
16,600.00	90.00	269.569	5,985.00	-1,554.38	-10,592.70	10,604.10	0.00	0.00	0.00
16,700.00	90.00	269.569	5,985.00	-1,555.13	-10,692.70	10,704.10	0.00	0.00	0.00
16,800.00	90.00	269.569	5,985.00	-1,555.88	-10,792.70	10,804.10	0.00	0.00	0.00
16,900.00	90.00	269.569	5,985.00	-1,556.63	-10,892.69	10,904.10	0.00	0.00	0.00
17,000.00	90.00	269.569	5,985.00	-1,557.38	-10,992.69	11,004.10	0.00	0.00	0.00
17,100.00	90.00	269.569	5,985.00	-1,558.13	-11,092.69	11,104.10	0.00	0.00	0.00
17,200.00	90.00	269.569	5,985.00	-1,558.88	-11,192.69	11,204.10	0.00	0.00	0.00
17,300.00	90.00	269.569	5,985.00	-1,559.64	-11,292.68	11,304.10	0.00	0.00	0.00
17,327.95	90.00	269.569	5,985.00	-1,559.85	-11,320.63	11,332.05	0.00	0.00	0.00
TD at 17327.95									

Design Targets									
Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (usft)	Easting (usft)	Latitude	Longitude
4-61-05-4040C PBHL - hit/miss target - Shape - Point	0.00	0.000	5,985.00	-1,559.85	-11,320.63	1,369,671.05	3,344,289.12	40° 20' 29.638 N	104° 15' 53.438 W
4-61-05-4040C LP - plan misses target center by 0.01ft at 6619.43ft MD (5985.00 TVD, -1479.38 N, -612.41 E) - Point	0.00	0.000	5,985.00	-1,479.37	-612.41	1,369,905.57	3,354,995.05	40° 20' 30.458 N	104° 13' 35.144 W

Plan Annotations				
Measured Depth (ft)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Comment
1,000.00	1,000.00	0.00	0.00	Start Build 2.00
2,817.32	2,697.86	-556.28	-34.52	Start 300.05 hold at 2817.32 MD
3,117.37	2,939.54	-733.77	-45.53	Start Drop -1.50
5,540.46	5,203.35	-1,475.47	-91.55	Start 260.78 hold at 5540.46 MD
5,801.24	5,464.13	-1,475.47	-91.55	Start DLS 11.00 TFO 269.57
6,619.42	5,985.00	-1,479.38	-612.41	Start 10708.53 hold at 6619.42 MD
17,327.95	5,985.00	-1,559.85	-11,320.63	TD at 17327.95