



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: Anschutz State 5-62-22_23 SWSW Pad
Well: Anschutz State 5-62-27-0164B2B
Wellbore: OH
Design: Plan 1



Azinuths to True North
Magnetic North: 8.26°



Magnetic Field
Strength: 52634.1snT
Dip Angle: 67.02°
Date: 11/11/2015
Model: BGGM2015

Plan: Plan 1 (Anschutz State 5-62-27-0164B2B/OH)

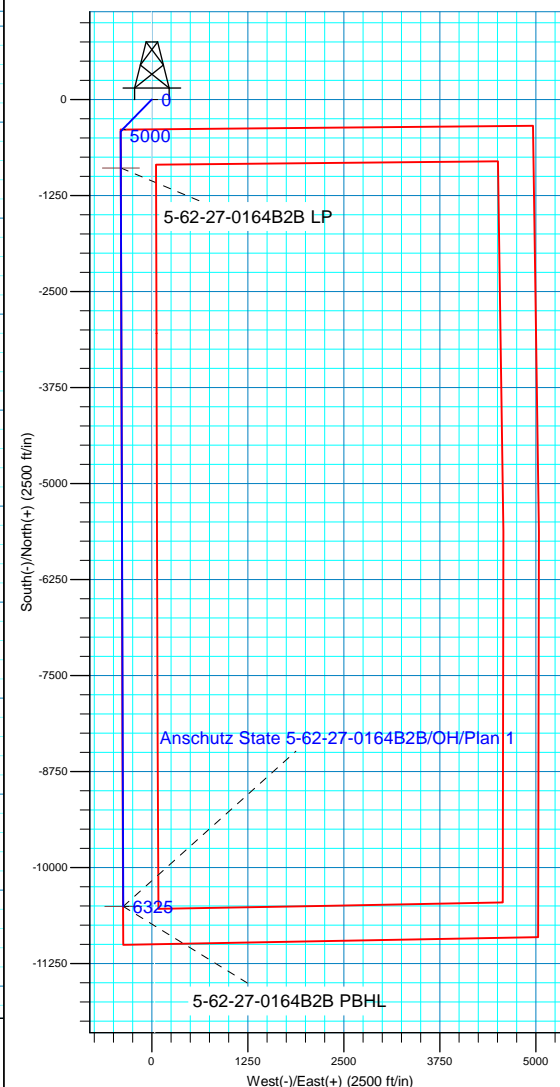
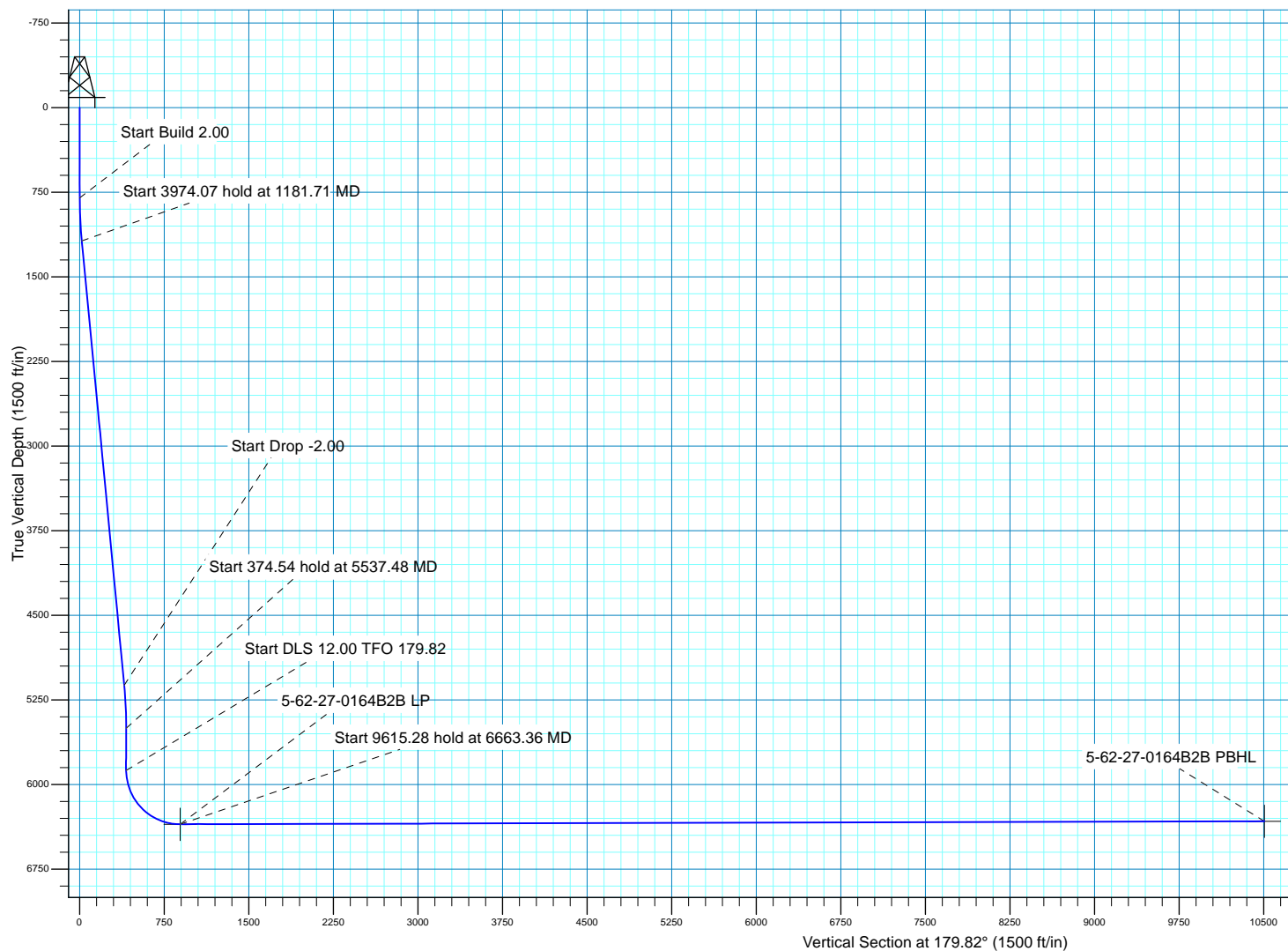
Created By: Seth Burstad Date: 11-11-2015

SECTION DETAILS

MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSect
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
800.00	0.00	0.00	800.00	0.00	0.00	0.00	0.00	0.00
1181.71	7.63	224.37	1180.58	-18.15	-17.76	2.00	224.37	18.10
5155.77	7.63	224.37	5119.42	-395.57	-386.91	0.00	0.00	394.35
5537.48	0.00	0.00	5500.00	-413.72	-404.67	2.00	180.00	412.45
5912.02	0.00	0.00	5874.54	-413.72	-404.67	0.00	0.00	412.45
6663.36	90.16	179.82	6352.00	-892.52	-403.14	12.00	179.82	891.25
16278.64	90.16	179.82	6325.00	-10507.71	-372.36	0.00	0.00	10506.49

WELL DETAILS: Anschutz State 5-62-27-0164B2B

		GL 4680' & KB 16' @ 4696.00ft		4680.00		
+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	
0.00	0.00	1383138.53	3329248.39	40° 22' 44.738 N	104° 19' 5.351 W	





Bill Barrett Corp.

Weld County, CO NAD 83
Anchut State 5-62-22_23 SWSW Pad
Anschutz State Fed 5-62-27-0164B2B

OH

Plan: Plan 1

Standard Planning Report

11 November, 2015



Database:	Casper District	Local Co-ordinate Reference:	Well Anschutz State Fed 5-62-27-0164B2B
Company:	Bill Barrett Corp.	TVD Reference:	GL 4680' & KB 16' @ 4696.00ft
Project:	Weld County, CO NAD 83	MD Reference:	GL 4680' & KB 16' @ 4696.00ft
Site:	Anchutz State 5-62-22_23 SWSW Pad	North Reference:	True
Well:	Anschutz State Fed 5-62-27-0164B2B	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Plan 1		

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	Anchutz State 5-62-22_23 SWSW Pad, Site Center: 5-62-27-0164B2B			
Site Position:		Northing:	1,383,138.54 usft	Latitude: 40° 22' 44.738 N
From:	Lat/Long	Easting:	3,329,248.39 usft	Longitude: 104° 19' 5.351 W
Position Uncertainty:	0.00 ft	Slot Radius:	13.200 in	Grid Convergence: 0.76 °

Well	Anschutz State Fed 5-62-27-0164B2B, 389' FSL 400' FWL Sec 22 T5N R62W			
Well Position	+N/-S	-0.01 ft	Northing:	1,383,138.53 usft
	+E/-W	0.00 ft	Easting:	3,329,248.39 usft
Position Uncertainty		0.00 ft	Wellhead Elevation:	0.00 ft
			Ground Level:	4,680.00 ft

Wellbore	OH				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	BGGM2015	11/11/2015	8.26	67.02	52,634

Design	Plan 1			
Audit Notes:				
Version:	Phase:	PLAN	Tie On Depth:	0.00
Vertical Section:	Depth From (TVD) (ft)	+N/-S (ft)	+E/-W (ft)	Direction (°)
	0.00	0.00	0.00	179.82

Plan Sections										
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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
800.00	0.00	0.00	800.00	0.00	0.00	0.00	0.00	0.00	0.00	
1,181.71	7.63	224.37	1,180.58	-18.15	-17.76	2.00	2.00	0.00	224.37	
5,155.78	7.63	224.37	5,119.42	-395.57	-386.92	0.00	0.00	0.00	0.00	
5,537.48	0.00	0.00	5,500.00	-413.72	-404.67	2.00	-2.00	0.00	180.00	
5,912.02	0.00	0.00	5,874.54	-413.72	-404.67	0.00	0.00	0.00	0.00	
6,663.36	90.16	179.82	6,352.00	-892.52	-403.14	12.00	12.00	23.93	179.82	
16,278.64	90.16	179.82	6,325.00	-10,507.71	-372.36	0.00	0.00	0.00	0.00	5-62-27-0164B2B PB

Database:	Casper District	Local Co-ordinate Reference:	Well Anschutz State Fed 5-62-27-0164B2B
Company:	Bill Barrett Corp.	TVD Reference:	GL 4680' & KB 16' @ 4696.00ft
Project:	Weld County, CO NAD 83	MD Reference:	GL 4680' & KB 16' @ 4696.00ft
Site:	Anchutz State 5-62-22_23 SWSW Pad	North Reference:	True
Well:	Anschutz State Fed 5-62-27-0164B2B	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
100.00	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00
200.00	0.00	0.00	200.00	0.00	0.00	0.00	0.00	0.00	0.00
300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.00	0.00	0.00
400.00	0.00	0.00	400.00	0.00	0.00	0.00	0.00	0.00	0.00
500.00	0.00	0.00	500.00	0.00	0.00	0.00	0.00	0.00	0.00
600.00	0.00	0.00	600.00	0.00	0.00	0.00	0.00	0.00	0.00
700.00	0.00	0.00	700.00	0.00	0.00	0.00	0.00	0.00	0.00
800.00	0.00	0.00	800.00	0.00	0.00	0.00	0.00	0.00	0.00
Start Build 2.00									
900.00	2.00	224.37	899.98	-1.25	-1.22	1.24	2.00	2.00	0.00
1,000.00	4.00	224.37	999.84	-4.99	-4.88	4.97	2.00	2.00	0.00
1,100.00	6.00	224.37	1,099.45	-11.22	-10.97	11.18	2.00	2.00	0.00
1,181.71	7.63	224.37	1,180.58	-18.15	-17.76	18.10	2.00	2.00	0.00
Start 3974.07 hold at 1181.71 MD									
1,200.00	7.63	224.37	1,198.71	-19.89	-19.45	19.83	0.00	0.00	0.00
1,300.00	7.63	224.37	1,297.82	-29.39	-28.74	29.30	0.00	0.00	0.00
1,400.00	7.63	224.37	1,396.94	-38.88	-38.03	38.76	0.00	0.00	0.00
1,500.00	7.63	224.37	1,496.05	-48.38	-47.32	48.23	0.00	0.00	0.00
1,600.00	7.63	224.37	1,595.16	-57.88	-56.61	57.70	0.00	0.00	0.00
1,700.00	7.63	224.37	1,694.28	-67.37	-65.90	67.17	0.00	0.00	0.00
1,800.00	7.63	224.37	1,793.39	-76.87	-75.19	76.63	0.00	0.00	0.00
1,900.00	7.63	224.37	1,892.51	-86.37	-84.48	86.10	0.00	0.00	0.00
2,000.00	7.63	224.37	1,991.62	-95.87	-93.77	95.57	0.00	0.00	0.00
2,100.00	7.63	224.37	2,090.73	-105.36	-103.06	105.04	0.00	0.00	0.00
2,200.00	7.63	224.37	2,189.85	-114.86	-112.35	114.51	0.00	0.00	0.00
2,300.00	7.63	224.37	2,288.96	-124.36	-121.64	123.97	0.00	0.00	0.00
2,400.00	7.63	224.37	2,388.07	-133.85	-130.93	133.44	0.00	0.00	0.00
2,500.00	7.63	224.37	2,487.19	-143.35	-140.21	142.91	0.00	0.00	0.00
2,600.00	7.63	224.37	2,586.30	-152.85	-149.50	152.38	0.00	0.00	0.00
2,700.00	7.63	224.37	2,685.41	-162.34	-158.79	161.84	0.00	0.00	0.00
2,800.00	7.63	224.37	2,784.53	-171.84	-168.08	171.31	0.00	0.00	0.00
2,900.00	7.63	224.37	2,883.64	-181.34	-177.37	180.78	0.00	0.00	0.00
3,000.00	7.63	224.37	2,982.76	-190.83	-186.66	190.25	0.00	0.00	0.00
3,100.00	7.63	224.37	3,081.87	-200.33	-195.95	199.72	0.00	0.00	0.00
3,200.00	7.63	224.37	3,180.98	-209.83	-205.24	209.18	0.00	0.00	0.00
3,300.00	7.63	224.37	3,280.10	-219.33	-214.53	218.65	0.00	0.00	0.00
3,400.00	7.63	224.37	3,379.21	-228.82	-223.82	228.12	0.00	0.00	0.00
3,500.00	7.63	224.37	3,478.32	-238.32	-233.11	237.59	0.00	0.00	0.00
3,600.00	7.63	224.37	3,577.44	-247.82	-242.40	247.05	0.00	0.00	0.00
3,700.00	7.63	224.37	3,676.55	-257.31	-251.68	256.52	0.00	0.00	0.00
3,800.00	7.63	224.37	3,775.66	-266.81	-260.97	265.99	0.00	0.00	0.00
3,900.00	7.63	224.37	3,874.78	-276.31	-270.26	275.46	0.00	0.00	0.00
4,000.00	7.63	224.37	3,973.89	-285.80	-279.55	284.92	0.00	0.00	0.00
4,100.00	7.63	224.37	4,073.01	-295.30	-288.84	294.39	0.00	0.00	0.00
4,200.00	7.63	224.37	4,172.12	-304.80	-298.13	303.86	0.00	0.00	0.00
4,300.00	7.63	224.37	4,271.23	-314.30	-307.42	313.33	0.00	0.00	0.00
4,400.00	7.63	224.37	4,370.35	-323.79	-316.71	322.80	0.00	0.00	0.00
4,500.00	7.63	224.37	4,469.46	-333.29	-326.00	332.26	0.00	0.00	0.00
4,600.00	7.63	224.37	4,568.57	-342.79	-335.29	341.73	0.00	0.00	0.00
4,700.00	7.63	224.37	4,667.69	-352.28	-344.58	351.20	0.00	0.00	0.00
4,728.57	7.63	224.37	4,696.00	-355.00	-347.23	353.90	0.00	0.00	0.00
BASE OF FOX HILLS									

Database:	Casper District	Local Co-ordinate Reference:	Well Anschutz State Fed 5-62-27-0164B2B
Company:	Bill Barrett Corp.	TVD Reference:	GL 4680' & KB 16' @ 4696.00ft
Project:	Weld County, CO NAD 83	MD Reference:	GL 4680' & KB 16' @ 4696.00ft
Site:	Anchutz State 5-62-22_23 SWSW Pad	North Reference:	True
Well:	Anschutz State Fed 5-62-27-0164B2B	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	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	7.63	224.37	4,766.80	-361.78	-353.87	360.67	0.00	0.00	0.00
4,900.00	7.63	224.37	4,865.92	-371.28	-363.16	370.13	0.00	0.00	0.00
5,000.00	7.63	224.37	4,965.03	-380.77	-372.44	379.60	0.00	0.00	0.00
5,100.00	7.63	224.37	5,064.14	-390.27	-381.73	389.07	0.00	0.00	0.00
5,155.78	7.63	224.37	5,119.42	-395.57	-386.92	394.35	0.00	0.00	0.00
Start Drop -2.00									
5,200.00	6.75	224.37	5,163.30	-399.53	-390.79	398.30	2.00	-2.00	0.00
5,278.13	5.19	224.37	5,241.00	-405.33	-396.47	404.09	2.00	-2.00	0.00
SHANNON									
5,300.00	4.75	224.37	5,262.79	-406.69	-397.79	405.44	2.00	-2.00	0.00
5,400.00	2.75	224.37	5,362.57	-411.36	-402.36	410.10	2.00	-2.00	0.00
5,500.00	0.75	224.37	5,462.52	-413.54	-404.50	412.27	2.00	-2.00	0.00
5,537.48	0.00	0.00	5,500.00	-413.72	-404.67	412.45	2.00	-2.00	0.00
Start 374.54 hold at 5537.48 MD									
5,600.00	0.00	0.00	5,562.52	-413.72	-404.67	412.45	0.00	0.00	0.00
5,700.00	0.00	0.00	5,662.52	-413.72	-404.67	412.45	0.00	0.00	0.00
5,800.00	0.00	0.00	5,762.52	-413.72	-404.67	412.45	0.00	0.00	0.00
5,900.00	0.00	0.00	5,862.52	-413.72	-404.67	412.45	0.00	0.00	0.00
5,912.02	0.00	0.00	5,874.54	-413.72	-404.67	412.45	0.00	0.00	0.00
Start DLS 12.00 TFO 179.82									
6,000.00	10.56	179.82	5,962.02	-421.80	-404.64	420.53	12.00	12.00	0.00
6,100.00	22.56	179.82	6,057.70	-450.25	-404.55	448.98	12.00	12.00	0.00
6,153.66	29.00	179.82	6,106.00	-473.57	-404.48	472.30	12.00	12.00	0.00
SHARON SPRINGS									
6,200.00	34.56	179.82	6,145.37	-497.96	-404.40	496.69	12.00	12.00	0.00
6,278.39	43.96	179.82	6,206.00	-547.52	-404.24	546.24	12.00	12.00	0.00
NIOBRARA									
6,300.00	46.56	179.82	6,221.21	-562.87	-404.19	561.59	12.00	12.00	0.00
6,400.00	58.56	179.82	6,281.90	-642.12	-403.94	640.85	12.00	12.00	0.00
6,480.73	68.25	179.82	6,318.00	-714.22	-403.71	712.95	12.00	12.00	0.00
TOP B CHALK TARGET									
6,500.00	70.56	179.82	6,324.78	-732.25	-403.65	730.98	12.00	12.00	0.00
6,500.67	70.64	179.82	6,325.00	-732.88	-403.65	731.61	12.00	12.00	0.00
TD (HORIZONTAL)									
6,600.00	82.56	179.82	6,347.98	-829.34	-403.34	828.07	12.00	12.00	0.00
6,659.87	89.74	179.82	6,352.00	-889.03	-403.15	887.76	12.00	12.00	0.00
LANDING POINT									
6,663.36	90.16	179.82	6,352.00	-892.52	-403.14	891.25	12.00	12.00	0.00
Start 9615.28 hold at 6663.36 MD									
6,700.00	90.16	179.82	6,351.90	-929.16	-403.02	927.89	0.00	0.00	0.00
6,800.00	90.16	179.82	6,351.62	-1,029.16	-402.70	1,027.89	0.00	0.00	0.00
6,900.00	90.16	179.82	6,351.34	-1,129.16	-402.38	1,127.89	0.00	0.00	0.00
7,000.00	90.16	179.82	6,351.06	-1,229.16	-402.06	1,227.89	0.00	0.00	0.00
7,100.00	90.16	179.82	6,350.78	-1,329.16	-401.74	1,327.89	0.00	0.00	0.00
7,200.00	90.16	179.82	6,350.50	-1,429.16	-401.42	1,427.89	0.00	0.00	0.00
7,300.00	90.16	179.82	6,350.22	-1,529.16	-401.10	1,527.89	0.00	0.00	0.00
7,400.00	90.16	179.82	6,349.93	-1,629.16	-400.78	1,627.89	0.00	0.00	0.00
7,500.00	90.16	179.82	6,349.65	-1,729.15	-400.46	1,727.89	0.00	0.00	0.00
7,600.00	90.16	179.82	6,349.37	-1,829.15	-400.14	1,827.89	0.00	0.00	0.00
7,700.00	90.16	179.82	6,349.09	-1,929.15	-399.82	1,927.89	0.00	0.00	0.00
7,800.00	90.16	179.82	6,348.81	-2,029.15	-399.50	2,027.89	0.00	0.00	0.00
7,900.00	90.16	179.82	6,348.53	-2,129.15	-399.18	2,127.89	0.00	0.00	0.00
8,000.00	90.16	179.82	6,348.25	-2,229.15	-398.86	2,227.89	0.00	0.00	0.00

Database:	Casper District	Local Co-ordinate Reference:	Well Anschutz State Fed 5-62-27-0164B2B
Company:	Bill Barrett Corp.	TVD Reference:	GL 4680' & KB 16' @ 4696.00ft
Project:	Weld County, CO NAD 83	MD Reference:	GL 4680' & KB 16' @ 4696.00ft
Site:	Anschutz State 5-62-22_23 SWSW Pad	North Reference:	True
Well:	Anschutz State Fed 5-62-27-0164B2B	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	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)
8,100.00	90.16	179.82	6,347.97	-2,329.15	-398.54	2,327.89	0.00	0.00	0.00
8,200.00	90.16	179.82	6,347.69	-2,429.15	-398.22	2,427.88	0.00	0.00	0.00
8,300.00	90.16	179.82	6,347.41	-2,529.15	-397.90	2,527.88	0.00	0.00	0.00
8,400.00	90.16	179.82	6,347.13	-2,629.15	-397.58	2,627.88	0.00	0.00	0.00
8,500.00	90.16	179.82	6,346.85	-2,729.15	-397.26	2,727.88	0.00	0.00	0.00
8,600.00	90.16	179.82	6,346.56	-2,829.14	-396.94	2,827.88	0.00	0.00	0.00
8,700.00	90.16	179.82	6,346.28	-2,929.14	-396.62	2,927.88	0.00	0.00	0.00
8,800.00	90.16	179.82	6,346.00	-3,029.14	-396.30	3,027.88	0.00	0.00	0.00
8,900.00	90.16	179.82	6,345.72	-3,129.14	-395.98	3,127.88	0.00	0.00	0.00
9,000.00	90.16	179.82	6,345.44	-3,229.14	-395.66	3,227.88	0.00	0.00	0.00
9,100.00	90.16	179.82	6,345.16	-3,329.14	-395.34	3,327.88	0.00	0.00	0.00
9,200.00	90.16	179.82	6,344.88	-3,429.14	-395.02	3,427.88	0.00	0.00	0.00
9,300.00	90.16	179.82	6,344.60	-3,529.14	-394.70	3,527.88	0.00	0.00	0.00
9,400.00	90.16	179.82	6,344.32	-3,629.14	-394.38	3,627.88	0.00	0.00	0.00
9,500.00	90.16	179.82	6,344.04	-3,729.14	-394.06	3,727.88	0.00	0.00	0.00
9,600.00	90.16	179.82	6,343.76	-3,829.14	-393.74	3,827.88	0.00	0.00	0.00
9,700.00	90.16	179.82	6,343.48	-3,929.13	-393.42	3,927.88	0.00	0.00	0.00
9,800.00	90.16	179.82	6,343.19	-4,029.13	-393.10	4,027.88	0.00	0.00	0.00
9,900.00	90.16	179.82	6,342.91	-4,129.13	-392.78	4,127.88	0.00	0.00	0.00
10,000.00	90.16	179.82	6,342.63	-4,229.13	-392.46	4,227.88	0.00	0.00	0.00
10,100.00	90.16	179.82	6,342.35	-4,329.13	-392.14	4,327.88	0.00	0.00	0.00
10,200.00	90.16	179.82	6,342.07	-4,429.13	-391.82	4,427.88	0.00	0.00	0.00
10,300.00	90.16	179.82	6,341.79	-4,529.13	-391.50	4,527.88	0.00	0.00	0.00
10,400.00	90.16	179.82	6,341.51	-4,629.13	-391.18	4,627.88	0.00	0.00	0.00
10,500.00	90.16	179.82	6,341.23	-4,729.13	-390.86	4,727.88	0.00	0.00	0.00
10,600.00	90.16	179.82	6,340.95	-4,829.13	-390.54	4,827.88	0.00	0.00	0.00
10,700.00	90.16	179.82	6,340.67	-4,929.13	-390.22	4,927.88	0.00	0.00	0.00
10,800.00	90.16	179.82	6,340.39	-5,029.12	-389.90	5,027.87	0.00	0.00	0.00
10,900.00	90.16	179.82	6,340.11	-5,129.12	-389.58	5,127.87	0.00	0.00	0.00
11,000.00	90.16	179.82	6,339.82	-5,229.12	-389.26	5,227.87	0.00	0.00	0.00
11,100.00	90.16	179.82	6,339.54	-5,329.12	-388.94	5,327.87	0.00	0.00	0.00
11,200.00	90.16	179.82	6,339.26	-5,429.12	-388.62	5,427.87	0.00	0.00	0.00
11,300.00	90.16	179.82	6,338.98	-5,529.12	-388.30	5,527.87	0.00	0.00	0.00
11,400.00	90.16	179.82	6,338.70	-5,629.12	-387.98	5,627.87	0.00	0.00	0.00
11,500.00	90.16	179.82	6,338.42	-5,729.12	-387.66	5,727.87	0.00	0.00	0.00
11,600.00	90.16	179.82	6,338.14	-5,829.12	-387.34	5,827.87	0.00	0.00	0.00
11,700.00	90.16	179.82	6,337.86	-5,929.12	-387.02	5,927.87	0.00	0.00	0.00
11,800.00	90.16	179.82	6,337.58	-6,029.12	-386.70	6,027.87	0.00	0.00	0.00
11,900.00	90.16	179.82	6,337.30	-6,129.11	-386.38	6,127.87	0.00	0.00	0.00
12,000.00	90.16	179.82	6,337.02	-6,229.11	-386.06	6,227.87	0.00	0.00	0.00
12,100.00	90.16	179.82	6,336.74	-6,329.11	-385.74	6,327.87	0.00	0.00	0.00
12,200.00	90.16	179.82	6,336.45	-6,429.11	-385.42	6,427.87	0.00	0.00	0.00
12,300.00	90.16	179.82	6,336.17	-6,529.11	-385.10	6,527.87	0.00	0.00	0.00
12,400.00	90.16	179.82	6,335.89	-6,629.11	-384.78	6,627.87	0.00	0.00	0.00
12,500.00	90.16	179.82	6,335.61	-6,729.11	-384.46	6,727.87	0.00	0.00	0.00
12,600.00	90.16	179.82	6,335.33	-6,829.11	-384.14	6,827.87	0.00	0.00	0.00
12,700.00	90.16	179.82	6,335.05	-6,929.11	-383.82	6,927.87	0.00	0.00	0.00
12,800.00	90.16	179.82	6,334.77	-7,029.11	-383.50	7,027.87	0.00	0.00	0.00
12,900.00	90.16	179.82	6,334.49	-7,129.11	-383.18	7,127.87	0.00	0.00	0.00
13,000.00	90.16	179.82	6,334.21	-7,229.10	-382.86	7,227.87	0.00	0.00	0.00
13,100.00	90.16	179.82	6,333.93	-7,329.10	-382.54	7,327.87	0.00	0.00	0.00
13,200.00	90.16	179.82	6,333.65	-7,429.10	-382.22	7,427.87	0.00	0.00	0.00
13,300.00	90.16	179.82	6,333.37	-7,529.10	-381.90	7,527.86	0.00	0.00	0.00
13,400.00	90.16	179.82	6,333.08	-7,629.10	-381.58	7,627.86	0.00	0.00	0.00

Database:	Casper District	Local Co-ordinate Reference:	Well Anschutz State Fed 5-62-27-0164B2B
Company:	Bill Barrett Corp.	TVD Reference:	GL 4680' & KB 16' @ 4696.00ft
Project:	Weld County, CO NAD 83	MD Reference:	GL 4680' & KB 16' @ 4696.00ft
Site:	Anchutz State 5-62-22_23 SWSW Pad	North Reference:	True
Well:	Anschutz State Fed 5-62-27-0164B2B	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	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)
13,500.00	90.16	179.82	6,332.80	-7,729.10	-381.26	7,727.86	0.00	0.00	0.00
13,600.00	90.16	179.82	6,332.52	-7,829.10	-380.94	7,827.86	0.00	0.00	0.00
13,700.00	90.16	179.82	6,332.24	-7,929.10	-380.62	7,927.86	0.00	0.00	0.00
13,800.00	90.16	179.82	6,331.96	-8,029.10	-380.30	8,027.86	0.00	0.00	0.00
13,900.00	90.16	179.82	6,331.68	-8,129.10	-379.98	8,127.86	0.00	0.00	0.00
14,000.00	90.16	179.82	6,331.40	-8,229.10	-379.66	8,227.86	0.00	0.00	0.00
14,100.00	90.16	179.82	6,331.12	-8,329.09	-379.34	8,327.86	0.00	0.00	0.00
14,200.00	90.16	179.82	6,330.84	-8,429.09	-379.02	8,427.86	0.00	0.00	0.00
14,300.00	90.16	179.82	6,330.56	-8,529.09	-378.70	8,527.86	0.00	0.00	0.00
14,400.00	90.16	179.82	6,330.28	-8,629.09	-378.38	8,627.86	0.00	0.00	0.00
14,500.00	90.16	179.82	6,330.00	-8,729.09	-378.06	8,727.86	0.00	0.00	0.00
14,600.00	90.16	179.82	6,329.71	-8,829.09	-377.74	8,827.86	0.00	0.00	0.00
14,700.00	90.16	179.82	6,329.43	-8,929.09	-377.42	8,927.86	0.00	0.00	0.00
14,800.00	90.16	179.82	6,329.15	-9,029.09	-377.10	9,027.86	0.00	0.00	0.00
14,900.00	90.16	179.82	6,328.87	-9,129.09	-376.78	9,127.86	0.00	0.00	0.00
15,000.00	90.16	179.82	6,328.59	-9,229.09	-376.46	9,227.86	0.00	0.00	0.00
15,100.00	90.16	179.82	6,328.31	-9,329.09	-376.14	9,327.86	0.00	0.00	0.00
15,200.00	90.16	179.82	6,328.03	-9,429.08	-375.82	9,427.86	0.00	0.00	0.00
15,300.00	90.16	179.82	6,327.75	-9,529.08	-375.50	9,527.86	0.00	0.00	0.00
15,400.00	90.16	179.82	6,327.47	-9,629.08	-375.18	9,627.86	0.00	0.00	0.00
15,500.00	90.16	179.82	6,327.19	-9,729.08	-374.86	9,727.86	0.00	0.00	0.00
15,600.00	90.16	179.82	6,326.91	-9,829.08	-374.54	9,827.86	0.00	0.00	0.00
15,700.00	90.16	179.82	6,326.63	-9,929.08	-374.22	9,927.86	0.00	0.00	0.00
15,800.00	90.16	179.82	6,326.34	-10,029.08	-373.90	10,027.86	0.00	0.00	0.00
15,900.00	90.16	179.82	6,326.06	-10,129.08	-373.58	10,127.85	0.00	0.00	0.00
16,000.00	90.16	179.82	6,325.78	-10,229.08	-373.26	10,227.85	0.00	0.00	0.00
16,100.00	90.16	179.82	6,325.50	-10,329.08	-372.94	10,327.85	0.00	0.00	0.00
16,200.00	90.16	179.82	6,325.22	-10,429.08	-372.62	10,427.85	0.00	0.00	0.00
16,278.64	90.16	179.82	6,325.00	-10,507.71	-372.36	10,506.49	0.00	0.00	0.00
TD at 16278.64									

Design Targets									
Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (usft)	Easting (usft)	Latitude	Longitude
5-62-27-0164B2B PBHL - hit/miss target - Shape - Point	0.00	0.00	6,325.00	-10,507.71	-372.36	1,372,626.81	3,329,016.10	40° 21' 0.900 N	104° 19' 10.160 W
5-62-27-0164B2B LP - plan misses target center by 0.01ft at 6663.35ft MD (6352.00 TVD, -892.51 N, -403.14 E) - Point	0.00	0.00	6,352.00	-892.51	-403.14	1,382,240.73	3,328,857.18	40° 22' 35.918 N	104° 19' 10.560 W

Database:	Casper District	Local Co-ordinate Reference:	Well Anschutz State Fed 5-62-27-0164B2B
Company:	Bill Barrett Corp.	TVD Reference:	GL 4680' & KB 16' @ 4696.00ft
Project:	Weld County, CO NAD 83	MD Reference:	GL 4680' & KB 16' @ 4696.00ft
Site:	Anchutz State 5-62-22_23 SWSW Pad	North Reference:	True
Well:	Anschutz State Fed 5-62-27-0164B2B	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Plan 1		

Formations					
Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)
4,728.57	4,696.00	BASE OF FOX HILLS		0.00	
5,278.13	5,241.00	SHANNON		0.00	
6,153.66	6,106.00	SHARON SPRINGS		0.00	
6,278.39	6,206.00	NIOBRARA		0.00	
6,480.73	6,318.00	TOP B CHALK TARGET		0.00	
6,500.67	6,325.00	TD (HORIZONTAL)		0.00	
6,659.87	6,352.00	LANDING POINT		0.00	

Plan Annotations					
Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates			
		+N/-S (ft)	+E/-W (ft)	Comment	
800.00	800.00	0.00	0.00	Start Build 2.00	
1,181.71	1,180.58	-18.15	-17.76	Start 3974.07 hold at 1181.71 MD	
5,155.78	5,119.42	-395.57	-386.92	Start Drop -2.00	
5,537.48	5,500.00	-413.72	-404.67	Start 374.54 hold at 5537.48 MD	
5,912.02	5,874.54	-413.72	-404.67	Start DLS 12.00 TFO 179.82	
6,663.36	6,352.00	-892.52	-403.14	Start 9615.28 hold at 6663.36 MD	
16,278.64	6,325.00	-10,507.71	-372.36	TD at 16278.64	