

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 Equus Farms 4-62-9_10 North Pad
Well: Anschutz Equus Farms 4-62-09-0164B2B
Wellbore: OH
Design: Plan 1



Azinuths to True North
Magnetic North: 8.27°

Magnetic Field
Strength: 52610.5nT
Dip Angle: 66.98°
Date: 11/6/2015
Model: BGGM2015

Plan: Plan 1 (Anschutz Equus Farms 4-62-09-0164B2B/OH)

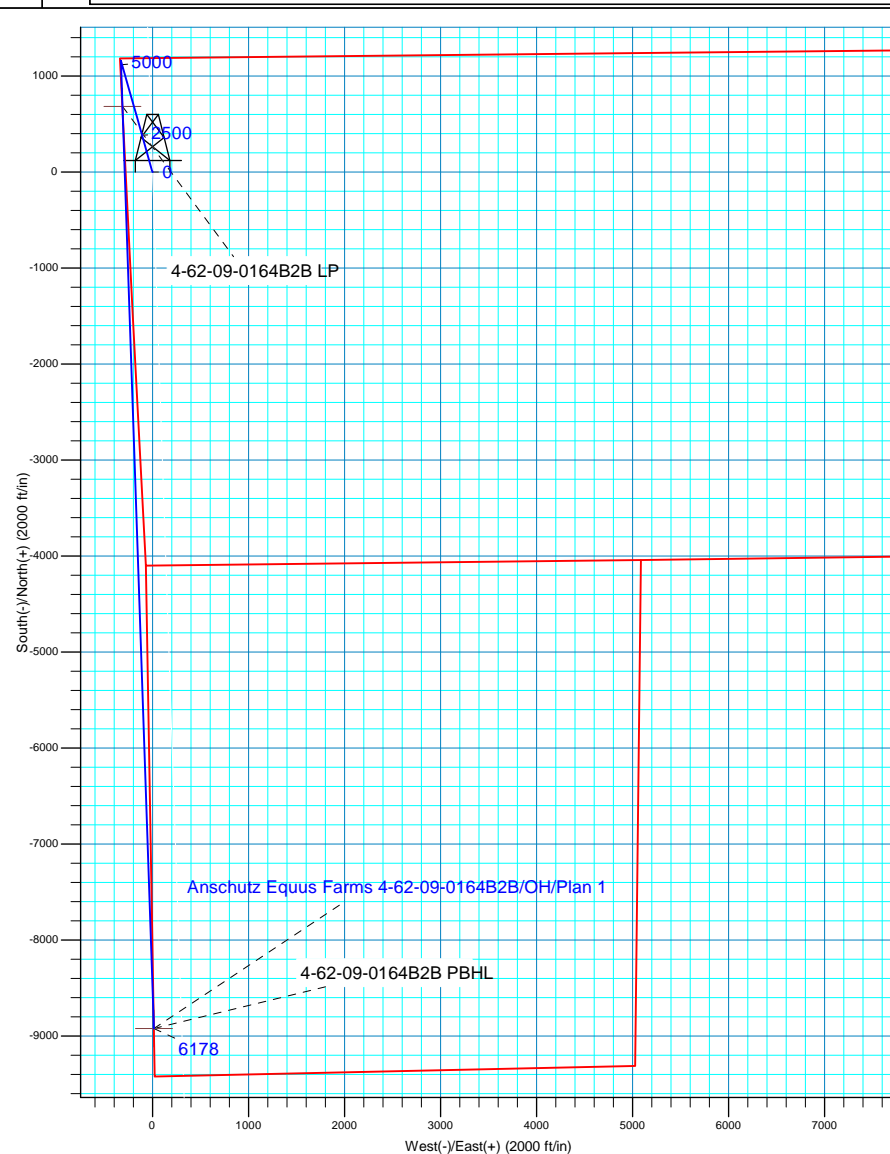
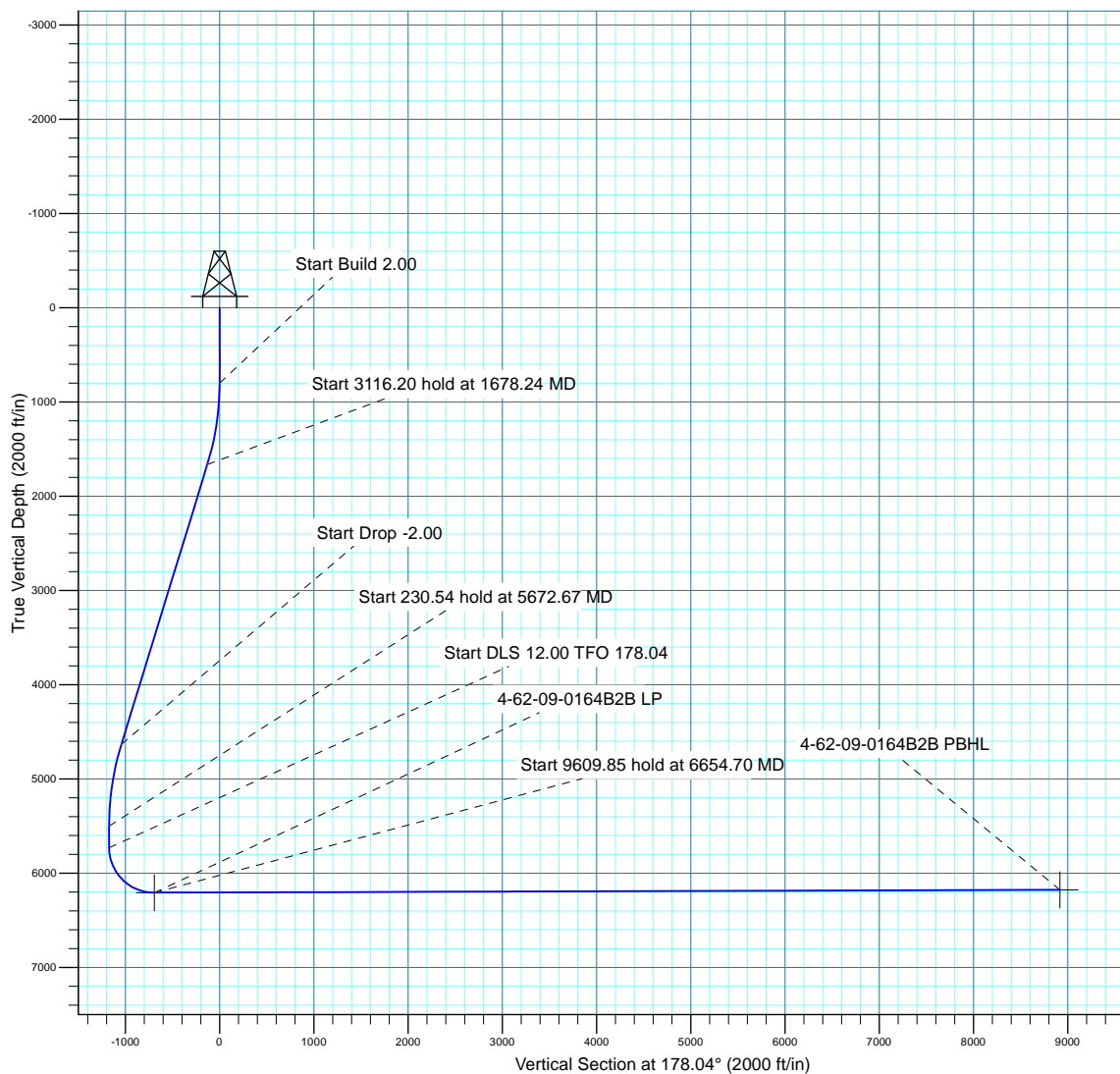
Created By: Seth Burstad Date: 11-06-2015

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
1678.24	17.56	344.17	1664.55	128.50	-36.44	2.00	344.17	-129.67
4794.43	17.56	344.17	4635.45	1033.24	-293.01	0.00	0.00	-1042.66
5672.67	0.00	0.00	5500.00	1161.74	-329.45	2.00	180.00	-1172.33
5903.21	0.00	0.00	5730.54	1161.74	-329.45	0.00	0.00	-1172.33
6654.70	90.18	178.04	6208.00	683.06	-313.08	12.00	178.04	-693.37
16264.55	90.18	178.04	6178.00	-8921.12	15.34	0.00	0.00	8916.43

WELL DETAILS: Anschutz Equus Farms 4-62-09-0164B2B

GL 4520' & KB 16' @ 4536.00ft				4520.00	
+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
0.00	0.00	1365436.86	3323746.21	40° 19' 50.541 N	104° 20' 19.439 W





Bill Barrett Corp.

Weld County, CO NAD 83

Anschutz Equus Farms 4-62-9_10 North Pad

Anschutz Equus Farms 4-62-09-0164B2B

OH

Plan: Plan 1

Standard Planning Report

06 November, 2015



Database:	Casper District	Local Co-ordinate Reference:	Well Anschutz Equus Farms 4-62-09-0164B2B
Company:	Bill Barrett Corp.	TVD Reference:	GL 4520' & KB 16' @ 4536.00ft
Project:	Weld County, CO NAD 83	MD Reference:	GL 4520' & KB 16' @ 4536.00ft
Site:	Anschutz Equus Farms 4-62-9_10 North Pad	North Reference:	True
Well:	Anschutz Equus Farms 4-62-09-0164B2B	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	Anschutz Equus Farms 4-62-9_10 North Pad, Site Center: 4-62-9-0108B2B		
Site Position:		Northing:	1,365,437.80 usft
From:	Lat/Long	Easting:	3,323,761.54 usft
Position Uncertainty:	0.00 ft	Slot Radius:	13.200 in
		Latitude:	40° 19' 50.549 N
		Longitude:	104° 20' 19.241 W
		Grid Convergence:	0.75 °

Well	Anschutz Equus Farms 4-62-09-0164B2B, 1186' FNL 280' FWL sec 9 T4N R62W		
Well Position	+N/-S	-0.74 ft	Northing: 1,365,436.86 usft
	+E/-W	-15.33 ft	Easting: 3,323,746.22 usft
Position Uncertainty	0.00 ft	Wellhead Elevation:	0.00 ft
		Latitude:	40° 19' 50.541 N
		Longitude:	104° 20' 19.439 W
		Ground Level:	4,520.00 ft

Wellbore	OH				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	BGGM2015	11/6/2015	8.27	66.98	52,610

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	178.04

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	
1,678.24	17.56	344.17	1,664.55	128.50	-36.44	2.00	2.00	0.00	344.17	
4,794.43	17.56	344.17	4,635.45	1,033.24	-293.01	0.00	0.00	0.00	0.00	
5,672.67	0.00	0.00	5,500.00	1,161.74	-329.45	2.00	-2.00	0.00	180.00	
5,903.21	0.00	0.00	5,730.54	1,161.74	-329.45	0.00	0.00	0.00	0.00	
6,654.70	90.18	178.04	6,208.00	683.06	-313.08	12.00	12.00	23.69	178.04	
16,264.55	90.18	178.04	6,178.00	-8,921.12	15.34	0.00	0.00	0.00	0.00	4-62-09-0164B2B PB

Database:	Casper District	Local Co-ordinate Reference:	Well Anschutz Equus Farms 4-62-09-0164B2B
Company:	Bill Barrett Corp.	TVD Reference:	GL 4520' & KB 16' @ 4536.00ft
Project:	Weld County, CO NAD 83	MD Reference:	GL 4520' & KB 16' @ 4536.00ft
Site:	Anschutz Equus Farms 4-62-9_10 North Pad	North Reference:	True
Well:	Anschutz Equus Farms 4-62-09-0164B2B	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	344.17	899.98	1.68	-0.48	-1.69	2.00	2.00	0.00
1,000.00	4.00	344.17	999.84	6.71	-1.90	-6.77	2.00	2.00	0.00
1,100.00	6.00	344.17	1,099.45	15.10	-4.28	-15.24	2.00	2.00	0.00
1,200.00	8.00	344.17	1,198.70	26.82	-7.61	-27.07	2.00	2.00	0.00
1,300.00	10.00	344.17	1,297.47	41.87	-11.87	-42.25	2.00	2.00	0.00
1,400.00	12.00	344.17	1,395.62	60.23	-17.08	-60.78	2.00	2.00	0.00
1,500.00	14.00	344.17	1,493.06	81.87	-23.22	-82.61	2.00	2.00	0.00
1,600.00	16.00	344.17	1,589.64	106.77	-30.28	-107.74	2.00	2.00	0.00
1,678.24	17.56	344.17	1,664.55	128.50	-36.44	-129.67	2.00	2.00	0.00
Start 3116.20 hold at 1678.24 MD									
1,700.00	17.56	344.17	1,685.29	134.82	-38.23	-136.05	0.00	0.00	0.00
1,800.00	17.56	344.17	1,780.63	163.85	-46.47	-165.34	0.00	0.00	0.00
1,900.00	17.56	344.17	1,875.97	192.88	-54.70	-194.64	0.00	0.00	0.00
2,000.00	17.56	344.17	1,971.31	221.92	-62.93	-223.94	0.00	0.00	0.00
2,100.00	17.56	344.17	2,066.64	250.95	-71.17	-253.24	0.00	0.00	0.00
2,200.00	17.56	344.17	2,161.98	279.99	-79.40	-282.54	0.00	0.00	0.00
2,300.00	17.56	344.17	2,257.32	309.02	-87.63	-311.84	0.00	0.00	0.00
2,400.00	17.56	344.17	2,352.66	338.05	-95.87	-341.13	0.00	0.00	0.00
2,500.00	17.56	344.17	2,447.99	367.09	-104.10	-370.43	0.00	0.00	0.00
2,600.00	17.56	344.17	2,543.33	396.12	-112.33	-399.73	0.00	0.00	0.00
2,700.00	17.56	344.17	2,638.67	425.15	-120.57	-429.03	0.00	0.00	0.00
2,800.00	17.56	344.17	2,734.01	454.19	-128.80	-458.33	0.00	0.00	0.00
2,900.00	17.56	344.17	2,829.35	483.22	-137.03	-487.62	0.00	0.00	0.00
3,000.00	17.56	344.17	2,924.68	512.25	-145.27	-516.92	0.00	0.00	0.00
3,100.00	17.56	344.17	3,020.02	541.29	-153.50	-546.22	0.00	0.00	0.00
3,200.00	17.56	344.17	3,115.36	570.32	-161.73	-575.52	0.00	0.00	0.00
3,300.00	17.56	344.17	3,210.70	599.35	-169.97	-604.82	0.00	0.00	0.00
3,400.00	17.56	344.17	3,306.03	628.39	-178.20	-634.11	0.00	0.00	0.00
3,500.00	17.56	344.17	3,401.37	657.42	-186.43	-663.41	0.00	0.00	0.00
3,600.00	17.56	344.17	3,496.71	686.45	-194.67	-692.71	0.00	0.00	0.00
3,700.00	17.56	344.17	3,592.05	715.49	-202.90	-722.01	0.00	0.00	0.00
3,800.00	17.56	344.17	3,687.38	744.52	-211.13	-751.31	0.00	0.00	0.00
3,900.00	17.56	344.17	3,782.72	773.55	-219.37	-780.61	0.00	0.00	0.00
4,000.00	17.56	344.17	3,878.06	802.59	-227.60	-809.90	0.00	0.00	0.00
4,100.00	17.56	344.17	3,973.40	831.62	-235.83	-839.20	0.00	0.00	0.00
4,200.00	17.56	344.17	4,068.73	860.66	-244.07	-868.50	0.00	0.00	0.00
4,300.00	17.56	344.17	4,164.07	889.69	-252.30	-897.80	0.00	0.00	0.00
4,400.00	17.56	344.17	4,259.41	918.72	-260.53	-927.10	0.00	0.00	0.00
4,500.00	17.56	344.17	4,354.75	947.76	-268.77	-956.39	0.00	0.00	0.00
4,600.00	17.56	344.17	4,450.09	976.79	-277.00	-985.69	0.00	0.00	0.00
4,690.12	17.56	344.17	4,536.00	1,002.95	-284.42	-1,012.09	0.00	0.00	0.00
BASE OF FOX HILLS									
4,700.00	17.56	344.17	4,545.42	1,005.82	-285.23	-1,014.99	0.00	0.00	0.00

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Company:	Bill Barrett Corp.	TVD Reference:	GL 4520' & KB 16' @ 4536.00ft
Project:	Weld County, CO NAD 83	MD Reference:	GL 4520' & KB 16' @ 4536.00ft
Site:	Anschutz Equus Farms 4-62-9_10 North Pad	North Reference:	True
Well:	Anschutz Equus Farms 4-62-09-0164B2B	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)
4,794.43	17.56	344.17	4,635.45	1,033.24	-293.01	-1,042.66	0.00	0.00	0.00
Start Drop -2.00									
4,800.00	17.45	344.17	4,640.76	1,034.85	-293.47	-1,044.28	2.00	-2.00	0.00
4,868.14	16.09	344.17	4,706.00	1,053.77	-298.83	-1,063.37	2.00	-2.00	0.00
SHANNON									
4,900.00	15.45	344.17	4,736.66	1,062.10	-301.19	-1,071.78	2.00	-2.00	0.00
5,000.00	13.45	344.17	4,833.49	1,086.11	-308.00	-1,096.01	2.00	-2.00	0.00
5,100.00	11.45	344.17	4,931.13	1,106.86	-313.89	-1,116.94	2.00	-2.00	0.00
5,200.00	9.45	344.17	5,029.47	1,124.31	-318.84	-1,134.56	2.00	-2.00	0.00
5,300.00	7.45	344.17	5,128.38	1,138.45	-322.85	-1,148.83	2.00	-2.00	0.00
5,400.00	5.45	344.17	5,227.74	1,149.27	-325.91	-1,159.74	2.00	-2.00	0.00
5,500.00	3.45	344.17	5,327.43	1,156.74	-328.03	-1,167.28	2.00	-2.00	0.00
5,600.00	1.45	344.17	5,427.34	1,160.85	-329.20	-1,171.43	2.00	-2.00	0.00
5,672.67	0.00	0.00	5,500.00	1,161.74	-329.45	-1,172.33	2.00	-2.00	0.00
Start 230.54 hold at 5672.67 MD									
5,700.00	0.00	0.00	5,527.33	1,161.74	-329.45	-1,172.33	0.00	0.00	0.00
5,800.00	0.00	0.00	5,627.33	1,161.74	-329.45	-1,172.33	0.00	0.00	0.00
5,900.00	0.00	0.00	5,727.33	1,161.74	-329.45	-1,172.33	0.00	0.00	0.00
5,903.21	0.00	0.00	5,730.54	1,161.74	-329.45	-1,172.33	0.00	0.00	0.00
Start DLS 12.00 TFO 178.04									
6,000.00	11.61	178.04	5,826.67	1,151.97	-329.12	-1,162.55	12.00	12.00	0.00
6,100.00	23.61	178.04	5,921.80	1,121.78	-328.08	-1,132.35	12.00	12.00	0.00
6,161.02	30.94	178.04	5,976.00	1,093.85	-327.13	-1,104.40	12.00	12.00	0.00
SHARON SPRINGS									
6,200.00	35.61	178.04	6,008.58	1,072.48	-326.40	-1,083.02	12.00	12.00	0.00
6,293.80	46.87	178.04	6,079.00	1,010.78	-324.29	-1,021.28	12.00	12.00	0.00
NIOBRARA									
6,300.00	47.61	178.04	6,083.21	1,006.23	-324.13	-1,016.73	12.00	12.00	0.00
6,363.90	55.28	178.04	6,123.00	956.33	-322.43	-966.80	12.00	12.00	0.00
A CHALK									
6,387.58	58.12	178.04	6,136.00	936.55	-321.75	-947.00	12.00	12.00	0.00
A MARL									
6,400.00	59.61	178.04	6,142.42	925.92	-321.39	-936.37	12.00	12.00	0.00
6,483.04	69.58	178.04	6,178.00	851.05	-318.83	-861.45	12.00	12.00	0.00
TD (HORIZONTAL)									
6,500.00	71.61	178.04	6,183.63	835.06	-318.28	-845.46	12.00	12.00	0.00
6,504.39	72.14	178.04	6,185.00	830.89	-318.14	-841.28	12.00	12.00	0.00
TOP "B" TARGET									
6,600.00	83.61	178.04	6,205.04	737.62	-314.95	-747.96	12.00	12.00	0.00
6,651.06	89.74	178.04	6,208.00	686.70	-313.21	-697.01	12.00	12.00	0.00
LANDING POINT									
6,654.70	90.18	178.04	6,208.00	683.06	-313.08	-693.37	12.00	12.00	0.00
Start 9609.85 hold at 6654.70 MD									
6,700.00	90.18	178.04	6,207.86	637.79	-311.53	-648.08	0.00	0.00	0.00
6,800.00	90.18	178.04	6,207.55	537.85	-308.12	-548.08	0.00	0.00	0.00
6,900.00	90.18	178.04	6,207.24	437.91	-304.70	-448.08	0.00	0.00	0.00
7,000.00	90.18	178.04	6,206.92	337.97	-301.28	-348.08	0.00	0.00	0.00
7,100.00	90.18	178.04	6,206.61	238.03	-297.86	-248.08	0.00	0.00	0.00
7,200.00	90.18	178.04	6,206.30	138.09	-294.45	-148.08	0.00	0.00	0.00
7,300.00	90.18	178.04	6,205.99	38.15	-291.03	-48.08	0.00	0.00	0.00
7,400.00	90.18	178.04	6,205.68	-61.79	-287.61	51.92	0.00	0.00	0.00

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Company:	Bill Barrett Corp.	TVD Reference:	GL 4520' & KB 16' @ 4536.00ft
Project:	Weld County, CO NAD 83	MD Reference:	GL 4520' & KB 16' @ 4536.00ft
Site:	Anschutz Equus Farms 4-62-9_10 North Pad	North Reference:	True
Well:	Anschutz Equus Farms 4-62-09-0164B2B	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)
7,500.00	90.18	178.04	6,205.36	-161.74	-284.19	151.92	0.00	0.00	0.00
7,600.00	90.18	178.04	6,205.05	-261.68	-280.78	251.92	0.00	0.00	0.00
7,700.00	90.18	178.04	6,204.74	-361.62	-277.36	351.92	0.00	0.00	0.00
7,800.00	90.18	178.04	6,204.43	-461.56	-273.94	451.92	0.00	0.00	0.00
7,900.00	90.18	178.04	6,204.11	-561.50	-270.52	551.92	0.00	0.00	0.00
8,000.00	90.18	178.04	6,203.80	-661.44	-267.11	651.92	0.00	0.00	0.00
8,100.00	90.18	178.04	6,203.49	-761.38	-263.69	751.92	0.00	0.00	0.00
8,200.00	90.18	178.04	6,203.18	-861.32	-260.27	851.92	0.00	0.00	0.00
8,300.00	90.18	178.04	6,202.87	-961.26	-256.85	951.92	0.00	0.00	0.00
8,400.00	90.18	178.04	6,202.55	-1,061.21	-253.44	1,051.92	0.00	0.00	0.00
8,500.00	90.18	178.04	6,202.24	-1,161.15	-250.02	1,151.92	0.00	0.00	0.00
8,600.00	90.18	178.04	6,201.93	-1,261.09	-246.60	1,251.92	0.00	0.00	0.00
8,700.00	90.18	178.04	6,201.62	-1,361.03	-243.18	1,351.92	0.00	0.00	0.00
8,800.00	90.18	178.04	6,201.30	-1,460.97	-239.76	1,451.91	0.00	0.00	0.00
8,900.00	90.18	178.04	6,200.99	-1,560.91	-236.35	1,551.91	0.00	0.00	0.00
9,000.00	90.18	178.04	6,200.68	-1,660.85	-232.93	1,651.91	0.00	0.00	0.00
9,100.00	90.18	178.04	6,200.37	-1,760.79	-229.51	1,751.91	0.00	0.00	0.00
9,200.00	90.18	178.04	6,200.06	-1,860.73	-226.09	1,851.91	0.00	0.00	0.00
9,300.00	90.18	178.04	6,199.74	-1,960.68	-222.68	1,951.91	0.00	0.00	0.00
9,400.00	90.18	178.04	6,199.43	-2,060.62	-219.26	2,051.91	0.00	0.00	0.00
9,500.00	90.18	178.04	6,199.12	-2,160.56	-215.84	2,151.91	0.00	0.00	0.00
9,600.00	90.18	178.04	6,198.81	-2,260.50	-212.42	2,251.91	0.00	0.00	0.00
9,700.00	90.18	178.04	6,198.50	-2,360.44	-209.01	2,351.91	0.00	0.00	0.00
9,800.00	90.18	178.04	6,198.18	-2,460.38	-205.59	2,451.91	0.00	0.00	0.00
9,900.00	90.18	178.04	6,197.87	-2,560.32	-202.17	2,551.91	0.00	0.00	0.00
10,000.00	90.18	178.04	6,197.56	-2,660.26	-198.75	2,651.91	0.00	0.00	0.00
10,100.00	90.18	178.04	6,197.25	-2,760.20	-195.34	2,751.91	0.00	0.00	0.00
10,200.00	90.18	178.04	6,196.93	-2,860.15	-191.92	2,851.91	0.00	0.00	0.00
10,300.00	90.18	178.04	6,196.62	-2,960.09	-188.50	2,951.91	0.00	0.00	0.00
10,400.00	90.18	178.04	6,196.31	-3,060.03	-185.08	3,051.91	0.00	0.00	0.00
10,500.00	90.18	178.04	6,196.00	-3,159.97	-181.67	3,151.91	0.00	0.00	0.00
10,600.00	90.18	178.04	6,195.69	-3,259.91	-178.25	3,251.91	0.00	0.00	0.00
10,700.00	90.18	178.04	6,195.37	-3,359.85	-174.83	3,351.91	0.00	0.00	0.00
10,800.00	90.18	178.04	6,195.06	-3,459.79	-171.41	3,451.90	0.00	0.00	0.00
10,900.00	90.18	178.04	6,194.75	-3,559.73	-168.00	3,551.90	0.00	0.00	0.00
11,000.00	90.18	178.04	6,194.44	-3,659.67	-164.58	3,651.90	0.00	0.00	0.00
11,100.00	90.18	178.04	6,194.12	-3,759.62	-161.16	3,751.90	0.00	0.00	0.00
11,200.00	90.18	178.04	6,193.81	-3,859.56	-157.74	3,851.90	0.00	0.00	0.00
11,300.00	90.18	178.04	6,193.50	-3,959.50	-154.33	3,951.90	0.00	0.00	0.00
11,400.00	90.18	178.04	6,193.19	-4,059.44	-150.91	4,051.90	0.00	0.00	0.00
11,500.00	90.18	178.04	6,192.88	-4,159.38	-147.49	4,151.90	0.00	0.00	0.00
11,600.00	90.18	178.04	6,192.56	-4,259.32	-144.07	4,251.90	0.00	0.00	0.00
11,700.00	90.18	178.04	6,192.25	-4,359.26	-140.66	4,351.90	0.00	0.00	0.00
11,800.00	90.18	178.04	6,191.94	-4,459.20	-137.24	4,451.90	0.00	0.00	0.00
11,900.00	90.18	178.04	6,191.63	-4,559.14	-133.82	4,551.90	0.00	0.00	0.00
12,000.00	90.18	178.04	6,191.31	-4,659.08	-130.40	4,651.90	0.00	0.00	0.00
12,100.00	90.18	178.04	6,191.00	-4,759.03	-126.99	4,751.90	0.00	0.00	0.00
12,200.00	90.18	178.04	6,190.69	-4,858.97	-123.57	4,851.90	0.00	0.00	0.00
12,300.00	90.18	178.04	6,190.38	-4,958.91	-120.15	4,951.90	0.00	0.00	0.00
12,400.00	90.18	178.04	6,190.07	-5,058.85	-116.73	5,051.90	0.00	0.00	0.00
12,500.00	90.18	178.04	6,189.75	-5,158.79	-113.32	5,151.90	0.00	0.00	0.00
12,600.00	90.18	178.04	6,189.44	-5,258.73	-109.90	5,251.90	0.00	0.00	0.00
12,700.00	90.18	178.04	6,189.13	-5,358.67	-106.48	5,351.90	0.00	0.00	0.00

Database:	Casper District	Local Co-ordinate Reference:	Well Anschutz Equus Farms 4-62-09-0164B2B
Company:	Bill Barrett Corp.	TVD Reference:	GL 4520' & KB 16' @ 4536.00ft
Project:	Weld County, CO NAD 83	MD Reference:	GL 4520' & KB 16' @ 4536.00ft
Site:	Anschutz Equus Farms 4-62-9_10 North Pad	North Reference:	True
Well:	Anschutz Equus Farms 4-62-09-0164B2B	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)	
12,800.00	90.18	178.04	6,188.82	-5,458.61	-103.06	5,451.90	0.00	0.00	0.00	
12,900.00	90.18	178.04	6,188.50	-5,558.55	-99.65	5,551.89	0.00	0.00	0.00	
13,000.00	90.18	178.04	6,188.19	-5,658.50	-96.23	5,651.89	0.00	0.00	0.00	
13,100.00	90.18	178.04	6,187.88	-5,758.44	-92.81	5,751.89	0.00	0.00	0.00	
13,200.00	90.18	178.04	6,187.57	-5,858.38	-89.39	5,851.89	0.00	0.00	0.00	
13,300.00	90.18	178.04	6,187.26	-5,958.32	-85.98	5,951.89	0.00	0.00	0.00	
13,400.00	90.18	178.04	6,186.94	-6,058.26	-82.56	6,051.89	0.00	0.00	0.00	
13,500.00	90.18	178.04	6,186.63	-6,158.20	-79.14	6,151.89	0.00	0.00	0.00	
13,600.00	90.18	178.04	6,186.32	-6,258.14	-75.72	6,251.89	0.00	0.00	0.00	
13,700.00	90.18	178.04	6,186.01	-6,358.08	-72.31	6,351.89	0.00	0.00	0.00	
13,800.00	90.18	178.04	6,185.69	-6,458.02	-68.89	6,451.89	0.00	0.00	0.00	
13,900.00	90.18	178.04	6,185.38	-6,557.97	-65.47	6,551.89	0.00	0.00	0.00	
14,000.00	90.18	178.04	6,185.07	-6,657.91	-62.05	6,651.89	0.00	0.00	0.00	
14,100.00	90.18	178.04	6,184.76	-6,757.85	-58.64	6,751.89	0.00	0.00	0.00	
14,200.00	90.18	178.04	6,184.45	-6,857.79	-55.22	6,851.89	0.00	0.00	0.00	
14,300.00	90.18	178.04	6,184.13	-6,957.73	-51.80	6,951.89	0.00	0.00	0.00	
14,400.00	90.18	178.04	6,183.82	-7,057.67	-48.38	7,051.89	0.00	0.00	0.00	
14,500.00	90.18	178.04	6,183.51	-7,157.61	-44.96	7,151.89	0.00	0.00	0.00	
14,600.00	90.18	178.04	6,183.20	-7,257.55	-41.55	7,251.89	0.00	0.00	0.00	
14,700.00	90.18	178.04	6,182.88	-7,357.49	-38.13	7,351.89	0.00	0.00	0.00	
14,800.00	90.18	178.04	6,182.57	-7,457.44	-34.71	7,451.89	0.00	0.00	0.00	
14,900.00	90.18	178.04	6,182.26	-7,557.38	-31.29	7,551.89	0.00	0.00	0.00	
15,000.00	90.18	178.04	6,181.95	-7,657.32	-27.88	7,651.88	0.00	0.00	0.00	
15,100.00	90.18	178.04	6,181.64	-7,757.26	-24.46	7,751.88	0.00	0.00	0.00	
15,200.00	90.18	178.04	6,181.32	-7,857.20	-21.04	7,851.88	0.00	0.00	0.00	
15,300.00	90.18	178.04	6,181.01	-7,957.14	-17.62	7,951.88	0.00	0.00	0.00	
15,400.00	90.18	178.04	6,180.70	-8,057.08	-14.21	8,051.88	0.00	0.00	0.00	
15,500.00	90.18	178.04	6,180.39	-8,157.02	-10.79	8,151.88	0.00	0.00	0.00	
15,600.00	90.18	178.04	6,180.07	-8,256.96	-7.37	8,251.88	0.00	0.00	0.00	
15,700.00	90.18	178.04	6,179.76	-8,356.91	-3.95	8,351.88	0.00	0.00	0.00	
15,800.00	90.18	178.04	6,179.45	-8,456.85	-0.54	8,451.88	0.00	0.00	0.00	
15,900.00	90.18	178.04	6,179.14	-8,556.79	2.88	8,551.88	0.00	0.00	0.00	
16,000.00	90.18	178.04	6,178.83	-8,656.73	6.30	8,651.88	0.00	0.00	0.00	
16,100.00	90.18	178.04	6,178.51	-8,756.67	9.72	8,751.88	0.00	0.00	0.00	
16,200.00	90.18	178.04	6,178.20	-8,856.61	13.13	8,851.88	0.00	0.00	0.00	
16,264.55	90.18	178.04	6,178.00	-8,921.12	15.34	8,916.43	0.00	0.00	0.00	
TD at 16264.55										

Design Targets										
Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (usft)	Easting (usft)	Latitude	Longitude	
4-62-09-0164B2B PBHL - hit/miss target - Shape - Point	0.00	0.00	6,178.00	-8,921.12	15.34	1,356,516.72	3,323,878.38	40° 18' 22.381 N	104° 20' 19.241 W	
4-62-09-0164B2B LP - plan hits target center - Point	0.00	0.00	6,208.00	683.06	-313.08	1,366,115.77	3,323,424.22	40° 19' 57.292 N	104° 20' 23.482 W	

Database:	Casper District	Local Co-ordinate Reference:	Well Anschutz Equus Farms 4-62-09-0164B2B
Company:	Bill Barrett Corp.	TVD Reference:	GL 4520' & KB 16' @ 4536.00ft
Project:	Weld County, CO NAD 83	MD Reference:	GL 4520' & KB 16' @ 4536.00ft
Site:	Anschutz Equus Farms 4-62-9_10 North Pad	North Reference:	True
Well:	Anschutz Equus Farms 4-62-09-0164B2B	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Plan 1		

Formations					
Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)
4,690.12	4,536.00	BASE OF FOX HILLS		0.00	
4,868.14	4,706.00	SHANNON		0.00	
6,161.02	5,976.00	SHARON SPRINGS		0.00	
6,293.80	6,079.00	NIOBRARA		0.00	
6,363.90	6,123.00	A CHALK		0.00	
6,387.58	6,136.00	A MARL		0.00	
6,483.04	6,178.00	TD (HORIZONTAL)		0.00	
6,504.39	6,185.00	TOP "B" TARGET		0.00	
6,651.06	6,208.00	LANDING POINT		0.00	

Plan Annotations				
Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment
		+N/-S (ft)	+E/-W (ft)	
800.00	800.00	0.00	0.00	Start Build 2.00
1,678.24	1,664.55	128.50	-36.44	Start 3116.20 hold at 1678.24 MD
4,794.43	4,635.45	1,033.24	-293.01	Start Drop -2.00
5,672.67	5,500.00	1,161.74	-329.45	Start 230.54 hold at 5672.67 MD
5,903.21	5,730.54	1,161.74	-329.45	Start DLS 12.00 TFO 178.04
6,654.70	6,208.00	683.06	-313.08	Start 9609.85 hold at 6654.70 MD
16,264.55	6,178.00	-8,921.12	15.34	TD at 16264.55