

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 4-62-33 S2N2 Pad
 Well: Anschutz Equus Farms 4-62-32-2417D2
 Wellbore: OH
 Design: Plan 1



Azimuths to True North
 Magnetic North: 8.27°

Magnetic Field
 Strength: 52589.3nT
 Dip Angle: 66.93°
 Date: 10/7/2015
 Model: BGGM2015

Plan: Plan 1 (Anschutz Equus Farms 4-62-32-2417D2/OH)

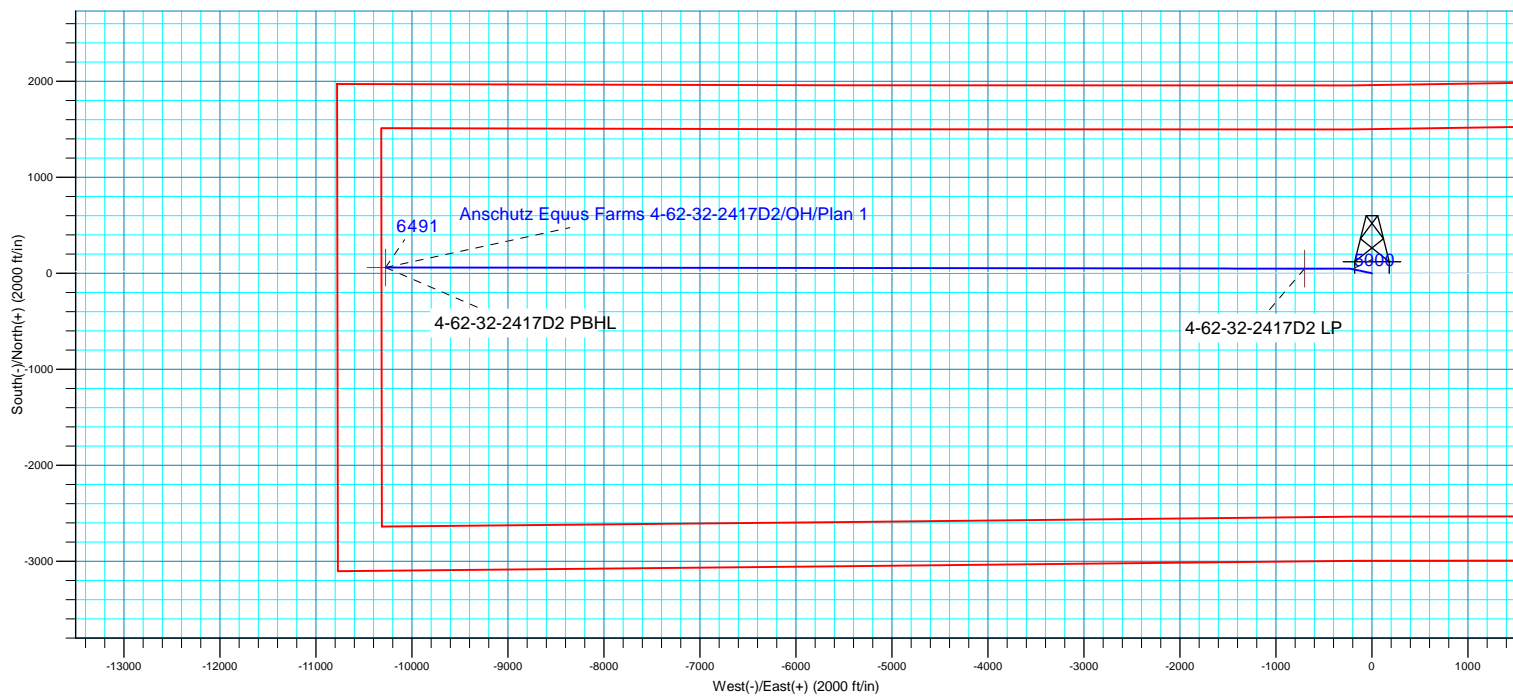
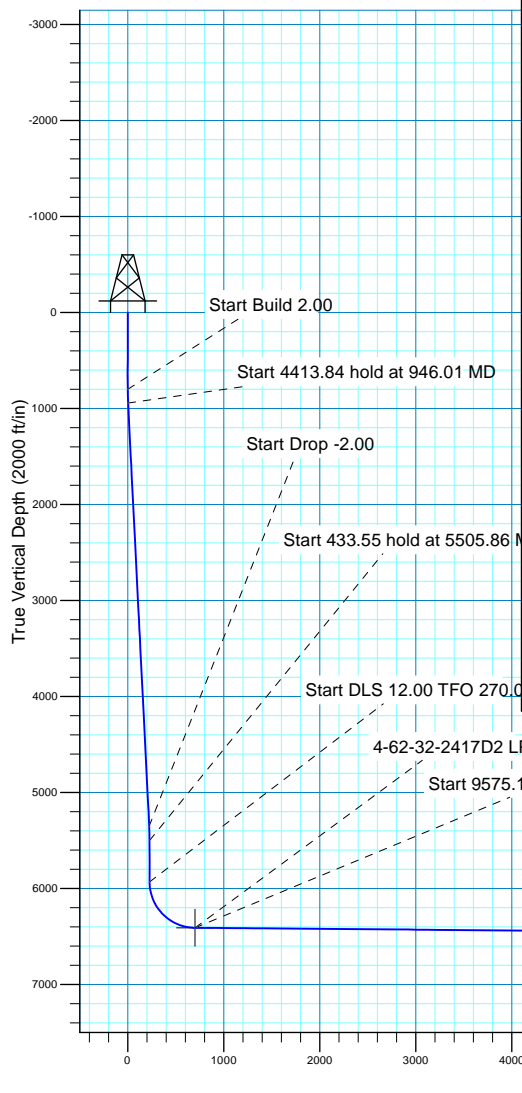
Created By: Seth Burstad Date: 10-7-2015

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
946.01	2.92	281.70	945.95	0.75	-3.64	2.00	281.70	3.64
5359.85	2.92	281.70	5354.05	46.34	-223.84	0.00	0.00	223.90
5505.86	0.00	0.00	5500.00	47.09	-227.48	2.00	180.00	227.55
5939.41	0.00	0.00	5933.55	47.09	-227.48	0.00	0.00	227.55
6685.42	89.52	270.08	6411.00	47.74	-700.96	12.00	270.08	701.02
16260.57	89.52	270.08	6491.00	60.80	-10275.77	0.00	0.00	10275.84

WELL DETAILS: Anschutz Equus Farms 4-62-32-2417D2

		GL 4657' & KB 16' @ 4673.00ft		4657.00	Longitude
+N/-S	+E/-W	Northing	Easting	Latitude	
0.00	0.00	1343427.08	3324324.42	40° 16' 12.979 N	104° 20' 15.698 W





Bill Barrett Corp.

Weld County, CO NAD 83

Anschutz Equus Farms 4-62-33 S2N2 Pad

Anschutz Equus Farms 4-62-32-2417D2

OH

Plan: Plan 1

Standard Planning Report

07 October, 2015



Database:	Casper District	Local Co-ordinate Reference:	Well Anschutz Equus Farms 4-62-32-2417D2
Company:	Bill Barrett Corp.	TVD Reference:	GL 4657' & KB 16' @ 4673.00ft
Project:	Weld County, CO NAD 83	MD Reference:	GL 4657' & KB 16' @ 4673.00ft
Site:	Anschutz Equus Farms 4-62-33 S2N2 Pad	North Reference:	True
Well:	Anschutz Equus Farms 4-62-32-2417D2	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 4-62-33 S2N2 Pad			
Site Position:		Northing:	1,343,456.59 usft	Latitude:	40° 16' 13.271 N
From:	Lat/Long	Easting:	3,324,324.03 usft	Longitude:	104° 20' 15.698 W
Position Uncertainty:	0.00 ft	Slot Radius:	13.200 in	Grid Convergence:	0.75

Well	Anschutz Equus Farms 4-62-32-2417D2, 1960' FNL 200' FWL Sec 33 T4N R62W					
Well Position	+N/-S	-29.52 ft	Northing:	1,343,427.07 usft	Latitude:	40° 16' 12.979 N
	+E/-W	0.00 ft	Easting:	3,324,324.42 usft	Longitude:	104° 20' 15.698 W
Position Uncertainty		0.00 ft	Wellhead Elevation:	0.00 ft	Ground Level:	4,657.00 ft

Wellbore	OH				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	BGGM2015	10/7/2015	8.27	66.93	52,589

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	270.08

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	
946.01	2.92	281.70	945.95	0.75	-3.64	2.00	2.00	0.00	281.70	
5,359.85	2.92	281.70	5,354.05	46.34	-223.84	0.00	0.00	0.00	0.00	
5,505.86	0.00	0.00	5,500.00	47.09	-227.48	2.00	-2.00	0.00	180.00	
5,939.41	0.00	0.00	5,933.55	47.09	-227.48	0.00	0.00	0.00	0.00	
6,685.42	89.52	270.08	6,411.00	47.74	-700.96	12.00	12.00	-12.05	270.08	
16,260.57	89.52	270.08	6,491.00	60.80	-10,275.77	0.00	0.00	0.00	0.00	4-62-32-2417D2 PBH

Database:	Casper District	Local Co-ordinate Reference:	Well Anschutz Equus Farms 4-62-32-2417D2
Company:	Bill Barrett Corp.	TVD Reference:	GL 4657' & KB 16' @ 4673.00ft
Project:	Weld County, CO NAD 83	MD Reference:	GL 4657' & KB 16' @ 4673.00ft
Site:	Anschutz Equus Farms 4-62-33 S2N2 Pad	North Reference:	True
Well:	Anschutz Equus Farms 4-62-32-2417D2	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	281.70	899.98	0.35	-1.71	1.71	2.00	2.00	0.00
946.01	2.92	281.70	945.95	0.75	-3.64	3.64	2.00	2.00	0.00
Start 4413.84 hold at 946.01 MD									
1,000.00	2.92	281.70	999.87	1.31	-6.34	6.34	0.00	0.00	0.00
1,100.00	2.92	281.70	1,099.74	2.34	-11.32	11.33	0.00	0.00	0.00
1,200.00	2.92	281.70	1,199.61	3.38	-16.31	16.32	0.00	0.00	0.00
1,300.00	2.92	281.70	1,299.48	4.41	-21.30	21.31	0.00	0.00	0.00
1,400.00	2.92	281.70	1,399.35	5.44	-26.29	26.30	0.00	0.00	0.00
1,500.00	2.92	281.70	1,499.22	6.48	-31.28	31.29	0.00	0.00	0.00
1,600.00	2.92	281.70	1,599.09	7.51	-36.27	36.28	0.00	0.00	0.00
1,700.00	2.92	281.70	1,698.96	8.54	-41.26	41.27	0.00	0.00	0.00
1,800.00	2.92	281.70	1,798.83	9.57	-46.25	46.26	0.00	0.00	0.00
1,900.00	2.92	281.70	1,898.70	10.61	-51.23	51.25	0.00	0.00	0.00
2,000.00	2.92	281.70	1,998.57	11.64	-56.22	56.24	0.00	0.00	0.00
2,100.00	2.92	281.70	2,098.44	12.67	-61.21	61.23	0.00	0.00	0.00
2,200.00	2.92	281.70	2,198.31	13.70	-66.20	66.22	0.00	0.00	0.00
2,300.00	2.92	281.70	2,298.18	14.74	-71.19	71.21	0.00	0.00	0.00
2,400.00	2.92	281.70	2,398.05	15.77	-76.18	76.20	0.00	0.00	0.00
2,500.00	2.92	281.70	2,497.92	16.80	-81.17	81.19	0.00	0.00	0.00
2,600.00	2.92	281.70	2,597.79	17.83	-86.16	86.18	0.00	0.00	0.00
2,700.00	2.92	281.70	2,697.66	18.87	-91.14	91.17	0.00	0.00	0.00
2,800.00	2.92	281.70	2,797.53	19.90	-96.13	96.16	0.00	0.00	0.00
2,900.00	2.92	281.70	2,897.40	20.93	-101.12	101.15	0.00	0.00	0.00
3,000.00	2.92	281.70	2,997.27	21.97	-106.11	106.14	0.00	0.00	0.00
3,100.00	2.92	281.70	3,097.14	23.00	-111.10	111.13	0.00	0.00	0.00
3,200.00	2.92	281.70	3,197.01	24.03	-116.09	116.12	0.00	0.00	0.00
3,300.00	2.92	281.70	3,296.88	25.06	-121.08	121.11	0.00	0.00	0.00
3,400.00	2.92	281.70	3,396.75	26.10	-126.07	126.10	0.00	0.00	0.00
3,500.00	2.92	281.70	3,496.62	27.13	-131.05	131.09	0.00	0.00	0.00
3,600.00	2.92	281.70	3,596.49	28.16	-136.04	136.08	0.00	0.00	0.00
3,700.00	2.92	281.70	3,696.36	29.19	-141.03	141.07	0.00	0.00	0.00
3,800.00	2.92	281.70	3,796.23	30.23	-146.02	146.06	0.00	0.00	0.00
3,900.00	2.92	281.70	3,896.10	31.26	-151.01	151.05	0.00	0.00	0.00
4,000.00	2.92	281.70	3,995.97	32.29	-156.00	156.04	0.00	0.00	0.00
4,100.00	2.92	281.70	4,095.84	33.33	-160.99	161.03	0.00	0.00	0.00
4,200.00	2.92	281.70	4,195.71	34.36	-165.98	166.02	0.00	0.00	0.00
4,300.00	2.92	281.70	4,295.58	35.39	-170.96	171.01	0.00	0.00	0.00
4,340.47	2.92	281.70	4,336.00	35.81	-172.98	173.03	0.00	0.00	0.00
SUSSEX									
4,400.00	2.92	281.70	4,395.45	36.42	-175.95	176.00	0.00	0.00	0.00
4,500.00	2.92	281.70	4,495.32	37.46	-180.94	180.99	0.00	0.00	0.00
4,600.00	2.92	281.70	4,595.19	38.49	-185.93	185.98	0.00	0.00	0.00
4,677.91	2.92	281.70	4,673.00	39.29	-189.82	189.87	0.00	0.00	0.00
BASE OF FOX HILLS									

Database:	Casper District	Local Co-ordinate Reference:	Well Anschutz Equus Farms 4-62-32-2417D2
Company:	Bill Barrett Corp.	TVD Reference:	GL 4657' & KB 16' @ 4673.00ft
Project:	Weld County, CO NAD 83	MD Reference:	GL 4657' & KB 16' @ 4673.00ft
Site:	Anschutz Equus Farms 4-62-33 S2N2 Pad	North Reference:	True
Well:	Anschutz Equus Farms 4-62-32-2417D2	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)
4,700.00	2.92	281.70	4,695.06	39.52	-190.92	190.97	0.00	0.00	0.00
4,800.00	2.92	281.70	4,794.93	40.55	-195.91	195.96	0.00	0.00	0.00
4,900.00	2.92	281.70	4,894.80	41.59	-200.90	200.95	0.00	0.00	0.00
5,000.00	2.92	281.70	4,994.67	42.62	-205.89	205.94	0.00	0.00	0.00
5,100.00	2.92	281.70	5,094.54	43.65	-210.87	210.93	0.00	0.00	0.00
5,191.58	2.92	281.70	5,186.00	44.60	-215.44	215.50	0.00	0.00	0.00
SHANNON									
5,200.00	2.92	281.70	5,194.41	44.69	-215.86	215.92	0.00	0.00	0.00
5,300.00	2.92	281.70	5,294.28	45.72	-220.85	220.92	0.00	0.00	0.00
5,359.85	2.92	281.70	5,354.05	46.34	-223.84	223.90	0.00	0.00	0.00
Start Drop -2.00									
5,400.00	2.12	281.70	5,394.17	46.69	-225.57	225.63	2.00	-2.00	0.00
5,500.00	0.12	281.70	5,494.14	47.09	-227.47	227.54	2.00	-2.00	0.00
5,505.86	0.00	0.00	5,500.00	47.09	-227.48	227.55	2.00	-2.00	0.00
Start 433.55 hold at 5505.86 MD									
5,600.00	0.00	0.00	5,594.14	47.09	-227.48	227.55	0.00	0.00	0.00
5,700.00	0.00	0.00	5,694.14	47.09	-227.48	227.55	0.00	0.00	0.00
5,800.00	0.00	0.00	5,794.14	47.09	-227.48	227.55	0.00	0.00	0.00
5,900.00	0.00	0.00	5,894.14	47.09	-227.48	227.55	0.00	0.00	0.00
5,939.41	0.00	0.00	5,933.55	47.09	-227.48	227.55	0.00	0.00	0.00
Start DLS 12.00 TFO 270.08									
6,000.00	7.27	270.08	5,993.98	47.10	-231.32	231.39	12.00	12.00	0.00
6,067.38	15.36	270.08	6,060.00	47.11	-244.53	244.59	12.00	12.00	0.00
SHARON SPRINGS									
6,100.00	19.27	270.08	6,091.13	47.13	-254.23	254.30	12.00	12.00	0.00
6,123.38	22.08	270.08	6,113.00	47.14	-262.49	262.55	12.00	12.00	0.00
NIORARA									
6,177.62	28.59	270.08	6,162.00	47.17	-285.68	285.75	12.00	12.00	0.00
A CHALK									
6,200.00	31.27	270.08	6,181.40	47.18	-296.85	296.91	12.00	12.00	0.00
6,235.47	35.53	270.08	6,211.00	47.21	-316.37	316.43	12.00	12.00	0.00
B CHALK									
6,300.00	43.27	270.08	6,260.83	47.27	-357.29	357.36	12.00	12.00	0.00
6,363.44	50.88	270.08	6,304.00	47.33	-403.71	403.78	12.00	12.00	0.00
C CHALK									
6,400.00	55.27	270.08	6,325.96	47.37	-432.94	433.00	12.00	12.00	0.00
6,500.00	67.27	270.08	6,373.94	47.49	-520.47	520.53	12.00	12.00	0.00
6,528.03	70.63	270.08	6,384.00	47.53	-546.62	546.68	12.00	12.00	0.00
FT. HAYS									
6,600.00	79.27	270.08	6,402.67	47.62	-616.06	616.12	12.00	12.00	0.00
6,645.53	84.73	270.08	6,409.00	47.68	-661.13	661.19	12.00	12.00	0.00
TOP CODELL TARGET									
6,685.42	89.52	270.08	6,411.00	47.74	-700.96	701.02	12.00	12.00	0.00
Start 9575.15 hold at 6685.42 MD									
6,685.64	89.52	270.08	6,411.00	47.74	-701.17	701.24	0.00	0.00	0.00
LANDING POINT									
6,700.00	89.52	270.08	6,411.12	47.76	-715.54	715.60	0.00	0.00	0.00
6,800.00	89.52	270.08	6,411.96	47.89	-815.53	815.60	0.00	0.00	0.00
6,900.00	89.52	270.08	6,412.79	48.03	-915.53	915.59	0.00	0.00	0.00
7,000.00	89.52	270.08	6,413.63	48.17	-1,015.53	1,015.59	0.00	0.00	0.00
7,100.00	89.52	270.08	6,414.46	48.30	-1,115.52	1,115.59	0.00	0.00	0.00
7,200.00	89.52	270.08	6,415.30	48.44	-1,215.52	1,215.58	0.00	0.00	0.00

Database:	Casper District	Local Co-ordinate Reference:	Well Anschutz Equus Farms 4-62-32-2417D2
Company:	Bill Barrett Corp.	TVD Reference:	GL 4657' & KB 16' @ 4673.00ft
Project:	Weld County, CO NAD 83	MD Reference:	GL 4657' & KB 16' @ 4673.00ft
Site:	Anschutz Equus Farms 4-62-33 S2N2 Pad	North Reference:	True
Well:	Anschutz Equus Farms 4-62-32-2417D2	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)
7,300.00	89.52	270.08	6,416.13	48.57	-1,315.51	1,315.58	0.00	0.00	0.00
7,400.00	89.52	270.08	6,416.97	48.71	-1,415.51	1,415.58	0.00	0.00	0.00
7,500.00	89.52	270.08	6,417.80	48.85	-1,515.51	1,515.57	0.00	0.00	0.00
7,523.45	89.52	270.08	6,418.00	48.88	-1,538.95	1,539.02	0.00	0.00	0.00
BASE CODELL TARGET									
7,600.00	89.52	270.08	6,418.64	48.98	-1,615.50	1,615.57	0.00	0.00	0.00
7,700.00	89.52	270.08	6,419.48	49.12	-1,715.50	1,715.57	0.00	0.00	0.00
7,800.00	89.52	270.08	6,420.31	49.26	-1,815.50	1,815.56	0.00	0.00	0.00
7,900.00	89.52	270.08	6,421.15	49.39	-1,915.49	1,915.56	0.00	0.00	0.00
8,000.00	89.52	270.08	6,421.98	49.53	-2,015.49	2,015.56	0.00	0.00	0.00
8,100.00	89.52	270.08	6,422.82	49.67	-2,115.49	2,115.55	0.00	0.00	0.00
8,200.00	89.52	270.08	6,423.65	49.80	-2,215.48	2,215.55	0.00	0.00	0.00
8,300.00	89.52	270.08	6,424.49	49.94	-2,315.48	2,315.55	0.00	0.00	0.00
8,400.00	89.52	270.08	6,425.32	50.08	-2,415.48	2,415.54	0.00	0.00	0.00
8,500.00	89.52	270.08	6,426.16	50.21	-2,515.47	2,515.54	0.00	0.00	0.00
8,600.00	89.52	270.08	6,426.99	50.35	-2,615.47	2,615.54	0.00	0.00	0.00
8,700.00	89.52	270.08	6,427.83	50.48	-2,715.46	2,715.53	0.00	0.00	0.00
8,800.00	89.52	270.08	6,428.67	50.62	-2,815.46	2,815.53	0.00	0.00	0.00
8,900.00	89.52	270.08	6,429.50	50.76	-2,915.46	2,915.53	0.00	0.00	0.00
9,000.00	89.52	270.08	6,430.34	50.89	-3,015.45	3,015.52	0.00	0.00	0.00
9,100.00	89.52	270.08	6,431.17	51.03	-3,115.45	3,115.52	0.00	0.00	0.00
9,200.00	89.52	270.08	6,432.01	51.17	-3,215.45	3,215.51	0.00	0.00	0.00
9,300.00	89.52	270.08	6,432.84	51.30	-3,315.44	3,315.51	0.00	0.00	0.00
9,400.00	89.52	270.08	6,433.68	51.44	-3,415.44	3,415.51	0.00	0.00	0.00
9,500.00	89.52	270.08	6,434.51	51.58	-3,515.44	3,515.50	0.00	0.00	0.00
9,600.00	89.52	270.08	6,435.35	51.71	-3,615.43	3,615.50	0.00	0.00	0.00
9,700.00	89.52	270.08	6,436.19	51.85	-3,715.43	3,715.50	0.00	0.00	0.00
9,800.00	89.52	270.08	6,437.02	51.99	-3,815.42	3,815.49	0.00	0.00	0.00
9,900.00	89.52	270.08	6,437.86	52.12	-3,915.42	3,915.49	0.00	0.00	0.00
10,000.00	89.52	270.08	6,438.69	52.26	-4,015.42	4,015.49	0.00	0.00	0.00
10,100.00	89.52	270.08	6,439.53	52.39	-4,115.41	4,115.48	0.00	0.00	0.00
10,200.00	89.52	270.08	6,440.36	52.53	-4,215.41	4,215.48	0.00	0.00	0.00
10,300.00	89.52	270.08	6,441.20	52.67	-4,315.41	4,315.48	0.00	0.00	0.00
10,400.00	89.52	270.08	6,442.03	52.80	-4,415.40	4,415.47	0.00	0.00	0.00
10,500.00	89.52	270.08	6,442.87	52.94	-4,515.40	4,515.47	0.00	0.00	0.00
10,600.00	89.52	270.08	6,443.71	53.08	-4,615.40	4,615.47	0.00	0.00	0.00
10,700.00	89.52	270.08	6,444.54	53.21	-4,715.39	4,715.46	0.00	0.00	0.00
10,800.00	89.52	270.08	6,445.38	53.35	-4,815.39	4,815.46	0.00	0.00	0.00
10,900.00	89.52	270.08	6,446.21	53.49	-4,915.39	4,915.46	0.00	0.00	0.00
11,000.00	89.52	270.08	6,447.05	53.62	-5,015.38	5,015.45	0.00	0.00	0.00
11,100.00	89.52	270.08	6,447.88	53.76	-5,115.38	5,115.45	0.00	0.00	0.00
11,200.00	89.52	270.08	6,448.72	53.90	-5,215.37	5,215.44	0.00	0.00	0.00
11,300.00	89.52	270.08	6,449.55	54.03	-5,315.37	5,315.44	0.00	0.00	0.00
11,400.00	89.52	270.08	6,450.39	54.17	-5,415.37	5,415.44	0.00	0.00	0.00
11,500.00	89.52	270.08	6,451.22	54.31	-5,515.36	5,515.43	0.00	0.00	0.00
11,600.00	89.52	270.08	6,452.06	54.44	-5,615.36	5,615.43	0.00	0.00	0.00
11,700.00	89.52	270.08	6,452.90	54.58	-5,715.36	5,715.43	0.00	0.00	0.00
11,800.00	89.52	270.08	6,453.73	54.71	-5,815.35	5,815.42	0.00	0.00	0.00
11,900.00	89.52	270.08	6,454.57	54.85	-5,915.35	5,915.42	0.00	0.00	0.00
12,000.00	89.52	270.08	6,455.40	54.99	-6,015.35	6,015.42	0.00	0.00	0.00
12,100.00	89.52	270.08	6,456.24	55.12	-6,115.34	6,115.41	0.00	0.00	0.00
12,200.00	89.52	270.08	6,457.07	55.26	-6,215.34	6,215.41	0.00	0.00	0.00
12,300.00	89.52	270.08	6,457.91	55.40	-6,315.34	6,315.41	0.00	0.00	0.00

Database:	Casper District	Local Co-ordinate Reference:	Well Anschutz Equus Farms 4-62-32-2417D2
Company:	Bill Barrett Corp.	TVD Reference:	GL 4657' & KB 16' @ 4673.00ft
Project:	Weld County, CO NAD 83	MD Reference:	GL 4657' & KB 16' @ 4673.00ft
Site:	Anschutz Equus Farms 4-62-33 S2N2 Pad	North Reference:	True
Well:	Anschutz Equus Farms 4-62-32-2417D2	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)
12,400.00	89.52	270.08	6,458.74	55.53	-6,415.33	6,415.40	0.00	0.00	0.00
12,500.00	89.52	270.08	6,459.58	55.67	-6,515.33	6,515.40	0.00	0.00	0.00
12,600.00	89.52	270.08	6,460.42	55.81	-6,615.32	6,615.40	0.00	0.00	0.00
12,700.00	89.52	270.08	6,461.25	55.94	-6,715.32	6,715.39	0.00	0.00	0.00
12,800.00	89.52	270.08	6,462.09	56.08	-6,815.32	6,815.39	0.00	0.00	0.00
12,900.00	89.52	270.08	6,462.92	56.22	-6,915.31	6,915.39	0.00	0.00	0.00
13,000.00	89.52	270.08	6,463.76	56.35	-7,015.31	7,015.38	0.00	0.00	0.00
13,100.00	89.52	270.08	6,464.59	56.49	-7,115.31	7,115.38	0.00	0.00	0.00
13,200.00	89.52	270.08	6,465.43	56.62	-7,215.30	7,215.38	0.00	0.00	0.00
13,300.00	89.52	270.08	6,466.26	56.76	-7,315.30	7,315.37	0.00	0.00	0.00
13,400.00	89.52	270.08	6,467.10	56.90	-7,415.30	7,415.37	0.00	0.00	0.00
13,500.00	89.52	270.08	6,467.94	57.03	-7,515.29	7,515.36	0.00	0.00	0.00
13,600.00	89.52	270.08	6,468.77	57.17	-7,615.29	7,615.36	0.00	0.00	0.00
13,700.00	89.52	270.08	6,469.61	57.31	-7,715.29	7,715.36	0.00	0.00	0.00
13,800.00	89.52	270.08	6,470.44	57.44	-7,815.28	7,815.35	0.00	0.00	0.00
13,900.00	89.52	270.08	6,471.28	57.58	-7,915.28	7,915.35	0.00	0.00	0.00
14,000.00	89.52	270.08	6,472.11	57.72	-8,015.27	8,015.35	0.00	0.00	0.00
14,100.00	89.52	270.08	6,472.95	57.85	-8,115.27	8,115.34	0.00	0.00	0.00
14,200.00	89.52	270.08	6,473.78	57.99	-8,215.27	8,215.34	0.00	0.00	0.00
14,300.00	89.52	270.08	6,474.62	58.13	-8,315.26	8,315.34	0.00	0.00	0.00
14,400.00	89.52	270.08	6,475.45	58.26	-8,415.26	8,415.33	0.00	0.00	0.00
14,500.00	89.52	270.08	6,476.29	58.40	-8,515.26	8,515.33	0.00	0.00	0.00
14,600.00	89.52	270.08	6,477.13	58.53	-8,615.25	8,615.33	0.00	0.00	0.00
14,700.00	89.52	270.08	6,477.96	58.67	-8,715.25	8,715.32	0.00	0.00	0.00
14,800.00	89.52	270.08	6,478.80	58.81	-8,815.25	8,815.32	0.00	0.00	0.00
14,900.00	89.52	270.08	6,479.63	58.94	-8,915.24	8,915.32	0.00	0.00	0.00
15,000.00	89.52	270.08	6,480.47	59.08	-9,015.24	9,015.31	0.00	0.00	0.00
15,100.00	89.52	270.08	6,481.30	59.22	-9,115.24	9,115.31	0.00	0.00	0.00
15,200.00	89.52	270.08	6,482.14	59.35	-9,215.23	9,215.31	0.00	0.00	0.00
15,300.00	89.52	270.08	6,482.97	59.49	-9,315.23	9,315.30	0.00	0.00	0.00
15,400.00	89.52	270.08	6,483.81	59.63	-9,415.22	9,415.30	0.00	0.00	0.00
15,500.00	89.52	270.08	6,484.65	59.76	-9,515.22	9,515.29	0.00	0.00	0.00
15,600.00	89.52	270.08	6,485.48	59.90	-9,615.22	9,615.29	0.00	0.00	0.00
15,700.00	89.52	270.08	6,486.32	60.04	-9,715.21	9,715.29	0.00	0.00	0.00
15,800.00	89.52	270.08	6,487.15	60.17	-9,815.21	9,815.28	0.00	0.00	0.00
15,900.00	89.52	270.08	6,487.99	60.31	-9,915.21	9,915.28	0.00	0.00	0.00
16,000.00	89.52	270.08	6,488.82	60.45	-10,015.20	10,015.28	0.00	0.00	0.00
16,100.00	89.52	270.08	6,489.66	60.58	-10,115.20	10,115.27	0.00	0.00	0.00
16,200.00	89.52	270.08	6,490.49	60.72	-10,215.20	10,215.27	0.00	0.00	0.00
16,260.57	89.52	270.08	6,491.00	60.80	-10,275.77	10,275.84	0.00	0.00	0.00
TD at 16260.57									

Database:	Casper District	Local Co-ordinate Reference:	Well Anschutz Equus Farms 4-62-32-2417D2
Company:	Bill Barrett Corp.	TVD Reference:	GL 4657' & KB 16' @ 4673.00ft
Project:	Weld County, CO NAD 83	MD Reference:	GL 4657' & KB 16' @ 4673.00ft
Site:	Anschutz Equus Farms 4-62-33 S2N2 Pad	North Reference:	True
Well:	Anschutz Equus Farms 4-62-32-2417D2	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Plan 1		

Design Targets									
Target Name	Dip Angle	Dip Dir.	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
- hit/miss target	(°)	(°)	(ft)	(ft)	(ft)	(usft)	(usft)		
- Shape									
4-62-32-2417D2 LP	0.00	0.00	6,411.00	47.75	-700.96	1,343,465.63	3,323,622.90	40° 16' 13.451 N	104° 20' 24.742 W
- plan misses target center by 0.01ft at 6685.42ft MD (6411.00 TVD, 47.74 N, -700.96 E)									
- Point									
4-62-32-2417D2 PBHL	0.00	0.00	6,491.00	60.80	-10,275.77	1,343,353.18	3,314,048.76	40° 16' 13.559 N	104° 22' 28.268 W
- plan hits target center									
- Point									

Formations					
Measured Depth	Vertical Depth	Name	Lithology	Dip	Dip Direction
(ft)	(ft)			(°)	(°)
4,340.47	4,336.00	SUSSEX		0.00	
4,677.91	4,673.00	BASE OF FOX HILLS		0.00	
5,191.58	5,186.00	SHANNON		0.00	
6,067.38	6,060.00	SHARON SPRINGS		0.00	
6,123.38	6,113.00	NIOBRARA		0.00	
6,177.62	6,162.00	A CHALK		0.00	
6,235.47	6,211.00	B CHALK		0.00	
6,363.44	6,304.00	C CHALK		0.00	
6,528.03	6,384.00	FT. HAYS		0.00	
6,645.53	6,409.00	TOP CODELL TARGET		0.00	
6,685.64	6,411.00	LANDING POINT		0.00	
7,523.45	6,418.00	BASE CODELL TARGET		0.00	
16,260.57	6,491.00	TD (HORIZONTAL)		0.00	

Plan Annotations				
Measured Depth	Vertical Depth	Local Coordinates		Comment
(ft)	(ft)	+N/-S (ft)	+E/-W (ft)	
800.00	800.00	0.00	0.00	Start Build 2.00
946.01	945.95	0.75	-3.64	Start 4413.84 hold at 946.01 MD
5,359.85	5,354.05	46.34	-223.84	Start Drop -2.00
5,505.86	5,500.00	47.09	-227.48	Start 433.55 hold at 5505.86 MD
5,939.41	5,933.55	47.09	-227.48	Start DLS 12.00 TFO 270.08
6,685.42	6,411.00	47.74	-700.96	Start 9575.15 hold at 6685.42 MD
16,260.57	6,491.00	60.80	-10,275.77	TD at 16260.57