

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 5-61-34 NESE
Well: Anschutz Equus Farms 5-61-34-4148B
Wellbore: OH
Design: Plan 1



Azimuths to True North
Magnetic North: 8.23°



Magnetic Field
Strength: 52366.7nT
Dip Angle: 67.07°
Date: 8/28/2017
Model: HDGM

Plan: Plan 1 (Anschutz Equus Farms 5-61-34-4148B/OH)

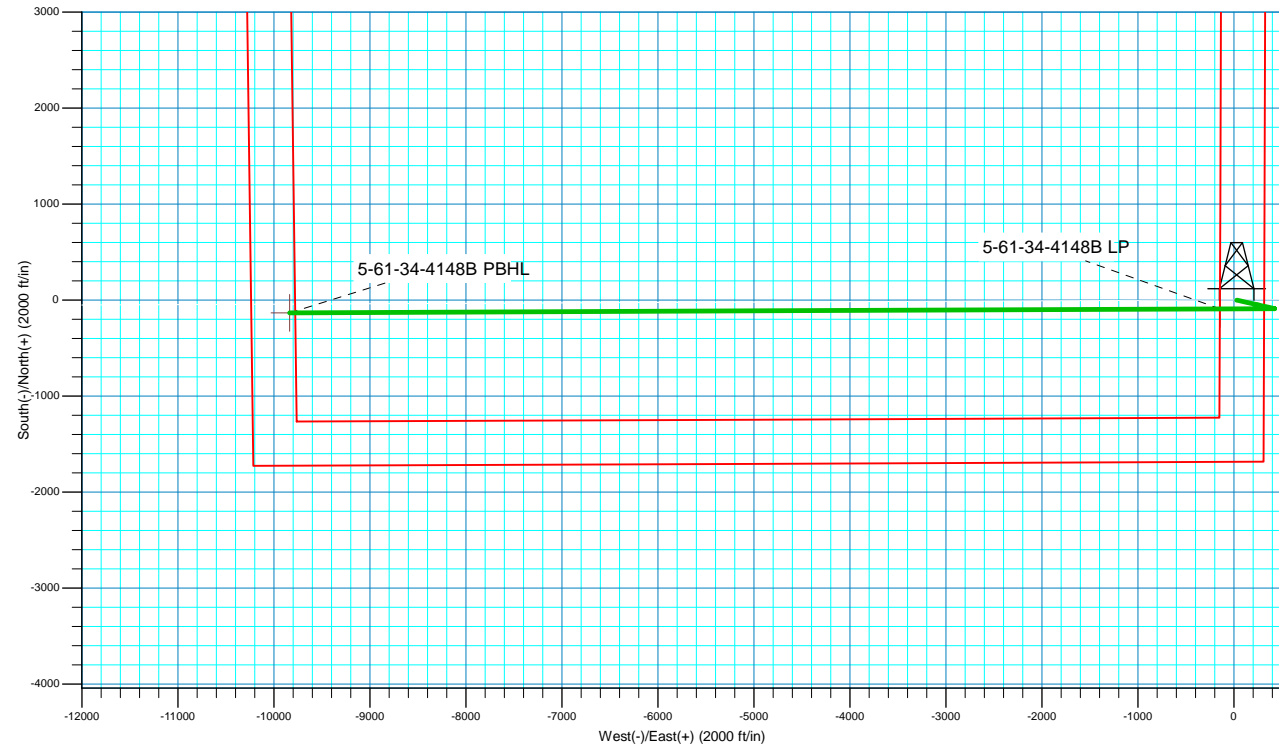
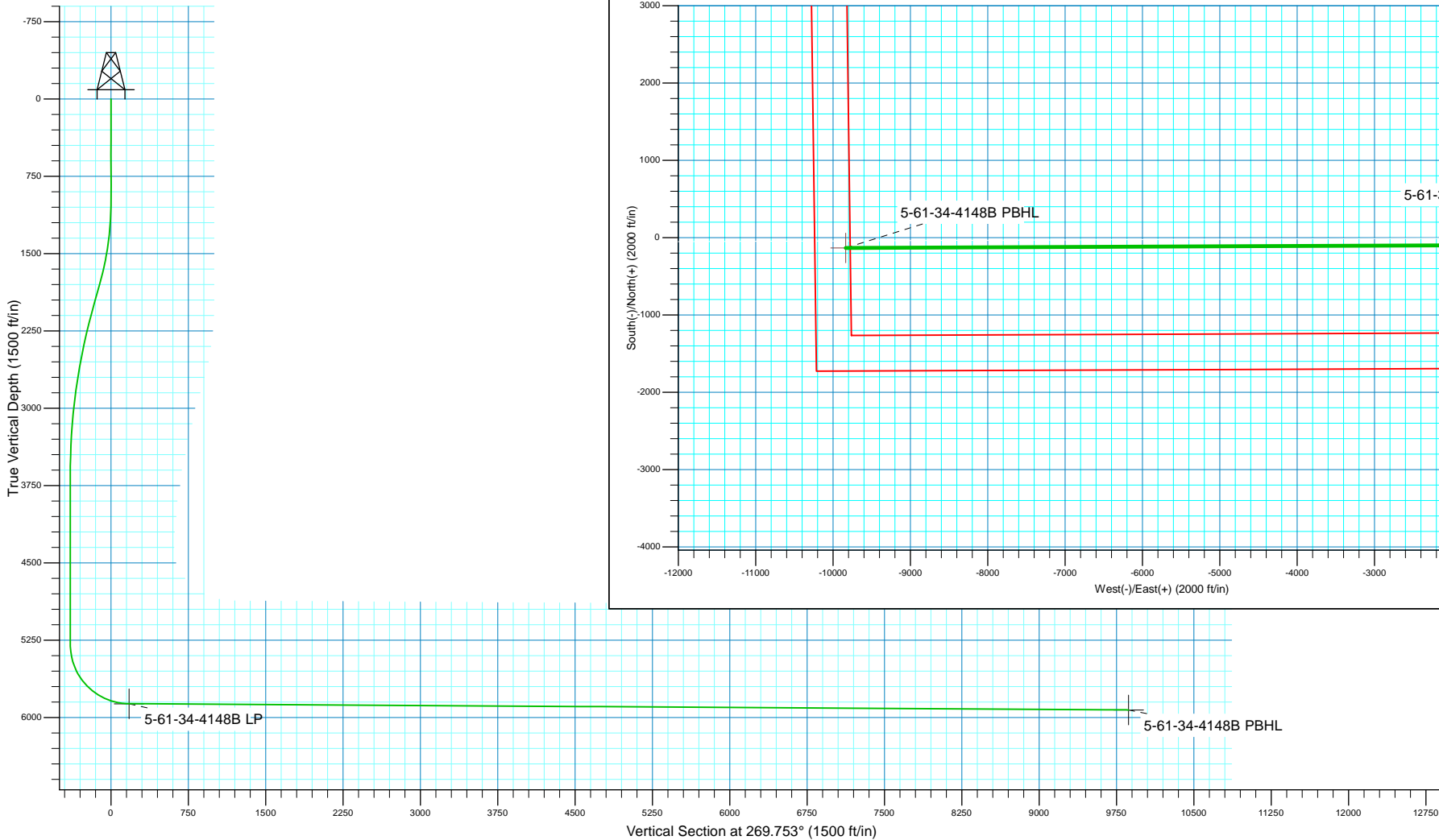
Created By: Seth Burstad Date: 8-28-2017

SECTION DETAILS

MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSect
0.00	0.00	0.000	0.00	-0.02	29.26	0.00	0.00	0.00
1000.00	0.00	0.000	1000.00	-0.02	29.26	0.00	0.00	0.00
1787.86	15.76	102.654	1777.97	-23.61	134.31	2.00	102.65	-104.94
2088.03	15.76	102.654	2066.86	-41.47	213.84	0.00	0.00	-184.40
3663.76	0.00	0.000	3622.80	-88.63	423.92	1.00	180.00	-394.27
5334.01	0.00	0.000	5293.05	-88.63	423.92	0.00	0.00	-394.27
6230.47	89.65	269.753	5866.00	-91.09	-145.48	10.00	269.75	175.14
15922.48	89.65	269.753	5926.00	-132.83	-9837.22	0.00	0.00	9866.96

WELL DETAILS: Anschutz Equus Farms 5-61-34-4148B

+N/-S	+E/-W	GL 4479.6' & KB 20' @ 4499.60ft	4479.60	Longitude
Northing	Easting	Latitude		
-0.02	29.26	1374782.92	3366038.60	40° 21' 17.060 N 104° 11' 11.602 W





Bill Barrett Corporation

Bill Barrett Corp.

Weld County, CO NAD 83

Anschutz Equus Farms 5-61-34 NESE

Anschutz Equus Farms 5-61-34-4148B

OH

Plan: Plan 1

Standard Planning Report

28 August, 2017



Scientific Drilling

www.scientificdrilling.com



Database:	Casper District	Local Co-ordinate Reference:	Well Anschutz Equus Farms 5-61-34-4148B
Company:	Bill Barrett Corp.	TVD Reference:	GL 4479.6' & KB 20' @ 4499.60ft
Project:	Weld County, CO NAD 83	MD Reference:	GL 4479.6' & KB 20' @ 4499.60ft
Site:	Anschutz Equus Farms 5-61-34 NESE	North Reference:	True
Well:	Anschutz Equus Farms 5-61-34-4148B	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 5-61-34 NESE, Site Center : Anschuts Equus Farms 5-61-34-2532BS			
Site Position:		Northing:	1,374,782.51 usft	Latitude:	40° 21' 17.060 N
From:	Lat/Long	Easting:	3,366,009.33 usft	Longitude:	104° 11' 11.980 W
Position Uncertainty:	0.00 ft	Slot Radius:	13.200 in	Grid Convergence:	0.85 °

Well	Anschutz Equus Farms 5-61-34-4148B, 1685' FSL 285' FEL Sec 34 T5N R61W					
Well Position	+N/-S	-0.02 ft	Northing:	1,374,782.93 usft	Latitude:	40° 21' 17.060 N
	+E/-W	29.26 ft	Easting:	3,366,038.59 usft	Longitude:	104° 11' 11.602 W
Position Uncertainty		0.00 ft	Wellhead Elevation:	0.00 ft	Ground Level:	4,479.60 ft

Wellbore	OH				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	HDGM	8/28/2017	8.23	67.07	52,367

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	269.753

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	0.000	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	
1,787.86	15.76	102.654	1,777.97	-23.58	105.04	2.00	2.00	0.00	102.65	
2,088.03	15.76	102.654	2,066.86	-41.44	184.58	0.00	0.00	0.00	0.00	
3,663.76	0.00	0.000	3,622.80	-88.61	394.66	1.00	-1.00	0.00	180.00	
5,334.01	0.00	0.000	5,293.05	-88.61	394.66	0.00	0.00	0.00	0.00	
6,230.47	89.65	269.753	5,866.00	-91.06	-174.75	10.00	10.00	-10.07	269.75	
15,922.48	89.65	269.753	5,926.00	-132.80	-9,866.48	0.00	0.00	0.00	0.00	5-61-34-4148B PBHL

Database:	Casper District	Local Co-ordinate Reference:	Well Anschutz Equus Farms 5-61-34-4148B
Company:	Bill Barrett Corp.	TVD Reference:	GL 4479.6' & KB 20' @ 4499.60ft
Project:	Weld County, CO NAD 83	MD Reference:	GL 4479.6' & KB 20' @ 4499.60ft
Site:	Anschutz Equus Farms 5-61-34 NESE	North Reference:	True
Well:	Anschutz Equus Farms 5-61-34-4148B	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	0.000	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
Start Build 2.00									
1,100.00	2.00	102.654	1,099.98	-0.38	1.70	-1.70	2.00	2.00	0.00
1,200.00	4.00	102.654	1,199.84	-1.53	6.81	-6.80	2.00	2.00	0.00
1,300.00	6.00	102.654	1,299.45	-3.44	15.31	-15.30	2.00	2.00	0.00
1,400.00	8.00	102.654	1,398.70	-6.11	27.20	-27.18	2.00	2.00	0.00
1,500.00	10.00	102.654	1,497.47	-9.53	42.47	-42.42	2.00	2.00	0.00
1,600.00	12.00	102.654	1,595.62	-13.71	61.08	-61.02	2.00	2.00	0.00
1,700.00	14.00	102.654	1,693.06	-18.64	83.03	-82.95	2.00	2.00	0.00
1,787.86	15.76	102.654	1,777.97	-23.58	105.04	-104.94	2.00	2.00	0.00
Start 300.17 hold at 1787.86 MD									
1,800.00	15.76	102.654	1,789.65	-24.31	108.26	-108.15	0.00	0.00	0.00
1,900.00	15.76	102.654	1,885.89	-30.26	134.75	-134.62	0.00	0.00	0.00
2,000.00	15.76	102.654	1,982.13	-36.20	161.25	-161.09	0.00	0.00	0.00
2,088.03	15.76	102.654	2,066.86	-41.44	184.58	-184.40	0.00	0.00	0.00
Start Drop -1.00									
2,100.00	15.64	102.654	2,078.38	-42.15	187.74	-187.55	1.00	-1.00	0.00
2,200.00	14.64	102.654	2,174.91	-47.87	213.21	-213.01	1.00	-1.00	0.00
2,300.00	13.64	102.654	2,271.88	-53.22	237.05	-236.81	1.00	-1.00	0.00
2,400.00	12.64	102.654	2,369.26	-58.20	259.22	-258.97	1.00	-1.00	0.00
2,500.00	11.64	102.654	2,467.02	-62.81	279.74	-279.46	1.00	-1.00	0.00
2,600.00	10.64	102.654	2,565.14	-67.04	298.59	-298.29	1.00	-1.00	0.00
2,700.00	9.64	102.654	2,663.58	-70.89	315.76	-315.45	1.00	-1.00	0.00
2,800.00	8.64	102.654	2,762.31	-74.37	331.25	-330.93	1.00	-1.00	0.00
2,900.00	7.64	102.654	2,861.30	-77.47	345.06	-344.73	1.00	-1.00	0.00
3,000.00	6.64	102.654	2,960.52	-80.20	357.19	-356.84	1.00	-1.00	0.00
3,100.00	5.64	102.654	3,059.95	-82.54	367.62	-367.26	1.00	-1.00	0.00
3,200.00	4.64	102.654	3,159.54	-84.50	376.36	-375.99	1.00	-1.00	0.00
3,300.00	3.64	102.654	3,259.28	-86.08	383.40	-383.02	1.00	-1.00	0.00
3,400.00	2.64	102.654	3,359.13	-87.28	388.74	-388.36	1.00	-1.00	0.00
3,500.00	1.64	102.654	3,459.06	-88.10	392.38	-391.99	1.00	-1.00	0.00
3,600.00	0.64	102.654	3,559.04	-88.53	394.31	-393.93	1.00	-1.00	0.00
3,663.76	0.00	0.000	3,622.80	-88.61	394.66	-394.27	1.00	-1.00	0.00
Start 1670.25 hold at 3663.76 MD									
3,700.00	0.00	0.000	3,659.04	-88.61	394.66	-394.27	0.00	0.00	0.00
3,800.00	0.00	0.000	3,759.04	-88.61	394.66	-394.27	0.00	0.00	0.00
3,900.00	0.00	0.000	3,859.04	-88.61	394.66	-394.27	0.00	0.00	0.00
4,000.00	0.00	0.000	3,959.04	-88.61	394.66	-394.27	0.00	0.00	0.00
4,100.00	0.00	0.000	4,059.04	-88.61	394.66	-394.27	0.00	0.00	0.00
4,200.00	0.00	0.000	4,159.04	-88.61	394.66	-394.27	0.00	0.00	0.00
4,300.00	0.00	0.000	4,259.04	-88.61	394.66	-394.27	0.00	0.00	0.00
4,400.00	0.00	0.000	4,359.04	-88.61	394.66	-394.27	0.00	0.00	0.00
4,500.00	0.00	0.000	4,459.04	-88.61	394.66	-394.27	0.00	0.00	0.00
4,600.00	0.00	0.000	4,559.04	-88.61	394.66	-394.27	0.00	0.00	0.00

Database:	Casper District	Local Co-ordinate Reference:	Well Anschutz Equus Farms 5-61-34-4148B
Company:	Bill Barrett Corp.	TVD Reference:	GL 4479.6' & KB 20' @ 4499.60ft
Project:	Weld County, CO NAD 83	MD Reference:	GL 4479.6' & KB 20' @ 4499.60ft
Site:	Anschutz Equus Farms 5-61-34 NESE	North Reference:	True
Well:	Anschutz Equus Farms 5-61-34-4148B	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	0.00	0.000	4,659.04	-88.61	394.66	-394.27	0.00	0.00	0.00
4,800.00	0.00	0.000	4,759.04	-88.61	394.66	-394.27	0.00	0.00	0.00
4,900.00	0.00	0.000	4,859.04	-88.61	394.66	-394.27	0.00	0.00	0.00
5,000.00	0.00	0.000	4,959.04	-88.61	394.66	-394.27	0.00	0.00	0.00
5,100.00	0.00	0.000	5,059.04	-88.61	394.66	-394.27	0.00	0.00	0.00
5,200.00	0.00	0.000	5,159.04	-88.61	394.66	-394.27	0.00	0.00	0.00
5,300.00	0.00	0.000	5,259.04	-88.61	394.66	-394.27	0.00	0.00	0.00
5,334.01	0.00	0.000	5,293.05	-88.61	394.66	-394.27	0.00	0.00	0.00
Start DLS 10.00 TFO 269.75									
5,400.00	6.60	269.753	5,358.89	-88.63	390.86	-390.48	10.00	10.00	0.00
5,500.00	16.60	269.753	5,456.73	-88.71	370.78	-370.40	10.00	10.00	0.00
5,600.00	26.60	269.753	5,549.59	-88.87	334.02	-333.63	10.00	10.00	0.00
5,700.00	36.60	269.753	5,634.65	-89.10	281.69	-281.30	10.00	10.00	0.00
5,800.00	46.60	269.753	5,709.34	-89.38	215.39	-215.00	10.00	10.00	0.00
5,900.00	56.60	269.753	5,771.38	-89.72	137.12	-136.73	10.00	10.00	0.00
6,000.00	66.60	269.753	5,818.88	-90.10	49.27	-48.88	10.00	10.00	0.00
6,100.00	76.60	269.753	5,850.41	-90.51	-45.50	45.89	10.00	10.00	0.00
6,200.00	86.60	269.753	5,865.00	-90.93	-144.30	144.69	10.00	10.00	0.00
6,230.47	89.65	269.753	5,866.00	-91.06	-174.75	175.14	10.00	10.00	0.00
Start 9692.01 hold at 6230.47 MD									
6,300.00	89.65	269.753	5,866.43	-91.36	-244.28	244.67	0.00	0.00	0.00
6,400.00	89.65	269.753	5,867.05	-91.79	-344.28	344.67	0.00	0.00	0.00
6,500.00	89.65	269.753	5,867.67	-92.22	-444.27	444.67	0.00	0.00	0.00
6,600.00	89.65	269.753	5,868.28	-92.65	-544.27	544.66	0.00	0.00	0.00
6,700.00	89.65	269.753	5,868.90	-93.08	-644.27	644.66	0.00	0.00	0.00
6,800.00	89.65	269.753	5,869.52	-93.51	-744.26	744.66	0.00	0.00	0.00
6,900.00	89.65	269.753	5,870.14	-93.95	-844.26	844.66	0.00	0.00	0.00
7,000.00	89.65	269.753	5,870.76	-94.38	-944.26	944.66	0.00	0.00	0.00
7,100.00	89.65	269.753	5,871.38	-94.81	-1,044.26	1,044.65	0.00	0.00	0.00
7,200.00	89.65	269.753	5,872.00	-95.24	-1,144.25	1,144.65	0.00	0.00	0.00
7,300.00	89.65	269.753	5,872.62	-95.67	-1,244.25	1,244.65	0.00	0.00	0.00
7,400.00	89.65	269.753	5,873.24	-96.10	-1,344.25	1,344.65	0.00	0.00	0.00
7,500.00	89.65	269.753	5,873.86	-96.53	-1,444.24	1,444.65	0.00	0.00	0.00
7,600.00	89.65	269.753	5,874.48	-96.96	-1,544.24	1,544.64	0.00	0.00	0.00
7,700.00	89.65	269.753	5,875.09	-97.39	-1,644.24	1,644.64	0.00	0.00	0.00
7,800.00	89.65	269.753	5,875.71	-97.82	-1,744.24	1,744.64	0.00	0.00	0.00
7,900.00	89.65	269.753	5,876.33	-98.25	-1,844.23	1,844.64	0.00	0.00	0.00
8,000.00	89.65	269.753	5,876.95	-98.68	-1,944.23	1,944.64	0.00	0.00	0.00
8,100.00	89.65	269.753	5,877.57	-99.11	-2,044.23	2,044.64	0.00	0.00	0.00
8,200.00	89.65	269.753	5,878.19	-99.54	-2,144.22	2,144.63	0.00	0.00	0.00
8,300.00	89.65	269.753	5,878.81	-99.97	-2,244.22	2,244.63	0.00	0.00	0.00
8,400.00	89.65	269.753	5,879.43	-100.40	-2,344.22	2,344.63	0.00	0.00	0.00
8,500.00	89.65	269.753	5,880.05	-100.84	-2,444.22	2,444.63	0.00	0.00	0.00
8,600.00	89.65	269.753	5,880.67	-101.27	-2,544.21	2,544.63	0.00	0.00	0.00
8,700.00	89.65	269.753	5,881.29	-101.70	-2,644.21	2,644.62	0.00	0.00	0.00
8,800.00	89.65	269.753	5,881.90	-102.13	-2,744.21	2,744.62	0.00	0.00	0.00
8,900.00	89.65	269.753	5,882.52	-102.56	-2,844.20	2,844.62	0.00	0.00	0.00
9,000.00	89.65	269.753	5,883.14	-102.99	-2,944.20	2,944.62	0.00	0.00	0.00
9,100.00	89.65	269.753	5,883.76	-103.42	-3,044.20	3,044.62	0.00	0.00	0.00
9,200.00	89.65	269.753	5,884.38	-103.85	-3,144.20	3,144.61	0.00	0.00	0.00
9,300.00	89.65	269.753	5,885.00	-104.28	-3,244.19	3,244.61	0.00	0.00	0.00
9,400.00	89.65	269.753	5,885.62	-104.71	-3,344.19	3,344.61	0.00	0.00	0.00
9,500.00	89.65	269.753	5,886.24	-105.14	-3,444.19	3,444.61	0.00	0.00	0.00

Database:	Casper District	Local Co-ordinate Reference:	Well Anschutz Equus Farms 5-61-34-4148B
Company:	Bill Barrett Corp.	TVD Reference:	GL 4479.6' & KB 20' @ 4499.60ft
Project:	Weld County, CO NAD 83	MD Reference:	GL 4479.6' & KB 20' @ 4499.60ft
Site:	Anschutz Equus Farms 5-61-34 NESE	North Reference:	True
Well:	Anschutz Equus Farms 5-61-34-4148B	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)
9,600.00	89.65	269.753	5,886.86	-105.57	-3,544.18	3,544.61	0.00	0.00	0.00
9,700.00	89.65	269.753	5,887.48	-106.00	-3,644.18	3,644.60	0.00	0.00	0.00
9,800.00	89.65	269.753	5,888.10	-106.43	-3,744.18	3,744.60	0.00	0.00	0.00
9,900.00	89.65	269.753	5,888.72	-106.86	-3,844.18	3,844.60	0.00	0.00	0.00
10,000.00	89.65	269.753	5,889.33	-107.29	-3,944.17	3,944.60	0.00	0.00	0.00
10,100.00	89.65	269.753	5,889.95	-107.73	-4,044.17	4,044.60	0.00	0.00	0.00
10,200.00	89.65	269.753	5,890.57	-108.16	-4,144.17	4,144.60	0.00	0.00	0.00
10,300.00	89.65	269.753	5,891.19	-108.59	-4,244.16	4,244.59	0.00	0.00	0.00
10,400.00	89.65	269.753	5,891.81	-109.02	-4,344.16	4,344.59	0.00	0.00	0.00
10,500.00	89.65	269.753	5,892.43	-109.45	-4,444.16	4,444.59	0.00	0.00	0.00
10,600.00	89.65	269.753	5,893.05	-109.88	-4,544.16	4,544.59	0.00	0.00	0.00
10,700.00	89.65	269.753	5,893.67	-110.31	-4,644.15	4,644.59	0.00	0.00	0.00
10,800.00	89.65	269.753	5,894.29	-110.74	-4,744.15	4,744.58	0.00	0.00	0.00
10,900.00	89.65	269.753	5,894.91	-111.17	-4,844.15	4,844.58	0.00	0.00	0.00
11,000.00	89.65	269.753	5,895.53	-111.60	-4,944.14	4,944.58	0.00	0.00	0.00
11,100.00	89.65	269.753	5,896.14	-112.03	-5,044.14	5,044.58	0.00	0.00	0.00
11,200.00	89.65	269.753	5,896.76	-112.46	-5,144.14	5,144.58	0.00	0.00	0.00
11,300.00	89.65	269.753	5,897.38	-112.89	-5,244.14	5,244.57	0.00	0.00	0.00
11,400.00	89.65	269.753	5,898.00	-113.32	-5,344.13	5,344.57	0.00	0.00	0.00
11,500.00	89.65	269.753	5,898.62	-113.75	-5,444.13	5,444.57	0.00	0.00	0.00
11,600.00	89.65	269.753	5,899.24	-114.18	-5,544.13	5,544.57	0.00	0.00	0.00
11,700.00	89.65	269.753	5,899.86	-114.62	-5,644.12	5,644.57	0.00	0.00	0.00
11,800.00	89.65	269.753	5,900.48	-115.05	-5,744.12	5,744.56	0.00	0.00	0.00
11,900.00	89.65	269.753	5,901.10	-115.48	-5,844.12	5,844.56	0.00	0.00	0.00
12,000.00	89.65	269.753	5,901.72	-115.91	-5,944.12	5,944.56	0.00	0.00	0.00
12,100.00	89.65	269.753	5,902.34	-116.34	-6,044.11	6,044.56	0.00	0.00	0.00
12,200.00	89.65	269.753	5,902.95	-116.77	-6,144.11	6,144.56	0.00	0.00	0.00
12,300.00	89.65	269.753	5,903.57	-117.20	-6,244.11	6,244.55	0.00	0.00	0.00
12,400.00	89.65	269.753	5,904.19	-117.63	-6,344.10	6,344.55	0.00	0.00	0.00
12,500.00	89.65	269.753	5,904.81	-118.06	-6,444.10	6,444.55	0.00	0.00	0.00
12,600.00	89.65	269.753	5,905.43	-118.49	-6,544.10	6,544.55	0.00	0.00	0.00
12,700.00	89.65	269.753	5,906.05	-118.92	-6,644.10	6,644.55	0.00	0.00	0.00
12,800.00	89.65	269.753	5,906.67	-119.35	-6,744.09	6,744.55	0.00	0.00	0.00
12,900.00	89.65	269.753	5,907.29	-119.78	-6,844.09	6,844.54	0.00	0.00	0.00
13,000.00	89.65	269.753	5,907.91	-120.21	-6,944.09	6,944.54	0.00	0.00	0.00
13,100.00	89.65	269.753	5,908.53	-120.64	-7,044.08	7,044.54	0.00	0.00	0.00
13,200.00	89.65	269.753	5,909.15	-121.08	-7,144.08	7,144.54	0.00	0.00	0.00
13,300.00	89.65	269.753	5,909.76	-121.51	-7,244.08	7,244.54	0.00	0.00	0.00
13,400.00	89.65	269.753	5,910.38	-121.94	-7,344.08	7,344.53	0.00	0.00	0.00
13,500.00	89.65	269.753	5,911.00	-122.37	-7,444.07	7,444.53	0.00	0.00	0.00
13,600.00	89.65	269.753	5,911.62	-122.80	-7,544.07	7,544.53	0.00	0.00	0.00
13,700.00	89.65	269.753	5,912.24	-123.23	-7,644.07	7,644.53	0.00	0.00	0.00
13,800.00	89.65	269.753	5,912.86	-123.66	-7,744.06	7,744.53	0.00	0.00	0.00
13,900.00	89.65	269.753	5,913.48	-124.09	-7,844.06	7,844.52	0.00	0.00	0.00
14,000.00	89.65	269.753	5,914.10	-124.52	-7,944.06	7,944.52	0.00	0.00	0.00
14,100.00	89.65	269.753	5,914.72	-124.95	-8,044.06	8,044.52	0.00	0.00	0.00
14,200.00	89.65	269.753	5,915.34	-125.38	-8,144.05	8,144.52	0.00	0.00	0.00
14,300.00	89.65	269.753	5,915.96	-125.81	-8,244.05	8,244.52	0.00	0.00	0.00
14,400.00	89.65	269.753	5,916.57	-126.24	-8,344.05	8,344.51	0.00	0.00	0.00
14,500.00	89.65	269.753	5,917.19	-126.67	-8,444.05	8,444.51	0.00	0.00	0.00
14,600.00	89.65	269.753	5,917.81	-127.10	-8,544.04	8,544.51	0.00	0.00	0.00
14,700.00	89.65	269.753	5,918.43	-127.53	-8,644.04	8,644.51	0.00	0.00	0.00
14,800.00	89.65	269.753	5,919.05	-127.97	-8,744.04	8,744.51	0.00	0.00	0.00
14,900.00	89.65	269.753	5,919.67	-128.40	-8,844.03	8,844.51	0.00	0.00	0.00

Database:	Casper District	Local Co-ordinate Reference:	Well Anschutz Equus Farms 5-61-34-4148B
Company:	Bill Barrett Corp.	TVD Reference:	GL 4479.6' & KB 20' @ 4499.60ft
Project:	Weld County, CO NAD 83	MD Reference:	GL 4479.6' & KB 20' @ 4499.60ft
Site:	Anschutz Equus Farms 5-61-34 NESE	North Reference:	True
Well:	Anschutz Equus Farms 5-61-34-4148B	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)
15,000.00	89.65	269.753	5,920.29	-128.83	-8,944.03	8,944.50	0.00	0.00	0.00
15,100.00	89.65	269.753	5,920.91	-129.26	-9,044.03	9,044.50	0.00	0.00	0.00
15,200.00	89.65	269.753	5,921.53	-129.69	-9,144.03	9,144.50	0.00	0.00	0.00
15,300.00	89.65	269.753	5,922.15	-130.12	-9,244.02	9,244.50	0.00	0.00	0.00
15,400.00	89.65	269.753	5,922.77	-130.55	-9,344.02	9,344.50	0.00	0.00	0.00
15,500.00	89.65	269.753	5,923.38	-130.98	-9,444.02	9,444.49	0.00	0.00	0.00
15,600.00	89.65	269.753	5,924.00	-131.41	-9,544.01	9,544.49	0.00	0.00	0.00
15,700.00	89.65	269.753	5,924.62	-131.84	-9,644.01	9,644.49	0.00	0.00	0.00
15,800.00	89.65	269.753	5,925.24	-132.27	-9,744.01	9,744.49	0.00	0.00	0.00
15,900.00	89.65	269.753	5,925.86	-132.70	-9,844.01	9,844.49	0.00	0.00	0.00
15,922.48	89.65	269.753	5,926.00	-132.80	-9,866.48	9,866.96	0.00	0.00	0.00
TD at 15922.48									

Design Targets									
Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (usft)	Easting (usft)	Latitude	Longitude
- hit/miss target									
- Shape									
5-61-34-4148B LP	0.00	0.000	5,866.00	-91.05	-174.74	1,374,689.30	3,365,865.22	40° 21' 16.160 N	104° 11' 13.859 W
- plan misses target center by 0.01ft at 6230.46ft MD (5866.00 TVD, -91.06 N, -174.74 E)									
- Point									
5-61-34-4148B PBHL	0.00	0.000	5,926.00	-132.80	-9,866.48	1,374,504.01	3,356,175.18	40° 21' 15.728 N	104° 13' 19.049 W
- plan hits target center									
- Point									

Plan Annotations					
Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates			
		+N/-S (ft)	+E/-W (ft)	Comment	
1,000.00	1,000.00	0.00	0.00	Start Build 2.00	
1,787.86	1,777.97	-23.58	105.04	Start 300.17 hold at 1787.86 MD	
2,088.03	2,066.86	-41.44	184.58	Start Drop -1.00	
3,663.76	3,622.80	-88.61	394.66	Start 1670.25 hold at 3663.76 MD	
5,334.01	5,293.05	-88.61	394.66	Start DLS 10.00 TFO 269.75	
6,230.47	5,866.00	-91.06	-174.75	Start 9692.01 hold at 6230.47 MD	
15,922.48	5,926.00	-132.80	-9,866.48	TD at 15922.48	