

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 5-61-34-5649B
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 5-61-34-5649B/OH)

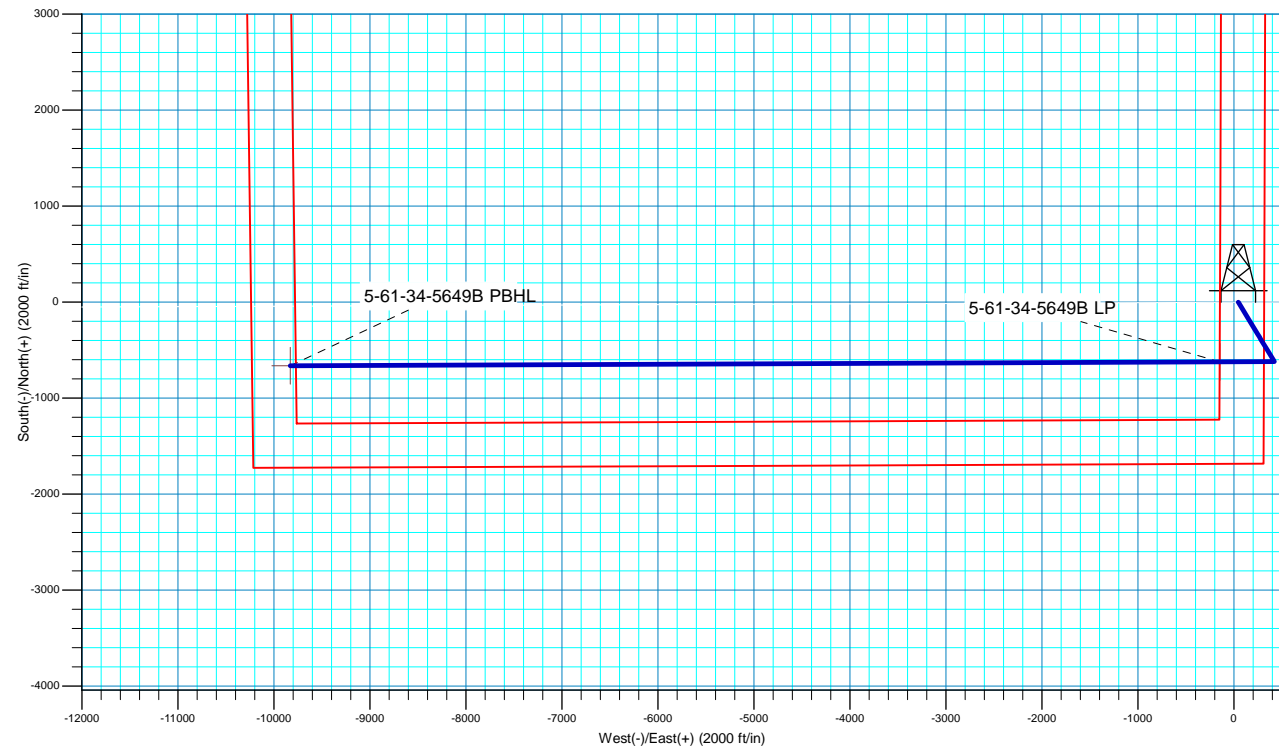
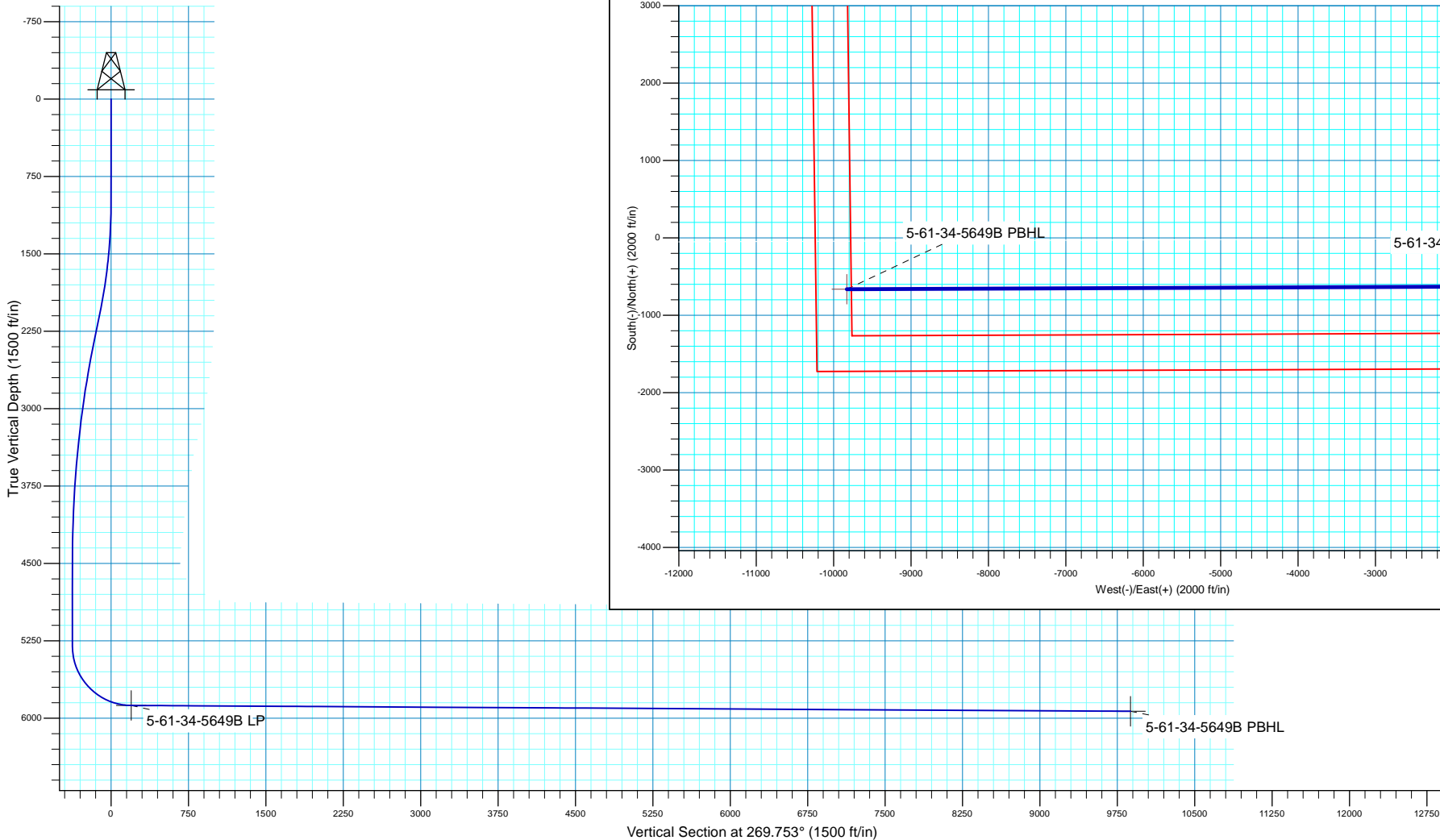
Created By: Seth Burstad Date: 8-28-2017

SECTION DETAILS

MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSect
0.00	0.00	0.000	0.00	-0.02	44.87	0.00	0.00	0.00
1000.00	0.00	0.000	1000.00	-0.02	44.87	0.00	0.00	0.00
2089.30	21.79	148.706	2063.24	-174.87	151.15	2.00	148.71	-105.53
2389.52	21.79	148.706	2342.02	-270.08	209.03	0.00	0.00	-162.99
4568.12	0.00	0.000	4468.50	-619.77	421.59	1.00	180.00	-374.04
5402.67	0.00	0.000	5303.05	-619.77	421.59	0.00	0.00	-374.04
6299.30	89.66	269.753	5876.00	-622.23	-147.99	10.00	269.75	195.54
15981.47	89.66	269.753	5933.00	-663.97	-9829.90	0.00	0.00	9877.54

WELL DETAILS: Anschutz Equus Farms 5-61-34-5649B

+N/-S	+E/-W	GL 4479.6' & KB 20' @ 4499.60ft	4479.60	Longitude
Northing	Easting	Latitude		
-0.02	44.87	1374783.15	3366054.20	40° 21' 17.060 N 104° 11' 11.400 W





Bill Barrett Corporation

Bill Barrett Corp.

Weld County, CO NAD 83

Anschutz Equus Farms 5-61-34 NESE

Anschutz Equus Farms 5-61-34-5649B

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 5-61-34-5649B
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 5-61-34-5649B	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 : Anschutz 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 5-61-34-5649B, 1685' FSL 270' FEL Sec 34 T5N R61W					
Well Position	+N/-S	-0.02 ft	Northing:	1,374,783.16 usft	Latitude:	40° 21' 17.060 N
	+E/-W	44.87 ft	Easting:	3,366,054.20 usft	Longitude:	104° 11' 11.400 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	
2,089.30	21.79	148.706	2,063.24	-174.85	106.28	2.00	2.00	0.00	148.71	
2,389.52	21.79	148.706	2,342.02	-270.06	164.16	0.00	0.00	0.00	0.00	
4,568.12	0.00	0.000	4,468.50	-619.75	376.72	1.00	-1.00	0.00	180.00	
5,402.67	0.00	0.000	5,303.05	-619.75	376.72	0.00	0.00	0.00	0.00	
6,299.30	89.66	269.753	5,876.00	-622.21	-192.86	10.00	10.00	-10.07	269.75	
15,981.47	89.66	269.753	5,933.00	-663.94	-9,874.77	0.00	0.00	0.00	0.00	5-61-34-5649B PBHL

Database:	Casper District	Local Co-ordinate Reference:	Well Anschutz Equus Farms 5-61-34-5649B
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 5-61-34-5649B	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	148.706	1,099.98	-1.49	0.91	-0.90	2.00	2.00	0.00
1,200.00	4.00	148.706	1,199.84	-5.96	3.62	-3.60	2.00	2.00	0.00
1,300.00	6.00	148.706	1,299.45	-13.41	8.15	-8.09	2.00	2.00	0.00
1,400.00	8.00	148.706	1,398.70	-23.82	14.48	-14.38	2.00	2.00	0.00
1,500.00	10.00	148.706	1,497.47	-37.19	22.61	-22.45	2.00	2.00	0.00
1,600.00	12.00	148.706	1,595.62	-53.49	32.52	-32.29	2.00	2.00	0.00
1,700.00	14.00	148.706	1,693.06	-72.72	44.20	-43.89	2.00	2.00	0.00
1,800.00	16.00	148.706	1,789.64	-94.83	57.64	-57.23	2.00	2.00	0.00
1,900.00	18.00	148.706	1,885.27	-119.81	72.83	-72.31	2.00	2.00	0.00
2,000.00	20.00	148.706	1,979.82	-147.63	89.74	-89.10	2.00	2.00	0.00
2,089.30	21.79	148.706	2,063.24	-174.85	106.28	-105.53	2.00	2.00	0.00
Start 300.22 hold at 2089.30 MD									
2,100.00	21.79	148.706	2,073.18	-178.24	108.34	-107.57	0.00	0.00	0.00
2,200.00	21.79	148.706	2,166.03	-209.95	127.62	-126.72	0.00	0.00	0.00
2,300.00	21.79	148.706	2,258.89	-241.67	146.90	-145.86	0.00	0.00	0.00
2,389.52	21.79	148.706	2,342.02	-270.06	164.16	-162.99	0.00	0.00	0.00
Start Drop -1.00									
2,400.00	21.68	148.706	2,351.75	-273.38	166.17	-164.99	1.00	-1.00	0.00
2,500.00	20.68	148.706	2,445.00	-304.25	184.94	-183.63	1.00	-1.00	0.00
2,600.00	19.68	148.706	2,538.86	-333.73	202.86	-201.42	1.00	-1.00	0.00
2,700.00	18.68	148.706	2,633.30	-361.80	219.93	-218.36	1.00	-1.00	0.00
2,800.00	17.68	148.706	2,728.31	-388.47	236.13	-234.46	1.00	-1.00	0.00
2,900.00	16.68	148.706	2,823.84	-413.71	251.48	-249.69	1.00	-1.00	0.00
3,000.00	15.68	148.706	2,919.88	-437.52	265.95	-264.06	1.00	-1.00	0.00
3,100.00	14.68	148.706	3,016.39	-459.90	279.55	-277.57	1.00	-1.00	0.00
3,200.00	13.68	148.706	3,113.34	-480.83	292.28	-290.20	1.00	-1.00	0.00
3,300.00	12.68	148.706	3,210.71	-500.32	304.12	-301.96	1.00	-1.00	0.00
3,400.00	11.68	148.706	3,308.45	-518.35	315.08	-312.85	1.00	-1.00	0.00
3,500.00	10.68	148.706	3,406.55	-534.92	325.16	-322.85	1.00	-1.00	0.00
3,600.00	9.68	148.706	3,504.98	-550.02	334.34	-331.96	1.00	-1.00	0.00
3,700.00	8.68	148.706	3,603.70	-563.66	342.62	-340.19	1.00	-1.00	0.00
3,800.00	7.68	148.706	3,702.68	-575.82	350.02	-347.53	1.00	-1.00	0.00
3,900.00	6.68	148.706	3,801.89	-586.50	356.51	-353.98	1.00	-1.00	0.00
4,000.00	5.68	148.706	3,901.31	-595.70	362.10	-359.53	1.00	-1.00	0.00
4,100.00	4.68	148.706	4,000.90	-603.42	366.79	-364.19	1.00	-1.00	0.00
4,200.00	3.68	148.706	4,100.63	-609.65	370.58	-367.95	1.00	-1.00	0.00
4,300.00	2.68	148.706	4,200.48	-614.39	373.46	-370.81	1.00	-1.00	0.00
4,400.00	1.68	148.706	4,300.40	-617.64	375.44	-372.77	1.00	-1.00	0.00
4,500.00	0.68	148.706	4,400.38	-619.40	376.51	-373.84	1.00	-1.00	0.00
4,568.12	0.00	0.000	4,468.50	-619.75	376.72	-374.04	1.00	-1.00	0.00
Start 834.55 hold at 4568.12 MD									
4,600.00	0.00	0.000	4,500.38	-619.75	376.72	-374.04	0.00	0.00	0.00

Database:	Casper District	Local Co-ordinate Reference:	Well Anschutz Equus Farms 5-61-34-5649B
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 5-61-34-5649B	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	4,600.38	-619.75	376.72	-374.04	0.00	0.00	0.00
4,800.00	0.00	0.000	4,700.38	-619.75	376.72	-374.04	0.00	0.00	0.00
4,900.00	0.00	0.000	4,800.38	-619.75	376.72	-374.04	0.00	0.00	0.00
5,000.00	0.00	0.000	4,900.38	-619.75	376.72	-374.04	0.00	0.00	0.00
5,100.00	0.00	0.000	5,000.38	-619.75	376.72	-374.04	0.00	0.00	0.00
5,200.00	0.00	0.000	5,100.38	-619.75	376.72	-374.04	0.00	0.00	0.00
5,300.00	0.00	0.000	5,200.38	-619.75	376.72	-374.04	0.00	0.00	0.00
5,400.00	0.00	0.000	5,300.38	-619.75	376.72	-374.04	0.00	0.00	0.00
5,402.67	0.00	0.000	5,303.05	-619.75	376.72	-374.04	0.00	0.00	0.00
Start DLS 10.00 TFO 269.75									
5,500.00	9.73	269.753	5,399.91	-619.79	368.47	-365.80	10.00	10.00	0.00
5,600.00	19.73	269.753	5,496.50	-619.90	343.07	-340.40	10.00	10.00	0.00
5,700.00	29.73	269.753	5,587.21	-620.08	301.29	-298.61	10.00	10.00	0.00
5,800.00	39.73	269.753	5,669.29	-620.32	244.39	-241.71	10.00	10.00	0.00
5,900.00	49.73	269.753	5,740.24	-620.62	174.10	-171.42	10.00	10.00	0.00
6,000.00	59.73	269.753	5,797.90	-620.97	92.55	-89.88	10.00	10.00	0.00
6,100.00	69.73	269.753	5,840.53	-621.36	2.24	0.44	10.00	10.00	0.00
6,200.00	79.73	269.753	5,866.83	-621.78	-94.11	96.79	10.00	10.00	0.00
6,299.30	89.66	269.753	5,876.00	-622.21	-192.86	195.54	10.00	10.00	0.00
Start 9682.17 hold at 6299.30 MD									
6,300.00	89.66	269.753	5,876.00	-622.21	-193.56	196.24	0.00	0.00	0.00
6,400.00	89.66	269.753	5,876.59	-622.64	-293.56	296.24	0.00	0.00	0.00
6,500.00	89.66	269.753	5,877.18	-623.07	-393.56	396.24	0.00	0.00	0.00
6,600.00	89.66	269.753	5,877.77	-623.50	-493.55	496.24	0.00	0.00	0.00
6,700.00	89.66	269.753	5,878.36	-623.93	-593.55	596.23	0.00	0.00	0.00
6,800.00	89.66	269.753	5,878.95	-624.36	-693.55	696.23	0.00	0.00	0.00
6,900.00	89.66	269.753	5,879.53	-624.79	-793.55	796.23	0.00	0.00	0.00
7,000.00	89.66	269.753	5,880.12	-625.23	-893.54	896.23	0.00	0.00	0.00
7,100.00	89.66	269.753	5,880.71	-625.66	-993.54	996.23	0.00	0.00	0.00
7,200.00	89.66	269.753	5,881.30	-626.09	-1,093.54	1,096.23	0.00	0.00	0.00
7,300.00	89.66	269.753	5,881.89	-626.52	-1,193.53	1,196.22	0.00	0.00	0.00
7,400.00	89.66	269.753	5,882.48	-626.95	-1,293.53	1,296.22	0.00	0.00	0.00
7,500.00	89.66	269.753	5,883.07	-627.38	-1,393.53	1,396.22	0.00	0.00	0.00
7,600.00	89.66	269.753	5,883.66	-627.81	-1,493.53	1,496.22	0.00	0.00	0.00
7,700.00	89.66	269.753	5,884.24	-628.24	-1,593.52	1,596.22	0.00	0.00	0.00
7,800.00	89.66	269.753	5,884.83	-628.67	-1,693.52	1,696.22	0.00	0.00	0.00
7,900.00	89.66	269.753	5,885.42	-629.11	-1,793.52	1,796.21	0.00	0.00	0.00
8,000.00	89.66	269.753	5,886.01	-629.54	-1,893.52	1,896.21	0.00	0.00	0.00
8,100.00	89.66	269.753	5,886.60	-629.97	-1,993.51	1,996.21	0.00	0.00	0.00
8,200.00	89.66	269.753	5,887.19	-630.40	-2,093.51	2,096.21	0.00	0.00	0.00
8,300.00	89.66	269.753	5,887.78	-630.83	-2,193.51	2,196.21	0.00	0.00	0.00
8,400.00	89.66	269.753	5,888.37	-631.26	-2,293.51	2,296.21	0.00	0.00	0.00
8,500.00	89.66	269.753	5,888.95	-631.69	-2,393.50	2,396.20	0.00	0.00	0.00
8,600.00	89.66	269.753	5,889.54	-632.12	-2,493.50	2,496.20	0.00	0.00	0.00
8,700.00	89.66	269.753	5,890.13	-632.55	-2,593.50	2,596.20	0.00	0.00	0.00
8,800.00	89.66	269.753	5,890.72	-632.98	-2,693.49	2,696.20	0.00	0.00	0.00
8,900.00	89.66	269.753	5,891.31	-633.42	-2,793.49	2,796.20	0.00	0.00	0.00
9,000.00	89.66	269.753	5,891.90	-633.85	-2,893.49	2,896.19	0.00	0.00	0.00
9,100.00	89.66	269.753	5,892.49	-634.28	-2,993.49	2,996.19	0.00	0.00	0.00
9,200.00	89.66	269.753	5,893.08	-634.71	-3,093.48	3,096.19	0.00	0.00	0.00
9,300.00	89.66	269.753	5,893.66	-635.14	-3,193.48	3,196.19	0.00	0.00	0.00
9,400.00	89.66	269.753	5,894.25	-635.57	-3,293.48	3,296.19	0.00	0.00	0.00
9,500.00	89.66	269.753	5,894.84	-636.00	-3,393.48	3,396.19	0.00	0.00	0.00

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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 5-61-34-5649B	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	89.66	269.753	5,895.43	-636.43	-3,493.47	3,496.18	0.00	0.00	0.00
9,700.00	89.66	269.753	5,896.02	-636.86	-3,593.47	3,596.18	0.00	0.00	0.00
9,800.00	89.66	269.753	5,896.61	-637.30	-3,693.47	3,696.18	0.00	0.00	0.00
9,900.00	89.66	269.753	5,897.20	-637.73	-3,793.47	3,796.18	0.00	0.00	0.00
10,000.00	89.66	269.753	5,897.79	-638.16	-3,893.46	3,896.18	0.00	0.00	0.00
10,100.00	89.66	269.753	5,898.37	-638.59	-3,993.46	3,996.18	0.00	0.00	0.00
10,200.00	89.66	269.753	5,898.96	-639.02	-4,093.46	4,096.17	0.00	0.00	0.00
10,300.00	89.66	269.753	5,899.55	-639.45	-4,193.45	4,196.17	0.00	0.00	0.00
10,400.00	89.66	269.753	5,900.14	-639.88	-4,293.45	4,296.17	0.00	0.00	0.00
10,500.00	89.66	269.753	5,900.73	-640.31	-4,393.45	4,396.17	0.00	0.00	0.00
10,600.00	89.66	269.753	5,901.32	-640.74	-4,493.45	4,496.17	0.00	0.00	0.00
10,700.00	89.66	269.753	5,901.91	-641.17	-4,593.44	4,596.17	0.00	0.00	0.00
10,800.00	89.66	269.753	5,902.50	-641.61	-4,693.44	4,696.16	0.00	0.00	0.00
10,900.00	89.66	269.753	5,903.08	-642.04	-4,793.44	4,796.16	0.00	0.00	0.00
11,000.00	89.66	269.753	5,903.67	-642.47	-4,893.44	4,896.16	0.00	0.00	0.00
11,100.00	89.66	269.753	5,904.26	-642.90	-4,993.43	4,996.16	0.00	0.00	0.00
11,200.00	89.66	269.753	5,904.85	-643.33	-5,093.43	5,096.16	0.00	0.00	0.00
11,300.00	89.66	269.753	5,905.44	-643.76	-5,193.43	5,196.15	0.00	0.00	0.00
11,400.00	89.66	269.753	5,906.03	-644.19	-5,293.43	5,296.15	0.00	0.00	0.00
11,500.00	89.66	269.753	5,906.62	-644.62	-5,393.42	5,396.15	0.00	0.00	0.00
11,600.00	89.66	269.753	5,907.20	-645.05	-5,493.42	5,496.15	0.00	0.00	0.00
11,700.00	89.66	269.753	5,907.79	-645.49	-5,593.42	5,596.15	0.00	0.00	0.00
11,800.00	89.66	269.753	5,908.38	-645.92	-5,693.41	5,696.15	0.00	0.00	0.00
11,900.00	89.66	269.753	5,908.97	-646.35	-5,793.41	5,796.14	0.00	0.00	0.00
12,000.00	89.66	269.753	5,909.56	-646.78	-5,893.41	5,896.14	0.00	0.00	0.00
12,100.00	89.66	269.753	5,910.15	-647.21	-5,993.41	5,996.14	0.00	0.00	0.00
12,200.00	89.66	269.753	5,910.74	-647.64	-6,093.40	6,096.14	0.00	0.00	0.00
12,300.00	89.66	269.753	5,911.33	-648.07	-6,193.40	6,196.14	0.00	0.00	0.00
12,400.00	89.66	269.753	5,911.91	-648.50	-6,293.40	6,296.14	0.00	0.00	0.00
12,500.00	89.66	269.753	5,912.50	-648.93	-6,393.40	6,396.13	0.00	0.00	0.00
12,600.00	89.66	269.753	5,913.09	-649.36	-6,493.39	6,496.13	0.00	0.00	0.00
12,700.00	89.66	269.753	5,913.68	-649.80	-6,593.39	6,596.13	0.00	0.00	0.00
12,800.00	89.66	269.753	5,914.27	-650.23	-6,693.39	6,696.13	0.00	0.00	0.00
12,900.00	89.66	269.753	5,914.86	-650.66	-6,793.39	6,796.13	0.00	0.00	0.00
13,000.00	89.66	269.753	5,915.45	-651.09	-6,893.38	6,896.13	0.00	0.00	0.00
13,100.00	89.66	269.753	5,916.04	-651.52	-6,993.38	6,996.12	0.00	0.00	0.00
13,200.00	89.66	269.753	5,916.62	-651.95	-7,093.38	7,096.12	0.00	0.00	0.00
13,300.00	89.66	269.753	5,917.21	-652.38	-7,193.37	7,196.12	0.00	0.00	0.00
13,400.00	89.66	269.753	5,917.80	-652.81	-7,293.37	7,296.12	0.00	0.00	0.00
13,500.00	89.66	269.753	5,918.39	-653.24	-7,393.37	7,396.12	0.00	0.00	0.00
13,600.00	89.66	269.753	5,918.98	-653.68	-7,493.37	7,496.12	0.00	0.00	0.00
13,700.00	89.66	269.753	5,919.57	-654.11	-7,593.36	7,596.11	0.00	0.00	0.00
13,800.00	89.66	269.753	5,920.16	-654.54	-7,693.36	7,696.11	0.00	0.00	0.00
13,900.00	89.66	269.753	5,920.75	-654.97	-7,793.36	7,796.11	0.00	0.00	0.00
14,000.00	89.66	269.753	5,921.33	-655.40	-7,893.36	7,896.11	0.00	0.00	0.00
14,100.00	89.66	269.753	5,921.92	-655.83	-7,993.35	7,996.11	0.00	0.00	0.00
14,200.00	89.66	269.753	5,922.51	-656.26	-8,093.35	8,096.10	0.00	0.00	0.00
14,300.00	89.66	269.753	5,923.10	-656.69	-8,193.35	8,196.10	0.00	0.00	0.00
14,400.00	89.66	269.753	5,923.69	-657.12	-8,293.35	8,296.10	0.00	0.00	0.00
14,500.00	89.66	269.753	5,924.28	-657.55	-8,393.34	8,396.10	0.00	0.00	0.00
14,600.00	89.66	269.753	5,924.87	-657.99	-8,493.34	8,496.10	0.00	0.00	0.00
14,700.00	89.66	269.753	5,925.46	-658.42	-8,593.34	8,596.10	0.00	0.00	0.00
14,800.00	89.66	269.753	5,926.04	-658.85	-8,693.33	8,696.09	0.00	0.00	0.00
14,900.00	89.66	269.753	5,926.63	-659.28	-8,793.33	8,796.09	0.00	0.00	0.00

Database:	Casper District	Local Co-ordinate Reference:	Well Anschutz Equus Farms 5-61-34-5649B
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 5-61-34-5649B	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	89.66	269.753	5,927.22	-659.71	-8,893.33	8,896.09	0.00	0.00	0.00
15,100.00	89.66	269.753	5,927.81	-660.14	-8,993.33	8,996.09	0.00	0.00	0.00
15,200.00	89.66	269.753	5,928.40	-660.57	-9,093.32	9,096.09	0.00	0.00	0.00
15,300.00	89.66	269.753	5,928.99	-661.00	-9,193.32	9,196.09	0.00	0.00	0.00
15,400.00	89.66	269.753	5,929.58	-661.43	-9,293.32	9,296.08	0.00	0.00	0.00
15,500.00	89.66	269.753	5,930.17	-661.86	-9,393.32	9,396.08	0.00	0.00	0.00
15,600.00	89.66	269.753	5,930.75	-662.30	-9,493.31	9,496.08	0.00	0.00	0.00
15,700.00	89.66	269.753	5,931.34	-662.73	-9,593.31	9,596.08	0.00	0.00	0.00
15,800.00	89.66	269.753	5,931.93	-663.16	-9,693.31	9,696.08	0.00	0.00	0.00
15,900.00	89.66	269.753	5,932.52	-663.59	-9,793.31	9,796.08	0.00	0.00	0.00
15,981.47	89.66	269.753	5,933.00	-663.94	-9,874.77	9,877.54	0.00	0.00	0.00
TD at 15981.47									

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									
5-61-34-5649B LP	0.00	0.000	5,876.00	-622.20	-192.86	1,374,158.18	3,365,870.57	40° 21' 10.912 N	104° 11' 13.891 W
- plan misses target center by 0.01ft at 6299.30ft MD (5876.00 TVD, -622.21 N, -192.86 E)									
- Point									
5-61-34-5649B PBHL	0.00	0.000	5,933.00	-663.94	-9,874.77	1,373,973.03	3,356,190.36	40° 21' 10.480 N	104° 13' 18.952 W
- plan hits target center									
- Point									

Plan Annotations				
Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment
		+N/-S (ft)	+E/-W (ft)	
1,000.00	1,000.00	0.00	0.00	Start Build 2.00
2,089.30	2,063.24	-174.85	106.28	Start 300.22 hold at 2089.30 MD
2,389.52	2,342.02	-270.06	164.16	Start Drop -1.00
4,568.12	4,468.50	-619.75	376.72	Start 834.55 hold at 4568.12 MD
5,402.67	5,303.05	-619.75	376.72	Start DLS 10.00 TFO 269.75
6,299.30	5,876.00	-622.21	-192.86	Start 9682.17 hold at 6299.30 MD
15,981.47	5,933.00	-663.94	-9,874.77	TD at 15981.47