



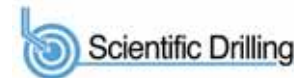
PROJECT DETAILS: Weld County, CO NAD 83

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 4-62-28 NWSW Pad  
Well: Anschutz Equus Farms 4-62-28-3340B2  
Wellbore: OH  
Design: Plan 1



Azinuths to True North  
Magnetic North: 8.28°



Magnetic Field  
Strength: 52595.1snT  
Dip Angle: 66.94°  
Date: 10/5/2015  
Model: BGGM2015

Plan: Plan 1 (Anschutz Equus Farms 4-62-28-3340B2/OH)

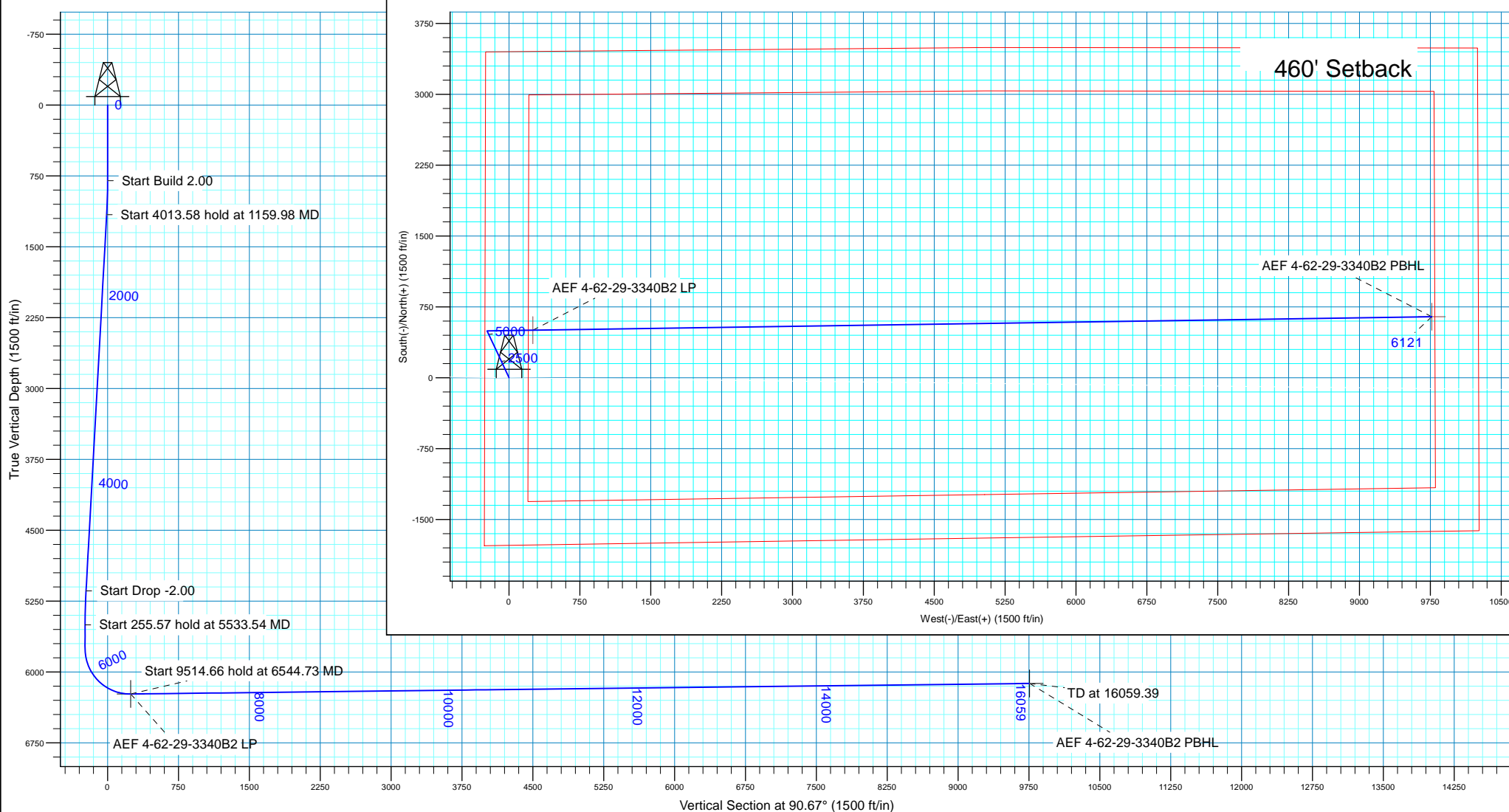
Created By: Julie Cruse Date: 5 October 2015

### 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
1159.98	7.20	334.97	1159.03	20.47	-9.56	2.00	334.97	-9.80
5173.56	7.20	334.97	5140.97	476.23	-222.37	0.00	0.00	-227.93
5533.54	0.00	0.00	5500.00	496.70	-231.93	2.00	180.00	-237.72
5789.11	0.00	0.00	5755.57	496.70	-231.93	0.00	0.00	-237.72
6544.73	90.67	89.14	6233.00	503.94	251.10	12.00	89.14	245.19
16059.39	90.67	89.14	6121.00	646.52	9764.03	0.00	0.00	9755.81

### WELL DETAILS: Anschutz Equus Farms 4-62-28-3340B2

Ground Level: 4628.00  
Northing 1347157.06 Easting 3324299.43 Latitude 40° 16' 49.840 N Longitude 104° 20' 15.390 W



# **Bill Barrett Corp.**

**Weld County, CO NAD 83**

**Anschutz Equus Farms 4-62-28 NWSW Pad**

**Anschutz Equus Farms 4-62-28-3340B2**

**OH**

**Plan: Plan 1**

## **Standard Planning Report**

**05 October, 2015**



# Scientific Drilling

## Planning Report

<b>Database:</b>	Casper District	<b>Local Co-ordinate Reference:</b>	Well Anschutz Equus Farms 4-62-28-3340B2
<b>Company:</b>	Bill Barrett Corp.	<b>TVD Reference:</b>	GL 4628' & KB 16' @ 4644.00ft
<b>Project:</b>	Weld County, CO NAD 83	<b>MD Reference:</b>	GL 4628' & KB 16' @ 4644.00ft
<b>Site:</b>	Anschutz Equus Farms 4-62-28 NWSW Pad	<b>North Reference:</b>	True
<b>Well:</b>	Anschutz Equus Farms 4-62-28-3340B2	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	OH		
<b>Design:</b>	Plan 1		

<b>Project</b>	Weld County, CO NAD 83		
<b>Map System:</b>	US State Plane 1983	<b>System Datum:</b>	Mean Sea Level
<b>Geo Datum:</b>	North American Datum 1983		
<b>Map Zone:</b>	Colorado Northern Zone		

Site		Anschutz Equus Farms 4-62-28 NWSW Pad			
Site Position:		Northing:	1,347,052.84 usft	Latitude:	40° 16' 48.810 N
From:	Lat/Long	Easting:	3,324,300.02 usft	Longitude:	104° 20' 15.400 W
Position Uncertainty:	0.00 ft	Slot Radius:	13.200 in	Grid Convergence:	0.75 °

Well	Anschutz Equus Farms 4-62-28-3340B2, 1771' FSL 250' FWL Sec 28 T4N R62W					
Well Position	+N/-S	104.22 ft	Northing:	1,347,157.06 usft	Latitude:	40° 16' 49.840 N
	+E/-W	0.78 ft	Easting:	3,324,299.43 usft	Longitude:	104° 20' 15.390 W
Position Uncertainty		0.00 ft	Wellhead Elevation:	0.00 ft	Ground Level:	4,628.00 ft

<b>Wellbore</b>	OH				
<b>Magnetics</b>	<b>Model Name</b>	<b>Sample Date</b>	<b>Declination (°)</b>	<b>Dip Angle (°)</b>	<b>Field Strength (nT)</b>
	BGGM2015	10/5/2015	8.27	66.94	52,595

<b>Design</b>	Plan 1			
<b>Audit Notes:</b>				
<b>Version:</b>	<b>Phase:</b>	PLAN	<b>Tie On Depth:</b>	0.00
<b>Vertical Section:</b>	<b>Depth From (TVD) (ft)</b>	<b>+N/-S (ft)</b>	<b>+E/-W (ft)</b>	<b>Direction (°)</b>
	0.00	0.00	0.00	90.67

<b>Plan Sections</b>										
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	
1,159.98	7.20	334.97	1,159.03	20.47	-9.56	2.00	2.00	0.00	334.97	
5,173.56	7.20	334.97	5,140.97	476.23	-222.37	0.00	0.00	0.00	0.00	
5,533.54	0.00	0.00	5,500.00	496.70	-231.93	2.00	-2.00	0.00	180.00	
5,789.11	0.00	0.00	5,755.57	496.70	-231.93	0.00	0.00	0.00	0.00	
6,544.73	90.67	89.14	6,233.00	503.94	251.10	12.00	12.00	11.80	89.14	
16,059.39	90.67	89.14	6,121.00	646.52	9,764.03	0.00	0.00	0.00	0.00	AEF 4-62-29-3340B2

# Scientific Drilling

## Planning Report

<b>Database:</b>	Casper District	<b>Local Co-ordinate Reference:</b>	Well Anschutz Equus Farms 4-62-28-3340B2
<b>Company:</b>	Bill Barrett Corp.	<b>TVD Reference:</b>	GL 4628' & KB 16' @ 4644.00ft
<b>Project:</b>	Weld County, CO NAD 83	<b>MD Reference:</b>	GL 4628' & KB 16' @ 4644.00ft
<b>Site:</b>	Anschutz Equus Farms 4-62-28 NWSW Pad	<b>North Reference:</b>	True
<b>Well:</b>	Anschutz Equus Farms 4-62-28-3340B2	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	OH		
<b>Design:</b>	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
16.00	0.00	0.00	16.00	0.00	0.00	0.00	0.00	0.00	0.00
Base of Fox Hills									
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
900.00	2.00	334.97	899.98	1.58	-0.74	-0.76	2.00	2.00	0.00
1,000.00	4.00	334.97	999.84	6.32	-2.95	-3.03	2.00	2.00	0.00
1,100.00	6.00	334.97	1,099.45	14.22	-6.64	-6.81	2.00	2.00	0.00
1,159.98	7.20	334.97	1,159.03	20.47	-9.56	-9.80	2.00	2.00	0.00
1,200.00	7.20	334.97	1,198.74	25.01	-11.68	-11.97	0.00	0.00	0.00
1,300.00	7.20	334.97	1,297.95	36.37	-16.98	-17.40	0.00	0.00	0.00
1,400.00	7.20	334.97	1,397.16	47.72	-22.28	-22.84	0.00	0.00	0.00
1,500.00	7.20	334.97	1,496.37	59.08	-27.59	-28.27	0.00	0.00	0.00
1,600.00	7.20	334.97	1,595.58	70.43	-32.89	-33.71	0.00	0.00	0.00
1,700.00	7.20	334.97	1,694.80	81.79	-38.19	-39.14	0.00	0.00	0.00
1,800.00	7.20	334.97	1,794.01	93.14	-43.49	-44.58	0.00	0.00	0.00
1,900.00	7.20	334.97	1,893.22	104.50	-48.80	-50.01	0.00	0.00	0.00
2,000.00	7.20	334.97	1,992.43	115.86	-54.10	-55.45	0.00	0.00	0.00
2,100.00	7.20	334.97	2,091.64	127.21	-59.40	-60.88	0.00	0.00	0.00
2,200.00	7.20	334.97	2,190.85	138.57	-64.70	-66.32	0.00	0.00	0.00
2,300.00	7.20	334.97	2,290.07	149.92	-70.01	-71.75	0.00	0.00	0.00
2,400.00	7.20	334.97	2,389.28	161.28	-75.31	-77.19	0.00	0.00	0.00
2,500.00	7.20	334.97	2,488.49	172.63	-80.61	-82.62	0.00	0.00	0.00
2,600.00	7.20	334.97	2,587.70	183.99	-85.91	-88.06	0.00	0.00	0.00
2,700.00	7.20	334.97	2,686.91	195.35	-91.21	-93.49	0.00	0.00	0.00
2,800.00	7.20	334.97	2,786.12	206.70	-96.52	-98.93	0.00	0.00	0.00
2,900.00	7.20	334.97	2,885.33	218.06	-101.82	-104.36	0.00	0.00	0.00
3,000.00	7.20	334.97	2,984.55	229.41	-107.12	-109.80	0.00	0.00	0.00
3,100.00	7.20	334.97	3,083.76	240.77	-112.42	-115.23	0.00	0.00	0.00
3,200.00	7.20	334.97	3,182.97	252.12	-117.73	-120.67	0.00	0.00	0.00
3,300.00	7.20	334.97	3,282.18	263.48	-123.03	-126.10	0.00	0.00	0.00
3,400.00	7.20	334.97	3,381.39	274.83	-128.33	-131.54	0.00	0.00	0.00
3,500.00	7.20	334.97	3,480.60	286.19	-133.63	-136.97	0.00	0.00	0.00
3,600.00	7.20	334.97	3,579.82	297.55	-138.94	-142.41	0.00	0.00	0.00
3,700.00	7.20	334.97	3,679.03	308.90	-144.24	-147.84	0.00	0.00	0.00
3,800.00	7.20	334.97	3,778.24	320.26	-149.54	-153.28	0.00	0.00	0.00
3,900.00	7.20	334.97	3,877.45	331.61	-154.84	-158.71	0.00	0.00	0.00
4,000.00	7.20	334.97	3,976.66	342.97	-160.15	-164.15	0.00	0.00	0.00
4,100.00	7.20	334.97	4,075.87	354.32	-165.45	-169.58	0.00	0.00	0.00
4,200.00	7.20	334.97	4,175.08	365.68	-170.75	-175.02	0.00	0.00	0.00
4,300.00	7.20	334.97	4,274.30	377.04	-176.05	-180.45	0.00	0.00	0.00
4,350.10	7.20	334.97	4,324.00	382.72	-178.71	-183.17	0.00	0.00	0.00
Sussex									
4,400.00	7.20	334.97	4,373.51	388.39	-181.36	-185.89	0.00	0.00	0.00
4,500.00	7.20	334.97	4,472.72	399.75	-186.66	-191.32	0.00	0.00	0.00
4,600.00	7.20	334.97	4,571.93	411.10	-191.96	-196.76	0.00	0.00	0.00
4,700.00	7.20	334.97	4,671.14	422.46	-197.26	-202.19	0.00	0.00	0.00
4,800.00	7.20	334.97	4,770.35	433.81	-202.57	-207.62	0.00	0.00	0.00

# Scientific Drilling

## Planning Report

<b>Database:</b>	Casper District	<b>Local Co-ordinate Reference:</b>	Well Anschutz Equus Farms 4-62-28-3340B2
<b>Company:</b>	Bill Barrett Corp.	<b>TVD Reference:</b>	GL 4628' & KB 16' @ 4644.00ft
<b>Project:</b>	Weld County, CO NAD 83	<b>MD Reference:</b>	GL 4628' & KB 16' @ 4644.00ft
<b>Site:</b>	Anschutz Equus Farms 4-62-28 NWSW Pad	<b>North Reference:</b>	True
<b>Well:</b>	Anschutz Equus Farms 4-62-28-3340B2	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	OH		
<b>Design:</b>	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)
4,900.00	7.20	334.97	4,869.57	445.17	-207.87	-213.06	0.00	0.00	0.00
5,000.00	7.20	334.97	4,968.78	456.53	-213.17	-218.49	0.00	0.00	0.00
5,100.00	7.20	334.97	5,067.99	467.88	-218.47	-223.93	0.00	0.00	0.00
5,173.56	7.20	334.97	5,140.97	476.23	-222.37	-227.93	0.00	0.00	0.00
5,200.00	6.67	334.97	5,167.22	479.13	-223.72	-229.31	2.00	-2.00	0.00
5,206.83	6.53	334.97	5,174.00	479.84	-224.06	-229.65	2.00	-2.00	0.00
Shannon									
5,300.00	4.67	334.97	5,266.72	488.08	-227.90	-233.60	2.00	-2.00	0.00
5,400.00	2.67	334.97	5,366.51	493.88	-230.61	-236.37	2.00	-2.00	0.00
5,500.00	0.67	334.97	5,466.46	496.52	-231.85	-237.64	2.00	-2.00	0.00
5,533.54	0.00	0.00	5,500.00	496.70	-231.93	-237.72	2.00	-2.00	0.00
5,600.00	0.00	0.00	5,566.46	496.70	-231.93	-237.72	0.00	0.00	0.00
5,700.00	0.00	0.00	5,666.46	496.70	-231.93	-237.72	0.00	0.00	0.00
5,789.11	0.00	0.00	5,755.57	496.70	-231.93	-237.72	0.00	0.00	0.00
5,800.00	1.31	89.14	5,766.46	496.70	-231.81	-237.60	12.00	12.00	0.00
5,900.00	13.31	89.14	5,865.47	496.89	-219.11	-224.91	12.00	12.00	0.00
6,000.00	25.31	89.14	5,959.67	497.39	-186.11	-191.92	12.00	12.00	0.00
6,100.00	37.31	89.14	6,044.95	498.16	-134.25	-140.07	12.00	12.00	0.00
6,103.84	37.77	89.14	6,048.00	498.20	-131.91	-137.73	12.00	12.00	0.00
Sharon Springs									
6,175.29	46.34	89.14	6,101.00	498.92	-84.10	-89.93	12.00	12.00	0.00
Niobrara									
6,200.00	49.31	89.14	6,117.59	499.19	-65.79	-71.63	12.00	12.00	0.00
6,246.25	54.86	89.14	6,146.00	499.74	-29.33	-35.17	12.00	12.00	0.00
A Chalk									
6,260.45	56.56	89.14	6,154.00	499.91	-17.60	-23.44	12.00	12.00	0.00
A Marl									
6,300.00	61.31	89.14	6,174.40	500.42	16.27	10.42	12.00	12.00	0.00
6,357.74	68.24	89.14	6,199.00	501.20	68.46	62.60	12.00	12.00	0.00
Top "B" Target									
6,400.00	73.31	89.14	6,212.91	501.80	108.35	102.47	12.00	12.00	0.00
6,500.00	85.31	89.14	6,231.43	503.27	206.42	200.52	12.00	12.00	0.00
6,544.72	90.67	89.14	6,233.00	503.94	251.10	245.19	12.00	12.00	0.00
AEF 4-62-29-3340B2 LP									
6,600.00	90.67	89.14	6,232.35	504.77	306.36	300.44	0.00	0.00	0.00
6,700.00	90.67	89.14	6,231.17	506.27	406.34	400.40	0.00	0.00	0.00
6,800.00	90.67	89.14	6,230.00	507.77	506.33	500.35	0.00	0.00	0.00
6,900.00	90.67	89.14	6,228.82	509.26	606.31	600.31	0.00	0.00	0.00
7,000.00	90.67	89.14	6,227.64	510.76	706.29	700.27	0.00	0.00	0.00
7,100.00	90.67	89.14	6,226.47	512.26	806.27	800.23	0.00	0.00	0.00
7,200.00	90.67	89.14	6,225.29	513.76	906.25	900.18	0.00	0.00	0.00
7,300.00	90.67	89.14	6,224.11	515.26	1,006.24	1,000.14	0.00	0.00	0.00
7,400.00	90.67	89.14	6,222.93	516.76	1,106.22	1,100.10	0.00	0.00	0.00
7,500.00	90.67	89.14	6,221.76	518.25	1,206.20	1,200.06	0.00	0.00	0.00
7,600.00	90.67	89.14	6,220.58	519.75	1,306.18	1,300.01	0.00	0.00	0.00
7,700.00	90.67	89.14	6,219.40	521.25	1,406.16	1,399.97	0.00	0.00	0.00
7,800.00	90.67	89.14	6,218.23	522.75	1,506.14	1,499.93	0.00	0.00	0.00
7,900.00	90.67	89.14	6,217.05	524.25	1,606.13	1,599.89	0.00	0.00	0.00
8,000.00	90.67	89.14	6,215.87	525.75	1,706.11	1,699.84	0.00	0.00	0.00
8,100.00	90.67	89.14	6,214.69	527.25	1,806.09	1,799.80	0.00	0.00	0.00
8,200.00	90.67	89.14	6,213.52	528.74	1,906.07	1,899.76	0.00	0.00	0.00
8,300.00	90.67	89.14	6,212.34	530.24	2,006.05	1,999.72	0.00	0.00	0.00
8,400.00	90.67	89.14	6,211.16	531.74	2,106.04	2,099.67	0.00	0.00	0.00

# Scientific Drilling

## Planning Report

<b>Database:</b>	Casper District	<b>Local Co-ordinate Reference:</b>	Well Anschutz Equus Farms 4-62-28-3340B2
<b>Company:</b>	Bill Barrett Corp.	<b>TVD Reference:</b>	GL 4628' & KB 16' @ 4644.00ft
<b>Project:</b>	Weld County, CO NAD 83	<b>MD Reference:</b>	GL 4628' & KB 16' @ 4644.00ft
<b>Site:</b>	Anschutz Equus Farms 4-62-28 NWSW Pad	<b>North Reference:</b>	True
<b>Well:</b>	Anschutz Equus Farms 4-62-28-3340B2	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	OH		
<b>Design:</b>	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)
8,500.00	90.67	89.14	6,209.99	533.24	2,206.02	2,199.63	0.00	0.00	0.00
8,600.00	90.67	89.14	6,208.81	534.74	2,306.00	2,299.59	0.00	0.00	0.00
8,700.00	90.67	89.14	6,207.63	536.24	2,405.98	2,399.55	0.00	0.00	0.00
8,800.00	90.67	89.14	6,206.45	537.74	2,505.96	2,499.50	0.00	0.00	0.00
8,900.00	90.67	89.14	6,205.28	539.23	2,605.94	2,599.46	0.00	0.00	0.00
9,000.00	90.67	89.14	6,204.10	540.73	2,705.93	2,699.42	0.00	0.00	0.00
9,100.00	90.67	89.14	6,202.92	542.23	2,805.91	2,799.38	0.00	0.00	0.00
9,200.00	90.67	89.14	6,201.75	543.73	2,905.89	2,899.33	0.00	0.00	0.00
9,300.00	90.67	89.14	6,200.57	545.23	3,005.87	2,999.29	0.00	0.00	0.00
9,400.00	90.67	89.14	6,199.39	546.73	3,105.85	3,099.25	0.00	0.00	0.00
9,500.00	90.67	89.14	6,198.21	548.23	3,205.84	3,199.21	0.00	0.00	0.00
9,600.00	90.67	89.14	6,197.04	549.72	3,305.82	3,299.16	0.00	0.00	0.00
9,700.00	90.67	89.14	6,195.86	551.22	3,405.80	3,399.12	0.00	0.00	0.00
9,800.00	90.67	89.14	6,194.68	552.72	3,505.78	3,499.08	0.00	0.00	0.00
9,900.00	90.67	89.14	6,193.51	554.22	3,605.76	3,599.04	0.00	0.00	0.00
10,000.00	90.67	89.14	6,192.33	555.72	3,705.75	3,698.99	0.00	0.00	0.00
10,100.00	90.67	89.14	6,191.15	557.22	3,805.73	3,798.95	0.00	0.00	0.00
10,200.00	90.67	89.14	6,189.97	558.72	3,905.71	3,898.91	0.00	0.00	0.00
10,300.00	90.67	89.14	6,188.80	560.21	4,005.69	3,998.87	0.00	0.00	0.00
10,400.00	90.67	89.14	6,187.62	561.71	4,105.67	4,098.82	0.00	0.00	0.00
10,500.00	90.67	89.14	6,186.44	563.21	4,205.65	4,198.78	0.00	0.00	0.00
10,600.00	90.67	89.14	6,185.27	564.71	4,305.64	4,298.74	0.00	0.00	0.00
10,700.00	90.67	89.14	6,184.09	566.21	4,405.62	4,398.70	0.00	0.00	0.00
10,800.00	90.67	89.14	6,182.91	567.71	4,505.60	4,498.65	0.00	0.00	0.00
10,900.00	90.67	89.14	6,181.73	569.20	4,605.58	4,598.61	0.00	0.00	0.00
11,000.00	90.67	89.14	6,180.56	570.70	4,705.56	4,698.57	0.00	0.00	0.00
11,100.00	90.67	89.14	6,179.38	572.20	4,805.55	4,798.53	0.00	0.00	0.00
11,200.00	90.67	89.14	6,178.20	573.70	4,905.53	4,898.48	0.00	0.00	0.00
11,300.00	90.67	89.14	6,177.03	575.20	5,005.51	4,998.44	0.00	0.00	0.00
11,400.00	90.67	89.14	6,175.85	576.70	5,105.49	5,098.40	0.00	0.00	0.00
11,500.00	90.67	89.14	6,174.67	578.20	5,205.47	5,198.36	0.00	0.00	0.00
11,600.00	90.67	89.14	6,173.49	579.69	5,305.45	5,298.31	0.00	0.00	0.00
11,700.00	90.67	89.14	6,172.32	581.19	5,405.44	5,398.27	0.00	0.00	0.00
11,800.00	90.67	89.14	6,171.14	582.69	5,505.42	5,498.23	0.00	0.00	0.00
11,900.00	90.67	89.14	6,169.96	584.19	5,605.40	5,598.19	0.00	0.00	0.00
12,000.00	90.67	89.14	6,168.79	585.69	5,705.38	5,698.14	0.00	0.00	0.00
12,100.00	90.67	89.14	6,167.61	587.19	5,805.36	5,798.10	0.00	0.00	0.00
12,200.00	90.67	89.14	6,166.43	588.69	5,905.35	5,898.06	0.00	0.00	0.00
12,300.00	90.67	89.14	6,165.25	590.18	6,005.33	5,998.02	0.00	0.00	0.00
12,400.00	90.67	89.14	6,164.08	591.68	6,105.31	6,097.97	0.00	0.00	0.00
12,500.00	90.67	89.14	6,162.90	593.18	6,205.29	6,197.93	0.00	0.00	0.00
12,600.00	90.67	89.14	6,161.72	594.68	6,305.27	6,297.89	0.00	0.00	0.00
12,700.00	90.67	89.14	6,160.55	596.18	6,405.25	6,397.85	0.00	0.00	0.00
12,800.00	90.67	89.14	6,159.37	597.68	6,505.24	6,497.80	0.00	0.00	0.00
12,900.00	90.67	89.14	6,158.19	599.18	6,605.22	6,597.76	0.00	0.00	0.00
13,000.00	90.67	89.14	6,157.01	600.67	6,705.20	6,697.72	0.00	0.00	0.00
13,100.00	90.67	89.14	6,155.84	602.17	6,805.18	6,797.68	0.00	0.00	0.00
13,200.00	90.67	89.14	6,154.66	603.67	6,905.16	6,897.63	0.00	0.00	0.00
13,300.00	90.67	89.14	6,153.48	605.17	7,005.15	6,997.59	0.00	0.00	0.00
13,400.00	90.67	89.14	6,152.31	606.67	7,105.13	7,097.55	0.00	0.00	0.00
13,500.00	90.67	89.14	6,151.13	608.17	7,205.11	7,197.51	0.00	0.00	0.00
13,600.00	90.67	89.14	6,149.95	609.67	7,305.09	7,297.46	0.00	0.00	0.00
13,700.00	90.67	89.14	6,148.77	611.16	7,405.07	7,397.42	0.00	0.00	0.00
13,800.00	90.67	89.14	6,147.60	612.66	7,505.06	7,497.38	0.00	0.00	0.00

# Scientific Drilling

## Planning Report

<b>Database:</b>	Casper District	<b>Local Co-ordinate Reference:</b>	Well Anschutz Equus Farms 4-62-28-3340B2
<b>Company:</b>	Bill Barrett Corp.	<b>TVD Reference:</b>	GL 4628' & KB 16' @ 4644.00ft
<b>Project:</b>	Weld County, CO NAD 83	<b>MD Reference:</b>	GL 4628' & KB 16' @ 4644.00ft
<b>Site:</b>	Anschutz Equus Farms 4-62-28 NWSW Pad	<b>North Reference:</b>	True
<b>Well:</b>	Anschutz Equus Farms 4-62-28-3340B2	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	OH		
<b>Design:</b>	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)	
13,900.00	90.67	89.14	6,146.42	614.16	7,605.04	7,597.34	0.00	0.00	0.00	
14,000.00	90.67	89.14	6,145.24	615.66	7,705.02	7,697.29	0.00	0.00	0.00	
14,100.00	90.67	89.14	6,144.07	617.16	7,805.00	7,797.25	0.00	0.00	0.00	
14,200.00	90.67	89.14	6,142.89	618.66	7,904.98	7,897.21	0.00	0.00	0.00	
14,300.00	90.67	89.14	6,141.71	620.15	8,004.96	7,997.17	0.00	0.00	0.00	
14,400.00	90.67	89.14	6,140.53	621.65	8,104.95	8,097.12	0.00	0.00	0.00	
14,500.00	90.67	89.14	6,139.36	623.15	8,204.93	8,197.08	0.00	0.00	0.00	
14,600.00	90.67	89.14	6,138.18	624.65	8,304.91	8,297.04	0.00	0.00	0.00	
14,700.00	90.67	89.14	6,137.00	626.15	8,404.89	8,397.00	0.00	0.00	0.00	
14,800.00	90.67	89.14	6,135.83	627.65	8,504.87	8,496.95	0.00	0.00	0.00	
14,900.00	90.67	89.14	6,134.65	629.15	8,604.86	8,596.91	0.00	0.00	0.00	
15,000.00	90.67	89.14	6,133.47	630.64	8,704.84	8,696.87	0.00	0.00	0.00	
15,100.00	90.67	89.14	6,132.29	632.14	8,804.82	8,796.83	0.00	0.00	0.00	
15,200.00	90.67	89.14	6,131.12	633.64	8,904.80	8,896.78	0.00	0.00	0.00	
15,300.00	90.67	89.14	6,129.94	635.14	9,004.78	8,996.74	0.00	0.00	0.00	
15,400.00	90.67	89.14	6,128.76	636.64	9,104.76	9,096.70	0.00	0.00	0.00	
15,500.00	90.67	89.14	6,127.58	638.14	9,204.75	9,196.66	0.00	0.00	0.00	
15,600.00	90.67	89.14	6,126.41	639.64	9,304.73	9,296.61	0.00	0.00	0.00	
15,700.00	90.67	89.14	6,125.23	641.13	9,404.71	9,396.57	0.00	0.00	0.00	
15,800.00	90.67	89.14	6,124.05	642.63	9,504.69	9,496.53	0.00	0.00	0.00	
15,900.00	90.67	89.14	6,122.88	644.13	9,604.67	9,596.49	0.00	0.00	0.00	
16,000.00	90.67	89.14	6,121.70	645.63	9,704.66	9,696.44	0.00	0.00	0.00	
16,059.39	90.67	89.14	6,121.00	646.52	9,764.03	9,755.81	0.00	0.00	0.00	
AEF 4-62-29-3340B2 PBHL										

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										
AEF 4-62-29-3340B2 PE	0.00	0.00	6,121.00	646.52	9,764.03	1,347,931.51	3,334,054.13	40° 16' 56.210 N	104° 18' 9.400 W	
- plan hits target center										
- Point										
AEF 4-62-29-3340B2 LF	0.00	0.00	6,233.00	503.94	251.10	1,347,664.25	3,324,543.90	40° 16' 54.820 N	104° 20' 12.150 W	
- plan hits target center										
- Point										

Formations						
Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)	
16.00	16.00	Base of Fox Hills		0.00		
4,350.10	4,324.00	Sussex		0.00		
5,206.83	5,174.00	Shannon		0.00		
6,103.84	6,048.00	Sharon Springs		0.00		
6,175.29	6,101.00	Niobrara		0.00		
6,246.25	6,146.00	A Chalk		0.00		
6,260.45	6,154.00	A Marl		0.00		
6,357.74	6,199.00	Top "B" Target		0.00		