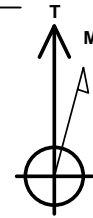


BILL BARRETT CORP
STATE OF COLORADO 1S-66-36 3340 CDH
Adams County, CO

Geodetic System: US State Plane 1983
Zone: Colorado Northern Zone
WELL @ 5245.0usft (Original Well Elev)
Ground Level: 5225.0
Latitude: 39° 55' 0.903 N
Longitude: 104° 43' 56.852 W

Magnetic North is 8.49° East of True North (Magnetic Declination)



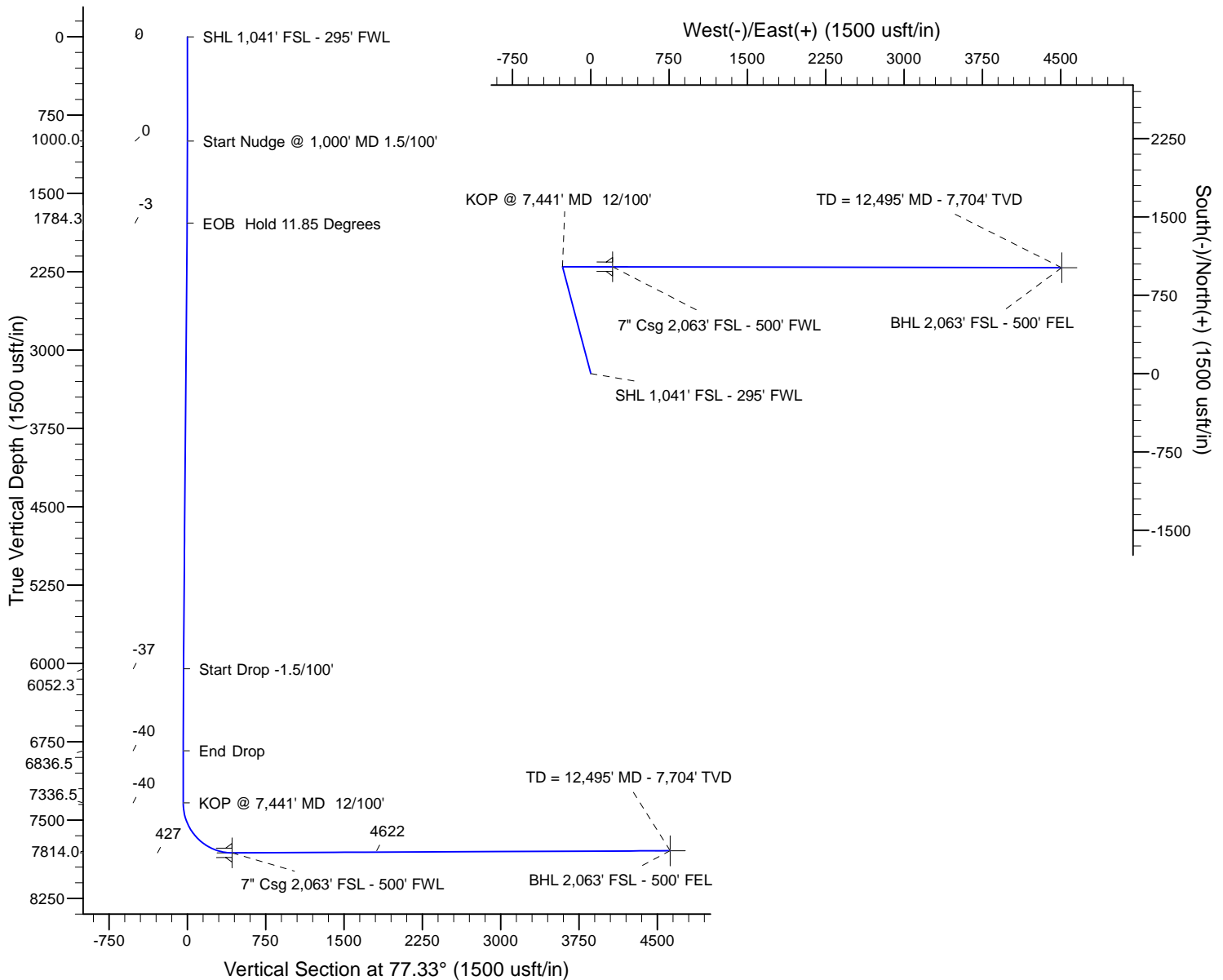
Azimuths to True North
Magnetic North: 8.49°

Magnetic Field
Strength: 52627.5snT
Dip Angle: 66.58°
Date: 10/28/2013
Model: IGRF2010

FORMATION TOP DETAILS

MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	Vsect
0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.0
1000.0	0.00	0.00	1000.0	0.0	0.0	0.00	0.00	0.0
1789.9	11.85	345.15	1784.3	78.7	-20.9	1.50	345.15	-3.1
6150.8	11.85	345.15	6052.2	944.1	-250.3	0.00	0.00	-37.2
6940.6	0.00	0.00	6836.5	1022.8	-271.2	1.50	180.00	-40.3
7440.6	0.00	0.00	7336.5	1022.8	-271.2	0.00	0.00	-40.3
8192.9	90.27	90.11	7814.0	1021.9	208.5	12.00	90.11	427.5
12494.5	90.27	90.11	7794.0	1013.5	4510.1	0.00	0.00	4622.6

TVDPATH	MDPATH	FORMATION
845.0	845.0	Base Fox Hills
4995.9	5071.5	Shannon
7294.3	7398.4	Sharon Springs
7382.3	7486.5	Niobrara
7806.4	8105.7	Top CDLL Target
7813.2	8163.0	Landing Point



Plan: Design #1 (STATE OF COLORADO 1S-66-36 3340 CDH/Wellbore #)

Created By: Mike Kirby Date: 14:30, October 28 2013
Checked: Date:
Reviewed: Date:
Approved: x Date: x

Planning Report

Database:	Rocky Mountain R5000 Database	Local Co-ordinate Reference:	Well STATE OF COLORADO 1S-66-36 3340 CDH
Company:	BILL BARRETT CORP	TVD Reference:	WELL @ 5245.0usft (Original Well Elev)
Project:	Adams County, CO	MD Reference:	WELL @ 5245.0usft (Original Well Elev)
Site:	State of Coloardo 36-1S-66W South Pad	North Reference:	True
Well:	STATE OF COLORADO 1S-66-36 3340 CDH	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Design #1		

Project	Adams County, CO		
Map System:	US State Plane 1983	System Datum:	Mean Sea Level
Geo Datum:	North American Datum 1983		
Map Zone:	Colorado Northern Zone		

Site		State of Coloardo 36-1S-66W South Pad			
Site Position:		Northing:	1,213,513.90 usft	Latitude:	39° 55' 0.903 N
From:	Map	Easting:	3,215,288.70 usft	Longitude:	104° 43' 56.852 W
Position Uncertainty:	0.0 usft	Slot Radius:	13-3/16 "	Grid Convergence:	0.50 °

Well	STATE OF COLORADO 1S-66-36 3340 CDH					
Well Position	+N/-S	105.0 usft	Northing:	1,213,618.90 usft	Latitude:	39° 55' 1.941 N
	+E/-W	0.3 usft	Easting:	3,215,288.10 usft	Longitude:	104° 43' 56.848 W
Position Uncertainty		0.0 usft	Wellhead Elevation:	5,245.0 usft	Ground Level:	5,225.0 usft

Wellbore	Wellbore #1				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	10/28/2013	8.49	66.58	52,628

Design	Design #1				
Audit Notes:					
Version:	Phase:	PROTOTYPE	Tie On Depth:	0.0	
Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)	
	0.0	0.0	0.0	77.33	

Plan Sections										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	TFO (°)	Target
0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.00	0.00	
1,000.0	0.00	0.00	1,000.0	0.0	0.0	0.00	0.00	0.00	0.00	
1,789.9	11.85	345.15	1,784.3	78.7	-20.9	1.50	1.50	0.00	345.15	
6,150.8	11.85	345.15	6,052.2	944.1	-250.3	0.00	0.00	0.00	0.00	
6,940.6	0.00	0.00	6,836.5	1,022.8	-271.2	1.50	-1.50	0.00	180.00	
7,440.6	0.00	0.00	7,336.5	1,022.8	-271.2	0.00	0.00	0.00	0.00	
8,192.9	90.27	90.11	7,814.0	1,021.9	208.5	12.00	12.00	0.00	90.11	
12,494.5	90.27	90.11	7,794.0	1,013.5	4,510.1	0.00	0.00	0.00	0.00	SOC 1S-66-36 3340

Planning Report

Database:	Rocky Mountain R5000 Database	Local Co-ordinate Reference:	Well STATE OF COLORADO 1S-66-36 3340 CDH
Company:	BILL BARRETT CORP	TVD Reference:	WELL @ 5245.0usft (Original Well Elev)
Project:	Adams County, CO	MD Reference:	WELL @ 5245.0usft (Original Well Elev)
Site:	State of Coloardo 36-1S-66W South Pad	North Reference:	True
Well:	STATE OF COLORADO 1S-66-36 3340 CDH	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Design #1		

Planned Survey										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	
0.0	0.00	0.00	0.0	0.0	0.0	0.0	0.00	0.00	0.00	
2.0	0.00	0.00	2.0	0.0	0.0	0.0	0.00	0.00	0.00	
SHL 1,041' FSL - 295' FWL										
100.0	0.00	0.00	100.0	0.0	0.0	0.0	0.00	0.00	0.00	
200.0	0.00	0.00	200.0	0.0	0.0	0.0	0.00	0.00	0.00	
300.0	0.00	0.00	300.0	0.0	0.0	0.0	0.00	0.00	0.00	
400.0	0.00	0.00	400.0	0.0	0.0	0.0	0.00	0.00	0.00	
500.0	0.00	0.00	500.0	0.0	0.0	0.0	0.00	0.00	0.00	
600.0	0.00	0.00	600.0	0.0	0.0	0.0	0.00	0.00	0.00	
700.0	0.00	0.00	700.0	0.0	0.0	0.0	0.00	0.00	0.00	
800.0	0.00	0.00	800.0	0.0	0.0	0.0	0.00	0.00	0.00	
845.0	0.00	0.00	845.0	0.0	0.0	0.0	0.00	0.00	0.00	
Base Fox Hills										
900.0	0.00	0.00	900.0	0.0	0.0	0.0	0.00	0.00	0.00	
1,000.0	0.00	0.00	1,000.0	0.0	0.0	0.0	0.00	0.00	0.00	
Start Nudge @ 1,000' MD 1.5/100'										
1,100.0	1.50	345.15	1,100.0	1.3	-0.3	0.0	1.50	1.50	0.00	
1,200.0	3.00	345.15	1,199.9	5.1	-1.3	-0.2	1.50	1.50	0.00	
1,300.0	4.50	345.15	1,299.7	11.4	-3.0	-0.4	1.50	1.50	0.00	
1,400.0	6.00	345.15	1,399.3	20.2	-5.4	-0.8	1.50	1.50	0.00	
1,500.0	7.50	345.15	1,498.6	31.6	-8.4	-1.2	1.50	1.50	0.00	
1,600.0	9.00	345.15	1,597.5	45.5	-12.1	-1.8	1.50	1.50	0.00	
1,700.0	10.50	345.15	1,696.1	61.8	-16.4	-2.4	1.50	1.50	0.00	
1,789.9	11.85	345.15	1,784.3	78.7	-20.9	-3.1	1.50	1.50	0.00	
EOB Hold 11.85 Degrees										
1,800.0	11.85	345.15	1,794.2	80.7	-21.4	-3.2	0.00	0.00	0.00	
1,900.0	11.85	345.15	1,892.0	100.5	-26.7	-4.0	0.00	0.00	0.00	
2,000.0	11.85	345.15	1,989.9	120.4	-31.9	-4.7	0.00	0.00	0.00	
2,100.0	11.85	345.15	2,087.8	140.2	-37.2	-5.5	0.00	0.00	0.00	
2,200.0	11.85	345.15	2,185.6	160.1	-42.4	-6.3	0.00	0.00	0.00	
2,300.0	11.85	345.15	2,283.5	179.9	-47.7	-7.1	0.00	0.00	0.00	
2,400.0	11.85	345.15	2,381.4	199.7	-53.0	-7.9	0.00	0.00	0.00	
2,500.0	11.85	345.15	2,479.3	219.6	-58.2	-8.7	0.00	0.00	0.00	
2,600.0	11.85	345.15	2,577.1	239.4	-63.5	-9.4	0.00	0.00	0.00	
2,700.0	11.85	345.15	2,675.0	259.3	-68.8	-10.2	0.00	0.00	0.00	
2,800.0	11.85	345.15	2,772.9	279.1	-74.0	-11.0	0.00	0.00	0.00	
2,900.0	11.85	345.15	2,870.7	299.0	-79.3	-11.8	0.00	0.00	0.00	
3,000.0	11.85	345.15	2,968.6	318.8	-84.5	-12.6	0.00	0.00	0.00	
3,100.0	11.85	345.15	3,066.5	338.7	-89.8	-13.4	0.00	0.00	0.00	
3,200.0	11.85	345.15	3,164.3	358.5	-95.1	-14.1	0.00	0.00	0.00	
3,300.0	11.85	345.15	3,262.2	378.4	-100.3	-14.9	0.00	0.00	0.00	
3,400.0	11.85	345.15	3,360.1	398.2	-105.6	-15.7	0.00	0.00	0.00	
3,500.0	11.85	345.15	3,457.9	418.1	-110.8	-16.5	0.00	0.00	0.00	
3,600.0	11.85	345.15	3,555.8	437.9	-116.1	-17.3	0.00	0.00	0.00	
3,700.0	11.85	345.15	3,653.7	457.8	-121.4	-18.1	0.00	0.00	0.00	
3,800.0	11.85	345.15	3,751.6	477.6	-126.6	-18.8	0.00	0.00	0.00	
3,900.0	11.85	345.15	3,849.4	497.4	-131.9	-19.6	0.00	0.00	0.00	
4,000.0	11.85	345.15	3,947.3	517.3	-137.2	-20.4	0.00	0.00	0.00	
4,100.0	11.85	345.15	4,045.2	537.1	-142.4	-21.2	0.00	0.00	0.00	
4,200.0	11.85	345.15	4,143.0	557.0	-147.7	-22.0	0.00	0.00	0.00	
4,300.0	11.85	345.15	4,240.9	576.8	-152.9	-22.8	0.00	0.00	0.00	
4,400.0	11.85	345.15	4,338.8	596.7	-158.2	-23.5	0.00	0.00	0.00	
4,500.0	11.85	345.15	4,436.6	616.5	-163.5	-24.3	0.00	0.00	0.00	

Planning Report

Database:	Rocky Mountain R5000 Database	Local Co-ordinate Reference:	Well STATE OF COLORADO 1S-66-36 3340 CDH
Company:	BILL BARRETT CORP	TVD Reference:	WELL @ 5245.0usft (Original Well Elev)
Project:	Adams County, CO	MD Reference:	WELL @ 5245.0usft (Original Well Elev)
Site:	State of Colorado 36-1S-66W South Pad	North Reference:	True
Well:	STATE OF COLORADO 1S-66-36 3340 CDH	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Design #1		

Planned Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
4,600.0	11.85	345.15	4,534.5	636.4	-168.7	-25.1	0.00	0.00	0.00
4,700.0	11.85	345.15	4,632.4	656.2	-174.0	-25.9	0.00	0.00	0.00
4,800.0	11.85	345.15	4,730.3	676.1	-179.3	-26.7	0.00	0.00	0.00
4,900.0	11.85	345.15	4,828.1	695.9	-184.5	-27.4	0.00	0.00	0.00
5,000.0	11.85	345.15	4,926.0	715.8	-189.8	-28.2	0.00	0.00	0.00
5,071.5	11.85	345.15	4,995.9	729.9	-193.5	-28.8	0.00	0.00	0.00
Shannon									
5,100.0	11.85	345.15	5,023.9	735.6	-195.0	-29.0	0.00	0.00	0.00
5,200.0	11.85	345.15	5,121.7	755.4	-200.3	-29.8	0.00	0.00	0.00
5,300.0	11.85	345.15	5,219.6	775.3	-205.6	-30.6	0.00	0.00	0.00
5,400.0	11.85	345.15	5,317.5	795.1	-210.8	-31.4	0.00	0.00	0.00
5,500.0	11.85	345.15	5,415.3	815.0	-216.1	-32.1	0.00	0.00	0.00
5,600.0	11.85	345.15	5,513.2	834.8	-221.4	-32.9	0.00	0.00	0.00
5,700.0	11.85	345.15	5,611.1	854.7	-226.6	-33.7	0.00	0.00	0.00
5,800.0	11.85	345.15	5,708.9	874.5	-231.9	-34.5	0.00	0.00	0.00
5,900.0	11.85	345.15	5,806.8	894.4	-237.1	-35.3	0.00	0.00	0.00
6,000.0	11.85	345.15	5,904.7	914.2	-242.4	-36.1	0.00	0.00	0.00
6,100.0	11.85	345.15	6,002.6	934.1	-247.7	-36.8	0.00	0.00	0.00
6,150.8	11.85	345.15	6,052.3	944.1	-250.3	-37.2	0.00	0.00	0.00
Start Drop -1.5/100'									
6,200.0	11.11	345.15	6,100.5	953.6	-252.9	-37.6	1.50	-1.50	0.00
6,300.0	9.61	345.15	6,198.9	971.0	-257.5	-38.3	1.50	-1.50	0.00
6,400.0	8.11	345.15	6,297.7	985.9	-261.4	-38.9	1.50	-1.50	0.00
6,500.0	6.61	345.15	6,396.8	998.3	-264.7	-39.4	1.50	-1.50	0.00
6,600.0	5.11	345.15	6,496.3	1,008.1	-267.3	-39.8	1.50	-1.50	0.00
6,700.0	3.61	345.15	6,596.0	1,015.5	-269.3	-40.1	1.50	-1.50	0.00
6,800.0	2.11	345.15	6,695.9	1,020.3	-270.5	-40.2	1.50	-1.50	0.00
6,900.0	0.61	345.15	6,795.9	1,022.6	-271.1	-40.3	1.50	-1.50	0.00
6,940.6	0.00	345.15	6,836.5	1,022.8	-271.2	-40.3	1.50	-1.50	0.00
End Drop									
7,000.0	0.00	0.00	6,895.9	1,022.8	-271.2	-40.3	0.00	0.00	0.00
7,100.0	0.00	0.00	6,995.9	1,022.8	-271.2	-40.3	0.00	0.00	0.00
7,200.0	0.00	0.00	7,095.9	1,022.8	-271.2	-40.3	0.00	0.00	0.00
7,300.0	0.00	0.00	7,195.9	1,022.8	-271.2	-40.3	0.00	0.00	0.00
7,398.4	0.00	0.00	7,294.3	1,022.8	-271.2	-40.3	0.00	0.00	0.00
Sharon Springs									
7,400.0	0.00	0.00	7,295.9	1,022.8	-271.2	-40.3	0.00	0.00	0.00
7,440.6	0.00	0.00	7,336.5	1,022.8	-271.2	-40.3	0.00	0.00	0.00
KOP @ 7,441' MD 12/100'									
7,486.5	5.50	90.11	7,382.3	1,022.8	-269.0	-38.2	11.99	11.99	0.00
Niobrara									
7,500.0	7.12	90.11	7,395.7	1,022.8	-267.5	-36.8	12.00	12.00	0.00
7,600.0	19.12	90.11	7,492.9	1,022.7	-244.9	-14.6	12.00	12.00	0.00
7,700.0	31.12	90.11	7,583.3	1,022.7	-202.5	26.7	12.00	12.00	0.00
7,800.0	43.12	90.11	7,662.9	1,022.6	-142.2	85.4	12.00	12.00	0.00
7,900.0	55.12	90.11	7,728.2	1,022.4	-66.8	159.0	12.00	12.00	0.00
8,000.0	67.12	90.11	7,776.4	1,022.2	20.6	244.3	12.00	12.00	0.00
8,100.0	79.12	90.11	7,805.4	1,022.0	116.2	337.4	12.00	12.00	0.00
8,105.7	79.81	90.11	7,806.4	1,022.0	121.8	342.9	12.00	12.00	0.00
Top CDLL Target									
8,163.0	86.69	90.11	7,813.2	1,021.9	178.7	398.4	12.00	12.00	0.00
Landing Point									

Planning Report

Database:	Rocky Mountain R5000 Database	Local Co-ordinate Reference:	Well STATE OF COLORADO 1S-66-36 3340 CDH
Company:	BILL BARRETT CORP	TVD Reference:	WELL @ 5245.0usft (Original Well Elev)
Project:	Adams County, CO	MD Reference:	WELL @ 5245.0usft (Original Well Elev)
Site:	State of Colorado 36-1S-66W South Pad	North Reference:	True
Well:	STATE OF COLORADO 1S-66-36 3340 CDH	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Design #1		

Planned Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
8,192.9	90.27	90.11	7,814.0	1,021.9	208.5	427.5	11.98	11.98	0.00
7" Csg 2,063' FSL - 500' FWL - 7"									
8,200.0	90.27	90.11	7,813.9	1,021.9	215.6	434.4	0.00	0.00	0.00
8,300.0	90.27	90.11	7,813.5	1,021.7	315.6	531.9	0.00	0.00	0.00
8,400.0	90.27	90.11	7,813.0	1,021.5	415.6	629.5	0.00	0.00	0.00
8,500.0	90.27	90.11	7,812.5	1,021.3	515.6	727.0	0.00	0.00	0.00
8,600.0	90.27	90.11	7,812.1	1,021.1	615.6	824.5	0.00	0.00	0.00
8,700.0	90.27	90.11	7,811.6	1,020.9	715.6	922.0	0.00	0.00	0.00
8,800.0	90.27	90.11	7,811.1	1,020.7	815.6	1,019.6	0.00	0.00	0.00
8,900.0	90.27	90.11	7,810.7	1,020.5	915.6	1,117.1	0.00	0.00	0.00
9,000.0	90.27	90.11	7,810.2	1,020.3	1,015.6	1,214.6	0.00	0.00	0.00
9,100.0	90.27	90.11	7,809.7	1,020.1	1,115.6	1,312.1	0.00	0.00	0.00
9,200.0	90.27	90.11	7,809.3	1,019.9	1,215.6	1,409.7	0.00	0.00	0.00
9,300.0	90.27	90.11	7,808.8	1,019.7	1,315.6	1,507.2	0.00	0.00	0.00
9,400.0	90.27	90.11	7,808.4	1,019.5	1,415.6	1,604.7	0.00	0.00	0.00
9,500.0	90.27	90.11	7,807.9	1,019.3	1,515.6	1,702.2	0.00	0.00	0.00
9,600.0	90.27	90.11	7,807.4	1,019.1	1,615.6	1,799.7	0.00	0.00	0.00
9,700.0	90.27	90.11	7,807.0	1,019.0	1,715.6	1,897.3	0.00	0.00	0.00
9,800.0	90.27	90.11	7,806.5	1,018.8	1,815.6	1,994.8	0.00	0.00	0.00
9,900.0	90.27	90.11	7,806.0	1,018.6	1,915.6	2,092.3	0.00	0.00	0.00
10,000.0	90.27	90.11	7,805.6	1,018.4	2,015.6	2,189.8	0.00	0.00	0.00
10,100.0	90.27	90.11	7,805.1	1,018.2	2,115.6	2,287.4	0.00	0.00	0.00
10,200.0	90.27	90.11	7,804.6	1,018.0	2,215.6	2,384.9	0.00	0.00	0.00
10,300.0	90.27	90.11	7,804.2	1,017.8	2,315.6	2,482.4	0.00	0.00	0.00
10,400.0	90.27	90.11	7,803.7	1,017.6	2,415.6	2,579.9	0.00	0.00	0.00
10,500.0	90.27	90.11	7,803.2	1,017.4	2,515.6	2,677.5	0.00	0.00	0.00
10,600.0	90.27	90.11	7,802.8	1,017.2	2,615.6	2,775.0	0.00	0.00	0.00
10,700.0	90.27	90.11	7,802.3	1,017.0	2,715.6	2,872.5	0.00	0.00	0.00
10,800.0	90.27	90.11	7,801.9	1,016.8	2,815.6	2,970.0	0.00	0.00	0.00
10,900.0	90.27	90.11	7,801.4	1,016.6	2,915.6	3,067.5	0.00	0.00	0.00
11,000.0	90.27	90.11	7,800.9	1,016.4	3,015.6	3,165.1	0.00	0.00	0.00
11,100.0	90.27	90.11	7,800.5	1,016.2	3,115.6	3,262.6	0.00	0.00	0.00
11,200.0	90.27	90.11	7,800.0	1,016.0	3,215.6	3,360.1	0.00	0.00	0.00
11,300.0	90.27	90.11	7,799.5	1,015.9	3,315.6	3,457.6	0.00	0.00	0.00
11,400.0	90.27	90.11	7,799.1	1,015.7	3,415.6	3,555.2	0.00	0.00	0.00
11,500.0	90.27	90.11	7,798.6	1,015.5	3,515.6	3,652.7	0.00	0.00	0.00
11,600.0	90.27	90.11	7,798.1	1,015.3	3,615.6	3,750.2	0.00	0.00	0.00
11,700.0	90.27	90.11	7,797.7	1,015.1	3,715.6	3,847.7	0.00	0.00	0.00
11,800.0	90.27	90.11	7,797.2	1,014.9	3,815.6	3,945.2	0.00	0.00	0.00
11,900.0	90.27	90.11	7,796.7	1,014.7	3,915.6	4,042.8	0.00	0.00	0.00
12,000.0	90.27	90.11	7,796.3	1,014.5	4,015.6	4,140.3	0.00	0.00	0.00
12,100.0	90.27	90.11	7,795.8	1,014.3	4,115.6	4,237.8	0.00	0.00	0.00
12,200.0	90.27	90.11	7,795.4	1,014.1	4,215.6	4,335.3	0.00	0.00	0.00
12,300.0	90.27	90.11	7,794.9	1,013.9	4,315.6	4,432.9	0.00	0.00	0.00
12,400.0	90.27	90.11	7,794.4	1,013.7	4,415.6	4,530.4	0.00	0.00	0.00
12,494.0	90.27	90.11	7,794.0	1,013.5	4,509.6	4,622.1	0.00	0.00	0.00
TD = 12,495' MD - 7,704' TVD - BHL 2,063' FSL - 500' FEL									
12,494.5	90.27	90.11	7,794.0	1,013.5	4,510.1	4,622.6	0.00	0.00	0.00

Planning Report

Database:	Rocky Mountain R5000 Database	Local Co-ordinate Reference:	Well STATE OF COLORADO 1S-66-36 3340 CDH
Company:	BILL BARRETT CORP	TVD Reference:	WELL @ 5245.0usft (Original Well Elev)
Project:	Adams County, CO	MD Reference:	WELL @ 5245.0usft (Original Well Elev)
Site:	State of Colorado 36-1S-66W South Pad	North Reference:	True
Well:	STATE OF COLORADO 1S-66-36 3340 CDH	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Design #1		

Design Targets									
Target Name - hit/miss target - Shape	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude
SOC 1S-66-36 3340 CC - plan hits target center - Point	0.00	0.00	7,794.0	1,013.5	4,510.1	1,214,671.40	3,219,789.26	39° 55' 11.953 N	104° 42' 58.960 W
SOC 1S-66-36 3340 CC - plan misses target center by 0.1usft at 8192.8usft MD (7814.0 TVD, 1021.9 N, 208.5 E) - Point	0.00	0.00	7,814.0	1,021.9	208.5	1,214,642.60	3,215,487.70	39° 55' 12.040 N	104° 43' 54.172 W

Casing Points				
Measured Depth (usft)	Vertical Depth (usft)	Name	Casing Diameter (")	Hole Diameter (")
8,192.9	7,814.0	7"	7	8-3/4

Formations					
Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)
845.0	845.0	Base Fox Hills		-0.27	90.11
5,071.5	4,995.9	Shannon		-0.27	90.11
7,398.4	7,294.3	Sharon Springs		-0.27	90.11
7,486.5	7,382.3	Niobrara		-0.27	90.11
8,105.7	7,806.4	Top CDLL Target		-0.27	90.11
8,163.0	7,813.2	Landing Point		-0.27	90.11

Plan Annotations				
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
2.0	2.0	0.0	0.0	SHL 1,041' FSL - 295' FWL
1,000.0	1,000.0	0.0	0.0	Start Nudge @ 1,000' MD 1.5/100'
1,789.9	1,784.3	78.7	-20.9	EOB Hold 11.85 Degrees
6,150.8	6,052.3	944.1	-250.3	Start Drop -1.5/100'
6,940.6	6,836.5	1,022.8	-271.2	End Drop
7,440.6	7,336.5	1,022.8	-271.2	KOP @ 7,441' MD 12/100'
8,192.9	7,814.0	1,021.9	208.5	7" Csg 2,063' FSL - 500' FWL
12,494.0	7,794.0	1,013.5	4,509.6	TD = 12,495' MD - 7,704' TVD
12,494.0	7,794.0	1,013.5	4,509.6	BHL 2,063' FSL - 500' FEL