

BILL BARRETT CORP

GARFIELD COUNTY, COLORADO NAD 1983

Miller Pad #9

Miller 13C-6-791

Wellbore #1

Plan: Design #1

Standard Planning Report

16 May, 2011

Bill Barrett Corp

Planning Report

Database:	Compass	Local Co-ordinate Reference:	Well Miller 13C-6-791
Company:	BILL BARRETT CORP	TVD Reference:	WELL @ 6091.00ft (Original Well Elev)
Project:	GARFIELD COUNTY, COLORADO NAD 1983	MD Reference:	WELL @ 6091.00ft (Original Well Elev)
Site:	Miller Pad #9	North Reference:	True
Well:	Miller 13C-6-791	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Design #1		

Project	GARFIELD COUNTY, COLORADO NAD 1983		
Map System:	US State Plane 1983	System Datum:	Mean Sea Level
Geo Datum:	North American Datum 1983		
Map Zone:	Colorado Central Zone		

Site	Miller Pad #9		
Site Position:		Northing:	1,604,898.699 ft
From:	Lat/Long	Easting:	2,405,969.198 ft
Position Uncertainty:	0.00 ft	Slot Radius:	"
		Latitude:	39° 28' 31.184 N
		Longitude:	107° 36' 16.4376 W
		Grid Convergence:	-1.33 °

Well	Miller 13C-6-791		
Well Position	+N/-S	-17.13 ft	Northing:
	+E/-W	8.19 ft	Easting:
Position Uncertainty		0.00 ft	Wellhead Elevation:
			ft
			Latitude:
			39° 28' 31.015 N
			Longitude:
			107° 36' 16.3332 W
			Ground Level:
			0.00 ft

Wellbore	Wellbore #1				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF200510	12/31/2009	10.34	65.85	52,464

Design	Design #1			
Audit Notes:				
Version:	Phase:	PROTOTYPE	Tie On Depth:	0.00
Vertical Section:	Depth From (TVD) (ft)	+N/-S (ft)	+E/-W (ft)	Direction (°)
	0.00	0.00	0.00	126.74

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	
700.00	0.00	0.00	700.00	0.00	0.00	0.00	0.00	0.00	0.00	
910.00	5.25	126.74	909.70	-5.75	7.70	2.50	2.50	0.00	126.74	
4,429.55	5.25	126.74	4,414.50	-198.38	265.78	0.00	0.00	0.00	0.00	
4,779.55	0.00	0.00	4,764.00	-207.97	278.62	1.50	-1.50	0.00	180.00	
6,779.55	0.00	0.00	6,764.00	-207.97	278.62	0.00	0.00	0.00	0.00	Miller 13C-6-791 (T

Bill Barrett Corp

Planning Report

Database:	Compass	Local Co-ordinate Reference:	Well Miller 13C-6-791
Company:	BILL BARRETT CORP	TVD Reference:	WELL @ 6091.00ft (Original Well Elev)
Project:	GARFIELD COUNTY, COLORADO NAD 1983	MD Reference:	WELL @ 6091.00ft (Original Well Elev)
Site:	Miller Pad #9	North Reference:	True
Well:	Miller 13C-6-791	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Design #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	2.50	126.74	799.97	-1.30	1.75	2.18	2.50	2.50	0.00	
900.00	5.00	126.74	899.75	-5.22	6.99	8.72	2.50	2.50	0.00	
910.00	5.25	126.74	909.70	-5.75	7.70	9.61	2.50	2.50	0.00	
1,000.00	5.25	126.74	999.33	-10.68	14.30	17.85	0.00	0.00	0.00	
1,100.00	5.25	126.74	1,098.91	-16.15	21.64	27.00	0.00	0.00	0.00	
1,200.00	5.25	126.74	1,198.49	-21.62	28.97	36.15	0.00	0.00	0.00	
1,300.00	5.25	126.74	1,298.07	-27.10	36.30	45.30	0.00	0.00	0.00	
1,400.00	5.25	126.74	1,397.65	-32.57	43.63	54.45	0.00	0.00	0.00	
1,500.00	5.25	126.74	1,497.23	-38.04	50.97	63.60	0.00	0.00	0.00	
1,600.00	5.25	126.74	1,596.81	-43.52	58.30	72.75	0.00	0.00	0.00	
1,700.00	5.25	126.74	1,696.39	-48.99	65.63	81.90	0.00	0.00	0.00	
1,800.00	5.25	126.74	1,795.97	-54.46	72.96	91.05	0.00	0.00	0.00	
1,900.00	5.25	126.74	1,895.55	-59.94	80.30	100.20	0.00	0.00	0.00	
2,000.00	5.25	126.74	1,995.13	-65.41	87.63	109.35	0.00	0.00	0.00	
2,100.00	5.25	126.74	2,094.71	-70.88	94.96	118.50	0.00	0.00	0.00	
2,200.00	5.25	126.74	2,194.29	-76.36	102.29	127.65	0.00	0.00	0.00	
2,300.00	5.25	126.74	2,293.88	-81.83	109.63	136.80	0.00	0.00	0.00	
2,400.00	5.25	126.74	2,393.46	-87.30	116.96	145.95	0.00	0.00	0.00	
2,500.00	5.25	126.74	2,493.04	-92.78	124.29	155.10	0.00	0.00	0.00	
2,600.00	5.25	126.74	2,592.62	-98.25	131.62	164.25	0.00	0.00	0.00	
2,700.00	5.25	126.74	2,692.20	-103.72	138.96	173.40	0.00	0.00	0.00	
2,800.00	5.25	126.74	2,791.78	-109.20	146.29	182.55	0.00	0.00	0.00	
2,900.00	5.25	126.74	2,891.36	-114.67	153.62	191.70	0.00	0.00	0.00	
3,000.00	5.25	126.74	2,990.94	-120.14	160.95	200.85	0.00	0.00	0.00	
3,100.00	5.25	126.74	3,090.52	-125.62	168.29	210.00	0.00	0.00	0.00	
3,200.00	5.25	126.74	3,190.10	-131.09	175.62	219.15	0.00	0.00	0.00	
3,300.00	5.25	126.74	3,289.68	-136.56	182.95	228.30	0.00	0.00	0.00	
3,400.00	5.25	126.74	3,389.26	-142.03	190.28	237.45	0.00	0.00	0.00	
3,500.00	5.25	126.74	3,488.84	-147.51	197.62	246.60	0.00	0.00	0.00	
3,600.00	5.25	126.74	3,588.42	-152.98	204.95	255.75	0.00	0.00	0.00	
3,700.00	5.25	126.74	3,688.00	-158.45	212.28	264.90	0.00	0.00	0.00	
3,800.00	5.25	126.74	3,787.58	-163.93	219.61	274.05	0.00	0.00	0.00	
3,900.00	5.25	126.74	3,887.16	-169.40	226.95	283.20	0.00	0.00	0.00	
4,000.00	5.25	126.74	3,986.74	-174.87	234.28	292.35	0.00	0.00	0.00	
4,100.00	5.25	126.74	4,086.32	-180.35	241.61	301.50	0.00	0.00	0.00	
4,200.00	5.25	126.74	4,185.91	-185.82	248.94	310.65	0.00	0.00	0.00	
4,300.00	5.25	126.74	4,285.49	-191.29	256.28	319.80	0.00	0.00	0.00	
4,400.00	5.25	126.74	4,385.07	-196.77	263.61	328.95	0.00	0.00	0.00	
4,429.55	5.25	126.74	4,414.50	-198.38	265.78	331.65	0.00	0.00	0.00	
4,500.00	4.19	126.74	4,484.70	-201.85	270.42	337.45	1.50	-1.50	0.00	
4,600.00	2.69	126.74	4,584.52	-205.45	275.24	343.46	1.50	-1.50	0.00	
4,700.00	1.19	126.74	4,684.46	-207.47	277.95	346.85	1.50	-1.50	0.00	
4,779.55	0.00	0.00	4,764.00	-207.97	278.62	347.68	1.50	-1.50	0.00	
4,800.00	0.00	0.00	4,784.45	-207.97	278.62	347.68	0.00	0.00	0.00	
4,900.00	0.00	0.00	4,884.45	-207.97	278.62	347.68	0.00	0.00	0.00	

Bill Barrett Corp

Planning Report


Database:	Compass	Local Co-ordinate Reference:	Well Miller 13C-6-791
Company:	BILL BARRETT CORP	TVD Reference:	WELL @ 6091.00ft (Original Well Elev)
Project:	GARFIELD COUNTY, COLORADO NAD 1983	MD Reference:	WELL @ 6091.00ft (Original Well Elev)
Site:	Miller Pad #9	North Reference:	True
Well:	Miller 13C-6-791	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Design #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)	
5,000.00	0.00	0.00	4,984.45	-207.97	278.62	347.68	0.00	0.00	0.00	
5,100.00	0.00	0.00	5,084.45	-207.97	278.62	347.68	0.00	0.00	0.00	
5,200.00	0.00	0.00	5,184.45	-207.97	278.62	347.68	0.00	0.00	0.00	
5,300.00	0.00	0.00	5,284.45	-207.97	278.62	347.68	0.00	0.00	0.00	
5,400.00	0.00	0.00	5,384.45	-207.97	278.62	347.68	0.00	0.00	0.00	
5,500.00	0.00	0.00	5,484.45	-207.97	278.62	347.68	0.00	0.00	0.00	
5,600.00	0.00	0.00	5,584.45	-207.97	278.62	347.68	0.00	0.00	0.00	
5,700.00	0.00	0.00	5,684.45	-207.97	278.62	347.68	0.00	0.00	0.00	
5,800.00	0.00	0.00	5,784.45	-207.97	278.62	347.68	0.00	0.00	0.00	
5,900.00	0.00	0.00	5,884.45	-207.97	278.62	347.68	0.00	0.00	0.00	
6,000.00	0.00	0.00	5,984.45	-207.97	278.62	347.68	0.00	0.00	0.00	
6,100.00	0.00	0.00	6,084.45	-207.97	278.62	347.68	0.00	0.00	0.00	
6,200.00	0.00	0.00	6,184.45	-207.97	278.62	347.68	0.00	0.00	0.00	
6,300.00	0.00	0.00	6,284.45	-207.97	278.62	347.68	0.00	0.00	0.00	
6,400.00	0.00	0.00	6,384.45	-207.97	278.62	347.68	0.00	0.00	0.00	
6,500.00	0.00	0.00	6,484.45	-207.97	278.62	347.68	0.00	0.00	0.00	
6,600.00	0.00	0.00	6,584.45	-207.97	278.62	347.68	0.00	0.00	0.00	
6,700.00	0.00	0.00	6,684.45	-207.97	278.62	347.68	0.00	0.00	0.00	
6,779.55	0.00	0.00	6,764.00	-207.97	278.62	347.68	0.00	0.00	0.00	

Casing Points					
Measured Depth (ft)	Vertical Depth (ft)	Name	Casing Diameter (")	Hole Diameter (")	
700.00	700.00	9 5/8"	9-5/8	12-1/4	

Formations						
Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)	
2,862.48	2,854.00	Mesaverde		0.00		
3,625.69	3,614.00	Price Coal		0.00		
4,228.21	4,214.00	Top Gas		0.00		
6,479.55	6,464.00	Rollins		0.00		
6,779.55	6,764.00	TD		0.00		

WELL DETAILS: Miller 13C-6-791							
Ground Level: 0.00							
+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Slot	
0.00	0.00	1604881.386	2405976.985	39° 28' 31.015 N	107° 36' 16.3332 W		

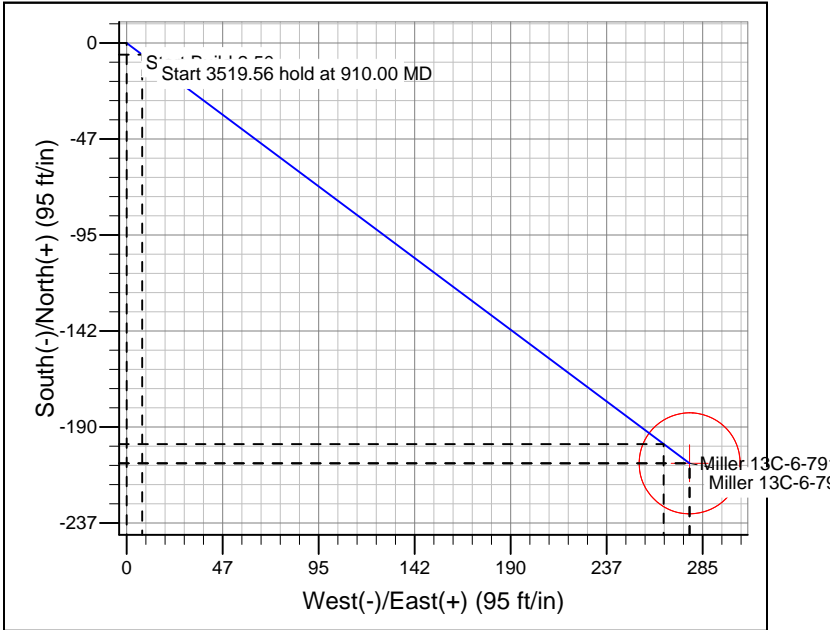
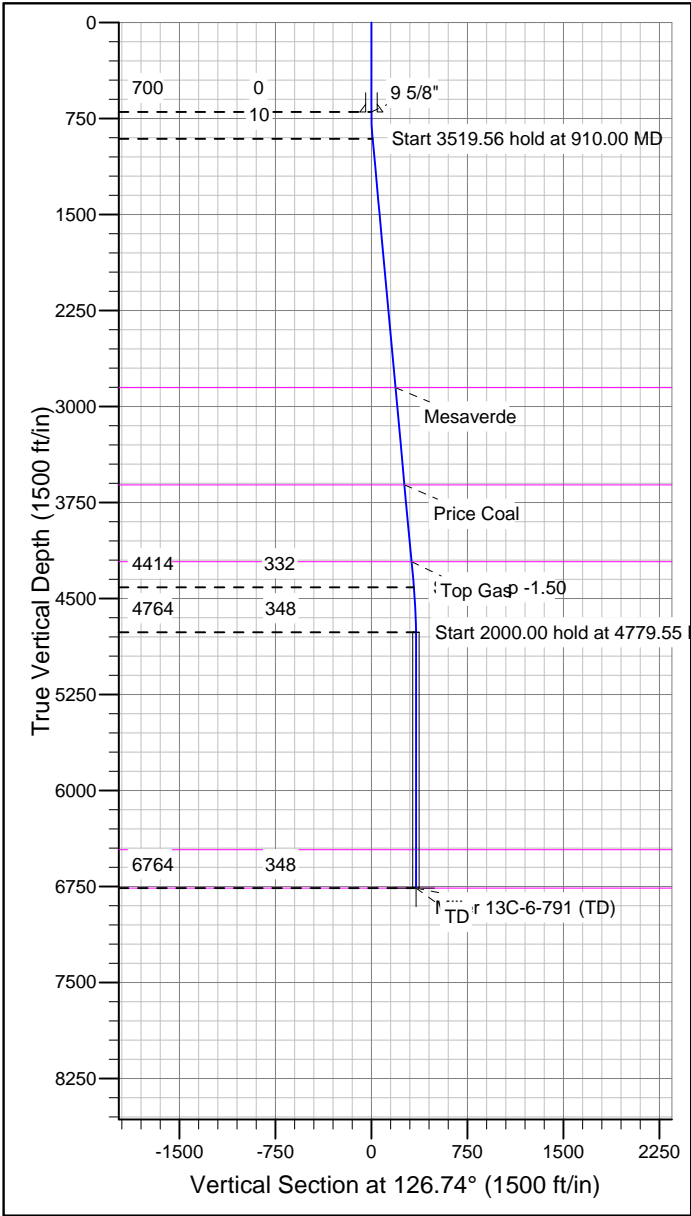


Azimuths to True North
Magnetic North 10.34°

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	DLeg	TFace	VSec	Target
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2	90.00	0.00	0.00	700.00	0.00	0.00	0.00	0.00	0.00	
3	910.00	5.25	126.74	909.70	-5.75	7.70	2.50	126.74	9.61	
4	3519.55	5.25	126.74	4414.50	-198.38	265.78	0.00	0.00	331.65	
5	4228.21	0.00	0.00	4764.00	-207.97	278.62	1.50	180.00	347.68	
6	6779.55	0.00	0.00	6764.00	-207.97	278.62	0.00	0.00	347.68	Miller 13C-6-791 (TD)

Strength: 52463.85
Dip Angle: 65.85°
Date: 12/31/2019
Model: IGRF2015

WELLBORE TARGET DETAILS				
Name	TVD	+N/-S	+E/-W	Shape
Miller 13C-6-791 (TD)	6764.00	-207.97	278.62	Circle (Radius: 25.00)



CASING DETAILS			
TVD	MD	Name	Size
700.00	700.00	9 5/8"	9-5/8

FORMATION TOP DETAILS		
TVDPath	MDPath	Formation
2854.00	2862.48	Mesaverde
3614.00	3625.69	Price Coal
4214.00	4228.21	Top Gas
6464.00	6479.55	Rollins
6764.00	6779.55	TD

REFERENCE INFORMATION	
Co-ordinate (N/E) Reference:	Well Miller 13C-6-791, True North
Vertical (TVD) Reference:	WELL @ 6091.00ft (Original Well Elev)
Section (VS) Reference:	Slot - (0.00N, 0.00E)
Measured Depth Reference:	WELL @ 6091.00ft (Original Well Elev)
Calculation Method:	Minimum Curvature