



Bill Barrett Corp.

Garfield County, Colorado

MDP 23 Pad

Federal 31C-19-691

Wellbore #1

Plan: plan1 10jun10 rbw

Standard Planning Report

11 June, 2010

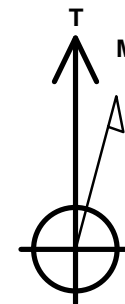
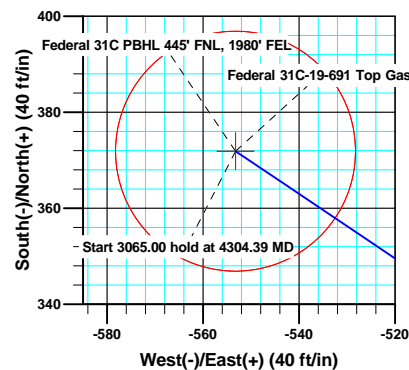
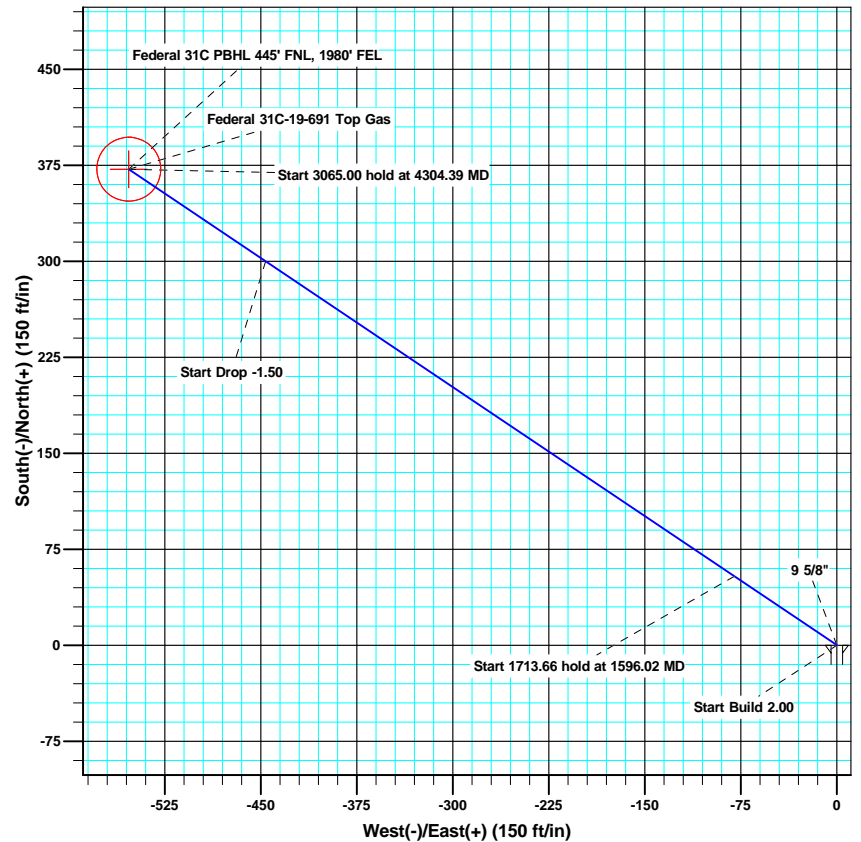
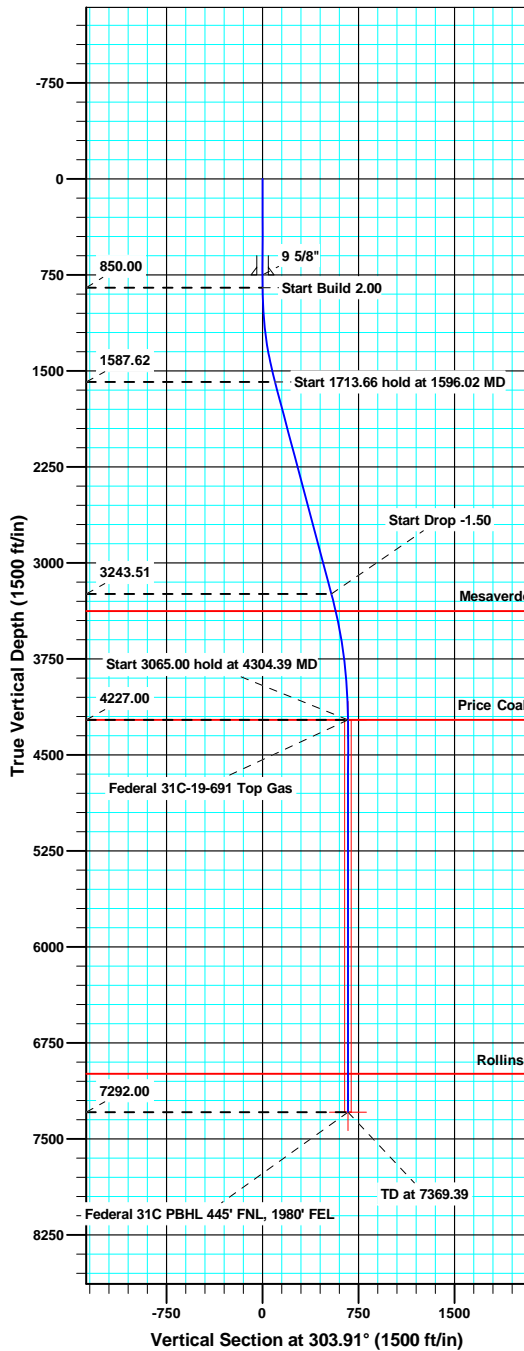


WELL DETAILS: Federal 31C-19-691

North American Datum 1983 US State Plane 1983 Colorado Central Zone
 +N/-S +E/-W Northing Easting Latitude Longitude
 0.00 0.00 1620361.93 2409656.74 39.518005 -107.592768

Ground Level: 5904.00

MDP 23 Pad



Azimuths to True North
 Magnetic North: 10.28°

Magnetic Field
 Strength: 52446.7snT
 Dip Angle: 65.87°
 Date: 6/10/2010
 Model: IGRF200510

ANNOTATIONS

TVD	MD	Inc	Azi	+N/-S	+E/-W	Vsect	Departure	Annotation
850.00	850.00	0.00	0.00	0.00	0.00	0.00	0.00	Start Build 2.00
1587.62	1596.02	14.92	303.91	53.89	-80.16	96.59	96.59	Start 1713.66 hold at 1596.02 MD
3243.51	3309.69	14.92	303.91	300.06	-446.34	537.82	537.82	Start Drop -1.50
4227.00	4304.39	0.00	0.00	371.91	-553.22	666.60	666.60	Start 3065.00 hold at 4304.39 MD
7292.00	7369.39	0.00	0.00	371.91	-553.22	666.60	666.60	TD at 7369.39

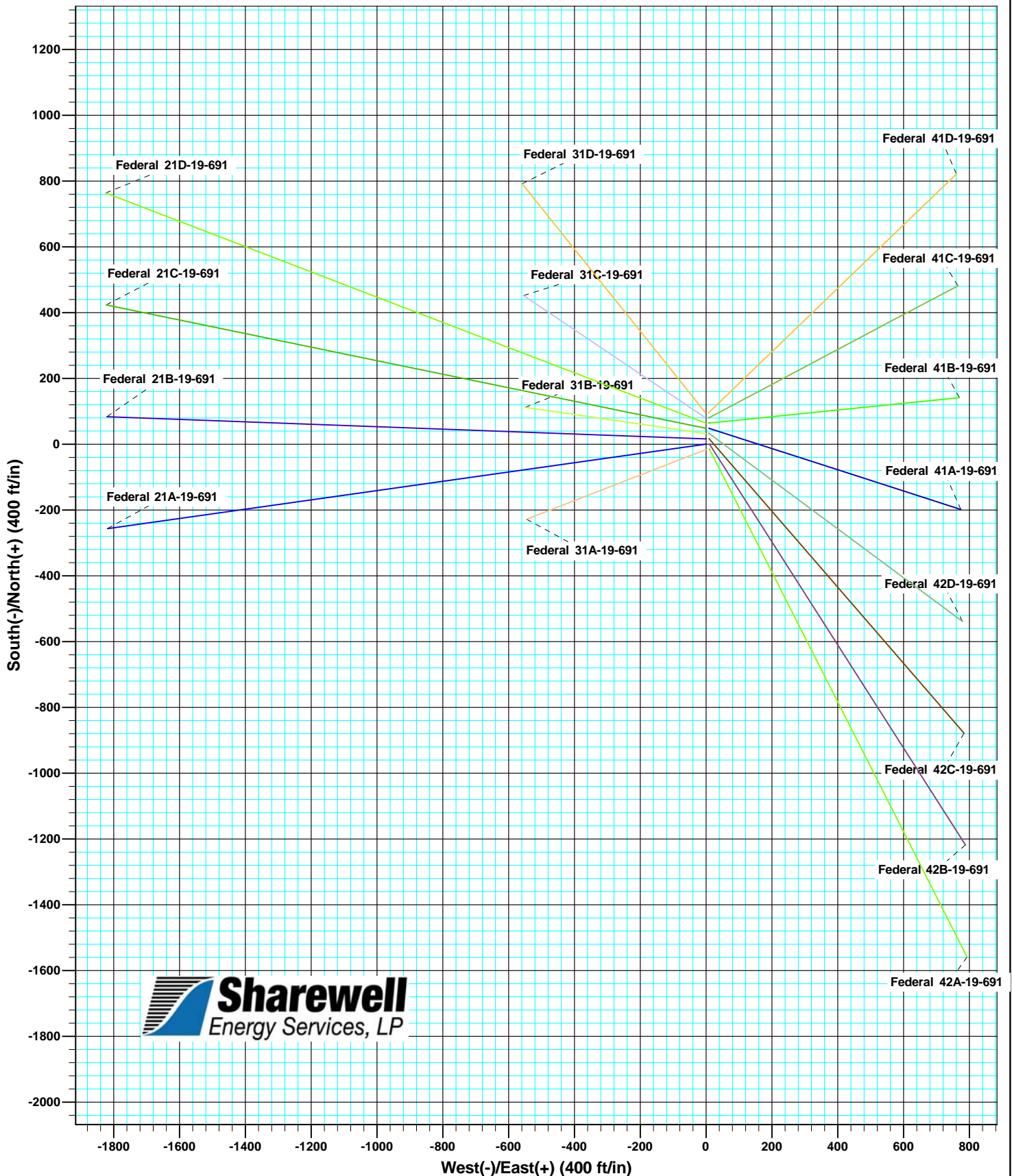




MDP 23 Pad

North American Datum 1983		US State Plane 1983		Colorado Central Zone	
+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
0.00	0.00	1620282.13	2409656.60	39.517786	-107.592762

Ground Level: 5904.00



Database:	SWFS01 Compass DB	Local Co-ordinate Reference:	Well Federal 31C-19-691
Company:	Bill Barrett Corp.	TVD Reference:	KB @ 5927.00ft
Project:	Garfield County, Colorado	MD Reference:	KB @ 5927.00ft
Site:	MDP 23 Pad	North Reference:	True
Well:	Federal 31C-19-691	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	plan1 10jun10 rbw		

Project	Garfield County, Colorado		
Map System:	US State Plane 1983	System Datum:	Mean Sea Level
Geo Datum:	North American Datum 1983		
Map Zone:	Colorado Central Zone		

Site	MDP 23 Pad				
Site Position:		Northing:	1,620,378.10 usft	Latitude:	39.518050
From:	Lat/Long	Easting:	2,409,666.99 usft	Longitude:	-107.592733
Position Uncertainty:	0.00 ft	Slot Radius:	1.10 ft	Grid Convergence:	-1.32 °

Well	Federal 31C-19-691					
Well Position	+N/-S	-16.40 ft	Northing:	1,620,361.93 usft	Latitude:	39.518005
	+E/-W	-9.87 ft	Easting:	2,409,656.74 usft	Longitude:	-107.592768
Position Uncertainty		0.00 ft	Wellhead Elevation:		Ground Level:	5,904.00 ft

Wellbore	Wellbore #1				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF200510	6/10/2010	10.28	65.87	52,447

Design	plan1 10jun10 rbw			
Audit Notes:				
Version:	Phase:	PROTOTYPE	Tie On Depth:	0.00
Vertical Section:	Depth From (TVD)	+N/-S	+E/-W	Direction
	(ft)	(ft)	(ft)	(°)
	0.00	0.00	0.00	303.91

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	
850.00	0.00	0.00	850.00	0.00	0.00	0.00	0.00	0.00	0.00	
1,596.02	14.92	303.91	1,587.62	53.89	-80.16	2.00	2.00	0.00	303.91	
3,309.69	14.92	303.91	3,243.51	300.06	-446.34	0.00	0.00	0.00	0.00	
4,304.39	0.00	0.00	4,227.00	371.91	-553.22	1.50	-1.50	0.00	180.00	Federal 31C-19-691 1
7,369.39	0.00	0.00	7,292.00	371.91	-553.22	0.00	0.00	0.00	0.00	Federal 31C PBHL 44



Database:	SWFS01 Compass DB	Local Co-ordinate Reference:	Well Federal 31C-19-691
Company:	Bill Barrett Corp.	TVD Reference:	KB @ 5927.00ft
Project:	Garfield County, Colorado	MD Reference:	KB @ 5927.00ft
Site:	MDP 23 Pad	North Reference:	True
Well:	Federal 31C-19-691	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	plan1 10jun10 rbw		

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
750.00	0.00	0.00	750.00	0.00	0.00	0.00	0.00	0.00	0.00
9 5/8"									
800.00	0.00	0.00	800.00	0.00	0.00	0.00	0.00	0.00	0.00
850.00	0.00	0.00	850.00	0.00	0.00	0.00	0.00	0.00	0.00
Start Build 2.00									
900.00	1.00	303.91	900.00	0.24	-0.36	0.44	2.00	2.00	0.00
1,000.00	3.00	303.91	999.93	2.19	-3.26	3.93	2.00	2.00	0.00
1,100.00	5.00	303.91	1,099.68	6.08	-9.05	10.90	2.00	2.00	0.00
1,200.00	7.00	303.91	1,199.13	11.91	-17.72	21.35	2.00	2.00	0.00
1,300.00	9.00	303.91	1,298.15	19.68	-29.27	35.27	2.00	2.00	0.00
1,400.00	11.00	303.91	1,396.63	29.37	-43.68	52.63	2.00	2.00	0.00
1,500.00	13.00	303.91	1,494.44	40.96	-60.93	73.42	2.00	2.00	0.00
1,596.02	14.92	303.91	1,587.62	53.89	-80.16	96.59	2.00	2.00	0.00
Start 1713.66 hold at 1596.02 MD									
1,600.00	14.92	303.91	1,591.46	54.46	-81.01	97.61	0.00	0.00	0.00
1,700.00	14.92	303.91	1,688.09	68.82	-102.38	123.36	0.00	0.00	0.00
1,800.00	14.92	303.91	1,784.72	83.19	-123.74	149.11	0.00	0.00	0.00
1,900.00	14.92	303.91	1,881.35	97.55	-145.11	174.86	0.00	0.00	0.00
2,000.00	14.92	303.91	1,977.98	111.92	-166.48	200.60	0.00	0.00	0.00
2,100.00	14.92	303.91	2,074.60	126.28	-187.85	226.35	0.00	0.00	0.00
2,200.00	14.92	303.91	2,171.23	140.65	-209.22	252.10	0.00	0.00	0.00
2,300.00	14.92	303.91	2,267.86	155.01	-230.59	277.85	0.00	0.00	0.00
2,400.00	14.92	303.91	2,364.49	169.38	-251.95	303.60	0.00	0.00	0.00
2,500.00	14.92	303.91	2,461.12	183.74	-273.32	329.34	0.00	0.00	0.00
2,600.00	14.92	303.91	2,557.75	198.11	-294.69	355.09	0.00	0.00	0.00
2,700.00	14.92	303.91	2,654.38	212.47	-316.06	380.84	0.00	0.00	0.00
2,800.00	14.92	303.91	2,751.00	226.84	-337.43	406.59	0.00	0.00	0.00
2,900.00	14.92	303.91	2,847.63	241.20	-358.79	432.33	0.00	0.00	0.00
3,000.00	14.92	303.91	2,944.26	255.57	-380.16	458.08	0.00	0.00	0.00
3,100.00	14.92	303.91	3,040.89	269.93	-401.53	483.83	0.00	0.00	0.00
3,200.00	14.92	303.91	3,137.52	284.30	-422.90	509.58	0.00	0.00	0.00
3,300.00	14.92	303.91	3,234.15	298.66	-444.27	535.33	0.00	0.00	0.00
3,309.69	14.92	303.91	3,243.51	300.06	-446.34	537.82	0.00	0.00	0.00
Start Drop -1.50									
3,400.00	13.57	303.91	3,331.04	312.45	-464.78	560.04	1.50	-1.50	0.00
3,447.21	12.86	303.91	3,377.00	318.47	-473.73	570.83	1.50	-1.50	0.00
Mesaverde									
3,500.00	12.07	303.91	3,428.55	324.83	-483.18	582.22	1.50	-1.50	0.00
3,600.00	10.57	303.91	3,526.60	335.77	-499.47	601.84	1.50	-1.50	0.00
3,700.00	9.07	303.91	3,625.13	345.29	-513.62	618.89	1.50	-1.50	0.00
3,800.00	7.57	303.91	3,724.08	353.35	-525.62	633.35	1.50	-1.50	0.00
3,900.00	6.07	303.91	3,823.37	359.98	-535.47	645.22	1.50	-1.50	0.00
4,000.00	4.57	303.91	3,922.94	365.14	-543.16	654.48	1.50	-1.50	0.00
4,100.00	3.07	303.91	4,022.71	368.86	-548.68	661.14	1.50	-1.50	0.00
4,200.00	1.57	303.91	4,122.63	371.11	-552.03	665.18	1.50	-1.50	0.00
4,300.00	0.07	303.91	4,222.61	371.91	-553.21	666.60	1.50	-1.50	0.00



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Project:	Garfield County, Colorado	MD Reference:	KB @ 5927.00ft
Site:	MDP 23 Pad	North Reference:	True
Well:	Federal 31C-19-691	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	plan1 10jun10 rbw		

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)	
4,304.39	0.00	0.00	4,227.00	371.91	-553.22	666.60	1.50	-1.50	0.00	
Start 3065.00 hold at 4304.39 MD - Price Coal - Federal 31C-19-691 Top Gas										
4,400.00	0.00	0.00	4,322.61	371.91	-553.22	666.60	0.00	0.00	0.00	
4,500.00	0.00	0.00	4,422.61	371.91	-553.22	666.60	0.00	0.00	0.00	
4,600.00	0.00	0.00	4,522.61	371.91	-553.22	666.60	0.00	0.00	0.00	
4,700.00	0.00	0.00	4,622.61	371.91	-553.22	666.60	0.00	0.00	0.00	
4,800.00	0.00	0.00	4,722.61	371.91	-553.22	666.60	0.00	0.00	0.00	
4,900.00	0.00	0.00	4,822.61	371.91	-553.22	666.60	0.00	0.00	0.00	
5,000.00	0.00	0.00	4,922.61	371.91	-553.22	666.60	0.00	0.00	0.00	
5,100.00	0.00	0.00	5,022.61	371.91	-553.22	666.60	0.00	0.00	0.00	
5,200.00	0.00	0.00	5,122.61	371.91	-553.22	666.60	0.00	0.00	0.00	
5,300.00	0.00	0.00	5,222.61	371.91	-553.22	666.60	0.00	0.00	0.00	
5,400.00	0.00	0.00	5,322.61	371.91	-553.22	666.60	0.00	0.00	0.00	
5,500.00	0.00	0.00	5,422.61	371.91	-553.22	666.60	0.00	0.00	0.00	
5,600.00	0.00	0.00	5,522.61	371.91	-553.22	666.60	0.00	0.00	0.00	
5,700.00	0.00	0.00	5,622.61	371.91	-553.22	666.60	0.00	0.00	0.00	
5,800.00	0.00	0.00	5,722.61	371.91	-553.22	666.60	0.00	0.00	0.00	
5,900.00	0.00	0.00	5,822.61	371.91	-553.22	666.60	0.00	0.00	0.00	
6,000.00	0.00	0.00	5,922.61	371.91	-553.22	666.60	0.00	0.00	0.00	
6,100.00	0.00	0.00	6,022.61	371.91	-553.22	666.60	0.00	0.00	0.00	
6,200.00	0.00	0.00	6,122.61	371.91	-553.22	666.60	0.00	0.00	0.00	
6,300.00	0.00	0.00	6,222.61	371.91	-553.22	666.60	0.00	0.00	0.00	
6,400.00	0.00	0.00	6,322.61	371.91	-553.22	666.60	0.00	0.00	0.00	
6,500.00	0.00	0.00	6,422.61	371.91	-553.22	666.60	0.00	0.00	0.00	
6,600.00	0.00	0.00	6,522.61	371.91	-553.22	666.60	0.00	0.00	0.00	
6,700.00	0.00	0.00	6,622.61	371.91	-553.22	666.60	0.00	0.00	0.00	
6,800.00	0.00	0.00	6,722.61	371.91	-553.22	666.60	0.00	0.00	0.00	
6,900.00	0.00	0.00	6,822.61	371.91	-553.22	666.60	0.00	0.00	0.00	
7,000.00	0.00	0.00	6,922.61	371.91	-553.22	666.60	0.00	0.00	0.00	
7,069.39	0.00	0.00	6,992.00	371.91	-553.22	666.60	0.00	0.00	0.00	
Rollins										
7,100.00	0.00	0.00	7,022.61	371.91	-553.22	666.60	0.00	0.00	0.00	
7,200.00	0.00	0.00	7,122.61	371.91	-553.22	666.60	0.00	0.00	0.00	
7,300.00	0.00	0.00	7,222.61	371.91	-553.22	666.60	0.00	0.00	0.00	
7,369.39	0.00	0.00	7,292.00	371.91	-553.22	666.60	0.00	0.00	0.00	
TD at 7369.39 - Federal 31C PBHL 445' FNL, 1980' FEL										

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										
Federal 31C-19-691 Top	0.00	0.00	4,227.00	371.91	-553.22	1,620,746.48	2,409,112.24	39.519026	-107.594729	
- plan hits target center										
- Circle (radius 25.00)										
Federal 31C PBHL 445'	0.00	0.00	7,292.00	371.91	-553.22	1,620,746.48	2,409,112.24	39.519026	-107.594729	
- plan hits target center										
- Point										

Database:	SWFS01 Compass DB	Local Co-ordinate Reference:	Well Federal 31C-19-691
Company:	Bill Barrett Corp.	TVD Reference:	KB @ 5927.00ft
Project:	Garfield County, Colorado	MD Reference:	KB @ 5927.00ft
Site:	MDP 23 Pad	North Reference:	True
Well:	Federal 31C-19-691	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	plan1 10jun10 rbw		

Casing Points					
Measured Depth (ft)	Vertical Depth (ft)	Name	Casing Diameter (ft)	Hole Diameter (ft)	
750.00	750.00	9 5/8"	0.80	1.02	

Formations					
Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)
3,447.21	3,377.00	Mesaverde		0.00	
4,304.39	4,227.00	Price Coal		0.00	
7,069.39	6,992.00	Rollins		0.00	

Plan Annotations					
Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates			
		+N/-S (ft)	+E/-W (ft)	Comment	
850.00	850.00	0.00	0.00	Start Build 2.00	
1,596.02	1,587.62	53.89	-80.16	Start 1713.66 hold at 1596.02 MD	
3,309.69	3,243.51	300.06	-446.34	Start Drop -1.50	
4,304.39	4,227.00	371.91	-553.22	Start 3065.00 hold at 4304.39 MD	
7,369.39	7,292.00	371.91	-553.22	TD at 7369.39	