



Bill Barrett Corp.

Garfield County, Colorado

MDP 23 Pad

Federal 31D-19-691

Wellbore #1

Plan: plan1 10jun10 rbw

Standard Planning Report

11 June, 2010

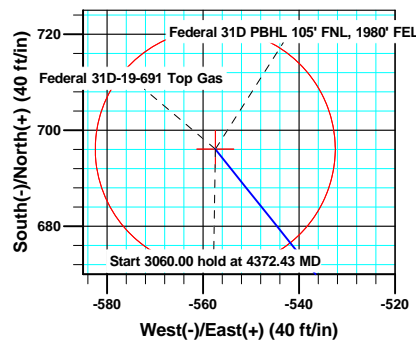
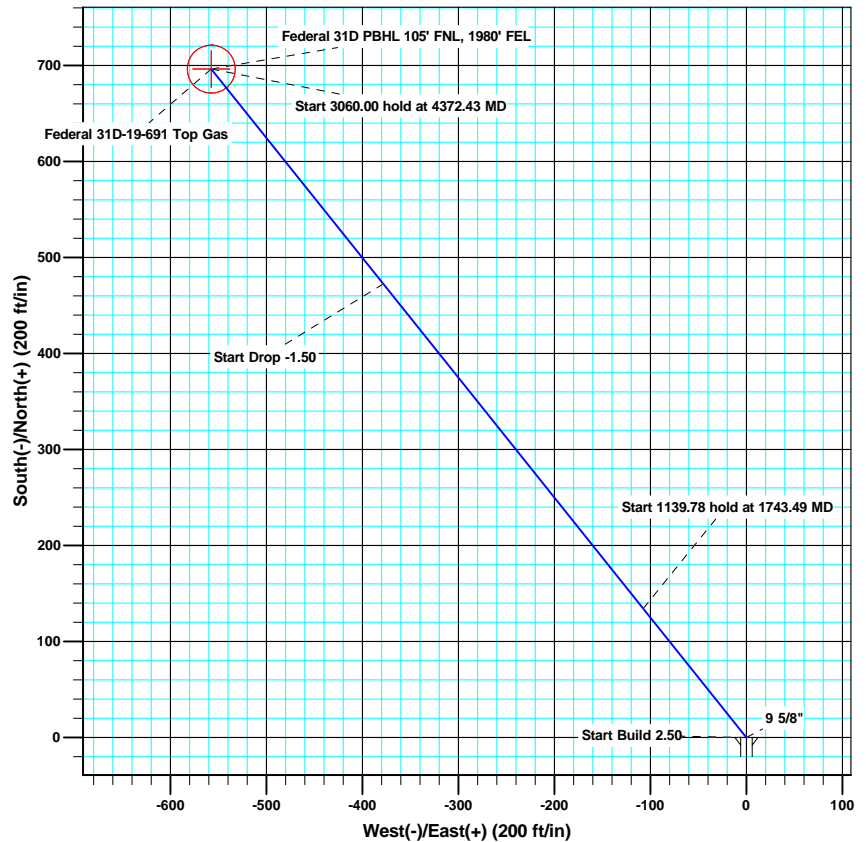
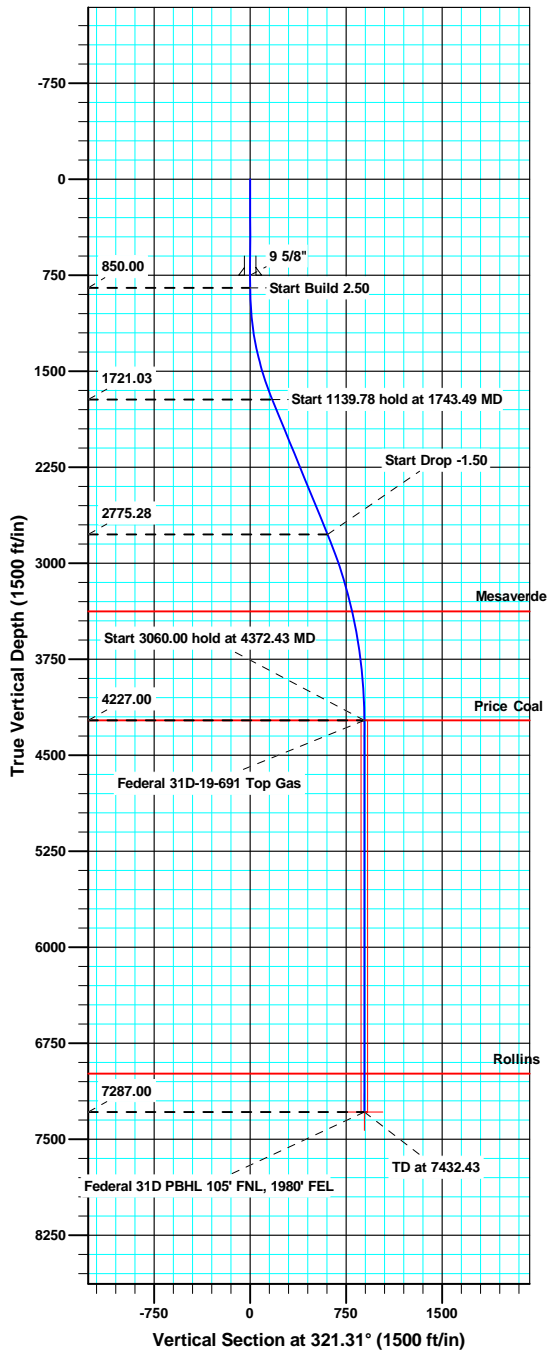


WELL DETAILS: Federal 31D-19-691

North American Datum 1983 US State Plane 1983 Colorado Central Zone
 +N/-S +E/-W Northing Easting Latitude Longitude
 0.00 0.00 1620377.96 2409656.83 39.518049 -107.592769

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 2.50
1721.03	1743.49	22.34	321.31	134.24	-107.50	171.97	171.97	Start 1139.78 hold at 1743.49 MD
2775.28	2883.27	22.34	321.31	472.36	-378.28	605.16	605.16	Start Drop -1.50
4227.00	4372.43	0.00	0.00	696.08	-557.44	891.78	891.78	Start 3060.00 hold at 4372.43 MD
7287.00	7432.43	0.00	0.00	696.08	-557.44	891.78	891.78	TD at 7432.43



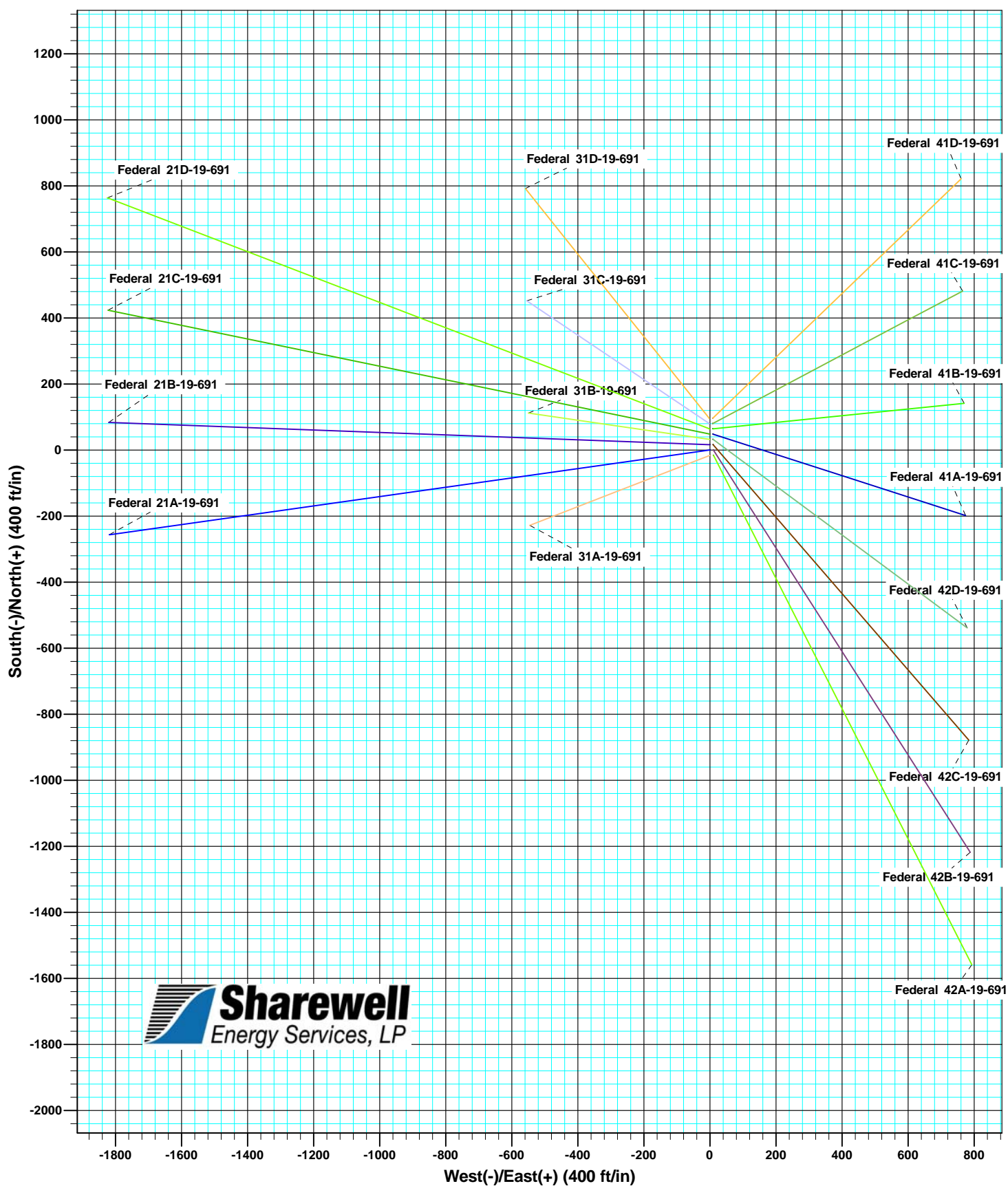


MDP 23 Pad

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 31D-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 31D-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 31D-19-691					
Well Position	+N/-S	-0.37 ft	Northing:	1,620,377.96 usft	Latitude:	39.518049
	+E/-W	-10.16 ft	Easting:	2,409,656.83 usft	Longitude:	-107.592769
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 (ft)	+E/-W (ft)	Direction (°)
	0.00	0.00	0.00	321.31

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	
1,743.49	22.34	321.31	1,721.03	134.24	-107.50	2.50	2.50	0.00	321.31	
2,883.27	22.34	321.31	2,775.28	472.36	-378.28	0.00	0.00	0.00	0.00	
4,372.43	0.00	0.00	4,227.00	696.08	-557.44	1.50	-1.50	0.00	180.00	Federal 31D-19-691 1
7,432.43	0.00	0.00	7,287.00	696.08	-557.44	0.00	0.00	0.00	0.00	Federal 31D PBHL 1C



Database:	SWFS01 Compass DB	Local Co-ordinate Reference:	Well Federal 31D-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 31D-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 2.50									
900.00	1.25	321.31	900.00	0.43	-0.34	0.55	2.50	2.50	0.00
1,000.00	3.75	321.31	999.89	3.83	-3.07	4.91	2.50	2.50	0.00
1,100.00	6.25	321.31	1,099.50	10.63	-8.51	13.62	2.50	2.50	0.00
1,200.00	8.75	321.31	1,198.64	20.82	-16.67	26.67	2.50	2.50	0.00
1,300.00	11.25	321.31	1,297.11	34.37	-27.53	44.04	2.50	2.50	0.00
1,400.00	13.75	321.31	1,394.74	51.27	-41.06	65.68	2.50	2.50	0.00
1,500.00	16.25	321.31	1,491.32	71.47	-57.23	91.56	2.50	2.50	0.00
1,600.00	18.75	321.31	1,586.69	94.94	-76.03	121.63	2.50	2.50	0.00
1,700.00	21.25	321.31	1,680.65	121.63	-97.41	155.83	2.50	2.50	0.00
1,743.49	22.34	321.31	1,721.03	134.24	-107.50	171.97	2.50	2.50	0.00
Start 1139.78 hold at 1743.49 MD									
1,800.00	22.34	321.31	1,773.30	151.00	-120.92	193.45	0.00	0.00	0.00
1,900.00	22.34	321.31	1,865.79	180.66	-144.68	231.46	0.00	0.00	0.00
2,000.00	22.34	321.31	1,958.29	210.33	-168.44	269.46	0.00	0.00	0.00
2,100.00	22.34	321.31	2,050.79	240.00	-192.19	307.47	0.00	0.00	0.00
2,200.00	22.34	321.31	2,143.28	269.66	-215.95	345.47	0.00	0.00	0.00
2,300.00	22.34	321.31	2,235.78	299.33	-239.71	383.48	0.00	0.00	0.00
2,400.00	22.34	321.31	2,328.27	328.99	-263.46	421.49	0.00	0.00	0.00
2,500.00	22.34	321.31	2,420.77	358.66	-287.22	459.49	0.00	0.00	0.00
2,600.00	22.34	321.31	2,513.27	388.32	-310.98	497.50	0.00	0.00	0.00
2,700.00	22.34	321.31	2,605.76	417.99	-334.74	535.50	0.00	0.00	0.00
2,800.00	22.34	321.31	2,698.26	447.66	-358.49	573.51	0.00	0.00	0.00
2,883.27	22.34	321.31	2,775.28	472.36	-378.28	605.16	0.00	0.00	0.00
Start Drop -1.50									
2,900.00	22.09	321.31	2,790.77	477.29	-382.23	611.48	1.50	-1.50	0.00
3,000.00	20.59	321.31	2,883.91	505.69	-404.97	647.86	1.50	-1.50	0.00
3,100.00	19.09	321.31	2,977.98	532.18	-426.18	681.80	1.50	-1.50	0.00
3,200.00	17.59	321.31	3,072.90	556.73	-445.85	713.26	1.50	-1.50	0.00
3,300.00	16.09	321.31	3,168.61	579.34	-463.95	742.22	1.50	-1.50	0.00
3,400.00	14.59	321.31	3,265.04	599.99	-480.48	768.67	1.50	-1.50	0.00
3,500.00	13.09	321.31	3,362.14	618.65	-495.43	792.58	1.50	-1.50	0.00
3,515.25	12.86	321.31	3,377.00	621.32	-497.57	796.00	1.50	-1.50	0.00
Mesaverde									
3,600.00	11.59	321.31	3,459.83	635.33	-508.79	813.94	1.50	-1.50	0.00
3,700.00	10.09	321.31	3,558.04	650.00	-520.54	832.74	1.50	-1.50	0.00
3,800.00	8.59	321.31	3,656.71	662.67	-530.68	848.97	1.50	-1.50	0.00
3,900.00	7.09	321.31	3,755.78	673.31	-539.20	862.60	1.50	-1.50	0.00
4,000.00	5.59	321.31	3,855.16	681.92	-546.10	873.64	1.50	-1.50	0.00
4,100.00	4.09	321.31	3,954.80	688.50	-551.37	882.07	1.50	-1.50	0.00
4,200.00	2.59	321.31	4,054.63	693.05	-555.01	887.89	1.50	-1.50	0.00
4,300.00	1.09	321.31	4,154.58	695.55	-557.01	891.09	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 31D-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)	
4,372.43	0.00	0.00	4,227.00	696.08	-557.44	891.78	1.50	-1.50	0.00	
Start 3060.00 hold at 4372.43 MD - Price Coal - Federal 31D-19-691 Top Gas										
4,400.00	0.00	0.00	4,254.57	696.08	-557.44	891.78	0.00	0.00	0.00	
4,500.00	0.00	0.00	4,354.57	696.08	-557.44	891.78	0.00	0.00	0.00	
4,600.00	0.00	0.00	4,454.57	696.08	-557.44	891.78	0.00	0.00	0.00	
4,700.00	0.00	0.00	4,554.57	696.08	-557.44	891.78	0.00	0.00	0.00	
4,800.00	0.00	0.00	4,654.57	696.08	-557.44	891.78	0.00	0.00	0.00	
4,900.00	0.00	0.00	4,754.57	696.08	-557.44	891.78	0.00	0.00	0.00	
5,000.00	0.00	0.00	4,854.57	696.08	-557.44	891.78	0.00	0.00	0.00	
5,100.00	0.00	0.00	4,954.57	696.08	-557.44	891.78	0.00	0.00	0.00	
5,200.00	0.00	0.00	5,054.57	696.08	-557.44	891.78	0.00	0.00	0.00	
5,300.00	0.00	0.00	5,154.57	696.08	-557.44	891.78	0.00	0.00	0.00	
5,400.00	0.00	0.00	5,254.57	696.08	-557.44	891.78	0.00	0.00	0.00	
5,500.00	0.00	0.00	5,354.57	696.08	-557.44	891.78	0.00	0.00	0.00	
5,600.00	0.00	0.00	5,454.57	696.08	-557.44	891.78	0.00	0.00	0.00	
5,700.00	0.00	0.00	5,554.57	696.08	-557.44	891.78	0.00	0.00	0.00	
5,800.00	0.00	0.00	5,654.57	696.08	-557.44	891.78	0.00	0.00	0.00	
5,900.00	0.00	0.00	5,754.57	696.08	-557.44	891.78	0.00	0.00	0.00	
6,000.00	0.00	0.00	5,854.57	696.08	-557.44	891.78	0.00	0.00	0.00	
6,100.00	0.00	0.00	5,954.57	696.08	-557.44	891.78	0.00	0.00	0.00	
6,200.00	0.00	0.00	6,054.57	696.08	-557.44	891.78	0.00	0.00	0.00	
6,300.00	0.00	0.00	6,154.57	696.08	-557.44	891.78	0.00	0.00	0.00	
6,400.00	0.00	0.00	6,254.57	696.08	-557.44	891.78	0.00	0.00	0.00	
6,500.00	0.00	0.00	6,354.57	696.08	-557.44	891.78	0.00	0.00	0.00	
6,600.00	0.00	0.00	6,454.57	696.08	-557.44	891.78	0.00	0.00	0.00	
6,700.00	0.00	0.00	6,554.57	696.08	-557.44	891.78	0.00	0.00	0.00	
6,800.00	0.00	0.00	6,654.57	696.08	-557.44	891.78	0.00	0.00	0.00	
6,900.00	0.00	0.00	6,754.57	696.08	-557.44	891.78	0.00	0.00	0.00	
7,000.00	0.00	0.00	6,854.57	696.08	-557.44	891.78	0.00	0.00	0.00	
7,100.00	0.00	0.00	6,954.57	696.08	-557.44	891.78	0.00	0.00	0.00	
7,132.43	0.00	0.00	6,987.00	696.08	-557.44	891.78	0.00	0.00	0.00	
Rollins										
7,200.00	0.00	0.00	7,054.57	696.08	-557.44	891.78	0.00	0.00	0.00	
7,300.00	0.00	0.00	7,154.57	696.08	-557.44	891.78	0.00	0.00	0.00	
7,400.00	0.00	0.00	7,254.57	696.08	-557.44	891.78	0.00	0.00	0.00	
7,432.43	0.00	0.00	7,287.00	696.08	-557.44	891.78	0.00	0.00	0.00	
TD at 7432.43 - Federal 31D PBHL 105' 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 31D-19-691 Top	0.00	0.00	4,227.00	696.08	-557.44	1,621,086.70	2,409,115.57	39.519960	-107.594745	
- plan hits target center										
- Circle (radius 25.00)										
Federal 31D PBHL 105'	0.00	0.00	7,287.00	696.08	-557.44	1,621,086.70	2,409,115.57	39.519960	-107.594745	
- plan hits target center										
- Point										

Database:	SWFS01 Compass DB	Local Co-ordinate Reference:	Well Federal 31D-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 31D-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 (°)
3,515.25	3,377.00	Mesaverde		0.00	
4,372.43	4,227.00	Price Coal		0.00	
7,132.43	6,987.00	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 2.50	
1,743.49	1,721.03	134.24	-107.50	Start 1139.78 hold at 1743.49 MD	
2,883.27	2,775.28	472.36	-378.28	Start Drop -1.50	
4,372.43	4,227.00	696.08	-557.44	Start 3060.00 hold at 4372.43 MD	
7,432.43	7,287.00	696.08	-557.44	TD at 7432.43	