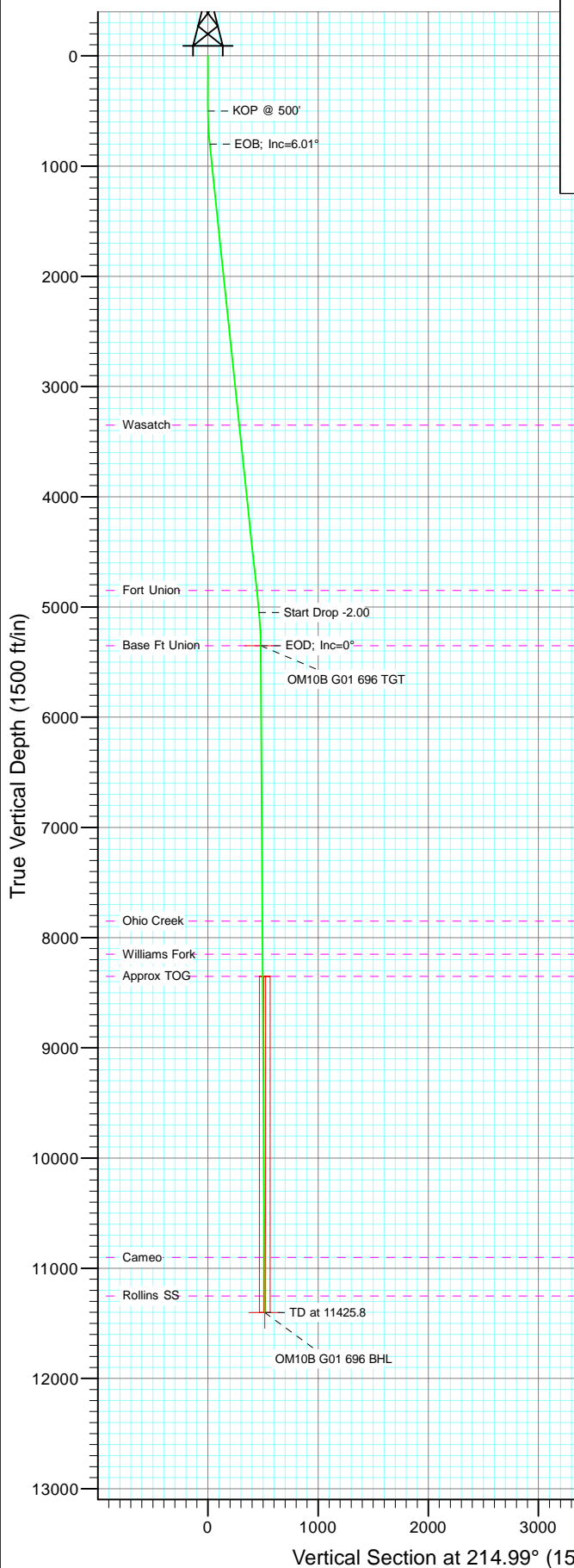
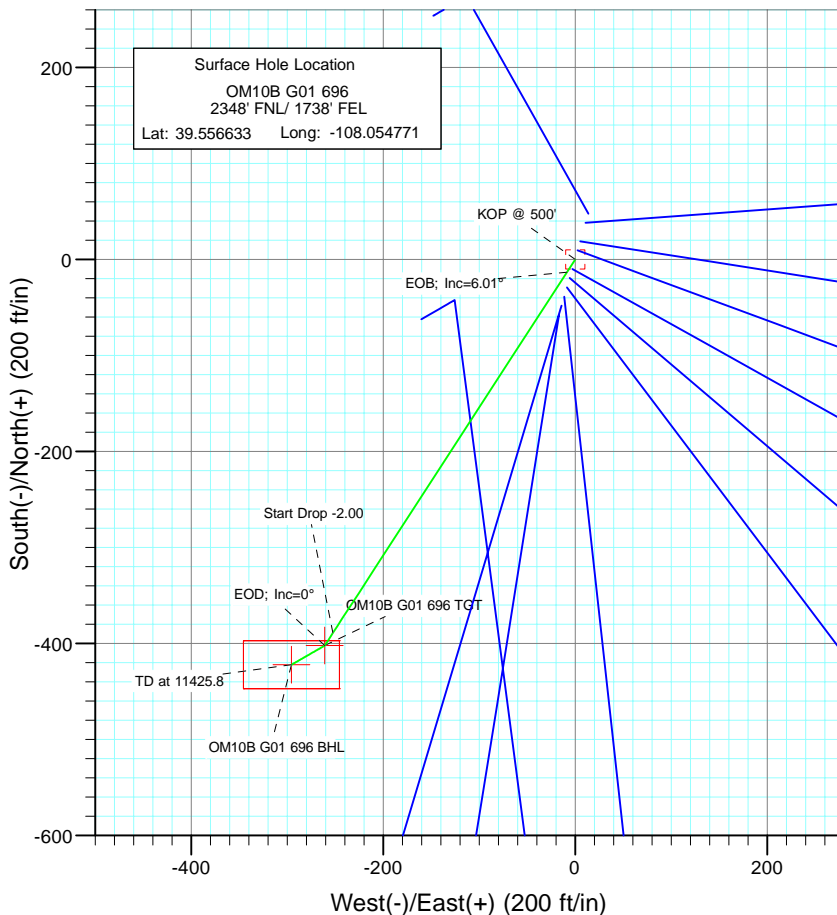




Project: Garfield County
Site: G01 696 Pad
Well: OM10B G01 696
Wellbore: DD
Design: Plan #1



SECTION DETAILS										
Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSec	Target
1	0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.0	
2	500.0	0.00	0.00	500.0	0.0	0.0	0.00	0.00	0.0	
3	800.7	6.01	212.97	800.2	-13.2	-8.6	2.00	212.97	15.8	
4	5074.9	6.01	212.97	5050.8	-389.0	-252.3	0.00	0.00	463.3	
5	5375.6	0.00	0.00	5351.0	-402.2	-260.8	2.00	180.00	479.1	OM10B G01 696 TGT
6	5529.0	0.38	240.06	5504.4	-402.5	-261.3	0.25	240.06	479.5	
7	11425.8	0.38	240.06	11401.0	-422.2	-295.5	0.00	0.00	515.3	OM10B G01 696 BHL



Azimuths to True North
Magnetic North: 10.47°

Magnetic Field
Strength: 52371.6snT
Dip Angle: 65.81°
Date: 8/12/2010
Model: IGRF200510

FORMATION TOP DETAILS

TVDPath	MDPath	Formation
3351.0	3365.7	Wasatch
4851.0	4874.0	Fort Union
5351.0	5375.6	Base Ft Union
7851.0	7875.7	Ohio Creek
8151.0	8175.7	Williams Fork
8351.0	8375.7	Approx TOG
10901.0	10925.8	Cameo
11251.0	11275.8	Rollins SS

DESIGN DETAILS: Plan #1

105XXX; BH
KBE @ 8352.0ft (Patterson 302)

Target	Azimuth	Origin	N/S	E/W	From TVD
OM10B G01 696 BHL	214.99	Slot	0.0	0.0	0.0

Cathedral Energy Services

Planning Report

Database:	EDM 5000.1 US Multi Users DB	Local Co-ordinate Reference:	Well OM10B G01 696
Company:	Berry Petroleum Company (NAD 83)	TVD Reference:	KBE @ 8352.0ft (Patterson 302)
Project:	Garfield County	MD Reference:	KBE @ 8352.0ft (Patterson 302)
Site:	G01 696 Pad	North Reference:	True
Well:	OM10B G01 696	Survey Calculation Method:	Minimum Curvature
Wellbore:	DD		
Design:	Plan #1		

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

Site		G01 696 Pad			
Site Position:		Northing:	1,636,699.44 ft	Latitude:	39.553712
From:	Lat/Long	Easting:	2,279,741.26 ft	Longitude:	-108.054742
Position Uncertainty:	0.0 ft	Slot Radius:	13.200 in	Grid Convergence:	-1.61 °

Well	OM10B G01 696					
Well Position	+N/-S	0.0 ft	Northing:	1,637,763.20 ft	Latitude:	39.556633
	+E/-W	0.0 ft	Easting:	2,279,763.00 ft	Longitude:	-108.054771
Position Uncertainty		0.0 ft	Wellhead Elevation:	ft	Ground Level:	8,337.0 ft

Wellbore	DD				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF200510	8/12/2010	10.47	65.81	52,372

Design	Plan #1			
Audit Notes:				
Version:	Phase:	PLAN	Tie On Depth:	0.0
Vertical Section:	Depth From (TVD) (ft)	+N/-S (ft)	+E/-W (ft)	Direction (°)
	0.0	0.0	0.0	214.99

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
0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.00	0.00	
500.0	0.00	0.00	500.0	0.0	0.0	0.00	0.00	0.00	0.00	
800.7	6.01	212.97	800.2	-13.2	-8.6	2.00	2.00	0.00	212.97	
5,074.9	6.01	212.97	5,050.8	-389.0	-252.3	0.00	0.00	0.00	0.00	
5,375.6	0.00	0.00	5,351.0	-402.2	-260.8	2.00	-2.00	0.00	180.00	OM10B G01 696 TGT
5,529.0	0.38	240.06	5,504.4	-402.5	-261.3	0.25	0.25	-78.19	240.06	
11,425.8	0.38	240.06	11,401.0	-422.2	-295.5	0.00	0.00	0.00	0.00	OM10B G01 696 BHL

Cathedral Energy Services

Planning Report

Database:	EDM 5000.1 US Multi Users DB	Local Co-ordinate Reference:	Well OM10B G01 696
Company:	Berry Petroleum Company (NAD 83)	TVD Reference:	KBE @ 8352.0ft (Patterson 302)
Project:	Garfield County	MD Reference:	KBE @ 8352.0ft (Patterson 302)
Site:	G01 696 Pad	North Reference:	True
Well:	OM10B G01 696	Survey Calculation Method:	Minimum Curvature
Wellbore:	DD		
Design:	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)	Comments / Formations
0.0	0.00	0.00	0.0	0.0	0.0	0.0	0.00	0.00	
30.0	0.00	0.00	30.0	0.0	0.0	0.0	0.00	0.00	
60.0	0.00	0.00	60.0	0.0	0.0	0.0	0.00	0.00	
90.0	0.00	0.00	90.0	0.0	0.0	0.0	0.00	0.00	
120.0	0.00	0.00	120.0	0.0	0.0	0.0	0.00	0.00	
150.0	0.00	0.00	150.0	0.0	0.0	0.0	0.00	0.00	
180.0	0.00	0.00	180.0	0.0	0.0	0.0	0.00	0.00	
210.0	0.00	0.00	210.0	0.0	0.0	0.0	0.00	0.00	
240.0	0.00	0.00	240.0	0.0	0.0	0.0	0.00	0.00	
270.0	0.00	0.00	270.0	0.0	0.0	0.0	0.00	0.00	
300.0	0.00	0.00	300.0	0.0	0.0	0.0	0.00	0.00	
330.0	0.00	0.00	330.0	0.0	0.0	0.0	0.00	0.00	
360.0	0.00	0.00	360.0	0.0	0.0	0.0	0.00	0.00	
390.0	0.00	0.00	390.0	0.0	0.0	0.0	0.00	0.00	
420.0	0.00	0.00	420.0	0.0	0.0	0.0	0.00	0.00	
450.0	0.00	0.00	450.0	0.0	0.0	0.0	0.00	0.00	
480.0	0.00	0.00	480.0	0.0	0.0	0.0	0.00	0.00	
500.0	0.00	0.00	500.0	0.0	0.0	0.0	0.00	0.00	KOP @ 500'
510.0	0.20	212.97	510.0	0.0	0.0	0.0	2.00	2.00	
540.0	0.80	212.97	540.0	-0.2	-0.2	0.3	2.00	2.00	
570.0	1.40	212.97	570.0	-0.7	-0.5	0.9	2.00	2.00	
600.0	2.00	212.97	600.0	-1.5	-0.9	1.7	2.00	2.00	
630.0	2.60	212.97	630.0	-2.5	-1.6	2.9	2.00	2.00	
660.0	3.20	212.97	659.9	-3.7	-2.4	4.5	2.00	2.00	
690.0	3.80	212.97	689.9	-5.3	-3.4	6.3	2.00	2.00	
720.0	4.40	212.97	719.8	-7.1	-4.6	8.4	2.00	2.00	
750.0	5.00	212.97	749.7	-9.1	-5.9	10.9	2.00	2.00	
780.0	5.60	212.97	779.6	-11.5	-7.4	13.7	2.00	2.00	
800.7	6.01	212.97	800.2	-13.2	-8.6	15.8	2.00	2.00	EOB; Inc=6.01°
810.0	6.01	212.97	809.4	-14.0	-9.1	16.7	0.00	0.00	
840.0	6.01	212.97	839.2	-16.7	-10.8	19.9	0.00	0.00	
870.0	6.01	212.97	869.1	-19.3	-12.5	23.0	0.00	0.00	
900.0	6.01	212.97	898.9	-22.0	-14.2	26.2	0.00	0.00	
930.0	6.01	212.97	928.7	-24.6	-16.0	29.3	0.00	0.00	
960.0	6.01	212.97	958.6	-27.2	-17.7	32.4	0.00	0.00	
990.0	6.01	212.97	988.4	-29.9	-19.4	35.6	0.00	0.00	
1,020.0	6.01	212.97	1,018.2	-32.5	-21.1	38.7	0.00	0.00	
1,050.0	6.01	212.97	1,048.1	-35.1	-22.8	41.9	0.00	0.00	
1,080.0	6.01	212.97	1,077.9	-37.8	-24.5	45.0	0.00	0.00	
1,110.0	6.01	212.97	1,107.7	-40.4	-26.2	48.1	0.00	0.00	
1,140.0	6.01	212.97	1,137.6	-43.1	-27.9	51.3	0.00	0.00	
1,170.0	6.01	212.97	1,167.4	-45.7	-29.6	54.4	0.00	0.00	
1,200.0	6.01	212.97	1,197.3	-48.3	-31.3	57.6	0.00	0.00	
1,230.0	6.01	212.97	1,227.1	-51.0	-33.1	60.7	0.00	0.00	
1,260.0	6.01	212.97	1,256.9	-53.6	-34.8	63.9	0.00	0.00	
1,290.0	6.01	212.97	1,286.8	-56.2	-36.5	67.0	0.00	0.00	
1,320.0	6.01	212.97	1,316.6	-58.9	-38.2	70.1	0.00	0.00	
1,350.0	6.01	212.97	1,346.4	-61.5	-39.9	73.3	0.00	0.00	
1,380.0	6.01	212.97	1,376.3	-64.2	-41.6	76.4	0.00	0.00	
1,410.0	6.01	212.97	1,406.1	-66.8	-43.3	79.6	0.00	0.00	
1,440.0	6.01	212.97	1,435.9	-69.4	-45.0	82.7	0.00	0.00	
1,470.0	6.01	212.97	1,465.8	-72.1	-46.7	85.8	0.00	0.00	

Cathedral Energy Services

Planning Report

Database:	EDM 5000.1 US Multi Users DB	Local Co-ordinate Reference:	Well OM10B G01 696
Company:	Berry Petroleum Company (NAD 83)	TVD Reference:	KBE @ 8352.0ft (Patterson 302)
Project:	Garfield County	MD Reference:	KBE @ 8352.0ft (Patterson 302)
Site:	G01 696 Pad	North Reference:	True
Well:	OM10B G01 696	Survey Calculation Method:	Minimum Curvature
Wellbore:	DD		
Design:	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)	Comments / Formations
1,500.0	6.01	212.97	1,495.6	-74.7	-48.4	89.0	0.00	0.00	
1,530.0	6.01	212.97	1,525.4	-77.3	-50.2	92.1	0.00	0.00	
1,560.0	6.01	212.97	1,555.3	-80.0	-51.9	95.3	0.00	0.00	
1,590.0	6.01	212.97	1,585.1	-82.6	-53.6	98.4	0.00	0.00	
1,620.0	6.01	212.97	1,614.9	-85.3	-55.3	101.5	0.00	0.00	
1,650.0	6.01	212.97	1,644.8	-87.9	-57.0	104.7	0.00	0.00	
1,680.0	6.01	212.97	1,674.6	-90.5	-58.7	107.8	0.00	0.00	
1,710.0	6.01	212.97	1,704.4	-93.2	-60.4	111.0	0.00	0.00	
1,740.0	6.01	212.97	1,734.3	-95.8	-62.1	114.1	0.00	0.00	
1,770.0	6.01	212.97	1,764.1	-98.4	-63.8	117.3	0.00	0.00	
1,800.0	6.01	212.97	1,793.9	-101.1	-65.6	120.4	0.00	0.00	
1,830.0	6.01	212.97	1,823.8	-103.7	-67.3	123.5	0.00	0.00	
1,860.0	6.01	212.97	1,853.6	-106.4	-69.0	126.7	0.00	0.00	
1,890.0	6.01	212.97	1,883.5	-109.0	-70.7	129.8	0.00	0.00	
1,920.0	6.01	212.97	1,913.3	-111.6	-72.4	133.0	0.00	0.00	
1,950.0	6.01	212.97	1,943.1	-114.3	-74.1	136.1	0.00	0.00	
1,980.0	6.01	212.97	1,973.0	-116.9	-75.8	139.2	0.00	0.00	
2,010.0	6.01	212.97	2,002.8	-119.5	-77.5	142.4	0.00	0.00	
2,040.0	6.01	212.97	2,032.6	-122.2	-79.2	145.5	0.00	0.00	
2,070.0	6.01	212.97	2,062.5	-124.8	-80.9	148.7	0.00	0.00	
2,100.0	6.01	212.97	2,092.3	-127.4	-82.7	151.8	0.00	0.00	
2,130.0	6.01	212.97	2,122.1	-130.1	-84.4	155.0	0.00	0.00	
2,160.0	6.01	212.97	2,152.0	-132.7	-86.1	158.1	0.00	0.00	
2,190.0	6.01	212.97	2,181.8	-135.4	-87.8	161.2	0.00	0.00	
2,220.0	6.01	212.97	2,211.6	-138.0	-89.5	164.4	0.00	0.00	
2,250.0	6.01	212.97	2,241.5	-140.6	-91.2	167.5	0.00	0.00	
2,280.0	6.01	212.97	2,271.3	-143.3	-92.9	170.7	0.00	0.00	
2,310.0	6.01	212.97	2,301.1	-145.9	-94.6	173.8	0.00	0.00	
2,340.0	6.01	212.97	2,331.0	-148.5	-96.3	176.9	0.00	0.00	
2,370.0	6.01	212.97	2,360.8	-151.2	-98.1	180.1	0.00	0.00	
2,400.0	6.01	212.97	2,390.6	-153.8	-99.8	183.2	0.00	0.00	
2,430.0	6.01	212.97	2,420.5	-156.5	-101.5	186.4	0.00	0.00	
2,460.0	6.01	212.97	2,450.3	-159.1	-103.2	189.5	0.00	0.00	
2,490.0	6.01	212.97	2,480.1	-161.7	-104.9	192.6	0.00	0.00	

Targets

Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (ft)	Easting (ft)	Latitude	Longitude
- hit/miss target									
- Shape									
OM10B G01 696 TGT	0.00	0.00	5,351.0	-402.2	-260.8	1,637,368.50	2,279,490.94	39.555529	-108.055696
- plan misses target center by 2885.1ft at 2490.0ft MD (2480.1 TVD, -161.7 N, -104.9 E)									
- Point									
OM10B G01 696 BHL	0.00	0.00	11,401.0	-422.2	-295.5	1,637,349.53	2,279,455.75	39.555474	-108.055819
- plan misses target center by 8926.7ft at 2490.0ft MD (2480.1 TVD, -161.7 N, -104.9 E)									
- Rectangle (sides W50.0 H100.0 D0.0)									

Cathedral Energy Services

Planning Report

Database:	EDM 5000.1 US Multi Users DB	Local Co-ordinate Reference:	Well OM10B G01 696
Company:	Berry Petroleum Company (NAD 83)	TVD Reference:	KBE @ 8352.0ft (Patterson 302)
Project:	Garfield County	MD Reference:	KBE @ 8352.0ft (Patterson 302)
Site:	G01 696 Pad	North Reference:	True
Well:	OM10B G01 696	Survey Calculation Method:	Minimum Curvature
Wellbore:	DD		
Design:	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)	Comments / Formations
2,500.0	6.01	212.97	2,490.1	-162.6	-105.5	193.7	0.00	0.00	
2,600.0	6.01	212.97	2,589.5	-171.4	-111.2	204.2	0.00	0.00	
2,700.0	6.01	212.97	2,689.0	-180.2	-116.9	214.6	0.00	0.00	
2,800.0	6.01	212.97	2,788.4	-189.0	-122.6	225.1	0.00	0.00	
2,900.0	6.01	212.97	2,887.9	-197.8	-128.3	235.6	0.00	0.00	
3,000.0	6.01	212.97	2,987.3	-206.6	-134.0	246.1	0.00	0.00	
3,100.0	6.01	212.97	3,086.8	-215.4	-139.7	256.5	0.00	0.00	
3,200.0	6.01	212.97	3,186.2	-224.1	-145.4	267.0	0.00	0.00	
3,300.0	6.01	212.97	3,285.7	-232.9	-151.1	277.5	0.00	0.00	
3,365.7	6.01	212.97	3,351.0	-238.7	-154.8	284.3	0.00	0.00	Wasatch
3,400.0	6.01	212.97	3,385.1	-241.7	-156.8	287.9	0.00	0.00	
3,500.0	6.01	212.97	3,484.6	-250.5	-162.5	298.4	0.00	0.00	
3,600.0	6.01	212.97	3,584.0	-259.3	-168.2	308.9	0.00	0.00	
3,700.0	6.01	212.97	3,683.5	-268.1	-173.9	319.4	0.00	0.00	
3,800.0	6.01	212.97	3,782.9	-276.9	-179.6	329.8	0.00	0.00	
3,900.0	6.01	212.97	3,882.4	-285.7	-185.3	340.3	0.00	0.00	
4,000.0	6.01	212.97	3,981.8	-294.5	-191.0	350.8	0.00	0.00	
4,100.0	6.01	212.97	4,081.3	-303.3	-196.7	361.2	0.00	0.00	
4,200.0	6.01	212.97	4,180.7	-312.1	-202.4	371.7	0.00	0.00	
4,300.0	6.01	212.97	4,280.2	-320.8	-208.1	382.2	0.00	0.00	
4,400.0	6.01	212.97	4,379.6	-329.6	-213.8	392.7	0.00	0.00	
4,500.0	6.01	212.97	4,479.1	-338.4	-219.5	403.1	0.00	0.00	
4,600.0	6.01	212.97	4,578.5	-347.2	-225.2	413.6	0.00	0.00	
4,700.0	6.01	212.97	4,678.0	-356.0	-230.9	424.1	0.00	0.00	
4,800.0	6.01	212.97	4,777.4	-364.8	-236.6	434.5	0.00	0.00	
4,874.0	6.01	212.97	4,851.0	-371.3	-240.8	442.3	0.00	0.00	Fort Union
4,900.0	6.01	212.97	4,876.9	-373.6	-242.3	445.0	0.00	0.00	
5,000.0	6.01	212.97	4,976.3	-382.4	-248.0	455.5	0.00	0.00	
5,074.9	6.01	212.97	5,050.8	-389.0	-252.3	463.3	0.00	0.00	Start Drop -2.00
5,100.0	5.51	212.97	5,075.8	-391.1	-253.6	465.8	2.00	-2.00	
5,200.0	3.51	212.97	5,175.5	-397.7	-257.9	473.7	2.00	-2.00	
5,300.0	1.51	212.97	5,275.4	-401.4	-260.3	478.1	2.00	-2.00	
5,375.6	0.00	0.00	5,351.0	-402.2	-260.8	479.1	2.00	-2.00	EOD; Inc=0° - Base Ft Union - OM10B G01 696
5,400.0	0.06	240.06	5,375.4	-402.2	-260.9	479.1	0.25	0.25	
5,500.0	0.31	240.06	5,475.4	-402.4	-261.1	479.4	0.25	0.25	
5,529.0	0.38	240.06	5,504.4	-402.5	-261.3	479.5	0.25	0.25	
5,600.0	0.38	240.06	5,575.4	-402.7	-261.7	480.0	0.00	0.00	
5,700.0	0.38	240.06	5,675.4	-403.0	-262.3	480.6	0.00	0.00	
5,800.0	0.38	240.06	5,775.4	-403.4	-262.9	481.2	0.00	0.00	
5,900.0	0.38	240.06	5,875.4	-403.7	-263.4	481.8	0.00	0.00	
6,000.0	0.38	240.06	5,975.4	-404.0	-264.0	482.4	0.00	0.00	
6,100.0	0.38	240.06	6,075.4	-404.4	-264.6	483.0	0.00	0.00	
6,200.0	0.38	240.06	6,175.4	-404.7	-265.2	483.6	0.00	0.00	
6,300.0	0.38	240.06	6,275.4	-405.0	-265.8	484.2	0.00	0.00	
6,400.0	0.38	240.06	6,375.3	-405.4	-266.3	484.8	0.00	0.00	
6,500.0	0.38	240.06	6,475.3	-405.7	-266.9	485.4	0.00	0.00	
6,600.0	0.38	240.06	6,575.3	-406.0	-267.5	486.0	0.00	0.00	
6,700.0	0.38	240.06	6,675.3	-406.4	-268.1	486.6	0.00	0.00	
6,800.0	0.38	240.06	6,775.3	-406.7	-268.7	487.3	0.00	0.00	
6,900.0	0.38	240.06	6,875.3	-407.0	-269.2	487.9	0.00	0.00	
7,000.0	0.38	240.06	6,975.3	-407.4	-269.8	488.5	0.00	0.00	
7,100.0	0.38	240.06	7,075.3	-407.7	-270.4	489.1	0.00	0.00	

Cathedral Energy Services

Planning Report

Database:	EDM 5000.1 US Multi Users DB	Local Co-ordinate Reference:	Well OM10B G01 696
Company:	Berry Petroleum Company (NAD 83)	TVD Reference:	KBE @ 8352.0ft (Patterson 302)
Project:	Garfield County	MD Reference:	KBE @ 8352.0ft (Patterson 302)
Site:	G01 696 Pad	North Reference:	True
Well:	OM10B G01 696	Survey Calculation Method:	Minimum Curvature
Wellbore:	DD		
Design:	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)	Comments / Formations
7,200.0	0.38	240.06	7,175.3	-408.0	-271.0	489.7	0.00	0.00	
7,300.0	0.38	240.06	7,275.3	-408.4	-271.6	490.3	0.00	0.00	
7,400.0	0.38	240.06	7,375.3	-408.7	-272.1	490.9	0.00	0.00	
7,500.0	0.38	240.06	7,475.3	-409.0	-272.7	491.5	0.00	0.00	
7,600.0	0.38	240.06	7,575.3	-409.4	-273.3	492.1	0.00	0.00	
7,700.0	0.38	240.06	7,675.3	-409.7	-273.9	492.7	0.00	0.00	
7,800.0	0.38	240.06	7,775.3	-410.0	-274.5	493.3	0.00	0.00	
7,875.7	0.38	240.06	7,851.0	-410.3	-274.9	493.8	0.00	0.00	Ohio Creek
7,900.0	0.38	240.06	7,875.3	-410.4	-275.0	493.9	0.00	0.00	
8,000.0	0.38	240.06	7,975.3	-410.7	-275.6	494.5	0.00	0.00	
8,100.0	0.38	240.06	8,075.3	-411.0	-276.2	495.1	0.00	0.00	
8,175.7	0.38	240.06	8,151.0	-411.3	-276.6	495.6	0.00	0.00	Williams Fork
8,200.0	0.38	240.06	8,175.3	-411.4	-276.8	495.7	0.00	0.00	
8,300.0	0.38	240.06	8,275.3	-411.7	-277.4	496.3	0.00	0.00	
8,375.7	0.38	240.06	8,351.0	-412.0	-277.8	496.8	0.00	0.00	Approx TOG
8,400.0	0.38	240.06	8,375.3	-412.0	-277.9	497.0	0.00	0.00	
8,500.0	0.38	240.06	8,475.3	-412.4	-278.5	497.6	0.00	0.00	
8,600.0	0.38	240.06	8,575.3	-412.7	-279.1	498.2	0.00	0.00	
8,700.0	0.38	240.06	8,675.3	-413.0	-279.7	498.8	0.00	0.00	
8,800.0	0.38	240.06	8,775.3	-413.4	-280.3	499.4	0.00	0.00	
8,900.0	0.38	240.06	8,875.3	-413.7	-280.8	500.0	0.00	0.00	
9,000.0	0.38	240.06	8,975.3	-414.0	-281.4	500.6	0.00	0.00	
9,100.0	0.38	240.06	9,075.3	-414.4	-282.0	501.2	0.00	0.00	
9,200.0	0.38	240.06	9,175.3	-414.7	-282.6	501.8	0.00	0.00	
9,300.0	0.38	240.06	9,275.3	-415.1	-283.2	502.4	0.00	0.00	
9,400.0	0.38	240.06	9,375.3	-415.4	-283.7	503.0	0.00	0.00	
9,500.0	0.38	240.06	9,475.3	-415.7	-284.3	503.6	0.00	0.00	
9,600.0	0.38	240.06	9,575.3	-416.1	-284.9	504.2	0.00	0.00	
9,700.0	0.38	240.06	9,675.3	-416.4	-285.5	504.8	0.00	0.00	
9,800.0	0.38	240.06	9,775.3	-416.7	-286.1	505.4	0.00	0.00	
9,900.0	0.38	240.06	9,875.3	-417.1	-286.6	506.0	0.00	0.00	
10,000.0	0.38	240.06	9,975.3	-417.4	-287.2	506.7	0.00	0.00	
10,100.0	0.38	240.06	10,075.3	-417.7	-287.8	507.3	0.00	0.00	
10,200.0	0.38	240.06	10,175.3	-418.1	-288.4	507.9	0.00	0.00	
10,300.0	0.38	240.06	10,275.3	-418.4	-289.0	508.5	0.00	0.00	
10,400.0	0.38	240.06	10,375.3	-418.7	-289.5	509.1	0.00	0.00	
10,500.0	0.38	240.06	10,475.3	-419.1	-290.1	509.7	0.00	0.00	
10,600.0	0.38	240.06	10,575.3	-419.4	-290.7	510.3	0.00	0.00	
10,700.0	0.38	240.06	10,675.3	-419.7	-291.3	510.9	0.00	0.00	
10,800.0	0.38	240.06	10,775.2	-420.1	-291.9	511.5	0.00	0.00	
10,900.0	0.38	240.06	10,875.2	-420.4	-292.4	512.1	0.00	0.00	
10,925.8	0.38	240.06	10,901.0	-420.5	-292.6	512.3	0.00	0.00	Cameo
11,000.0	0.38	240.06	10,975.2	-420.7	-293.0	512.7	0.00	0.00	
11,100.0	0.38	240.06	11,075.2	-421.1	-293.6	513.3	0.00	0.00	
11,200.0	0.38	240.06	11,175.2	-421.4	-294.2	513.9	0.00	0.00	
11,275.8	0.38	240.06	11,251.0	-421.7	-294.6	514.4	0.00	0.00	Rollins SS
11,300.0	0.38	240.06	11,275.2	-421.7	-294.8	514.5	0.00	0.00	
11,400.0	0.38	240.06	11,375.2	-422.1	-295.3	515.1	0.00	0.00	
11,425.8	0.38	240.06	11,401.0	-422.2	-295.5	515.3	0.00	0.00	OM10B G01 696 BHL

Cathedral Energy Services

Planning Report

Database:	EDM 5000.1 US Multi Users DB	Local Co-ordinate Reference:	Well OM10B G01 696
Company:	Berry Petroleum Company (NAD 83)	TVD Reference:	KBE @ 8352.0ft (Patterson 302)
Project:	Garfield County	MD Reference:	KBE @ 8352.0ft (Patterson 302)
Site:	G01 696 Pad	North Reference:	True
Well:	OM10B G01 696	Survey Calculation Method:	Minimum Curvature
Wellbore:	DD		
Design:	Plan #1		

Targets									
Target Name	Dip Angle	Dip Dir.	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
- hit/miss target	(°)	(°)	(ft)	(ft)	(ft)	(ft)	(ft)		
- Shape									
OM10B G01 696 TGT	0.00	0.00	5,351.0	-402.2	-260.8	1,637,368.50	2,279,490.94	39.555529	-108.055696
- plan hits target center									
- Point									
OM10B G01 696 BHL	0.00	0.00	11,401.0	-422.2	-295.5	1,637,349.53	2,279,455.75	39.555474	-108.055819
- plan hits target center									
- Rectangle (sides W50.0 H100.0 D0.0)									

Formations						
Measured Depth	Vertical Depth	Name	Lithology	Dip	Dip Direction	
(ft)	(ft)			(°)	(°)	
3,365.7	3,351.0	Wasatch		0.00		
4,874.0	4,851.0	Fort Union		0.00		
5,375.6	5,351.0	Base Ft Union		0.00		
7,875.7	7,851.0	Ohio Creek		0.00		
8,175.7	8,151.0	Williams Fork		0.00		
8,375.7	8,351.0	Approx TOG		0.00		
10,925.8	10,901.0	Cameo		0.00		
11,275.8	11,251.0	Rollins SS		0.00		

Plan Annotations					
Measured Depth	Vertical Depth	Local Coordinates			
(ft)	(ft)	+N/-S	+E/-W	Comment	
(ft)	(ft)	(ft)	(ft)		
500.0	500.0	0.0	0.0	KOP @ 500'	
800.7	800.2	-13.2	-8.6	EOB; Inc=6.01°	
5,074.9	5,050.8	-389.0	-252.3	Start Drop -2.00	
5,375.6	5,351.0	-402.2	-260.8	EOD; Inc=0°	
11,425.8	11,401.0	-422.2	-295.5	TD at 11425.8	

Berry Petroleum Company (NAD 83)

Garfield County

G01 696 Pad

OM10B G01 696

DD

Plan #1

Anticollision Report

12 August, 2010

Cathedral Energy Services

Anticollision Report

Company:	Berry Petroleum Company (NAD 83)	Local Co-ordinate Reference:	Well OM10B G01 696
Project:	Garfield County	TVD Reference:	KBE @ 8352.0ft (Patterson 302)
Reference Site:	G01 696 Pad	MD Reference:	KBE @ 8352.0ft (Patterson 302)
Site Error:	0.0ft	North Reference:	True
Reference Well:	OM10B G01 696	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	DD	Database:	EDM 5000.1 US Multi Users DB
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Reference	Plan #1		
Filter type:	NO GLOBAL FILTER: Using user defined selection & filtering criteria		
Interpolation Method:	Stations	Error Model:	Systematic Ellipse
Depth Range:	Unlimited	Scan Method:	Closest Approach 3D
Results Limited by:	Maximum center-center distance of 100.0ft	Error Surface:	Elliptical Conic
Warning Levels Evaluated at:	2.00 Sigma		

Survey Tool Program		Date	8/12/2010		
From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description	
0.0	11,425.8	Plan #1 (DD)	MWD	Geolink MWD	

Summary						
Site Name	Reference Measured Depth (ft)	Offset Measured Depth (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Separation Factor	Warning
Offset Well - Wellbore - Design						
G01 696 Pad						
OM07C G01 696 - DD - Plan #1						Out of range
OM07D G01 696 - DD - Plan #1	500.0	500.0	49.7	48.0	29.340	CC, ES
OM07D G01 696 - DD - Plan #1	700.0	699.8	56.4	54.0	23.608	SF
OM08C G01 696 - DD - Plan #1	200.0	200.0	19.7	19.0	30.475	CC
OM08C G01 696 - DD - Plan #1	300.0	299.9	20.0	19.0	20.009	ES
OM08C G01 696 - DD - Plan #1	500.0	498.7	26.6	24.8	15.074	SF
OM08D G01 696 - DD - Plan #1	500.0	500.0	39.8	38.1	23.504	CC, ES
OM08D G01 696 - DD - Plan #1	600.0	599.4	42.1	40.1	20.625	SF
OM09A G01 696 - DD - Plan #1	271.8	271.8	9.8	8.9	10.864	CC
OM09A G01 696 - DD - Plan #1	300.0	300.0	9.8	8.8	9.818	ES
OM09A G01 696 - DD - Plan #1	400.0	399.7	11.5	10.1	8.404	SF
OM09B G01 696 - DD - Plan #1	200.0	200.0	10.2	9.6	15.843	CC, ES
OM09B G01 696 - DD - Plan #1	400.0	399.5	13.6	12.3	10.135	SF
OM09C G01 696 - DD - Plan #1	200.0	200.0	30.3	29.7	46.987	CC, ES
OM09C G01 696 - DD - Plan #1	600.0	595.0	50.5	48.5	24.419	SF
OM09D G01 696 - DD - Plan #1	200.0	200.0	20.1	19.5	31.144	CC, ES
OM09D G01 696 - DD - Plan #1	400.0	399.1	23.8	22.5	17.710	SF
OM10A G01 696 - DD - Plan #1	200.0	200.0	40.2	39.6	62.288	CC, ES
OM10A G01 696 - DD - Plan #1	700.0	689.5	75.4	73.0	31.615	SF
OM10C G01 696 - DD - Plan #1	200.0	200.0	50.1	49.5	77.589	CC, ES
OM10C G01 696 - DD - Plan #1	800.7	788.3	94.4	91.6	34.625	SF
OM10D G01 696 - DD - Plan #1	200.0	200.0	60.3	59.7	93.438	CC, ES
OM10D G01 696 - DD - Plan #1	700.0	686.0	96.1	93.7	40.567	SF

Cathedral Energy Services

Anticollision Report

Company:	Berry Petroleum Company (NAD 83)	Local Co-ordinate Reference:	Well OM10B G01 696
Project:	Garfield County	TVD Reference:	KBE @ 8352.0ft (Patterson 302)
Reference Site:	G01 696 Pad	MD Reference:	KBE @ 8352.0ft (Patterson 302)
Site Error:	0.0ft	North Reference:	True
Reference Well:	OM10B G01 696	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	DD	Database:	EDM 5000.1 US Multi Users DB
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Offset Design G01 696 Pad - OM07D G01 696 - DD - Plan #1												Offset Site Error:	0.0 ft
Survey Program: 0-MWD												Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance						
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
0.0	0.0	0.0	0.0	0.0	0.0	16.15	47.7	13.8	49.7				
100.0	100.0	100.0	100.0	0.1	0.1	16.15	47.7	13.8	49.7	49.4	0.30	167.412	
200.0	200.0	200.0	200.0	0.3	0.3	16.15	47.7	13.8	49.7	49.0	0.65	76.919	
300.0	300.0	300.0	300.0	0.5	0.5	16.15	47.7	13.8	49.7	48.7	0.99	49.930	
400.0	400.0	400.0	400.0	0.7	0.7	16.15	47.7	13.8	49.7	48.3	1.34	36.961	
500.0	500.0	500.0	500.0	0.8	0.8	16.15	47.7	13.8	49.7	48.0	1.69	29.340 CC, ES	
600.0	600.0	600.0	600.0	1.0	1.0	163.74	47.7	13.8	51.3	49.3	2.04	25.152	
700.0	699.8	699.8	699.8	1.2	1.2	165.20	47.7	13.8	56.4	54.0	2.39	23.608 SF	
800.7	800.2	800.2	800.2	1.4	1.4	167.14	47.7	13.8	64.9	62.2	2.74	23.730	
900.0	898.9	898.9	898.9	1.6	1.5	168.91	47.7	13.8	75.1	72.0	3.08	24.365	
1,000.0	998.4	998.4	998.4	1.9	1.7	170.26	47.7	13.8	85.4	82.0	3.43	24.892	
1,100.0	1,097.8	1,095.9	1,095.8	2.1	1.9	170.53	49.1	13.0	96.7	93.0	3.78	25.606	

Cathedral Energy Services

Anticollision Report

Company:	Berry Petroleum Company (NAD 83)	Local Co-ordinate Reference:	Well OM10B G01 696
Project:	Garfield County	TVD Reference:	KBE @ 8352.0ft (Patterson 302)
Reference Site:	G01 696 Pad	MD Reference:	KBE @ 8352.0ft (Patterson 302)
Site Error:	0.0ft	North Reference:	True
Reference Well:	OM10B G01 696	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	DD	Database:	EDM 5000.1 US Multi Users DB
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Offset Design G01 696 Pad - OM08C G01 696 - DD - Plan #1												Offset Site Error:	0.0 ft
Survey Program: 0-MWD												Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance						
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
0.0	0.0	0.0	0.0	0.0	0.0	15.80	18.9	5.4	19.7				
100.0	100.0	100.0	100.0	0.1	0.1	15.80	18.9	5.4	19.7	19.4	0.30	66.327	
200.0	200.0	200.0	200.0	0.3	0.3	15.80	18.9	5.4	19.7	19.0	0.65	30.475 CC	
300.0	300.0	299.9	299.9	0.5	0.5	20.76	18.7	7.1	20.0	19.0	1.00	20.009 ES	
400.0	400.0	399.5	399.3	0.7	0.7	34.36	17.9	12.2	21.7	20.3	1.37	15.843	
500.0	500.0	498.7	498.1	0.8	0.9	51.40	16.5	20.7	26.6	24.8	1.76	15.074 SF	
600.0	600.0	597.0	595.7	1.0	1.2	-148.65	14.7	32.5	37.4	35.3	2.09	17.875	
700.0	699.8	694.0	691.5	1.2	1.5	-142.18	12.4	47.3	54.9	52.5	2.45	22.381	
800.7	800.2	791.4	787.3	1.4	1.8	-139.52	9.7	64.8	77.9	75.1	2.83	27.509	

Cathedral Energy Services

Anticollision Report

Company:	Berry Petroleum Company (NAD 83)	Local Co-ordinate Reference:	Well OM10B G01 696
Project:	Garfield County	TVD Reference:	KBE @ 8352.0ft (Patterson 302)
Reference Site:	G01 696 Pad	MD Reference:	KBE @ 8352.0ft (Patterson 302)
Site Error:	0.0ft	North Reference:	True
Reference Well:	OM10B G01 696	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	DD	Database:	EDM 5000.1 US Multi Users DB
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Offset Design G01 696 Pad - OM08D G01 696 - DD - Plan #1												Offset Site Error:	0.0 ft
Survey Program: 0-MWD												Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis		Distance							
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
0.0	0.0	0.0	0.0	0.0	0.0	16.04	38.2	11.0	39.8				
100.0	100.0	100.0	100.0	0.1	0.1	16.04	38.2	11.0	39.8	39.5	0.30	134.110	
200.0	200.0	200.0	200.0	0.3	0.3	16.04	38.2	11.0	39.8	39.1	0.65	61.618	
300.0	300.0	300.0	300.0	0.5	0.5	16.04	38.2	11.0	39.8	38.8	0.99	39.998	
400.0	400.0	400.0	400.0	0.7	0.7	16.04	38.2	11.0	39.8	38.4	1.34	29.609	
500.0	500.0	500.0	500.0	0.8	0.8	16.04	38.2	11.0	39.8	38.1	1.69	23.504 CC, ES	
600.0	600.0	599.4	599.4	1.0	1.0	165.96	38.4	12.7	42.1	40.1	2.04	20.625 SF	
700.0	699.8	698.3	698.1	1.2	1.2	172.88	38.7	17.8	49.6	47.2	2.39	20.709	
800.7	800.2	796.7	796.2	1.4	1.4	-179.40	39.4	26.3	63.2	60.5	2.76	22.949	
900.0	898.9	892.4	891.1	1.6	1.6	-172.95	40.2	37.8	81.4	78.3	3.12	26.053	

Cathedral Energy Services

Anticollision Report

Company:	Berry Petroleum Company (NAD 83)	Local Co-ordinate Reference:	Well OM10B G01 696
Project:	Garfield County	TVD Reference:	KBE @ 8352.0ft (Patterson 302)
Reference Site:	G01 696 Pad	MD Reference:	KBE @ 8352.0ft (Patterson 302)
Site Error:	0.0ft	North Reference:	True
Reference Well:	OM10B G01 696	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	DD	Database:	EDM 5000.1 US Multi Users DB
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Offset Design G01 696 Pad - OM09A G01 696 - DD - Plan #1													Offset Site Error:	0.0 ft
Survey Program: 0-MWD													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance							
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning	
0.0	0.0	0.0	0.0	0.0	0.0	15.01	9.5	2.5	9.8					
100.0	100.0	100.0	100.0	0.1	0.1	15.01	9.5	2.5	9.8	9.5	0.30	33.030		
200.0	200.0	200.0	200.0	0.3	0.3	15.01	9.5	2.5	9.8	9.2	0.65	15.176		
271.8	271.8	271.8	271.8	0.4	0.5	20.27	9.2	3.4	9.8	8.9	0.90	10.864 CC		
300.0	300.0	300.0	300.0	0.5	0.5	25.23	8.9	4.2	9.8	8.8	1.00	9.818 ES		
400.0	400.0	399.7	399.6	0.7	0.7	52.11	7.1	9.1	11.5	10.1	1.37	8.404 SF		
500.0	500.0	499.0	498.5	0.8	0.9	76.67	4.1	17.2	17.7	15.9	1.76	10.087		
600.0	600.0	597.5	596.2	1.0	1.2	-125.46	-0.1	28.4	29.6	27.5	2.06	14.331		
700.0	699.8	694.7	692.3	1.2	1.5	-123.04	-5.3	42.5	46.9	44.5	2.43	19.316		
800.7	800.2	792.1	788.0	1.4	1.8	-123.35	-11.5	59.4	69.1	66.3	2.82	24.489		
900.0	898.9	888.6	882.7	1.6	2.2	-124.51	-17.9	76.6	92.3	89.1	3.23	28.589		

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Anticollision Report

Company:	Berry Petroleum Company (NAD 83)	Local Co-ordinate Reference:	Well OM10B G01 696
Project:	Garfield County	TVD Reference:	KBE @ 8352.0ft (Patterson 302)
Reference Site:	G01 696 Pad	MD Reference:	KBE @ 8352.0ft (Patterson 302)
Site Error:	0.0ft	North Reference:	True
Reference Well:	OM10B G01 696	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	DD	Database:	EDM 5000.1 US Multi Users DB
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Offset Design G01 696 Pad - OM09B G01 696 - DD - Plan #1													Offset Site Error:	0.0 ft
Survey Program: 0-MWD													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance					Separation Factor	Warning	
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Total Uncertainty Axis			
0.0	0.0	0.0	0.0	0.0	0.0	-164.00	-9.8	-2.8	10.2					
100.0	100.0	100.0	100.0	0.1	0.1	-164.00	-9.8	-2.8	10.2	9.9	0.30	34.481		
200.0	200.0	200.0	200.0	0.3	0.3	-164.00	-9.8	-2.8	10.2	9.6	0.65	15.843 CC, ES		
300.0	300.0	299.9	299.9	0.5	0.5	-173.06	-10.7	-1.3	10.8	9.8	1.00	10.808		
400.0	400.0	399.5	399.4	0.7	0.7	166.21	-13.2	3.2	13.6	12.3	1.34	10.135 SF		
500.0	500.0	498.7	498.1	0.8	0.9	148.29	-17.4	10.8	20.6	18.9	1.69	12.158		
600.0	600.0	597.1	595.8	1.0	1.2	-78.17	-23.2	21.2	31.3	29.3	2.05	15.260		
700.0	699.8	694.4	691.9	1.2	1.5	-89.31	-30.6	34.3	46.1	43.7	2.40	19.243		
800.7	800.2	791.0	786.8	1.4	1.8	-97.65	-39.4	50.2	65.7	63.0	2.77	23.704		
900.0	898.9	887.5	881.3	1.6	2.2	-103.33	-49.1	67.4	87.8	84.7	3.18	27.659		

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Anticollision Report

Company:	Berry Petroleum Company (NAD 83)	Local Co-ordinate Reference:	Well OM10B G01 696
Project:	Garfield County	TVD Reference:	KBE @ 8352.0ft (Patterson 302)
Reference Site:	G01 696 Pad	MD Reference:	KBE @ 8352.0ft (Patterson 302)
Site Error:	0.0ft	North Reference:	True
Reference Well:	OM10B G01 696	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	DD	Database:	EDM 5000.1 US Multi Users DB
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Offset Design G01 696 Pad - OM09C G01 696 - DD - Plan #1												Offset Site Error:	0.0 ft
Survey Program: 0-MWD												Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis		Distance							
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
0.0	0.0	0.0	0.0	0.0	0.0	-163.81	-29.1	-8.5	30.3				
100.0	100.0	100.0	100.0	0.1	0.1	-163.81	-29.1	-8.5	30.3	30.0	0.30	102.265	
200.0	200.0	200.0	200.0	0.3	0.3	-163.81	-29.1	-8.5	30.3	29.7	0.65	46.987 CC, ES	
300.0	300.0	299.3	299.3	0.5	0.5	-166.33	-30.5	-7.4	31.4	30.4	0.99	31.600	
400.0	400.0	398.4	398.3	0.7	0.7	-172.89	-34.6	-4.3	34.9	33.6	1.34	26.028	
500.0	500.0	497.0	496.5	0.8	0.9	178.88	-41.4	0.8	41.6	39.9	1.69	24.627	
600.0	600.0	595.0	593.8	1.0	1.2	-43.01	-50.8	7.9	50.5	48.5	2.07	24.419 SF	
700.0	699.8	692.2	689.8	1.2	1.5	-52.53	-62.8	17.0	61.4	59.0	2.42	25.426	
800.7	800.2	789.1	784.9	1.4	1.8	-61.66	-77.3	27.9	75.3	72.5	2.77	27.157	
900.0	898.9	883.4	876.9	1.6	2.2	-68.94	-93.9	40.4	93.0	89.8	3.14	29.568	

Cathedral Energy Services

Anticollision Report

Company:	Berry Petroleum Company (NAD 83)	Local Co-ordinate Reference:	Well OM10B G01 696
Project:	Garfield County	TVD Reference:	KBE @ 8352.0ft (Patterson 302)
Reference Site:	G01 696 Pad	MD Reference:	KBE @ 8352.0ft (Patterson 302)
Site Error:	0.0ft	North Reference:	True
Reference Well:	OM10B G01 696	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	DD	Database:	EDM 5000.1 US Multi Users DB
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Offset Design G01 696 Pad - OM09D G01 696 - DD - Plan #1												Offset Site Error:	0.0 ft
Survey Program: 0-MWD												Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	
0.0	0.0	0.0	0.0	0.0	0.0	-163.72	-19.3	-5.6	20.1				
100.0	100.0	100.0	100.0	0.1	0.1	-163.72	-19.3	-5.6	20.1	19.8	0.30	67.784	
200.0	200.0	200.0	200.0	0.3	0.3	-163.72	-19.3	-5.6	20.1	19.5	0.65	31.144 CC, ES	
300.0	300.0	299.7	299.7	0.5	0.5	-168.06	-20.4	-4.3	20.9	19.9	1.00	20.985	
400.0	400.0	399.1	398.9	0.7	0.7	-179.11	-23.8	-0.4	23.8	22.5	1.34	17.710 SF	
500.0	500.0	498.1	497.5	0.8	0.9	168.14	-29.3	6.2	30.1	28.4	1.69	17.799	
600.0	600.0	596.3	595.1	1.0	1.2	-57.20	-37.0	15.2	39.4	37.3	2.07	19.031	
700.0	699.8	693.6	691.2	1.2	1.5	-69.04	-46.8	26.7	51.8	49.4	2.41	21.469	
800.7	800.2	790.4	786.2	1.4	1.8	-79.07	-58.6	40.5	68.3	65.5	2.77	24.619	
900.0	898.9	884.5	878.0	1.6	2.2	-86.18	-72.0	56.3	89.0	85.9	3.16	28.187	

Cathedral Energy Services

Anticollision Report

Company:	Berry Petroleum Company (NAD 83)	Local Co-ordinate Reference:	Well OM10B G01 696
Project:	Garfield County	TVD Reference:	KBE @ 8352.0ft (Patterson 302)
Reference Site:	G01 696 Pad	MD Reference:	KBE @ 8352.0ft (Patterson 302)
Site Error:	0.0ft	North Reference:	True
Reference Well:	OM10B G01 696	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	DD	Database:	EDM 5000.1 US Multi Users DB
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Offset Design G01 696 Pad - OM10A G01 696 - DD - Plan #1												Offset Site Error:	0.0 ft
Survey Program: 0-MWD												Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance						
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
0.0	0.0	0.0	0.0	0.0	0.0	-163.72	-38.6	-11.3	40.2				
100.0	100.0	100.0	100.0	0.1	0.1	-163.72	-38.6	-11.3	40.2	39.9	0.30	135.567	
200.0	200.0	200.0	200.0	0.3	0.3	-163.72	-38.6	-11.3	40.2	39.6	0.65	62.288 CC, ES	
300.0	300.0	298.7	298.7	0.5	0.5	-164.61	-40.3	-11.1	41.8	40.8	0.99	42.128	
400.0	400.0	397.1	397.0	0.7	0.7	-166.92	-45.3	-10.5	46.7	45.3	1.34	34.810	
500.0	500.0	495.1	494.6	0.8	0.9	-169.85	-53.7	-9.6	54.8	53.1	1.69	32.431	
600.0	600.0	592.6	591.3	1.0	1.2	-26.26	-65.3	-8.3	64.8	62.8	2.04	31.815	
700.0	699.8	689.5	687.2	1.2	1.5	-30.43	-80.1	-6.7	75.4	73.0	2.38	31.615 SF	
800.7	800.2	786.7	782.6	1.4	1.8	-34.99	-98.1	-4.7	86.8	84.0	2.74	31.714	
900.0	898.9	883.7	877.4	1.6	2.2	-39.22	-118.7	-2.5	99.8	96.7	3.10	32.195	

Cathedral Energy Services

Anticollision Report

Company:	Berry Petroleum Company (NAD 83)	Local Co-ordinate Reference:	Well OM10B G01 696
Project:	Garfield County	TVD Reference:	KBE @ 8352.0ft (Patterson 302)
Reference Site:	G01 696 Pad	MD Reference:	KBE @ 8352.0ft (Patterson 302)
Site Error:	0.0ft	North Reference:	True
Reference Well:	OM10B G01 696	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	DD	Database:	EDM 5000.1 US Multi Users DB
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Offset Design G01 696 Pad - OM10C G01 696 - DD - Plan #1													Offset Site Error:	0.0 ft
Survey Program: 0-MWD													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance					Separation Factor	Warning	
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Total Uncertainty Axis			
0.0	0.0	0.0	0.0	0.0	0.0	-163.66	-48.1	-14.1	50.1					
100.0	100.0	100.0	100.0	0.1	0.1	-163.66	-48.1	-14.1	50.1	49.8	0.30	168.870		
200.0	200.0	200.0	200.0	0.3	0.3	-163.66	-48.1	-14.1	50.1	49.5	0.65	77.589 CC, ES		
300.0	300.0	298.2	298.2	0.5	0.5	-163.65	-49.7	-14.6	51.8	50.8	0.99	52.192		
400.0	400.0	396.3	396.1	0.7	0.7	-163.62	-54.5	-16.0	57.0	55.6	1.34	42.362		
500.0	500.0	493.8	493.3	0.8	0.9	-163.59	-62.5	-18.4	65.5	63.8	1.70	38.431		
600.0	600.0	590.9	589.7	1.0	1.2	-16.83	-73.6	-21.7	75.8	73.7	2.03	37.386		
700.0	699.8	688.0	685.6	1.2	1.5	-17.66	-87.8	-26.0	86.0	83.7	2.37	36.291		
800.7	800.2	788.3	784.6	1.4	1.8	-18.98	-103.6	-30.7	94.4	91.6	2.73	34.625 SF		

Cathedral Energy Services

Anticollision Report

Company:	Berry Petroleum Company (NAD 83)	Local Co-ordinate Reference:	Well OM10B G01 696
Project:	Garfield County	TVD Reference:	KBE @ 8352.0ft (Patterson 302)
Reference Site:	G01 696 Pad	MD Reference:	KBE @ 8352.0ft (Patterson 302)
Site Error:	0.0ft	North Reference:	True
Reference Well:	OM10B G01 696	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	DD	Database:	EDM 5000.1 US Multi Users DB
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Offset Design G01 696 Pad - OM10D G01 696 - DD - Plan #1													Offset Site Error:	0.0 ft
Survey Program: 0-MWD													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance					Separation Factor	Warning	
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Total Uncertainty Axis			
0.0	0.0	0.0	0.0	0.0	0.0	-163.72	-57.9	-16.9	60.3					
100.0	100.0	100.0	100.0	0.1	0.1	-163.72	-57.9	-16.9	60.3	60.0	0.30	203.365		
200.0	200.0	200.0	200.0	0.3	0.3	-163.72	-57.9	-16.9	60.3	59.7	0.65	93.438 CC, ES		
300.0	300.0	297.9	297.9	0.5	0.5	-163.91	-59.6	-17.2	62.0	61.0	0.99	62.542		
400.0	400.0	395.6	395.5	0.7	0.7	-164.44	-64.5	-18.0	67.1	65.8	1.34	50.055		
500.0	500.0	492.8	492.3	0.8	0.9	-165.16	-72.7	-19.3	75.6	73.9	1.70	44.572		
600.0	600.0	589.6	588.4	1.0	1.2	-19.20	-84.0	-21.1	85.8	83.8	2.03	42.352		
700.0	699.8	686.0	683.6	1.2	1.5	-20.85	-98.5	-23.4	96.1	93.7	2.37	40.567 SF		

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Anticollision Report

Company:	Berry Petroleum Company (NAD 83)	Local Co-ordinate Reference:	Well OM10B G01 696
Project:	Garfield County	TVD Reference:	KBE @ 8352.0ft (Patterson 302)
Reference Site:	G01 696 Pad	MD Reference:	KBE @ 8352.0ft (Patterson 302)
Site Error:	0.0ft	North Reference:	True
Reference Well:	OM10B G01 696	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	DD	Database:	EDM 5000.1 US Multi Users DB
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Reference Depths are relative to KBE @ 8352.0ft (Patterson 302)
 Offset Depths are relative to Offset Datum
 Central Meridian is -105.500000 °

Coordinates are relative to: OM10B G01 696
 Coordinate System is US State Plane 1983, Colorado Central Zone
 Grid Convergence at Surface is: -1.61°

