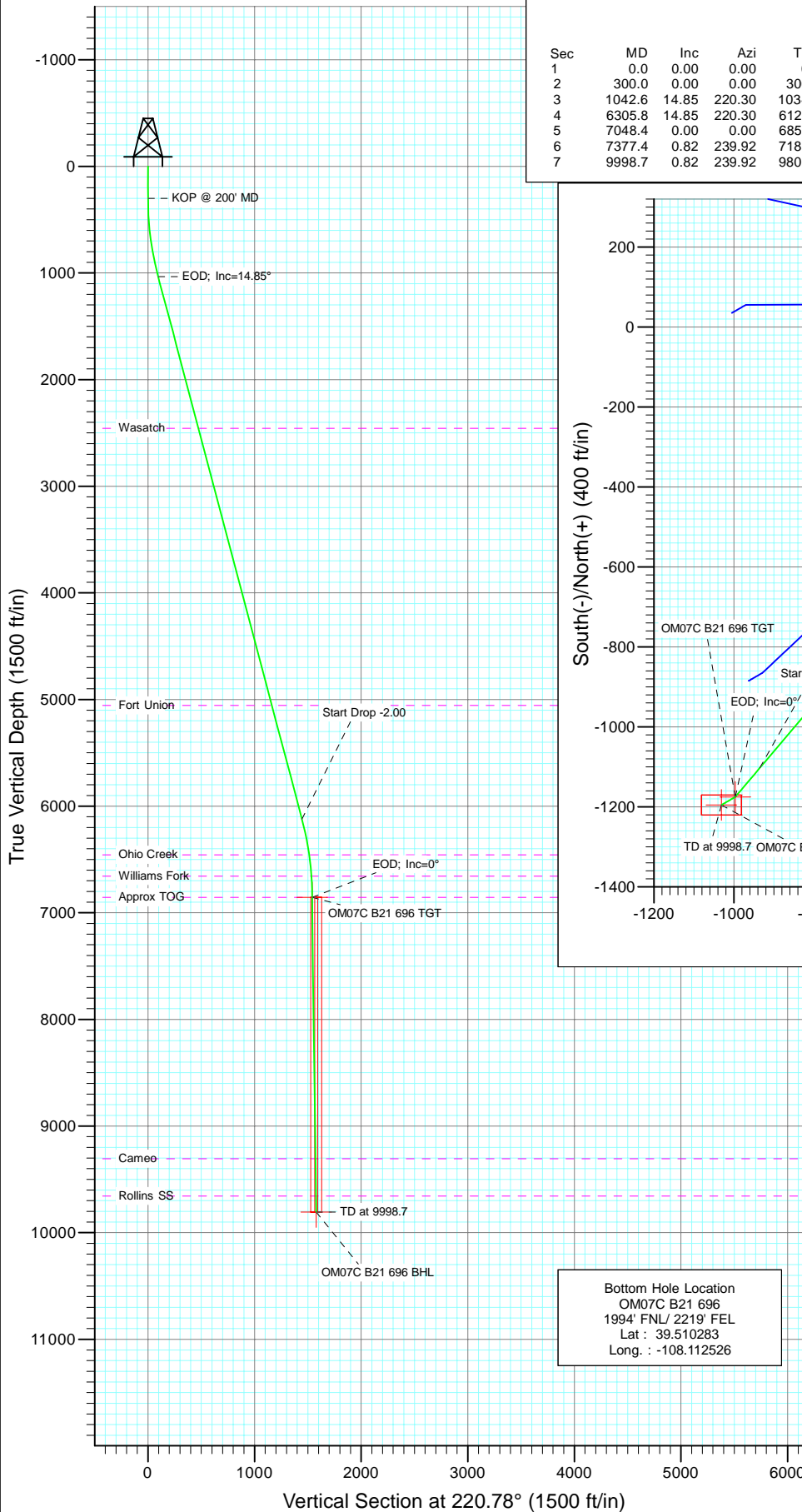
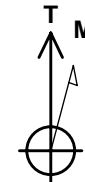
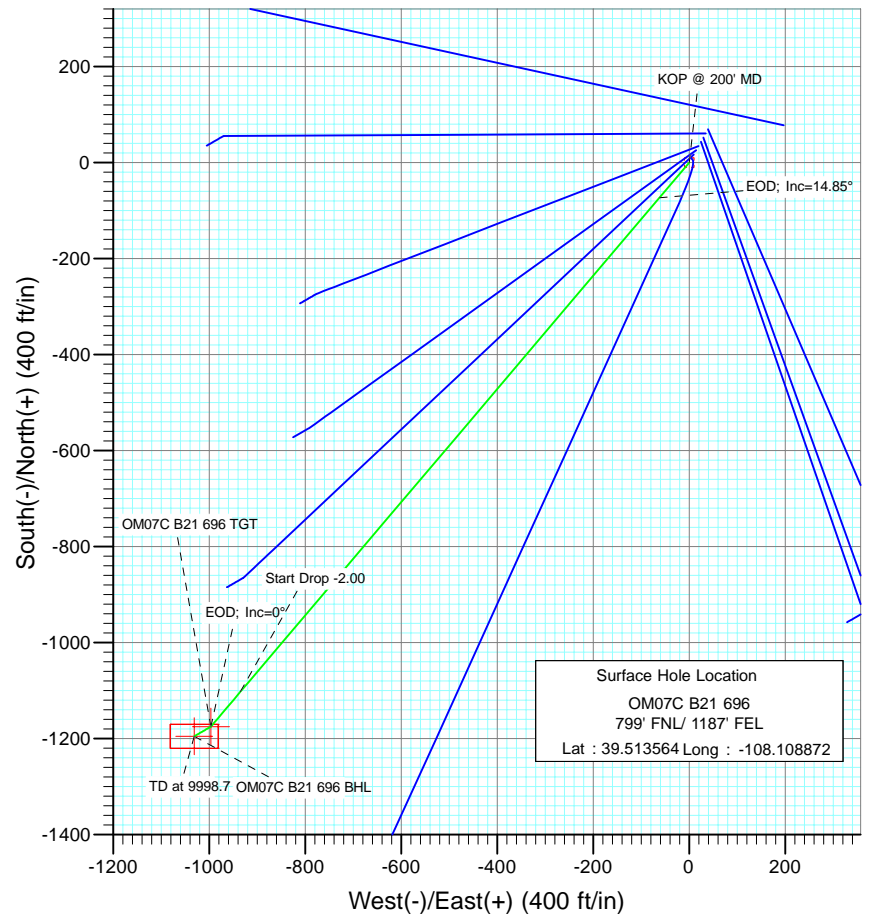


Project: Garfield County
 Site: NENE S21-T6S-R96W (B21 696 Pad)
 Well: OM07C B21 696
 Wellbore: DD
 Design: Plan #1



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	300.0	0.00	0.00	300.0	0.0	0.0	0.00	0.00	0.0	
3	1042.6	14.85	220.30	1034.3	-73.0	-61.9	2.00	220.30	95.7	
4	6305.8	14.85	220.30	6121.7	-1102.0	-934.4	0.00	0.00	1444.8	
5	7048.4	0.00	0.00	6856.0	-1175.0	-996.4	2.00	180.00	1540.5	OM07C B21 696 TGT
6	7377.4	0.82	239.92	7185.0	-1176.2	-998.4	0.25	239.92	1542.7	
7	9998.7	0.82	239.92	9806.0	-1195.0	-1031.0	0.00	0.00	1578.3	OM07C B21 696 BHL



Azimuths to True North
 Magnetic North: 10.45°
 Magnetic Field
 Strength: 52312.3snT
 Dip Angle: 65.76°
 Date: 11/30/2010
 Model: IGRF200510

FORMATION TOP DETAILS

TVDPath	MDPath	Formation
2456.0	2513.4	Wasatch
5056.0	5203.3	Fort Union
6456.0	6647.1	Ohio Creek
6656.0	6848.3	Williams Fork
6856.0	7048.4	Approx TOG
9306.0	9498.7	Cameo
9656.0	9848.7	Rollins SS

DESIGN DETAILS: Plan #1

1055XX; BH
 KBE @ 8293.0ft (Original Well Elev)

Target	Azimuth	Origin	N/S	E/W	From TVD
OM07C B21 696 BHL	220.78	Slot	0.0	0.0	0.0

Bottom Hole Location
 OM07C B21 696
 1994' FNL/ 2219' FEL
 Lat : 39.510283
 Long. : -108.112526

Cathedral Energy Services

Planning Report

Database:	EDM 5000.1 US Multi Users DB	Local Co-ordinate Reference:	Well OM07C B21 696
Company:	Berry Petroleum Company (NAD 83)	TVD Reference:	KBE @ 8293.0ft (Original Well Elev)
Project:	Garfield County	MD Reference:	KBE @ 8293.0ft (Original Well Elev)
Site:	NENE S21-T6S-R96W (B21 696 Pad)	North Reference:	True
Well:	OM07C B21 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		NENE S21-T6S-R96W (B21 696 Pad)			
Site Position:		Northing:	1,622,587.75 ft	Latitude:	39.513778
From:	Lat/Long	Easting:	2,264,263.59 ft	Longitude:	-108.108174
Position Uncertainty:	0.0 ft	Slot Radius:	13.200 in	Grid Convergence:	-1.64 °

Well	OM07C B21 696					
Well Position	+N/-S	0.0 ft	Northing:	1,622,515.48 ft	Latitude:	39.513564
	+E/-W	0.0 ft	Easting:	2,264,064.50 ft	Longitude:	-108.108872
Position Uncertainty		0.0 ft	Wellhead Elevation:	ft	Ground Level:	8,278.0 ft

Wellbore	DD				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF200510	11/30/2010	10.45	65.76	52,312

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	220.78

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	
300.0	0.00	0.00	300.0	0.0	0.0	0.00	0.00	0.00	0.00	
1,042.6	14.85	220.30	1,034.3	-73.0	-61.9	2.00	2.00	0.00	220.30	
6,305.8	14.85	220.30	6,121.7	-1,102.0	-934.4	0.00	0.00	0.00	0.00	
7,048.4	0.00	0.00	6,856.0	-1,175.0	-996.4	2.00	-2.00	0.00	180.00	OM07C B21 696 TGT
7,377.4	0.82	239.92	7,185.0	-1,176.2	-998.4	0.25	0.25	-36.50	239.92	
9,998.7	0.82	239.92	9,806.0	-1,195.0	-1,031.0	0.00	0.00	0.00	0.00	OM07C B21 696 BHL

Cathedral Energy Services

Planning Report

Database:	EDM 5000.1 US Multi Users DB	Local Co-ordinate Reference:	Well OM07C B21 696
Company:	Berry Petroleum Company (NAD 83)	TVD Reference:	KBE @ 8293.0ft (Original Well Elev)
Project:	Garfield County	MD Reference:	KBE @ 8293.0ft (Original Well Elev)
Site:	NENE S21-T6S-R96W (B21 696 Pad)	North Reference:	True
Well:	OM07C B21 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	KOP @ 200' MD
330.0	0.60	220.30	330.0	-0.1	-0.1	0.2	2.00	2.00	
360.0	1.20	220.30	360.0	-0.5	-0.4	0.6	2.00	2.00	
390.0	1.80	220.30	390.0	-1.1	-0.9	1.4	2.00	2.00	
420.0	2.40	220.30	420.0	-1.9	-1.6	2.5	2.00	2.00	
450.0	3.00	220.30	449.9	-3.0	-2.5	3.9	2.00	2.00	
480.0	3.60	220.30	479.9	-4.3	-3.7	5.7	2.00	2.00	
510.0	4.20	220.30	509.8	-5.9	-5.0	7.7	2.00	2.00	
540.0	4.80	220.30	539.7	-7.7	-6.5	10.0	2.00	2.00	
570.0	5.40	220.30	569.6	-9.7	-8.2	12.7	2.00	2.00	
600.0	6.00	220.30	599.5	-12.0	-10.1	15.7	2.00	2.00	
630.0	6.60	220.30	629.3	-14.5	-12.3	19.0	2.00	2.00	
660.0	7.20	220.30	659.1	-17.2	-14.6	22.6	2.00	2.00	
690.0	7.80	220.30	688.8	-20.2	-17.1	26.5	2.00	2.00	
720.0	8.40	220.30	718.5	-23.4	-19.9	30.7	2.00	2.00	
750.0	9.00	220.30	748.2	-26.9	-22.8	35.3	2.00	2.00	
780.0	9.60	220.30	777.8	-30.6	-25.9	40.1	2.00	2.00	
810.0	10.20	220.30	807.3	-34.5	-29.3	45.3	2.00	2.00	
840.0	10.80	220.30	836.8	-38.7	-32.8	50.7	2.00	2.00	
870.0	11.40	220.30	866.2	-43.1	-36.6	56.5	2.00	2.00	
900.0	12.00	220.30	895.6	-47.7	-40.5	62.6	2.00	2.00	
930.0	12.60	220.30	924.9	-52.6	-44.6	69.0	2.00	2.00	
960.0	13.20	220.30	954.2	-57.7	-49.0	75.7	2.00	2.00	
990.0	13.80	220.30	983.3	-63.1	-53.5	82.7	2.00	2.00	
1,020.0	14.40	220.30	1,012.4	-68.6	-58.2	90.0	2.00	2.00	
1,042.6	14.85	220.30	1,034.3	-73.0	-61.9	95.7	2.00	2.00	EOD; Inc=14.85°
1,050.0	14.85	220.30	1,041.5	-74.4	-63.1	97.6	0.00	0.00	
1,080.0	14.85	220.30	1,070.5	-80.3	-68.1	105.3	0.00	0.00	
1,110.0	14.85	220.30	1,099.5	-86.2	-73.1	113.0	0.00	0.00	
1,140.0	14.85	220.30	1,128.5	-92.0	-78.0	120.7	0.00	0.00	
1,170.0	14.85	220.30	1,157.5	-97.9	-83.0	128.4	0.00	0.00	
1,200.0	14.85	220.30	1,186.5	-103.8	-88.0	136.1	0.00	0.00	
1,230.0	14.85	220.30	1,215.5	-109.6	-93.0	143.7	0.00	0.00	
1,260.0	14.85	220.30	1,244.4	-115.5	-97.9	151.4	0.00	0.00	
1,290.0	14.85	220.30	1,273.4	-121.4	-102.9	159.1	0.00	0.00	
1,320.0	14.85	220.30	1,302.4	-127.2	-107.9	166.8	0.00	0.00	
1,350.0	14.85	220.30	1,331.4	-133.1	-112.9	174.5	0.00	0.00	
1,380.0	14.85	220.30	1,360.4	-139.0	-117.8	182.2	0.00	0.00	
1,410.0	14.85	220.30	1,389.4	-144.8	-122.8	189.9	0.00	0.00	
1,440.0	14.85	220.30	1,418.4	-150.7	-127.8	197.6	0.00	0.00	
1,470.0	14.85	220.30	1,447.4	-156.6	-132.8	205.3	0.00	0.00	
1,500.0	14.85	220.30	1,476.4	-162.4	-137.7	212.9	0.00	0.00	

Cathedral Energy Services

Planning Report

Database:	EDM 5000.1 US Multi Users DB	Local Co-ordinate Reference:	Well OM07C B21 696
Company:	Berry Petroleum Company (NAD 83)	TVD Reference:	KBE @ 8293.0ft (Original Well Elev)
Project:	Garfield County	MD Reference:	KBE @ 8293.0ft (Original Well Elev)
Site:	NENE S21-T6S-R96W (B21 696 Pad)	North Reference:	True
Well:	OM07C B21 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
1,530.0	14.85	220.30	1,505.4	-168.3	-142.7	220.6	0.00	0.00	
1,560.0	14.85	220.30	1,534.4	-174.2	-147.7	228.3	0.00	0.00	
1,590.0	14.85	220.30	1,563.4	-180.0	-152.6	236.0	0.00	0.00	
1,620.0	14.85	220.30	1,592.4	-185.9	-157.6	243.7	0.00	0.00	
1,650.0	14.85	220.30	1,621.4	-191.7	-162.6	251.4	0.00	0.00	
1,680.0	14.85	220.30	1,650.4	-197.6	-167.6	259.1	0.00	0.00	
1,710.0	14.85	220.30	1,679.4	-203.5	-172.5	266.8	0.00	0.00	
1,740.0	14.85	220.30	1,708.4	-209.3	-177.5	274.5	0.00	0.00	
1,770.0	14.85	220.30	1,737.4	-215.2	-182.5	282.2	0.00	0.00	
1,800.0	14.85	220.30	1,766.4	-221.1	-187.5	289.8	0.00	0.00	
1,830.0	14.85	220.30	1,795.4	-226.9	-192.4	297.5	0.00	0.00	
1,860.0	14.85	220.30	1,824.4	-232.8	-197.4	305.2	0.00	0.00	
1,890.0	14.85	220.30	1,853.4	-238.7	-202.4	312.9	0.00	0.00	
1,920.0	14.85	220.30	1,882.4	-244.5	-207.4	320.6	0.00	0.00	
1,950.0	14.85	220.30	1,911.4	-250.4	-212.3	328.3	0.00	0.00	
1,980.0	14.85	220.30	1,940.4	-256.3	-217.3	336.0	0.00	0.00	
2,010.0	14.85	220.30	1,969.4	-262.1	-222.3	343.7	0.00	0.00	
2,040.0	14.85	220.30	1,998.4	-268.0	-227.3	351.4	0.00	0.00	
2,070.0	14.85	220.30	2,027.4	-273.9	-232.2	359.1	0.00	0.00	
2,100.0	14.85	220.30	2,056.4	-279.7	-237.2	366.7	0.00	0.00	
2,130.0	14.85	220.30	2,085.4	-285.6	-242.2	374.4	0.00	0.00	
2,160.0	14.85	220.30	2,114.4	-291.5	-247.1	382.1	0.00	0.00	
2,190.0	14.85	220.30	2,143.4	-297.3	-252.1	389.8	0.00	0.00	
2,220.0	14.85	220.30	2,172.4	-303.2	-257.1	397.5	0.00	0.00	
2,250.0	14.85	220.30	2,201.4	-309.1	-262.1	405.2	0.00	0.00	
2,280.0	14.85	220.30	2,230.4	-314.9	-267.0	412.9	0.00	0.00	
2,310.0	14.85	220.30	2,259.4	-320.8	-272.0	420.6	0.00	0.00	
2,340.0	14.85	220.30	2,288.4	-326.7	-277.0	428.3	0.00	0.00	
2,370.0	14.85	220.30	2,317.4	-332.5	-282.0	436.0	0.00	0.00	
2,400.0	14.85	220.30	2,346.4	-338.4	-286.9	443.6	0.00	0.00	
2,430.0	14.85	220.30	2,375.4	-344.2	-291.9	451.3	0.00	0.00	
2,460.0	14.85	220.30	2,404.4	-350.1	-296.9	459.0	0.00	0.00	
2,490.0	14.85	220.30	2,433.4	-356.0	-301.9	466.7	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									
OM07C B21 696 BHL	0.00	0.00	9,806.0	-1,195.0	-1,031.0	1,621,350.53	2,262,999.66	39.510283	-108.112526
- plan misses target center by 7456.0ft at 2490.0ft MD (2433.4 TVD, -356.0 N, -301.9 E)									
- Rectangle (sides W50.0 H100.0 D0.0)									
OM07C B21 696 TGT	0.00	0.00	6,856.0	-1,175.0	-996.4	1,621,369.57	2,263,034.83	39.510338	-108.112403
- plan misses target center by 4551.1ft at 2490.0ft MD (2433.4 TVD, -356.0 N, -301.9 E)									
- Point									

Cathedral Energy Services

Planning Report

Database:	EDM 5000.1 US Multi Users DB	Local Co-ordinate Reference:	Well OM07C B21 696
Company:	Berry Petroleum Company (NAD 83)	TVD Reference:	KBE @ 8293.0ft (Original Well Elev)
Project:	Garfield County	MD Reference:	KBE @ 8293.0ft (Original Well Elev)
Site:	NENE S21-T6S-R96W (B21 696 Pad)	North Reference:	True
Well:	OM07C B21 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	14.85	220.30	2,443.0	-357.9	-303.5	469.3	0.00	0.00	
2,513.4	14.85	220.30	2,456.0	-360.6	-305.7	472.7	0.00	0.00	Wasatch
2,600.0	14.85	220.30	2,539.7	-377.5	-320.1	494.9	0.00	0.00	
2,700.0	14.85	220.30	2,636.3	-397.0	-336.7	520.5	0.00	0.00	
2,800.0	14.85	220.30	2,733.0	-416.6	-353.2	546.2	0.00	0.00	
2,900.0	14.85	220.30	2,829.7	-436.1	-369.8	571.8	0.00	0.00	
3,000.0	14.85	220.30	2,926.3	-455.7	-386.4	597.4	0.00	0.00	
3,100.0	14.85	220.30	3,023.0	-475.2	-403.0	623.1	0.00	0.00	
3,200.0	14.85	220.30	3,119.6	-494.8	-419.6	648.7	0.00	0.00	
3,300.0	14.85	220.30	3,216.3	-514.3	-436.1	674.3	0.00	0.00	
3,400.0	14.85	220.30	3,312.9	-533.9	-452.7	700.0	0.00	0.00	
3,500.0	14.85	220.30	3,409.6	-553.4	-469.3	725.6	0.00	0.00	
3,600.0	14.85	220.30	3,506.3	-573.0	-485.9	751.2	0.00	0.00	
3,700.0	14.85	220.30	3,602.9	-592.5	-502.4	776.9	0.00	0.00	
3,800.0	14.85	220.30	3,699.6	-612.1	-519.0	802.5	0.00	0.00	
3,900.0	14.85	220.30	3,796.2	-631.6	-535.6	828.1	0.00	0.00	
4,000.0	14.85	220.30	3,892.9	-651.2	-552.2	853.8	0.00	0.00	
4,100.0	14.85	220.30	3,989.6	-670.7	-568.8	879.4	0.00	0.00	
4,200.0	14.85	220.30	4,086.2	-690.3	-585.3	905.0	0.00	0.00	
4,300.0	14.85	220.30	4,182.9	-709.8	-601.9	930.7	0.00	0.00	
4,400.0	14.85	220.30	4,279.5	-729.4	-618.5	956.3	0.00	0.00	
4,500.0	14.85	220.30	4,376.2	-748.9	-635.1	981.9	0.00	0.00	
4,600.0	14.85	220.30	4,472.9	-768.5	-651.7	1,007.6	0.00	0.00	
4,700.0	14.85	220.30	4,569.5	-788.0	-668.2	1,033.2	0.00	0.00	
4,800.0	14.85	220.30	4,666.2	-807.6	-684.8	1,058.8	0.00	0.00	
4,900.0	14.85	220.30	4,762.8	-827.2	-701.4	1,084.5	0.00	0.00	
5,000.0	14.85	220.30	4,859.5	-846.7	-718.0	1,110.1	0.00	0.00	
5,100.0	14.85	220.30	4,956.1	-866.3	-734.5	1,135.7	0.00	0.00	
5,200.0	14.85	220.30	5,052.8	-885.8	-751.1	1,161.4	0.00	0.00	
5,203.3	14.85	220.30	5,056.0	-886.4	-751.7	1,162.2	0.00	0.00	Fort Union
5,300.0	14.85	220.30	5,149.5	-905.4	-767.7	1,187.0	0.00	0.00	
5,400.0	14.85	220.30	5,246.1	-924.9	-784.3	1,212.6	0.00	0.00	
5,500.0	14.85	220.30	5,342.8	-944.5	-800.9	1,238.2	0.00	0.00	
5,600.0	14.85	220.30	5,439.4	-964.0	-817.4	1,263.9	0.00	0.00	
5,700.0	14.85	220.30	5,536.1	-983.6	-834.0	1,289.5	0.00	0.00	
5,800.0	14.85	220.30	5,632.8	-1,003.1	-850.6	1,315.1	0.00	0.00	
5,900.0	14.85	220.30	5,729.4	-1,022.7	-867.2	1,340.8	0.00	0.00	
6,000.0	14.85	220.30	5,826.1	-1,042.2	-883.7	1,366.4	0.00	0.00	
6,100.0	14.85	220.30	5,922.7	-1,061.8	-900.3	1,392.0	0.00	0.00	
6,200.0	14.85	220.30	6,019.4	-1,081.3	-916.9	1,417.7	0.00	0.00	
6,300.0	14.85	220.30	6,116.1	-1,100.9	-933.5	1,443.3	0.00	0.00	
6,305.8	14.85	220.30	6,121.7	-1,102.0	-934.4	1,444.8	0.00	0.00	Start Drop -2.00
6,400.0	12.97	220.30	6,213.1	-1,119.3	-949.1	1,467.4	2.00	-2.00	
6,500.0	10.97	220.30	6,310.9	-1,135.1	-962.5	1,488.2	2.00	-2.00	
6,600.0	8.97	220.30	6,409.4	-1,148.3	-973.7	1,505.5	2.00	-2.00	
6,647.1	8.03	220.30	6,456.0	-1,153.6	-978.2	1,512.4	2.00	-2.00	Ohio Creek
6,700.0	6.97	220.30	6,508.4	-1,158.9	-982.7	1,519.3	2.00	-2.00	
6,800.0	4.97	220.30	6,607.9	-1,166.8	-989.4	1,529.7	2.00	-2.00	
6,848.3	4.00	220.30	6,656.0	-1,169.7	-991.8	1,533.5	2.00	-2.00	Williams Fork
6,900.0	2.97	220.30	6,707.6	-1,172.1	-993.9	1,536.7	2.00	-2.00	
7,000.0	0.97	220.30	6,807.6	-1,174.7	-996.1	1,540.1	2.00	-2.00	
7,048.4	0.00	0.00	6,856.0	-1,175.0	-996.4	1,540.5	2.00	-2.00	EOD; Inc=0° - Approx TOG - OM07C B21 696 1

Cathedral Energy Services

Planning Report

Database:	EDM 5000.1 US Multi Users DB	Local Co-ordinate Reference:	Well OM07C B21 696
Company:	Berry Petroleum Company (NAD 83)	TVD Reference:	KBE @ 8293.0ft (Original Well Elev)
Project:	Garfield County	MD Reference:	KBE @ 8293.0ft (Original Well Elev)
Site:	NENE S21-T6S-R96W (B21 696 Pad)	North Reference:	True
Well:	OM07C B21 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
7,100.0	0.13	239.92	6,907.6	-1,175.0	-996.4	1,540.6	0.25	0.25	
7,200.0	0.38	239.92	7,007.6	-1,175.3	-996.8	1,541.0	0.25	0.25	
7,300.0	0.63	239.92	7,107.6	-1,175.7	-997.5	1,541.8	0.25	0.25	
7,377.4	0.82	239.92	7,185.0	-1,176.2	-998.4	1,542.7	0.25	0.25	
7,400.0	0.82	239.92	7,207.6	-1,176.3	-998.7	1,543.0	0.00	0.00	
7,500.0	0.82	239.92	7,307.5	-1,177.1	-999.9	1,544.4	0.00	0.00	
7,600.0	0.82	239.92	7,407.5	-1,177.8	-1,001.2	1,545.8	0.00	0.00	
7,700.0	0.82	239.92	7,507.5	-1,178.5	-1,002.4	1,547.1	0.00	0.00	
7,800.0	0.82	239.92	7,607.5	-1,179.2	-1,003.6	1,548.5	0.00	0.00	
7,900.0	0.82	239.92	7,707.5	-1,179.9	-1,004.9	1,549.8	0.00	0.00	
8,000.0	0.82	239.92	7,807.5	-1,180.7	-1,006.1	1,551.2	0.00	0.00	
8,100.0	0.82	239.92	7,907.5	-1,181.4	-1,007.4	1,552.5	0.00	0.00	
8,200.0	0.82	239.92	8,007.5	-1,182.1	-1,008.6	1,553.9	0.00	0.00	
8,300.0	0.82	239.92	8,107.5	-1,182.8	-1,009.9	1,555.3	0.00	0.00	
8,400.0	0.82	239.92	8,207.5	-1,183.5	-1,011.1	1,556.6	0.00	0.00	
8,500.0	0.82	239.92	8,307.4	-1,184.3	-1,012.3	1,558.0	0.00	0.00	
8,600.0	0.82	239.92	8,407.4	-1,185.0	-1,013.6	1,559.3	0.00	0.00	
8,700.0	0.82	239.92	8,507.4	-1,185.7	-1,014.8	1,560.7	0.00	0.00	
8,800.0	0.82	239.92	8,607.4	-1,186.4	-1,016.1	1,562.0	0.00	0.00	
8,900.0	0.82	239.92	8,707.4	-1,187.1	-1,017.3	1,563.4	0.00	0.00	
9,000.0	0.82	239.92	8,807.4	-1,187.9	-1,018.5	1,564.7	0.00	0.00	
9,100.0	0.82	239.92	8,907.4	-1,188.6	-1,019.8	1,566.1	0.00	0.00	
9,200.0	0.82	239.92	9,007.4	-1,189.3	-1,021.0	1,567.5	0.00	0.00	
9,300.0	0.82	239.92	9,107.4	-1,190.0	-1,022.3	1,568.8	0.00	0.00	
9,400.0	0.82	239.92	9,207.3	-1,190.7	-1,023.5	1,570.2	0.00	0.00	
9,498.7	0.82	239.92	9,306.0	-1,191.4	-1,024.7	1,571.5	0.00	0.00	Cameo
9,500.0	0.82	239.92	9,307.3	-1,191.5	-1,024.8	1,571.5	0.00	0.00	
9,600.0	0.82	239.92	9,407.3	-1,192.2	-1,026.0	1,572.9	0.00	0.00	
9,700.0	0.82	239.92	9,507.3	-1,192.9	-1,027.2	1,574.2	0.00	0.00	
9,800.0	0.82	239.92	9,607.3	-1,193.6	-1,028.5	1,575.6	0.00	0.00	
9,848.7	0.82	239.92	9,656.0	-1,194.0	-1,029.1	1,576.3	0.00	0.00	Rollins SS
9,900.0	0.82	239.92	9,707.3	-1,194.3	-1,029.7	1,577.0	0.00	0.00	
9,998.7	0.82	239.92	9,806.0	-1,195.0	-1,031.0	1,578.3	0.00	0.00	TD at 9998.7 - OM07C B21 696 BHL

Targets									
Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (ft)	Easting (ft)	Latitude	Longitude
OM07C B21 696 BHL - hit/miss target - Shape	0.00	0.00	9,806.0	-1,195.0	-1,031.0	1,621,350.53	2,262,999.66	39.510283	-108.112526
OM07C B21 696 TGT - plan hits target center - Point	0.00	0.00	6,856.0	-1,175.0	-996.4	1,621,369.57	2,263,034.83	39.510338	-108.112403

Cathedral Energy Services

Planning Report

Database:	EDM 5000.1 US Multi Users DB	Local Co-ordinate Reference:	Well OM07C B21 696
Company:	Berry Petroleum Company (NAD 83)	TVD Reference:	KBE @ 8293.0ft (Original Well Elev)
Project:	Garfield County	MD Reference:	KBE @ 8293.0ft (Original Well Elev)
Site:	NENE S21-T6S-R96W (B21 696 Pad)	North Reference:	True
Well:	OM07C B21 696	Survey Calculation Method:	Minimum Curvature
Wellbore:	DD		
Design:	Plan #1		

Formations						
Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)	
2,513.4	2,456.0	Wasatch		0.00		
5,203.3	5,056.0	Fort Union		0.00		
6,647.1	6,456.0	Ohio Creek		0.00		
6,848.3	6,656.0	Williams Fork		0.00		
7,048.4	6,856.0	Approx TOG		0.00		
9,498.7	9,306.0	Cameo		0.00		
9,848.7	9,656.0	Rollins SS		0.00		

Plan Annotations					
Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates			
		+N/-S (ft)	+E/-W (ft)	Comment	
300.0	300.0	0.0	0.0	KOP @ 200' MD	
1,042.6	1,034.3	-73.0	-61.9	EOD; Inc=14.85°	
6,305.8	6,121.7	-1,102.0	-934.4	Start Drop -2.00	
7,048.4	6,856.0	-1,175.0	-996.4	EOD; Inc=0°	
9,998.7	9,806.0	-1,195.0	-1,031.0	TD at 9998.7	

Berry Petroleum Company (NAD 83)

Garfield County

NENE S21-T6S-R96W (B21 696 Pad)

OM07C B21 696

DD

Plan #1

Anticollision Report

01 December, 2010

Cathedral Energy Services

Anticollision Report

Company:	Berry Petroleum Company (NAD 83)	Local Co-ordinate Reference:	Well OM07C B21 696
Project:	Garfield County	TVD Reference:	KBE @ 8293.0ft (Original Well Elev)
Reference Site:	NENE S21-T6S-R96W (B21 696 Pad)	MD Reference:	KBE @ 8293.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	OM07C B21 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:	MD Interval 100.0ft	Error Model:	Systematic Ellipse
Depth Range:	Unlimited	Scan Method:	Closest Approach 3D
Results Limited by:	Maximum center-center distance of 1,399.5ft	Error Surface:	Elliptical Conic
Warning Levels Evaluated at:	2.00 Sigma		

Survey Tool Program	Date	12/1/2010		
From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description
0.0	9,998.7	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						
NENE S21-T6S-R96W (B21 696 Pad)						
OM02B B21 696 - DD - Plan #1	681.8	708.9	201.9	199.3	79.115	CC
OM02B B21 696 - DD - Plan #1	700.0	727.9	201.9	199.3	76.477	ES
OM02B B21 696 - DD - Plan #1	6,100.0	5,975.1	1,381.4	1,339.9	33.305	SF
OM02C B21 696 - DD - Plan #1	383.0	385.0	68.3	67.0	52.326	CC
OM02C B21 696 - DD - Plan #1	400.0	402.2	68.3	67.0	49.937	ES
OM02C B21 696 - DD - Plan #1	9,998.7	9,893.9	1,230.9	1,180.9	24.611	SF
OM02D B21 696 - DD - Plan #1	300.0	300.0	39.8	38.9	40.053	CC, ES
OM02D B21 696 - DD - Plan #1	4,600.0	4,580.7	522.5	491.1	16.612	SF
OM07A B21 696 - DD - Plan #1	300.0	300.0	29.7	28.7	29.891	CC, ES
OM07A B21 696 - DD - Plan #1	9,998.7	9,893.7	656.3	615.6	16.140	SF
OM07B B21 696 - DD - Plan #1	300.0	300.0	19.8	18.8	19.869	CC, ES
OM07B B21 696 - DD - Plan #1	9,998.7	9,944.7	317.8	274.1	7.270	SF
OM07D B21 696 - DD - Plan #1	271.0	271.0	9.6	8.7	10.745	CC
OM07D B21 696 - DD - Plan #1	300.0	300.0	9.7	8.7	9.682	ES
OM07D B21 696 - DD - Plan #1	9,998.7	10,024.7	460.4	394.6	7.001	SF
OM08B B21 696 - DD - Plan #1	300.0	300.0	49.8	48.8	50.074	CC, ES
OM08B B21 696 - DD - Plan #1	9,998.7	9,914.6	1,380.9	1,331.0	27.697	SF
OM08C B21 696 - DD - Plan #1	300.0	300.0	59.9	58.9	60.236	CC, ES
OM08C B21 696 - DD - Plan #1	900.0	901.6	100.0	96.4	27.646	SF
OM08D B21 696 - DD - Plan #1	416.1	419.4	77.3	75.9	54.066	CC, ES
OM08D B21 696 - DD - Plan #1	1,000.0	996.4	142.0	137.3	30.340	SF

Cathedral Energy Services

Anticollision Report

Company:	Berry Petroleum Company (NAD 83)	Local Co-ordinate Reference:	Well OM07C B21 696
Project:	Garfield County	TVD Reference:	KBE @ 8293.0ft (Original Well Elev)
Reference Site:	NENE S21-T6S-R96W (B21 696 Pad)	MD Reference:	KBE @ 8293.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	OM07C B21 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 NENE S21-T6S-R96W (B21 696 Pad) - OM02B B21 696 - DD - Plan #1													Offset Site Error:	0.0 ft
Survey Program: O-MWD													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance					Total Uncertainty Axis	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)				
0.0	0.0	0.0	0.0	0.0	0.0	68.40	78.0	196.9	211.8					
100.0	100.0	100.0	100.0	0.1	0.1	68.40	78.0	196.9	211.8	211.5	0.30	713.823		
200.0	200.0	200.0	200.0	0.3	0.3	68.40	78.0	196.9	211.8	211.1	0.65	327.973		
300.0	300.0	306.5	306.5	0.5	0.5	68.10	78.4	195.0	210.3	209.2	1.01	208.009		
400.0	400.0	412.7	412.5	0.7	0.7	-153.38	79.6	189.2	207.2	205.9	1.38	150.510		
500.0	499.8	518.5	517.9	0.9	1.0	-155.69	81.7	179.6	204.5	202.7	1.76	115.990		
600.0	599.5	623.6	622.1	1.1	1.3	-159.12	84.6	166.4	202.5	200.3	2.18	92.920		
681.8	680.6	708.9	706.2	1.3	1.5	-162.72	87.6	152.9	201.9	199.3	2.55	79.115 CC		
700.0	698.7	727.9	724.9	1.3	1.6	-163.61	88.3	149.5	201.9	199.3	2.64	76.477 ES		
800.0	797.5	829.3	824.3	1.6	2.0	-168.90	92.6	129.9	203.7	200.6	3.14	64.789		
900.0	895.6	927.2	920.1	2.0	2.4	-174.14	96.9	110.2	210.3	206.6	3.67	57.369		
1,000.0	993.1	1,024.7	1,015.5	2.4	2.7	-179.05	101.1	90.6	222.0	217.8	4.20	52.820		
1,100.0	1,089.8	1,121.9	1,110.6	2.9	3.1	176.58	105.4	71.0	238.1	233.3	4.77	49.914		
1,200.0	1,186.5	1,218.9	1,205.6	3.3	3.5	172.77	109.7	51.5	255.7	250.3	5.37	47.611		
1,300.0	1,283.1	1,316.0	1,300.6	3.8	3.9	169.45	113.9	32.0	274.3	268.3	5.99	45.756		
1,400.0	1,379.8	1,413.0	1,395.5	4.3	4.3	166.56	118.2	12.4	293.7	287.0	6.64	44.225		
1,500.0	1,476.4	1,510.1	1,490.5	4.7	4.7	164.02	122.4	-7.1	313.7	306.4	7.31	42.940		
1,600.0	1,573.1	1,607.2	1,585.5	5.2	5.1	161.78	126.7	-26.6	334.3	326.3	7.99	41.852		
1,700.0	1,669.7	1,704.2	1,680.5	5.7	5.5	159.80	130.9	-46.1	355.3	346.6	8.68	40.922		
1,800.0	1,766.4	1,801.3	1,775.5	6.2	5.9	158.04	135.2	-65.7	376.6	367.2	9.39	40.122		
1,900.0	1,863.1	1,898.4	1,870.5	6.7	6.2	156.47	139.4	-85.2	398.3	388.2	10.10	39.430		
2,000.0	1,959.7	1,995.4	1,965.5	7.1	6.6	155.06	143.7	-104.7	420.2	409.4	10.82	38.829		
2,100.0	2,056.4	2,092.5	2,060.4	7.6	7.0	153.79	148.0	-124.2	442.4	430.8	11.55	38.303		
2,200.0	2,153.0	2,189.6	2,155.4	8.1	7.4	152.65	152.2	-143.8	464.7	452.4	12.28	37.841		
2,300.0	2,249.7	2,286.6	2,250.4	8.6	7.8	151.60	156.5	-163.3	487.2	474.2	13.02	37.433		
2,400.0	2,346.4	2,383.7	2,345.4	9.1	8.2	150.65	160.7	-182.8	509.8	496.1	13.75	37.071		
2,500.0	2,443.0	2,480.8	2,440.4	9.5	8.6	149.78	165.0	-202.3	532.6	518.1	14.49	36.749		
2,600.0	2,539.7	2,577.8	2,535.4	10.0	9.0	148.98	169.2	-221.9	555.5	540.2	15.24	36.460		
2,700.0	2,636.3	2,674.9	2,630.4	10.5	9.4	148.24	173.5	-241.4	578.4	562.5	15.98	36.201		
2,800.0	2,733.0	2,772.0	2,725.3	11.0	9.8	147.56	177.7	-260.9	601.5	584.8	16.72	35.967		
2,900.0	2,829.7	2,869.0	2,820.3	11.5	10.2	146.93	182.0	-280.4	624.6	607.2	17.47	35.755		
3,000.0	2,926.3	2,966.1	2,915.3	12.0	10.6	146.34	186.3	-300.0	647.8	629.6	18.22	35.563		
3,100.0	3,023.0	3,063.2	3,010.3	12.5	11.0	145.79	190.5	-319.5	671.1	652.1	18.96	35.387		
3,200.0	3,119.6	3,160.2	3,105.3	12.9	11.3	145.28	194.8	-339.0	694.4	674.7	19.71	35.227		
3,300.0	3,216.3	3,257.3	3,200.3	13.4	11.7	144.81	199.0	-358.6	717.7	697.3	20.46	35.080		
3,400.0	3,312.9	3,354.4	3,295.3	13.9	12.1	144.36	203.3	-378.1	741.1	719.9	21.21	34.944		
3,500.0	3,409.6	3,451.4	3,390.3	14.4	12.5	143.94	207.5	-397.6	764.6	742.6	21.96	34.819		
3,600.0	3,506.3	3,548.5	3,485.2	14.9	12.9	143.55	211.8	-417.1	788.1	765.4	22.71	34.704		
3,700.0	3,602.9	3,645.6	3,580.2	15.4	13.3	143.18	216.0	-436.7	811.6	788.1	23.46	34.597		
3,800.0	3,699.6	3,742.6	3,675.2	15.8	13.7	142.83	220.3	-456.2	835.1	810.9	24.21	34.497		
3,900.0	3,796.2	3,839.7	3,770.2	16.3	14.1	142.49	224.5	-475.7	858.7	833.7	24.96	34.405		
4,000.0	3,892.9	3,936.8	3,865.2	16.8	14.5	142.18	228.8	-495.2	882.3	856.6	25.71	34.318		
4,100.0	3,989.6	4,033.8	3,960.2	17.3	14.9	141.88	233.1	-514.8	905.9	879.4	26.46	34.238		
4,200.0	4,086.2	4,130.9	4,055.2	17.8	15.3	141.60	237.3	-534.3	929.5	902.3	27.21	34.162		
4,300.0	4,182.9	4,228.0	4,150.1	18.3	15.7	141.33	241.6	-553.8	953.2	925.2	27.96	34.091		
4,400.0	4,279.5	4,325.0	4,245.1	18.8	16.1	141.08	245.8	-573.3	976.9	948.2	28.71	34.025		
4,500.0	4,376.2	4,422.1	4,340.1	19.2	16.5	140.83	250.1	-592.9	1,000.6	971.1	29.46	33.962		
4,600.0	4,472.9	4,519.2	4,435.1	19.7	16.9	140.60	254.3	-612.4	1,024.3	994.1	30.21	33.903		
4,700.0	4,569.5	4,616.2	4,530.1	20.2	17.3	140.38	258.6	-631.9	1,048.0	1,017.1	30.96	33.847		
4,800.0	4,666.2	4,713.3	4,625.1	20.7	17.6	140.17	262.8	-651.4	1,071.8	1,040.0	31.71	33.794		
4,900.0	4,762.8	4,810.4	4,720.1	21.2	18.0	139.97	267.1	-671.0	1,095.5	1,063.0	32.46	33.744		
5,000.0	4,859.5	4,907.4	4,815.0	21.7	18.4	139.77	271.4	-690.5	1,119.3	1,086.1	33.22	33.697		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Cathedral Energy Services

Anticollision Report

Company:	Berry Petroleum Company (NAD 83)	Local Co-ordinate Reference:	Well OM07C B21 696
Project:	Garfield County	TVD Reference:	KBE @ 8293.0ft (Original Well Elev)
Reference Site:	NENE S21-T6S-R96W (B21 696 Pad)	MD Reference:	KBE @ 8293.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	OM07C B21 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												NENE S21-T6S-R96W (B21 696 Pad) - OM02B B21 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					
5,100.0	4,956.1	5,004.5	4,910.0	22.2	18.8	139.59	275.6	-710.0	1,143.1	1,109.1	33.97	33.652					
5,200.0	5,052.8	5,101.5	5,005.0	22.6	19.2	139.41	279.9	-729.6	1,166.9	1,132.1	34.72	33.610					
5,300.0	5,149.5	5,198.6	5,100.0	23.1	19.6	139.24	284.1	-749.1	1,190.7	1,155.2	35.47	33.569					
5,400.0	5,246.1	5,295.7	5,195.0	23.6	20.0	139.07	288.4	-768.6	1,214.5	1,178.2	36.22	33.531					
5,500.0	5,342.8	5,392.7	5,290.0	24.1	20.4	138.91	292.6	-788.1	1,238.3	1,201.3	36.97	33.494					
5,600.0	5,439.4	5,489.8	5,385.0	24.6	20.8	138.76	296.9	-807.7	1,262.1	1,224.4	37.72	33.459					
5,700.0	5,536.1	5,586.9	5,479.9	25.1	21.2	138.61	301.1	-827.2	1,286.0	1,247.5	38.47	33.425					
5,800.0	5,632.8	5,683.9	5,574.9	25.6	21.6	138.47	305.4	-846.7	1,309.8	1,270.6	39.22	33.393					
5,900.0	5,729.4	5,781.0	5,669.9	26.0	22.0	138.34	309.7	-866.2	1,333.6	1,293.7	39.97	33.363					
6,000.0	5,826.1	5,878.1	5,764.9	26.5	22.4	138.21	313.9	-885.8	1,357.5	1,316.8	40.73	33.333					
6,100.0	5,922.7	5,975.1	5,859.9	27.0	22.8	138.08	318.2	-905.3	1,381.4	1,339.9	41.48	33.305 SF					

Cathedral Energy Services

Anticollision Report

Company:	Berry Petroleum Company (NAD 83)	Local Co-ordinate Reference:	Well OM07C B21 696
Project:	Garfield County	TVD Reference:	KBE @ 8293.0ft (Original Well Elev)
Reference Site:	NENE S21-T6S-R96W (B21 696 Pad)	MD Reference:	KBE @ 8293.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	OM07C B21 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 NENE S21-T6S-R96W (B21 696 Pad) - OM02C B21 696 - DD - Plan #1													Offset Site Error:	0.0 ft
Survey Program: O-MWD													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance				Total	Separation	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)	Uncertainty Axis	Factor		
0.0	0.0	0.0	0.0	0.0	0.0	29.50	60.8	34.4	69.9					
100.0	100.0	100.0	100.0	0.1	0.1	29.50	60.8	34.4	69.9	69.6	0.30	235.571		
200.0	200.0	200.0	200.0	0.3	0.3	29.50	60.8	34.4	69.9	69.2	0.65	108.235		
300.0	300.0	301.2	301.2	0.5	0.5	28.21	60.8	32.6	69.0	68.0	1.00	68.985		
383.0	383.0	385.0	384.9	0.6	0.7	165.05	60.8	28.4	68.3	67.0	1.31	52.326 CC		
400.0	400.0	402.2	402.0	0.7	0.7	164.29	60.8	27.3	68.3	67.0	1.37	49.937 ES		
500.0	499.8	502.9	502.3	0.9	0.9	158.85	60.7	18.4	70.0	68.2	1.77	39.563		
600.0	599.5	603.1	601.8	1.1	1.2	152.27	60.7	6.1	74.5	72.3	2.22	33.525		
700.0	698.7	702.7	700.2	1.3	1.5	145.67	60.6	-9.2	82.3	79.6	2.73	30.149		
800.0	797.5	801.8	798.1	1.6	1.8	141.25	60.5	-25.0	93.8	90.5	3.28	28.609		
900.0	895.6	900.7	895.7	2.0	2.1	138.96	60.4	-40.7	108.2	104.3	3.86	28.056		
1,000.0	993.1	999.2	992.9	2.4	2.4	138.22	60.3	-56.4	125.2	120.8	4.46	28.079		
1,100.0	1,089.8	1,097.4	1,089.8	2.9	2.8	138.52	60.3	-72.0	144.5	139.4	5.08	28.437		
1,200.0	1,186.5	1,195.5	1,186.7	3.3	3.1	138.90	60.2	-87.6	163.9	158.2	5.71	28.712		
1,300.0	1,283.1	1,293.5	1,283.5	3.8	3.4	139.20	60.1	-103.2	183.4	177.1	6.34	28.911		
1,400.0	1,379.8	1,391.6	1,380.3	4.3	3.7	139.44	60.0	-118.8	202.9	195.9	6.98	29.062		
1,500.0	1,476.4	1,489.7	1,477.2	4.7	4.0	139.64	59.9	-134.4	222.4	214.7	7.62	29.179		
1,600.0	1,573.1	1,587.8	1,574.0	5.2	4.4	139.81	59.8	-150.0	241.8	233.6	8.26	29.272		
1,700.0	1,669.7	1,685.9	1,670.8	5.7	4.7	139.95	59.7	-165.6	261.3	252.4	8.90	29.348		
1,800.0	1,766.4	1,783.9	1,767.7	6.2	5.0	140.07	59.7	-181.2	280.8	271.3	9.55	29.410		
1,900.0	1,863.1	1,882.0	1,864.5	6.7	5.3	140.18	59.6	-196.8	300.3	290.1	10.19	29.462		
2,000.0	1,959.7	1,980.1	1,961.3	7.1	5.6	140.28	59.5	-212.4	319.8	308.9	10.84	29.507		
2,100.0	2,056.4	2,078.2	2,058.2	7.6	6.0	140.36	59.4	-228.0	339.3	327.8	11.48	29.545		
2,200.0	2,153.0	2,176.3	2,155.0	8.1	6.3	140.43	59.3	-243.6	358.7	346.6	12.13	29.577		
2,300.0	2,249.7	2,274.4	2,251.8	8.6	6.6	140.50	59.2	-259.2	378.2	365.5	12.78	29.606		
2,400.0	2,346.4	2,372.4	2,348.7	9.1	6.9	140.56	59.1	-274.8	397.7	384.3	13.42	29.631		
2,500.0	2,443.0	2,470.5	2,445.5	9.5	7.3	140.61	59.1	-290.4	417.2	403.1	14.07	29.654		
2,600.0	2,539.7	2,568.6	2,542.3	10.0	7.6	140.66	59.0	-306.0	436.7	422.0	14.72	29.673		
2,700.0	2,636.3	2,666.7	2,639.2	10.5	7.9	140.71	58.9	-321.6	456.2	440.8	15.36	29.691		
2,800.0	2,733.0	2,764.8	2,736.0	11.0	8.2	140.75	58.8	-337.2	475.7	459.7	16.01	29.707		
2,900.0	2,829.7	2,862.8	2,832.8	11.5	8.6	140.79	58.7	-352.8	495.2	478.5	16.66	29.722		
3,000.0	2,926.3	2,960.9	2,929.7	12.0	8.9	140.82	58.6	-368.4	514.6	497.3	17.31	29.735		
3,100.0	3,023.0	3,059.0	3,026.5	12.5	9.2	140.86	58.5	-384.0	534.1	516.2	17.96	29.747		
3,200.0	3,119.6	3,157.1	3,123.3	12.9	9.5	140.89	58.5	-399.5	553.6	535.0	18.60	29.758		
3,300.0	3,216.3	3,255.2	3,220.2	13.4	9.9	140.92	58.4	-415.1	573.1	553.9	19.25	29.768		
3,400.0	3,312.9	3,353.3	3,317.0	13.9	10.2	140.94	58.3	-430.7	592.6	572.7	19.90	29.778		
3,500.0	3,409.6	3,451.3	3,413.8	14.4	10.5	140.97	58.2	-446.3	612.1	591.5	20.55	29.786		
3,600.0	3,506.3	3,549.4	3,510.7	14.9	10.8	140.99	58.1	-461.9	631.6	610.4	21.20	29.795		
3,700.0	3,602.9	3,647.5	3,607.5	15.4	11.2	141.01	58.0	-477.5	651.1	629.2	21.85	29.802		
3,800.0	3,699.6	3,745.6	3,704.3	15.8	11.5	141.03	57.9	-493.1	670.6	648.1	22.50	29.809		
3,900.0	3,796.2	3,843.7	3,801.2	16.3	11.8	141.05	57.9	-508.7	690.0	666.9	23.14	29.816		
4,000.0	3,892.9	3,941.8	3,898.0	16.8	12.1	141.07	57.8	-524.3	709.5	685.7	23.79	29.822		
4,100.0	3,989.6	4,039.8	3,994.8	17.3	12.4	141.09	57.7	-539.9	729.0	704.6	24.44	29.827		
4,200.0	4,086.2	4,137.9	4,091.7	17.8	12.8	141.11	57.6	-555.5	748.5	723.4	25.09	29.833		
4,300.0	4,182.9	4,236.0	4,188.5	18.3	13.1	141.12	57.5	-571.1	768.0	742.3	25.74	29.838		
4,400.0	4,279.5	4,334.1	4,285.3	18.8	13.4	141.14	57.4	-586.7	787.5	761.1	26.39	29.843		
4,500.0	4,376.2	4,432.2	4,382.2	19.2	13.7	141.15	57.3	-602.3	807.0	779.9	27.04	29.847		
4,600.0	4,472.9	4,530.2	4,479.0	19.7	14.1	141.16	57.3	-617.9	826.5	798.8	27.69	29.851		
4,700.0	4,569.5	4,628.3	4,575.8	20.2	14.4	141.18	57.2	-633.5	846.0	817.6	28.34	29.855		
4,800.0	4,666.2	4,726.4	4,672.7	20.7	14.7	141.19	57.1	-649.1	865.5	836.5	28.98	29.859		
4,900.0	4,762.8	4,824.5	4,769.5	21.2	15.0	141.20	57.0	-664.7	884.9	855.3	29.63	29.863		
5,000.0	4,859.5	4,922.6	4,866.3	21.7	15.4	141.21	56.9	-680.3	904.4	874.1	30.28	29.866		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Cathedral Energy Services

Anticollision Report

Company:	Berry Petroleum Company (NAD 83)	Local Co-ordinate Reference:	Well OM07C B21 696
Project:	Garfield County	TVD Reference:	KBE @ 8293.0ft (Original Well Elev)
Reference Site:	NENE S21-T6S-R96W (B21 696 Pad)	MD Reference:	KBE @ 8293.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	OM07C B21 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 NENE S21-T6S-R96W (B21 696 Pad) - OM02C B21 696 - DD - Plan #1													Offset Site Error:	0.0 ft
Survey Program: O-MWD													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance				Total Uncertainty Axis	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)				
5,100.0	4,956.1	5,020.7	4,963.2	22.2	15.7	141.22	56.8	-695.9	923.9	893.0	30.93	29.870		
5,200.0	5,052.8	5,118.7	5,060.0	22.6	16.0	141.23	56.7	-711.5	943.4	911.8	31.58	29.873		
5,300.0	5,149.5	5,216.8	5,156.9	23.1	16.3	141.24	56.7	-727.1	962.9	930.7	32.23	29.876		
5,400.0	5,246.1	5,314.9	5,253.7	23.6	16.7	141.25	56.6	-742.7	982.4	949.5	32.88	29.879		
5,500.0	5,342.8	5,413.0	5,350.5	24.1	17.0	141.26	56.5	-758.3	1,001.9	968.4	33.53	29.881		
5,600.0	5,439.4	5,511.1	5,447.4	24.6	17.3	141.27	56.4	-773.9	1,021.4	987.2	34.18	29.884		
5,700.0	5,536.1	5,609.1	5,544.2	25.1	17.6	141.28	56.3	-789.5	1,040.9	1,006.0	34.83	29.887		
5,800.0	5,632.8	5,707.2	5,641.0	25.6	18.0	141.29	56.2	-805.1	1,060.4	1,024.9	35.48	29.889		
5,900.0	5,729.4	5,805.3	5,737.9	26.0	18.3	141.30	56.2	-820.7	1,079.8	1,043.7	36.13	29.891		
6,000.0	5,826.1	5,903.4	5,834.7	26.5	18.6	141.30	56.1	-836.3	1,099.3	1,062.6	36.78	29.893		
6,100.0	5,922.7	6,001.5	5,931.5	27.0	18.9	141.31	56.0	-851.9	1,118.8	1,081.4	37.42	29.896		
6,200.0	6,019.4	6,099.6	6,028.4	27.5	19.3	141.32	55.9	-867.5	1,138.3	1,100.2	38.07	29.898		
6,300.0	6,116.1	6,197.6	6,125.2	28.0	19.6	141.33	55.8	-883.1	1,157.8	1,119.1	38.72	29.900		
6,400.0	6,213.1	6,295.9	6,222.2	28.4	19.9	141.50	55.7	-898.7	1,176.1	1,136.7	39.38	29.867		
6,500.0	6,310.9	6,394.7	6,319.7	28.8	20.2	141.55	55.6	-914.4	1,191.7	1,151.7	40.03	29.770		
6,600.0	6,409.4	6,493.7	6,417.5	29.1	20.6	141.47	55.6	-930.2	1,204.7	1,164.0	40.68	29.612		
6,700.0	6,508.4	6,591.7	6,514.4	29.4	20.9	141.30	55.5	-944.8	1,214.9	1,173.7	41.28	29.435		
6,800.0	6,607.9	6,689.8	6,611.9	29.6	21.1	141.16	55.4	-956.2	1,222.7	1,180.9	41.76	29.279		
6,900.0	6,707.6	6,788.3	6,710.0	29.7	21.3	141.05	55.4	-964.3	1,227.8	1,185.7	42.14	29.137		
7,000.0	6,807.6	6,887.0	6,808.6	29.8	21.4	140.96	55.3	-969.0	1,230.3	1,187.9	42.42	29.006		
7,100.0	6,907.6	6,986.4	6,907.9	29.9	21.5	121.30	55.3	-970.3	1,230.6	1,188.0	42.63	28.870		
7,200.0	7,007.6	7,089.2	7,010.8	30.0	21.6	121.30	55.2	-970.6	1,230.7	1,187.9	42.85	28.725		
7,300.0	7,107.6	7,192.1	7,113.6	30.1	21.7	121.31	54.8	-971.2	1,230.8	1,187.7	43.08	28.572		
7,400.0	7,207.6	7,294.9	7,216.5	30.2	21.9	121.31	54.2	-972.3	1,230.9	1,187.6	43.32	28.414		
7,500.0	7,307.5	7,395.2	7,316.7	30.3	22.0	121.31	53.5	-973.5	1,230.9	1,187.3	43.56	28.256		
7,600.0	7,407.5	7,495.2	7,416.7	30.4	22.1	121.31	52.8	-974.8	1,230.9	1,187.1	43.80	28.100		
7,700.0	7,507.5	7,595.2	7,516.7	30.5	22.2	121.31	52.1	-976.0	1,230.9	1,186.8	44.05	27.944		
7,800.0	7,607.5	7,695.2	7,616.7	30.6	22.3	121.31	51.3	-977.2	1,230.9	1,186.6	44.29	27.789		
7,900.0	7,707.5	7,795.2	7,716.7	30.7	22.5	121.31	50.6	-978.5	1,230.9	1,186.3	44.54	27.635		
8,000.0	7,807.5	7,895.2	7,816.6	30.8	22.6	121.31	49.9	-979.7	1,230.9	1,186.1	44.79	27.482		
8,100.0	7,907.5	7,995.2	7,916.6	30.9	22.7	121.31	49.2	-981.0	1,230.9	1,185.9	45.04	27.329		
8,200.0	8,007.5	8,095.2	8,016.6	31.0	22.8	121.31	48.5	-982.2	1,230.9	1,185.6	45.29	27.178		
8,300.0	8,107.5	8,195.2	8,116.6	31.1	23.0	121.31	47.8	-983.5	1,230.9	1,185.4	45.54	27.027		
8,400.0	8,207.5	8,295.2	8,216.6	31.2	23.1	121.31	47.0	-984.7	1,230.9	1,185.1	45.80	26.877		
8,500.0	8,307.4	8,395.2	8,316.6	31.3	23.2	121.31	46.3	-985.9	1,230.9	1,184.9	46.05	26.728		
8,600.0	8,407.4	8,495.2	8,416.6	31.4	23.3	121.31	45.6	-987.2	1,230.9	1,184.6	46.31	26.580		
8,700.0	8,507.4	8,595.2	8,516.6	31.5	23.5	121.31	44.9	-988.4	1,230.9	1,184.3	46.57	26.433		
8,800.0	8,607.4	8,695.2	8,616.6	31.6	23.6	121.31	44.2	-989.7	1,230.9	1,184.1	46.83	26.287		
8,900.0	8,707.4	8,795.2	8,716.6	31.7	23.7	121.31	43.5	-990.9	1,230.9	1,183.8	47.09	26.142		
9,000.0	8,807.4	8,895.2	8,816.5	31.8	23.9	121.31	42.7	-992.2	1,230.9	1,183.6	47.35	25.998		
9,100.0	8,907.4	8,995.2	8,916.5	31.9	24.0	121.31	42.0	-993.4	1,230.9	1,183.3	47.61	25.855		
9,200.0	9,007.4	9,095.2	9,016.5	32.0	24.1	121.31	41.3	-994.6	1,230.9	1,183.1	47.87	25.712		
9,300.0	9,107.4	9,195.2	9,116.5	32.1	24.3	121.31	40.6	-995.9	1,230.9	1,182.8	48.14	25.571		
9,400.0	9,207.3	9,295.2	9,216.5	32.2	24.4	121.31	39.9	-997.1	1,230.9	1,182.5	48.40	25.431		
9,500.0	9,307.3	9,395.2	9,316.5	32.3	24.5	121.31	39.2	-998.4	1,230.9	1,182.3	48.67	25.291		
9,600.0	9,407.3	9,495.2	9,416.5	32.4	24.6	121.31	38.4	-999.6	1,230.9	1,182.0	48.94	25.153		
9,700.0	9,507.3	9,595.2	9,516.5	32.6	24.8	121.31	37.7	-1,000.9	1,230.9	1,181.7	49.21	25.015		
9,800.0	9,607.3	9,695.2	9,616.5	32.7	24.9	121.31	37.0	-1,002.1	1,230.9	1,181.5	49.48	24.879		
9,900.0	9,707.3	9,795.2	9,716.4	32.8	25.1	121.31	36.3	-1,003.3	1,230.9	1,181.2	49.75	24.743		
9,998.7	9,806.0	9,893.9	9,815.1	32.9	25.2	121.31	35.6	-1,004.6	1,230.9	1,180.9	50.02	24.611 SF		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Cathedral Energy Services

Anticollision Report

Company:	Berry Petroleum Company (NAD 83)	Local Co-ordinate Reference:	Well OM07C B21 696
Project:	Garfield County	TVD Reference:	KBE @ 8293.0ft (Original Well Elev)
Reference Site:	NENE S21-T6S-R96W (B21 696 Pad)	MD Reference:	KBE @ 8293.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	OM07C B21 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 NENE S21-T6S-R96W (B21 696 Pad) - OM02D B21 696 - DD - Plan #1													Offset Site Error:	0.0 ft
Survey Program: O-MWD													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance					Total Uncertainty Axis	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)				
0.0	0.0	0.0	0.0	0.0	0.0	29.71	34.6	19.7	39.8					
100.0	100.0	100.0	100.0	0.1	0.1	29.71	34.6	19.7	39.8	39.5	0.30	134.294		
200.0	200.0	200.0	200.0	0.3	0.3	29.71	34.6	19.7	39.8	39.2	0.65	61.703		
300.0	300.0	300.0	300.0	0.5	0.5	29.71	34.6	19.7	39.8	38.9	0.99	40.053 CC, ES		
400.0	400.0	400.0	400.0	0.7	0.7	169.85	34.6	19.7	41.6	40.2	1.34	30.937		
500.0	499.8	499.8	499.8	0.9	0.8	170.97	34.6	19.7	46.7	45.0	1.69	27.632		
600.0	599.5	601.0	601.0	1.1	1.0	171.26	34.0	18.1	53.9	51.9	2.04	26.438		
700.0	698.7	702.3	702.1	1.3	1.2	169.97	32.0	13.1	61.8	59.4	2.39	25.810		
800.0	797.5	803.7	803.1	1.6	1.4	167.64	28.8	4.8	70.4	67.7	2.76	25.467		
900.0	895.6	905.1	903.8	2.0	1.7	164.69	24.3	-6.9	79.9	76.7	3.17	25.216		
1,000.0	993.1	1,006.6	1,004.0	2.4	2.0	161.39	18.5	-21.9	90.4	86.8	3.63	24.903		
1,100.0	1,089.8	1,108.0	1,103.4	2.9	2.3	157.87	11.4	-40.2	101.5	97.3	4.18	24.279		
1,200.0	1,186.5	1,207.2	1,200.4	3.3	2.7	154.54	3.9	-59.6	112.3	107.5	4.80	23.387		
1,300.0	1,283.1	1,306.4	1,297.5	3.8	3.1	151.80	-3.6	-78.9	123.3	117.8	5.46	22.572		
1,400.0	1,379.8	1,405.7	1,394.5	4.3	3.4	149.52	-11.1	-98.3	134.6	128.4	6.16	21.855		
1,500.0	1,476.4	1,504.9	1,491.5	4.7	3.8	147.58	-18.6	-117.7	146.0	139.2	6.88	21.234		
1,600.0	1,573.1	1,604.1	1,588.6	5.2	4.2	145.94	-26.1	-137.1	157.6	150.0	7.61	20.700		
1,700.0	1,669.7	1,703.4	1,685.6	5.7	4.6	144.51	-33.6	-156.4	169.3	161.0	8.37	20.241		
1,800.0	1,766.4	1,802.6	1,782.6	6.2	5.0	143.27	-41.0	-175.8	181.1	172.0	9.13	19.844		
1,900.0	1,863.1	1,901.8	1,879.7	6.7	5.4	142.19	-48.5	-195.2	193.0	183.1	9.90	19.500		
2,000.0	1,959.7	2,001.0	1,976.7	7.1	5.8	141.23	-56.0	-214.6	204.9	194.3	10.67	19.200		
2,100.0	2,056.4	2,100.3	2,073.7	7.6	6.2	140.37	-63.5	-233.9	216.9	205.5	11.45	18.937		
2,200.0	2,153.0	2,199.5	2,170.8	8.1	6.6	139.61	-71.0	-253.3	228.9	216.7	12.24	18.705		
2,300.0	2,249.7	2,298.7	2,267.8	8.6	7.0	138.92	-78.5	-272.7	241.0	228.0	13.03	18.499		
2,400.0	2,346.4	2,398.0	2,364.8	9.1	7.4	138.30	-86.0	-292.1	253.1	239.3	13.82	18.315		
2,500.0	2,443.0	2,497.2	2,461.9	9.5	7.8	137.73	-93.5	-311.5	265.2	250.6	14.61	18.151		
2,600.0	2,539.7	2,596.4	2,558.9	10.0	8.2	137.21	-101.0	-330.8	277.3	261.9	15.41	18.002		
2,700.0	2,636.3	2,695.7	2,655.9	10.5	8.6	136.74	-108.5	-350.2	289.5	273.3	16.20	17.868		
2,800.0	2,733.0	2,794.9	2,753.0	11.0	9.0	136.30	-116.0	-369.6	301.7	284.7	17.00	17.746		
2,900.0	2,829.7	2,894.1	2,850.0	11.5	9.4	135.90	-123.5	-389.0	313.9	296.1	17.80	17.635		
3,000.0	2,926.3	2,993.4	2,947.0	12.0	9.8	135.53	-131.0	-408.3	326.1	307.5	18.60	17.533		
3,100.0	3,023.0	3,092.6	3,044.0	12.5	10.2	135.19	-138.5	-427.7	338.3	318.9	19.40	17.440		
3,200.0	3,119.6	3,191.8	3,141.1	12.9	10.6	134.87	-146.0	-447.1	350.5	330.3	20.20	17.354		
3,300.0	3,216.3	3,291.0	3,238.1	13.4	11.0	134.57	-153.5	-466.5	362.8	341.8	21.00	17.274		
3,400.0	3,312.9	3,390.3	3,335.1	13.9	11.4	134.29	-161.0	-485.8	375.0	353.2	21.80	17.200		
3,500.0	3,409.6	3,489.5	3,432.2	14.4	11.9	134.03	-168.5	-505.2	387.3	364.7	22.61	17.132		
3,600.0	3,506.3	3,588.7	3,529.2	14.9	12.3	133.78	-176.0	-524.6	399.6	376.2	23.41	17.068		
3,700.0	3,602.9	3,688.0	3,626.2	15.4	12.7	133.55	-183.5	-544.0	411.8	387.6	24.21	17.008		
3,800.0	3,699.6	3,787.2	3,723.3	15.8	13.1	133.33	-191.0	-563.3	424.1	399.1	25.02	16.953		
3,900.0	3,796.2	3,886.4	3,820.3	16.3	13.5	133.13	-198.5	-582.7	436.4	410.6	25.82	16.901		
4,000.0	3,892.9	3,985.7	3,917.3	16.8	13.9	132.93	-206.0	-602.1	448.7	422.1	26.63	16.852		
4,100.0	3,989.6	4,084.9	4,014.4	17.3	14.3	132.75	-213.4	-621.5	461.0	433.6	27.43	16.805		
4,200.0	4,086.2	4,184.1	4,111.4	17.8	14.7	132.57	-220.9	-640.8	473.3	445.1	28.24	16.762		
4,300.0	4,182.9	4,283.3	4,208.4	18.3	15.1	132.41	-228.4	-660.2	485.6	456.6	29.04	16.721		
4,400.0	4,279.5	4,382.6	4,305.5	18.8	15.5	132.25	-235.9	-679.6	497.9	468.1	29.85	16.682		
4,500.0	4,376.2	4,481.8	4,402.5	19.2	15.9	132.10	-243.4	-699.0	510.2	479.6	30.65	16.645		
4,600.0	4,472.9	4,580.7	4,499.2	19.7	16.3	131.96	-250.9	-718.3	522.5	491.1	31.45	16.612 SF		
4,700.0	4,569.5	4,675.6	4,592.3	20.2	16.7	132.02	-257.4	-735.1	535.3	503.2	32.14	16.655		
4,800.0	4,666.2	4,770.1	4,685.7	20.7	16.9	132.40	-262.8	-749.0	548.9	516.2	32.70	16.784		
4,900.0	4,762.8	4,864.2	4,779.0	21.2	17.2	133.07	-267.0	-760.0	563.4	530.3	33.14	17.000		
5,000.0	4,859.5	4,957.5	4,871.9	21.7	17.4	133.99	-270.2	-768.1	578.8	545.4	33.45	17.303		
5,100.0	4,956.1	5,049.8	4,964.1	22.2	17.5	135.14	-272.2	-773.3	595.4	561.7	33.65	17.696		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Cathedral Energy Services

Anticollision Report

Company:	Berry Petroleum Company (NAD 83)	Local Co-ordinate Reference:	Well OM07C B21 696
Project:	Garfield County	TVD Reference:	KBE @ 8293.0ft (Original Well Elev)
Reference Site:	NENE S21-T6S-R96W (B21 696 Pad)	MD Reference:	KBE @ 8293.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	OM07C B21 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 NENE S21-T6S-R96W (B21 696 Pad) - OM02D B21 696 - DD - Plan #1													Offset Site Error:	0.0 ft
Survey Program: O-MWD													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance				Total Uncertainty Axis	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)				
5,200.0	5,052.8	5,141.1	5,055.3	22.6	17.6	136.48	-273.1	-775.7	613.2	579.5	33.73	18.182		
5,300.0	5,149.5	5,236.1	5,150.3	23.1	17.7	138.00	-273.2	-776.0	632.2	598.5	33.71	18.752		
5,400.0	5,246.1	5,334.2	5,248.4	23.6	17.8	139.47	-273.5	-776.4	651.5	617.8	33.70	19.333		
5,500.0	5,342.8	5,431.7	5,345.8	24.1	17.9	140.83	-273.9	-777.1	671.0	637.3	33.70	19.911		
5,600.0	5,439.4	5,528.5	5,442.7	24.6	18.0	142.10	-274.3	-777.8	690.9	657.2	33.71	20.495		
5,700.0	5,536.1	5,625.4	5,539.6	25.1	18.1	143.30	-274.7	-778.5	711.0	677.3	33.72	21.084		
5,800.0	5,632.8	5,722.2	5,636.4	25.6	18.2	144.43	-275.1	-779.2	731.5	697.7	33.75	21.677		
5,900.0	5,729.4	5,819.1	5,733.3	26.0	18.3	145.50	-275.5	-780.0	752.2	718.4	33.77	22.272		
6,000.0	5,826.1	5,916.0	5,830.1	26.5	18.4	146.52	-275.9	-780.7	773.2	739.4	33.81	22.868		
6,100.0	5,922.7	6,012.8	5,927.0	27.0	18.5	147.48	-276.4	-781.4	794.4	760.5	33.86	23.464		
6,200.0	6,019.4	6,109.7	6,023.9	27.5	18.6	148.39	-276.8	-782.1	815.8	781.8	33.91	24.058		
6,300.0	6,116.1	6,206.6	6,120.7	28.0	18.7	149.26	-277.2	-782.8	837.3	803.4	33.97	24.650		
6,400.0	6,213.1	6,303.8	6,217.9	28.4	18.8	150.23	-277.6	-783.6	857.8	823.8	34.02	25.217		
6,500.0	6,310.9	6,401.8	6,315.9	28.8	19.0	151.03	-278.0	-784.3	875.4	841.3	34.09	25.677		
6,600.0	6,409.4	6,500.4	6,414.5	29.1	19.1	151.67	-278.5	-785.0	890.1	855.9	34.20	26.027		
6,700.0	6,508.4	6,599.5	6,513.7	29.4	19.2	152.16	-278.9	-785.8	901.7	867.4	34.33	26.268		
6,800.0	6,607.9	6,699.1	6,613.2	29.6	19.3	152.51	-279.3	-786.5	910.4	875.9	34.48	26.401		
6,900.0	6,707.6	6,798.9	6,713.0	29.7	19.4	152.72	-279.7	-787.3	915.9	881.3	34.66	26.428		
7,000.0	6,807.6	6,898.8	6,813.0	29.8	19.5	152.80	-280.2	-788.0	918.4	883.6	34.85	26.352		
7,100.0	6,907.6	6,998.8	6,913.0	29.9	19.7	133.15	-280.6	-788.7	918.2	883.1	35.10	26.164		
7,200.0	7,007.6	7,098.8	7,013.0	30.0	19.8	133.13	-281.0	-789.5	917.9	882.6	35.37	25.955		
7,245.2	7,052.8	7,144.1	7,058.2	30.0	19.8	133.13	-281.2	-789.8	917.9	882.4	35.49	25.865		
7,300.0	7,107.6	7,198.8	7,113.0	30.1	19.9	133.14	-281.5	-790.2	918.0	882.3	35.63	25.760		
7,400.0	7,207.6	7,298.8	7,212.9	30.2	20.0	133.16	-281.9	-791.0	918.3	882.4	35.90	25.579		
7,500.0	7,307.5	7,398.8	7,312.9	30.3	20.1	133.18	-282.3	-791.7	918.7	882.5	36.16	25.407		
7,600.0	7,407.5	7,498.8	7,412.9	30.4	20.3	133.21	-282.8	-792.5	919.1	882.6	36.42	25.235		
7,700.0	7,507.5	7,598.8	7,512.9	30.5	20.4	133.23	-283.2	-793.2	919.5	882.8	36.68	25.066		
7,800.0	7,607.5	7,698.8	7,612.9	30.6	20.5	133.26	-283.6	-794.0	919.8	882.9	36.95	24.897		
7,900.0	7,707.5	7,798.8	7,712.9	30.7	20.6	133.29	-284.0	-794.7	920.2	883.0	37.21	24.730		
8,000.0	7,807.5	7,898.8	7,812.9	30.8	20.8	133.31	-284.5	-795.5	920.6	883.2	37.48	24.565		
8,100.0	7,907.5	7,998.8	7,912.9	30.9	20.9	133.34	-284.9	-796.2	921.0	883.3	37.75	24.401		
8,200.0	8,007.5	8,098.8	8,012.9	31.0	21.0	133.36	-285.3	-796.9	921.4	883.4	38.01	24.239		
8,300.0	8,107.5	8,198.8	8,112.9	31.1	21.1	133.39	-285.8	-797.7	921.8	883.5	38.29	24.078		
8,400.0	8,207.5	8,298.8	8,212.9	31.2	21.3	133.42	-286.2	-798.4	922.2	883.7	38.56	23.918		
8,500.0	8,307.4	8,398.8	8,312.9	31.3	21.4	133.44	-286.6	-799.2	922.6	883.8	38.83	23.760		
8,600.0	8,407.4	8,498.8	8,412.9	31.4	21.5	133.47	-287.0	-799.9	923.0	883.9	39.10	23.604		
8,700.0	8,507.4	8,598.8	8,512.9	31.5	21.7	133.49	-287.5	-800.7	923.4	884.0	39.38	23.449		
8,800.0	8,607.4	8,698.8	8,612.9	31.6	21.8	133.52	-287.9	-801.4	923.8	884.2	39.66	23.295		
8,900.0	8,707.4	8,798.8	8,712.9	31.7	21.9	133.54	-288.3	-802.2	924.2	884.3	39.93	23.143		
9,000.0	8,807.4	8,898.8	8,812.9	31.8	22.1	133.57	-288.8	-802.9	924.6	884.4	40.21	22.993		
9,100.0	8,907.4	8,998.8	8,912.9	31.9	22.2	133.60	-289.2	-803.7	925.0	884.5	40.49	22.843		
9,200.0	9,007.4	9,098.8	9,012.9	32.0	22.3	133.62	-289.6	-804.4	925.4	884.6	40.77	22.696		
9,300.0	9,107.4	9,198.8	9,112.8	32.1	22.5	133.65	-290.1	-805.1	925.8	884.7	41.06	22.550		
9,400.0	9,207.3	9,298.8	9,212.8	32.2	22.6	133.67	-290.5	-805.9	926.2	884.9	41.34	22.405		
9,500.0	9,307.3	9,398.8	9,312.8	32.3	22.7	133.70	-290.9	-806.6	926.6	885.0	41.62	22.261		
9,600.0	9,407.3	9,498.8	9,412.8	32.4	22.9	133.72	-291.3	-807.4	927.0	885.1	41.91	22.120		
9,700.0	9,507.3	9,598.8	9,512.8	32.6	23.0	133.75	-291.8	-808.1	927.4	885.2	42.19	21.979		
9,800.0	9,607.3	9,698.8	9,612.8	32.7	23.1	133.78	-292.2	-808.9	927.8	885.3	42.48	21.840		
9,900.0	9,707.3	9,798.8	9,712.8	32.8	23.3	133.80	-292.6	-809.6	928.2	885.4	42.77	21.702		
9,998.7	9,806.0	9,897.5	9,811.5	32.9	23.4	133.83	-293.1	-810.4	928.6	885.5	43.05	21.568		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Cathedral Energy Services

Anticollision Report

Company:	Berry Petroleum Company (NAD 83)	Local Co-ordinate Reference:	Well OM07C B21 696
Project:	Garfield County	TVD Reference:	KBE @ 8293.0ft (Original Well Elev)
Reference Site:	NENE S21-T6S-R96W (B21 696 Pad)	MD Reference:	KBE @ 8293.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	OM07C B21 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 NENE S21-T6S-R96W (B21 696 Pad) - OM07A B21 696 - DD - Plan #1													Offset Site Error:	0.0 ft
Survey Program: O-MWD													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance					Total Uncertainty Axis	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)				
0.0	0.0	0.0	0.0	0.0	0.0	29.56	25.9	14.7	29.7					
100.0	100.0	100.0	100.0	0.1	0.1	29.56	25.9	14.7	29.7	29.4	0.30	100.222		
200.0	200.0	200.0	200.0	0.3	0.3	29.56	25.9	14.7	29.7	29.1	0.65	46.048		
300.0	300.0	300.0	300.0	0.5	0.5	29.56	25.9	14.7	29.7	28.7	0.99	29.891 CC, ES		
400.0	400.0	400.0	400.0	0.7	0.7	169.85	25.9	14.7	31.5	30.1	1.34	23.412		
500.0	499.8	499.8	499.8	0.9	0.8	171.28	25.9	14.7	36.6	34.9	1.69	21.655		
600.0	599.5	600.9	600.9	1.1	1.0	172.11	24.8	13.2	43.6	41.6	2.04	21.388		
700.0	698.7	702.2	702.0	1.3	1.2	171.76	21.7	8.9	50.8	48.4	2.39	21.262		
800.0	797.5	803.7	803.1	1.6	1.4	170.64	16.5	1.6	58.2	55.4	2.75	21.192		
900.0	895.6	905.4	904.0	2.0	1.7	169.03	9.2	-8.6	65.8	62.7	3.11	21.120		
1,000.0	993.1	1,006.6	1,004.0	2.4	2.0	167.17	-0.1	-21.5	73.8	70.3	3.50	21.053		
1,100.0	1,089.8	1,106.1	1,102.1	2.9	2.3	165.91	-9.7	-34.9	83.9	80.0	3.91	21.437		
1,200.0	1,186.5	1,205.5	1,200.1	3.3	2.6	164.99	-19.3	-48.2	94.3	90.0	4.34	21.738		
1,300.0	1,283.1	1,304.9	1,298.2	3.8	2.9	164.25	-28.9	-61.6	104.8	100.0	4.78	21.945		
1,400.0	1,379.8	1,404.4	1,396.3	4.3	3.2	163.65	-38.5	-75.0	115.3	110.1	5.22	22.086		
1,500.0	1,476.4	1,503.8	1,494.4	4.7	3.5	163.15	-48.1	-88.4	125.8	120.1	5.67	22.182		
1,600.0	1,573.1	1,603.3	1,592.4	5.2	3.8	162.72	-57.7	-101.7	136.3	130.2	6.13	22.247		
1,700.0	1,669.7	1,702.7	1,690.5	5.7	4.2	162.36	-67.3	-115.1	146.8	140.2	6.59	22.289		
1,800.0	1,766.4	1,802.2	1,788.6	6.2	4.5	162.04	-76.9	-128.5	157.3	150.3	7.05	22.316		
1,900.0	1,863.1	1,901.6	1,886.6	6.7	4.8	161.77	-86.5	-141.8	167.8	160.3	7.52	22.331		
2,000.0	1,959.7	2,001.0	1,984.7	7.1	5.2	161.53	-96.1	-155.2	178.4	170.4	7.98	22.338		
2,100.0	2,056.4	2,100.5	2,082.8	7.6	5.5	161.31	-105.7	-168.6	188.9	180.4	8.45	22.339		
2,200.0	2,153.0	2,199.9	2,180.8	8.1	5.8	161.12	-115.3	-182.0	199.4	190.5	8.93	22.336		
2,300.0	2,249.7	2,299.4	2,278.9	8.6	6.2	160.94	-125.0	-195.3	209.9	200.5	9.40	22.329		
2,400.0	2,346.4	2,398.8	2,377.0	9.1	6.5	160.78	-134.6	-208.7	220.5	210.6	9.88	22.321		
2,500.0	2,443.0	2,498.2	2,475.1	9.5	6.8	160.64	-144.2	-222.1	231.0	220.6	10.35	22.310		
2,600.0	2,539.7	2,597.7	2,573.1	10.0	7.2	160.51	-153.8	-235.4	241.5	230.7	10.83	22.299		
2,700.0	2,636.3	2,697.1	2,671.2	10.5	7.5	160.39	-163.4	-248.8	252.1	240.7	11.31	22.287		
2,800.0	2,733.0	2,796.6	2,769.3	11.0	7.8	160.28	-173.0	-262.2	262.6	250.8	11.79	22.274		
2,900.0	2,829.7	2,896.0	2,867.3	11.5	8.2	160.18	-182.6	-275.6	273.1	260.9	12.27	22.262		
3,000.0	2,926.3	2,995.5	2,965.4	12.0	8.5	160.09	-192.2	-288.9	283.7	270.9	12.75	22.249		
3,100.0	3,023.0	3,094.9	3,063.5	12.5	8.8	160.00	-201.8	-302.3	294.2	281.0	13.23	22.236		
3,200.0	3,119.6	3,194.3	3,161.5	12.9	9.2	159.92	-211.4	-315.7	304.7	291.0	13.71	22.223		
3,300.0	3,216.3	3,293.8	3,259.6	13.4	9.5	159.84	-221.0	-329.1	315.3	301.1	14.19	22.211		
3,400.0	3,312.9	3,393.2	3,357.7	13.9	9.8	159.77	-230.6	-342.4	325.8	311.1	14.68	22.199		
3,500.0	3,409.6	3,492.7	3,455.8	14.4	10.2	159.70	-240.2	-355.8	336.4	321.2	15.16	22.187		
3,600.0	3,506.3	3,592.1	3,553.8	14.9	10.5	159.64	-249.8	-369.2	346.9	331.2	15.64	22.175		
3,700.0	3,602.9	3,691.6	3,651.9	15.4	10.8	159.58	-259.4	-382.5	357.4	341.3	16.13	22.163		
3,800.0	3,699.6	3,791.0	3,750.0	15.8	11.2	159.53	-269.0	-395.9	368.0	351.4	16.61	22.152		
3,900.0	3,796.2	3,890.4	3,848.0	16.3	11.5	159.47	-278.6	-409.3	378.5	361.4	17.10	22.141		
4,000.0	3,892.9	3,989.9	3,946.1	16.8	11.9	159.43	-288.2	-422.7	389.1	371.5	17.58	22.131		
4,100.0	3,989.6	4,089.3	4,044.2	17.3	12.2	159.38	-297.8	-436.0	399.6	381.5	18.06	22.121		
4,200.0	4,086.2	4,188.8	4,142.2	17.8	12.5	159.33	-307.4	-449.4	410.1	391.6	18.55	22.111		
4,300.0	4,182.9	4,288.2	4,240.3	18.3	12.9	159.29	-317.0	-462.8	420.7	401.6	19.03	22.101		
4,400.0	4,279.5	4,387.7	4,338.4	18.8	13.2	159.25	-326.6	-476.1	431.2	411.7	19.52	22.092		
4,500.0	4,376.2	4,487.1	4,436.5	19.2	13.5	159.21	-336.2	-489.5	441.8	421.8	20.00	22.083		
4,600.0	4,472.9	4,586.5	4,534.5	19.7	13.9	159.18	-345.8	-502.9	452.3	431.8	20.49	22.074		
4,700.0	4,569.5	4,686.0	4,632.6	20.2	14.2	159.14	-355.4	-516.3	462.8	441.9	20.98	22.065		
4,800.0	4,666.2	4,785.4	4,730.7	20.7	14.6	159.11	-365.0	-529.6	473.4	451.9	21.46	22.057		
4,900.0	4,762.8	4,884.9	4,828.7	21.2	14.9	159.08	-374.6	-543.0	483.9	462.0	21.95	22.049		
5,000.0	4,859.5	4,984.3	4,926.8	21.7	15.2	159.05	-384.3	-556.4	494.5	472.0	22.43	22.041		
5,100.0	4,956.1	5,083.8	5,024.9	22.2	15.6	159.02	-393.9	-569.8	505.0	482.1	22.92	22.033		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Cathedral Energy Services

Anticollision Report

Company:	Berry Petroleum Company (NAD 83)	Local Co-ordinate Reference:	Well OM07C B21 696
Project:	Garfield County	TVD Reference:	KBE @ 8293.0ft (Original Well Elev)
Reference Site:	NENE S21-T6S-R96W (B21 696 Pad)	MD Reference:	KBE @ 8293.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	OM07C B21 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 NENE S21-T6S-R96W (B21 696 Pad) - OM07A B21 696 - DD - Plan #1													Offset Site Error:	0.0 ft
Survey Program: O-MWD													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance				Total		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)	Uncertainty Axis	Separation Factor		
5,200.0	5,052.8	5,183.2	5,122.9	22.6	15.9	158.99	-403.5	-583.1	515.6	492.2	23.41	22.026		
5,300.0	5,149.5	5,282.6	5,221.0	23.1	16.2	158.96	-413.1	-596.5	526.1	502.2	23.89	22.019		
5,400.0	5,246.1	5,382.1	5,319.1	23.6	16.6	158.94	-422.7	-609.9	536.6	512.3	24.38	22.012		
5,500.0	5,342.8	5,481.5	5,417.2	24.1	16.9	158.91	-432.3	-623.2	547.2	522.3	24.87	22.005		
5,600.0	5,439.4	5,581.0	5,515.2	24.6	17.3	158.89	-441.9	-636.6	557.7	532.4	25.35	21.999		
5,700.0	5,536.1	5,680.4	5,613.3	25.1	17.6	158.87	-451.5	-650.0	568.3	542.4	25.84	21.992		
5,800.0	5,632.8	5,779.8	5,711.4	25.6	17.9	158.84	-461.1	-663.4	578.8	552.5	26.33	21.986		
5,900.0	5,729.4	5,879.3	5,809.4	26.0	18.3	158.82	-470.7	-676.7	589.4	562.5	26.81	21.980		
6,000.0	5,826.1	5,978.7	5,907.5	26.5	18.6	158.80	-480.3	-690.1	599.9	572.6	27.30	21.974		
6,100.0	5,922.7	6,078.2	6,005.6	27.0	18.9	158.78	-489.9	-703.5	610.4	582.7	27.79	21.969		
6,200.0	6,019.4	6,177.6	6,103.6	27.5	19.3	158.76	-499.5	-716.8	621.0	592.7	28.27	21.963		
6,300.0	6,116.1	6,277.1	6,201.7	28.0	19.6	158.74	-509.1	-730.2	631.5	602.8	28.76	21.958		
6,400.0	6,213.1	6,376.6	6,299.9	28.4	20.0	158.74	-518.7	-743.6	640.6	611.4	29.27	21.887		
6,500.0	6,310.9	6,476.4	6,398.3	28.8	20.3	158.60	-528.4	-757.0	646.5	616.7	29.81	21.688		
6,600.0	6,409.4	6,562.1	6,483.0	29.1	20.5	158.43	-536.0	-767.7	650.2	619.9	30.28	21.468		
6,700.0	6,508.4	6,646.4	6,566.7	29.4	20.8	158.30	-542.1	-776.2	652.9	622.3	30.70	21.270		
6,800.0	6,607.9	6,730.8	6,650.6	29.6	20.9	158.18	-546.8	-782.7	654.9	623.8	31.05	21.089		
6,900.0	6,707.6	6,815.1	6,734.8	29.7	21.1	158.10	-550.1	-787.2	656.0	624.6	31.35	20.922		
7,000.0	6,807.6	6,900.0	6,819.6	29.8	21.2	158.04	-551.9	-789.7	656.2	624.6	31.60	20.768		
7,092.9	6,900.4	6,981.2	6,900.8	29.9	21.3	145.58	-552.2	-790.3	656.4	624.6	31.81	20.636		
7,100.0	6,907.6	6,988.6	6,908.1	29.9	21.3	138.39	-552.2	-790.3	656.0	624.2	31.84	20.606		
7,200.0	7,007.6	7,090.7	7,010.3	30.0	21.4	138.40	-552.4	-790.6	656.1	624.0	32.12	20.425		
7,300.0	7,107.6	7,192.9	7,112.5	30.1	21.5	138.40	-552.8	-791.3	656.2	623.7	32.42	20.242		
7,400.0	7,207.6	7,295.0	7,214.6	30.2	21.6	138.41	-553.4	-792.4	656.2	623.5	32.71	20.058		
7,500.0	7,307.5	7,395.0	7,314.6	30.3	21.8	138.41	-554.2	-793.6	656.2	623.2	33.01	19.879		
7,600.0	7,407.5	7,495.0	7,414.6	30.4	21.9	138.41	-554.9	-794.9	656.2	622.9	33.31	19.703		
7,700.0	7,507.5	7,595.0	7,514.6	30.5	22.0	138.41	-555.6	-796.1	656.2	622.6	33.60	19.529		
7,800.0	7,607.5	7,695.0	7,614.5	30.6	22.1	138.41	-556.3	-797.4	656.2	622.3	33.90	19.358		
7,900.0	7,707.5	7,795.0	7,714.5	30.7	22.3	138.41	-557.0	-798.6	656.2	622.0	34.20	19.188		
8,000.0	7,807.5	7,895.0	7,814.5	30.8	22.4	138.41	-557.7	-799.9	656.2	621.7	34.50	19.022		
8,100.0	7,907.5	7,995.0	7,914.5	30.9	22.5	138.41	-558.5	-801.1	656.2	621.4	34.80	18.857		
8,200.0	8,007.5	8,095.0	8,014.5	31.0	22.6	138.41	-559.2	-802.3	656.2	621.1	35.10	18.695		
8,300.0	8,107.5	8,195.0	8,114.5	31.1	22.8	138.41	-559.9	-803.6	656.2	620.8	35.40	18.536		
8,400.0	8,207.5	8,295.0	8,214.5	31.2	22.9	138.41	-560.6	-804.8	656.2	620.5	35.71	18.378		
8,500.0	8,307.4	8,395.0	8,314.5	31.3	23.0	138.41	-561.3	-806.1	656.2	620.2	36.01	18.223		
8,600.0	8,407.4	8,495.0	8,414.5	31.4	23.1	138.40	-562.0	-807.3	656.2	619.9	36.32	18.070		
8,700.0	8,507.4	8,595.0	8,514.5	31.5	23.3	138.40	-562.8	-808.6	656.2	619.6	36.62	17.919		
8,800.0	8,607.4	8,695.0	8,614.4	31.6	23.4	138.40	-563.5	-809.8	656.2	619.3	36.93	17.770		
8,900.0	8,707.4	8,795.0	8,714.4	31.7	23.5	138.40	-564.2	-811.1	656.2	619.0	37.24	17.623		
9,000.0	8,807.4	8,895.0	8,814.4	31.8	23.7	138.40	-564.9	-812.3	656.2	618.7	37.54	17.479		
9,100.0	8,907.4	8,995.0	8,914.4	31.9	23.8	138.40	-565.6	-813.6	656.2	618.4	37.85	17.336		
9,200.0	9,007.4	9,095.0	9,014.4	32.0	23.9	138.40	-566.3	-814.8	656.2	618.1	38.16	17.196		
9,300.0	9,107.4	9,195.0	9,114.4	32.1	24.1	138.40	-567.1	-816.0	656.2	617.8	38.47	17.057		
9,400.0	9,207.3	9,295.0	9,214.4	32.2	24.2	138.40	-567.8	-817.3	656.2	617.5	38.79	16.920		
9,500.0	9,307.3	9,395.0	9,314.4	32.3	24.3	138.40	-568.5	-818.5	656.2	617.1	39.10	16.785		
9,600.0	9,407.3	9,495.0	9,414.4	32.4	24.5	138.40	-569.2	-819.8	656.2	616.8	39.41	16.652		
9,700.0	9,507.3	9,595.0	9,514.4	32.6	24.6	138.40	-569.9	-821.0	656.2	616.5	39.72	16.521		
9,800.0	9,607.3	9,695.0	9,614.3	32.7	24.8	138.40	-570.6	-822.3	656.3	616.2	40.04	16.391		
9,900.0	9,707.3	9,795.0	9,714.3	32.8	24.9	138.40	-571.4	-823.5	656.3	615.9	40.35	16.264		
9,998.7	9,806.0	9,893.7	9,813.0	32.9	25.0	138.40	-572.1	-824.7	656.3	615.6	40.66	16.140 SF		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Cathedral Energy Services

Anticollision Report

Company:	Berry Petroleum Company (NAD 83)	Local Co-ordinate Reference:	Well OM07C B21 696
Project:	Garfield County	TVD Reference:	KBE @ 8293.0ft (Original Well Elev)
Reference Site:	NENE S21-T6S-R96W (B21 696 Pad)	MD Reference:	KBE @ 8293.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	OM07C B21 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 NENE S21-T6S-R96W (B21 696 Pad) - OM07B B21 696 - DD - Plan #1													Offset Site Error: 0.0 ft	
Survey Program: O-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	29.97	17.1	9.9	19.8					
100.0	100.0	100.0	100.0	0.1	0.1	29.97	17.1	9.9	19.8	19.5	0.30	66.621		
200.0	200.0	200.0	200.0	0.3	0.3	29.97	17.1	9.9	19.8	19.1	0.65	30.610		
300.0	300.0	300.0	300.0	0.5	0.5	29.97	17.1	9.9	19.8	18.8	0.99	19.869	CC, ES	
400.0	400.0	400.0	400.0	0.7	0.7	170.50	17.1	9.9	21.5	20.1	1.34	15.993		
500.0	499.8	500.7	500.7	0.9	0.8	171.37	15.9	8.6	25.0	23.3	1.69	14.748		
600.0	599.5	601.6	601.4	1.1	1.0	171.23	12.3	4.7	28.5	26.5	2.04	13.953		
700.0	698.7	702.5	702.0	1.3	1.3	170.41	6.2	-1.8	32.1	29.7	2.40	13.397		
800.0	797.5	803.6	802.3	1.6	1.5	169.11	-2.3	-10.8	35.7	33.0	2.76	12.972		
900.0	895.6	904.8	902.2	2.0	1.8	167.49	-13.3	-22.4	39.5	36.3	3.13	12.610		
1,000.0	993.1	1,006.1	1,001.6	2.4	2.2	165.62	-26.6	-36.7	43.3	39.8	3.53	12.263		
1,100.0	1,089.8	1,106.2	1,099.3	2.9	2.5	164.01	-41.3	-52.3	47.9	43.9	3.96	12.081		
1,200.0	1,186.5	1,206.1	1,196.9	3.3	2.9	162.78	-56.1	-68.0	52.8	48.3	4.42	11.942		
1,300.0	1,283.1	1,305.9	1,294.4	3.8	3.3	161.76	-70.8	-83.7	57.7	52.8	4.89	11.795		
1,400.0	1,379.8	1,405.8	1,391.9	4.3	3.7	160.90	-85.5	-99.3	62.6	57.2	5.37	11.649		
1,500.0	1,476.4	1,505.7	1,489.5	4.7	4.1	160.16	-100.2	-115.0	67.5	61.6	5.86	11.508		
1,600.0	1,573.1	1,605.6	1,587.0	5.2	4.5	159.53	-115.0	-130.6	72.4	66.1	6.37	11.375		
1,700.0	1,669.7	1,705.4	1,684.5	5.7	4.9	158.97	-129.7	-146.3	77.4	70.5	6.88	11.250		
1,800.0	1,766.4	1,805.3	1,782.1	6.2	5.3	158.49	-144.4	-162.0	82.3	74.9	7.39	11.134		
1,900.0	1,863.1	1,905.2	1,879.6	6.7	5.8	158.05	-159.1	-177.6	87.3	79.3	7.91	11.026		
2,000.0	1,959.7	2,005.1	1,977.1	7.1	6.2	157.67	-173.8	-193.3	92.2	83.8	8.44	10.927		
2,100.0	2,056.4	2,104.9	2,074.7	7.6	6.6	157.32	-188.6	-209.0	97.2	88.2	8.97	10.835		
2,200.0	2,153.0	2,204.8	2,172.2	8.1	7.0	157.01	-203.3	-224.6	102.1	92.6	9.50	10.750		
2,300.0	2,249.7	2,304.7	2,269.7	8.6	7.4	156.72	-218.0	-240.3	107.1	97.1	10.04	10.671		
2,400.0	2,346.4	2,404.6	2,367.3	9.1	7.8	156.47	-232.7	-255.9	112.1	101.5	10.57	10.598		
2,500.0	2,443.0	2,504.4	2,464.8	9.5	8.2	156.23	-247.5	-271.6	117.0	105.9	11.11	10.531		
2,600.0	2,539.7	2,604.3	2,562.4	10.0	8.7	156.01	-262.2	-287.3	122.0	110.4	11.66	10.468		
2,700.0	2,636.3	2,704.2	2,659.9	10.5	9.1	155.81	-276.9	-302.9	127.0	114.8	12.20	10.409		
2,800.0	2,733.0	2,804.1	2,757.4	11.0	9.5	155.62	-291.6	-318.6	132.0	119.2	12.74	10.354		
2,900.0	2,829.7	2,903.9	2,855.0	11.5	9.9	155.45	-306.3	-334.3	136.9	123.6	13.29	10.303		
3,000.0	2,926.3	3,003.8	2,952.5	12.0	10.3	155.29	-321.1	-349.9	141.9	128.1	13.84	10.255		
3,100.0	3,023.0	3,103.7	3,050.0	12.5	10.7	155.14	-335.8	-365.6	146.9	132.5	14.39	10.210		
3,200.0	3,119.6	3,203.6	3,147.6	12.9	11.1	155.00	-350.5	-381.2	151.9	136.9	14.94	10.168		
3,300.0	3,216.3	3,303.4	3,245.1	13.4	11.6	154.87	-365.2	-396.9	156.9	141.4	15.49	10.128		
3,400.0	3,312.9	3,403.3	3,342.6	13.9	12.0	154.75	-379.9	-412.6	161.8	145.8	16.04	10.091		
3,500.0	3,409.6	3,503.2	3,440.2	14.4	12.4	154.64	-394.7	-428.2	166.8	150.2	16.59	10.056		
3,600.0	3,506.3	3,603.1	3,537.7	14.9	12.8	154.53	-409.4	-443.9	171.8	154.7	17.14	10.022		
3,700.0	3,602.9	3,702.9	3,635.2	15.4	13.2	154.43	-424.1	-459.6	176.8	159.1	17.69	9.991		
3,800.0	3,699.6	3,802.8	3,732.8	15.8	13.6	154.33	-438.8	-475.2	181.8	163.5	18.25	9.961		
3,900.0	3,796.2	3,902.7	3,830.3	16.3	14.1	154.24	-453.6	-490.9	186.7	167.9	18.80	9.932		
4,000.0	3,892.9	4,002.6	3,927.8	16.8	14.5	154.15	-468.3	-506.5	191.7	172.4	19.36	9.905		
4,100.0	3,989.6	4,102.4	4,025.4	17.3	14.9	154.07	-483.0	-522.2	196.7	176.8	19.91	9.879		
4,200.0	4,086.2	4,202.3	4,122.9	17.8	15.3	153.99	-497.7	-537.9	201.7	181.2	20.47	9.855		
4,300.0	4,182.9	4,302.2	4,220.4	18.3	15.7	153.92	-512.4	-553.5	206.7	185.7	21.02	9.832		
4,400.0	4,279.5	4,402.1	4,318.0	18.8	16.1	153.85	-527.2	-569.2	211.7	190.1	21.58	9.809		
4,500.0	4,376.2	4,501.9	4,415.5	19.2	16.6	153.78	-541.9	-584.9	216.7	194.5	22.14	9.788		
4,600.0	4,472.9	4,601.8	4,513.0	19.7	17.0	153.71	-556.6	-600.5	221.6	199.0	22.69	9.768		
4,700.0	4,569.5	4,701.7	4,610.6	20.2	17.4	153.65	-571.3	-616.2	226.6	203.4	23.25	9.748		
4,800.0	4,666.2	4,801.6	4,708.1	20.7	17.8	153.59	-586.1	-631.8	231.6	207.8	23.81	9.730		
4,900.0	4,762.8	4,901.4	4,805.7	21.2	18.2	153.53	-600.8	-647.5	236.6	212.2	24.36	9.712		
5,000.0	4,859.5	5,001.3	4,903.2	21.7	18.6	153.48	-615.5	-663.2	241.6	216.7	24.92	9.694		
5,100.0	4,956.1	5,101.2	5,000.7	22.2	19.1	153.43	-630.2	-678.8	246.6	221.1	25.48	9.678		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Cathedral Energy Services

Anticollision Report

Company:	Berry Petroleum Company (NAD 83)	Local Co-ordinate Reference:	Well OM07C B21 696
Project:	Garfield County	TVD Reference:	KBE @ 8293.0ft (Original Well Elev)
Reference Site:	NENE S21-T6S-R96W (B21 696 Pad)	MD Reference:	KBE @ 8293.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	OM07C B21 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 NENE S21-T6S-R96W (B21 696 Pad) - OM07B B21 696 - DD - Plan #1													Offset Site Error:	0.0 ft
Survey Program: O-MWD													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance				Total Uncertainty Axis	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)				
5,200.0	5,052.8	5,201.1	5,098.3	22.6	19.5	153.38	-644.9	-694.5	251.6	225.5	26.04	9.662		
5,300.0	5,149.5	5,300.9	5,195.8	23.1	19.9	153.33	-659.7	-710.2	256.6	230.0	26.59	9.647		
5,400.0	5,246.1	5,400.8	5,293.3	23.6	20.3	153.28	-674.4	-725.8	261.5	234.4	27.15	9.632		
5,500.0	5,342.8	5,500.7	5,390.9	24.1	20.7	153.24	-689.1	-741.5	266.5	238.8	27.71	9.618		
5,600.0	5,439.4	5,600.6	5,488.4	24.6	21.2	153.20	-703.8	-757.1	271.5	243.3	28.27	9.605		
5,700.0	5,536.1	5,700.4	5,585.9	25.1	21.6	153.16	-718.5	-772.8	276.5	247.7	28.83	9.591		
5,800.0	5,632.8	5,800.3	5,683.5	25.6	22.0	153.12	-733.3	-788.5	281.5	252.1	29.39	9.579		
5,900.0	5,729.4	5,900.2	5,781.0	26.0	22.4	153.08	-748.0	-804.1	286.5	256.5	29.95	9.566		
6,000.0	5,826.1	6,000.1	5,878.5	26.5	22.8	153.04	-762.7	-819.8	291.5	261.0	30.51	9.555		
6,100.0	5,922.7	6,099.9	5,976.1	27.0	23.2	153.00	-777.4	-835.5	296.5	265.4	31.07	9.543		
6,200.0	6,019.4	6,199.8	6,073.6	27.5	23.7	152.97	-792.2	-851.1	301.5	269.8	31.63	9.532		
6,300.0	6,116.1	6,299.7	6,171.1	28.0	24.1	152.94	-806.9	-866.8	306.4	274.3	32.18	9.521		
6,400.0	6,213.1	6,398.0	6,267.1	28.4	24.5	152.81	-821.3	-882.2	310.1	277.3	32.79	9.457		
6,500.0	6,310.9	6,489.7	6,357.1	28.8	24.8	152.63	-833.5	-895.1	312.5	279.1	33.36	9.368		
6,600.0	6,409.4	6,581.3	6,447.5	29.1	25.1	152.47	-843.6	-905.9	314.4	280.6	33.86	9.287		
6,700.0	6,508.4	6,672.9	6,538.4	29.4	25.3	152.34	-851.8	-914.6	315.9	281.6	34.29	9.214		
6,800.0	6,607.9	6,764.5	6,629.5	29.6	25.5	152.23	-858.0	-921.2	317.0	282.3	34.66	9.147		
6,900.0	6,707.6	6,856.2	6,720.9	29.7	25.6	152.15	-862.2	-925.6	317.6	282.7	34.96	9.086		
7,000.0	6,807.6	6,947.8	6,812.5	29.8	25.7	152.10	-864.3	-927.9	317.8	282.6	35.19	9.031		
7,093.6	6,901.2	7,036.8	6,901.5	29.9	25.8	139.14	-864.7	-928.3	318.1	282.8	35.37	8.993		
7,100.0	6,907.6	7,043.3	6,908.0	29.9	25.8	132.46	-864.7	-928.3	317.7	282.3	35.41	8.972		
7,200.0	7,007.6	7,144.2	7,008.9	30.0	25.9	132.46	-864.9	-928.7	317.7	282.1	35.67	8.907		
7,300.0	7,107.6	7,245.1	7,109.8	30.1	26.0	132.47	-865.3	-929.4	317.8	281.8	35.94	8.841		
7,400.0	7,207.6	7,345.9	7,210.6	30.2	26.1	132.47	-866.0	-930.5	317.8	281.6	36.22	8.774		
7,500.0	7,307.5	7,445.9	7,310.6	30.3	26.2	132.47	-866.7	-931.8	317.8	281.3	36.49	8.708		
7,600.0	7,407.5	7,545.9	7,410.6	30.4	26.3	132.47	-867.4	-933.0	317.8	281.0	36.77	8.643		
7,700.0	7,507.5	7,645.9	7,510.6	30.5	26.5	132.47	-868.1	-934.2	317.8	280.7	37.05	8.578		
7,800.0	7,607.5	7,745.9	7,610.6	30.6	26.6	132.47	-868.8	-935.5	317.8	280.5	37.32	8.514		
7,900.0	7,707.5	7,845.9	7,710.6	30.7	26.7	132.47	-869.6	-936.7	317.8	280.2	37.60	8.451		
8,000.0	7,807.5	7,945.9	7,810.6	30.8	26.8	132.47	-870.3	-938.0	317.8	279.9	37.88	8.388		
8,100.0	7,907.5	8,045.9	7,910.6	30.9	26.9	132.47	-871.0	-939.2	317.8	279.6	38.17	8.326		
8,200.0	8,007.5	8,145.9	8,010.6	31.0	27.0	132.47	-871.7	-940.5	317.8	279.3	38.45	8.265		
8,300.0	8,107.5	8,245.9	8,110.5	31.1	27.1	132.47	-872.4	-941.7	317.8	279.1	38.73	8.204		
8,400.0	8,207.5	8,345.9	8,210.5	31.2	27.2	132.47	-873.2	-943.0	317.8	278.8	39.02	8.144		
8,500.0	8,307.4	8,445.9	8,310.5	31.3	27.3	132.47	-873.9	-944.2	317.8	278.5	39.30	8.085		
8,600.0	8,407.4	8,545.9	8,410.5	31.4	27.5	132.47	-874.6	-945.5	317.8	278.2	39.59	8.026		
8,700.0	8,507.4	8,645.9	8,510.5	31.5	27.6	132.47	-875.3	-946.7	317.8	277.9	39.88	7.968		
8,800.0	8,607.4	8,745.9	8,610.5	31.6	27.7	132.46	-876.0	-947.9	317.8	277.6	40.17	7.911		
8,900.0	8,707.4	8,845.9	8,710.5	31.7	27.8	132.46	-876.8	-949.2	317.8	277.3	40.46	7.854		
9,000.0	8,807.4	8,945.9	8,810.5	31.8	27.9	132.46	-877.5	-950.4	317.8	277.0	40.75	7.798		
9,100.0	8,907.4	9,045.9	8,910.5	31.9	28.0	132.46	-878.2	-951.7	317.8	276.7	41.04	7.742		
9,200.0	9,007.4	9,145.9	9,010.5	32.0	28.2	132.46	-878.9	-952.9	317.8	276.4	41.34	7.688		
9,300.0	9,107.4	9,245.9	9,110.4	32.1	28.3	132.46	-879.6	-954.2	317.8	276.1	41.63	7.633		
9,400.0	9,207.3	9,345.9	9,210.4	32.2	28.4	132.46	-880.4	-955.4	317.8	275.9	41.93	7.580		
9,500.0	9,307.3	9,445.9	9,310.4	32.3	28.5	132.46	-881.1	-956.7	317.8	275.6	42.22	7.526		
9,600.0	9,407.3	9,545.9	9,410.4	32.4	28.6	132.46	-881.8	-957.9	317.8	275.3	42.52	7.474		
9,700.0	9,507.3	9,645.9	9,510.4	32.6	28.8	132.46	-882.5	-959.1	317.8	275.0	42.82	7.422		
9,800.0	9,607.3	9,745.9	9,610.4	32.7	28.9	132.46	-883.2	-960.4	317.8	274.7	43.11	7.371		
9,900.0	9,707.3	9,845.9	9,710.4	32.8	29.0	132.46	-884.0	-961.6	317.8	274.4	43.41	7.320		
9,998.7	9,806.0	9,944.7	9,809.1	32.9	29.1	132.46	-884.7	-962.9	317.8	274.1	43.71	7.270 SF		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Cathedral Energy Services

Anticollision Report

Company:	Berry Petroleum Company (NAD 83)	Local Co-ordinate Reference:	Well OM07C B21 696
Project:	Garfield County	TVD Reference:	KBE @ 8293.0ft (Original Well Elev)
Reference Site:	NENE S21-T6S-R96W (B21 696 Pad)	MD Reference:	KBE @ 8293.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	OM07C B21 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 NENE S21-T6S-R96W (B21 696 Pad) - OM07D B21 696 - DD - Plan #1													Offset Site Error:	0.0 ft
Survey Program: O-MWD													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Distance		Total Uncertainty Axis	Separation Factor	Warning			
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)		Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)						
0.0	0.0	0.0	0.0	0.0	0.0	29.78	8.4	4.8	9.7					
100.0	100.0	100.0	100.0	0.1	0.1	29.78	8.4	4.8	9.7	9.4	0.30	32.548		
200.0	200.0	200.0	200.0	0.3	0.3	29.78	8.4	4.8	9.7	9.0	0.65	14.954		
271.0	271.0	271.0	271.0	0.4	0.4	35.00	7.9	5.5	9.6	8.7	0.90	10.745 CC		
300.0	300.0	300.0	300.0	0.5	0.5	40.15	7.4	6.2	9.7	8.7	1.00	9.682 ES		
400.0	400.0	400.2	400.1	0.7	0.7	-159.55	3.9	8.2	10.7	9.3	1.36	7.850		
500.0	499.8	500.5	500.2	0.9	0.9	-142.26	-2.6	8.3	13.1	11.3	1.74	7.521		
600.0	599.5	600.7	599.9	1.1	1.1	-129.93	-12.1	6.6	16.7	14.6	2.17	7.694		
700.0	698.7	700.8	699.2	1.3	1.4	-121.50	-24.5	3.0	21.3	18.6	2.68	7.934		
800.0	797.5	800.9	798.0	1.6	1.7	-115.67	-39.8	-2.4	26.6	23.4	3.29	8.092		
900.0	895.6	901.0	896.1	2.0	2.1	-111.50	-58.1	-9.5	32.6	28.6	4.01	8.146		
1,000.0	993.1	1,001.0	993.4	2.4	2.5	-108.41	-79.3	-18.5	39.2	34.4	4.84	8.114		
1,100.0	1,089.8	1,100.9	1,089.8	2.9	3.0	-105.57	-103.2	-29.2	46.2	40.5	5.75	8.043		
1,200.0	1,186.5	1,200.7	1,185.8	3.3	3.4	-102.79	-127.9	-40.4	53.3	46.6	6.69	7.974		
1,300.0	1,283.1	1,300.4	1,281.8	3.8	3.9	-100.67	-152.6	-51.6	60.5	52.9	7.63	7.924		
1,400.0	1,379.8	1,400.1	1,377.7	4.3	4.4	-99.00	-177.3	-62.9	67.7	59.1	8.58	7.888		
1,500.0	1,476.4	1,499.8	1,473.7	4.7	4.9	-97.66	-201.9	-74.1	75.0	65.5	9.54	7.861		
1,600.0	1,573.1	1,599.5	1,569.7	5.2	5.4	-96.55	-226.6	-85.3	82.3	71.8	10.50	7.840		
1,700.0	1,669.7	1,699.3	1,665.6	5.7	5.9	-95.62	-251.3	-96.5	89.6	78.2	11.46	7.824		
1,800.0	1,766.4	1,799.0	1,761.6	6.2	6.4	-94.83	-276.0	-107.7	97.0	84.6	12.42	7.812		
1,900.0	1,863.1	1,898.7	1,857.6	6.7	6.9	-94.16	-300.7	-118.9	104.4	91.0	13.38	7.802		
2,000.0	1,959.7	1,998.4	1,953.5	7.1	7.4	-93.57	-325.4	-130.1	111.8	97.4	14.34	7.793		
2,100.0	2,056.4	2,098.1	2,049.5	7.6	7.9	-93.06	-350.1	-141.3	119.1	103.8	15.30	7.787		
2,200.0	2,153.0	2,197.9	2,145.5	8.1	8.4	-92.61	-374.8	-152.5	126.6	110.3	16.26	7.781		
2,300.0	2,249.7	2,297.6	2,241.4	8.6	8.9	-92.20	-399.4	-163.7	134.0	116.7	17.23	7.777		
2,400.0	2,346.4	2,397.3	2,337.4	9.1	9.4	-91.84	-424.1	-174.9	141.4	123.2	18.19	7.773		
2,500.0	2,443.0	2,497.0	2,433.3	9.5	9.9	-91.52	-448.8	-186.1	148.8	129.6	19.15	7.770		
2,600.0	2,539.7	2,596.8	2,529.3	10.0	10.4	-91.22	-473.5	-197.3	156.2	136.1	20.11	7.767		
2,700.0	2,636.3	2,696.5	2,625.3	10.5	10.9	-90.95	-498.2	-208.5	163.7	142.6	21.08	7.765		
2,800.0	2,733.0	2,796.2	2,721.2	11.0	11.4	-90.71	-522.9	-219.7	171.1	149.0	22.04	7.763		
2,900.0	2,829.7	2,895.9	2,817.2	11.5	11.9	-90.49	-547.6	-230.9	178.5	155.5	23.00	7.761		
3,000.0	2,926.3	2,995.6	2,913.2	12.0	12.4	-90.28	-572.2	-242.1	186.0	162.0	23.97	7.759		
3,100.0	3,023.0	3,095.4	3,009.1	12.5	12.9	-90.09	-596.9	-253.3	193.4	168.5	24.93	7.758		
3,200.0	3,119.6	3,195.1	3,105.1	12.9	13.5	-89.91	-621.6	-264.5	200.8	175.0	25.89	7.757		
3,300.0	3,216.3	3,294.8	3,201.1	13.4	14.0	-89.75	-646.3	-275.7	208.3	181.4	26.86	7.756		
3,400.0	3,312.9	3,394.5	3,297.0	13.9	14.5	-89.60	-671.0	-286.9	215.7	187.9	27.82	7.755		
3,500.0	3,409.6	3,494.2	3,393.0	14.4	15.0	-89.46	-695.7	-298.1	223.2	194.4	28.78	7.754		
3,600.0	3,506.3	3,594.0	3,489.0	14.9	15.5	-89.32	-720.4	-309.3	230.6	200.9	29.75	7.753		
3,700.0	3,602.9	3,693.7	3,584.9	15.4	16.0	-89.20	-745.1	-320.5	238.1	207.4	30.71	7.753		
3,800.0	3,699.6	3,793.4	3,680.9	15.8	16.5	-89.08	-769.7	-331.7	245.5	213.9	31.67	7.752		
3,900.0	3,796.2	3,893.1	3,776.9	16.3	17.0	-88.97	-794.4	-342.9	253.0	220.3	32.64	7.752		
4,000.0	3,892.9	3,992.8	3,872.8	16.8	17.5	-88.87	-819.1	-354.1	260.4	226.8	33.60	7.751		
4,100.0	3,989.6	4,092.6	3,968.8	17.3	18.0	-88.77	-843.8	-365.3	267.9	233.3	34.56	7.751		
4,200.0	4,086.2	4,192.3	4,064.8	17.8	18.5	-88.68	-868.5	-376.5	275.3	239.8	35.53	7.750		
4,300.0	4,182.9	4,292.0	4,160.7	18.3	19.0	-88.59	-893.2	-387.7	282.8	246.3	36.49	7.750		
4,400.0	4,279.5	4,391.7	4,256.7	18.8	19.5	-88.50	-917.9	-399.0	290.2	252.8	37.45	7.750		
4,500.0	4,376.2	4,491.4	4,352.6	19.2	20.0	-88.43	-942.5	-410.2	297.7	259.3	38.42	7.750		
4,600.0	4,472.9	4,591.2	4,448.6	19.7	20.5	-88.35	-967.2	-421.4	305.2	265.8	39.38	7.749		
4,700.0	4,569.5	4,690.9	4,544.6	20.2	21.0	-88.28	-991.9	-432.6	312.6	272.3	40.34	7.749		
4,800.0	4,666.2	4,790.6	4,640.5	20.7	21.6	-88.21	-1,016.6	-443.8	320.1	278.8	41.31	7.749		
4,900.0	4,762.8	4,890.3	4,736.5	21.2	22.1	-88.14	-1,041.3	-455.0	327.5	285.3	42.27	7.749		
5,000.0	4,859.5	4,990.1	4,832.5	21.7	22.6	-88.08	-1,066.0	-466.2	335.0	291.8	43.23	7.749		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Cathedral Energy Services

Anticollision Report

Company:	Berry Petroleum Company (NAD 83)	Local Co-ordinate Reference:	Well OM07C B21 696
Project:	Garfield County	TVD Reference:	KBE @ 8293.0ft (Original Well Elev)
Reference Site:	NENE S21-T6S-R96W (B21 696 Pad)	MD Reference:	KBE @ 8293.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	OM07C B21 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 NENE S21-T6S-R96W (B21 696 Pad) - OM07D B21 696 - DD - Plan #1													Offset Site Error:	0.0 ft
Survey Program: O-MWD													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance				Total Uncertainty Axis	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)				
5,100.0	4,956.1	5,089.8	4,928.4	22.2	23.1	-88.02	-1,090.7	-477.4	342.4	298.2	44.20	7.748		
5,200.0	5,052.8	5,189.5	5,024.4	22.6	23.6	-87.97	-1,115.4	-488.6	349.9	304.7	45.16	7.748		
5,300.0	5,149.5	5,289.2	5,120.4	23.1	24.1	-87.91	-1,140.0	-499.8	357.4	311.2	46.12	7.748		
5,400.0	5,246.1	5,388.9	5,216.3	23.6	24.6	-87.86	-1,164.7	-511.0	364.8	317.7	47.09	7.748		
5,500.0	5,342.8	5,488.7	5,312.3	24.1	25.1	-87.81	-1,189.4	-522.2	372.3	324.2	48.05	7.748		
5,600.0	5,439.4	5,588.4	5,408.3	24.6	25.6	-87.76	-1,214.1	-533.4	379.7	330.7	49.01	7.748		
5,700.0	5,536.1	5,688.1	5,504.2	25.1	26.1	-87.71	-1,238.8	-544.6	387.2	337.2	49.98	7.748		
5,800.0	5,632.8	5,787.8	5,600.2	25.6	26.6	-87.67	-1,263.5	-555.8	394.7	343.7	50.94	7.748		
5,900.0	5,729.4	5,887.5	5,696.2	26.0	27.1	-87.63	-1,288.2	-567.0	402.1	350.2	51.90	7.748		
6,000.0	5,826.1	5,987.3	5,792.1	26.5	27.6	-87.58	-1,312.8	-578.2	409.6	356.7	52.87	7.748		
6,100.0	5,922.7	6,087.0	5,888.1	27.0	28.1	-87.54	-1,337.5	-589.4	417.0	363.2	53.83	7.747		
6,200.0	6,019.4	6,186.7	5,984.1	27.5	28.6	-87.51	-1,362.2	-600.6	424.5	369.7	54.79	7.747		
6,300.0	6,116.1	6,286.4	6,080.0	28.0	29.1	-87.47	-1,386.9	-611.8	432.0	376.2	55.76	7.747		
6,400.0	6,213.1	6,391.0	6,181.1	28.4	29.6	-87.58	-1,411.2	-622.8	439.0	382.3	56.66	7.747		
6,500.0	6,310.9	6,495.7	6,283.3	28.8	30.0	-87.67	-1,432.1	-632.3	445.0	387.5	57.45	7.746		
6,600.0	6,409.4	6,600.7	6,386.4	29.1	30.4	-87.75	-1,449.7	-640.3	450.0	391.9	58.11	7.744		
6,700.0	6,508.4	6,705.7	6,490.3	29.4	30.7	-87.81	-1,463.8	-646.7	454.1	395.4	58.67	7.740		
6,800.0	6,607.9	6,810.8	6,594.8	29.6	30.9	-87.84	-1,474.4	-651.5	457.1	398.0	59.10	7.735		
6,900.0	6,707.6	6,916.0	6,699.6	29.7	31.1	-87.86	-1,481.6	-654.8	459.2	399.8	59.42	7.728		
7,000.0	6,807.6	7,021.2	6,804.8	29.8	31.2	-87.86	-1,485.2	-656.4	460.2	400.6	59.62	7.719		
7,100.0	6,907.6	7,124.3	6,907.9	29.9	31.3	-107.47	-1,485.7	-656.7	460.4	400.6	59.77	7.702		
7,200.0	7,007.6	7,224.9	7,008.5	30.0	31.3	-107.47	-1,486.0	-657.1	460.4	400.4	59.94	7.681		
7,300.0	7,107.6	7,325.5	7,109.1	30.1	31.4	-107.47	-1,486.4	-657.8	460.4	400.3	60.12	7.658		
7,400.0	7,207.6	7,426.0	7,209.5	30.2	31.5	-107.48	-1,487.0	-658.9	460.4	400.1	60.31	7.634		
7,500.0	7,307.5	7,526.0	7,309.5	30.3	31.6	-107.48	-1,487.8	-660.2	460.4	399.9	60.50	7.609		
7,600.0	7,407.5	7,626.0	7,409.5	30.4	31.7	-107.48	-1,488.5	-661.4	460.4	399.7	60.70	7.585		
7,700.0	7,507.5	7,726.0	7,509.5	30.5	31.8	-107.48	-1,489.2	-662.7	460.4	399.5	60.89	7.561		
7,800.0	7,607.5	7,826.0	7,609.5	30.6	31.9	-107.48	-1,489.9	-663.9	460.4	399.3	61.09	7.536		
7,900.0	7,707.5	7,926.0	7,709.5	30.7	32.0	-107.48	-1,490.6	-665.2	460.4	399.1	61.29	7.512		
8,000.0	7,807.5	8,026.0	7,809.5	30.8	32.1	-107.48	-1,491.4	-666.4	460.4	398.9	61.49	7.487		
8,100.0	7,907.5	8,126.0	7,909.5	30.9	32.2	-107.48	-1,492.1	-667.6	460.4	398.7	61.69	7.463		
8,200.0	8,007.5	8,226.0	8,009.5	31.0	32.3	-107.48	-1,492.8	-668.9	460.4	398.5	61.89	7.438		
8,300.0	8,107.5	8,326.0	8,109.4	31.1	32.3	-107.48	-1,493.5	-670.1	460.4	398.3	62.10	7.414		
8,400.0	8,207.5	8,426.0	8,209.4	31.2	32.4	-107.48	-1,494.2	-671.4	460.4	398.1	62.30	7.389		
8,500.0	8,307.4	8,526.0	8,309.4	31.3	32.5	-107.48	-1,495.0	-672.6	460.4	397.9	62.51	7.365		
8,600.0	8,407.4	8,626.0	8,409.4	31.4	32.6	-107.48	-1,495.7	-673.8	460.4	397.7	62.72	7.341		
8,700.0	8,507.4	8,726.0	8,509.4	31.5	32.7	-107.48	-1,496.4	-675.1	460.4	397.5	62.93	7.316		
8,800.0	8,607.4	8,826.0	8,609.4	31.6	32.8	-107.48	-1,497.1	-676.3	460.4	397.2	63.14	7.292		
8,900.0	8,707.4	8,926.0	8,709.4	31.7	32.9	-107.48	-1,497.8	-677.6	460.4	397.0	63.35	7.267		
9,000.0	8,807.4	9,026.0	8,809.4	31.8	33.0	-107.48	-1,498.5	-678.8	460.4	396.8	63.56	7.243		
9,100.0	8,907.4	9,126.0	8,909.4	31.9	33.1	-107.48	-1,499.3	-680.1	460.4	396.6	63.78	7.219		
9,200.0	9,007.4	9,226.0	9,009.4	32.0	33.2	-107.48	-1,500.0	-681.3	460.4	396.4	63.99	7.194		
9,300.0	9,107.4	9,326.0	9,109.3	32.1	33.3	-107.48	-1,500.7	-682.5	460.4	396.2	64.21	7.170		
9,400.0	9,207.3	9,426.0	9,209.3	32.2	33.4	-107.48	-1,501.4	-683.8	460.4	396.0	64.43	7.146		
9,500.0	9,307.3	9,526.0	9,309.3	32.3	33.5	-107.48	-1,502.1	-685.0	460.4	395.7	64.65	7.122		
9,600.0	9,407.3	9,626.0	9,409.3	32.4	33.7	-107.48	-1,502.9	-686.3	460.4	395.5	64.87	7.097		
9,700.0	9,507.3	9,726.0	9,509.3	32.6	33.8	-107.48	-1,503.6	-687.5	460.4	395.3	65.09	7.073		
9,800.0	9,607.3	9,826.0	9,609.3	32.7	33.9	-107.48	-1,504.3	-688.8	460.4	395.1	65.31	7.049		
9,900.0	9,707.3	9,926.0	9,709.3	32.8	34.0	-107.48	-1,505.0	-690.0	460.4	394.8	65.53	7.025		
9,987.7	9,806.0	10,024.7	9,808.0	32.9	34.1	-107.48	-1,505.7	-691.2	460.4	394.6	65.76	7.001 SF		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Cathedral Energy Services

Anticollision Report

Company:	Berry Petroleum Company (NAD 83)	Local Co-ordinate Reference:	Well OM07C B21 696
Project:	Garfield County	TVD Reference:	KBE @ 8293.0ft (Original Well Elev)
Reference Site:	NENE S21-T6S-R96W (B21 696 Pad)	MD Reference:	KBE @ 8293.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	OM07C B21 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 NENE S21-T6S-R96W (B21 696 Pad) - OM08B B21 696 - DD - Plan #1													Offset Site Error:	0.0 ft
Survey Program: O-MWD													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis		Distance		Total		Separation		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)	Uncertainty Axis	Factor		
0.0	0.0	0.0	0.0	0.0	0.0	29.52	43.3	24.5	49.8					
100.0	100.0	100.0	100.0	0.1	0.1	29.52	43.3	24.5	49.8	49.5	0.30	167.896		
200.0	200.0	200.0	200.0	0.3	0.3	29.52	43.3	24.5	49.8	49.2	0.65	77.142		
300.0	300.0	300.0	300.0	0.5	0.5	29.52	43.3	24.5	49.8	48.8	0.99	50.074 CC, ES		
400.0	400.0	400.0	400.0	0.7	0.7	169.58	43.3	24.5	51.5	50.2	1.34	38.357		
500.0	499.8	499.8	499.8	0.9	0.8	170.52	43.3	24.5	56.7	55.0	1.69	33.523		
600.0	599.5	599.5	599.5	1.1	1.0	171.75	43.3	24.5	65.3	63.3	2.04	32.062		
700.0	698.7	700.3	700.3	1.3	1.2	174.09	41.7	25.1	76.3	74.0	2.38	32.037		
800.0	797.5	801.0	800.8	1.6	1.4	177.89	36.7	26.8	89.0	86.3	2.73	32.582		
900.0	895.6	901.4	900.8	2.0	1.6	-177.59	28.4	29.7	103.7	100.6	3.09	33.503		
1,000.0	993.1	1,001.2	999.9	2.4	1.8	-172.83	16.8	33.7	120.8	117.4	3.50	34.570		
1,100.0	1,089.8	1,100.4	1,097.8	2.9	2.1	-168.17	2.2	38.8	140.2	136.3	3.97	35.301		
1,200.0	1,186.5	1,198.0	1,193.9	3.3	2.4	-164.07	-14.1	44.4	160.1	155.6	4.51	35.513		
1,300.0	1,283.1	1,295.4	1,289.8	3.8	2.7	-160.88	-30.4	50.0	180.5	175.4	5.08	35.533		
1,400.0	1,379.8	1,392.9	1,385.7	4.3	3.0	-158.34	-46.7	55.7	201.4	195.7	5.68	35.454		
1,500.0	1,476.4	1,490.3	1,481.6	4.7	3.3	-156.28	-63.0	61.3	222.6	216.3	6.30	35.328		
1,600.0	1,573.1	1,587.8	1,577.5	5.2	3.7	-154.58	-79.2	66.9	244.0	237.0	6.93	35.186		
1,700.0	1,669.7	1,685.2	1,673.5	5.7	4.0	-153.15	-95.5	72.5	265.5	258.0	7.58	35.042		
1,800.0	1,766.4	1,782.6	1,769.4	6.2	4.3	-151.93	-111.8	78.2	287.3	279.0	8.23	34.903		
1,900.0	1,863.1	1,880.1	1,865.3	6.7	4.7	-150.89	-128.1	83.8	309.1	300.2	8.89	34.773		
2,000.0	1,959.7	1,977.5	1,961.2	7.1	5.0	-149.98	-144.3	89.4	331.0	321.4	9.55	34.653		
2,100.0	2,056.4	2,075.0	2,057.1	7.6	5.3	-149.19	-160.6	95.0	353.0	342.7	10.22	34.543		
2,200.0	2,153.0	2,172.4	2,153.0	8.1	5.7	-148.49	-176.9	100.7	375.0	364.1	10.89	34.442		
2,300.0	2,249.7	2,269.9	2,248.9	8.6	6.0	-147.86	-193.2	106.3	397.1	385.5	11.56	34.350		
2,400.0	2,346.4	2,367.3	2,344.8	9.1	6.3	-147.30	-209.4	111.9	419.2	406.9	12.23	34.267		
2,500.0	2,443.0	2,464.8	2,440.8	9.5	6.7	-146.80	-225.7	117.5	441.3	428.4	12.91	34.190		
2,600.0	2,539.7	2,562.2	2,536.7	10.0	7.0	-146.35	-242.0	123.2	463.5	449.9	13.58	34.120		
2,700.0	2,636.3	2,659.7	2,632.6	10.5	7.4	-145.94	-258.3	128.8	485.7	471.5	14.26	34.056		
2,800.0	2,733.0	2,757.1	2,728.5	11.0	7.7	-145.56	-274.5	134.4	508.0	493.0	14.94	33.996		
2,900.0	2,829.7	2,854.6	2,824.4	11.5	8.0	-145.22	-290.8	140.0	530.2	514.6	15.62	33.942		
3,000.0	2,926.3	2,952.0	2,920.3	12.0	8.4	-144.90	-307.1	145.7	552.5	536.2	16.30	33.891		
3,100.0	3,023.0	3,049.4	3,016.2	12.5	8.7	-144.61	-323.4	151.3	574.7	557.8	16.98	33.845		
3,200.0	3,119.6	3,146.9	3,112.1	12.9	9.1	-144.33	-339.6	156.9	597.0	579.4	17.66	33.801		
3,300.0	3,216.3	3,244.3	3,208.1	13.4	9.4	-144.08	-355.9	162.5	619.3	601.0	18.35	33.761		
3,400.0	3,312.9	3,341.8	3,304.0	13.9	9.8	-143.85	-372.2	168.2	641.7	622.6	19.03	33.723		
3,500.0	3,409.6	3,439.2	3,399.9	14.4	10.1	-143.63	-388.5	173.8	664.0	644.3	19.71	33.688		
3,600.0	3,506.3	3,536.7	3,495.8	14.9	10.4	-143.43	-404.7	179.4	686.3	665.9	20.39	33.655		
3,700.0	3,602.9	3,634.1	3,591.7	15.4	10.8	-143.24	-421.0	185.1	708.7	687.6	21.08	33.624		
3,800.0	3,699.6	3,731.6	3,687.6	15.8	11.1	-143.06	-437.3	190.7	731.0	709.3	21.76	33.596		
3,900.0	3,796.2	3,829.0	3,783.5	16.3	11.5	-142.89	-453.6	196.3	753.4	730.9	22.44	33.568		
4,000.0	3,892.9	3,926.5	3,879.4	16.8	11.8	-142.73	-469.8	201.9	775.7	752.6	23.13	33.543		
4,100.0	3,989.6	4,023.9	3,975.4	17.3	12.2	-142.58	-486.1	207.6	798.1	774.3	23.81	33.518		
4,200.0	4,086.2	4,121.3	4,071.3	17.8	12.5	-142.44	-502.4	213.2	820.5	796.0	24.49	33.495		
4,300.0	4,182.9	4,218.8	4,167.2	18.3	12.9	-142.30	-518.7	218.8	842.8	817.7	25.18	33.474		
4,400.0	4,279.5	4,316.2	4,263.1	18.8	13.2	-142.18	-534.9	224.4	865.2	839.4	25.86	33.453		
4,500.0	4,376.2	4,413.7	4,359.0	19.2	13.5	-142.05	-551.2	230.1	887.6	861.1	26.55	33.434		
4,600.0	4,472.9	4,511.1	4,454.9	19.7	13.9	-141.94	-567.5	235.7	910.0	882.8	27.23	33.415		
4,700.0	4,569.5	4,608.6	4,550.8	20.2	14.2	-141.83	-583.8	241.3	932.4	904.5	27.92	33.397		
4,800.0	4,666.2	4,706.0	4,646.7	20.7	14.6	-141.73	-600.0	246.9	954.8	926.2	28.60	33.381		
4,900.0	4,762.8	4,803.5	4,742.7	21.2	14.9	-141.63	-616.3	252.6	977.2	947.9	29.29	33.365		
5,000.0	4,859.5	4,900.9	4,838.6	21.7	15.3	-141.53	-632.6	258.2	999.6	969.6	29.97	33.349		
5,100.0	4,956.1	4,998.4	4,934.5	22.2	15.6	-141.44	-648.9	263.8	1,022.0	991.3	30.66	33.335		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Cathedral Energy Services

Anticollision Report

Company:	Berry Petroleum Company (NAD 83)	Local Co-ordinate Reference:	Well OM07C B21 696
Project:	Garfield County	TVD Reference:	KBE @ 8293.0ft (Original Well Elev)
Reference Site:	NENE S21-T6S-R96W (B21 696 Pad)	MD Reference:	KBE @ 8293.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	OM07C B21 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 NENE S21-T6S-R96W (B21 696 Pad) - OM08B B21 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				Total Uncertainty Axis	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)				
5,200.0	5,052.8	5,095.8	5,030.4	22.6	16.0	-141.35	-665.1	269.4	1,044.4	1,013.0	31.34	33.321		
5,300.0	5,149.5	5,193.3	5,126.3	23.1	16.3	-141.27	-681.4	275.1	1,066.8	1,034.8	32.03	33.307		
5,400.0	5,246.1	5,290.7	5,222.2	23.6	16.6	-141.19	-697.7	280.7	1,089.2	1,056.5	32.71	33.294		
5,500.0	5,342.8	5,388.1	5,318.1	24.1	17.0	-141.11	-714.0	286.3	1,111.6	1,078.2	33.40	33.282		
5,600.0	5,439.4	5,485.6	5,414.0	24.6	17.3	-141.04	-730.2	291.9	1,134.0	1,099.9	34.09	33.270		
5,700.0	5,536.1	5,583.0	5,510.0	25.1	17.7	-140.97	-746.5	297.6	1,156.4	1,121.7	34.77	33.259		
5,800.0	5,632.8	5,680.5	5,605.9	25.6	18.0	-140.90	-762.8	303.2	1,178.8	1,143.4	35.46	33.248		
5,900.0	5,729.4	5,777.9	5,701.8	26.0	18.4	-140.83	-779.0	308.8	1,201.3	1,165.1	36.14	33.238		
6,000.0	5,826.1	5,875.4	5,797.7	26.5	18.7	-140.77	-795.3	314.4	1,223.7	1,186.9	36.83	33.227		
6,100.0	5,922.7	5,972.8	5,893.6	27.0	19.1	-140.71	-811.6	320.1	1,246.1	1,208.6	37.51	33.218		
6,200.0	6,019.4	6,070.3	5,989.5	27.5	19.4	-140.65	-827.9	325.7	1,268.5	1,230.3	38.20	33.208		
6,300.0	6,116.1	6,167.7	6,085.4	28.0	19.7	-140.59	-844.1	331.3	1,290.9	1,252.1	38.88	33.199		
6,400.0	6,213.1	6,265.4	6,181.6	28.4	20.1	-140.75	-860.5	337.0	1,312.2	1,272.6	39.58	33.150		
6,500.0	6,310.9	6,363.5	6,278.2	28.8	20.4	-140.80	-876.9	342.6	1,330.8	1,290.6	40.27	33.047		
6,600.0	6,409.4	6,462.0	6,375.1	29.1	20.8	-140.72	-893.3	348.3	1,346.8	1,305.9	40.94	32.893		
6,700.0	6,508.4	6,567.6	6,479.3	29.4	21.1	-140.56	-909.4	353.9	1,359.9	1,318.4	41.57	32.714		
6,800.0	6,607.9	6,674.6	6,585.5	29.6	21.4	-140.43	-922.1	358.3	1,369.9	1,327.8	42.09	32.547		
6,900.0	6,707.6	6,782.3	6,692.7	29.7	21.6	-140.32	-931.1	361.4	1,376.6	1,334.1	42.49	32.394		
7,000.0	6,807.6	6,890.4	6,800.7	29.8	21.8	-140.24	-936.2	363.1	1,380.0	1,337.2	42.79	32.253		
7,100.0	6,907.6	6,998.3	6,908.6	29.9	21.9	-159.82	-937.6	363.6	1,380.6	1,337.6	43.00	32.104		
7,200.0	7,007.6	7,104.3	7,014.6	30.0	22.0	-159.82	-937.7	363.3	1,380.7	1,337.5	43.22	31.948		
7,300.0	7,107.6	7,210.3	7,120.5	30.1	22.1	-159.83	-938.1	362.6	1,380.8	1,337.4	43.44	31.789		
7,400.0	7,207.6	7,315.9	7,226.2	30.2	22.2	-159.83	-938.8	361.5	1,380.9	1,337.2	43.66	31.627		
7,500.0	7,307.5	7,415.9	7,326.2	30.3	22.3	-159.83	-939.5	360.2	1,380.9	1,337.0	43.88	31.468		
7,600.0	7,407.5	7,515.9	7,426.1	30.4	22.4	-159.83	-940.2	359.0	1,380.9	1,336.8	44.10	31.310		
7,700.0	7,507.5	7,615.9	7,526.1	30.5	22.5	-159.83	-940.9	357.7	1,380.9	1,336.5	44.33	31.153		
7,800.0	7,607.5	7,715.9	7,626.1	30.6	22.6	-159.83	-941.7	356.5	1,380.9	1,336.3	44.55	30.996		
7,900.0	7,707.5	7,815.9	7,726.1	30.7	22.7	-159.83	-942.4	355.3	1,380.9	1,336.1	44.78	30.839		
8,000.0	7,807.5	7,915.9	7,826.1	30.8	22.8	-159.83	-943.1	354.0	1,380.9	1,335.9	45.00	30.683		
8,100.0	7,907.5	8,015.9	7,926.1	30.9	22.9	-159.83	-943.8	352.8	1,380.9	1,335.6	45.23	30.527		
8,200.0	8,007.5	8,115.9	8,026.1	31.0	23.1	-159.83	-944.5	351.5	1,380.9	1,335.4	45.46	30.372		
8,300.0	8,107.5	8,215.9	8,126.1	31.1	23.2	-159.83	-945.2	350.3	1,380.9	1,335.2	45.70	30.218		
8,400.0	8,207.5	8,315.9	8,226.1	31.2	23.3	-159.83	-946.0	349.0	1,380.9	1,334.9	45.93	30.064		
8,500.0	8,307.4	8,415.9	8,326.1	31.3	23.4	-159.83	-946.7	347.8	1,380.9	1,334.7	46.17	29.910		
8,600.0	8,407.4	8,515.9	8,426.0	31.4	23.5	-159.83	-947.4	346.6	1,380.9	1,334.5	46.40	29.758		
8,700.0	8,507.4	8,615.9	8,526.0	31.5	23.6	-159.83	-948.1	345.3	1,380.9	1,334.2	46.64	29.606		
8,800.0	8,607.4	8,715.9	8,626.0	31.6	23.7	-159.83	-948.8	344.1	1,380.9	1,334.0	46.88	29.454		
8,900.0	8,707.4	8,815.9	8,726.0	31.7	23.8	-159.83	-949.6	342.8	1,380.9	1,333.7	47.12	29.304		
9,000.0	8,807.4	8,915.9	8,826.0	31.8	24.0	-159.83	-950.3	341.6	1,380.9	1,333.5	47.36	29.154		
9,100.0	8,907.4	9,015.9	8,926.0	31.9	24.1	-159.83	-951.0	340.3	1,380.9	1,333.2	47.61	29.004		
9,200.0	9,007.4	9,115.9	9,026.0	32.0	24.2	-159.83	-951.7	339.1	1,380.9	1,333.0	47.85	28.856		
9,300.0	9,107.4	9,215.9	9,126.0	32.1	24.3	-159.83	-952.4	337.9	1,380.9	1,332.8	48.10	28.708		
9,400.0	9,207.3	9,315.9	9,226.0	32.2	24.4	-159.83	-953.2	336.6	1,380.9	1,332.5	48.35	28.561		
9,500.0	9,307.3	9,415.9	9,326.0	32.3	24.6	-159.83	-953.9	335.4	1,380.9	1,332.3	48.60	28.415		
9,600.0	9,407.3	9,515.9	9,425.9	32.4	24.7	-159.83	-954.6	334.1	1,380.9	1,332.0	48.85	28.269		
9,700.0	9,507.3	9,615.9	9,525.9	32.6	24.8	-159.83	-955.3	332.9	1,380.9	1,331.8	49.10	28.125		
9,800.0	9,607.3	9,715.9	9,625.9	32.7	24.9	-159.83	-956.0	331.6	1,380.9	1,331.5	49.35	27.981		
9,900.0	9,707.3	9,815.9	9,725.9	32.8	25.0	-159.83	-956.8	330.4	1,380.9	1,331.2	49.60	27.838		
9,998.7	9,806.0	9,914.6	9,824.6	32.9	25.2	-159.83	-957.5	329.2	1,380.9	1,331.0	49.86	27.697 SF		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Cathedral Energy Services

Anticollision Report

Company:	Berry Petroleum Company (NAD 83)	Local Co-ordinate Reference:	Well OM07C B21 696
Project:	Garfield County	TVD Reference:	KBE @ 8293.0ft (Original Well Elev)
Reference Site:	NENE S21-T6S-R96W (B21 696 Pad)	MD Reference:	KBE @ 8293.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	OM07C B21 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 NENE S21-T6S-R96W (B21 696 Pad) - OM08C B21 696 - DD - Plan #1													Offset Site Error:	0.0 ft
Survey Program: O-MWD													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance				Total Uncertainty Axis	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)				
0.0	0.0	0.0	0.0	0.0	0.0	29.63	52.1	29.6	59.9					
100.0	100.0	100.0	100.0	0.1	0.1	29.63	52.1	29.6	59.9	59.6	0.30	201.968		
200.0	200.0	200.0	200.0	0.3	0.3	29.63	52.1	29.6	59.9	59.3	0.65	92.796		
300.0	300.0	300.0	300.0	0.5	0.5	29.63	52.1	29.6	59.9	58.9	0.99	60.236 CC, ES		
400.0	400.0	401.3	401.3	0.7	0.7	170.93	50.4	30.2	60.5	59.2	1.35	44.902		
500.0	499.8	502.5	502.3	0.9	0.9	175.51	45.4	32.0	62.5	60.8	1.71	36.586		
600.0	599.5	603.3	602.7	1.1	1.1	-177.59	37.0	35.0	66.7	64.6	2.09	31.853		
700.0	698.7	703.5	702.2	1.3	1.4	-169.44	25.4	39.2	73.9	71.4	2.53	29.276		
800.0	797.5	803.0	800.4	1.6	1.7	-161.24	10.6	44.5	84.9	81.9	3.03	28.053		
900.0	895.6	901.6	897.2	2.0	2.0	-153.84	-7.1	50.9	100.0	96.4	3.62	27.646 SF		
1,000.0	993.1	999.2	992.3	2.4	2.4	-147.72	-27.6	58.2	119.3	115.0	4.29	27.802		
1,100.0	1,089.8	1,096.2	1,086.8	2.9	2.8	-143.82	-48.4	65.7	141.8	136.8	5.00	28.330		
1,200.0	1,186.5	1,193.3	1,181.3	3.3	3.2	-141.14	-69.3	73.2	165.0	159.2	5.75	28.711		
1,300.0	1,283.1	1,290.3	1,275.7	3.8	3.6	-139.11	-90.1	80.7	188.4	181.9	6.50	28.982		
1,400.0	1,379.8	1,387.3	1,370.2	4.3	4.0	-137.54	-111.0	88.2	212.0	204.7	7.26	29.184		
1,500.0	1,476.4	1,484.3	1,464.7	4.7	4.4	-136.28	-131.8	95.7	235.7	227.7	8.03	29.340		
1,600.0	1,573.1	1,581.4	1,559.1	5.2	4.8	-135.25	-152.7	103.2	259.5	250.7	8.81	29.463		
1,700.0	1,669.7	1,678.4	1,653.6	5.7	5.3	-134.40	-173.5	110.7	283.4	273.8	9.59	29.562		
1,800.0	1,766.4	1,775.4	1,748.1	6.2	5.7	-133.67	-194.4	118.2	307.4	297.0	10.37	29.645		
1,900.0	1,863.1	1,872.5	1,842.5	6.7	6.1	-133.05	-215.2	125.7	331.3	320.2	11.15	29.714		
2,000.0	1,959.7	1,969.5	1,937.0	7.1	6.5	-132.52	-236.1	133.2	355.3	343.4	11.93	29.773		
2,100.0	2,056.4	2,066.5	2,031.5	7.6	6.9	-132.05	-256.9	140.7	379.4	366.6	12.72	29.824		
2,200.0	2,153.0	2,163.5	2,125.9	8.1	7.4	-131.64	-277.8	148.1	403.4	389.9	13.51	29.868		
2,300.0	2,249.7	2,260.6	2,220.4	8.6	7.8	-131.27	-298.6	155.6	427.5	413.2	14.29	29.907		
2,400.0	2,346.4	2,357.6	2,314.8	9.1	8.2	-130.95	-319.5	163.1	451.6	436.5	15.08	29.941		
2,500.0	2,443.0	2,454.6	2,409.3	9.5	8.6	-130.65	-340.3	170.6	475.7	459.8	15.87	29.972		
2,600.0	2,539.7	2,551.6	2,503.8	10.0	9.0	-130.39	-361.2	178.1	499.8	483.1	16.66	30.000		
2,700.0	2,636.3	2,648.7	2,598.2	10.5	9.5	-130.15	-382.0	185.6	523.9	506.4	17.45	30.025		
2,800.0	2,733.0	2,745.7	2,692.7	11.0	9.9	-129.93	-402.9	193.1	548.0	529.8	18.24	30.047		
2,900.0	2,829.7	2,842.7	2,787.2	11.5	10.3	-129.73	-423.7	200.6	572.1	553.1	19.03	30.068		
3,000.0	2,926.3	2,939.7	2,881.6	12.0	10.7	-129.54	-444.5	208.1	596.3	576.4	19.82	30.087		
3,100.0	3,023.0	3,036.8	2,976.1	12.5	11.1	-129.37	-465.4	215.6	620.4	599.8	20.61	30.104		
3,200.0	3,119.6	3,133.8	3,070.5	12.9	11.6	-129.21	-486.2	223.1	644.6	623.2	21.40	30.120		
3,300.0	3,216.3	3,230.8	3,165.0	13.4	12.0	-129.07	-507.1	230.6	668.7	646.5	22.19	30.135		
3,400.0	3,312.9	3,327.8	3,259.5	13.9	12.4	-128.93	-527.9	238.0	692.9	669.9	22.98	30.149		
3,500.0	3,409.6	3,424.9	3,353.9	14.4	12.8	-128.80	-548.8	245.5	717.0	693.2	23.77	30.162		
3,600.0	3,506.3	3,521.9	3,448.4	14.9	13.3	-128.69	-569.6	253.0	741.2	716.6	24.56	30.174		
3,700.0	3,602.9	3,618.9	3,542.9	15.4	13.7	-128.58	-590.5	260.5	765.3	740.0	25.36	30.185		
3,800.0	3,699.6	3,716.0	3,637.3	15.8	14.1	-128.47	-611.3	268.0	789.5	763.4	26.15	30.195		
3,900.0	3,796.2	3,813.0	3,731.8	16.3	14.5	-128.37	-632.2	275.5	813.7	786.7	26.94	30.205		
4,000.0	3,892.9	3,910.0	3,826.3	16.8	14.9	-128.28	-653.0	283.0	837.8	810.1	27.73	30.214		
4,100.0	3,989.6	4,007.0	3,920.7	17.3	15.4	-128.19	-673.9	290.5	862.0	833.5	28.52	30.223		
4,200.0	4,086.2	4,104.1	4,015.2	17.8	15.8	-128.11	-694.7	298.0	886.2	856.9	29.31	30.231		
4,300.0	4,182.9	4,201.1	4,109.6	18.3	16.2	-128.03	-715.6	305.5	910.4	880.3	30.11	30.239		
4,400.0	4,279.5	4,298.1	4,204.1	18.8	16.6	-127.96	-736.4	313.0	934.5	903.6	30.90	30.246		
4,500.0	4,376.2	4,395.1	4,298.6	19.2	17.1	-127.89	-757.3	320.5	958.7	927.0	31.69	30.253		
4,600.0	4,472.9	4,492.2	4,393.0	19.7	17.5	-127.82	-778.1	327.9	982.9	950.4	32.48	30.260		
4,700.0	4,569.5	4,589.2	4,487.5	20.2	17.9	-127.76	-799.0	335.4	1,007.1	973.8	33.27	30.266		
4,800.0	4,666.2	4,686.2	4,582.0	20.7	18.3	-127.70	-819.8	342.9	1,031.3	997.2	34.07	30.272		
4,900.0	4,762.8	4,783.2	4,676.4	21.2	18.7	-127.64	-840.7	350.4	1,055.4	1,020.6	34.86	30.278		
5,000.0	4,859.5	4,880.3	4,770.9	21.7	19.2	-127.58	-861.5	357.9	1,079.6	1,044.0	35.65	30.283		
5,100.0	4,956.1	4,977.3	4,865.4	22.2	19.6	-127.53	-882.4	365.4	1,103.8	1,067.4	36.44	30.288		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Cathedral Energy Services

Anticollision Report

Company:	Berry Petroleum Company (NAD 83)	Local Co-ordinate Reference:	Well OM07C B21 696
Project:	Garfield County	TVD Reference:	KBE @ 8293.0ft (Original Well Elev)
Reference Site:	NENE S21-T6S-R96W (B21 696 Pad)	MD Reference:	KBE @ 8293.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	OM07C B21 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												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	Vertical Depth	Measured Depth	Vertical Depth	Reference	Offset	Highside Toolface	Offset Wellbore Centre		Between Centres	Between Ellipses	Total Uncertainty Axis	Separation Factor			
(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(°)	+N/-S (ft)	+E/-W (ft)	(ft)	(ft)					
5,200.0	5,052.8	5,074.3	4,959.8	22.6	20.0	-127.48	-903.2	372.9	1,128.0	1,090.8	37.24	30.293			
5,300.0	5,149.5	5,171.4	5,054.3	23.1	20.4	-127.43	-924.1	380.4	1,152.2	1,114.2	38.03	30.298			
5,400.0	5,246.1	5,268.4	5,148.7	23.6	20.9	-127.38	-944.9	387.9	1,176.4	1,137.5	38.82	30.303			
5,500.0	5,342.8	5,365.4	5,243.2	24.1	21.3	-127.34	-965.8	395.4	1,200.6	1,160.9	39.61	30.307			
5,600.0	5,439.4	5,462.4	5,337.7	24.6	21.7	-127.30	-986.6	402.9	1,224.7	1,184.3	40.41	30.311			
5,700.0	5,536.1	5,559.5	5,432.1	25.1	22.1	-127.26	-1,007.5	410.4	1,248.9	1,207.7	41.20	30.315			
5,800.0	5,632.8	5,656.5	5,526.6	25.6	22.6	-127.22	-1,028.3	417.8	1,273.1	1,231.1	41.99	30.319			
5,900.0	5,729.4	5,753.5	5,621.1	26.0	23.0	-127.18	-1,049.2	425.3	1,297.3	1,254.5	42.78	30.323			
6,000.0	5,826.1	5,850.5	5,715.5	26.5	23.4	-127.14	-1,070.0	432.8	1,321.5	1,277.9	43.58	30.326			
6,100.0	5,922.7	5,947.6	5,810.0	27.0	23.8	-127.11	-1,090.9	440.3	1,345.7	1,301.3	44.37	30.330			
6,200.0	6,019.4	6,044.6	5,904.4	27.5	24.2	-127.07	-1,111.7	447.8	1,369.9	1,324.7	45.16	30.333			
6,300.0	6,116.1	6,141.6	5,998.9	28.0	24.7	-127.04	-1,132.6	455.3	1,394.1	1,348.1	45.95	30.337			

Cathedral Energy Services

Anticollision Report

Company:	Berry Petroleum Company (NAD 83)	Local Co-ordinate Reference:	Well OM07C B21 696
Project:	Garfield County	TVD Reference:	KBE @ 8293.0ft (Original Well Elev)
Reference Site:	NENE S21-T6S-R96W (B21 696 Pad)	MD Reference:	KBE @ 8293.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	OM07C B21 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 NENE S21-T6S-R96W (B21 696 Pad) - OM08D B21 696 - DD - Plan #1													Offset Site Error: 0.0 ft	
Survey Program: O-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		Between Centres (ft)	Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor		
							+N/-S (ft)	+E/-W (ft)						
0.0	0.0	0.0	0.0	0.0	0.0	29.71	69.2	39.5	79.7					
100.0	100.0	100.0	100.0	0.1	0.1	29.71	69.2	39.5	79.7	79.4	0.30	268.563		
200.0	200.0	200.0	200.0	0.3	0.3	29.71	69.2	39.5	79.7	79.0	0.65	123.394		
300.0	300.0	301.7	301.6	0.5	0.5	30.76	67.5	40.2	78.6	77.6	1.00	78.786		
400.0	400.0	403.1	402.9	0.7	0.7	173.92	62.6	42.3	77.4	76.0	1.37	56.572		
416.1	416.1	419.4	419.2	0.7	0.7	174.72	61.5	42.8	77.3	75.9	1.43	54.066	CC, ES	
500.0	499.8	504.1	503.6	0.9	0.9	179.86	54.4	45.9	78.2	76.4	1.76	44.389		
600.0	599.5	604.6	603.2	1.1	1.2	-172.36	43.0	50.8	82.1	79.9	2.20	37.295		
700.0	698.7	704.2	701.6	1.3	1.5	-163.81	28.5	57.0	90.1	87.4	2.70	33.304		
800.0	797.5	802.8	798.4	1.6	1.9	-155.60	11.1	64.4	102.7	99.4	3.28	31.289		
900.0	895.6	900.3	893.3	2.0	2.3	-148.43	-9.0	73.1	120.0	116.1	3.94	30.479		
1,000.0	993.1	996.4	986.2	2.4	2.8	-142.53	-31.9	82.9	142.0	137.3	4.68	30.340	SF	
1,100.0	1,089.8	1,091.9	1,077.7	2.9	3.2	-137.99	-56.9	93.7	167.8	162.3	5.48	30.606		
1,200.0	1,186.5	1,187.7	1,169.4	3.3	3.7	-134.72	-82.4	104.6	194.5	188.2	6.31	30.835		
1,300.0	1,283.1	1,283.5	1,261.1	3.8	4.2	-132.23	-107.9	115.5	221.7	214.6	7.15	31.034		
1,400.0	1,379.8	1,379.4	1,352.9	4.3	4.8	-130.29	-133.4	126.5	249.3	241.3	7.99	31.208		
1,500.0	1,476.4	1,475.2	1,444.6	4.7	5.3	-128.74	-158.8	137.4	277.0	268.2	8.83	31.359		
1,600.0	1,573.1	1,571.0	1,536.3	5.2	5.8	-127.46	-184.3	148.4	304.9	295.2	9.68	31.492		
1,700.0	1,669.7	1,666.9	1,628.1	5.7	6.3	-126.40	-209.8	159.3	332.9	322.4	10.53	31.610		
1,800.0	1,766.4	1,762.7	1,719.8	6.2	6.8	-125.51	-235.3	170.2	361.0	349.6	11.38	31.715		
1,900.0	1,863.1	1,858.5	1,811.5	6.7	7.3	-124.74	-260.7	181.2	389.2	376.9	12.23	31.809		
2,000.0	1,959.7	1,954.4	1,903.3	7.1	7.8	-124.08	-286.2	192.1	417.4	404.3	13.09	31.894		
2,100.0	2,056.4	2,050.2	1,995.0	7.6	8.3	-123.50	-311.7	203.1	445.7	431.7	13.94	31.970		
2,200.0	2,153.0	2,146.0	2,086.7	8.1	8.8	-122.99	-337.2	214.0	474.0	459.2	14.79	32.039		
2,300.0	2,249.7	2,241.8	2,178.5	8.6	9.3	-122.54	-362.6	224.9	502.3	486.7	15.65	32.102		
2,400.0	2,346.4	2,337.7	2,270.2	9.1	9.9	-122.13	-388.1	235.9	530.7	514.2	16.50	32.159		
2,500.0	2,443.0	2,433.5	2,361.9	9.5	10.4	-121.77	-413.6	246.8	559.1	541.7	17.36	32.212		
2,600.0	2,539.7	2,529.3	2,453.7	10.0	10.9	-121.44	-439.1	257.8	587.5	569.2	18.21	32.261		
2,700.0	2,636.3	2,625.2	2,545.4	10.5	11.4	-121.14	-464.5	268.7	615.9	596.8	19.06	32.306		
2,800.0	2,733.0	2,721.0	2,637.1	11.0	11.9	-120.87	-490.0	279.6	644.3	624.4	19.92	32.347		
2,900.0	2,829.7	2,816.8	2,728.9	11.5	12.4	-120.62	-515.5	290.6	672.7	652.0	20.77	32.386		
3,000.0	2,926.3	2,912.7	2,820.6	12.0	12.9	-120.39	-541.0	301.5	701.2	679.6	21.63	32.421		
3,100.0	3,023.0	3,008.5	2,912.3	12.5	13.4	-120.18	-566.4	312.5	729.7	707.2	22.48	32.455		
3,200.0	3,119.6	3,104.3	3,004.1	12.9	14.0	-119.99	-591.9	323.4	758.1	734.8	23.34	32.486		
3,300.0	3,216.3	3,200.1	3,095.8	13.4	14.5	-119.80	-617.4	334.3	786.6	762.4	24.19	32.516		
3,400.0	3,312.9	3,296.0	3,187.5	13.9	15.0	-119.64	-642.9	345.3	815.1	790.1	25.05	32.543		
3,500.0	3,409.6	3,391.8	3,279.2	14.4	15.5	-119.48	-668.3	356.2	843.6	817.7	25.90	32.569		
3,600.0	3,506.3	3,487.6	3,371.0	14.9	16.0	-119.33	-693.8	367.2	872.1	845.3	26.76	32.593		
3,700.0	3,602.9	3,583.5	3,462.7	15.4	16.5	-119.20	-719.3	378.1	900.6	873.0	27.61	32.616		
3,800.0	3,699.6	3,679.3	3,554.4	15.8	17.0	-119.07	-744.8	389.0	929.1	900.6	28.47	32.638		
3,900.0	3,796.2	3,775.1	3,646.2	16.3	17.6	-118.94	-770.2	400.0	957.6	928.3	29.32	32.659		
4,000.0	3,892.9	3,871.0	3,737.9	16.8	18.1	-118.83	-795.7	410.9	986.1	956.0	30.18	32.678		
4,100.0	3,989.6	3,966.8	3,829.6	17.3	18.6	-118.72	-821.2	421.9	1,014.7	983.6	31.03	32.697		
4,200.0	4,086.2	4,062.6	3,921.4	17.8	19.1	-118.62	-846.7	432.8	1,043.2	1,011.3	31.89	32.714		
4,300.0	4,182.9	4,158.4	4,013.1	18.3	19.6	-118.52	-872.1	443.7	1,071.7	1,039.0	32.74	32.731		
4,400.0	4,279.5	4,254.3	4,104.8	18.8	20.1	-118.43	-897.6	454.7	1,100.2	1,066.6	33.60	32.747		
4,500.0	4,376.2	4,350.1	4,196.6	19.2	20.6	-118.35	-923.1	465.6	1,128.8	1,094.3	34.45	32.762		
4,600.0	4,472.9	4,445.9	4,288.3	19.7	21.2	-118.26	-948.6	476.6	1,157.3	1,122.0	35.31	32.777		
4,700.0	4,569.5	4,541.8	4,380.0	20.2	21.7	-118.18	-974.0	487.5	1,185.8	1,149.7	36.16	32.791		
4,800.0	4,666.2	4,637.6	4,471.8	20.7	22.2	-118.11	-999.5	498.4	1,214.4	1,177.3	37.02	32.804		
4,900.0	4,762.8	4,733.4	4,563.5	21.2	22.7	-118.04	-1,025.0	509.4	1,242.9	1,205.0	37.87	32.817		
5,000.0	4,859.5	4,829.3	4,655.2	21.7	23.2	-117.97	-1,050.5	520.3	1,271.4	1,232.7	38.73	32.829		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Cathedral Energy Services

Anticollision Report

Company:	Berry Petroleum Company (NAD 83)	Local Co-ordinate Reference:	Well OM07C B21 696
Project:	Garfield County	TVD Reference:	KBE @ 8293.0ft (Original Well Elev)
Reference Site:	NENE S21-T6S-R96W (B21 696 Pad)	MD Reference:	KBE @ 8293.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	OM07C B21 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 NENE S21-T6S-R96W (B21 696 Pad) - OM08D B21 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
5,100.0	4,956.1	4,925.1	4,747.0	22.2	23.7	-117.90	-1,075.9	531.3	1,300.0	1,260.4	39.58	32.841	
5,200.0	5,052.8	5,020.9	4,838.7	22.6	24.2	-117.84	-1,101.4	542.2	1,328.5	1,288.1	40.44	32.852	
5,300.0	5,149.5	5,116.7	4,930.4	23.1	24.8	-117.78	-1,126.9	553.1	1,357.1	1,315.8	41.29	32.863	
5,400.0	5,246.1	5,212.6	5,022.2	23.6	25.3	-117.72	-1,152.4	564.1	1,385.6	1,343.5	42.15	32.874	

Cathedral Energy Services

Anticollision Report

Company:	Berry Petroleum Company (NAD 83)	Local Co-ordinate Reference:	Well OM07C B21 696
Project:	Garfield County	TVD Reference:	KBE @ 8293.0ft (Original Well Elev)
Reference Site:	NENE S21-T6S-R96W (B21 696 Pad)	MD Reference:	KBE @ 8293.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	OM07C B21 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 @ 8293.0ft (Original Well Elev)
Offset Depths are relative to Offset Datum
Central Meridian is -105.500000 °

Coordinates are relative to: OM07C B21 696
Coordinate System is US State Plane 1983, Colorado Central Zone
Grid Convergence at Surface is: -1.65°

