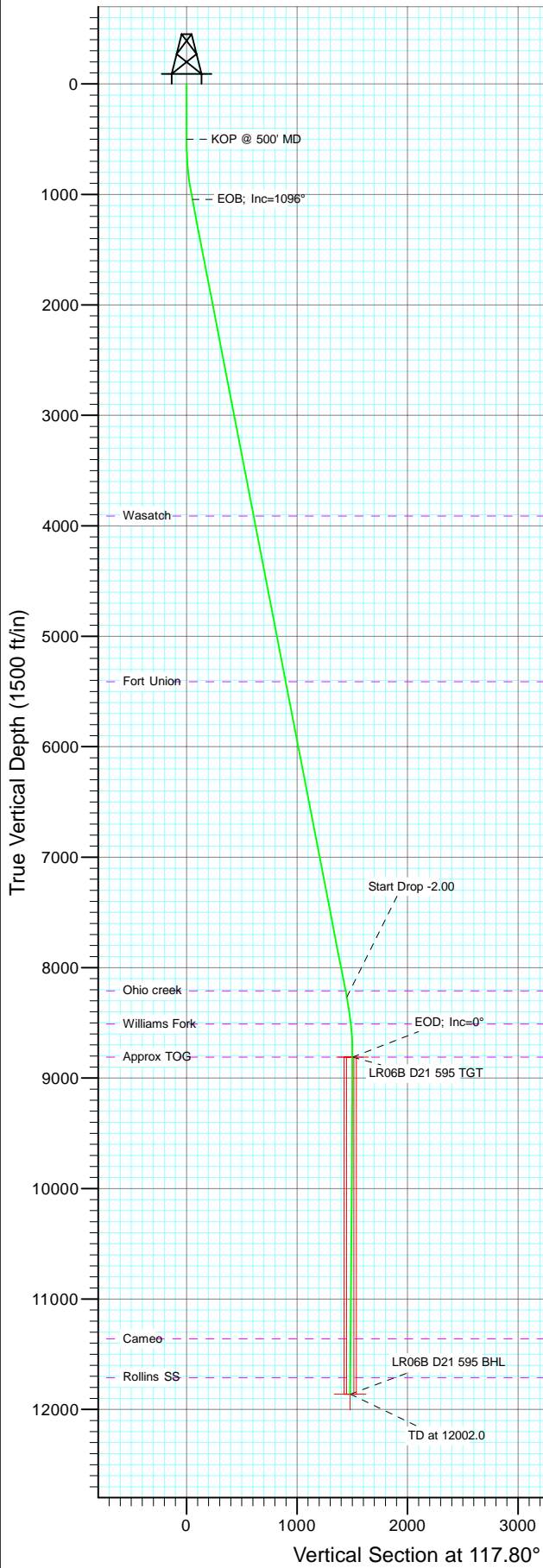
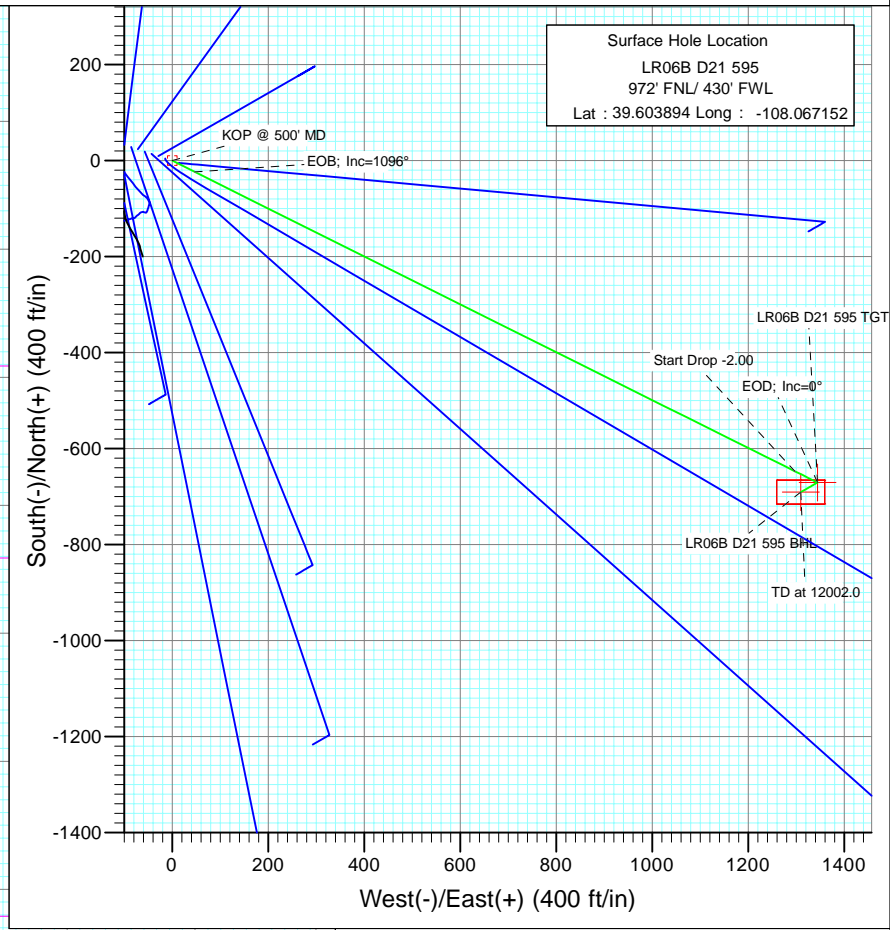


Project: Garfield County
 Site: D21 595 Pad
 Well: LR06B D21 595
 Wellbore: DD
 Design: Plan #2



SECTION DETAILS										
Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSect	Target
1	0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.0	
2	500.0	0.00	0.00	500.0	0.0	0.0	0.00	0.00	0.0	
3	1047.8	10.96	116.51	1044.5	-23.3	46.7	2.00	116.51	52.2	
4	8403.9	10.96	116.51	8266.5	-647.3	1297.9	0.00	0.00	1450.0	
5	8951.8	0.00	0.00	8811.0	-670.6	1344.7	-2.00	180.00	1502.2	LR06B D21 595 TGT
6	9268.9	0.79	240.05	9128.2	-671.7	1342.7	0.25	240.05	1501.0	
7	12002.0	0.79	240.05	11861.0	-690.6	1310.0	0.00	0.00	1480.9	LR06B D21 595 BHL



Azimuths to True North
Magnetic North: 10.44°

Magnetic Field
Strength: 52368.8snT
Dip Angle: 65.84°
Date: 11/23/2010
Model: IGRF200510

FORMATION TOP DETAILS		
TVDPath	MDPath	Formation
3911.0	3967.6	Wasatch
5411.0	5495.4	Fort Union
8211.0	8347.4	Ohio creek
8511.0	8651.2	Williams Fork
8811.0	8951.8	Approx TOG
11361.0	11502.0	Cameo
11711.0	11852.0	Rollins SS

Bottom Hole Location
 LR06B D21 595
 1660' FNL/ 1740' FWL
 Lat : 39.601998
 Long. : -108.062503

DESIGN DETAILS: Plan #2

1055XX; BH
 KBE @ 8278.0ft (Original Well Elev)

Target	Azimuth	Origin	N/S	E/W	From TVD
LR06B D21 595 BHL	117.80	Slot	0.0	0.0	0.0

Cathedral Energy Services

Planning Report

Database: EDM 5000.1 US Multi Users DB	Local Co-ordinate Reference: Well LR06B D21 595
Company: Berry Petroleum Company (NAD 83)	TVD Reference: KBE @ 8278.0ft (Original Well Elev)
Project: Garfield County	MD Reference: KBE @ 8278.0ft (Original Well Elev)
Site: D21 595 Pad	North Reference: True
Well: LR06B D21 595	Survey Calculation Method: Minimum Curvature
Wellbore: DD	
Design: Plan #2	

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 D21 595 Pad					
Site Position:		Northing:	1,655,115.77 ft	Latitude:	39.604011
From: Lat/Long		Easting:	2,276,632.91 ft	Longitude:	-108.067607
Position Uncertainty:	0.0 ft	Slot Radius:	13.200 in	Grid Convergence:	-1.62 °

Well LR06B D21 595						
Well Position	+N/-S	0.0 ft	Northing:	1,655,069.54 ft	Latitude:	39.603894
	+E/-W	0.0 ft	Easting:	2,276,759.86 ft	Longitude:	-108.067152
Position Uncertainty		0.0 ft	Wellhead Elevation:	ft	Ground Level:	8,263.0 ft

Wellbore DD					
Magnetics	Model Name	Sample Date	Declination	Dip Angle	Field Strength
	IGRF200510	11/23/2010	(°)	(°)	(nT)
			10.44	65.84	52,369

Design Plan #2					
Audit Notes:					
Version:	Phase:	PLAN	Tie On Depth:	0.0	
Vertical Section:	Depth From (TVD)	+N/-S	+E/-W	Direction	
	(ft)	(ft)	(ft)	(°)	
	0.0	0.0	0.0	117.80	

Plan Sections										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	TFO (°)	Target
0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.00	0.00	
500.0	0.00	0.00	500.0	0.0	0.0	0.00	0.00	0.00	0.00	
1,047.8	10.96	116.51	1,044.5	-23.3	46.7	2.00	2.00	0.00	116.51	
8,403.9	10.96	116.51	8,266.5	-647.3	1,297.9	0.00	0.00	0.00	0.00	
8,951.8	0.00	0.00	8,811.0	-670.6	1,344.7	2.00	-2.00	0.00	180.00	LR06B D21 595 TGT
9,268.9	0.79	240.05	9,128.2	-671.7	1,342.7	0.25	0.25	-37.82	240.05	
12,002.0	0.79	240.05	11,861.0	-690.6	1,310.0	0.00	0.00	0.00	0.00	LR06B D21 595 BHL

Cathedral Energy Services

Planning Report

Database:	EDM 5000.1 US Multi Users DB	Local Co-ordinate Reference:	Well LR06B D21 595
Company:	Berry Petroleum Company (NAD 83)	TVD Reference:	KBE @ 8278.0ft (Original Well Elev)
Project:	Garfield County	MD Reference:	KBE @ 8278.0ft (Original Well Elev)
Site:	D21 595 Pad	North Reference:	True
Well:	LR06B D21 595	Survey Calculation Method:	Minimum Curvature
Wellbore:	DD		
Design:	Plan #2		

Planned Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Comments / Formations
0.0	0.00	0.00	0.0	0.0	0.0	0.0	0.00	0.00	
30.0	0.00	0.00	30.0	0.0	0.0	0.0	0.00	0.00	
60.0	0.00	0.00	60.0	0.0	0.0	0.0	0.00	0.00	
90.0	0.00	0.00	90.0	0.0	0.0	0.0	0.00	0.00	
120.0	0.00	0.00	120.0	0.0	0.0	0.0	0.00	0.00	
150.0	0.00	0.00	150.0	0.0	0.0	0.0	0.00	0.00	
180.0	0.00	0.00	180.0	0.0	0.0	0.0	0.00	0.00	
210.0	0.00	0.00	210.0	0.0	0.0	0.0	0.00	0.00	
240.0	0.00	0.00	240.0	0.0	0.0	0.0	0.00	0.00	
270.0	0.00	0.00	270.0	0.0	0.0	0.0	0.00	0.00	
300.0	0.00	0.00	300.0	0.0	0.0	0.0	0.00	0.00	
330.0	0.00	0.00	330.0	0.0	0.0	0.0	0.00	0.00	
360.0	0.00	0.00	360.0	0.0	0.0	0.0	0.00	0.00	
390.0	0.00	0.00	390.0	0.0	0.0	0.0	0.00	0.00	
420.0	0.00	0.00	420.0	0.0	0.0	0.0	0.00	0.00	
450.0	0.00	0.00	450.0	0.0	0.0	0.0	0.00	0.00	
480.0	0.00	0.00	480.0	0.0	0.0	0.0	0.00	0.00	
500.0	0.00	0.00	500.0	0.0	0.0	0.0	0.00	0.00	KOP @ 500' MD
510.0	0.20	116.51	510.0	0.0	0.0	0.0	2.00	2.00	
540.0	0.80	116.51	540.0	-0.1	0.2	0.3	2.00	2.00	
570.0	1.40	116.51	570.0	-0.4	0.8	0.9	2.00	2.00	
600.0	2.00	116.51	600.0	-0.8	1.6	1.7	2.00	2.00	
630.0	2.60	116.51	630.0	-1.3	2.6	2.9	2.00	2.00	
660.0	3.20	116.51	659.9	-2.0	4.0	4.5	2.00	2.00	
690.0	3.80	116.51	689.9	-2.8	5.6	6.3	2.00	2.00	
720.0	4.40	116.51	719.8	-3.8	7.6	8.4	2.00	2.00	
750.0	5.00	116.51	749.7	-4.9	9.8	10.9	2.00	2.00	
780.0	5.60	116.51	779.6	-6.1	12.2	13.7	2.00	2.00	
810.0	6.20	116.51	809.4	-7.5	15.0	16.8	2.00	2.00	
840.0	6.80	116.51	839.2	-9.0	18.0	20.1	2.00	2.00	
870.0	7.40	116.51	869.0	-10.6	21.4	23.9	2.00	2.00	
900.0	8.00	116.51	898.7	-12.4	24.9	27.9	2.00	2.00	
930.0	8.60	116.51	928.4	-14.4	28.8	32.2	2.00	2.00	
960.0	9.20	116.51	958.0	-16.4	33.0	36.8	2.00	2.00	
990.0	9.80	116.51	987.6	-18.7	37.4	41.8	2.00	2.00	
1,020.0	10.40	116.51	1,017.1	-21.0	42.1	47.1	2.00	2.00	
1,047.8	10.96	116.51	1,044.5	-23.3	46.7	52.2	2.00	2.00	EOB; Inc=1096°
1,050.0	10.96	116.51	1,046.6	-23.5	47.1	52.6	0.00	0.00	
1,080.0	10.96	116.51	1,076.1	-26.0	52.2	58.3	0.00	0.00	
1,110.0	10.96	116.51	1,105.5	-28.6	57.3	64.0	0.00	0.00	
1,140.0	10.96	116.51	1,135.0	-31.1	62.4	69.7	0.00	0.00	
1,170.0	10.96	116.51	1,164.4	-33.7	67.5	75.4	0.00	0.00	
1,200.0	10.96	116.51	1,193.9	-36.2	72.6	81.1	0.00	0.00	
1,230.0	10.96	116.51	1,223.3	-38.8	77.7	86.8	0.00	0.00	
1,260.0	10.96	116.51	1,252.8	-41.3	82.8	92.5	0.00	0.00	
1,290.0	10.96	116.51	1,282.3	-43.8	87.9	98.2	0.00	0.00	
1,320.0	10.96	116.51	1,311.7	-46.4	93.0	103.9	0.00	0.00	
1,350.0	10.96	116.51	1,341.2	-48.9	98.1	109.6	0.00	0.00	
1,380.0	10.96	116.51	1,370.6	-51.5	103.2	115.3	0.00	0.00	
1,410.0	10.96	116.51	1,400.1	-54.0	108.3	121.0	0.00	0.00	
1,440.0	10.96	116.51	1,429.5	-56.6	113.4	126.7	0.00	0.00	
1,470.0	10.96	116.51	1,459.0	-59.1	118.5	132.4	0.00	0.00	

Cathedral Energy Services

Planning Report

Database:	EDM 5000.1 US Multi Users DB	Local Co-ordinate Reference:	Well LR06B D21 595
Company:	Berry Petroleum Company (NAD 83)	TVD Reference:	KBE @ 8278.0ft (Original Well Elev)
Project:	Garfield County	MD Reference:	KBE @ 8278.0ft (Original Well Elev)
Site:	D21 595 Pad	North Reference:	True
Well:	LR06B D21 595	Survey Calculation Method:	Minimum Curvature
Wellbore:	DD		
Design:	Plan #2		

Planned Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Comments / Formations
1,500.0	10.96	116.51	1,488.4	-61.7	123.6	138.1	0.00	0.00	
1,530.0	10.96	116.51	1,517.9	-64.2	128.7	143.8	0.00	0.00	
1,560.0	10.96	116.51	1,547.3	-66.8	133.8	149.5	0.00	0.00	
1,590.0	10.96	116.51	1,576.8	-69.3	138.9	155.2	0.00	0.00	
1,620.0	10.96	116.51	1,606.2	-71.8	144.1	160.9	0.00	0.00	
1,650.0	10.96	116.51	1,635.7	-74.4	149.2	166.6	0.00	0.00	
1,680.0	10.96	116.51	1,665.1	-76.9	154.3	172.3	0.00	0.00	
1,710.0	10.96	116.51	1,694.6	-79.5	159.4	178.0	0.00	0.00	
1,740.0	10.96	116.51	1,724.0	-82.0	164.5	183.7	0.00	0.00	
1,770.0	10.96	116.51	1,753.5	-84.6	169.6	189.4	0.00	0.00	
1,800.0	10.96	116.51	1,783.0	-87.1	174.7	195.1	0.00	0.00	
1,830.0	10.96	116.51	1,812.4	-89.7	179.8	200.8	0.00	0.00	
1,860.0	10.96	116.51	1,841.9	-92.2	184.9	206.5	0.00	0.00	
1,890.0	10.96	116.51	1,871.3	-94.7	190.0	212.2	0.00	0.00	
1,920.0	10.96	116.51	1,900.8	-97.3	195.1	217.9	0.00	0.00	
1,950.0	10.96	116.51	1,930.2	-99.8	200.2	223.6	0.00	0.00	
1,980.0	10.96	116.51	1,959.7	-102.4	205.3	229.3	0.00	0.00	
2,010.0	10.96	116.51	1,989.1	-104.9	210.4	235.0	0.00	0.00	
2,040.0	10.96	116.51	2,018.6	-107.5	215.5	240.7	0.00	0.00	
2,070.0	10.96	116.51	2,048.0	-110.0	220.6	246.4	0.00	0.00	
2,100.0	10.96	116.51	2,077.5	-112.6	225.7	252.1	0.00	0.00	
2,130.0	10.96	116.51	2,106.9	-115.1	230.8	257.8	0.00	0.00	
2,160.0	10.96	116.51	2,136.4	-117.6	235.9	263.5	0.00	0.00	
2,190.0	10.96	116.51	2,165.8	-120.2	241.0	269.2	0.00	0.00	
2,220.0	10.96	116.51	2,195.3	-122.7	246.1	274.9	0.00	0.00	
2,250.0	10.96	116.51	2,224.8	-125.3	251.2	280.6	0.00	0.00	
2,280.0	10.96	116.51	2,254.2	-127.8	256.3	286.3	0.00	0.00	
2,310.0	10.96	116.51	2,283.7	-130.4	261.4	292.0	0.00	0.00	
2,340.0	10.96	116.51	2,313.1	-132.9	266.5	297.7	0.00	0.00	
2,370.0	10.96	116.51	2,342.6	-135.5	271.6	303.4	0.00	0.00	
2,400.0	10.96	116.51	2,372.0	-138.0	276.7	309.1	0.00	0.00	
2,430.0	10.96	116.51	2,401.5	-140.5	281.8	314.8	0.00	0.00	
2,460.0	10.96	116.51	2,430.9	-143.1	286.9	320.5	0.00	0.00	
2,490.0	10.96	116.51	2,460.4	-145.6	292.0	326.2	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
LR06B D21 595 BHL - hit/miss target - Shape	0.00	0.00	11,861.0	-690.6	1,310.0	1,654,342.22	2,278,049.80	39.601998	-108.062503
- plan misses target center by 9471.3ft at 2490.0ft MD (2460.4 TVD, -145.6 N, 292.0 E)									
- Rectangle (sides W50.0 H100.0 D0.0)									
LR06B D21 595 TGT - hit/miss target - Shape	0.00	0.00	8,811.0	-670.6	1,344.7	1,654,361.21	2,278,085.02	39.602053	-108.062380
- plan misses target center by 6458.6ft at 2490.0ft MD (2460.4 TVD, -145.6 N, 292.0 E)									
- Point									

Cathedral Energy Services

Planning Report

Database:	EDM 5000.1 US Multi Users DB	Local Co-ordinate Reference:	Well LR06B D21 595
Company:	Berry Petroleum Company (NAD 83)	TVD Reference:	KBE @ 8278.0ft (Original Well Elev)
Project:	Garfield County	MD Reference:	KBE @ 8278.0ft (Original Well Elev)
Site:	D21 595 Pad	North Reference:	True
Well:	LR06B D21 595	Survey Calculation Method:	Minimum Curvature
Wellbore:	DD		
Design:	Plan #2		

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	10.96	116.51	2,470.2	-146.5	293.7	328.1	0.00	0.00	
2,600.0	10.96	116.51	2,568.4	-155.0	310.7	347.1	0.00	0.00	
2,700.0	10.96	116.51	2,666.6	-163.5	327.7	366.2	0.00	0.00	
2,800.0	10.96	116.51	2,764.7	-171.9	344.8	385.2	0.00	0.00	
2,900.0	10.96	116.51	2,862.9	-180.4	361.8	404.2	0.00	0.00	
3,000.0	10.96	116.51	2,961.1	-188.9	378.8	423.2	0.00	0.00	
3,100.0	10.96	116.51	3,059.3	-197.4	395.8	442.2	0.00	0.00	
3,200.0	10.96	116.51	3,157.4	-205.9	412.8	461.2	0.00	0.00	
3,300.0	10.96	116.51	3,255.6	-214.3	429.8	480.2	0.00	0.00	
3,400.0	10.96	116.51	3,353.8	-222.8	446.8	499.2	0.00	0.00	
3,500.0	10.96	116.51	3,452.0	-231.3	463.8	518.2	0.00	0.00	
3,600.0	10.96	116.51	3,550.1	-239.8	480.8	537.2	0.00	0.00	
3,700.0	10.96	116.51	3,648.3	-248.3	497.8	556.2	0.00	0.00	
3,800.0	10.96	116.51	3,746.5	-256.8	514.8	575.2	0.00	0.00	
3,900.0	10.96	116.51	3,844.7	-265.2	531.9	594.2	0.00	0.00	
3,967.6	10.96	116.51	3,911.0	-271.0	543.3	607.0	0.00	0.00	Wasatch
4,000.0	10.96	116.51	3,942.9	-273.7	548.9	613.2	0.00	0.00	
4,100.0	10.96	116.51	4,041.0	-282.2	565.9	632.2	0.00	0.00	
4,200.0	10.96	116.51	4,139.2	-290.7	582.9	651.2	0.00	0.00	
4,300.0	10.96	116.51	4,237.4	-299.2	599.9	670.2	0.00	0.00	
4,400.0	10.96	116.51	4,335.6	-307.7	616.9	689.2	0.00	0.00	
4,500.0	10.96	116.51	4,433.7	-316.1	633.9	708.2	0.00	0.00	
4,600.0	10.96	116.51	4,531.9	-324.6	650.9	727.2	0.00	0.00	
4,700.0	10.96	116.51	4,630.1	-333.1	667.9	746.2	0.00	0.00	
4,800.0	10.96	116.51	4,728.3	-341.6	684.9	765.2	0.00	0.00	
4,900.0	10.96	116.51	4,826.4	-350.1	701.9	784.2	0.00	0.00	
5,000.0	10.96	116.51	4,924.6	-358.6	718.9	803.2	0.00	0.00	
5,100.0	10.96	116.51	5,022.8	-367.0	736.0	822.2	0.00	0.00	
5,200.0	10.96	116.51	5,121.0	-375.5	753.0	841.2	0.00	0.00	
5,300.0	10.96	116.51	5,219.2	-384.0	770.0	860.2	0.00	0.00	
5,400.0	10.96	116.51	5,317.3	-392.5	787.0	879.2	0.00	0.00	
5,495.4	10.96	116.51	5,411.0	-400.6	803.2	897.3	0.00	0.00	Fort Union
5,500.0	10.96	116.51	5,415.5	-401.0	804.0	898.2	0.00	0.00	
5,600.0	10.96	116.51	5,513.7	-409.4	821.0	917.2	0.00	0.00	
5,700.0	10.96	116.51	5,611.9	-417.9	838.0	936.2	0.00	0.00	
5,800.0	10.96	116.51	5,710.0	-426.4	855.0	955.2	0.00	0.00	
5,900.0	10.96	116.51	5,808.2	-434.9	872.0	974.2	0.00	0.00	
6,000.0	10.96	116.51	5,906.4	-443.4	889.0	993.2	0.00	0.00	
6,100.0	10.96	116.51	6,004.6	-451.9	906.0	1,012.2	0.00	0.00	
6,200.0	10.96	116.51	6,102.7	-460.3	923.1	1,031.2	0.00	0.00	
6,300.0	10.96	116.51	6,200.9	-468.8	940.1	1,050.2	0.00	0.00	
6,400.0	10.96	116.51	6,299.1	-477.3	957.1	1,069.2	0.00	0.00	
6,500.0	10.96	116.51	6,397.3	-485.8	974.1	1,088.2	0.00	0.00	
6,600.0	10.96	116.51	6,495.5	-494.3	991.1	1,107.2	0.00	0.00	
6,700.0	10.96	116.51	6,593.6	-502.8	1,008.1	1,126.2	0.00	0.00	
6,800.0	10.96	116.51	6,691.8	-511.2	1,025.1	1,145.2	0.00	0.00	
6,900.0	10.96	116.51	6,790.0	-519.7	1,042.1	1,164.2	0.00	0.00	
7,000.0	10.96	116.51	6,888.2	-528.2	1,059.1	1,183.2	0.00	0.00	
7,100.0	10.96	116.51	6,986.3	-536.7	1,076.1	1,202.2	0.00	0.00	
7,200.0	10.96	116.51	7,084.5	-545.2	1,093.1	1,221.2	0.00	0.00	
7,300.0	10.96	116.51	7,182.7	-553.7	1,110.2	1,240.2	0.00	0.00	
7,400.0	10.96	116.51	7,280.9	-562.1	1,127.2	1,259.2	0.00	0.00	

Cathedral Energy Services

Planning Report

Database:	EDM 5000.1 US Multi Users DB	Local Co-ordinate Reference:	Well LR06B D21 595
Company:	Berry Petroleum Company (NAD 83)	TVD Reference:	KBE @ 8278.0ft (Original Well Elev)
Project:	Garfield County	MD Reference:	KBE @ 8278.0ft (Original Well Elev)
Site:	D21 595 Pad	North Reference:	True
Well:	LR06B D21 595	Survey Calculation Method:	Minimum Curvature
Wellbore:	DD		
Design:	Plan #2		

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
7,500.0	10.96	116.51	7,379.1	-570.6	1,144.2	1,278.2	0.00	0.00	
7,600.0	10.96	116.51	7,477.2	-579.1	1,161.2	1,297.2	0.00	0.00	
7,700.0	10.96	116.51	7,575.4	-587.6	1,178.2	1,316.2	0.00	0.00	
7,800.0	10.96	116.51	7,673.6	-596.1	1,195.2	1,335.2	0.00	0.00	
7,900.0	10.96	116.51	7,771.8	-604.5	1,212.2	1,354.2	0.00	0.00	
8,000.0	10.96	116.51	7,869.9	-613.0	1,229.2	1,373.3	0.00	0.00	
8,100.0	10.96	116.51	7,968.1	-621.5	1,246.2	1,392.3	0.00	0.00	
8,200.0	10.96	116.51	8,066.3	-630.0	1,263.2	1,411.3	0.00	0.00	
8,300.0	10.96	116.51	8,164.5	-638.5	1,280.2	1,430.3	0.00	0.00	
8,347.4	10.96	116.51	8,211.0	-642.5	1,288.3	1,439.3	0.00	0.00	Ohio creek
8,400.0	10.96	116.51	8,262.6	-647.0	1,297.2	1,449.3	0.00	0.00	
8,403.9	10.96	116.51	8,266.5	-647.3	1,297.9	1,450.0	0.00	0.00	Start Drop -2.00
8,500.0	9.04	116.51	8,361.1	-654.7	1,312.8	1,466.7	2.00	-2.00	
8,600.0	7.04	116.51	8,460.1	-661.0	1,325.3	1,480.6	2.00	-2.00	
8,651.2	6.01	116.51	8,511.0	-663.6	1,330.6	1,486.5	2.00	-2.00	Williams Fork
8,700.0	5.04	116.51	8,559.6	-665.7	1,334.8	1,491.2	2.00	-2.00	
8,800.0	3.04	116.51	8,659.3	-668.8	1,341.1	1,498.2	2.00	-2.00	
8,900.0	1.04	116.51	8,759.2	-670.4	1,344.2	1,501.7	2.00	-2.00	
8,951.8	0.00	0.00	8,811.0	-670.6	1,344.7	1,502.2	2.00	-2.00	EOD; Inc=0° - Approx TOG - LR06B D21 595 T
9,000.0	0.12	240.05	8,859.2	-670.6	1,344.6	1,502.2	0.25	0.25	
9,100.0	0.37	240.05	8,959.2	-670.8	1,344.2	1,502.0	0.25	0.25	
9,200.0	0.62	240.05	9,059.2	-671.3	1,343.5	1,501.5	0.25	0.25	
9,268.9	0.79	240.05	9,128.2	-671.7	1,342.7	1,501.0	0.25	0.25	
9,300.0	0.79	240.05	9,159.2	-671.9	1,342.4	1,500.8	0.00	0.00	
9,400.0	0.79	240.05	9,259.2	-672.6	1,341.2	1,500.1	0.00	0.00	
9,500.0	0.79	240.05	9,359.2	-673.3	1,340.0	1,499.3	0.00	0.00	
9,600.0	0.79	240.05	9,459.2	-674.0	1,338.8	1,498.6	0.00	0.00	
9,700.0	0.79	240.05	9,559.2	-674.7	1,337.6	1,497.9	0.00	0.00	
9,800.0	0.79	240.05	9,659.2	-675.4	1,336.4	1,497.1	0.00	0.00	
9,900.0	0.79	240.05	9,759.2	-676.1	1,335.2	1,496.4	0.00	0.00	
10,000.0	0.79	240.05	9,859.2	-676.7	1,334.0	1,495.6	0.00	0.00	
10,100.0	0.79	240.05	9,959.2	-677.4	1,332.8	1,494.9	0.00	0.00	
10,200.0	0.79	240.05	10,059.1	-678.1	1,331.6	1,494.2	0.00	0.00	
10,300.0	0.79	240.05	10,159.1	-678.8	1,330.4	1,493.4	0.00	0.00	
10,400.0	0.79	240.05	10,259.1	-679.5	1,329.2	1,492.7	0.00	0.00	
10,500.0	0.79	240.05	10,359.1	-680.2	1,328.0	1,492.0	0.00	0.00	
10,600.0	0.79	240.05	10,459.1	-680.9	1,326.8	1,491.2	0.00	0.00	
10,700.0	0.79	240.05	10,559.1	-681.6	1,325.6	1,490.5	0.00	0.00	
10,800.0	0.79	240.05	10,659.1	-682.3	1,324.4	1,489.7	0.00	0.00	
10,900.0	0.79	240.05	10,759.1	-683.0	1,323.2	1,489.0	0.00	0.00	
11,000.0	0.79	240.05	10,859.1	-683.7	1,322.0	1,488.3	0.00	0.00	
11,100.0	0.79	240.05	10,959.1	-684.3	1,320.8	1,487.5	0.00	0.00	
11,200.0	0.79	240.05	11,059.0	-685.0	1,319.6	1,486.8	0.00	0.00	
11,300.0	0.79	240.05	11,159.0	-685.7	1,318.4	1,486.0	0.00	0.00	
11,400.0	0.79	240.05	11,259.0	-686.4	1,317.2	1,485.3	0.00	0.00	
11,500.0	0.79	240.05	11,359.0	-687.1	1,316.0	1,484.6	0.00	0.00	
11,502.0	0.79	240.05	11,361.0	-687.1	1,316.0	1,484.6	0.00	0.00	Cameo
11,600.0	0.79	240.05	11,459.0	-687.8	1,314.8	1,483.8	0.00	0.00	
11,700.0	0.79	240.05	11,559.0	-688.5	1,313.6	1,483.1	0.00	0.00	
11,800.0	0.79	240.05	11,659.0	-689.2	1,312.4	1,482.4	0.00	0.00	
11,852.0	0.79	240.05	11,711.0	-689.5	1,311.8	1,482.0	0.00	0.00	Rollins SS
11,900.0	0.79	240.05	11,759.0	-689.9	1,311.2	1,481.6	0.00	0.00	

Cathedral Energy Services

Planning Report

Database:	EDM 5000.1 US Multi Users DB	Local Co-ordinate Reference:	Well LR06B D21 595
Company:	Berry Petroleum Company (NAD 83)	TVD Reference:	KBE @ 8278.0ft (Original Well Elev)
Project:	Garfield County	MD Reference:	KBE @ 8278.0ft (Original Well Elev)
Site:	D21 595 Pad	North Reference:	True
Well:	LR06B D21 595	Survey Calculation Method:	Minimum Curvature
Wellbore:	DD		
Design:	Plan #2		

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
12,000.0	0.79	240.05	11,859.0	-690.6	1,310.0	1,480.9	0.00	0.00	
12,002.0	0.79	240.05	11,861.0	-690.6	1,310.0	1,480.9	0.00	0.00	TD at 12002.0 - LR06B D21 595 BHL

Targets									
Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (ft)	Easting (ft)	Latitude	Longitude
LR06B D21 595 BHL - hit/miss target - Shape	0.00	0.00	11,861.0	-690.6	1,310.0	1,654,342.22	2,278,049.80	39.601998	-108.062503
- plan hits target center - Rectangle (sides W50.0 H100.0 D0.0)									
LR06B D21 595 TGT - plan hits target center - Point	0.00	0.00	8,811.0	-670.6	1,344.7	1,654,361.21	2,278,085.02	39.602053	-108.062380

Formations						
Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)	
3,967.6	3,911.0	Wasatch		0.00		
5,495.4	5,411.0	Fort Union		0.00		
8,347.4	8,211.0	Ohio creek		0.00		
8,651.2	8,511.0	Williams Fork		0.00		
8,951.8	8,811.0	Approx TOG		0.00		
11,502.0	11,361.0	Cameo		0.00		
11,852.0	11,711.0	Rollins SS		0.00		

Plan Annotations				
Measured Depth (ft)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Comment
500.0	500.0	0.0	0.0	KOP @ 500' MD
1,047.8	1,044.5	-23.3	46.7	EOB; Inc=1096°
8,403.9	8,266.5	-647.3	1,297.9	Start Drop -2.00
8,951.8	8,811.0	-670.6	1,344.7	EOD; Inc=0°
12,002.0	11,861.0	-690.6	1,310.0	TD at 12002.0

Berry Petroleum Company (NAD 83)

Garfield County

D21 595 Pad

LR06B D21 595

DD

Plan #2

Anticollision Report

03 December, 2010

Cathedral Energy Services

Anticollision Report

Company:	Berry Petroleum Company (NAD 83)	Local Co-ordinate Reference:	Well LR06B D21 595
Project:	Garfield County	TVD Reference:	KBE @ 8278.0ft (Original Well Elev)
Reference Site:	D21 595 Pad	MD Reference:	KBE @ 8278.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	LR06B D21 595	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 #2	Offset TVD Reference:	Offset Datum

Reference	Plan #2		
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	12/3/2010		
From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description
0.0	12,002.0	Plan #2 (DD)	MWD	Geolink MWD

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						
D21 595 Pad						
LR03C D21 595 - DD - Plan #2	200.0	200.0	14.9	14.2	23.016	CC, ES
LR03C D21 595 - DD - Plan #2	2,800.0	2,788.7	142.4	125.7	8.534	SF
LR04A D21 595 - DD - Plan #2	540.6	541.9	73.0	71.2	38.984	CC, ES
LR04A D21 595 - DD - Plan #2	800.0	799.6	88.5	85.5	30.053	SF
LR04B D21 595 - DD - Plan #2	300.0	300.0	105.1	104.1	105.655	CC, ES
LR04B D21 595 - DD - Plan #2	800.0	790.4	136.3	133.4	46.834	SF
LR04C D21 595 (Existing) - DD - DD	554.2	553.1	146.5	144.6	76.988	CC, ES
LR04C D21 595 (Existing) - DD - DD	2,500.0	2,484.8	373.7	364.6	40.962	SF
LR04D D21 595 - DD - Plan #2	524.3	525.1	22.6	20.7	12.203	CC, ES
LR04D D21 595 - DD - Plan #2	600.0	600.6	24.0	21.8	11.182	SF
LR05A D21 595 - DD - Plan #2	643.2	646.4	52.4	50.1	23.001	CC, ES
LR05A D21 595 - DD - Plan #2	900.0	902.3	64.9	61.5	19.070	SF
LR05B D21 595 (Existing) - DD - DD	0.0	0.0	167.2			
LR05B D21 595 (Existing) - DD - DD	3,000.0	2,992.0	441.1	427.9	33.332	SF
LR05BDR D21-595 - DD - Plan #2	611.2	617.0	125.2	122.9	55.584	CC, ES
LR05BDR D21-595 - DD - Plan #2	12,002.0	11,883.5	1,370.3	1,324.9	30.153	SF
LR05C D21 595 - DD - Plan #2	644.2	649.4	77.5	75.1	32.086	CC, ES
LR05C D21 595 - DD - Plan #2	12,002.0	11,945.6	1,145.0	1,084.5	18.917	SF
LR05D D21 595 - DD - Plan #2	623.9	629.9	110.2	107.9	47.264	CC, ES
LR05D D21 595 - DD - Plan #2	12,002.0	11,975.9	1,398.0	1,334.7	22.076	SF
LR06C D21 595 - DD - Plan #2	500.0	500.0	45.1	43.4	26.653	CC, ES
LR06C D21 595 - DD - Plan #2	2,900.0	2,920.0	124.8	106.4	6.783	SF
LR06D D21 595 - DD - Plan #2	503.5	503.9	9.3	7.5	5.267	CC, ES, 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 LR06B D21 595
Project:	Garfield County	TVD Reference:	KBE @ 8278.0ft (Original Well Elev)
Reference Site:	D21 595 Pad	MD Reference:	KBE @ 8278.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	LR06B D21 595	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 #2	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									
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning			
0.0	0.0	0.0	0.0	0.0	0.0	108.58	-4.7	14.1	14.9	14.6	0.30	50.093				
100.0	100.0	100.0	100.0	0.1	0.1	108.58	-4.7	14.1	14.9	14.6	0.30	50.093				
200.0	200.0	200.0	200.0	0.3	0.3	108.58	-4.7	14.1	14.9	14.2	0.65	23.016	CC, ES			
300.0	300.0	299.5	299.4	0.5	0.5	107.20	-4.9	15.8	16.6	15.6	1.00	16.601				
400.0	400.0	398.7	398.5	0.7	0.7	104.35	-5.4	20.9	21.7	20.3	1.36	15.893				
500.0	500.0	497.4	496.9	0.8	0.9	101.77	-6.1	29.4	30.2	28.5	1.75	17.236				
600.0	600.0	595.7	594.4	1.0	1.2	-17.23	-7.2	41.3	40.6	38.6	2.04	19.943				
700.0	699.8	693.9	691.5	1.2	1.5	-20.09	-8.6	56.3	51.0	48.6	2.38	21.424				
800.0	799.5	793.5	789.8	1.4	1.8	-23.24	-10.1	72.5	59.3	56.6	2.74	21.689				
900.0	898.7	893.3	888.2	1.7	2.1	-26.95	-11.5	88.7	64.6	61.5	3.11	20.816				
1,000.0	997.5	993.1	986.7	1.9	2.4	-31.59	-13.0	105.0	67.2	63.7	3.52	19.115				
1,100.0	1,095.7	1,092.9	1,085.1	2.3	2.8	-37.37	-14.5	121.2	67.7	63.7	4.00	16.929				
1,200.0	1,193.9	1,192.6	1,183.5	2.6	3.1	-43.23	-16.0	137.4	68.7	64.1	4.57	15.030				
1,300.0	1,292.1	1,292.4	1,281.9	3.0	3.4	-48.87	-17.5	153.6	70.3	65.1	5.21	13.492				
1,400.0	1,390.2	1,392.1	1,380.3	3.3	3.8	-54.21	-18.9	169.9	72.6	66.7	5.92	12.272				
1,500.0	1,488.4	1,491.9	1,478.7	3.7	4.1	-59.19	-20.4	186.1	75.5	68.8	6.66	11.324				
1,600.0	1,586.6	1,591.6	1,577.2	4.0	4.4	-63.77	-21.9	202.3	78.9	71.4	7.44	10.596				
1,700.0	1,684.8	1,691.4	1,675.6	4.4	4.8	-67.95	-23.4	218.5	82.7	74.5	8.24	10.043				
1,800.0	1,783.0	1,791.1	1,774.0	4.8	5.1	-71.74	-24.8	234.8	87.0	78.0	9.04	9.626				
1,900.0	1,881.1	1,890.9	1,872.4	5.1	5.4	-75.16	-26.3	251.0	91.6	81.8	9.84	9.312				
2,000.0	1,979.3	1,990.6	1,970.8	5.5	5.8	-78.25	-27.8	267.2	96.5	85.9	10.63	9.078				
2,100.0	2,077.5	2,090.4	2,069.2	5.9	6.1	-81.03	-29.3	283.5	101.7	90.3	11.42	8.904				
2,200.0	2,175.7	2,190.1	2,167.6	6.3	6.4	-83.54	-30.8	299.7	107.1	94.9	12.20	8.777				
2,300.0	2,273.8	2,289.9	2,266.0	6.6	6.8	-85.80	-32.2	315.9	112.6	99.6	12.97	8.685				
2,400.0	2,372.0	2,389.7	2,364.4	7.0	7.1	-87.85	-33.7	332.1	118.3	104.6	13.73	8.621				
2,500.0	2,470.2	2,489.4	2,462.9	7.4	7.4	-89.71	-35.2	348.4	124.2	109.7	14.48	8.578				
2,600.0	2,568.4	2,589.2	2,561.3	7.7	7.8	-91.40	-36.7	364.6	130.2	114.9	15.22	8.551				
2,700.0	2,666.6	2,688.9	2,659.7	8.1	8.1	-92.94	-38.2	380.8	136.2	120.3	15.96	8.538				
2,800.0	2,764.7	2,788.7	2,758.1	8.5	8.5	-94.35	-39.6	397.0	142.4	125.7	16.69	8.534	SF			
2,900.0	2,862.9	2,888.4	2,856.5	8.9	8.8	-95.64	-41.1	413.3	148.7	131.2	17.41	8.537				
3,000.0	2,961.1	2,988.2	2,954.9	9.3	9.1	-96.82	-42.6	429.5	155.0	136.8	18.13	8.547				
3,100.0	3,059.3	3,087.9	3,053.3	9.6	9.5	-97.92	-44.1	445.7	161.3	142.5	18.85	8.561				
3,200.0	3,157.4	3,187.7	3,151.7	10.0	9.8	-98.93	-45.6	461.9	167.8	148.2	19.56	8.579				
3,300.0	3,255.6	3,287.4	3,250.2	10.4	10.1	-99.86	-47.0	478.2	174.3	154.0	20.26	8.600				
3,400.0	3,353.8	3,387.2	3,348.6	10.8	10.5	-100.73	-48.5	494.4	180.8	159.8	20.97	8.623				
3,500.0	3,452.0	3,486.9	3,447.0	11.1	10.8	-101.54	-50.0	510.6	187.3	165.7	21.67	8.647				
3,600.0	3,550.1	3,586.7	3,545.4	11.5	11.1	-102.29	-51.5	526.8	193.9	171.6	22.36	8.672				
3,700.0	3,648.3	3,686.4	3,643.8	11.9	11.5	-102.99	-52.9	543.1	200.6	177.5	23.06	8.698				
3,800.0	3,746.5	3,786.2	3,742.2	12.3	11.8	-103.65	-54.4	559.3	207.2	183.5	23.75	8.725				
3,900.0	3,844.7	3,885.9	3,840.6	12.6	12.2	-104.26	-55.9	575.5	213.9	189.4	24.44	8.751				
4,000.0	3,942.9	3,985.7	3,939.0	13.0	12.5	-104.84	-57.4	591.8	220.6	195.5	25.13	8.778				
4,100.0	4,041.0	4,085.4	4,037.4	13.4	12.8	-105.39	-58.9	608.0	227.3	201.5	25.82	8.805				
4,200.0	4,139.2	4,185.2	4,135.9	13.8	13.2	-105.90	-60.3	624.2	234.1	207.6	26.50	8.832				
4,300.0	4,237.4	4,284.9	4,234.3	14.2	13.5	-106.39	-61.8	640.4	240.8	213.6	27.18	8.858				
4,400.0	4,335.6	4,384.7	4,332.7	14.5	13.8	-106.85	-63.3	656.7	247.6	219.7	27.87	8.884				
4,500.0	4,433.7	4,484.4	4,431.1	14.9	14.2	-107.28	-64.8	672.9	254.4	225.8	28.55	8.910				
4,600.0	4,531.9	4,584.2	4,529.5	15.3	14.5	-107.69	-66.3	689.1	261.2	232.0	29.23	8.936				
4,700.0	4,630.1	4,683.9	4,627.9	15.7	14.8	-108.08	-67.7	705.3	268.0	238.1	29.91	8.961				
4,800.0	4,728.3	4,783.7	4,726.3	16.0	15.2	-108.45	-69.2	721.6	274.8	244.2	30.59	8.985				
4,900.0	4,826.4	4,883.4	4,824.7	16.4	15.5	-108.81	-70.7	737.8	281.7	250.4	31.27	9.009				
5,000.0	4,924.6	4,983.2	4,923.1	16.8	15.9	-109.14	-72.2	754.0	288.5	256.6	31.94	9.032				
5,100.0	5,022.8	5,082.9	5,021.6	17.2	16.2	-109.46	-73.7	770.2	295.4	262.8	32.62	9.056				

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 LR06B D21 595
Project:	Garfield County	TVD Reference:	KBE @ 8278.0ft (Original Well Elev)
Reference Site:	D21 595 Pad	MD Reference:	KBE @ 8278.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	LR06B D21 595	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 #2	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			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		
5,200.0	5,121.0	5,182.7	5,120.0	17.6	16.5	-109.77	-75.1	786.5	302.3	269.0	33.29	9.078			
5,300.0	5,219.2	5,282.4	5,218.4	17.9	16.9	-110.06	-76.6	802.7	309.1	275.2	33.97	9.100			
5,400.0	5,317.3	5,382.2	5,316.8	18.3	17.2	-110.34	-78.1	818.9	316.0	281.4	34.64	9.122			
5,500.0	5,415.5	5,481.9	5,415.2	18.7	17.5	-110.61	-79.6	835.1	322.9	287.6	35.32	9.143			
5,600.0	5,513.7	5,581.7	5,513.6	19.1	17.9	-110.87	-81.0	851.4	329.8	293.8	35.99	9.163			
5,700.0	5,611.9	5,681.4	5,612.0	19.5	18.2	-111.11	-82.5	867.6	336.7	300.0	36.66	9.183			
5,800.0	5,710.0	5,781.2	5,710.4	19.8	18.5	-111.35	-84.0	883.8	343.6	306.3	37.34	9.203			
5,900.0	5,808.2	5,880.9	5,808.8	20.2	18.9	-111.58	-85.5	900.1	350.5	312.5	38.01	9.222			
6,000.0	5,906.4	5,980.7	5,907.3	20.6	19.2	-111.79	-87.0	916.3	357.5	318.8	38.68	9.241			
6,100.0	6,004.6	6,080.4	6,005.7	21.0	19.6	-112.00	-88.4	932.5	364.4	325.0	39.35	9.259			
6,200.0	6,102.7	6,180.2	6,104.1	21.3	19.9	-112.21	-89.9	948.7	371.3	331.3	40.02	9.277			
6,300.0	6,200.9	6,279.9	6,202.5	21.7	20.2	-112.40	-91.4	965.0	378.3	337.6	40.69	9.295			
6,400.0	6,299.1	6,379.7	6,300.9	22.1	20.6	-112.59	-92.9	981.2	385.2	343.8	41.37	9.312			
6,500.0	6,397.3	6,479.4	6,399.3	22.5	20.9	-112.77	-94.4	997.4	392.1	350.1	42.04	9.329			
6,600.0	6,495.5	6,579.2	6,497.7	22.9	21.2	-112.94	-95.8	1,013.6	399.1	356.4	42.71	9.345			
6,700.0	6,593.6	6,678.9	6,596.1	23.2	21.6	-113.11	-97.3	1,029.9	406.0	362.7	43.38	9.361			
6,800.0	6,691.8	6,778.7	6,694.6	23.6	21.9	-113.28	-98.8	1,046.1	413.0	368.9	44.04	9.377			
6,900.0	6,790.0	6,878.5	6,793.0	24.0	22.2	-113.43	-100.3	1,062.3	419.9	375.2	44.71	9.392			
7,000.0	6,888.2	6,978.2	6,891.4	24.4	22.6	-113.59	-101.7	1,078.5	426.9	381.5	45.38	9.407			
7,100.0	6,986.3	7,078.0	6,989.8	24.8	22.9	-113.73	-103.2	1,094.8	433.9	387.8	46.05	9.421			
7,200.0	7,084.5	7,177.7	7,088.2	25.1	23.3	-113.88	-104.7	1,111.0	440.8	394.1	46.72	9.436			
7,300.0	7,182.7	7,277.5	7,186.6	25.5	23.6	-114.02	-106.2	1,127.2	447.8	400.4	47.39	9.450			
7,400.0	7,280.9	7,377.2	7,285.0	25.9	23.9	-114.15	-107.7	1,143.4	454.8	406.7	48.06	9.463			
7,500.0	7,379.1	7,477.0	7,383.4	26.3	24.3	-114.28	-109.1	1,159.7	461.8	413.0	48.73	9.477			
7,600.0	7,477.2	7,576.7	7,481.8	26.6	24.6	-114.41	-110.6	1,175.9	468.7	419.3	49.39	9.490			
7,700.0	7,575.4	7,676.5	7,580.3	27.0	24.9	-114.53	-112.1	1,192.1	475.7	425.7	50.06	9.503			
7,800.0	7,673.6	7,776.2	7,678.7	27.4	25.3	-114.65	-113.6	1,208.4	482.7	432.0	50.73	9.515			
7,900.0	7,771.8	7,876.0	7,771.1	27.8	25.6	-114.76	-115.1	1,224.6	489.7	438.3	51.40	9.527			
8,000.0	7,869.9	7,975.7	7,875.5	28.2	25.9	-114.88	-116.5	1,240.8	496.7	444.6	52.06	9.539			
8,100.0	7,968.1	8,075.5	7,973.9	28.5	26.3	-114.99	-118.0	1,257.0	503.6	450.9	52.73	9.551			
8,200.0	8,066.3	8,175.2	8,072.3	28.9	26.6	-115.09	-119.5	1,273.3	510.6	457.2	53.40	9.563			
8,300.0	8,164.5	8,275.0	8,170.7	29.3	27.0	-115.20	-121.0	1,289.5	517.6	463.6	54.07	9.574			
8,400.0	8,262.6	8,374.7	8,269.1	29.7	27.3	-115.30	-122.5	1,305.7	524.6	469.9	54.73	9.585			
8,500.0	8,361.1	8,474.5	8,367.6	30.0	27.6	-115.35	-123.9	1,321.9	530.9	475.5	55.39	9.586			
8,600.0	8,460.1	8,573.0	8,465.0	30.3	27.9	-115.22	-125.2	1,336.3	535.9	479.9	55.97	9.575			
8,700.0	8,559.6	8,671.7	8,563.0	30.5	28.1	-115.11	-126.2	1,347.4	539.6	483.1	56.44	9.560			
8,800.0	8,659.3	8,770.4	8,661.5	30.7	28.3	-115.01	-126.9	1,355.0	542.0	485.2	56.81	9.542			
8,900.0	8,759.2	8,869.2	8,760.2	30.8	28.5	-114.91	-127.3	1,359.3	543.3	486.2	57.08	9.518			
9,000.0	8,859.2	8,968.6	8,859.5	30.9	28.6	121.61	-127.4	1,360.3	543.4	486.1	57.28	9.487			
9,100.0	8,959.2	9,069.8	8,960.8	30.9	28.6	121.62	-127.6	1,360.0	543.5	486.0	57.46	9.458			
9,200.0	9,059.2	9,171.1	9,062.1	31.0	28.7	121.63	-128.0	1,359.4	543.5	485.9	57.63	9.431			
9,300.0	9,159.2	9,272.2	9,163.2	31.1	28.8	121.64	-128.6	1,358.3	543.6	485.8	57.80	9.405			
9,400.0	9,259.2	9,372.2	9,263.2	31.2	28.9	121.64	-129.3	1,357.1	543.6	485.6	57.96	9.378			
9,500.0	9,359.2	9,472.2	9,363.2	31.3	29.0	121.64	-130.0	1,355.9	543.6	485.4	58.12	9.352			
9,600.0	9,459.2	9,572.2	9,463.2	31.4	29.1	121.64	-130.7	1,354.7	543.6	485.3	58.29	9.325			
9,700.0	9,559.2	9,672.2	9,563.1	31.4	29.1	121.64	-131.4	1,353.5	543.5	485.1	58.46	9.298			
9,800.0	9,659.2	9,772.2	9,663.1	31.5	29.2	121.64	-132.1	1,352.3	543.5	484.9	58.63	9.272			
9,900.0	9,759.2	9,872.2	9,763.1	31.6	29.3	121.64	-132.8	1,351.1	543.5	484.7	58.80	9.245			
10,000.0	9,859.2	9,972.2	9,863.1	31.7	29.4	121.64	-133.5	1,349.9	543.5	484.6	58.97	9.217			
10,100.0	9,959.2	10,072.2	9,963.1	31.8	29.5	121.64	-134.1	1,348.7	543.5	484.4	59.14	9.190			
10,200.0	10,059.1	10,172.2	10,063.1	31.9	29.6	121.64	-134.8	1,347.5	543.5	484.2	59.32	9.163			
10,300.0	10,159.1	10,272.2	10,163.1	31.9	29.7	121.64	-135.5	1,346.4	543.5	484.0	59.50	9.136			

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 LR06B D21 595
Project:	Garfield County	TVD Reference:	KBE @ 8278.0ft (Original Well Elev)
Reference Site:	D21 595 Pad	MD Reference:	KBE @ 8278.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	LR06B D21 595	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 #2	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				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)					
10,400.0	10,259.1	10,372.2	10,263.1	32.0	29.8	121.64	-136.2	1,345.2	543.5	483.9	59.67	9.108			
10,500.0	10,359.1	10,472.2	10,363.1	32.1	29.9	121.64	-136.9	1,344.0	543.5	483.7	59.85	9.081			
10,600.0	10,459.1	10,572.2	10,463.1	32.2	29.9	121.64	-137.6	1,342.8	543.5	483.5	60.04	9.053			
10,700.0	10,559.1	10,672.2	10,563.1	32.3	30.0	121.64	-138.3	1,341.6	543.5	483.3	60.22	9.026			
10,800.0	10,659.1	10,772.2	10,663.0	32.4	30.1	121.64	-139.0	1,340.4	543.5	483.1	60.40	8.998			
10,900.0	10,759.1	10,872.2	10,763.0	32.5	30.2	121.64	-139.7	1,339.2	543.5	482.9	60.59	8.970			
11,000.0	10,859.1	10,972.2	10,863.0	32.6	30.3	121.64	-140.4	1,338.0	543.5	482.7	60.78	8.943			
11,100.0	10,959.1	11,072.2	10,963.0	32.7	30.4	121.64	-141.1	1,336.8	543.5	482.5	60.97	8.915			
11,200.0	11,059.0	11,172.2	11,063.0	32.8	30.5	121.64	-141.8	1,335.6	543.5	482.4	61.16	8.887			
11,300.0	11,159.0	11,272.2	11,163.0	32.9	30.6	121.64	-142.5	1,334.4	543.5	482.2	61.35	8.859			
11,400.0	11,259.0	11,372.2	11,263.0	32.9	30.7	121.64	-143.2	1,333.2	543.5	482.0	61.54	8.831			
11,500.0	11,359.0	11,472.2	11,363.0	33.0	30.8	121.64	-143.9	1,332.0	543.5	481.8	61.74	8.803			
11,600.0	11,459.0	11,572.2	11,463.0	33.1	30.9	121.64	-144.5	1,330.8	543.5	481.6	61.94	8.775			
11,700.0	11,559.0	11,672.2	11,563.0	33.2	31.0	121.64	-145.2	1,329.6	543.5	481.4	62.13	8.747			
11,800.0	11,659.0	11,772.2	11,662.9	33.3	31.1	121.64	-145.9	1,328.4	543.5	481.2	62.33	8.720			
11,900.0	11,759.0	11,872.2	11,762.9	33.4	31.2	121.64	-146.6	1,327.2	543.5	481.0	62.53	8.692			
12,000.0	11,859.0	11,972.2	11,862.9	33.5	31.3	121.64	-147.3	1,326.0	543.5	480.8	62.73	8.664			
12,002.0	11,861.0	11,974.3	11,865.0	33.5	31.3	121.64	-147.3	1,326.0	543.5	480.8	62.74	8.663			

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 LR06B D21 595
Project:	Garfield County	TVD Reference:	KBE @ 8278.0ft (Original Well Elev)
Reference Site:	D21 595 Pad	MD Reference:	KBE @ 8278.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	LR06B D21 595	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 #2	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								
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning		
0.0	0.0	0.0	0.0	0.0	0.0	-71.63	23.7	-71.3	75.1						
100.0	100.0	100.0	100.0	0.1	0.1	-71.63	23.7	-71.3	75.1	74.8	0.30	253.167			
200.0	200.0	200.0	200.0	0.3	0.3	-71.63	23.7	-71.3	75.1	74.5	0.65	116.320			
300.0	300.0	300.0	300.0	0.5	0.5	-71.63	23.7	-71.3	75.1	74.1	0.99	75.506			
400.0	400.0	400.7	400.7	0.7	0.7	-70.33	25.1	-70.3	74.6	73.3	1.35	55.410			
500.0	500.0	501.2	501.1	0.8	0.9	-66.35	29.4	-67.2	73.3	71.6	1.70	43.059			
540.6	540.6	541.9	541.6	0.9	1.0	179.57	32.0	-65.3	73.0	71.2	1.87	38.984	CC, ES		
600.0	600.0	601.3	600.7	1.0	1.1	-176.12	36.5	-62.0	73.7	71.6	2.11	34.998			
700.0	699.8	700.6	699.3	1.2	1.3	-167.78	46.1	-55.2	78.7	76.2	2.52	31.193			
800.0	799.5	799.6	797.6	1.4	1.6	-160.95	56.0	-48.0	88.5	85.5	2.94	30.053	SF		
900.0	898.7	898.3	895.6	1.7	1.8	-156.26	65.9	-40.9	102.4	99.0	3.37	30.379			
1,000.0	997.5	996.7	993.1	1.9	2.1	-153.40	75.8	-33.8	119.9	116.1	3.81	31.478			
1,100.0	1,095.7	1,094.5	1,090.3	2.3	2.4	-151.90	85.6	-26.8	140.2	135.9	4.27	32.869			
1,200.0	1,193.9	1,192.3	1,187.3	2.6	2.6	-150.91	95.4	-19.7	160.9	156.2	4.74	33.961			
1,300.0	1,292.1	1,290.1	1,284.4	3.0	2.9	-150.15	105.2	-12.7	181.6	176.4	5.22	34.813			
1,400.0	1,390.2	1,387.9	1,381.4	3.3	3.2	-149.54	115.0	-5.6	202.4	196.7	5.70	35.490			
1,500.0	1,488.4	1,485.7	1,478.5	3.7	3.4	-149.04	124.8	1.4	223.2	217.0	6.19	36.037			
1,600.0	1,586.6	1,583.5	1,575.5	4.0	3.7	-148.63	134.6	8.4	243.9	237.3	6.69	36.487			
1,700.0	1,684.8	1,681.3	1,672.6	4.4	4.0	-148.29	144.4	15.5	264.7	257.6	7.18	36.862			
1,800.0	1,783.0	1,779.1	1,769.6	4.8	4.2	-147.99	154.2	22.5	285.6	277.9	7.68	37.178			
1,900.0	1,881.1	1,876.9	1,866.7	5.1	4.5	-147.74	164.0	29.6	306.4	298.2	8.18	37.448			
2,000.0	1,979.3	1,974.7	1,963.7	5.5	4.8	-147.52	173.8	36.6	327.2	318.5	8.68	37.680			
2,100.0	2,077.5	2,072.5	2,060.8	5.9	5.0	-147.32	183.6	43.7	348.0	338.8	9.19	37.882			
2,200.0	2,175.7	2,170.3	2,157.8	6.3	5.3	-147.15	193.4	50.7	368.8	359.1	9.69	38.059			
2,300.0	2,273.8	2,268.1	2,254.9	6.6	5.6	-146.99	203.2	57.8	389.7	379.5	10.20	38.215			
2,400.0	2,372.0	2,365.9	2,352.0	7.0	5.9	-146.85	213.0	64.8	410.5	399.8	10.70	38.354			
2,500.0	2,470.2	2,463.8	2,449.0	7.4	6.1	-146.73	222.8	71.9	431.3	420.1	11.21	38.478			
2,600.0	2,568.4	2,561.6	2,546.1	7.7	6.4	-146.61	232.6	78.9	452.2	440.4	11.72	38.589			
2,700.0	2,666.6	2,659.4	2,643.1	8.1	6.7	-146.51	242.4	86.0	473.0	460.8	12.23	38.690			
2,800.0	2,764.7	2,757.2	2,740.2	8.5	6.9	-146.41	252.2	93.0	493.8	481.1	12.73	38.781			
2,900.0	2,862.9	2,855.0	2,837.2	8.9	7.2	-146.32	262.0	100.1	514.7	501.4	13.24	38.864			
3,000.0	2,961.1	2,952.8	2,934.3	9.3	7.5	-146.24	271.8	107.1	535.5	521.8	13.75	38.940			
3,100.0	3,059.3	3,050.6	3,031.3	9.6	7.8	-146.17	281.6	114.2	556.3	542.1	14.26	39.010			
3,200.0	3,157.4	3,148.4	3,128.4	10.0	8.0	-146.10	291.4	121.2	577.2	562.4	14.77	39.074			
3,300.0	3,255.6	3,246.2	3,225.4	10.4	8.3	-146.03	301.2	128.3	598.0	582.8	15.28	39.133			
3,400.0	3,353.8	3,344.0	3,322.5	10.8	8.6	-145.97	311.0	135.3	618.9	603.1	15.79	39.188			
3,500.0	3,452.0	3,441.8	3,419.5	11.1	8.8	-145.92	320.8	142.3	639.7	623.4	16.30	39.238			
3,600.0	3,550.1	3,539.6	3,516.6	11.5	9.1	-145.86	330.6	149.4	660.6	643.7	16.81	39.286			
3,700.0	3,648.3	3,637.4	3,613.7	11.9	9.4	-145.81	340.4	156.4	681.4	664.1	17.33	39.330			
3,800.0	3,746.5	3,735.2	3,710.7	12.3	9.6	-145.77	350.2	163.5	702.3	684.4	17.84	39.371			
3,900.0	3,844.7	3,833.0	3,807.8	12.6	9.9	-145.72	360.0	170.5	723.1	704.8	18.35	39.410			
4,000.0	3,942.9	3,930.8	3,904.8	13.0	10.2	-145.68	369.8	177.6	743.9	725.1	18.86	39.446			
4,100.0	4,041.0	4,028.6	4,001.9	13.4	10.5	-145.64	379.6	184.6	764.8	745.4	19.37	39.480			
4,200.0	4,139.2	4,126.4	4,098.9	13.8	10.7	-145.61	389.4	191.7	785.6	765.8	19.88	39.513			
4,300.0	4,237.4	4,224.2	4,196.0	14.2	11.0	-145.57	399.2	198.7	806.5	786.1	20.40	39.543			
4,400.0	4,335.6	4,322.0	4,293.0	14.5	11.3	-145.54	409.0	205.8	827.3	806.4	20.91	39.572			
4,500.0	4,433.7	4,419.8	4,390.1	14.9	11.5	-145.51	418.8	212.8	848.2	826.8	21.42	39.599			
4,600.0	4,531.9	4,517.6	4,487.1	15.3	11.8	-145.48	428.6	219.9	869.0	847.1	21.93	39.624			
4,700.0	4,630.1	4,615.4	4,584.2	15.7	12.1	-145.45	438.4	226.9	889.9	867.4	22.44	39.649			
4,800.0	4,728.3	4,713.2	4,681.2	16.0	12.4	-145.42	448.2	234.0	910.7	887.8	22.96	39.672			
4,900.0	4,826.4	4,811.0	4,778.3	16.4	12.6	-145.39	458.0	241.0	931.6	908.1	23.47	39.694			
5,000.0	4,924.6	4,908.8	4,875.4	16.8	12.9	-145.37	467.8	248.1	952.4	928.4	23.98	39.715			

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 LR06B D21 595
Project:	Garfield County	TVD Reference:	KBE @ 8278.0ft (Original Well Elev)
Reference Site:	D21 595 Pad	MD Reference:	KBE @ 8278.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	LR06B D21 595	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 #2	Offset TVD Reference:	Offset Datum

Offset Design												D21 595 Pad - LR04A D21 595 - DD - Plan #2		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)					
5,100.0	5,022.8	5,006.6	4,972.4	17.2	13.2	-145.34	477.7	255.1	973.3	948.8	24.49	39.735			
5,200.0	5,121.0	5,104.4	5,069.5	17.6	13.4	-145.32	487.5	262.2	994.1	969.1	25.01	39.755			
5,300.0	5,219.2	5,211.7	5,176.1	17.9	13.7	-145.33	497.6	269.5	1,014.7	989.2	25.52	39.757			
5,400.0	5,317.3	5,327.1	5,291.0	18.3	14.0	-145.56	505.2	274.9	1,033.8	1,007.8	25.98	39.797			
5,500.0	5,415.5	5,442.7	5,406.5	18.7	14.1	-146.01	509.1	277.7	1,051.3	1,024.9	26.36	39.886			
5,600.0	5,513.7	5,549.8	5,513.7	19.1	14.2	-146.60	509.6	278.0	1,067.4	1,040.7	26.68	40.012			
5,700.0	5,611.9	5,647.9	5,611.7	19.5	14.4	-147.17	509.3	277.7	1,083.4	1,056.5	26.98	40.155			
5,800.0	5,710.0	5,746.0	5,709.8	19.8	14.5	-147.74	509.0	277.1	1,099.6	1,072.3	27.28	40.305			
5,900.0	5,808.2	5,844.1	5,807.9	20.2	14.6	-148.29	508.7	276.6	1,115.8	1,088.2	27.58	40.458			
6,000.0	5,906.4	5,942.2	5,906.1	20.6	14.7	-148.82	508.4	276.1	1,132.1	1,104.2	27.88	40.613			
6,100.0	6,004.6	6,040.3	6,004.2	21.0	14.8	-149.34	508.1	275.5	1,148.5	1,120.4	28.17	40.771			
6,200.0	6,102.7	6,138.5	6,102.3	21.3	14.9	-149.85	507.8	275.0	1,165.0	1,136.6	28.46	40.930			
6,300.0	6,200.9	6,236.6	6,200.4	21.7	15.0	-150.34	507.5	274.5	1,181.6	1,152.9	28.76	41.090			
6,400.0	6,299.1	6,334.7	6,298.5	22.1	15.2	-150.81	507.2	273.9	1,198.3	1,169.2	29.05	41.251			
6,500.0	6,397.3	6,432.8	6,396.6	22.5	15.3	-151.28	506.9	273.4	1,215.1	1,185.7	29.34	41.413			
6,600.0	6,495.5	6,530.9	6,494.7	22.9	15.4	-151.73	506.6	272.9	1,231.9	1,202.3	29.63	41.575			
6,700.0	6,593.6	6,629.0	6,592.8	23.2	15.5	-152.17	506.3	272.3	1,248.8	1,218.9	29.92	41.738			
6,800.0	6,691.8	6,727.1	6,690.9	23.6	15.6	-152.60	506.0	271.8	1,265.8	1,235.6	30.21	41.900			
6,900.0	6,790.0	6,825.2	6,789.0	24.0	15.8	-153.01	505.7	271.3	1,282.8	1,252.3	30.50	42.061			
7,000.0	6,888.2	6,923.3	6,887.1	24.4	15.9	-153.42	505.3	270.7	1,299.9	1,269.1	30.79	42.223			
7,100.0	6,986.3	7,021.4	6,985.2	24.8	16.0	-153.81	505.0	270.2	1,317.1	1,286.0	31.08	42.383			
7,200.0	7,084.5	7,119.5	7,083.3	25.1	16.1	-154.20	504.7	269.7	1,334.3	1,302.9	31.36	42.543			
7,300.0	7,182.7	7,217.7	7,181.5	25.5	16.3	-154.58	504.4	269.1	1,351.6	1,319.9	31.65	42.701			
7,400.0	7,280.9	7,315.8	7,279.6	25.9	16.4	-154.94	504.1	268.6	1,368.9	1,337.0	31.94	42.859			
7,500.0	7,379.1	7,413.9	7,377.7	26.3	16.5	-155.30	503.8	268.1	1,386.3	1,354.1	32.23	43.015			

Cathedral Energy Services

Anticollision Report

Company:	Berry Petroleum Company (NAD 83)	Local Co-ordinate Reference:	Well LR06B D21 595
Project:	Garfield County	TVD Reference:	KBE @ 8278.0ft (Original Well Elev)
Reference Site:	D21 595 Pad	MD Reference:	KBE @ 8278.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	LR06B D21 595	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 #2	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				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	-71.62	33.1	-99.7	105.1						
100.0	100.0	100.0	100.0	0.1	0.1	-71.62	33.1	-99.7	105.1	104.8	0.30	354.254			
200.0	200.0	200.0	200.0	0.3	0.3	-71.62	33.1	-99.7	105.1	104.5	0.65	162.765			
300.0	300.0	300.0	300.0	0.5	0.5	-71.62	33.1	-99.7	105.1	104.1	0.99	105.655 CC, ES			
400.0	400.0	399.3	399.2	0.7	0.7	-70.70	34.9	-99.5	105.5	104.1	1.34	78.537			
500.0	500.0	498.3	498.1	0.8	0.9	-68.00	40.0	-98.9	106.7	105.0	1.69	63.087			
600.0	600.0	596.7	596.2	1.0	1.1	179.81	48.4	-97.8	110.9	108.8	2.09	53.060			
700.0	699.8	694.2	693.0	1.2	1.3	-174.87	60.0	-96.3	120.7	118.2	2.49	48.368			
800.0	799.5	790.4	788.0	1.4	1.6	-169.39	74.7	-94.5	136.3	133.4	2.91	46.834 SF			
900.0	898.7	887.5	883.8	1.7	1.9	-164.82	90.9	-92.4	157.1	153.8	3.33	47.211			
1,000.0	997.5	984.0	978.9	1.9	2.2	-161.59	106.9	-90.4	181.8	178.0	3.74	48.559			
1,100.0	1,095.7	1,079.8	1,073.3	2.3	2.5	-159.46	122.9	-88.4	209.6	205.4	4.17	50.216			
1,200.0	1,193.9	1,175.6	1,167.7	2.6	2.8	-157.93	138.8	-86.4	237.9	233.3	4.62	51.507			
1,300.0	1,292.1	1,271.3	1,262.1	3.0	3.2	-156.73	154.8	-84.3	266.4	261.3	5.07	52.529			
1,400.0	1,390.2	1,367.0	1,356.5	3.3	3.5	-155.76	170.7	-82.3	294.9	289.4	5.53	53.350			
1,500.0	1,488.4	1,462.8	1,450.8	3.7	3.8	-154.96	186.7	-80.3	323.5	317.6	5.99	54.018			
1,600.0	1,586.6	1,558.5	1,545.2	4.0	4.1	-154.29	202.6	-78.3	352.2	345.8	6.45	54.569			
1,700.0	1,684.8	1,654.2	1,639.6	4.4	4.4	-153.72	218.6	-76.3	380.9	374.0	6.92	55.028			
1,800.0	1,783.0	1,749.9	1,733.9	4.8	4.8	-153.23	234.5	-74.2	409.6	402.3	7.39	55.415			
1,900.0	1,881.1	1,845.7	1,828.3	5.1	5.1	-152.80	250.5	-72.2	438.4	430.5	7.86	55.744			
2,000.0	1,979.3	1,941.4	1,922.7	5.5	5.4	-152.43	266.4	-70.2	467.2	458.8	8.34	56.028			
2,100.0	2,077.5	2,037.1	2,017.0	5.9	5.7	-152.10	282.4	-68.2	496.0	487.2	8.81	56.273			
2,200.0	2,175.7	2,132.9	2,111.4	6.3	6.1	-151.80	298.3	-66.2	524.8	515.5	9.29	56.488			
2,300.0	2,273.8	2,228.6	2,205.8	6.6	6.4	-151.54	314.3	-64.1	553.6	543.8	9.77	56.676			
2,400.0	2,372.0	2,324.3	2,300.1	7.0	6.7	-151.30	330.2	-62.1	582.4	572.2	10.25	56.843			
2,500.0	2,470.2	2,420.0	2,394.5	7.4	7.0	-151.09	346.2	-60.1	611.2	600.5	10.73	56.992			
2,600.0	2,568.4	2,515.8	2,488.9	7.7	7.4	-150.89	362.1	-58.1	640.1	628.9	11.21	57.125			
2,700.0	2,666.6	2,611.5	2,583.3	8.1	7.7	-150.71	378.1	-56.1	668.9	657.3	11.69	57.245			
2,800.0	2,764.7	2,707.2	2,677.6	8.5	8.0	-150.55	394.0	-54.0	697.8	685.6	12.17	57.353			
2,900.0	2,862.9	2,803.0	2,772.0	8.9	8.3	-150.40	410.0	-52.0	726.6	714.0	12.65	57.452			
3,000.0	2,961.1	2,898.7	2,866.4	9.3	8.7	-150.26	425.9	-50.0	755.5	742.4	13.13	57.541			
3,100.0	3,059.3	2,994.4	2,960.7	9.6	9.0	-150.13	441.8	-48.0	784.4	770.8	13.61	57.623			
3,200.0	3,157.4	3,090.1	3,055.1	10.0	9.3	-150.01	457.8	-46.0	813.2	799.2	14.09	57.698			
3,300.0	3,255.6	3,185.9	3,149.5	10.4	9.6	-149.90	473.7	-43.9	842.1	827.5	14.58	57.767			
3,400.0	3,353.8	3,281.6	3,243.8	10.8	10.0	-149.80	489.7	-41.9	871.0	855.9	15.06	57.831			
3,500.0	3,452.0	3,377.3	3,338.2	11.1	10.3	-149.70	505.6	-39.9	899.9	884.3	15.54	57.890			
3,600.0	3,550.1	3,473.1	3,432.6	11.5	10.6	-149.61	521.6	-37.9	928.8	912.7	16.03	57.945			
3,700.0	3,648.3	3,568.8	3,526.9	11.9	10.9	-149.52	537.5	-35.9	957.6	941.1	16.51	57.996			
3,800.0	3,746.5	3,664.5	3,621.3	12.3	11.3	-149.44	553.5	-33.8	986.5	969.5	17.00	58.043			
3,900.0	3,844.7	3,760.2	3,715.7	12.6	11.6	-149.36	569.4	-31.8	1,015.4	997.9	17.48	58.088			
4,000.0	3,942.9	3,856.0	3,810.1	13.0	11.9	-149.29	585.4	-29.8	1,044.3	1,026.3	17.96	58.129			
4,100.0	4,041.0	3,951.7	3,904.4	13.4	12.2	-149.22	601.3	-27.8	1,073.2	1,054.7	18.45	58.168			
4,200.0	4,139.2	4,047.4	3,998.8	13.8	12.6	-149.16	617.3	-25.8	1,102.1	1,083.1	18.93	58.205			
4,300.0	4,237.4	4,143.2	4,093.2	14.2	12.9	-149.10	633.2	-23.7	1,131.0	1,111.5	19.42	58.240			
4,400.0	4,335.6	4,238.9	4,187.5	14.5	13.2	-149.04	649.2	-21.7	1,159.9	1,139.9	19.90	58.272			
4,500.0	4,433.7	4,334.6	4,281.9	14.9	13.6	-148.98	665.1	-19.7	1,188.7	1,168.4	20.39	58.303			
4,600.0	4,531.9	4,430.4	4,376.3	15.3	13.9	-148.93	681.1	-17.7	1,217.6	1,196.8	20.87	58.332			
4,700.0	4,630.1	4,526.1	4,470.6	15.7	14.2	-148.88	697.0	-15.7	1,246.5	1,225.2	21.36	58.360			
4,800.0	4,728.3	4,621.8	4,565.0	16.0	14.5	-148.83	713.0	-13.6	1,275.4	1,253.6	21.84	58.386			
4,900.0	4,826.4	4,717.5	4,659.4	16.4	14.9	-148.79	728.9	-11.6	1,304.3	1,282.0	22.33	58.411			
5,000.0	4,924.6	4,813.3	4,753.8	16.8	15.2	-148.74	744.9	-9.6	1,333.2	1,310.4	22.82	58.434			
5,100.0	5,022.8	4,909.0	4,848.1	17.2	15.5	-148.70	760.8	-7.6	1,362.1	1,338.8	23.30	58.457			

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 LR06B D21 595
Project:	Garfield County	TVD Reference:	KBE @ 8278.0ft (Original Well Elev)
Reference Site:	D21 595 Pad	MD Reference:	KBE @ 8278.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	LR06B D21 595	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 #2	Offset TVD Reference:	Offset Datum

Offset Design D21 595 Pad - LR04B D21 595 - DD - Plan #2												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	
5,200.0	5,121.0	5,004.7	4,942.5	17.6	15.8	-148.66	776.7	-5.6	1,391.0	1,367.2	23.79	58.478	

Cathedral Energy Services

Anticollision Report

Company:	Berry Petroleum Company (NAD 83)	Local Co-ordinate Reference:	Well LR06B D21 595
Project:	Garfield County	TVD Reference:	KBE @ 8278.0ft (Original Well Elev)
Reference Site:	D21 595 Pad	MD Reference:	KBE @ 8278.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	LR06B D21 595	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 #2	Offset TVD Reference:	Offset Datum

Offset Design													Offset Site Error:	0.0 ft
D21 595 Pad - LR04C D21 595 (Existing) - DD - DD													Offset Well Error:	0.0 ft
Survey Program: 140-MWD														
Reference		Offset		Semi Major Axis			Distance							
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning	
0.0	0.0	0.0	0.0	0.0	0.0	-71.70	47.7	-144.3	152.0					
100.0	100.0	96.8	96.8	0.1	0.2	-71.83	47.3	-144.1	151.7	151.4	0.30	498.896		
200.0	200.0	197.5	197.5	0.3	0.3	-72.25	46.0	-143.7	150.9	150.3	0.65	232.720		
300.0	300.0	298.0	298.0	0.5	0.5	-72.91	44.0	-143.1	149.8	148.8	1.00	149.987		
400.0	400.0	398.2	398.1	0.7	0.7	-73.67	41.7	-142.2	148.2	146.9	1.35	109.974		
500.0	500.0	498.3	498.3	0.8	0.9	-74.33	39.7	-141.5	147.0	145.3	1.70	86.581		
554.2	554.2	553.1	553.0	0.9	1.0	168.63	38.0	-141.0	146.5	144.6	1.90	76.988	CC, ES	
600.0	600.0	598.9	598.8	1.0	1.1	168.15	36.4	-140.5	146.9	144.8	2.07	71.071		
700.0	699.8	700.1	699.9	1.2	1.2	166.97	31.8	-139.4	149.8	147.4	2.43	61.627		
800.0	799.5	802.2	801.7	1.4	1.5	165.80	26.0	-137.2	154.9	152.1	2.80	55.320		
900.0	898.7	904.7	903.9	1.7	1.7	164.87	19.5	-133.5	161.9	158.7	3.18	50.979		
1,000.0	997.5	1,007.2	1,006.1	1.9	1.9	164.40	12.8	-127.9	170.4	166.9	3.55	48.021		
1,100.0	1,095.7	1,109.0	1,107.5	2.3	2.1	164.35	6.2	-120.8	180.4	176.4	3.93	45.905		
1,200.0	1,193.9	1,204.8	1,202.8	2.6	2.3	164.38	-0.1	-114.2	190.7	186.4	4.30	44.307		
1,300.0	1,292.1	1,300.9	1,298.6	3.0	2.5	164.45	-5.7	-109.5	203.2	198.5	4.68	43.452		
1,400.0	1,390.2	1,397.6	1,395.1	3.3	2.7	164.57	-11.0	-106.1	217.0	212.0	5.05	42.954		
1,500.0	1,488.4	1,497.3	1,494.5	3.7	3.0	164.38	-17.5	-103.1	231.2	225.7	5.46	42.376		
1,600.0	1,586.6	1,597.4	1,594.3	4.0	3.2	164.05	-24.7	-99.8	245.0	239.2	5.85	41.901		
1,700.0	1,684.8	1,696.7	1,693.4	4.4	3.4	164.28	-29.8	-95.8	258.4	252.2	6.22	41.554		
1,800.0	1,783.0	1,794.0	1,790.6	4.8	3.6	164.66	-33.8	-91.9	272.1	265.5	6.58	41.360		
1,900.0	1,881.1	1,888.5	1,885.0	5.1	3.7	165.05	-37.2	-89.3	287.0	280.1	6.93	41.405		
2,000.0	1,979.3	1,990.2	1,986.6	5.5	3.9	165.40	-40.9	-86.8	302.4	295.1	7.30	41.408		
2,100.0	2,077.5	2,090.7	2,087.0	5.9	4.1	165.64	-45.3	-83.5	316.7	309.1	7.67	41.283		
2,200.0	2,175.7	2,190.1	2,186.2	6.3	4.3	165.82	-49.7	-80.1	330.9	322.8	8.04	41.149		
2,300.0	2,273.8	2,288.0	2,283.9	6.6	4.5	166.04	-53.8	-76.6	345.1	336.7	8.40	41.065		
2,400.0	2,372.0	2,388.3	2,384.1	7.0	4.7	166.28	-57.8	-73.3	359.4	350.7	8.77	41.000		
2,500.0	2,470.2	2,484.8	2,480.5	7.4	4.9	166.51	-61.5	-69.9	373.7	364.6	9.12	40.962	SF	
2,600.0	2,568.4	2,582.8	2,578.3	7.7	5.1	166.77	-64.8	-67.0	388.6	379.1	9.48	41.007		
2,700.0	2,666.6	2,682.0	2,677.5	8.1	5.3	167.07	-67.8	-64.1	403.6	393.8	9.83	41.065		
2,800.0	2,764.7	2,779.9	2,773.3	8.5	5.5	167.37	-70.4	-61.5	418.9	408.7	10.17	41.189		
2,900.0	2,862.9	2,877.4	2,872.7	8.9	5.6	167.73	-72.6	-58.9	434.5	424.0	10.51	41.328		
3,000.0	2,961.1	2,973.1	2,968.4	9.3	5.8	168.10	-74.2	-56.6	450.4	439.5	10.85	41.521		
3,100.0	3,059.3	3,072.1	3,067.3	9.6	6.0	168.44	-75.9	-54.5	466.5	455.3	11.19	41.705		
3,200.0	3,157.4	3,168.8	3,164.1	10.0	6.2	168.77	-77.5	-52.5	482.8	471.3	11.52	41.898		
3,300.0	3,255.6	3,265.0	3,260.2	10.4	6.3	169.02	-79.3	-51.0	499.5	487.6	11.86	42.106		
3,400.0	3,353.8	3,361.0	3,356.2	10.8	6.5	169.23	-81.3	-50.1	516.7	504.5	12.21	42.337		
3,500.0	3,452.0	3,462.2	3,457.3	11.1	6.7	169.44	-83.3	-49.1	533.9	521.4	12.55	42.528		
3,600.0	3,550.1	3,560.2	3,555.3	11.5	6.8	169.65	-85.1	-47.8	550.9	538.0	12.90	42.706		
3,700.0	3,648.3	3,652.8	3,647.9	11.9	7.0	169.71	-87.9	-47.6	568.5	555.3	13.25	42.903		
3,800.0	3,746.5	3,749.9	3,744.9	12.3	7.2	169.69	-91.4	-48.1	586.7	573.1	13.62	43.091		
3,900.0	3,844.7	3,846.5	3,841.4	12.6	7.3	169.68	-94.7	-48.8	605.2	591.2	13.98	43.299		
4,000.0	3,942.9	3,944.9	3,939.8	13.0	7.5	169.69	-97.8	-49.6	623.7	609.4	14.34	43.502		
4,100.0	4,041.0	4,042.0	4,036.8	13.4	7.7	169.76	-100.4	-50.2	642.4	627.7	14.69	43.723		
4,200.0	4,139.2	4,138.5	4,133.3	13.8	7.8	169.85	-102.4	-51.1	661.3	646.3	15.04	43.969		
4,300.0	4,237.4	4,238.8	4,233.6	14.2	8.0	169.96	-104.4	-51.7	680.1	664.7	15.39	44.184		
4,400.0	4,335.6	4,336.3	4,331.1	14.5	8.2	170.10	-105.9	-52.2	698.8	683.1	15.74	44.410		
4,500.0	4,433.7	4,433.5	4,428.2	14.9	8.3	170.26	-107.0	-52.6	717.7	701.6	16.08	44.642		
4,600.0	4,531.9	4,529.7	4,524.4	15.3	8.5	170.41	-108.0	-53.3	736.8	720.4	16.42	44.883		
4,700.0	4,630.1	4,626.1	4,620.9	15.7	8.6	170.59	-108.6	-54.1	756.1	739.4	16.75	45.145		
4,800.0	4,728.3	4,723.6	4,718.4	16.0	8.8	170.80	-108.5	-54.8	775.6	758.5	17.08	45.412		
4,900.0	4,826.4	4,821.6	4,816.4	16.4	9.0	171.02	-108.3	-55.5	795.1	777.7	17.41	45.670		
5,000.0	4,924.6	4,919.4	4,914.2	16.8	9.1	171.23	-108.0	-56.2	814.7	796.9	17.74	45.916		

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 LR06B D21 595
Project:	Garfield County	TVD Reference:	KBE @ 8278.0ft (Original Well Elev)
Reference Site:	D21 595 Pad	MD Reference:	KBE @ 8278.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	LR06B D21 595	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 #2	Offset TVD Reference:	Offset Datum

Offset Design													Offset Site Error:	0.0 ft	
Survey Program: 140-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	5,022.8	5,016.1	5,010.9	17.2	9.3	171.42	-107.8	-57.0	834.3	816.2	18.07	46.162			
5,200.0	5,121.0	5,112.1	5,106.9	17.6	9.4	171.61	-107.6	-58.0	854.1	835.7	18.40	46.413			
5,300.0	5,219.2	5,209.0	5,203.7	17.9	9.6	171.79	-107.1	-59.1	874.2	855.5	18.73	46.665			
5,400.0	5,317.3	5,306.6	5,301.3	18.3	9.7	171.97	-106.6	-60.3	894.3	875.3	19.07	46.902			
5,500.0	5,415.5	5,402.9	5,397.7	18.7	9.9	172.10	-106.7	-61.8	914.6	895.1	19.41	47.122			
5,600.0	5,513.7	5,497.6	5,492.3	19.1	10.1	172.17	-107.5	-63.7	935.0	915.3	19.75	47.346			
5,700.0	5,611.9	5,597.4	5,592.1	19.5	10.2	172.24	-108.2	-66.0	955.8	935.7	20.10	47.552			
5,800.0	5,710.0	5,699.0	5,693.6	19.8	10.4	172.23	-110.4	-68.2	975.9	955.4	20.46	47.691			
5,900.0	5,808.2	5,795.2	5,789.8	20.2	10.6	172.22	-112.4	-70.3	996.0	975.2	20.81	47.854			
6,000.0	5,906.4	5,894.0	5,888.6	20.6	10.7	172.25	-114.0	-72.3	1,016.3	995.2	21.17	48.013			
6,100.0	6,004.6	5,996.0	5,990.5	21.0	10.9	172.28	-115.5	-74.1	1,036.3	1,014.8	21.52	48.145			
6,200.0	6,102.7	6,097.5	6,092.0	21.3	11.1	172.32	-117.0	-75.5	1,055.9	1,034.1	21.88	48.263			
6,300.0	6,200.9	6,197.2	6,191.7	21.7	11.2	172.39	-118.0	-76.4	1,075.3	1,053.1	22.23	48.380			
6,400.0	6,299.1	6,295.2	6,289.7	22.1	11.4	172.47	-118.8	-77.2	1,094.6	1,072.1	22.57	48.503			
6,500.0	6,397.3	6,390.0	6,384.5	22.5	11.6	172.56	-119.2	-78.0	1,114.1	1,091.2	22.90	48.641			
6,600.0	6,495.5	6,482.7	6,477.2	22.9	11.7	172.64	-119.6	-79.1	1,134.0	1,110.7	23.24	48.797			
6,700.0	6,593.6	6,575.9	6,570.4	23.2	11.9	172.70	-120.1	-80.7	1,154.2	1,130.7	23.57	48.964			
6,800.0	6,691.8	6,674.4	6,668.9	23.6	12.0	172.78	-120.4	-82.6	1,174.8	1,150.8	23.92	49.119			
6,900.0	6,790.0	6,771.2	6,765.6	24.0	12.2	172.85	-120.7	-84.4	1,195.2	1,171.0	24.26	49.272			
7,000.0	6,888.2	6,870.2	6,864.6	24.4	12.4	172.90	-121.2	-86.3	1,215.7	1,191.1	24.60	49.412			
7,100.0	6,986.3	6,967.9	6,962.3	24.8	12.5	172.95	-121.9	-88.2	1,236.2	1,211.2	24.95	49.547			
7,200.0	7,084.5	7,062.4	7,056.8	25.1	12.7	172.99	-122.7	-90.2	1,256.8	1,231.5	25.29	49.691			
7,300.0	7,182.7	7,156.7	7,151.1	25.5	12.9	173.02	-123.4	-92.5	1,277.6	1,252.0	25.63	49.843			
7,400.0	7,280.9	7,251.4	7,245.7	25.9	13.0	173.05	-124.1	-95.1	1,298.7	1,272.8	25.97	50.000			
7,500.0	7,379.1	7,351.5	7,345.7	26.3	13.2	173.09	-124.8	-97.8	1,319.9	1,293.6	26.33	50.137			
7,600.0	7,477.2	7,447.6	7,441.8	26.6	13.4	173.12	-125.5	-100.4	1,341.0	1,314.3	26.67	50.280			
7,700.0	7,575.4	7,545.3	7,539.5	27.0	13.5	173.14	-126.3	-103.1	1,362.2	1,335.1	27.02	50.414			
7,800.0	7,673.6	7,646.4	7,640.6	27.4	13.7	173.15	-127.5	-105.9	1,383.2	1,355.8	27.38	50.527			

Cathedral Energy Services

Anticollision Report

Company:	Berry Petroleum Company (NAD 83)	Local Co-ordinate Reference:	Well LR06B D21 595
Project:	Garfield County	TVD Reference:	KBE @ 8278.0ft (Original Well Elev)
Reference Site:	D21 595 Pad	MD Reference:	KBE @ 8278.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	LR06B D21 595	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 #2	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				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	-71.59	9.5	-28.5	30.0						
100.0	100.0	100.0	100.0	0.1	0.1	-71.59	9.5	-28.5	30.0	29.7	0.30	101.087			
200.0	200.0	200.0	200.0	0.3	0.3	-71.59	9.5	-28.5	30.0	29.3	0.65	46.445			
300.0	300.0	300.8	300.8	0.5	0.5	-68.27	10.6	-26.5	28.6	27.6	1.00	28.543			
400.0	400.0	401.1	400.8	0.7	0.7	-56.80	13.7	-21.0	25.1	23.8	1.37	18.393			
500.0	500.0	500.8	500.3	0.8	0.9	-40.08	17.4	-14.6	22.7	21.0	1.72	13.244			
524.3	524.3	525.1	524.5	0.9	1.0	-152.22	18.3	-13.1	22.6	20.7	1.85	12.203 CC, ES			
600.0	600.0	600.6	599.8	1.0	1.1	-140.72	21.1	-8.3	24.0	21.8	2.14	11.182 SF			
700.0	699.8	700.4	699.3	1.2	1.3	-132.70	24.7	-1.9	29.0	26.5	2.53	11.475			
800.0	799.5	800.1	798.8	1.4	1.5	-131.42	28.4	4.5	36.7	33.7	2.93	12.518			
900.0	898.7	899.6	898.0	1.7	1.8	-133.77	32.0	10.8	46.7	43.3	3.35	13.940			
1,000.0	997.5	998.7	996.8	1.9	2.0	-137.60	35.7	17.1	59.2	55.5	3.78	15.685			
1,100.0	1,095.7	1,097.4	1,095.3	2.3	2.2	-141.60	39.3	23.4	74.3	70.1	4.21	17.667			
1,200.0	1,193.9	1,196.1	1,193.7	2.6	2.4	-144.45	42.9	29.7	90.0	85.3	4.64	19.404			
1,300.0	1,292.1	1,294.8	1,292.1	3.0	2.6	-146.46	46.5	36.0	105.8	100.7	5.07	20.882			
1,400.0	1,390.2	1,393.5	1,390.6	3.3	2.8	-147.94	50.1	42.3	121.7	116.2	5.49	22.150			
1,500.0	1,488.4	1,492.2	1,489.0	3.7	3.0	-149.08	53.8	48.6	137.6	131.7	5.92	23.246			
1,600.0	1,586.6	1,590.9	1,587.4	4.0	3.3	-149.99	57.4	54.9	153.6	147.3	6.35	24.203			
1,700.0	1,684.8	1,689.6	1,685.8	4.4	3.5	-150.72	61.0	61.2	169.7	162.9	6.78	25.044			
1,800.0	1,783.0	1,788.2	1,784.2	4.8	3.7	-151.33	64.6	67.5	185.7	178.5	7.20	25.788			
1,900.0	1,881.1	1,886.9	1,882.7	5.1	3.9	-151.84	68.2	73.8	201.8	194.2	7.63	26.452			
2,000.0	1,979.3	1,985.6	1,981.1	5.5	4.1	-152.27	71.8	80.1	217.9	209.8	8.06	27.047			
2,100.0	2,077.5	2,084.3	2,079.5	5.9	4.3	-152.65	75.5	86.4	234.0	225.5	8.48	27.583			
2,200.0	2,175.7	2,183.0	2,177.9	6.3	4.5	-152.97	79.1	92.7	250.1	241.2	8.91	28.069			
2,300.0	2,273.8	2,281.7	2,276.3	6.6	4.7	-153.26	82.7	99.0	266.2	256.9	9.34	28.512			
2,400.0	2,372.0	2,380.4	2,374.7	7.0	5.0	-153.51	86.3	105.3	282.3	272.5	9.76	28.916			
2,500.0	2,470.2	2,479.0	2,473.2	7.4	5.2	-153.74	89.9	111.6	298.4	288.2	10.19	29.287			
2,600.0	2,568.4	2,577.7	2,571.6	7.7	5.4	-153.94	93.6	117.9	314.6	303.9	10.62	29.628			
2,700.0	2,666.6	2,676.4	2,670.0	8.1	5.6	-154.13	97.2	124.2	330.7	319.6	11.04	29.943			
2,800.0	2,764.7	2,775.1	2,768.4	8.5	5.8	-154.30	100.8	130.5	346.8	335.3	11.47	30.235			
2,900.0	2,862.9	2,873.8	2,866.8	8.9	6.0	-154.45	104.4	136.8	362.9	351.0	11.90	30.507			
3,000.0	2,961.1	2,972.5	2,965.2	9.3	6.2	-154.59	108.0	143.1	379.1	366.8	12.32	30.759			
3,100.0	3,059.3	3,071.2	3,063.7	9.6	6.5	-154.71	111.6	149.4	395.2	382.5	12.75	30.995			
3,200.0	3,157.4	3,169.8	3,162.1	10.0	6.7	-154.83	115.3	155.7	411.4	398.2	13.18	31.216			
3,300.0	3,255.6	3,268.5	3,260.5	10.4	6.9	-154.94	118.9	162.0	427.5	413.9	13.60	31.423			
3,400.0	3,353.8	3,367.2	3,358.9	10.8	7.1	-155.04	122.5	168.3	443.6	429.6	14.03	31.617			
3,500.0	3,452.0	3,465.9	3,457.3	11.1	7.3	-155.13	126.1	174.6	459.8	445.3	14.46	31.800			
3,600.0	3,550.1	3,564.6	3,555.8	11.5	7.5	-155.22	129.7	180.9	475.9	461.0	14.89	31.973			
3,700.0	3,648.3	3,663.3	3,654.2	11.9	7.7	-155.30	133.4	187.2	492.1	476.8	15.31	32.136			
3,800.0	3,746.5	3,762.0	3,752.6	12.3	8.0	-155.38	137.0	193.5	508.2	492.5	15.74	32.290			
3,900.0	3,844.7	3,860.6	3,851.0	12.6	8.2	-155.45	140.6	199.8	524.4	508.2	16.17	32.436			
4,000.0	3,942.9	3,959.3	3,949.4	13.0	8.4	-155.52	144.2	206.1	540.5	523.9	16.59	32.575			
4,100.0	4,041.0	4,058.0	4,047.8	13.4	8.6	-155.58	147.8	212.4	556.7	539.7	17.02	32.707			
4,200.0	4,139.2	4,156.7	4,146.3	13.8	8.8	-155.64	151.4	218.7	572.8	555.4	17.45	32.832			
4,300.0	4,237.4	4,255.4	4,244.7	14.2	9.0	-155.70	155.1	225.0	589.0	571.1	17.87	32.951			
4,400.0	4,335.6	4,354.1	4,343.1	14.5	9.2	-155.75	158.7	231.3	605.1	586.8	18.30	33.065			
4,500.0	4,433.7	4,452.7	4,441.5	14.9	9.5	-155.80	162.3	237.6	621.3	602.6	18.73	33.174			
4,600.0	4,531.9	4,551.4	4,539.9	15.3	9.7	-155.85	165.9	243.9	637.4	618.3	19.16	33.277			
4,700.0	4,630.1	4,650.1	4,638.4	15.7	9.9	-155.90	169.5	250.2	653.6	634.0	19.58	33.377			
4,800.0	4,728.3	4,748.8	4,736.8	16.0	10.1	-155.94	173.2	256.5	669.7	649.7	20.01	33.472			
4,900.0	4,826.4	4,847.5	4,835.2	16.4	10.3	-155.98	176.8	262.8	685.9	665.5	20.44	33.563			
5,000.0	4,924.6	4,946.2	4,933.6	16.8	10.5	-156.02	180.4	269.1	702.0	681.2	20.86	33.650			

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 LR06B D21 595
Project:	Garfield County	TVD Reference:	KBE @ 8278.0ft (Original Well Elev)
Reference Site:	D21 595 Pad	MD Reference:	KBE @ 8278.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	LR06B D21 595	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 #2	Offset TVD Reference:	Offset Datum

Offset Design													D21 595 Pad - LR04D D21 595 - DD - Plan #2		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)						
5,100.0	5,022.8	5,044.9	5,032.0	17.2	10.7	-156.06	184.0	275.4	718.2	696.9	21.29	33.734				
5,200.0	5,121.0	5,143.5	5,130.4	17.6	11.0	-156.10	187.6	281.7	734.4	712.6	21.72	33.815				
5,300.0	5,219.2	5,242.2	5,228.9	17.9	11.2	-156.13	191.2	288.0	750.5	728.4	22.14	33.892				
5,400.0	5,317.3	5,339.0	5,325.3	18.3	11.4	-156.18	194.7	294.0	766.7	744.2	22.55	33.999				
5,500.0	5,415.5	5,431.9	5,418.2	18.7	11.5	-156.45	196.5	297.1	783.5	760.6	22.88	34.238				
5,600.0	5,513.7	5,527.0	5,513.3	19.1	11.7	-156.95	196.6	297.4	800.9	777.8	23.16	34.583				
5,700.0	5,611.9	5,624.6	5,610.9	19.5	11.8	-157.49	196.4	297.1	818.6	795.1	23.43	34.942				
5,800.0	5,710.0	5,722.7	5,709.0	19.8	11.9	-158.03	196.1	296.5	836.3	812.6	23.69	35.297				
5,900.0	5,808.2	5,820.8	5,807.1	20.2	12.1	-158.55	195.8	296.0	854.2	830.2	23.96	35.645				
6,000.0	5,906.4	5,918.9	5,905.2	20.6	12.2	-159.05	195.5	295.5	872.1	847.8	24.23	35.985				
6,100.0	6,004.6	6,017.0	6,003.3	21.0	12.3	-159.52	195.2	294.9	890.0	865.5	24.51	36.317				
6,200.0	6,102.7	6,115.1	6,101.4	21.3	12.5	-159.98	194.9	294.4	908.0	883.3	24.78	36.641				
6,300.0	6,200.9	6,213.2	6,199.5	21.7	12.6	-160.42	194.6	293.9	926.1	901.0	25.06	36.957				
6,400.0	6,299.1	6,311.3	6,297.6	22.1	12.8	-160.84	194.3	293.3	944.2	918.9	25.34	37.266				
6,500.0	6,397.3	6,409.4	6,395.7	22.5	12.9	-161.25	194.0	292.8	962.4	936.8	25.62	37.567				
6,600.0	6,495.5	6,507.5	6,493.8	22.9	13.0	-161.64	193.7	292.3	980.6	954.7	25.90	37.861				
6,700.0	6,593.6	6,605.7	6,591.9	23.2	13.2	-162.01	193.3	291.7	998.9	972.7	26.18	38.148				
6,800.0	6,691.8	6,703.8	6,690.0	23.6	13.3	-162.38	193.0	291.2	1,017.2	990.7	26.47	38.428				
6,900.0	6,790.0	6,801.9	6,788.1	24.0	13.5	-162.73	192.7	290.7	1,035.5	1,008.7	26.76	38.701				
7,000.0	6,888.2	6,900.0	6,886.3	24.4	13.6	-163.07	192.4	290.1	1,053.9	1,026.8	27.05	38.967				
7,100.0	6,986.3	6,998.1	6,984.4	24.8	13.8	-163.40	192.1	289.6	1,072.3	1,044.9	27.34	39.227				
7,200.0	7,084.5	7,096.2	7,082.5	25.1	13.9	-163.71	191.8	289.1	1,090.7	1,063.1	27.63	39.480				
7,300.0	7,182.7	7,194.3	7,180.6	25.5	14.1	-164.02	191.5	288.6	1,109.2	1,081.3	27.92	39.727				
7,400.0	7,280.9	7,292.4	7,278.7	25.9	14.2	-164.31	191.2	288.0	1,127.7	1,099.5	28.21	39.969				
7,500.0	7,379.1	7,390.5	7,376.8	26.3	14.4	-164.60	190.9	287.5	1,146.2	1,117.7	28.51	40.204				
7,600.0	7,477.2	7,488.6	7,474.9	26.6	14.5	-164.88	190.6	287.0	1,164.8	1,136.0	28.81	40.434				
7,700.0	7,575.4	7,586.7	7,573.0	27.0	14.7	-165.14	190.3	286.4	1,183.3	1,154.2	29.11	40.658				
7,800.0	7,673.6	7,684.9	7,671.1	27.4	14.8	-165.40	190.0	285.9	1,202.0	1,172.5	29.40	40.876				
7,900.0	7,771.8	7,783.0	7,769.2	27.8	15.0	-165.66	189.7	285.4	1,220.6	1,190.9	29.71	41.090				
8,000.0	7,869.9	7,881.1	7,867.3	28.2	15.1	-165.90	189.4	284.8	1,239.2	1,209.2	30.01	41.298				
8,100.0	7,968.1	7,979.2	7,965.4	28.5	15.3	-166.14	189.0	284.3	1,257.9	1,227.6	30.31	41.502				
8,200.0	8,066.3	8,077.3	8,063.5	28.9	15.4	-166.37	188.7	283.8	1,276.6	1,246.0	30.61	41.700				
8,300.0	8,164.5	8,175.4	8,161.7	29.3	15.6	-166.59	188.4	283.2	1,295.3	1,264.4	30.92	41.894				
8,400.0	8,262.6	8,273.5	8,259.8	29.7	15.7	-166.81	188.1	282.7	1,314.0	1,282.8	31.22	42.084				
8,500.0	8,361.1	8,371.9	8,358.2	30.0	15.9	-167.08	187.8	282.2	1,331.2	1,299.7	31.57	42.164				
8,600.0	8,460.1	8,470.9	8,457.1	30.3	16.0	-167.30	187.5	281.6	1,345.1	1,313.2	31.91	42.157				
8,700.0	8,559.6	8,570.3	8,556.5	30.5	16.2	-167.47	187.2	281.1	1,355.6	1,323.4	32.22	42.069				
8,800.0	8,659.3	8,670.0	8,656.2	30.7	16.3	-167.59	186.9	280.5	1,362.7	1,330.2	32.52	41.902				
8,900.0	8,759.2	8,769.9	8,756.2	30.8	16.5	-167.66	186.6	280.0	1,366.4	1,333.6	32.80	41.660				
9,000.0	8,859.2	8,869.9	8,856.1	30.9	16.7	-68.77	186.3	279.5	1,367.0	1,333.9	33.09	41.315				
9,100.0	8,959.2	8,969.9	8,956.1	30.9	16.8	68.76	185.9	278.9	1,367.1	1,333.7	33.41	40.924				
9,200.0	9,059.2	9,069.9	9,056.1	31.0	17.0	68.77	185.6	278.4	1,367.0	1,333.3	33.72	40.535				
9,300.0	9,159.2	9,169.9	9,156.1	31.1	17.1	68.80	185.3	277.8	1,366.8	1,332.7	34.05	40.146				
9,400.0	9,259.2	9,269.9	9,256.1	31.2	17.3	68.83	185.0	277.3	1,366.5	1,332.1	34.37	39.759				
9,500.0	9,359.2	9,369.9	9,356.1	31.3	17.4	68.85	184.7	276.7	1,366.2	1,331.5	34.69	39.379				
9,600.0	9,459.2	9,469.9	9,456.1	31.4	17.6	68.88	184.4	276.2	1,366.0	1,330.9	35.02	39.005				
9,700.0	9,559.2	9,569.9	9,556.1	31.4	17.8	68.91	184.1	275.7	1,365.7	1,330.3	35.35	38.638				
9,800.0	9,659.2	9,669.9	9,656.1	31.5	17.9	68.94	183.7	275.1	1,365.4	1,329.7	35.67	38.277				
9,900.0	9,759.2	9,769.9	9,756.1	31.6	18.1	68.97	183.4	274.6	1,365.1	1,329.1	36.00	37.922				
10,000.0	9,859.2	9,869.9	9,856.1	31.7	18.2	69.00	183.1	274.0	1,364.9	1,328.5	36.33	37.574				
10,100.0	9,959.2	9,969.9	9,956.1	31.8	18.4	69.03	182.8	273.5	1,364.6	1,327.9	36.65	37.231				
10,200.0	10,059.1	10,069.9	10,056.1	31.9	18.6	69.06	182.5	273.0	1,364.3	1,327.3	36.98	36.893				

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 LR06B D21 595
Project:	Garfield County	TVD Reference:	KBE @ 8278.0ft (Original Well Elev)
Reference Site:	D21 595 Pad	MD Reference:	KBE @ 8278.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	LR06B D21 595	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 #2	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								
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		
10,300.0	10,159.1	10,169.9	10,156.1	31.9	18.7	69.09	182.2	272.4	1,364.1	1,326.7	37.31	36.561			
10,400.0	10,259.1	10,269.9	10,256.1	32.0	18.9	69.12	181.9	271.9	1,363.8	1,326.1	37.64	36.235			
10,500.0	10,359.1	10,369.9	10,356.1	32.1	19.1	69.15	181.5	271.3	1,363.5	1,325.5	37.97	35.914			
10,600.0	10,459.1	10,469.9	10,456.1	32.2	19.2	69.18	181.2	270.8	1,363.2	1,324.9	38.30	35.598			
10,700.0	10,559.1	10,569.9	10,556.1	32.3	19.4	69.21	180.9	270.2	1,363.0	1,324.3	38.62	35.287			
10,800.0	10,659.1	10,669.9	10,656.1	32.4	19.5	69.24	180.6	269.7	1,362.7	1,323.7	38.95	34.982			
10,900.0	10,759.1	10,769.9	10,756.1	32.5	19.7	69.27	180.3	269.2	1,362.4	1,323.1	39.29	34.681			
11,000.0	10,859.1	10,869.9	10,856.1	32.6	19.9	69.30	180.0	268.6	1,362.2	1,322.5	39.62	34.384			
11,100.0	10,959.1	10,969.9	10,956.1	32.7	20.0	69.33	179.7	268.1	1,361.9	1,321.9	39.95	34.093			
11,200.0	11,059.0	11,069.9	11,056.0	32.8	20.2	69.36	179.4	267.5	1,361.6	1,321.3	40.28	33.806			
11,300.0	11,159.0	11,169.9	11,156.0	32.9	20.4	69.39	179.0	267.0	1,361.4	1,320.7	40.61	33.523			
11,400.0	11,259.0	11,269.9	11,256.0	32.9	20.5	69.42	178.7	266.4	1,361.1	1,320.2	40.94	33.245			
11,500.0	11,359.0	11,369.8	11,356.0	33.0	20.7	69.45	178.4	265.9	1,360.8	1,319.6	41.27	32.971			
11,600.0	11,459.0	11,469.8	11,456.0	33.1	20.9	69.48	178.1	265.4	1,360.6	1,319.0	41.61	32.701			
11,700.0	11,559.0	11,569.8	11,556.0	33.2	21.0	69.51	177.8	264.8	1,360.3	1,318.4	41.94	32.435			
11,800.0	11,659.0	11,669.8	11,656.0	33.3	21.2	69.54	177.5	264.3	1,360.0	1,317.8	42.27	32.173			
11,900.0	11,759.0	11,769.8	11,756.0	33.4	21.3	69.57	177.2	263.7	1,359.8	1,317.2	42.61	31.915			
12,000.0	11,859.0	11,869.8	11,856.0	33.5	21.5	69.60	176.8	263.2	1,359.5	1,316.6	42.94	31.661			
12,002.0	11,861.0	11,871.9	11,858.0	33.5	21.5	69.60	176.8	263.2	1,359.5	1,316.5	42.95	31.656			

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 LR06B D21 595
Project:	Garfield County	TVD Reference:	KBE @ 8278.0ft (Original Well Elev)
Reference Site:	D21 595 Pad	MD Reference:	KBE @ 8278.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	LR06B D21 595	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 #2	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								
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning		
0.0	0.0	0.0	0.0	0.0	0.0	-71.59	18.9	-56.9	60.0						
100.0	100.0	100.0	100.0	0.1	0.1	-71.59	18.9	-56.9	60.0	59.7	0.30	202.173			
200.0	200.0	200.0	200.0	0.3	0.3	-71.59	18.9	-56.9	60.0	59.3	0.65	92.891			
300.0	300.0	300.0	300.0	0.5	0.5	-71.59	18.9	-56.9	60.0	59.0	0.99	60.297			
400.0	400.0	401.3	401.3	0.7	0.7	-72.92	17.3	-56.2	58.9	57.5	1.35	43.711			
500.0	500.0	502.4	502.3	0.8	0.9	-77.20	12.3	-54.2	55.7	54.0	1.70	32.783			
600.0	600.0	603.1	602.6	1.0	1.1	158.83	4.1	-50.9	52.7	50.6	2.10	25.128			
643.2	643.2	646.4	645.5	1.1	1.2	154.87	-0.4	-49.1	52.4	50.1	2.28	23.001	CC, ES		
700.0	699.8	703.0	701.8	1.2	1.3	150.07	-6.3	-46.7	53.1	50.5	2.51	21.111			
800.0	799.5	802.7	800.8	1.4	1.6	143.64	-16.7	-42.4	57.3	54.4	2.95	19.453			
900.0	898.7	902.3	899.8	1.7	1.8	140.16	-27.2	-38.2	64.9	61.5	3.40	19.070	SF		
1,000.0	997.5	1,001.8	998.7	1.9	2.1	139.15	-37.6	-34.0	75.2	71.3	3.87	19.403			
1,100.0	1,095.7	1,101.0	1,097.2	2.3	2.3	139.73	-48.0	-29.7	87.7	83.4	4.36	20.129			
1,200.0	1,193.9	1,200.1	1,195.8	2.6	2.6	140.36	-58.4	-25.5	100.6	95.8	4.85	20.733			
1,300.0	1,292.1	1,299.3	1,294.3	3.0	2.8	140.85	-68.8	-21.3	113.5	108.2	5.35	21.209			
1,400.0	1,390.2	1,398.5	1,392.8	3.3	3.1	141.24	-79.2	-17.1	126.4	120.6	5.86	21.591			
1,500.0	1,488.4	1,497.6	1,491.3	3.7	3.4	141.56	-89.6	-12.9	139.4	133.0	6.36	21.905			
1,600.0	1,586.6	1,596.8	1,589.8	4.0	3.6	141.82	-100.0	-8.6	152.3	145.4	6.87	22.167			
1,700.0	1,684.8	1,695.9	1,688.4	4.4	3.9	142.05	-110.4	-4.4	165.2	157.8	7.38	22.390			
1,800.0	1,783.0	1,795.1	1,786.9	4.8	4.1	142.24	-120.8	-0.2	178.1	170.2	7.89	22.580			
1,900.0	1,881.1	1,894.3	1,885.4	5.1	4.4	142.40	-131.2	4.0	191.1	182.7	8.40	22.745			
2,000.0	1,979.3	1,993.4	1,983.9	5.5	4.7	142.54	-141.6	8.2	204.0	195.1	8.91	22.889			
2,100.0	2,077.5	2,092.6	2,082.5	5.9	4.9	142.67	-152.0	12.4	216.9	207.5	9.42	23.016			
2,200.0	2,175.7	2,191.7	2,181.0	6.3	5.2	142.78	-162.4	16.7	229.8	219.9	9.94	23.129			
2,300.0	2,273.8	2,290.9	2,279.5	6.6	5.4	142.88	-172.7	20.9	242.8	232.3	10.45	23.230			
2,400.0	2,372.0	2,390.1	2,378.0	7.0	5.7	142.97	-183.1	25.1	255.7	244.7	10.96	23.321			
2,500.0	2,470.2	2,489.2	2,476.6	7.4	6.0	143.06	-193.5	29.3	268.6	257.2	11.48	23.403			
2,600.0	2,568.4	2,588.4	2,575.1	7.7	6.2	143.13	-203.9	33.5	281.6	269.6	11.99	23.477			
2,700.0	2,666.6	2,687.5	2,673.6	8.1	6.5	143.20	-214.3	37.8	294.5	282.0	12.51	23.545			
2,800.0	2,764.7	2,786.7	2,772.1	8.5	6.7	143.26	-224.7	42.0	307.4	294.4	13.02	23.607			
2,900.0	2,862.9	2,885.9	2,870.6	8.9	7.0	143.32	-235.1	46.2	320.4	306.8	13.54	23.664			
3,000.0	2,961.1	2,985.0	2,969.2	9.3	7.3	143.37	-245.5	50.4	333.3	319.2	14.05	23.717			
3,100.0	3,059.3	3,084.2	3,067.7	9.6	7.5	143.42	-255.9	54.6	346.2	331.7	14.57	23.766			
3,200.0	3,157.4	3,183.3	3,166.2	10.0	7.8	143.46	-266.3	58.8	359.2	344.1	15.08	23.811			
3,300.0	3,255.6	3,282.5	3,264.7	10.4	8.0	143.50	-276.7	63.1	372.1	356.5	15.60	23.853			
3,400.0	3,353.8	3,381.7	3,363.3	10.8	8.3	143.54	-287.1	67.3	385.0	368.9	16.12	23.892			
3,500.0	3,452.0	3,480.8	3,461.8	11.1	8.6	143.58	-297.5	71.5	398.0	381.3	16.63	23.929			
3,600.0	3,550.1	3,580.0	3,560.3	11.5	8.8	143.61	-307.9	75.7	410.9	393.8	17.15	23.963			
3,700.0	3,648.3	3,679.1	3,658.8	11.9	9.1	143.65	-318.3	79.9	423.8	406.2	17.66	23.996			
3,800.0	3,746.5	3,778.3	3,757.4	12.3	9.3	143.68	-328.7	84.2	436.8	418.6	18.18	24.026			
3,900.0	3,844.7	3,877.5	3,855.9	12.6	9.6	143.70	-339.1	88.4	449.7	431.0	18.70	24.054			
4,000.0	3,942.9	3,976.6	3,954.4	13.0	9.9	143.73	-349.4	92.6	462.6	443.4	19.21	24.081			
4,100.0	4,041.0	4,075.8	4,052.9	13.4	10.1	143.76	-359.8	96.8	475.6	455.9	19.73	24.107			
4,200.0	4,139.2	4,174.9	4,151.4	13.8	10.4	143.78	-370.2	101.0	488.5	468.3	20.24	24.131			
4,300.0	4,237.4	4,274.1	4,250.0	14.2	10.6	143.80	-380.6	105.3	501.5	480.7	20.76	24.154			
4,400.0	4,335.6	4,373.3	4,348.5	14.5	10.9	143.83	-391.0	109.5	514.4	493.1	21.28	24.176			
4,500.0	4,433.7	4,472.4	4,447.0	14.9	11.2	143.85	-401.4	113.7	527.3	505.5	21.79	24.196			
4,600.0	4,531.9	4,571.6	4,545.5	15.3	11.4	143.87	-411.8	117.9	540.3	517.9	22.31	24.216			
4,700.0	4,630.1	4,670.7	4,644.1	15.7	11.7	143.88	-422.2	122.1	553.2	530.4	22.83	24.235			
4,800.0	4,728.3	4,769.9	4,742.6	16.0	12.0	143.90	-432.6	126.3	566.1	542.8	23.34	24.253			
4,900.0	4,826.4	4,869.0	4,841.1	16.4	12.2	143.92	-443.0	130.6	579.1	555.2	23.86	24.270			
5,000.0	4,924.6	4,968.2	4,939.6	16.8	12.5	143.94	-453.4	134.8	592.0	567.6	24.38	24.286			

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 LR06B D21 595
Project:	Garfield County	TVD Reference:	KBE @ 8278.0ft (Original Well Elev)
Reference Site:	D21 595 Pad	MD Reference:	KBE @ 8278.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	LR06B D21 595	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 #2	Offset TVD Reference:	Offset Datum

Offset Design													D21 595 Pad - LR05A D21 595 - DD - Plan #2		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)						
5,100.0	5,022.8	5,067.4	5,038.2	17.2	12.7	143.95	-463.8	139.0	604.9	580.0	24.89	24.302				
5,200.0	5,121.0	5,166.5	5,136.7	17.6	13.0	143.97	-474.2	143.2	617.9	592.5	25.41	24.317				
5,300.0	5,219.2	5,265.7	5,235.2	17.9	13.3	143.98	-484.6	147.4	630.8	604.9	25.93	24.331				
5,400.0	5,317.3	5,364.8	5,333.7	18.3	13.5	143.99	-495.0	151.7	643.7	617.3	26.44	24.345				
5,500.0	5,415.5	5,464.0	5,432.2	18.7	13.8	144.01	-505.4	155.9	656.7	629.7	26.96	24.358				
5,600.0	5,513.7	5,563.2	5,530.8	19.1	14.0	144.02	-515.8	160.1	669.6	642.1	27.48	24.371				
5,700.0	5,611.9	5,662.3	5,629.3	19.5	14.3	144.03	-526.1	164.3	682.6	654.6	27.99	24.383				
5,800.0	5,710.0	5,761.5	5,727.8	19.8	14.6	144.04	-536.5	168.5	695.5	667.0	28.51	24.395				
5,900.0	5,808.2	5,860.6	5,826.3	20.2	14.8	144.06	-546.9	172.8	708.4	679.4	29.03	24.406				
6,000.0	5,906.4	5,959.8	5,924.9	20.6	15.1	144.07	-557.3	177.0	721.4	691.8	29.54	24.417				
6,100.0	6,004.6	6,059.0	6,023.4	21.0	15.4	144.08	-567.7	181.2	734.3	704.2	30.06	24.427				
6,200.0	6,102.7	6,158.1	6,121.9	21.3	15.6	144.09	-578.1	185.4	747.2	716.7	30.58	24.438				
6,300.0	6,200.9	6,257.3	6,220.4	21.7	15.9	144.10	-588.5	189.6	760.2	729.1	31.09	24.447				
6,400.0	6,299.1	6,356.4	6,319.0	22.1	16.1	144.11	-598.9	193.8	773.1	741.5	31.61	24.457				
6,500.0	6,397.3	6,455.6	6,417.5	22.5	16.4	144.12	-609.3	198.1	786.0	753.9	32.13	24.466				
6,600.0	6,495.5	6,554.8	6,516.0	22.9	16.7	144.13	-619.7	202.3	799.0	766.3	32.64	24.475				
6,700.0	6,593.6	6,653.9	6,614.5	23.2	16.9	144.13	-630.1	206.5	811.9	778.8	33.16	24.484				
6,800.0	6,691.8	6,753.1	6,713.0	23.6	17.2	144.14	-640.5	210.7	824.9	791.2	33.68	24.492				
6,900.0	6,790.0	6,852.2	6,811.6	24.0	17.4	144.15	-650.9	214.9	837.8	803.6	34.20	24.500				
7,000.0	6,888.2	6,951.4	6,910.1	24.4	17.7	144.16	-661.3	219.2	850.7	816.0	34.71	24.508				
7,100.0	6,986.3	7,050.6	7,008.6	24.8	18.0	144.17	-671.7	223.4	863.7	828.4	35.23	24.515				
7,200.0	7,084.5	7,149.7	7,107.1	25.1	18.2	144.17	-682.1	227.6	876.6	840.9	35.75	24.523				
7,300.0	7,182.7	7,248.9	7,205.7	25.5	18.5	144.18	-692.5	231.8	889.5	853.3	36.26	24.530				
7,400.0	7,280.9	7,348.0	7,304.2	25.9	18.7	144.19	-702.8	236.0	902.5	865.7	36.78	24.537				
7,500.0	7,379.1	7,447.2	7,402.7	26.3	19.0	144.19	-713.2	240.3	915.4	878.1	37.30	24.544				
7,600.0	7,477.2	7,546.4	7,501.2	26.6	19.3	144.20	-723.6	244.5	928.3	890.5	37.81	24.550				
7,700.0	7,575.4	7,645.5	7,599.8	27.0	19.5	144.21	-734.0	248.7	941.3	902.9	38.33	24.557				
7,800.0	7,673.6	7,744.7	7,698.3	27.4	19.8	144.21	-744.4	252.9	954.2	915.4	38.85	24.563				
7,900.0	7,771.8	7,843.8	7,796.8	27.8	20.1	144.22	-754.8	257.1	967.2	927.8	39.37	24.569				
8,000.0	7,869.9	7,943.0	7,895.3	28.2	20.3	144.23	-765.2	261.3	980.1	940.2	39.88	24.575				
8,100.0	7,968.1	8,042.2	7,993.8	28.5	20.6	144.23	-775.6	265.6	993.0	952.6	40.40	24.580				
8,200.0	8,066.3	8,141.3	8,092.4	28.9	20.8	144.24	-786.0	269.8	1,006.0	965.0	40.92	24.586				
8,300.0	8,164.5	8,240.5	8,190.9	29.3	21.1	144.24	-796.4	274.0	1,018.9	977.5	41.43	24.591				
8,400.0	8,262.6	8,339.6	8,289.4	29.7	21.4	144.25	-806.8	278.2	1,031.8	989.9	41.95	24.597				
8,500.0	8,361.1	8,438.9	8,388.1	30.0	21.6	144.33	-817.2	282.4	1,043.5	1,001.0	42.48	24.566				
8,600.0	8,460.1	8,537.0	8,485.5	30.3	21.9	144.28	-827.4	286.6	1,052.3	1,009.3	42.99	24.477				
8,700.0	8,559.6	8,629.1	8,577.2	30.5	22.1	144.23	-835.2	289.7	1,058.8	1,015.4	43.42	24.389				
8,800.0	8,659.3	8,721.4	8,669.3	30.7	22.2	144.20	-840.2	291.8	1,063.2	1,019.5	43.75	24.303				
8,900.0	8,759.2	8,813.7	8,761.7	30.8	22.4	144.20	-842.4	292.7	1,065.5	1,021.5	44.00	24.219				
9,000.0	8,859.2	8,908.5	8,856.4	30.9	22.5	20.67	-842.6	292.7	1,065.9	1,021.7	44.22	24.107				
9,100.0	8,959.2	9,004.3	8,952.2	30.9	22.6	20.67	-842.8	292.2	1,066.0	1,021.5	44.46	23.977				
9,200.0	9,059.2	9,100.0	9,047.9	31.0	22.7	20.67	-843.3	291.5	1,066.0	1,021.3	44.71	23.845				
9,300.0	9,159.2	9,197.5	9,145.4	31.1	22.8	20.67	-843.9	290.4	1,066.0	1,021.1	44.96	23.711				
9,400.0	9,259.2	9,297.5	9,245.4	31.2	23.0	20.67	-844.6	289.2	1,066.0	1,020.8	45.22	23.574				
9,500.0	9,359.2	9,397.5	9,345.4	31.3	23.1	20.67	-845.3	288.0	1,066.0	1,020.6	45.49	23.437				
9,600.0	9,459.2	9,497.5	9,445.4	31.4	23.2	20.67	-846.0	286.8	1,066.0	1,020.3	45.75	23.301				
9,700.0	9,559.2	9,597.5	9,545.4	31.4	23.3	20.67	-846.7	285.6	1,066.0	1,020.0	46.02	23.166				
9,800.0	9,659.2	9,697.5	9,645.4	31.5	23.5	20.67	-847.4	284.4	1,066.0	1,019.8	46.28	23.033				
9,900.0	9,759.2	9,797.5	9,745.4	31.6	23.6	20.67	-848.1	283.2	1,066.0	1,019.5	46.55	22.900				
10,000.0	9,859.2	9,897.5	9,845.4	31.7	23.7	20.66	-848.7	282.0	1,066.0	1,019.2	46.82	22.768				
10,100.0	9,959.2	9,997.5	9,945.4	31.8	23.8	20.66	-849.4	280.8	1,066.0	1,018.9	47.09	22.637				
10,200.0	10,059.1	10,097.5	10,045.4	31.9	24.0	20.66	-850.1	279.6	1,066.0	1,018.7	47.36	22.507				

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 LR06B D21 595
Project:	Garfield County	TVD Reference:	KBE @ 8278.0ft (Original Well Elev)
Reference Site:	D21 595 Pad	MD Reference:	KBE @ 8278.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	LR06B D21 595	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 #2	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								
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		
10,300.0	10,159.1	10,197.5	10,145.3	31.9	24.1	20.66	-850.8	278.4	1,066.0	1,018.4	47.64	22.379			
10,400.0	10,259.1	10,297.5	10,245.3	32.0	24.2	20.66	-851.5	277.2	1,066.0	1,018.1	47.91	22.251			
10,500.0	10,359.1	10,397.5	10,345.3	32.1	24.4	20.66	-852.2	276.0	1,066.0	1,017.8	48.18	22.124			
10,600.0	10,459.1	10,497.5	10,445.3	32.2	24.5	20.66	-852.9	274.8	1,066.0	1,017.6	48.46	21.998			
10,700.0	10,559.1	10,597.5	10,545.3	32.3	24.6	20.66	-853.6	273.6	1,066.0	1,017.3	48.74	21.874			
10,800.0	10,659.1	10,697.5	10,645.3	32.4	24.8	20.66	-854.3	272.4	1,066.0	1,017.0	49.01	21.750			
10,900.0	10,759.1	10,797.5	10,745.3	32.5	24.9	20.66	-855.0	271.2	1,066.0	1,016.7	49.29	21.627			
11,000.0	10,859.1	10,897.5	10,845.3	32.6	25.0	20.66	-855.7	270.0	1,066.0	1,016.4	49.57	21.505			
11,100.0	10,959.1	10,997.5	10,945.3	32.7	25.2	20.66	-856.3	268.8	1,066.0	1,016.2	49.85	21.384			
11,200.0	11,059.0	11,097.5	11,045.3	32.8	25.3	20.66	-857.0	267.6	1,066.0	1,015.9	50.13	21.264			
11,300.0	11,159.0	11,197.5	11,145.3	32.9	25.4	20.66	-857.7	266.4	1,066.0	1,015.6	50.41	21.146			
11,400.0	11,259.0	11,297.5	11,245.2	32.9	25.6	20.66	-858.4	265.2	1,066.0	1,015.3	50.70	21.028			
11,500.0	11,359.0	11,397.5	11,345.2	33.0	25.7	20.66	-859.1	264.0	1,066.0	1,015.0	50.98	20.911			
11,600.0	11,459.0	11,497.5	11,445.2	33.1	25.9	20.66	-859.8	262.9	1,066.0	1,014.7	51.26	20.795			
11,700.0	11,559.0	11,597.5	11,545.2	33.2	26.0	20.66	-860.5	261.7	1,066.0	1,014.5	51.55	20.680			
11,800.0	11,659.0	11,697.5	11,645.2	33.3	26.1	20.66	-861.2	260.5	1,066.0	1,014.2	51.83	20.566			
11,900.0	11,759.0	11,797.5	11,745.2	33.4	26.3	20.66	-861.9	259.3	1,066.0	1,013.9	52.12	20.453			
11,970.7	11,829.7	11,868.3	11,815.9	33.5	26.4	20.66	-862.4	258.4	1,066.0	1,013.7	52.32	20.373			
12,000.0	11,859.0	11,894.0	11,841.7	33.5	26.4	20.66	-862.5	258.1	1,066.0	1,013.6	52.40	20.343			
12,002.0	11,861.0	11,894.0	11,841.7	33.5	26.4	20.66	-862.5	258.1	1,066.0	1,013.6	52.41	20.342			

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 LR06B D21 595
Project:	Garfield County	TVD Reference:	KBE @ 8278.0ft (Original Well Elev)
Reference Site:	D21 595 Pad	MD Reference:	KBE @ 8278.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	LR06B D21 595	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 #2	Offset TVD Reference:	Offset Datum

Offset Design													Offset Site Error:	0.0 ft
D21 595 Pad - LR05B D21 595 (Existing) - DD - DD													Offset Well Error:	0.0 ft
Survey Program: 202-MWD														
Reference		Offset		Semi Major Axis			Distance							
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning	
0.0	0.0	0.0	0.0	0.0	0.0	-68.26	61.9	-155.3	167.2					
100.0	100.0	94.6	94.6	0.1	0.2	-68.24	62.1	-155.6	167.5	167.2	0.31	547.155		
200.0	200.0	193.2	193.2	0.3	0.3	-68.20	62.7	-156.7	168.8	168.1	0.65	261.596		
300.0	300.0	292.7	292.7	0.5	0.5	-68.14	63.5	-158.3	170.6	169.6	0.99	171.464		
400.0	400.0	391.7	391.7	0.7	0.7	-68.29	63.9	-160.5	172.8	171.5	1.35	128.273		
500.0	500.0	493.3	493.3	0.8	0.9	-68.84	63.2	-163.2	175.0	173.3	1.70	102.718		
600.0	600.0	597.9	597.7	1.0	1.0	173.68	60.3	-164.7	177.1	175.1	2.05	86.374		
700.0	699.8	700.9	700.6	1.2	1.2	172.08	54.4	-164.8	180.5	178.1	2.42	74.691		
800.0	799.5	803.9	803.2	1.4	1.4	170.11	46.1	-163.7	185.6	182.8	2.79	66.471		
900.0	898.7	906.1	905.0	1.7	1.6	168.25	36.7	-161.3	192.9	189.7	3.18	60.733		
1,000.0	997.5	1,007.8	1,006.2	1.9	1.9	166.80	27.2	-157.5	202.3	198.8	3.56	56.835		
1,100.0	1,095.7	1,110.1	1,107.9	2.3	2.1	165.94	18.3	-152.4	213.7	209.7	3.96	54.001		
1,200.0	1,193.9	1,212.0	1,209.2	2.6	2.3	165.06	8.6	-145.9	223.9	219.5	4.37	51.212		
1,300.0	1,292.1	1,312.0	1,308.4	3.0	2.6	164.03	-2.1	-139.2	233.6	228.8	4.80	48.652		
1,400.0	1,390.2	1,406.0	1,401.6	3.3	2.8	162.96	-12.7	-133.9	244.4	239.2	5.23	46.773		
1,500.0	1,488.4	1,505.3	1,500.3	3.7	3.1	162.19	-22.5	-129.3	256.5	250.8	5.66	45.337		
1,600.0	1,586.6	1,604.0	1,598.5	4.0	3.3	161.59	-31.9	-124.7	268.5	262.5	6.09	44.087		
1,700.0	1,684.8	1,702.7	1,696.6	4.4	3.5	161.09	-41.0	-120.2	280.9	274.3	6.52	43.064		
1,800.0	1,783.0	1,801.1	1,794.6	4.8	3.8	160.76	-49.4	-115.9	293.4	286.5	6.95	42.223		
1,900.0	1,881.1	1,899.0	1,892.0	5.1	4.0	160.24	-58.8	-112.1	306.4	299.0	7.40	41.378		
2,000.0	1,979.3	1,999.2	1,991.5	5.5	4.3	159.56	-69.5	-108.4	319.4	311.5	7.88	40.532		
2,100.0	2,077.5	2,098.1	2,089.6	5.9	4.6	158.67	-81.7	-104.5	332.1	323.7	8.39	39.586		
2,200.0	2,175.7	2,191.9	2,182.5	6.3	4.8	157.71	-94.2	-102.0	346.0	337.1	8.90	38.873		
2,300.0	2,273.8	2,292.6	2,282.2	6.6	5.1	156.70	-108.0	-99.6	360.2	350.7	9.44	38.141		
2,400.0	2,372.0	2,395.7	2,384.4	7.0	5.4	155.80	-121.7	-96.9	374.4	364.4	9.99	37.466		
2,500.0	2,470.2	2,508.3	2,495.8	7.4	5.7	154.96	-136.4	-89.9	384.9	374.3	10.57	36.415		
2,600.0	2,568.4	2,608.0	2,594.4	7.7	6.0	154.30	-149.1	-82.6	394.5	383.4	11.11	35.519		
2,700.0	2,666.6	2,705.0	2,690.4	8.1	6.3	153.76	-161.0	-75.6	404.3	392.7	11.63	34.778		
2,800.0	2,764.7	2,798.1	2,782.7	8.5	6.6	153.35	-171.8	-69.9	415.2	403.1	12.13	34.221		
2,900.0	2,862.9	2,886.4	2,870.2	8.9	6.8	152.87	-182.9	-66.2	428.2	415.5	12.64	33.863		
3,000.0	2,961.1	2,992.0	2,974.8	9.3	7.1	152.17	-197.3	-61.9	441.1	427.9	13.23	33.332 SF		
3,100.0	3,059.3	3,013.0	2,995.6	9.6	7.2	152.08	-199.9	-61.1	460.7	447.2	13.53	34.047		
3,200.0	3,157.4	3,013.0	2,995.6	10.0	7.2	152.08	-199.9	-61.1	499.5	485.7	13.77	36.284		
3,300.0	3,255.6	3,013.0	2,995.6	10.4	7.2	152.08	-199.9	-61.1	553.8	539.8	14.00	39.558		
3,400.0	3,353.8	3,013.0	2,995.6	10.8	7.2	152.08	-199.9	-61.1	619.6	605.4	14.23	43.531		
3,500.0	3,452.0	3,013.0	2,995.6	11.1	7.2	152.08	-199.9	-61.1	693.6	679.2	14.47	47.943		
3,600.0	3,550.1	3,013.0	2,995.6	11.5	7.2	152.08	-199.9	-61.1	773.5	758.8	14.70	52.613		
3,700.0	3,648.3	3,013.0	2,995.6	11.9	7.2	152.08	-199.9	-61.1	857.7	842.7	14.94	57.420		
3,800.0	3,746.5	3,013.0	2,995.6	12.3	7.2	152.08	-199.9	-61.1	944.9	929.7	15.17	62.282		
3,900.0	3,844.7	3,013.0	2,995.6	12.6	7.2	152.08	-199.9	-61.1	1,034.4	1,019.0	15.41	67.146		
4,000.0	3,942.9	3,013.0	2,995.6	13.0	7.2	152.08	-199.9	-61.1	1,125.7	1,110.1	15.64	71.976		
4,100.0	4,041.0	3,013.0	2,995.6	13.4	7.2	152.08	-199.9	-61.1	1,218.4	1,202.5	15.87	76.750		
4,200.0	4,139.2	3,013.0	2,995.6	13.8	7.2	152.08	-199.9	-61.1	1,312.1	1,296.0	16.11	81.452		

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 LR06B D21 595
Project:	Garfield County	TVD Reference:	KBE @ 8278.0ft (Original Well Elev)
Reference Site:	D21 595 Pad	MD Reference:	KBE @ 8278.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	LR06B D21 595	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 #2	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				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	-71.61	42.6	-128.2	135.1						
100.0	100.0	100.0	100.0	0.1	0.2	-71.61	42.6	-128.2	135.1	134.8	0.32	418.421			
200.0	200.0	200.0	200.0	0.3	0.3	-71.61	42.6	-128.2	135.1	134.4	0.67	201.060			
300.0	300.0	302.4	302.4	0.5	0.5	-72.28	40.8	-127.8	134.2	133.2	1.03	130.894			
400.0	400.0	404.6	404.4	0.7	0.7	-74.35	35.5	-126.7	131.6	130.2	1.38	95.499			
500.0	500.0	506.2	505.6	0.8	1.0	-77.95	26.6	-124.7	127.7	126.0	1.73	73.801			
600.0	600.0	605.9	604.7	1.0	1.2	161.21	16.0	-122.4	125.2	123.0	2.21	56.783			
611.2	611.2	617.0	615.8	1.0	1.2	160.74	14.8	-122.2	125.2	122.9	2.25	55.584	CC, ES		
700.0	699.8	705.5	703.7	1.2	1.4	157.31	5.3	-120.1	126.7	124.1	2.63	48.264			
800.0	799.5	805.1	802.7	1.4	1.7	154.16	-5.3	-117.8	131.9	128.9	3.05	43.195			
900.0	898.7	904.6	901.6	1.7	1.9	151.89	-16.0	-115.5	140.5	137.1	3.49	40.248			
1,000.0	997.5	1,003.8	1,000.2	1.9	2.2	150.50	-26.6	-113.2	152.4	148.4	3.94	38.661			
1,100.0	1,095.7	1,102.7	1,098.6	2.3	2.5	149.88	-37.2	-110.9	166.8	162.4	4.40	37.878			
1,200.0	1,193.9	1,201.6	1,196.9	2.6	2.7	149.47	-47.8	-108.6	181.7	176.8	4.88	37.219			
1,300.0	1,292.1	1,300.5	1,295.2	3.0	3.0	149.13	-58.4	-106.4	196.5	191.1	5.36	36.637			
1,400.0	1,390.2	1,399.4	1,393.5	3.3	3.2	148.83	-69.0	-104.1	211.3	205.5	5.85	36.121			
1,500.0	1,488.4	1,498.3	1,491.7	3.7	3.5	148.57	-79.6	-101.8	226.2	219.8	6.34	35.665			
1,600.0	1,586.6	1,597.2	1,590.0	4.0	3.7	148.35	-90.1	-99.5	241.0	234.2	6.84	35.258			
1,700.0	1,684.8	1,696.1	1,688.3	4.4	4.0	148.15	-100.7	-97.2	255.8	248.5	7.33	34.895			
1,800.0	1,783.0	1,795.0	1,786.6	4.8	4.2	147.97	-111.3	-94.9	270.7	262.9	7.83	34.569			
1,900.0	1,881.1	1,893.9	1,884.9	5.1	4.5	147.81	-121.9	-92.6	285.5	277.2	8.33	34.275			
2,000.0	1,979.3	1,992.7	1,983.2	5.5	4.7	147.67	-132.5	-90.3	300.4	291.6	8.83	34.009			
2,100.0	2,077.5	2,091.6	2,081.5	5.9	5.0	147.54	-143.1	-88.0	315.2	305.9	9.34	33.767			
2,200.0	2,175.7	2,190.5	2,179.8	6.3	5.2	147.42	-153.7	-85.7	330.1	320.3	9.84	33.547			
2,300.0	2,273.8	2,289.4	2,278.1	6.6	5.5	147.31	-164.2	-83.5	344.9	334.6	10.34	33.345			
2,400.0	2,372.0	2,388.3	2,376.4	7.0	5.8	147.21	-174.8	-81.2	359.8	349.0	10.85	33.159			
2,500.0	2,470.2	2,487.2	2,474.7	7.4	6.0	147.12	-185.4	-78.9	374.7	363.3	11.36	32.989			
2,600.0	2,568.4	2,586.1	2,573.0	7.7	6.3	147.04	-196.0	-76.6	389.5	377.7	11.86	32.831			
2,700.0	2,666.6	2,685.0	2,671.3	8.1	6.5	146.96	-206.6	-74.3	404.4	392.0	12.37	32.685			
2,800.0	2,764.7	2,783.8	2,769.6	8.5	6.8	146.89	-217.2	-72.0	419.2	406.4	12.88	32.549			
2,900.0	2,862.9	2,882.7	2,867.9	8.9	7.0	146.82	-227.8	-69.7	434.1	420.7	13.39	32.422			
3,000.0	2,961.1	2,981.6	2,966.2	9.3	7.3	146.76	-238.3	-67.4	449.0	435.1	13.90	32.304			
3,100.0	3,059.3	3,080.5	3,064.4	9.6	7.5	146.70	-248.9	-65.1	463.8	449.4	14.41	32.193			
3,200.0	3,157.4	3,179.4	3,162.7	10.0	7.8	146.64	-259.5	-62.8	478.7	463.8	14.92	32.090			
3,300.0	3,255.6	3,278.3	3,261.0	10.4	8.1	146.59	-270.1	-60.6	493.5	478.1	15.43	31.992			
3,400.0	3,353.8	3,377.2	3,359.3	10.8	8.3	146.54	-280.7	-58.3	508.4	492.5	15.94	31.901			
3,500.0	3,452.0	3,476.1	3,457.6	11.1	8.6	146.50	-291.3	-56.0	523.3	506.8	16.45	31.814			
3,600.0	3,550.1	3,575.0	3,555.9	11.5	8.8	146.45	-301.9	-53.7	538.1	521.2	16.96	31.733			
3,700.0	3,648.3	3,673.8	3,654.2	11.9	9.1	146.41	-312.4	-51.4	553.0	535.5	17.47	31.656			
3,800.0	3,746.5	3,772.7	3,752.5	12.3	9.3	146.37	-323.0	-49.1	567.9	549.9	17.98	31.583			
3,900.0	3,844.7	3,871.6	3,850.8	12.6	9.6	146.34	-333.6	-46.8	582.7	564.2	18.49	31.514			
4,000.0	3,942.9	3,970.5	3,949.1	13.0	9.9	146.30	-344.2	-44.5	597.6	578.6	19.00	31.448			
4,100.0	4,041.0	4,069.4	4,047.4	13.4	10.1	146.27	-354.8	-42.2	612.5	592.9	19.51	31.385			
4,200.0	4,139.2	4,168.3	4,145.7	13.8	10.4	146.23	-365.4	-39.9	627.3	607.3	20.03	31.326			
4,300.0	4,237.4	4,267.2	4,244.0	14.2	10.6	146.20	-376.0	-37.7	642.2	621.6	20.54	31.269			
4,400.0	4,335.6	4,366.1	4,342.3	14.5	10.9	146.17	-386.5	-35.4	657.1	636.0	21.05	31.215			
4,500.0	4,433.7	4,465.0	4,440.6	14.9	11.1	146.15	-397.1	-33.1	671.9	650.4	21.56	31.163			
4,600.0	4,531.9	4,563.8	4,538.8	15.3	11.4	146.12	-407.7	-30.8	686.8	664.7	22.07	31.114			
4,700.0	4,630.1	4,662.7	4,637.1	15.7	11.6	146.09	-418.3	-28.5	701.6	679.1	22.59	31.066			
4,800.0	4,728.3	4,761.6	4,735.4	16.0	11.9	146.07	-428.9	-26.2	716.5	693.4	23.10	31.021			
4,900.0	4,826.4	4,860.5	4,833.7	16.4	12.2	146.05	-439.5	-23.9	731.4	707.8	23.61	30.978			
5,000.0	4,924.6	4,959.4	4,932.0	16.8	12.4	146.02	-450.1	-21.6	746.2	722.1	24.12	30.936			

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 LR06B D21 595
Project:	Garfield County	TVD Reference:	KBE @ 8278.0ft (Original Well Elev)
Reference Site:	D21 595 Pad	MD Reference:	KBE @ 8278.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	LR06B D21 595	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 #2	Offset TVD Reference:	Offset Datum

Offset Design													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	5,022.8	5,058.3	5,030.3	17.2	12.7	146.00	-460.6	-19.3	761.1	736.5	24.63	30.896			
5,200.0	5,121.0	5,157.0	5,128.5	17.6	12.9	145.98	-471.2	-17.1	776.0	750.8	25.15	30.860			
5,300.0	5,219.2	5,253.5	5,224.5	17.9	13.1	146.10	-479.7	-15.2	791.0	765.4	25.59	30.915			
5,400.0	5,317.3	5,349.6	5,320.5	18.3	13.3	146.44	-485.1	-14.0	806.4	780.4	25.95	31.074			
5,500.0	5,415.5	5,445.3	5,416.1	18.7	13.4	146.99	-487.3	-13.6	822.1	795.9	26.24	31.328			
5,600.0	5,513.7	5,540.3	5,511.2	19.1	13.5	147.66	-487.4	-13.7	838.3	811.8	26.50	31.638			
5,700.0	5,611.9	5,636.2	5,607.0	19.5	13.7	148.31	-487.7	-14.1	855.0	828.2	26.75	31.957			
5,800.0	5,710.0	5,734.3	5,705.1	19.8	13.8	148.95	-488.0	-14.6	871.8	844.8	27.01	32.275			
5,900.0	5,808.2	5,832.4	5,803.2	20.2	13.9	149.56	-488.3	-15.2	888.8	861.5	27.27	32.590			
6,000.0	5,906.4	5,930.5	5,901.3	20.6	14.0	150.15	-488.6	-15.7	905.9	878.3	27.53	32.902			
6,100.0	6,004.6	6,028.6	5,999.4	21.0	14.2	150.72	-488.9	-16.2	923.0	895.2	27.79	33.209			
6,200.0	6,102.7	6,126.7	6,097.6	21.3	14.3	151.26	-489.2	-16.8	940.3	912.2	28.06	33.513			
6,300.0	6,200.9	6,224.8	6,195.7	21.7	14.4	151.79	-489.5	-17.3	957.6	929.3	28.32	33.812			
6,400.0	6,299.1	6,322.9	6,293.8	22.1	14.6	152.30	-489.8	-17.8	975.0	946.4	28.59	34.107			
6,500.0	6,397.3	6,421.0	6,391.9	22.5	14.7	152.79	-490.2	-18.4	992.5	963.6	28.85	34.398			
6,600.0	6,495.5	6,519.2	6,490.0	22.9	14.8	153.26	-490.5	-18.9	1,010.0	980.9	29.12	34.684			
6,700.0	6,593.6	6,617.3	6,588.1	23.2	15.0	153.72	-490.8	-19.4	1,027.6	998.2	29.39	34.965			
6,800.0	6,691.8	6,715.4	6,686.2	23.6	15.1	154.16	-491.1	-20.0	1,045.3	1,015.6	29.66	35.242			
6,900.0	6,790.0	6,813.5	6,784.3	24.0	15.2	154.59	-491.4	-20.5	1,063.0	1,033.1	29.93	35.514			
7,000.0	6,888.2	6,911.6	6,882.4	24.4	15.4	155.00	-491.7	-21.0	1,080.8	1,050.6	30.21	35.781			
7,100.0	6,986.3	7,009.7	6,980.5	24.8	15.5	155.40	-492.0	-21.5	1,098.6	1,068.1	30.48	36.044			
7,200.0	7,084.5	7,107.8	7,078.6	25.1	15.6	155.79	-492.3	-22.1	1,116.5	1,085.7	30.76	36.302			
7,300.0	7,182.7	7,205.9	7,176.7	25.5	15.8	156.17	-492.6	-22.6	1,134.4	1,103.4	31.03	36.556			
7,400.0	7,280.9	7,304.0	7,274.8	25.9	15.9	156.53	-492.9	-23.1	1,152.4	1,121.1	31.31	36.805			
7,500.0	7,379.1	7,402.1	7,373.0	26.3	16.1	156.88	-493.2	-23.7	1,170.4	1,138.8	31.59	37.049			
7,600.0	7,477.2	7,500.3	7,471.1	26.6	16.2	157.23	-493.5	-24.2	1,188.5	1,156.6	31.87	37.289			
7,700.0	7,575.4	7,598.4	7,569.2	27.0	16.3	157.56	-493.8	-24.7	1,206.6	1,174.4	32.15	37.524			
7,800.0	7,673.6	7,696.5	7,667.3	27.4	16.5	157.88	-494.2	-25.3	1,224.7	1,192.3	32.44	37.756			
7,900.0	7,771.8	7,794.6	7,765.4	27.8	16.6	158.19	-494.5	-25.8	1,242.9	1,210.2	32.72	37.982			
8,000.0	7,869.9	7,892.7	7,863.5	28.2	16.8	158.50	-494.8	-26.3	1,261.1	1,228.1	33.01	38.205			
8,100.0	7,968.1	7,990.8	7,961.6	28.5	16.9	158.79	-495.1	-26.9	1,279.4	1,246.1	33.30	38.423			
8,200.0	8,066.3	8,088.9	8,059.7	28.9	17.1	159.08	-495.4	-27.4	1,297.7	1,264.1	33.59	38.637			
8,300.0	8,164.5	8,187.0	8,157.8	29.3	17.2	159.36	-495.7	-27.9	1,316.0	1,282.1	33.88	38.848			
8,400.0	8,262.6	8,285.1	8,255.9	29.7	17.3	159.63	-496.0	-28.5	1,334.3	1,300.1	34.17	39.054			
8,500.0	8,361.1	8,383.5	8,354.3	30.0	17.5	159.98	-496.3	-29.0	1,351.2	1,316.7	34.49	39.181			
8,600.0	8,460.1	8,482.5	8,453.3	30.3	17.6	160.26	-496.6	-29.5	1,364.8	1,330.0	34.79	39.226			
8,700.0	8,559.6	8,581.9	8,552.7	30.5	17.8	160.46	-496.9	-30.1	1,375.2	1,340.2	35.09	39.192			
8,800.0	8,659.3	8,681.6	8,652.4	30.7	17.9	160.59	-497.2	-30.6	1,382.4	1,347.0	35.37	39.081			
8,900.0	8,759.2	8,781.5	8,752.3	30.8	18.1	160.65	-497.6	-31.2	1,386.2	1,350.6	35.64	38.897			
9,000.0	8,859.2	8,881.5	8,852.3	30.9	18.2	37.11	-497.9	-31.7	1,387.1	1,351.2	35.92	38.619			
9,100.0	8,959.2	8,981.5	8,952.3	30.9	18.4	37.10	-498.2	-32.3	1,387.3	1,351.1	36.22	38.298			
9,200.0	9,059.2	9,081.5	9,052.3	31.0	18.5	37.11	-498.5	-32.8	1,387.1	1,350.6	36.53	37.973			
9,300.0	9,159.2	9,181.5	9,152.3	31.1	18.7	37.12	-498.8	-33.3	1,386.6	1,349.7	36.84	37.643			
9,400.0	9,259.2	9,281.5	9,252.3	31.2	18.8	37.14	-499.1	-33.9	1,386.0	1,348.8	37.15	37.311			
9,500.0	9,359.2	9,381.5	9,352.3	31.3	19.0	37.16	-499.4	-34.4	1,385.4	1,347.9	37.46	36.984			
9,600.0	9,459.2	9,481.5	9,452.3	31.4	19.1	37.18	-499.8	-35.0	1,384.8	1,347.0	37.77	36.661			
9,700.0	9,559.2	9,581.5	9,552.3	31.4	19.3	37.20	-500.1	-35.5	1,384.2	1,346.1	38.09	36.344			
9,800.0	9,659.2	9,681.5	9,652.3	31.5	19.4	37.22	-500.4	-36.1	1,383.6	1,345.2	38.40	36.031			
9,900.0	9,759.2	9,781.5	9,752.3	31.6	19.6	37.24	-500.7	-36.6	1,383.0	1,344.2	38.71	35.722			
10,000.0	9,859.2	9,881.5	9,852.3	31.7	19.8	37.26	-501.0	-37.1	1,382.4	1,343.3	39.03	35.418			
10,100.0	9,959.2	9,981.5	9,952.3	31.8	19.9	37.28	-501.3	-37.7	1,381.8	1,342.4	39.35	35.119			
10,200.0	10,059.1	10,081.5	10,052.3	31.9	20.1	37.29	-501.6	-38.2	1,381.1	1,341.5	39.66	34.824			

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 LR06B D21 595
Project:	Garfield County	TVD Reference:	KBE @ 8278.0ft (Original Well Elev)
Reference Site:	D21 595 Pad	MD Reference:	KBE @ 8278.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	LR06B D21 595	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 #2	Offset TVD Reference:	Offset Datum

Offset Design													Offset Site Error:	0.0 ft	
Survey Program: 0-MWD													Offset Well Error:		0.0 ft
D21 595 Pad - LR05BDR D21-595 - DD - Plan #2															
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)					
10,300.0	10,159.1	10,181.5	10,152.3	31.9	20.2	37.31	-502.0	-38.8	1,380.5	1,340.6	39.98	34.532			
10,400.0	10,259.1	10,281.5	10,252.2	32.0	20.4	37.33	-502.3	-39.3	1,379.9	1,339.6	40.30	34.245			
10,500.0	10,359.1	10,381.5	10,352.2	32.1	20.5	37.35	-502.6	-39.9	1,379.3	1,338.7	40.61	33.962			
10,600.0	10,459.1	10,481.5	10,452.2	32.2	20.7	37.37	-502.9	-40.4	1,378.7	1,337.8	40.93	33.683			
10,700.0	10,559.1	10,581.5	10,552.2	32.3	20.8	37.39	-503.2	-40.9	1,378.1	1,336.9	41.25	33.408			
10,800.0	10,659.1	10,681.5	10,652.2	32.4	21.0	37.41	-503.5	-41.5	1,377.5	1,336.0	41.57	33.137			
10,900.0	10,759.1	10,781.5	10,752.2	32.5	21.2	37.43	-503.8	-42.0	1,376.9	1,335.0	41.89	32.870			
11,000.0	10,859.1	10,881.5	10,852.2	32.6	21.3	37.45	-504.2	-42.6	1,376.3	1,334.1	42.21	32.606			
11,100.0	10,959.1	10,981.5	10,952.2	32.7	21.5	37.47	-504.5	-43.1	1,375.7	1,333.2	42.53	32.346			
11,200.0	11,059.0	11,081.5	11,052.2	32.8	21.6	37.49	-504.8	-43.7	1,375.1	1,332.3	42.85	32.089			
11,300.0	11,159.0	11,181.5	11,152.2	32.9	21.8	37.50	-505.1	-44.2	1,374.5	1,331.4	43.18	31.836			
11,400.0	11,259.0	11,281.5	11,252.2	32.9	21.9	37.52	-505.4	-44.7	1,373.9	1,330.4	43.50	31.586			
11,500.0	11,359.0	11,381.5	11,352.2	33.0	22.1	37.54	-505.7	-45.3	1,373.3	1,329.5	43.82	31.340			
11,600.0	11,459.0	11,481.5	11,452.2	33.1	22.3	37.56	-506.0	-45.8	1,372.7	1,328.6	44.14	31.097			
11,700.0	11,559.0	11,581.5	11,552.2	33.2	22.4	37.58	-506.3	-46.4	1,372.1	1,327.7	44.47	30.857			
11,800.0	11,659.0	11,681.5	11,652.2	33.3	22.6	37.60	-506.7	-46.9	1,371.5	1,326.7	44.79	30.621			
11,900.0	11,759.0	11,781.5	11,752.2	33.4	22.7	37.62	-507.0	-47.5	1,370.9	1,325.8	45.11	30.387			
12,000.0	11,859.0	11,881.4	11,852.2	33.5	22.9	37.64	-507.3	-48.0	1,370.3	1,324.9	45.44	30.157			
12,002.0	11,861.0	11,883.5	11,854.2	33.5	22.9	37.64	-507.3	-48.0	1,370.3	1,324.9	45.45	30.153 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 LR06B D21 595
Project:	Garfield County	TVD Reference:	KBE @ 8278.0ft (Original Well Elev)
Reference Site:	D21 595 Pad	MD Reference:	KBE @ 8278.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	LR06B D21 595	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 #2	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				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	-71.59	28.4	-85.4	90.0						
100.0	100.0	100.0	100.0	0.1	0.1	-71.59	28.4	-85.4	90.0	89.7	0.30	303.260			
200.0	200.0	200.0	200.0	0.3	0.3	-71.59	28.4	-85.4	90.0	89.3	0.65	139.336			
300.0	300.0	301.9	301.9	0.5	0.5	-72.53	26.7	-84.8	88.9	87.9	1.00	89.073			
400.0	400.0	403.5	403.3	0.7	0.7	-75.45	21.6	-83.1	85.9	84.5	1.35	63.597			
500.0	500.0	504.6	504.1	0.8	0.9	-80.74	13.1	-80.2	81.4	79.7	1.70	47.829			
600.0	600.0	605.1	603.8	1.0	1.2	155.06	1.3	-76.2	77.9	75.7	2.21	35.335			
644.2	644.2	649.4	647.6	1.1	1.3	151.08	-4.9	-74.1	77.5	75.1	2.42	32.086	CC, ES		
700.0	699.8	704.8	702.3	1.2	1.5	146.13	-13.1	-71.4	78.3	75.6	2.69	29.129			
800.0	799.5	804.1	800.4	1.4	1.8	138.81	-27.9	-66.4	83.1	79.9	3.19	26.060			
900.0	898.7	903.5	898.5	1.7	2.1	133.91	-42.7	-61.4	91.5	87.8	3.71	24.656			
1,000.0	997.5	1,002.8	996.6	1.9	2.4	131.27	-57.4	-56.4	102.7	98.4	4.26	24.097			
1,100.0	1,095.7	1,101.9	1,094.5	2.3	2.7	130.36	-72.1	-51.5	115.9	111.1	4.84	23.965			
1,200.0	1,193.9	1,201.0	1,192.3	2.6	3.1	129.84	-86.9	-46.5	129.5	124.0	5.43	23.836			
1,300.0	1,292.1	1,300.1	1,290.2	3.0	3.4	129.42	-101.6	-41.5	143.0	136.9	6.03	23.695			
1,400.0	1,390.2	1,399.1	1,388.0	3.3	3.7	129.07	-116.3	-36.6	156.5	149.9	6.65	23.555			
1,500.0	1,488.4	1,498.2	1,485.9	3.7	4.0	128.78	-131.0	-31.6	170.1	162.8	7.26	23.421			
1,600.0	1,586.6	1,597.3	1,583.7	4.0	4.3	128.53	-145.7	-26.7	183.6	175.7	7.88	23.297			
1,700.0	1,684.8	1,696.4	1,681.6	4.4	4.7	128.32	-160.5	-21.7	197.2	188.7	8.51	23.182			
1,800.0	1,783.0	1,795.4	1,779.4	4.8	5.0	128.13	-175.2	-16.7	210.7	201.6	9.13	23.076			
1,900.0	1,881.1	1,894.5	1,877.3	5.1	5.3	127.96	-189.9	-11.8	224.3	214.5	9.76	22.980			
2,000.0	1,979.3	1,993.6	1,975.1	5.5	5.6	127.82	-204.6	-6.8	237.8	227.4	10.39	22.892			
2,100.0	2,077.5	2,092.7	2,073.0	5.9	5.9	127.69	-219.3	-1.8	251.4	240.4	11.02	22.811			
2,200.0	2,175.7	2,191.7	2,170.8	6.3	6.3	127.57	-234.0	3.1	264.9	253.3	11.65	22.736			
2,300.0	2,273.8	2,290.8	2,268.7	6.6	6.6	127.47	-248.8	8.1	278.5	266.2	12.29	22.668			
2,400.0	2,372.0	2,389.9	2,366.5	7.0	6.9	127.37	-263.5	13.0	292.1	279.1	12.92	22.605			
2,500.0	2,470.2	2,489.0	2,464.4	7.4	7.2	127.28	-278.2	18.0	305.6	292.1	13.56	22.546			
2,600.0	2,568.4	2,588.0	2,562.2	7.7	7.5	127.20	-292.9	23.0	319.2	305.0	14.19	22.492			
2,700.0	2,666.6	2,687.1	2,660.1	8.1	7.9	127.13	-307.6	27.9	332.7	317.9	14.83	22.442			
2,800.0	2,764.7	2,786.2	2,757.9	8.5	8.2	127.06	-322.4	32.9	346.3	330.8	15.46	22.395			
2,900.0	2,862.9	2,885.3	2,855.8	8.9	8.5	127.00	-337.1	37.9	359.9	343.8	16.10	22.352			
3,000.0	2,961.1	2,984.3	2,953.6	9.3	8.8	126.94	-351.8	42.8	373.4	356.7	16.74	22.311			
3,100.0	3,059.3	3,083.4	3,051.5	9.6	9.1	126.89	-366.5	47.8	387.0	369.6	17.38	22.273			
3,200.0	3,157.4	3,182.5	3,149.3	10.0	9.5	126.84	-381.2	52.7	400.6	382.5	18.01	22.237			
3,300.0	3,255.6	3,281.6	3,247.2	10.4	9.8	126.79	-395.9	57.7	414.1	395.5	18.65	22.203			
3,400.0	3,353.8	3,380.6	3,345.0	10.8	10.1	126.75	-410.7	62.7	427.7	408.4	19.29	22.172			
3,500.0	3,452.0	3,479.7	3,442.9	11.1	10.4	126.71	-425.4	67.6	441.3	421.3	19.93	22.142			
3,600.0	3,550.1	3,578.8	3,540.7	11.5	10.8	126.67	-440.1	72.6	454.8	434.3	20.57	22.114			
3,700.0	3,648.3	3,677.9	3,638.6	11.9	11.1	126.63	-454.8	77.6	468.4	447.2	21.21	22.087			
3,800.0	3,746.5	3,776.9	3,736.4	12.3	11.4	126.60	-469.5	82.5	481.9	460.1	21.85	22.062			
3,900.0	3,844.7	3,876.0	3,834.3	12.6	11.7	126.57	-484.3	87.5	495.5	473.0	22.48	22.038			
4,000.0	3,942.9	3,975.1	3,932.1	13.0	12.0	126.53	-499.0	92.4	509.1	486.0	23.12	22.015			
4,100.0	4,041.0	4,074.2	4,030.0	13.4	12.4	126.51	-513.7	97.4	522.6	498.9	23.76	21.993			
4,200.0	4,139.2	4,173.2	4,127.8	13.8	12.7	126.48	-528.4	102.4	536.2	511.8	24.40	21.973			
4,300.0	4,237.4	4,272.3	4,225.7	14.2	13.0	126.45	-543.1	107.3	549.8	524.7	25.04	21.953			
4,400.0	4,335.6	4,371.4	4,323.5	14.5	13.3	126.43	-557.8	112.3	563.3	537.7	25.68	21.934			
4,500.0	4,433.7	4,470.5	4,421.4	14.9	13.6	126.40	-572.6	117.3	576.9	550.6	26.32	21.916			
4,600.0	4,531.9	4,569.5	4,519.2	15.3	14.0	126.38	-587.3	122.2	590.5	563.5	26.96	21.899			
4,700.0	4,630.1	4,668.6	4,617.1	15.7	14.3	126.36	-602.0	127.2	604.0	576.4	27.60	21.883			
4,800.0	4,728.3	4,767.7	4,714.9	16.0	14.6	126.34	-616.7	132.2	617.6	589.4	28.24	21.867			
4,900.0	4,826.4	4,866.8	4,812.8	16.4	14.9	126.32	-631.4	137.1	631.2	602.3	28.88	21.852			
5,000.0	4,924.6	4,965.8	4,910.6	16.8	15.3	126.30	-646.2	142.1	644.7	615.2	29.52	21.838			

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 LR06B D21 595
Project:	Garfield County	TVD Reference:	KBE @ 8278.0ft (Original Well Elev)
Reference Site:	D21 595 Pad	MD Reference:	KBE @ 8278.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	LR06B D21 595	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 #2	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								
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	5,022.8	5,064.9	5,008.5	17.2	15.6	126.28	-660.9	147.0	658.3	628.1	30.16	21.824			
5,200.0	5,121.0	5,164.0	5,106.3	17.6	15.9	126.26	-675.6	152.0	671.9	641.1	30.80	21.811			
5,300.0	5,219.2	5,263.1	5,204.2	17.9	16.2	126.25	-690.3	157.0	685.4	654.0	31.45	21.798			
5,400.0	5,317.3	5,362.1	5,302.0	18.3	16.5	126.23	-705.0	161.9	699.0	666.9	32.09	21.786			
5,500.0	5,415.5	5,461.2	5,399.9	18.7	16.9	126.21	-719.7	166.9	712.6	679.9	32.73	21.774			
5,600.0	5,513.7	5,560.3	5,497.7	19.1	17.2	126.20	-734.5	171.9	726.1	692.8	33.37	21.762			
5,700.0	5,611.9	5,659.4	5,595.6	19.5	17.5	126.18	-749.2	176.8	739.7	705.7	34.01	21.751			
5,800.0	5,710.0	5,758.4	5,693.4	19.8	17.8	126.17	-763.9	181.8	753.3	718.6	34.65	21.741			
5,900.0	5,808.2	5,857.5	5,791.3	20.2	18.1	126.16	-778.6	186.7	766.8	731.6	35.29	21.730			
6,000.0	5,906.4	5,956.6	5,889.1	20.6	18.5	126.14	-793.3	191.7	780.4	744.5	35.93	21.720			
6,100.0	6,004.6	6,055.7	5,987.0	21.0	18.8	126.13	-808.1	196.7	794.0	757.4	36.57	21.711			
6,200.0	6,102.7	6,154.7	6,084.8	21.3	19.1	126.12	-822.8	201.6	807.5	770.3	37.21	21.702			
6,300.0	6,200.9	6,253.8	6,182.7	21.7	19.4	126.11	-837.5	206.6	821.1	783.3	37.85	21.693			
6,400.0	6,299.1	6,352.9	6,280.5	22.1	19.8	126.10	-852.2	211.6	834.7	796.2	38.49	21.684			
6,500.0	6,397.3	6,452.0	6,378.4	22.5	20.1	126.08	-866.9	216.5	848.2	809.1	39.13	21.675			
6,600.0	6,495.5	6,551.0	6,476.2	22.9	20.4	126.07	-881.6	221.5	861.8	822.0	39.78	21.667			
6,700.0	6,593.6	6,650.1	6,574.1	23.2	20.7	126.06	-896.4	226.4	875.4	835.0	40.42	21.659			
6,800.0	6,691.8	6,749.2	6,671.9	23.6	21.0	126.05	-911.1	231.4	889.0	847.9	41.06	21.652			
6,900.0	6,790.0	6,848.3	6,769.8	24.0	21.4	126.04	-925.8	236.4	902.5	860.8	41.70	21.644			
7,000.0	6,888.2	6,947.3	6,867.6	24.4	21.7	126.03	-940.5	241.3	916.1	873.7	42.34	21.637			
7,100.0	6,986.3	7,046.4	6,965.5	24.8	22.0	126.03	-955.2	246.3	929.7	886.7	42.98	21.630			
7,200.0	7,084.5	7,145.5	7,063.3	25.1	22.3	126.02	-970.0	251.3	943.2	899.6	43.62	21.623			
7,300.0	7,182.7	7,244.6	7,161.2	25.5	22.7	126.01	-984.7	256.2	956.8	912.5	44.26	21.616			
7,400.0	7,280.9	7,343.6	7,259.0	25.9	23.0	126.00	-999.4	261.2	970.4	925.5	44.90	21.610			
7,500.0	7,379.1	7,442.7	7,366.9	26.3	23.3	125.99	-1,014.1	266.1	983.9	938.4	45.54	21.604			
7,600.0	7,477.2	7,541.8	7,454.7	26.6	23.6	125.98	-1,028.8	271.1	997.5	951.3	46.19	21.597			
7,700.0	7,575.4	7,640.9	7,552.6	27.0	23.9	125.98	-1,043.5	276.1	1,011.1	964.2	46.83	21.591			
7,800.0	7,673.6	7,739.9	7,650.4	27.4	24.3	125.97	-1,058.3	281.0	1,024.6	977.2	47.47	21.586			
7,900.0	7,771.8	7,839.0	7,748.3	27.8	24.6	125.96	-1,073.0	286.0	1,038.2	990.1	48.11	21.580			
8,000.0	7,869.9	7,938.1	7,846.1	28.2	24.9	125.95	-1,087.7	291.0	1,051.8	1,003.0	48.75	21.574			
8,100.0	7,968.1	8,037.2	7,944.0	28.5	25.2	125.95	-1,102.4	295.9	1,065.3	1,015.9	49.39	21.569			
8,200.0	8,066.3	8,136.2	8,041.8	28.9	25.5	125.94	-1,117.1	300.9	1,078.9	1,028.9	50.03	21.564			
8,300.0	8,164.5	8,235.3	8,139.7	29.3	25.9	125.93	-1,131.9	305.8	1,092.5	1,041.8	50.67	21.559			
8,400.0	8,262.6	8,334.4	8,237.5	29.7	26.2	125.93	-1,146.6	310.8	1,106.0	1,054.7	51.32	21.554			
8,500.0	8,361.1	8,433.6	8,335.5	30.0	26.5	126.05	-1,161.3	315.8	1,118.7	1,066.7	51.95	21.532			
8,600.0	8,460.1	8,538.4	8,439.2	30.3	26.8	126.07	-1,175.5	320.5	1,129.0	1,076.5	52.53	21.492			
8,700.0	8,559.6	8,644.3	8,544.6	30.5	27.0	126.09	-1,186.1	324.1	1,136.9	1,083.9	53.00	21.450			
8,800.0	8,659.3	8,750.6	8,650.5	30.7	27.2	126.11	-1,193.1	326.5	1,142.1	1,088.7	53.36	21.402			
8,900.0	8,759.2	8,857.0	8,756.9	30.8	27.4	126.13	-1,196.3	327.6	1,144.6	1,091.0	53.61	21.350			
9,000.0	8,859.2	8,956.3	8,856.2	30.9	27.5	2.60	-1,196.6	327.6	1,145.0	1,091.2	53.81	21.279			
9,100.0	8,959.2	9,051.6	8,951.5	30.9	27.6	2.60	-1,196.9	327.2	1,145.0	1,091.0	54.00	21.202			
9,200.0	9,059.2	9,146.8	9,046.7	31.0	27.7	2.60	-1,197.3	326.5	1,145.0	1,090.8	54.20	21.125			
9,300.0	9,159.2	9,243.5	9,143.4	31.1	27.8	2.60	-1,197.9	325.4	1,145.0	1,090.6	54.40	21.047			
9,400.0	9,259.2	9,343.5	9,243.4	31.2	27.9	2.60	-1,198.6	324.2	1,145.0	1,090.4	54.61	20.966			
9,500.0	9,359.2	9,443.5	9,343.4	31.3	28.0	2.60	-1,199.3	323.0	1,145.0	1,090.2	54.83	20.885			
9,600.0	9,459.2	9,543.5	9,443.4	31.4	28.1	2.60	-1,200.0	321.8	1,145.0	1,090.0	55.04	20.804			
9,700.0	9,559.2	9,643.5	9,543.4	31.4	28.2	2.60	-1,200.7	320.6	1,145.0	1,089.8	55.25	20.724			
9,800.0	9,659.2	9,743.5	9,643.4	31.5	28.3	2.60	-1,201.4	319.4	1,145.0	1,089.6	55.47	20.643			
9,900.0	9,759.2	9,843.5	9,743.4	31.6	28.4	2.60	-1,202.0	318.2	1,145.0	1,089.4	55.68	20.563			
10,000.0	9,859.2	9,943.5	9,843.3	31.7	28.5	2.60	-1,202.7	317.0	1,145.0	1,089.1	55.90	20.483			
10,100.0	9,959.2	10,043.5	9,943.3	31.8	28.6	2.60	-1,203.4	315.8	1,145.0	1,088.9	56.12	20.403			
10,200.0	10,059.1	10,143.5	10,043.3	31.9	28.7	2.60	-1,204.1	314.6	1,145.0	1,088.7	56.34	20.323			

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 LR06B D21 595
Project:	Garfield County	TVD Reference:	KBE @ 8278.0ft (Original Well Elev)
Reference Site:	D21 595 Pad	MD Reference:	KBE @ 8278.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	LR06B D21 595	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 #2	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				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)					
10,300.0	10,159.1	10,243.5	10,143.3	31.9	28.8	2.60	-1,204.8	313.4	1,145.0	1,088.5	56.56	20.243			
10,400.0	10,259.1	10,343.5	10,243.3	32.0	29.0	2.60	-1,205.5	312.2	1,145.0	1,088.2	56.79	20.163			
10,500.0	10,359.1	10,443.5	10,343.3	32.1	29.1	2.60	-1,206.2	311.0	1,145.0	1,088.0	57.01	20.084			
10,600.0	10,459.1	10,543.5	10,443.3	32.2	29.2	2.60	-1,206.9	309.9	1,145.0	1,087.8	57.24	20.004			
10,700.0	10,559.1	10,643.5	10,543.3	32.3	29.3	2.60	-1,207.6	308.7	1,145.0	1,087.6	57.47	19.925			
10,800.0	10,659.1	10,743.5	10,643.3	32.4	29.4	2.60	-1,208.3	307.5	1,145.0	1,087.3	57.69	19.847			
10,900.0	10,759.1	10,843.5	10,743.3	32.5	29.5	2.60	-1,209.0	306.3	1,145.0	1,087.1	57.92	19.768			
11,000.0	10,859.1	10,943.5	10,843.3	32.6	29.6	2.60	-1,209.7	305.1	1,145.0	1,086.9	58.15	19.689			
11,100.0	10,959.1	11,043.5	10,943.2	32.7	29.8	2.60	-1,210.3	303.9	1,145.0	1,086.6	58.39	19.611			
11,200.0	11,059.0	11,143.5	11,043.2	32.8	29.9	2.60	-1,211.0	302.7	1,145.0	1,086.4	58.62	19.533			
11,300.0	11,159.0	11,243.5	11,143.2	32.9	30.0	2.60	-1,211.7	301.5	1,145.0	1,086.2	58.85	19.456			
11,400.0	11,259.0	11,343.5	11,243.2	32.9	30.1	2.60	-1,212.4	300.3	1,145.0	1,085.9	59.09	19.378			
11,500.0	11,359.0	11,443.5	11,343.2	33.0	30.2	2.60	-1,213.1	299.1	1,145.0	1,085.7	59.32	19.301			
11,600.0	11,459.0	11,543.5	11,443.2	33.1	30.3	2.60	-1,213.8	297.9	1,145.0	1,085.5	59.56	19.224			
11,700.0	11,559.0	11,643.5	11,543.2	33.2	30.5	2.60	-1,214.5	296.7	1,145.0	1,085.2	59.80	19.147			
11,800.0	11,659.0	11,743.5	11,643.2	33.3	30.6	2.60	-1,215.2	295.5	1,145.0	1,085.0	60.04	19.071			
11,900.0	11,759.0	11,843.5	11,743.2	33.4	30.7	2.60	-1,215.9	294.3	1,145.0	1,084.7	60.28	18.994			
12,000.0	11,859.0	11,943.5	11,843.2	33.5	30.8	2.60	-1,216.6	293.1	1,145.0	1,084.5	60.52	18.919			
12,002.0	11,861.0	11,945.6	11,845.2	33.5	30.8	2.60	-1,216.6	293.1	1,145.0	1,084.5	60.53	18.917 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 LR06B D21 595
Project:	Garfield County	TVD Reference:	KBE @ 8278.0ft (Original Well Elev)
Reference Site:	D21 595 Pad	MD Reference:	KBE @ 8278.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	LR06B D21 595	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 #2	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				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	-71.59	37.9	-113.8	120.0						
100.0	100.0	100.0	100.0	0.1	0.1	-71.59	37.9	-113.8	120.0	119.7	0.30	404.347			
200.0	200.0	200.0	200.0	0.3	0.3	-71.59	37.9	-113.8	120.0	119.3	0.65	185.781			
300.0	300.0	302.1	302.1	0.5	0.5	-72.35	36.1	-113.5	119.1	118.1	1.00	119.275			
400.0	400.0	403.9	403.7	0.7	0.7	-74.69	30.8	-112.4	116.6	115.2	1.35	86.317			
500.0	500.0	505.2	504.6	0.8	0.9	-78.77	22.0	-110.6	112.9	111.2	1.70	66.298			
600.0	600.0	605.9	604.5	1.0	1.2	158.99	9.7	-108.2	110.3	108.1	2.21	49.829			
623.9	623.9	629.9	628.3	1.1	1.3	157.43	6.3	-107.5	110.2	107.9	2.33	47.264	CC, ES		
700.0	699.8	705.9	703.3	1.2	1.5	152.11	-5.8	-105.0	111.3	108.6	2.71	41.083			
800.0	799.5	805.0	800.7	1.4	1.9	145.15	-23.7	-101.4	116.7	113.4	3.24	36.006			
900.0	898.7	903.9	897.9	1.7	2.2	139.77	-41.7	-97.8	126.2	122.4	3.79	33.302			
1,000.0	997.5	1,002.7	995.0	1.9	2.6	136.08	-59.7	-94.1	139.1	134.7	4.36	31.878			
1,100.0	1,095.7	1,101.4	1,091.9	2.3	2.9	133.89	-77.7	-90.5	154.5	149.5	4.97	31.106			
1,200.0	1,193.9	1,200.0	1,188.8	2.6	3.3	132.28	-95.7	-86.9	170.3	164.7	5.59	30.464			
1,300.0	1,292.1	1,298.7	1,285.8	3.0	3.6	130.95	-113.6	-83.2	186.2	180.0	6.23	29.910			
1,400.0	1,390.2	1,397.3	1,382.7	3.3	4.0	129.82	-131.6	-79.6	202.2	195.4	6.87	29.433			
1,500.0	1,488.4	1,496.0	1,479.6	3.7	4.3	128.86	-149.6	-76.0	218.3	210.8	7.52	29.020			
1,600.0	1,586.6	1,594.6	1,576.5	4.0	4.7	128.03	-167.6	-72.4	234.4	226.3	8.18	28.662			
1,700.0	1,684.8	1,693.2	1,673.4	4.4	5.1	127.31	-185.5	-68.7	250.6	241.8	8.84	28.348			
1,800.0	1,783.0	1,791.9	1,770.4	4.8	5.4	126.68	-203.5	-65.1	266.8	257.3	9.51	28.072			
1,900.0	1,881.1	1,890.5	1,867.3	5.1	5.8	126.12	-221.5	-61.5	283.1	272.9	10.17	27.829			
2,000.0	1,979.3	1,989.1	1,964.2	5.5	6.2	125.62	-239.4	-57.9	299.3	288.5	10.84	27.612			
2,100.0	2,077.5	2,087.8	2,061.1	5.9	6.5	125.17	-257.4	-54.2	315.6	304.1	11.51	27.418			
2,200.0	2,175.7	2,186.4	2,158.0	6.3	6.9	124.76	-275.4	-50.6	331.9	319.7	12.18	27.244			
2,300.0	2,273.8	2,285.1	2,254.9	6.6	7.2	124.40	-293.3	-47.0	348.2	335.4	12.86	27.086			
2,400.0	2,372.0	2,383.7	2,351.9	7.0	7.6	124.06	-311.3	-43.3	364.5	351.0	13.53	26.944			
2,500.0	2,470.2	2,482.3	2,448.8	7.4	8.0	123.76	-329.3	-39.7	380.9	366.7	14.20	26.814			
2,600.0	2,568.4	2,581.0	2,545.7	7.7	8.3	123.48	-347.3	-36.1	397.2	382.3	14.88	26.695			
2,700.0	2,666.6	2,679.6	2,642.6	8.1	8.7	123.22	-365.2	-32.5	413.6	398.0	15.56	26.586			
2,800.0	2,764.7	2,778.2	2,739.5	8.5	9.0	122.98	-383.2	-28.8	429.9	413.7	16.23	26.486			
2,900.0	2,862.9	2,876.9	2,836.5	8.9	9.4	122.76	-401.2	-25.2	446.3	429.4	16.91	26.394			
3,000.0	2,961.1	2,975.5	2,933.4	9.3	9.8	122.55	-419.1	-21.6	462.7	445.1	17.59	26.308			
3,100.0	3,059.3	3,074.2	3,030.3	9.6	10.1	122.36	-437.1	-18.0	479.0	460.8	18.26	26.229			
3,200.0	3,157.4	3,172.8	3,127.2	10.0	10.5	122.18	-455.1	-14.3	495.4	476.5	18.94	26.155			
3,300.0	3,255.6	3,271.4	3,224.1	10.4	10.9	122.02	-473.0	-10.7	511.8	492.2	19.62	26.086			
3,400.0	3,353.8	3,370.1	3,321.1	10.8	11.2	121.86	-491.0	-7.1	528.2	507.9	20.30	26.021			
3,500.0	3,452.0	3,468.7	3,418.0	11.1	11.6	121.71	-509.0	-3.4	544.6	523.6	20.98	25.961			
3,600.0	3,550.1	3,567.3	3,514.9	11.5	12.0	121.57	-527.0	0.2	561.0	539.3	21.66	25.904			
3,700.0	3,648.3	3,666.0	3,611.8	11.9	12.3	121.44	-544.9	3.8	577.4	555.1	22.34	25.850			
3,800.0	3,746.5	3,764.6	3,708.7	12.3	12.7	121.32	-562.9	7.4	593.8	570.8	23.02	25.800			
3,900.0	3,844.7	3,863.3	3,805.6	12.6	13.0	121.20	-580.9	11.1	610.2	586.5	23.70	25.753			
4,000.0	3,942.9	3,961.9	3,902.6	13.0	13.4	121.09	-598.8	14.7	626.6	602.3	24.37	25.708			
4,100.0	4,041.0	4,060.5	3,999.5	13.4	13.8	120.99	-616.8	18.3	643.0	618.0	25.05	25.665			
4,200.0	4,139.2	4,159.2	4,096.4	13.8	14.1	120.89	-634.8	21.9	659.5	633.7	25.73	25.625			
4,300.0	4,237.4	4,257.8	4,193.3	14.2	14.5	120.79	-652.8	25.6	675.9	649.5	26.41	25.587			
4,400.0	4,335.6	4,356.4	4,290.2	14.5	14.9	120.70	-670.7	29.2	692.3	665.2	27.09	25.551			
4,500.0	4,433.7	4,455.1	4,387.2	14.9	15.2	120.61	-688.7	32.8	708.7	680.9	27.77	25.516			
4,600.0	4,531.9	4,553.7	4,484.1	15.3	15.6	120.53	-706.7	36.5	725.1	696.7	28.45	25.483			
4,700.0	4,630.1	4,652.4	4,581.0	15.7	15.9	120.45	-724.6	40.1	741.5	712.4	29.14	25.452			
4,800.0	4,728.3	4,751.0	4,677.9	16.0	16.3	120.38	-742.6	43.7	758.0	728.2	29.82	25.422			
4,900.0	4,826.4	4,849.6	4,774.8	16.4	16.7	120.30	-760.6	47.3	774.4	743.9	30.50	25.393			
5,000.0	4,924.6	4,948.3	4,871.8	16.8	17.0	120.23	-778.5	51.0	790.8	759.6	31.18	25.366			

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 LR06B D21 595
Project:	Garfield County	TVD Reference:	KBE @ 8278.0ft (Original Well Elev)
Reference Site:	D21 595 Pad	MD Reference:	KBE @ 8278.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	LR06B D21 595	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 #2	Offset TVD Reference:	Offset Datum

Offset Design													D21 595 Pad - LR05D D21 595 - DD - Plan #2		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)						
5,100.0	5,022.8	5,046.9	4,968.7	17.2	17.4	120.17	-796.5	54.6	807.2	775.4	31.86	25.339				
5,200.0	5,121.0	5,145.5	5,065.6	17.6	17.8	120.10	-814.5	58.2	823.7	791.1	32.54	25.314				
5,300.0	5,219.2	5,244.2	5,162.5	17.9	18.1	120.04	-832.5	61.8	840.1	806.9	33.22	25.290				
5,400.0	5,317.3	5,342.8	5,259.4	18.3	18.5	119.98	-850.4	65.5	856.5	822.6	33.90	25.267				
5,500.0	5,415.5	5,441.5	5,356.3	18.7	18.9	119.93	-868.4	69.1	873.0	838.4	34.58	25.245				
5,600.0	5,513.7	5,540.1	5,453.3	19.1	19.2	119.87	-886.4	72.7	889.4	854.1	35.26	25.223				
5,700.0	5,611.9	5,638.7	5,550.2	19.5	19.6	119.82	-904.3	76.4	905.8	869.9	35.94	25.203				
5,800.0	5,710.0	5,737.4	5,647.1	19.8	19.9	119.77	-922.3	80.0	922.3	885.6	36.62	25.183				
5,900.0	5,808.2	5,836.0	5,744.0	20.2	20.3	119.72	-940.3	83.6	938.7	901.4	37.30	25.164				
6,000.0	5,906.4	5,934.6	5,840.9	20.6	20.7	119.67	-958.2	87.2	955.1	917.1	37.98	25.145				
6,100.0	6,004.6	6,033.3	5,937.9	21.0	21.0	119.63	-976.2	90.9	971.6	932.9	38.67	25.127				
6,200.0	6,102.7	6,131.9	6,034.8	21.3	21.4	119.58	-994.2	94.5	988.0	948.6	39.35	25.110				
6,300.0	6,200.9	6,230.6	6,131.7	21.7	21.8	119.54	-1,012.2	98.1	1,004.4	964.4	40.03	25.094				
6,400.0	6,299.1	6,329.2	6,228.6	22.1	22.1	119.50	-1,030.1	101.8	1,020.9	980.2	40.71	25.077				
6,500.0	6,397.3	6,427.8	6,325.5	22.5	22.5	119.46	-1,048.1	105.4	1,037.3	995.9	41.39	25.062				
6,600.0	6,495.5	6,526.5	6,422.5	22.9	22.9	119.42	-1,066.1	109.0	1,053.7	1,011.7	42.07	25.047				
6,700.0	6,593.6	6,625.1	6,519.4	23.2	23.2	119.38	-1,084.0	112.6	1,070.2	1,027.4	42.75	25.032				
6,800.0	6,691.8	6,723.7	6,616.3	23.6	23.6	119.35	-1,102.0	116.3	1,086.6	1,043.2	43.43	25.018				
6,900.0	6,790.0	6,822.4	6,713.2	24.0	23.9	119.31	-1,120.0	119.9	1,103.0	1,058.9	44.11	25.005				
7,000.0	6,888.2	6,921.0	6,810.1	24.4	24.3	119.28	-1,138.0	123.5	1,119.5	1,074.7	44.80	24.991				
7,100.0	6,986.3	7,019.7	6,907.0	24.8	24.7	119.24	-1,155.9	127.1	1,135.9	1,090.5	45.48	24.978				
7,200.0	7,084.5	7,118.3	7,004.0	25.1	25.0	119.21	-1,173.9	130.8	1,152.4	1,106.2	46.16	24.966				
7,300.0	7,182.7	7,216.9	7,100.9	25.5	25.4	119.18	-1,191.9	134.4	1,168.8	1,122.0	46.84	24.954				
7,400.0	7,280.9	7,315.6	7,197.8	25.9	25.8	119.15	-1,209.8	138.0	1,185.2	1,137.7	47.52	24.942				
7,500.0	7,379.1	7,414.2	7,294.7	26.3	26.1	119.12	-1,227.8	141.7	1,201.7	1,153.5	48.20	24.931				
7,600.0	7,477.2	7,512.8	7,391.6	26.6	26.5	119.09	-1,245.8	145.3	1,218.1	1,169.2	48.88	24.920				
7,700.0	7,575.4	7,611.5	7,488.6	27.0	26.8	119.06	-1,263.7	148.9	1,234.6	1,185.0	49.56	24.909				
7,800.0	7,673.6	7,710.1	7,585.5	27.4	27.2	119.03	-1,281.7	152.5	1,251.0	1,200.8	50.24	24.898				
7,900.0	7,771.8	7,808.8	7,682.4	27.8	27.6	119.01	-1,299.7	156.2	1,267.5	1,216.5	50.93	24.888				
8,000.0	7,869.9	7,907.4	7,779.3	28.2	27.9	118.98	-1,317.7	159.8	1,283.9	1,232.3	51.61	24.878				
8,100.0	7,968.1	8,006.0	7,876.2	28.5	28.3	118.96	-1,335.6	163.4	1,300.3	1,248.0	52.29	24.868				
8,200.0	8,066.3	8,104.7	7,973.2	28.9	28.7	118.93	-1,353.6	167.0	1,316.8	1,263.8	52.97	24.859				
8,300.0	8,164.5	8,203.3	8,070.1	29.3	29.0	118.91	-1,371.6	170.7	1,333.2	1,279.6	53.65	24.850				
8,400.0	8,262.6	8,301.9	8,167.0	29.7	29.4	118.88	-1,389.5	174.3	1,349.7	1,295.3	54.33	24.841				
8,500.0	8,361.1	8,403.1	8,266.3	30.0	29.8	119.06	-1,407.9	178.0	1,365.3	1,310.3	55.03	24.809				
8,600.0	8,460.1	8,524.5	8,386.2	30.3	30.1	119.16	-1,427.0	181.9	1,378.4	1,322.7	55.68	24.756				
8,700.0	8,559.6	8,646.7	8,507.5	30.5	30.4	119.24	-1,441.2	184.7	1,388.1	1,331.9	56.20	24.699				
8,800.0	8,659.3	8,769.5	8,630.0	30.7	30.6	119.31	-1,450.4	186.6	1,394.5	1,337.9	56.60	24.638				
8,900.0	8,759.2	8,892.6	8,753.0	30.8	30.8	119.36	-1,454.3	187.4	1,397.5	1,340.6	56.87	24.573				
9,000.0	8,859.2	8,994.6	8,855.0	30.9	30.9	-4.16	-1,454.6	187.3	1,397.8	1,340.7	57.06	24.495				
9,100.0	8,959.2	9,088.9	8,949.3	30.9	31.0	-4.16	-1,454.8	186.9	1,397.9	1,340.6	57.25	24.418				
9,200.0	9,059.2	9,183.2	9,043.6	31.0	31.0	-4.16	-1,455.2	186.2	1,397.9	1,340.5	57.43	24.341				
9,300.0	9,159.2	9,279.5	9,139.9	31.1	31.1	-4.16	-1,455.9	185.1	1,398.0	1,340.3	57.62	24.262				
9,400.0	9,259.2	9,379.5	9,239.9	31.2	31.2	-4.16	-1,456.6	183.9	1,398.0	1,340.2	57.81	24.181				
9,500.0	9,359.2	9,479.5	9,339.9	31.3	31.3	-4.16	-1,457.2	182.7	1,398.0	1,340.0	58.01	24.099				
9,600.0	9,459.2	9,579.5	9,439.9	31.4	31.4	-4.16	-1,457.9	181.5	1,398.0	1,339.8	58.21	24.018				
9,700.0	9,559.2	9,679.5	9,539.9	31.4	31.5	-4.16	-1,458.6	180.3	1,398.0	1,339.6	58.40	23.936				
9,800.0	9,659.2	9,779.5	9,639.9	31.5	31.6	-4.16	-1,459.3	179.1	1,398.0	1,339.4	58.60	23.854				
9,900.0	9,759.2	9,879.5	9,739.9	31.6	31.7	-4.16	-1,460.0	177.9	1,398.0	1,339.2	58.81	23.773				
10,000.0	9,859.2	9,979.5	9,839.9	31.7	31.8	-4.16	-1,460.7	176.7	1,398.0	1,339.0	59.01	23.691				
10,100.0	9,959.2	10,079.5	9,939.9	31.8	31.9	-4.16	-1,461.4	175.5	1,398.0	1,338.8	59.21	23.610				
10,200.0	10,059.1	10,179.5	10,039.8	31.9	32.0	-4.16	-1,462.1	174.3	1,398.0	1,338.5	59.42	23.528				

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 LR06B D21 595
Project:	Garfield County	TVD Reference:	KBE @ 8278.0ft (Original Well Elev)
Reference Site:	D21 595 Pad	MD Reference:	KBE @ 8278.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	LR06B D21 595	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 #2	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		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)					
10,300.0	10,159.1	10,279.5	10,139.8	31.9	32.1	-4.16	-1,462.8	173.1	1,398.0	1,338.3	59.62	23.447			
10,400.0	10,259.1	10,379.5	10,239.8	32.0	32.2	-4.16	-1,463.5	171.9	1,398.0	1,338.1	59.83	23.365			
10,500.0	10,359.1	10,479.5	10,339.8	32.1	32.4	-4.16	-1,464.2	170.7	1,398.0	1,337.9	60.04	23.284			
10,600.0	10,459.1	10,579.5	10,439.8	32.2	32.5	-4.16	-1,464.8	169.5	1,398.0	1,337.7	60.25	23.202			
10,700.0	10,559.1	10,679.5	10,539.8	32.3	32.6	-4.16	-1,465.5	168.3	1,398.0	1,337.5	60.46	23.121			
10,800.0	10,659.1	10,779.5	10,639.8	32.4	32.7	-4.16	-1,466.2	167.1	1,398.0	1,337.3	60.68	23.040			
10,900.0	10,759.1	10,879.5	10,739.8	32.5	32.8	-4.16	-1,466.9	165.9	1,398.0	1,337.1	60.89	22.959			
11,000.0	10,859.1	10,979.5	10,839.8	32.6	32.9	-4.16	-1,467.6	164.7	1,398.0	1,336.9	61.11	22.878			
11,100.0	10,959.1	11,079.5	10,939.8	32.7	33.0	-4.16	-1,468.3	163.5	1,398.0	1,336.6	61.32	22.797			
11,200.0	11,059.0	11,179.5	11,039.8	32.8	33.1	-4.16	-1,469.0	162.3	1,398.0	1,336.4	61.54	22.716			
11,300.0	11,159.0	11,279.5	11,139.7	32.9	33.2	-4.16	-1,469.7	161.1	1,398.0	1,336.2	61.76	22.635			
11,400.0	11,259.0	11,379.5	11,239.7	32.9	33.3	-4.16	-1,470.4	159.9	1,398.0	1,336.0	61.98	22.555			
11,500.0	11,359.0	11,479.5	11,339.7	33.0	33.4	-4.16	-1,471.1	158.7	1,398.0	1,335.8	62.20	22.475			
11,600.0	11,459.0	11,579.5	11,439.7	33.1	33.5	-4.16	-1,471.7	157.5	1,398.0	1,335.5	62.42	22.394			
11,700.0	11,559.0	11,679.5	11,539.7	33.2	33.7	-4.16	-1,472.4	156.3	1,398.0	1,335.3	62.65	22.314			
11,800.0	11,659.0	11,779.5	11,639.7	33.3	33.8	-4.16	-1,473.1	155.1	1,398.0	1,335.1	62.87	22.235			
11,900.0	11,759.0	11,879.5	11,739.7	33.4	33.9	-4.16	-1,473.8	153.9	1,398.0	1,334.9	63.10	22.155			
11,970.4	11,829.4	11,950.0	11,810.1	33.5	34.0	-4.16	-1,474.3	153.0	1,398.0	1,334.7	63.26	22.099			
12,000.0	11,859.0	11,975.9	11,836.0	33.5	34.0	-4.16	-1,474.5	152.7	1,398.0	1,334.6	63.32	22.077			
12,002.0	11,861.0	11,975.9	11,836.0	33.5	34.0	-4.16	-1,474.5	152.7	1,398.0	1,334.7	63.33	22.076 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 LR06B D21 595
Project:	Garfield County	TVD Reference:	KBE @ 8278.0ft (Original Well Elev)
Reference Site:	D21 595 Pad	MD Reference:	KBE @ 8278.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	LR06B D21 595	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 #2	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				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	-71.65	14.2	-42.8	45.1						
100.0	100.0	100.0	100.0	0.1	0.1	-71.65	14.2	-42.8	45.1	44.8	0.30	152.081			
200.0	200.0	200.0	200.0	0.3	0.3	-71.65	14.2	-42.8	45.1	44.5	0.65	69.875			
300.0	300.0	300.0	300.0	0.5	0.5	-71.65	14.2	-42.8	45.1	44.1	0.99	45.357			
400.0	400.0	400.0	400.0	0.7	0.7	-71.65	14.2	-42.8	45.1	43.8	1.34	33.576			
500.0	500.0	500.0	500.0	0.8	0.8	-71.65	14.2	-42.8	45.1	43.4	1.69	26.653	CC, ES		
600.0	600.0	600.0	600.0	1.0	1.0	172.14	14.2	-42.8	46.9	44.8	2.04	22.952			
700.0	699.8	699.8	699.8	1.2	1.2	172.92	14.2	-42.8	52.0	49.7	2.39	21.796			
800.0	799.5	799.5	799.5	1.4	1.4	173.91	14.2	-42.8	60.7	58.0	2.73	22.223			
900.0	898.7	898.7	898.7	1.7	1.5	174.91	14.2	-42.8	72.8	69.8	3.07	23.709			
1,000.0	997.5	997.5	997.5	1.9	1.7	175.78	14.2	-42.8	88.4	85.0	3.41	25.944			
1,100.0	1,095.7	1,099.2	1,099.2	2.3	1.9	176.23	13.1	-41.5	105.4	101.7	3.75	28.083			
1,200.0	1,193.9	1,202.0	1,201.8	2.6	2.1	176.00	9.5	-37.5	119.5	115.4	4.11	29.070			
1,300.0	1,292.1	1,305.7	1,305.1	3.0	2.3	175.28	3.4	-30.7	130.2	125.7	4.47	29.109			
1,400.0	1,390.2	1,410.0	1,408.6	3.3	2.5	174.11	-5.3	-21.0	137.5	132.7	4.84	28.393			
1,500.0	1,488.4	1,514.5	1,511.8	3.7	2.8	172.49	-16.5	-8.4	141.5	136.3	5.23	27.062			
1,600.0	1,586.6	1,619.2	1,614.4	4.0	3.1	170.34	-30.1	6.9	142.3	136.7	5.64	25.220			
1,700.0	1,684.8	1,723.6	1,715.9	4.4	3.5	167.52	-46.3	25.0	140.0	133.9	6.10	22.944			
1,800.0	1,783.0	1,827.4	1,816.0	4.8	3.9	163.82	-64.7	45.8	134.9	128.3	6.64	20.307			
1,900.0	1,881.1	1,928.4	1,912.4	5.1	4.4	159.17	-84.7	68.1	127.9	120.6	7.31	17.509			
2,000.0	1,979.3	2,027.6	2,007.0	5.5	4.9	154.01	-104.5	90.3	121.5	113.4	8.10	15.013			
2,100.0	2,077.5	2,126.7	2,101.6	5.9	5.4	148.33	-124.3	112.6	116.3	107.2	9.04	12.867			
2,200.0	2,175.7	2,225.9	2,196.2	6.3	5.9	142.19	-144.1	134.8	112.3	102.1	10.12	11.089			
2,300.0	2,273.8	2,325.1	2,290.8	6.6	6.4	135.69	-163.9	157.0	109.6	98.3	11.33	9.674			
2,400.0	2,372.0	2,424.2	2,385.4	7.0	7.0	128.96	-183.7	179.2	108.5	95.9	12.62	8.600			
2,423.3	2,394.9	2,447.3	2,407.4	7.1	7.1	127.38	-188.3	184.4	108.5	95.5	12.92	8.395			
2,500.0	2,470.2	2,523.4	2,480.0	7.4	7.5	122.18	-203.4	201.4	108.9	95.0	13.92	7.826			
2,600.0	2,568.4	2,622.5	2,574.5	7.7	8.0	115.55	-223.2	223.6	110.9	95.7	15.18	7.302			
2,700.0	2,666.6	2,721.7	2,669.1	8.1	8.6	109.23	-243.0	245.8	114.2	97.9	16.36	6.982			
2,800.0	2,764.7	2,820.8	2,763.7	8.5	9.1	103.33	-262.8	268.0	118.9	101.5	17.44	6.821			
2,900.0	2,862.9	2,920.0	2,858.3	8.9	9.6	97.92	-282.6	290.3	124.8	106.4	18.40	6.783	SF		
3,000.0	2,961.1	3,019.2	2,952.9	9.3	10.2	93.03	-302.4	312.5	131.7	112.5	19.26	6.838			
3,100.0	3,059.3	3,118.3	3,047.5	9.6	10.7	88.66	-322.2	334.7	139.5	119.4	20.03	6.962			
3,200.0	3,157.4	3,217.5	3,142.1	10.0	11.3	84.76	-342.0	356.9	148.0	127.2	20.73	7.137			
3,300.0	3,255.6	3,316.6	3,236.7	10.4	11.8	81.29	-361.8	379.1	157.1	135.7	21.37	7.349			
3,400.0	3,353.8	3,415.8	3,331.2	10.8	12.4	78.21	-381.6	401.3	166.7	144.7	21.97	7.588			
3,500.0	3,452.0	3,514.9	3,425.8	11.1	12.9	75.47	-401.4	423.5	176.7	154.2	22.53	7.843			
3,600.0	3,550.1	3,614.1	3,520.4	11.5	13.5	73.03	-421.2	445.8	187.1	164.1	23.07	8.111			
3,700.0	3,648.3	3,713.3	3,615.0	11.9	14.0	70.85	-441.0	468.0	197.8	174.2	23.60	8.384			
3,800.0	3,746.5	3,812.4	3,709.6	12.3	14.6	68.89	-460.8	490.2	208.8	184.7	24.11	8.661			
3,900.0	3,844.7	3,911.6	3,804.2	12.6	15.1	67.13	-480.6	512.4	220.0	195.4	24.61	8.939			
4,000.0	3,942.9	4,010.7	3,898.8	13.0	15.7	65.54	-500.4	534.6	231.3	206.2	25.11	9.215			
4,100.0	4,041.0	4,109.9	3,993.4	13.4	16.2	64.10	-520.2	556.8	242.9	217.3	25.60	9.487			
4,200.0	4,139.2	4,209.0	4,087.9	13.8	16.8	62.79	-540.0	579.0	254.5	228.4	26.09	9.756			
4,300.0	4,237.4	4,308.2	4,182.5	14.2	17.4	61.59	-559.8	601.2	266.3	239.7	26.58	10.019			
4,400.0	4,335.6	4,407.4	4,277.1	14.5	17.9	60.50	-579.6	623.5	278.2	251.1	27.07	10.277			
4,500.0	4,433.7	4,506.5	4,371.7	14.9	18.5	59.50	-599.4	645.7	290.2	262.6	27.56	10.529			
4,600.0	4,531.9	4,605.7	4,466.3	15.3	19.0	58.57	-619.1	667.9	302.2	274.2	28.05	10.775			
4,700.0	4,630.1	4,704.8	4,560.9	15.7	19.6	57.72	-638.9	690.1	314.4	285.8	28.54	11.014			
4,800.0	4,728.3	4,804.0	4,655.5	16.0	20.1	56.93	-658.7	712.3	326.5	297.5	29.03	11.247			
4,900.0	4,826.4	4,903.1	4,750.1	16.4	20.7	56.20	-678.5	734.5	338.8	309.3	29.53	11.473			
5,000.0	4,924.6	5,002.3	4,844.6	16.8	21.2	55.52	-698.3	756.7	351.1	321.1	30.02	11.694			

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 LR06B D21 595
Project:	Garfield County	TVD Reference:	KBE @ 8278.0ft (Original Well Elev)
Reference Site:	D21 595 Pad	MD Reference:	KBE @ 8278.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	LR06B D21 595	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 #2	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				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	5,022.8	5,101.5	4,939.2	17.2	21.8	54.88	-718.1	778.9	363.4	332.9	30.52	11.908			
5,200.0	5,121.0	5,200.6	5,033.8	17.6	22.4	54.29	-737.9	801.2	375.8	344.8	31.02	12.116			
5,300.0	5,219.2	5,299.8	5,128.4	17.9	22.9	53.73	-757.7	823.4	388.3	356.7	31.52	12.318			
5,400.0	5,317.3	5,398.9	5,223.0	18.3	23.5	53.21	-777.5	845.6	400.7	368.7	32.02	12.514			
5,500.0	5,415.5	5,498.1	5,317.6	18.7	24.0	52.72	-797.3	867.8	413.2	380.7	32.52	12.705			
5,600.0	5,513.7	5,597.2	5,412.2	19.1	24.6	52.26	-817.1	890.0	425.7	392.7	33.03	12.890			
5,700.0	5,611.9	5,696.4	5,506.8	19.5	25.1	51.82	-836.9	912.2	438.3	404.7	33.53	13.070			
5,800.0	5,710.0	5,795.5	5,601.3	19.8	25.7	51.41	-856.7	934.4	450.8	416.8	34.04	13.244			
5,900.0	5,808.2	5,894.7	5,695.9	20.2	26.3	51.02	-876.5	956.7	463.4	428.9	34.55	13.414			
6,000.0	5,906.4	5,993.9	5,790.5	20.6	26.8	50.66	-896.3	978.9	476.0	441.0	35.06	13.579			
6,100.0	6,004.6	6,093.0	5,885.1	21.0	27.4	50.31	-916.1	1,001.1	488.7	453.1	35.57	13.749			
6,200.0	6,102.7	6,192.2	5,979.7	21.3	27.9	49.98	-935.9	1,023.3	501.3	465.2	36.08	13.896			
6,300.0	6,200.9	6,291.3	6,074.3	21.7	28.5	49.66	-955.7	1,045.5	514.0	477.4	36.59	14.047			
6,400.0	6,299.1	6,390.5	6,168.9	22.1	29.0	49.36	-975.5	1,067.7	526.6	489.5	37.10	14.195			
6,500.0	6,397.3	6,489.6	6,263.5	22.5	29.6	49.08	-995.3	1,089.9	539.3	501.7	37.61	14.338			
6,600.0	6,495.5	6,588.8	6,358.0	22.9	30.2	48.80	-1,015.0	1,112.1	552.0	513.9	38.13	14.478			
6,700.0	6,593.6	6,688.0	6,452.6	23.2	30.7	48.54	-1,034.8	1,134.4	564.7	526.1	38.64	14.614			
6,800.0	6,691.8	6,787.1	6,547.2	23.6	31.3	48.29	-1,054.6	1,156.6	577.5	538.3	39.16	14.747			
6,900.0	6,790.0	6,886.3	6,641.8	24.0	31.8	48.06	-1,074.4	1,178.8	590.2	550.5	39.68	14.876			
7,000.0	6,888.2	6,985.4	6,736.4	24.4	32.4	47.83	-1,094.2	1,201.0	602.9	562.8	40.19	15.001			
7,100.0	6,986.3	7,084.6	6,831.0	24.8	33.0	47.61	-1,114.0	1,223.2	615.7	575.0	40.71	15.124			
7,200.0	7,084.5	7,183.7	6,925.6	25.1	33.5	47.40	-1,133.8	1,245.4	628.5	587.2	41.23	15.243			
7,300.0	7,182.7	7,282.9	7,020.2	25.5	34.1	47.20	-1,153.6	1,267.6	641.2	599.5	41.75	15.359			
7,400.0	7,280.9	7,382.1	7,114.7	25.9	34.6	47.00	-1,173.4	1,289.8	654.0	611.7	42.27	15.473			
7,500.0	7,379.1	7,481.2	7,209.3	26.3	35.2	46.82	-1,193.2	1,312.1	666.8	624.0	42.79	15.583			
7,600.0	7,477.2	7,580.4	7,303.9	26.6	35.7	46.64	-1,213.0	1,334.3	679.6	636.3	43.31	15.691			
7,700.0	7,575.4	7,679.5	7,398.5	27.0	36.3	46.47	-1,232.8	1,356.5	692.4	648.5	43.83	15.797			
7,800.0	7,673.6	7,778.7	7,493.1	27.4	36.9	46.30	-1,252.6	1,378.7	705.2	660.8	44.35	15.900			
7,900.0	7,771.8	7,877.8	7,587.7	27.8	37.4	46.14	-1,272.4	1,400.9	718.0	673.1	44.87	16.000			
8,000.0	7,869.9	7,977.0	7,682.3	28.2	38.0	45.98	-1,292.2	1,423.1	730.8	685.4	45.40	16.098			
8,100.0	7,968.1	8,076.2	7,776.9	28.5	38.5	45.84	-1,312.0	1,445.3	743.6	697.7	45.92	16.194			
8,200.0	8,066.3	8,175.3	7,871.4	28.9	39.1	45.69	-1,331.8	1,467.6	756.4	710.0	46.44	16.288			
8,300.0	8,164.5	8,274.5	7,966.0	29.3	39.7	45.55	-1,351.6	1,489.8	769.3	722.3	46.97	16.379			
8,400.0	8,262.6	8,372.7	8,079.1	29.7	40.3	45.43	-1,371.4	1,515.4	781.3	733.8	47.55	16.434			
8,500.0	8,361.1	8,523.0	8,205.3	30.0	40.9	45.33	-1,391.2	1,539.8	790.9	742.7	48.19	16.414			
8,600.0	8,460.1	8,654.0	8,333.4	30.3	41.3	45.60	-1,411.0	1,560.0	799.0	750.3	48.73	16.399			
8,700.0	8,559.6	8,785.5	8,463.2	30.5	41.7	45.62	-1,428.3	1,575.9	805.7	756.5	49.17	16.386			
8,800.0	8,659.3	8,917.4	8,594.2	30.7	42.0	45.62	-1,438.5	1,587.3	810.8	761.3	49.50	16.378			
8,900.0	8,759.2	9,049.7	8,726.2	30.8	42.2	45.57	-1,444.7	1,594.3	814.3	764.6	49.74	16.373			
9,000.0	8,859.2	9,182.3	8,858.7	30.9	42.3	-78.04	-1,446.8	1,596.6	816.1	766.1	49.93	16.345			
9,100.0	8,959.2	9,282.1	8,958.5	30.9	42.4	-78.05	-1,446.9	1,596.4	816.0	765.9	50.13	16.279			
9,200.0	9,059.2	9,381.4	9,057.8	31.0	42.5	-78.07	-1,447.2	1,595.9	816.0	765.7	50.31	16.217			
9,300.0	9,159.2	9,480.7	9,157.1	31.1	42.5	-78.08	-1,447.7	1,595.0	815.9	765.4	50.50	16.158			
9,334.5	9,193.8	9,515.0	9,191.4	31.1	42.6	-78.08	-1,448.0	1,594.6	815.9	765.4	50.56	16.137			
9,400.0	9,259.2	9,580.5	9,256.9	31.2	42.6	-78.08	-1,448.4	1,593.8	815.9	765.2	50.69	16.097			
9,500.0	9,359.2	9,680.5	9,356.9	31.3	42.7	-78.08	-1,449.1	1,592.6	815.9	765.0	50.88	16.036			
9,600.0	9,459.2	9,780.5	9,456.9	31.4	42.7	-78.08	-1,449.8	1,591.4	815.9	764.8	51.08	15.975			
9,700.0	9,559.2	9,880.5	9,556.9	31.4	42.8	-78.08	-1,450.5	1,590.2	815.9	764.7	51.27	15.914			
9,800.0	9,659.2	9,980.5	9,656.8	31.5	42.8	-78.08	-1,451.2	1,589.0	815.9	764.5	51.47	15.852			
9,900.0	9,759.2	10,080.5	9,756.8	31.6	42.9	-78.08	-1,451.9	1,587.8	815.9	764.3	51.67	15.791			
10,000.0	9,859.2	10,180.5	9,856.8	31.7	43.0	-78.08	-1,452.6	1,586.6	815.9	764.1	51.87	15.729			
10,100.0	9,959.2	10,280.5	9,956.8	31.8	43.0	-78.08	-1,453.3	1,585.4	815.9	763.9	52.08	15.668			

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 LR06B D21 595
Project:	Garfield County	TVD Reference:	KBE @ 8278.0ft (Original Well Elev)
Reference Site:	D21 595 Pad	MD Reference:	KBE @ 8278.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	LR06B D21 595	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 #2	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				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)					
10,200.0	10,059.1	10,380.5	10,056.8	31.9	43.1	-78.08	-1,454.0	1,584.2	815.9	763.6	52.28	15.607			
10,300.0	10,159.1	10,480.5	10,156.8	31.9	43.2	-78.08	-1,454.7	1,583.0	815.9	763.4	52.49	15.545			
10,400.0	10,259.1	10,580.5	10,256.8	32.0	43.2	-78.08	-1,455.4	1,581.8	815.9	763.2	52.70	15.484			
10,500.0	10,359.1	10,680.5	10,356.8	32.1	43.3	-78.08	-1,456.1	1,580.6	815.9	763.0	52.90	15.423			
10,600.0	10,459.1	10,780.5	10,456.8	32.2	43.4	-78.08	-1,456.7	1,579.4	815.9	762.8	53.12	15.361			
10,700.0	10,559.1	10,880.5	10,556.8	32.3	43.4	-78.08	-1,457.4	1,578.2	815.9	762.6	53.33	15.300			
10,800.0	10,659.1	10,980.5	10,656.7	32.4	43.5	-78.08	-1,458.1	1,576.9	815.9	762.4	53.54	15.239			
10,900.0	10,759.1	11,080.5	10,756.7	32.5	43.6	-78.08	-1,458.8	1,575.7	815.9	762.2	53.76	15.178			
11,000.0	10,859.1	11,180.5	10,856.7	32.6	43.7	-78.08	-1,459.5	1,574.5	815.9	762.0	53.97	15.117			
11,100.0	10,959.1	11,280.5	10,956.7	32.7	43.7	-78.08	-1,460.2	1,573.3	815.9	761.7	54.19	15.056			
11,200.0	11,059.0	11,380.5	11,056.7	32.8	43.8	-78.08	-1,460.9	1,572.1	815.9	761.5	54.41	14.995			
11,300.0	11,159.0	11,480.5	11,156.7	32.9	43.9	-78.08	-1,461.6	1,570.9	815.9	761.3	54.63	14.935			
11,400.0	11,259.0	11,580.5	11,256.7	32.9	43.9	-78.08	-1,462.3	1,569.7	815.9	761.1	54.86	14.874			
11,500.0	11,359.0	11,680.5	11,356.7	33.0	44.0	-78.08	-1,463.0	1,568.5	815.9	760.9	55.08	14.814			
11,600.0	11,459.0	11,780.5	11,456.7	33.1	44.1	-78.08	-1,463.7	1,567.3	815.9	760.6	55.30	14.753			
11,700.0	11,559.0	11,880.5	11,556.7	33.2	44.2	-78.08	-1,464.4	1,566.1	815.9	760.4	55.53	14.693			
11,800.0	11,659.0	11,980.5	11,656.6	33.3	44.2	-78.08	-1,465.1	1,564.9	815.9	760.2	55.76	14.633			
11,900.0	11,759.0	12,080.5	11,756.6	33.4	44.3	-78.08	-1,465.8	1,563.7	815.9	760.0	55.99	14.573			
12,000.0	11,859.0	12,180.5	11,856.6	33.5	44.4	-78.07	-1,466.4	1,562.5	815.9	759.7	56.22	14.514			
12,002.0	11,861.0	12,182.5	11,858.7	33.5	44.4	-78.07	-1,466.5	1,562.5	815.9	759.7	56.22	14.512			

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 LR06B D21 595
Project:	Garfield County	TVD Reference:	KBE @ 8278.0ft (Original Well Elev)
Reference Site:	D21 595 Pad	MD Reference:	KBE @ 8278.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	LR06B D21 595	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 #2	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				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	-71.76	4.7	-14.4	15.1						
100.0	100.0	100.0	100.0	0.1	0.1	-71.76	4.7	-14.4	15.1	14.8	0.30	50.994			
200.0	200.0	200.0	200.0	0.3	0.3	-71.76	4.7	-14.4	15.1	14.5	0.65	23.430			
300.0	300.0	300.2	300.2	0.5	0.5	-77.92	3.0	-14.1	14.4	13.4	1.00	14.454			
400.0	400.0	400.5	400.4	0.7	0.7	-95.56	-1.2	-11.8	11.9	10.6	1.34	8.855			
500.0	500.0	500.5	500.0	0.8	0.9	-136.17	-6.7	-6.4	9.3	7.6	1.71	5.433			
503.5	503.5	503.9	503.5	0.9	0.9	105.34	-6.9	-6.2	9.3	7.5	1.77	5.267	CC, ES, SF		
600.0	600.0	600.0	598.9	1.0	1.2	61.04	-13.6	2.1	12.9	10.8	2.11	6.139			
700.0	699.8	699.2	697.1	1.2	1.4	41.56	-21.9	13.7	20.4	18.0	2.45	8.343			
800.0	799.5	798.1	794.4	1.4	1.8	32.75	-31.6	28.4	28.9	26.1	2.81	10.290			
900.0	898.7	896.7	890.8	1.7	2.2	27.79	-42.5	46.1	37.6	34.4	3.17	11.840			
1,000.0	997.5	995.4	986.6	1.9	2.6	24.59	-54.7	66.7	46.2	42.7	3.55	13.033			
1,100.0	1,095.7	1,095.2	1,083.1	2.3	3.1	23.21	-67.4	88.5	53.1	49.1	3.94	13.469			
1,200.0	1,193.9	1,195.0	1,179.6	2.6	3.5	22.32	-80.2	110.2	59.6	55.2	4.34	13.725			
1,300.0	1,292.1	1,294.7	1,276.2	3.0	4.0	21.60	-92.9	131.9	66.1	61.3	4.74	13.943			
1,400.0	1,390.2	1,394.5	1,372.7	3.3	4.5	21.01	-105.6	153.7	72.6	67.5	5.14	14.130			
1,500.0	1,488.4	1,494.3	1,469.3	3.7	5.0	20.51	-118.4	175.4	79.1	73.6	5.54	14.293			
1,600.0	1,586.6	1,594.1	1,565.9	4.0	5.4	20.10	-131.1	197.1	85.6	79.7	5.93	14.436			
1,700.0	1,684.8	1,693.9	1,662.4	4.4	5.9	19.74	-143.8	218.8	92.2	85.8	6.33	14.563			
1,800.0	1,783.0	1,793.7	1,759.0	4.8	6.4	19.42	-156.6	240.6	98.7	92.0	6.73	14.677			
1,900.0	1,881.1	1,893.5	1,855.5	5.1	6.9	19.15	-169.3	262.3	105.2	98.1	7.12	14.779			
2,000.0	1,979.3	1,993.2	1,952.1	5.5	7.3	18.91	-182.0	284.0	111.8	104.3	7.52	14.872			
2,100.0	2,077.5	2,093.0	2,048.6	5.9	7.8	18.70	-194.8	305.7	118.3	110.4	7.91	14.956			
2,200.0	2,175.7	2,192.8	2,145.2	6.3	8.3	18.51	-207.5	327.5	124.9	116.6	8.31	15.033			
2,300.0	2,273.8	2,292.6	2,241.7	6.6	8.8	18.33	-220.2	349.2	131.4	122.7	8.70	15.103			
2,400.0	2,372.0	2,392.4	2,338.3	7.0	9.3	18.18	-233.0	370.9	138.0	128.9	9.10	15.168			
2,500.0	2,470.2	2,492.2	2,434.8	7.4	9.7	18.03	-245.7	392.7	144.5	135.0	9.49	15.228			
2,600.0	2,568.4	2,591.9	2,531.4	7.7	10.2	17.90	-258.4	414.4	151.1	141.2	9.88	15.284			
2,700.0	2,666.6	2,691.7	2,628.0	8.1	10.7	17.79	-271.2	436.1	157.6	147.3	10.28	15.335			
2,800.0	2,764.7	2,791.5	2,724.5	8.5	11.2	17.68	-283.9	457.8	164.2	153.5	10.67	15.383			
2,900.0	2,862.9	2,891.3	2,821.1	8.9	11.7	17.57	-296.6	479.6	170.7	159.6	11.06	15.428			
3,000.0	2,961.1	2,991.1	2,917.6	9.3	12.1	17.48	-309.4	501.3	177.2	165.8	11.46	15.470			
3,100.0	3,059.3	3,090.9	3,014.2	9.6	12.6	17.39	-322.1	523.0	183.8	171.9	11.85	15.509			
3,200.0	3,157.4	3,190.7	3,110.7	10.0	13.1	17.31	-334.8	544.8	190.3	178.1	12.24	15.546			
3,300.0	3,255.6	3,290.4	3,207.3	10.4	13.6	17.24	-347.6	566.5	196.9	184.3	12.64	15.581			
3,400.0	3,353.8	3,390.2	3,303.8	10.8	14.1	17.17	-360.3	588.2	203.4	190.4	13.03	15.613			
3,500.0	3,452.0	3,490.0	3,400.4	11.1	14.6	17.10	-373.0	609.9	210.0	196.6	13.42	15.644			
3,600.0	3,550.1	3,589.8	3,496.9	11.5	15.0	17.04	-385.8	631.7	216.6	202.7	13.82	15.674			
3,700.0	3,648.3	3,689.6	3,593.5	11.9	15.5	16.98	-398.5	653.4	223.1	208.9	14.21	15.701			
3,800.0	3,746.5	3,789.4	3,690.1	12.3	16.0	16.92	-411.2	675.1	229.7	215.1	14.60	15.728			
3,900.0	3,844.7	3,889.2	3,786.6	12.6	16.5	16.87	-424.0	696.9	236.2	221.2	14.99	15.753			
4,000.0	3,942.9	3,988.9	3,883.2	13.0	17.0	16.82	-436.7	718.6	242.8	227.4	15.39	15.777			
4,100.0	4,041.0	4,088.7	3,979.7	13.4	17.4	16.78	-449.4	740.3	249.3	233.5	15.78	15.799			
4,200.0	4,139.2	4,188.5	4,076.3	13.8	17.9	16.73	-462.2	762.0	255.9	239.7	16.17	15.821			
4,300.0	4,237.4	4,288.3	4,172.8	14.2	18.4	16.69	-474.9	783.8	262.4	245.9	16.56	15.842			
4,400.0	4,335.6	4,388.1	4,269.4	14.5	18.9	16.65	-487.6	805.5	269.0	252.0	16.96	15.861			
4,500.0	4,433.7	4,487.9	4,365.9	14.9	19.4	16.61	-500.4	827.2	275.5	258.2	17.35	15.880			
4,600.0	4,531.9	4,587.6	4,462.5	15.3	19.8	16.57	-513.1	849.0	282.1	264.3	17.74	15.898			
4,700.0	4,630.1	4,687.4	4,559.0	15.7	20.3	16.54	-525.8	870.7	288.6	270.5	18.13	15.916			
4,800.0	4,728.3	4,787.2	4,655.6	16.0	20.8	16.51	-538.6	892.4	295.2	276.7	18.53	15.932			
4,900.0	4,826.4	4,887.0	4,752.2	16.4	21.3	16.47	-551.3	914.1	301.7	282.8	18.92	15.948			
5,000.0	4,924.6	4,986.8	4,848.7	16.8	21.8	16.44	-564.0	935.9	308.3	289.0	19.31	15.964			

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 LR06B D21 595
Project:	Garfield County	TVD Reference:	KBE @ 8278.0ft (Original Well Elev)
Reference Site:	D21 595 Pad	MD Reference:	KBE @ 8278.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	LR06B D21 595	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 #2	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				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	5,022.8	5,086.6	4,945.3	17.2	22.3	16.41	-576.8	957.6	314.8	295.1	19.70	15.978			
5,200.0	5,121.0	5,186.4	5,041.8	17.6	22.7	16.39	-589.5	979.3	321.4	301.3	20.10	15.992			
5,300.0	5,219.2	5,286.1	5,138.4	17.9	23.2	16.36	-602.2	1,001.1	327.9	307.5	20.49	16.006			
5,400.0	5,317.3	5,385.9	5,234.9	18.3	23.7	16.33	-615.0	1,022.8	334.5	313.6	20.88	16.019			
5,500.0	5,415.5	5,485.7	5,331.5	18.7	24.2	16.31	-627.7	1,044.5	341.1	319.8	21.27	16.032			
5,600.0	5,513.7	5,585.5	5,428.0	19.1	24.7	16.28	-640.4	1,066.2	347.6	325.9	21.67	16.044			
5,700.0	5,611.9	5,685.3	5,524.6	19.5	25.2	16.26	-653.2	1,088.0	354.2	332.1	22.06	16.056			
5,800.0	5,710.0	5,785.1	5,621.1	19.8	25.6	16.24	-665.9	1,109.7	360.7	338.3	22.45	16.068			
5,900.0	5,808.2	5,884.8	5,717.7	20.2	26.1	16.22	-678.6	1,131.4	367.3	344.4	22.84	16.079			
6,000.0	5,906.4	5,984.6	5,814.3	20.6	26.6	16.20	-691.4	1,153.1	373.8	350.6	23.23	16.089			
6,100.0	6,004.6	6,084.4	5,910.8	21.0	27.1	16.18	-704.1	1,174.9	380.4	356.8	23.63	16.100			
6,200.0	6,102.7	6,184.2	6,007.4	21.3	27.6	16.16	-716.8	1,196.6	386.9	362.9	24.02	16.110			
6,300.0	6,200.9	6,284.0	6,103.9	21.7	28.0	16.14	-729.6	1,218.3	393.5	369.1	24.41	16.119			
6,400.0	6,299.1	6,383.8	6,200.5	22.1	28.5	16.12	-742.3	1,240.1	400.0	375.2	24.80	16.129			
6,500.0	6,397.3	6,483.6	6,297.0	22.5	29.0	16.10	-755.0	1,261.8	406.6	381.4	25.20	16.138			
6,600.0	6,495.5	6,583.3	6,393.6	22.9	29.5	16.09	-767.8	1,283.5	413.1	387.6	25.59	16.147			
6,700.0	6,593.6	6,683.1	6,490.1	23.2	30.0	16.07	-780.5	1,305.2	419.7	393.7	25.98	16.155			
6,800.0	6,691.8	6,782.9	6,586.7	23.6	30.5	16.06	-793.2	1,327.0	426.3	399.9	26.37	16.164			
6,900.0	6,790.0	6,882.7	6,683.2	24.0	30.9	16.04	-806.0	1,348.7	432.8	406.0	26.76	16.172			
7,000.0	6,888.2	6,982.5	6,779.8	24.4	31.4	16.03	-818.7	1,370.4	439.4	412.2	27.16	16.180			
7,100.0	6,986.3	7,082.3	6,876.4	24.8	31.9	16.01	-831.4	1,392.2	445.9	418.4	27.55	16.187			
7,200.0	7,084.5	7,182.1	6,972.9	25.1	32.4	16.00	-844.2	1,413.9	452.5	424.5	27.94	16.195			
7,300.0	7,182.7	7,281.8	7,069.5	25.5	32.9	15.98	-856.9	1,435.6	459.0	430.7	28.33	16.202			
7,400.0	7,280.9	7,381.6	7,166.0	25.9	33.3	15.97	-869.6	1,457.3	465.6	436.9	28.72	16.209			
7,500.0	7,379.1	7,481.4	7,262.6	26.3	33.8	15.96	-882.4	1,479.1	472.1	443.0	29.12	16.216			
7,600.0	7,477.2	7,581.2	7,359.1	26.6	34.3	15.94	-895.1	1,500.8	478.7	449.2	29.51	16.223			
7,700.0	7,575.4	7,681.0	7,455.7	27.0	34.8	15.93	-907.8	1,522.5	485.2	455.3	29.90	16.229			
7,800.0	7,673.6	7,780.8	7,552.2	27.4	35.3	15.92	-920.6	1,544.3	491.8	461.5	30.29	16.236			
7,900.0	7,771.8	7,880.5	7,648.8	27.8	35.8	15.91	-933.3	1,566.0	498.4	467.7	30.68	16.242			
8,000.0	7,869.9	7,980.3	7,745.3	28.2	36.2	15.90	-946.0	1,587.7	504.9	473.8	31.08	16.248			
8,100.0	7,968.1	8,080.1	7,841.9	28.5	36.7	15.89	-958.8	1,609.4	511.5	480.0	31.47	16.254			
8,200.0	8,066.3	8,179.9	7,938.5	28.9	37.2	15.88	-971.5	1,631.2	518.0	486.2	31.86	16.259			
8,300.0	8,164.5	8,279.7	8,035.0	29.3	37.7	15.87	-984.2	1,652.9	524.6	492.3	32.25	16.265			
8,400.0	8,262.6	8,382.6	8,134.6	29.7	38.2	15.86	-997.0	1,675.3	531.1	498.4	32.65	16.266			
8,500.0	8,361.1	8,504.7	8,253.5	30.0	38.7	15.89	-1,011.3	1,699.1	536.5	503.5	33.07	16.226			
8,600.0	8,460.1	8,627.1	8,373.8	30.3	39.1	15.91	-1,022.7	1,718.5	541.1	507.7	33.44	16.183			
8,700.0	8,559.6	8,749.8	8,495.3	30.5	39.4	15.92	-1,031.5	1,733.5	544.9	511.2	33.77	16.136			
8,800.0	8,659.3	8,872.6	8,617.5	30.7	39.7	15.92	-1,037.7	1,744.0	547.9	513.8	34.07	16.084			
8,900.0	8,759.2	8,995.7	8,740.3	30.8	39.8	15.90	-1,041.2	1,750.1	550.0	515.7	34.32	16.027			
9,000.0	8,859.2	9,114.7	8,859.4	30.9	39.9	-107.66	-1,042.1	1,751.6	551.0	516.4	34.59	15.928			
9,100.0	8,959.2	9,215.5	8,960.1	30.9	40.0	-107.67	-1,042.2	1,751.3	551.0	516.1	34.89	15.792			
9,200.0	9,059.2	9,316.2	9,060.8	31.0	40.0	-107.69	-1,042.6	1,750.7	551.1	515.9	35.19	15.660			
9,300.0	9,159.2	9,416.9	9,161.5	31.1	40.1	-107.70	-1,043.2	1,749.6	551.1	515.6	35.49	15.530			
9,400.0	9,259.2	9,516.9	9,261.5	31.2	40.2	-107.70	-1,043.9	1,748.4	551.1	515.3	35.79	15.399			
9,500.0	9,359.2	9,616.9	9,361.5	31.3	40.2	-107.70	-1,044.6	1,747.2	551.1	515.0	36.09	15.270			
9,600.0	9,459.2	9,716.9	9,461.5	31.4	40.3	-107.69	-1,045.3	1,746.0	551.1	514.7	36.40	15.142			
9,700.0	9,559.2	9,816.9	9,561.5	31.4	40.4	-107.69	-1,046.0	1,744.8	551.1	514.4	36.70	15.016			
9,800.0	9,659.2	9,916.9	9,661.5	31.5	40.4	-107.69	-1,046.6	1,743.6	551.1	514.1	37.01	14.892			
9,900.0	9,759.2	10,016.9	9,761.5	31.6	40.5	-107.69	-1,047.3	1,742.4	551.1	513.8	37.31	14.769			
10,000.0	9,859.2	10,116.9	9,861.5	31.7	40.5	-107.69	-1,048.0	1,741.2	551.1	513.5	37.62	14.648			
10,100.0	9,959.2	10,216.9	9,961.5	31.8	40.6	-107.69	-1,048.7	1,740.0	551.1	513.2	37.93	14.529			
10,200.0	10,059.1	10,316.9	10,061.5	31.9	40.7	-107.69	-1,049.4	1,738.8	551.1	512.9	38.24	14.412			

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 LR06B D21 595
Project:	Garfield County	TVD Reference:	KBE @ 8278.0ft (Original Well Elev)
Reference Site:	D21 595 Pad	MD Reference:	KBE @ 8278.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	LR06B D21 595	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 #2	Offset TVD Reference:	Offset Datum

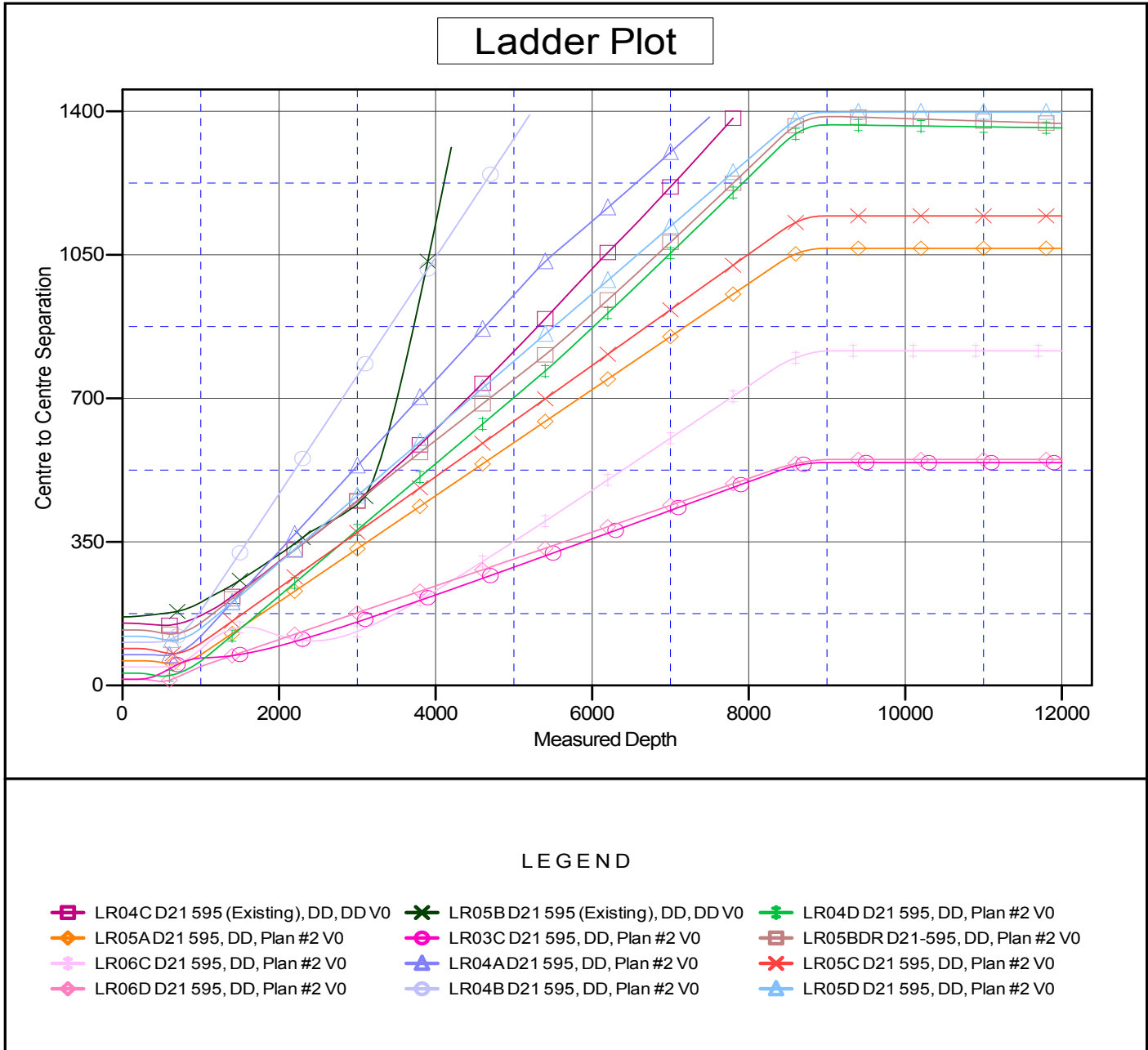
Offset Design													Offset Site Error:	0.0 ft	
Survey Program: 0-MWD													Offset Well Error:		0.0 ft
Reference				Offset			Semi Major Axis			Distance			Total Uncertainty Axis	Separation Factor	Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)					
10,300.0	10,159.1	10,416.9	10,161.4	31.9	40.7	-107.69	-1,050.1	1,737.6	551.1	512.6	38.55	14.296			
10,400.0	10,259.1	10,516.9	10,261.4	32.0	40.8	-107.69	-1,050.8	1,736.4	551.1	512.2	38.86	14.182			
10,500.0	10,359.1	10,616.9	10,361.4	32.1	40.9	-107.69	-1,051.5	1,735.2	551.1	511.9	39.17	14.069			
10,600.0	10,459.1	10,716.9	10,461.4	32.2	41.0	-107.69	-1,052.2	1,734.0	551.1	511.6	39.48	13.958			
10,700.0	10,559.1	10,816.9	10,561.4	32.3	41.0	-107.69	-1,052.9	1,732.8	551.1	511.3	39.80	13.848			
10,800.0	10,659.1	10,916.9	10,661.4	32.4	41.1	-107.69	-1,053.6	1,731.6	551.1	511.0	40.11	13.740			
10,900.0	10,759.1	11,016.9	10,761.4	32.5	41.2	-107.69	-1,054.3	1,730.4	551.1	510.7	40.42	13.633			
11,000.0	10,859.1	11,116.9	10,861.4	32.6	41.2	-107.69	-1,055.0	1,729.2	551.1	510.4	40.74	13.528			
11,100.0	10,959.1	11,216.9	10,961.4	32.7	41.3	-107.69	-1,055.7	1,728.0	551.1	510.1	41.05	13.424			
11,200.0	11,059.0	11,316.9	11,061.4	32.8	41.4	-107.69	-1,056.3	1,726.8	551.1	509.7	41.37	13.322			
11,300.0	11,159.0	11,416.9	11,161.4	32.9	41.5	-107.69	-1,057.0	1,725.6	551.1	509.4	41.69	13.220			
11,400.0	11,259.0	11,516.9	11,261.3	32.9	41.5	-107.69	-1,057.7	1,724.4	551.1	509.1	42.00	13.121			
11,500.0	11,359.0	11,616.9	11,361.3	33.0	41.6	-107.69	-1,058.4	1,723.2	551.1	508.8	42.32	13.022			
11,600.0	11,459.0	11,716.9	11,461.3	33.1	41.7	-107.69	-1,059.1	1,722.0	551.1	508.5	42.64	12.925			
11,700.0	11,559.0	11,816.9	11,561.3	33.2	41.8	-107.69	-1,059.8	1,720.8	551.1	508.2	42.96	12.829			
11,800.0	11,659.0	11,916.9	11,661.3	33.3	41.8	-107.69	-1,060.5	1,719.6	551.1	507.8	43.28	12.735			
11,900.0	11,759.0	12,016.9	11,761.3	33.4	41.9	-107.69	-1,061.2	1,718.4	551.1	507.5	43.60	12.641			
12,000.0	11,859.0	12,116.9	11,861.3	33.5	42.0	-107.69	-1,061.9	1,717.2	551.1	507.2	43.92	12.549			
12,002.0	11,861.0	12,118.9	11,863.3	33.5	42.0	-107.69	-1,061.9	1,717.2	551.1	507.2	43.92	12.547			

Cathedral Energy Services

Anticollision Report

Company: Berry Petroleum Company (NAD 83)	Local Co-ordinate Reference: Well LR06B D21 595	
Project: Garfield County	TVD Reference: KBE @ 8278.0ft (Original Well Elev)	
Reference Site: D21 595 Pad	MD Reference: KBE @ 8278.0ft (Original Well Elev)	
Site Error: 0.0ft	North Reference: True	
Reference Well: LR06B D21 595	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 #2	Offset TVD Reference: Offset Datum	

Reference Depths are relative to KBE @ 8278.0ft (Original Well Elev) Coordinates are relative to: LR06B D21 595
 Offset Depths are relative to Offset Datum Coordinate System is US State Plane 1983, Colorado Central Zone
 Central Meridian is -105.500000 ° Grid Convergence at Surface is: -1.62°



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