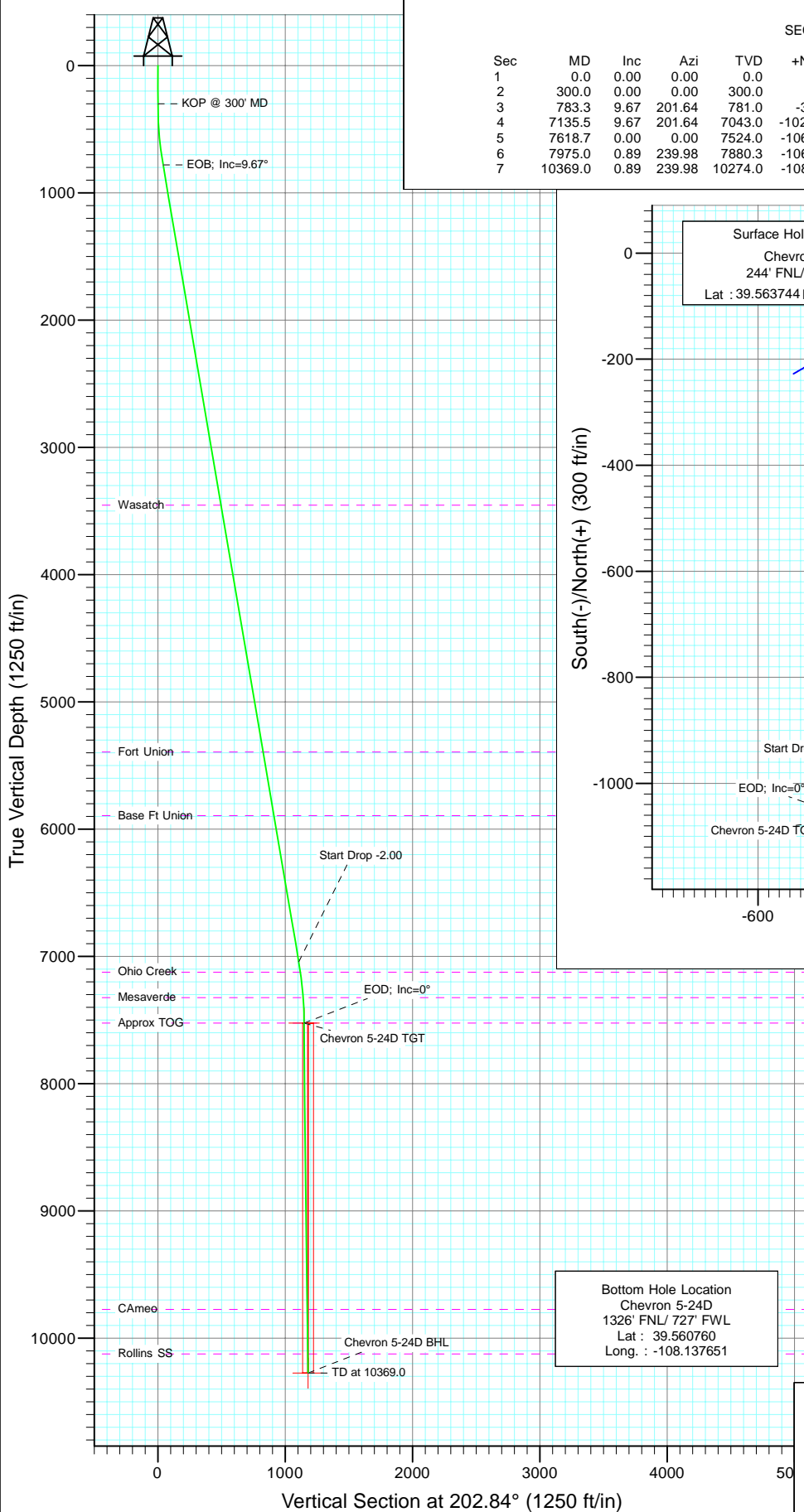
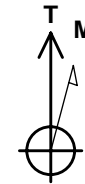
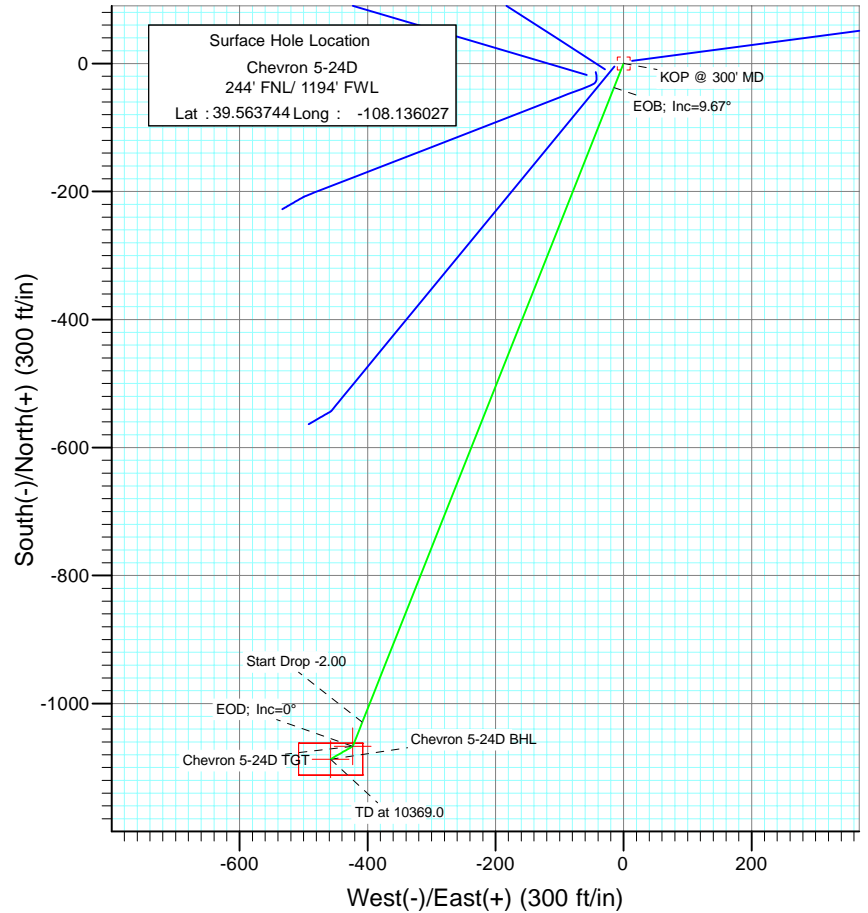


Project: Garfield County
Site: Chevron D05 696 Pad
Well: Chevron 5-24D
Wellbore: DD
Design: Plan #2



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	300.0	0.00	0.00	300.0	0.0	0.0	0.00	0.00	0.0	
3	783.3	9.67	201.64	781.0	-37.8	-15.0	2.00	201.64	40.7	
4	7135.5	9.67	201.64	7043.0	-1029.1	-408.3	0.00	0.00	1106.9	
5	7618.7	0.00	0.00	7524.0	-1066.9	-423.2	2.00	180.00	1147.5	Chevron 5-24D TGT
6	7975.0	0.89	239.98	7880.3	-1068.3	-425.6	0.25	239.98	1149.7	
7	10369.0	0.89	239.98	10274.0	-1086.9	-457.9	0.00	0.00	1179.4	Chevron 5-24D BHL



Azimuths to True North
Magnetic North: 10.59°

Magnetic Field
Strength: 52430.6snT
Dip Angle: 65.82°
Date: 12/14/2009
Model: IGRF200510

FORMATION TOP DETAILS

TVDPath	MDPath	Formation
3454.0	3494.8	Wasatch
5394.0	5462.7	Fort Union
5894.0	5969.9	Base Ft Union
7124.0	7217.4	Ohio Creek
7324.0	7418.6	Mesaverde
7524.0	7618.7	Approx TOG
9774.0	9869.0	Cameo
10124.0	10219.0	Rollins SS

DESIGN DETAILS: Plan #2

95XXX; BH
KBE @ 8160.0ft (Original Well Elev)

Target	Azimuth	Origin	N/S	E/W	From TVD
Chevron 5-24D BHL	202.84	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 Chevron 5-24D
Company:	Berry Petroleum Company (NAD 83)	TVD Reference:	KBE @ 8160.0ft (Original Well Elev)
Project:	Garfield County	MD Reference:	KBE @ 8160.0ft (Original Well Elev)
Site:	Chevron D05 696 Pad	North Reference:	True
Well:	Chevron 5-24D	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		Chevron D05 696 Pad			
Site Position:		Northing:	1,641,014.90 ft	Latitude:	39.563760
From:	Lat/Long	Easting:	2,256,856.29 ft	Longitude:	-108.136313
Position Uncertainty:	0.0 ft	Slot Radius:	13.200 in	Grid Convergence:	-1.66 °

Well	Chevron 5-24D					
Well Position	+N/-S	0.0 ft	Northing:	1,641,006.73 ft	Latitude:	39.563744
	+E/-W	0.0 ft	Easting:	2,256,936.72 ft	Longitude:	-108.136027
Position Uncertainty		0.0 ft	Wellhead Elevation:	ft	Ground Level:	8,142.0 ft

Wellbore	DD				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF200510	12/14/2009	10.59	65.82	52,431

Design	Plan #2			
Audit Notes:				
Version:	Phase:	PLAN	Tie On Depth:	0.0
Vertical Section:	Depth From (TVD) (ft)	+N/-S (ft)	+E/-W (ft)	Direction (°)
	0.0	0.0	0.0	202.84

Plan Sections										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	TFO (°)	Target
0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.00	0.00	
300.0	0.00	0.00	300.0	0.0	0.0	0.00	0.00	0.00	0.00	
783.3	9.67	201.64	781.0	-37.8	-15.0	2.00	2.00	0.00	201.64	
7,135.5	9.67	201.64	7,043.0	-1,029.1	-408.3	0.00	0.00	0.00	0.00	
7,618.7	0.00	0.00	7,524.0	-1,066.9	-423.2	2.00	-2.00	0.00	180.00	Chevron 5-24D TGT
7,975.0	0.89	239.98	7,880.3	-1,068.3	-425.6	0.25	0.25	-33.68	239.98	
10,369.0	0.89	239.98	10,274.0	-1,086.9	-457.9	0.00	0.00	0.00	0.00	Chevron 5-24D BHL

Cathedral Energy Services

Planning Report

Database:	EDM 5000.1 US Multi Users DB	Local Co-ordinate Reference:	Well Chevron 5-24D
Company:	Berry Petroleum Company (NAD 83)	TVD Reference:	KBE @ 8160.0ft (Original Well Elev)
Project:	Garfield County	MD Reference:	KBE @ 8160.0ft (Original Well Elev)
Site:	Chevron D05 696 Pad	North Reference:	True
Well:	Chevron 5-24D	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	KOP @ 300' MD
330.0	0.60	201.64	330.0	-0.1	-0.1	0.2	2.00	2.00	
360.0	1.20	201.64	360.0	-0.6	-0.2	0.6	2.00	2.00	
390.0	1.80	201.64	390.0	-1.3	-0.5	1.4	2.00	2.00	
420.0	2.40	201.64	420.0	-2.3	-0.9	2.5	2.00	2.00	
450.0	3.00	201.64	449.9	-3.6	-1.4	3.9	2.00	2.00	
480.0	3.60	201.64	479.9	-5.3	-2.1	5.7	2.00	2.00	
510.0	4.20	201.64	509.8	-7.2	-2.8	7.7	2.00	2.00	
540.0	4.80	201.64	539.7	-9.3	-3.7	10.0	2.00	2.00	
570.0	5.40	201.64	569.6	-11.8	-4.7	12.7	2.00	2.00	
600.0	6.00	201.64	599.5	-14.6	-5.8	15.7	2.00	2.00	
630.0	6.60	201.64	629.3	-17.6	-7.0	19.0	2.00	2.00	
660.0	7.20	201.64	659.1	-21.0	-8.3	22.6	2.00	2.00	
690.0	7.80	201.64	688.8	-24.6	-9.8	26.5	2.00	2.00	
720.0	8.40	201.64	718.5	-28.6	-11.3	30.7	2.00	2.00	
750.0	9.00	201.64	748.2	-32.8	-13.0	35.3	2.00	2.00	
780.0	9.60	201.64	777.8	-37.3	-14.8	40.1	2.00	2.00	
783.3	9.67	201.64	781.0	-37.8	-15.0	40.7	2.00	2.00	EOB; Inc=9.67°
810.0	9.67	201.64	807.3	-42.0	-16.7	45.1	0.00	0.00	
840.0	9.67	201.64	836.9	-46.7	-18.5	50.2	0.00	0.00	
870.0	9.67	201.64	866.5	-51.3	-20.4	55.2	0.00	0.00	
900.0	9.67	201.64	896.1	-56.0	-22.2	60.2	0.00	0.00	
930.0	9.67	201.64	925.6	-60.7	-24.1	65.3	0.00	0.00	
960.0	9.67	201.64	955.2	-65.4	-25.9	70.3	0.00	0.00	
990.0	9.67	201.64	984.8	-70.1	-27.8	75.4	0.00	0.00	
1,020.0	9.67	201.64	1,014.4	-74.7	-29.7	80.4	0.00	0.00	
1,050.0	9.67	201.64	1,043.9	-79.4	-31.5	85.4	0.00	0.00	
1,080.0	9.67	201.64	1,073.5	-84.1	-33.4	90.5	0.00	0.00	
1,110.0	9.67	201.64	1,103.1	-88.8	-35.2	95.5	0.00	0.00	
1,140.0	9.67	201.64	1,132.6	-93.5	-37.1	100.5	0.00	0.00	
1,170.0	9.67	201.64	1,162.2	-98.2	-38.9	105.6	0.00	0.00	
1,200.0	9.67	201.64	1,191.8	-102.8	-40.8	110.6	0.00	0.00	
1,230.0	9.67	201.64	1,221.4	-107.5	-42.7	115.6	0.00	0.00	
1,260.0	9.67	201.64	1,250.9	-112.2	-44.5	120.7	0.00	0.00	
1,290.0	9.67	201.64	1,280.5	-116.9	-46.4	125.7	0.00	0.00	
1,320.0	9.67	201.64	1,310.1	-121.6	-48.2	130.7	0.00	0.00	
1,350.0	9.67	201.64	1,339.7	-126.2	-50.1	135.8	0.00	0.00	
1,380.0	9.67	201.64	1,369.2	-130.9	-51.9	140.8	0.00	0.00	
1,410.0	9.67	201.64	1,398.8	-135.6	-53.8	145.9	0.00	0.00	
1,440.0	9.67	201.64	1,428.4	-140.3	-55.7	150.9	0.00	0.00	
1,470.0	9.67	201.64	1,458.0	-145.0	-57.5	155.9	0.00	0.00	
1,500.0	9.67	201.64	1,487.5	-149.6	-59.4	161.0	0.00	0.00	

Cathedral Energy Services

Planning Report

Database:	EDM 5000.1 US Multi Users DB	Local Co-ordinate Reference:	Well Chevron 5-24D
Company:	Berry Petroleum Company (NAD 83)	TVD Reference:	KBE @ 8160.0ft (Original Well Elev)
Project:	Garfield County	MD Reference:	KBE @ 8160.0ft (Original Well Elev)
Site:	Chevron D05 696 Pad	North Reference:	True
Well:	Chevron 5-24D	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
1,530.0	9.67	201.64	1,517.1	-154.3	-61.2	166.0	0.00	0.00	
1,560.0	9.67	201.64	1,546.7	-159.0	-63.1	171.0	0.00	0.00	
1,590.0	9.67	201.64	1,576.3	-163.7	-64.9	176.1	0.00	0.00	
1,620.0	9.67	201.64	1,605.8	-168.4	-66.8	181.1	0.00	0.00	
1,650.0	9.67	201.64	1,635.4	-173.1	-68.7	186.1	0.00	0.00	
1,680.0	9.67	201.64	1,665.0	-177.7	-70.5	191.2	0.00	0.00	
1,710.0	9.67	201.64	1,694.6	-182.4	-72.4	196.2	0.00	0.00	
1,740.0	9.67	201.64	1,724.1	-187.1	-74.2	201.2	0.00	0.00	
1,770.0	9.67	201.64	1,753.7	-191.8	-76.1	206.3	0.00	0.00	
1,800.0	9.67	201.64	1,783.3	-196.5	-77.9	211.3	0.00	0.00	
1,830.0	9.67	201.64	1,812.9	-201.1	-79.8	216.4	0.00	0.00	
1,860.0	9.67	201.64	1,842.4	-205.8	-81.7	221.4	0.00	0.00	
1,890.0	9.67	201.64	1,872.0	-210.5	-83.5	226.4	0.00	0.00	
1,920.0	9.67	201.64	1,901.6	-215.2	-85.4	231.5	0.00	0.00	
1,950.0	9.67	201.64	1,931.2	-219.9	-87.2	236.5	0.00	0.00	
1,980.0	9.67	201.64	1,960.7	-224.6	-89.1	241.5	0.00	0.00	
2,010.0	9.67	201.64	1,990.3	-229.2	-90.9	246.6	0.00	0.00	
2,040.0	9.67	201.64	2,019.9	-233.9	-92.8	251.6	0.00	0.00	
2,070.0	9.67	201.64	2,049.4	-238.6	-94.7	256.6	0.00	0.00	
2,100.0	9.67	201.64	2,079.0	-243.3	-96.5	261.7	0.00	0.00	
2,130.0	9.67	201.64	2,108.6	-248.0	-98.4	266.7	0.00	0.00	
2,160.0	9.67	201.64	2,138.2	-252.6	-100.2	271.7	0.00	0.00	
2,190.0	9.67	201.64	2,167.7	-257.3	-102.1	276.8	0.00	0.00	
2,220.0	9.67	201.64	2,197.3	-262.0	-103.9	281.8	0.00	0.00	
2,250.0	9.67	201.64	2,226.9	-266.7	-105.8	286.8	0.00	0.00	
2,280.0	9.67	201.64	2,256.5	-271.4	-107.7	291.9	0.00	0.00	
2,310.0	9.67	201.64	2,286.0	-276.1	-109.5	296.9	0.00	0.00	
2,340.0	9.67	201.64	2,315.6	-280.7	-111.4	302.0	0.00	0.00	
2,370.0	9.67	201.64	2,345.2	-285.4	-113.2	307.0	0.00	0.00	
2,400.0	9.67	201.64	2,374.8	-290.1	-115.1	312.0	0.00	0.00	
2,430.0	9.67	201.64	2,404.3	-294.8	-116.9	317.1	0.00	0.00	
2,460.0	9.67	201.64	2,433.9	-299.5	-118.8	322.1	0.00	0.00	
2,490.0	9.67	201.64	2,463.5	-304.1	-120.7	327.1	0.00	0.00	

Targets

Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (ft)	Easting (ft)	Latitude	Longitude
- hit/miss target									
- Shape									
Chevron 5-24D TGT	0.00	0.00	7,524.0	-1,066.9	-423.2	1,639,952.56	2,256,482.70	39.560815	-108.137528
- plan misses target center by 5126.6ft at 2490.0ft MD (2463.5 TVD, -304.1 N, -120.7 E)									
- Point									
Chevron 5-24D BHL	0.00	0.00	10,274.0	-1,086.9	-457.9	1,639,933.57	2,256,447.51	39.560760	-108.137651
- plan misses target center by 7856.9ft at 2490.0ft MD (2463.5 TVD, -304.1 N, -120.7 E)									
- Rectangle (sides W50.0 H100.0 D0.0)									

Cathedral Energy Services

Planning Report

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Project:	Garfield County	MD Reference:	KBE @ 8160.0ft (Original Well Elev)
Site:	Chevron D05 696 Pad	North Reference:	True
Well:	Chevron 5-24D	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	9.67	201.64	2,473.3	-305.7	-121.3	328.8	0.00	0.00	
2,600.0	9.67	201.64	2,571.9	-321.3	-127.5	345.6	0.00	0.00	
2,700.0	9.67	201.64	2,670.5	-336.9	-133.7	362.4	0.00	0.00	
2,800.0	9.67	201.64	2,769.1	-352.5	-139.8	379.2	0.00	0.00	
2,900.0	9.67	201.64	2,867.7	-368.1	-146.0	396.0	0.00	0.00	
3,000.0	9.67	201.64	2,966.2	-383.7	-152.2	412.7	0.00	0.00	
3,100.0	9.67	201.64	3,064.8	-399.3	-158.4	429.5	0.00	0.00	
3,200.0	9.67	201.64	3,163.4	-414.9	-164.6	446.3	0.00	0.00	
3,300.0	9.67	201.64	3,262.0	-430.6	-170.8	463.1	0.00	0.00	
3,400.0	9.67	201.64	3,360.6	-446.2	-177.0	479.9	0.00	0.00	
3,494.8	9.67	201.64	3,454.0	-460.9	-182.9	495.8	0.00	0.00	Wasatch
3,500.0	9.67	201.64	3,459.2	-461.8	-183.2	496.7	0.00	0.00	
3,600.0	9.67	201.64	3,557.7	-477.4	-189.4	513.4	0.00	0.00	
3,700.0	9.67	201.64	3,656.3	-493.0	-195.6	530.2	0.00	0.00	
3,800.0	9.67	201.64	3,754.9	-508.6	-201.8	547.0	0.00	0.00	
3,900.0	9.67	201.64	3,853.5	-524.2	-207.9	563.8	0.00	0.00	
4,000.0	9.67	201.64	3,952.1	-539.8	-214.1	580.6	0.00	0.00	
4,100.0	9.67	201.64	4,050.6	-555.4	-220.3	597.4	0.00	0.00	
4,200.0	9.67	201.64	4,149.2	-571.0	-226.5	614.2	0.00	0.00	
4,300.0	9.67	201.64	4,247.8	-586.6	-232.7	630.9	0.00	0.00	
4,400.0	9.67	201.64	4,346.4	-602.2	-238.9	647.7	0.00	0.00	
4,500.0	9.67	201.64	4,445.0	-617.8	-245.1	664.5	0.00	0.00	
4,600.0	9.67	201.64	4,543.5	-633.4	-251.3	681.3	0.00	0.00	
4,700.0	9.67	201.64	4,642.1	-649.0	-257.5	698.1	0.00	0.00	
4,800.0	9.67	201.64	4,740.7	-664.6	-263.7	714.9	0.00	0.00	
4,900.0	9.67	201.64	4,839.3	-680.2	-269.9	731.7	0.00	0.00	
5,000.0	9.67	201.64	4,937.9	-695.8	-276.0	748.4	0.00	0.00	
5,100.0	9.67	201.64	5,036.4	-711.5	-282.2	765.2	0.00	0.00	
5,200.0	9.67	201.64	5,135.0	-727.1	-288.4	782.0	0.00	0.00	
5,300.0	9.67	201.64	5,233.6	-742.7	-294.6	798.8	0.00	0.00	
5,400.0	9.67	201.64	5,332.2	-758.3	-300.8	815.6	0.00	0.00	
5,462.7	9.67	201.64	5,394.0	-768.1	-304.7	826.1	0.00	0.00	Fort Union
5,500.0	9.67	201.64	5,430.8	-773.9	-307.0	832.4	0.00	0.00	
5,600.0	9.67	201.64	5,529.3	-789.5	-313.2	849.1	0.00	0.00	
5,700.0	9.67	201.64	5,627.9	-805.1	-319.4	865.9	0.00	0.00	
5,800.0	9.67	201.64	5,726.5	-820.7	-325.6	882.7	0.00	0.00	
5,900.0	9.67	201.64	5,825.1	-836.3	-331.8	899.5	0.00	0.00	
5,969.9	9.67	201.64	5,894.0	-847.2	-336.1	911.2	0.00	0.00	Base Ft Union
6,000.0	9.67	201.64	5,923.7	-851.9	-338.0	916.3	0.00	0.00	
6,100.0	9.67	201.64	6,022.2	-867.5	-344.1	933.1	0.00	0.00	
6,200.0	9.67	201.64	6,120.8	-883.1	-350.3	949.9	0.00	0.00	
6,300.0	9.67	201.64	6,219.4	-898.7	-356.5	966.6	0.00	0.00	
6,400.0	9.67	201.64	6,318.0	-914.3	-362.7	983.4	0.00	0.00	
6,500.0	9.67	201.64	6,416.6	-929.9	-368.9	1,000.2	0.00	0.00	
6,600.0	9.67	201.64	6,515.1	-945.5	-375.1	1,017.0	0.00	0.00	
6,700.0	9.67	201.64	6,613.7	-961.1	-381.3	1,033.8	0.00	0.00	
6,800.0	9.67	201.64	6,712.3	-976.7	-387.5	1,050.6	0.00	0.00	
6,900.0	9.67	201.64	6,810.9	-992.4	-393.7	1,067.4	0.00	0.00	
7,000.0	9.67	201.64	6,909.5	-1,008.0	-399.9	1,084.1	0.00	0.00	
7,100.0	9.67	201.64	7,008.1	-1,023.6	-406.1	1,100.9	0.00	0.00	
7,135.5	9.67	201.64	7,043.0	-1,029.1	-408.3	1,106.9	0.00	0.00	Start Drop -2.00
7,200.0	8.37	201.64	7,106.7	-1,038.5	-412.0	1,117.0	2.00	-2.00	

Cathedral Energy Services

Planning Report

Database:	EDM 5000.1 US Multi Users DB	Local Co-ordinate Reference:	Well Chevron 5-24D
Company:	Berry Petroleum Company (NAD 83)	TVD Reference:	KBE @ 8160.0ft (Original Well Elev)
Project:	Garfield County	MD Reference:	KBE @ 8160.0ft (Original Well Elev)
Site:	Chevron D05 696 Pad	North Reference:	True
Well:	Chevron 5-24D	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
7,217.4	8.03	201.64	7,124.0	-1,040.8	-412.9	1,119.5	2.00	-2.00	Ohio Creek
7,300.0	6.37	201.64	7,205.9	-1,050.4	-416.7	1,129.8	2.00	-2.00	
7,400.0	4.37	201.64	7,305.5	-1,059.1	-420.2	1,139.2	2.00	-2.00	
7,418.6	4.00	201.64	7,324.0	-1,060.4	-420.7	1,140.5	2.00	-2.00	Mesaverde
7,500.0	2.37	201.64	7,405.3	-1,064.6	-422.3	1,145.1	2.00	-2.00	
7,600.0	0.37	201.64	7,505.3	-1,066.8	-423.2	1,147.5	2.00	-2.00	
7,618.7	0.00	0.00	7,524.0	-1,066.9	-423.2	1,147.5	2.00	-2.00	EOD; Inc=0° - Approx TOG - Chevron 5-24D TC
7,700.0	0.20	239.98	7,605.3	-1,067.0	-423.4	1,147.6	0.25	0.25	
7,800.0	0.45	239.98	7,705.3	-1,067.3	-423.9	1,148.1	0.25	0.25	
7,900.0	0.70	239.98	7,805.3	-1,067.8	-424.7	1,148.9	0.25	0.25	
7,975.0	0.89	239.98	7,880.3	-1,068.3	-425.6	1,149.7	0.25	0.25	
8,000.0	0.89	239.98	7,905.2	-1,068.5	-426.0	1,150.1	0.00	0.00	
8,100.0	0.89	239.98	8,005.2	-1,069.3	-427.3	1,151.3	0.00	0.00	
8,200.0	0.89	239.98	8,105.2	-1,070.0	-428.7	1,152.5	0.00	0.00	
8,300.0	0.89	239.98	8,205.2	-1,070.8	-430.0	1,153.8	0.00	0.00	
8,400.0	0.89	239.98	8,305.2	-1,071.6	-431.4	1,155.0	0.00	0.00	
8,500.0	0.89	239.98	8,405.2	-1,072.4	-432.7	1,156.2	0.00	0.00	
8,600.0	0.89	239.98	8,505.2	-1,073.1	-434.1	1,157.5	0.00	0.00	
8,700.0	0.89	239.98	8,605.2	-1,073.9	-435.4	1,158.7	0.00	0.00	
8,800.0	0.89	239.98	8,705.1	-1,074.7	-436.8	1,160.0	0.00	0.00	
8,900.0	0.89	239.98	8,805.1	-1,075.5	-438.1	1,161.2	0.00	0.00	
9,000.0	0.89	239.98	8,905.1	-1,076.3	-439.4	1,162.4	0.00	0.00	
9,100.0	0.89	239.98	9,005.1	-1,077.0	-440.8	1,163.7	0.00	0.00	
9,200.0	0.89	239.98	9,105.1	-1,077.8	-442.1	1,164.9	0.00	0.00	
9,300.0	0.89	239.98	9,205.1	-1,078.6	-443.5	1,166.2	0.00	0.00	
9,400.0	0.89	239.98	9,305.1	-1,079.4	-444.8	1,167.4	0.00	0.00	
9,500.0	0.89	239.98	9,405.1	-1,080.1	-446.2	1,168.6	0.00	0.00	
9,600.0	0.89	239.98	9,505.0	-1,080.9	-447.5	1,169.9	0.00	0.00	
9,700.0	0.89	239.98	9,605.0	-1,081.7	-448.9	1,171.1	0.00	0.00	
9,800.0	0.89	239.98	9,705.0	-1,082.5	-450.2	1,172.4	0.00	0.00	
9,869.0	0.89	239.98	9,774.0	-1,083.0	-451.1	1,173.2	0.00	0.00	Cameo
9,900.0	0.89	239.98	9,805.0	-1,083.3	-451.6	1,173.6	0.00	0.00	
10,000.0	0.89	239.98	9,905.0	-1,084.0	-452.9	1,174.8	0.00	0.00	
10,100.0	0.89	239.98	10,005.0	-1,084.8	-454.3	1,176.1	0.00	0.00	
10,200.0	0.89	239.98	10,105.0	-1,085.6	-455.6	1,177.3	0.00	0.00	
10,219.0	0.89	239.98	10,124.0	-1,085.7	-455.9	1,177.5	0.00	0.00	Rollins SS
10,300.0	0.89	239.98	10,205.0	-1,086.4	-456.9	1,178.6	0.00	0.00	
10,369.0	0.89	239.98	10,274.0	-1,086.9	-457.9	1,179.4	0.00	0.00	TD at 10369.0 - Chevron 5-24D BHL

Targets									
Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (ft)	Easting (ft)	Latitude	Longitude
- hit/miss target									
- Shape									
Chevron 5-24D TGT	0.00	0.00	7,524.0	-1,066.9	-423.2	1,639,952.56	2,256,482.70	39.560815	-108.137528
- plan hits target center									
- Point									
Chevron 5-24D BHL	0.00	0.00	10,274.0	-1,086.9	-457.9	1,639,933.57	2,256,447.51	39.560760	-108.137651
- plan hits target center									
- Rectangle (sides W50.0 H100.0 D0.0)									

Cathedral Energy Services

Planning Report

Database:	EDM 5000.1 US Multi Users DB	Local Co-ordinate Reference:	Well Chevron 5-24D
Company:	Berry Petroleum Company (NAD 83)	TVD Reference:	KBE @ 8160.0ft (Original Well Elev)
Project:	Garfield County	MD Reference:	KBE @ 8160.0ft (Original Well Elev)
Site:	Chevron D05 696 Pad	North Reference:	True
Well:	Chevron 5-24D	Survey Calculation Method:	Minimum Curvature
Wellbore:	DD		
Design:	Plan #2		

Formations						
Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)	
3,494.8	3,454.0	Wasatch		0.00		
5,462.7	5,394.0	Fort Union		0.00		
5,969.9	5,894.0	Base Ft Union		0.00		
7,217.4	7,124.0	Ohio Creek		0.00		
7,418.6	7,324.0	Mesaverde		0.00		
7,618.7	7,524.0	Approx TOG		0.00		
9,869.0	9,774.0	Cameo		0.00		
10,219.0	10,124.0	Rollins SS		0.00		

Plan Annotations					
Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates			
		+N/-S (ft)	+E/-W (ft)	Comment	
300.0	300.0	0.0	0.0	KOP @ 300' MD	
783.3	781.0	-37.8	-15.0	EOB; Inc=9.67°	
7,135.5	7,043.0	-1,029.1	-408.3	Start Drop -2.00	
7,618.7	7,524.0	-1,066.9	-423.2	EOD; Inc=0°	
10,369.0	10,274.0	-1,086.9	-457.9	TD at 10369.0	

Berry Petroleum Company (NAD 83)

**Garfield County
Chevron D05 696 Pad
Chevron 5-24D
DD
Plan #2**

Anticollision Report

22 November, 2010

Cathedral Energy Services

Anticollision Report

Company:	Berry Petroleum Company (NAD 83)	Local Co-ordinate Reference:	Well Chevron 5-24D
Project:	Garfield County	TVD Reference:	KBE @ 8160.0ft (Original Well Elev)
Reference Site:	Chevron D05 696 Pad	MD Reference:	KBE @ 8160.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Chevron 5-24D	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 1,221.6ft	Error Surface:	Elliptical Conic
Warning Levels Evaluated at:	2.00 Sigma		

Survey Tool Program		Date	11/22/2010		
From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description	
0.0	10,369.0	Plan #2 (DD)	MWD	Geolink MWD	

Summary						
Site Name	Reference	Offset	Distance		Separation	Warning
	Measured	Measured	Between	Between		
	Depth	Depth	Centres	Ellipses		
Offset Well - Wellbore - Design	(ft)	(ft)	(ft)	(ft)	Factor	
Chevron D05 696 Pad						
Chevron 35-1D - DD - Plan #4	200.0	200.0	30.4	29.8	47.910	CC, ES
Chevron 35-1D - DD - Plan #4	500.0	496.6	39.9	38.2	23.374	SF
Chevron 5-16D - DD - Plan #3	200.0	200.0	13.8	13.2	21.790	CC, ES
Chevron 5-16D - DD - Plan #3	300.0	299.5	15.6	14.6	15.806	SF
Chevron 5-26D - DD - Plan #2	200.0	200.0	15.1	14.5	23.828	CC, ES
Chevron 5-26D - DD - Plan #2	1,000.0	997.2	31.8	27.5	7.345	SF
Chevron 5-27D - DD - Plan #3	767.3	765.3	47.1	44.3	16.587	CC, ES
Chevron 5-27D - DD - Plan #3	900.0	896.1	52.2	48.8	15.294	SF
Chevron 5-28D - DD - Plan #4	665.8	662.2	43.3	40.9	18.209	CC
Chevron 5-28D - DD - Plan #4	700.0	695.9	43.4	40.9	17.166	ES
Chevron 5-28D - DD - Plan #4	1,000.0	993.6	55.2	51.0	13.304	SF

Cathedral Energy Services

Anticollision Report

Company:	Berry Petroleum Company (NAD 83)	Local Co-ordinate Reference:	Well Chevron 5-24D
Project:	Garfield County	TVD Reference:	KBE @ 8160.0ft (Original Well Elev)
Reference Site:	Chevron D05 696 Pad	MD Reference:	KBE @ 8160.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Chevron 5-24D	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	
0.0	0.0	0.0	0.0	0.0	0.0	-107.43	-9.1	-29.0	30.4				
100.0	100.0	100.0	100.0	0.1	0.1	-107.43	-9.1	-29.0	30.4	30.2	0.29	106.336	
200.0	200.0	200.0	200.0	0.3	0.3	-107.43	-9.1	-29.0	30.4	29.8	0.64	47.910 CC, ES	
300.0	300.0	299.3	299.3	0.5	0.5	-105.03	-8.2	-30.5	31.6	30.6	0.99	32.009	
400.0	400.0	398.3	398.1	0.7	0.7	61.97	-5.4	-34.8	34.4	33.1	1.34	25.640	
500.0	499.8	496.6	496.1	0.9	0.9	76.24	-0.8	-41.9	39.9	38.2	1.71	23.374 SF	
600.0	599.5	594.7	593.5	1.1	1.2	91.21	5.4	-51.5	50.2	48.1	2.09	24.023	
700.0	698.7	692.9	691.0	1.3	1.4	103.67	11.8	-61.4	64.0	61.5	2.51	25.534	
800.0	797.5	790.6	788.0	1.6	1.7	113.67	18.1	-71.3	81.0	78.1	2.95	27.443	
900.0	896.1	888.1	884.8	1.9	1.9	120.86	24.5	-81.1	100.3	96.9	3.41	29.453	
1,000.0	994.6	985.6	981.6	2.3	2.2	125.71	30.8	-90.9	120.7	116.8	3.86	31.239	
1,100.0	1,093.2	1,083.1	1,078.3	2.6	2.4	129.15	37.1	-100.8	141.7	137.3	4.32	32.780	
1,200.0	1,191.8	1,180.5	1,175.1	2.9	2.7	131.70	43.5	-110.6	163.0	158.2	4.78	34.101	
1,300.0	1,290.4	1,278.0	1,271.9	3.3	3.0	133.66	49.8	-120.5	184.5	179.3	5.24	35.237	
1,400.0	1,389.0	1,375.5	1,368.6	3.6	3.2	135.21	56.2	-130.3	206.3	200.6	5.69	36.221	
1,500.0	1,487.5	1,473.0	1,465.4	3.9	3.5	136.46	62.5	-140.1	228.1	221.9	6.15	37.077	
1,600.0	1,586.1	1,570.4	1,562.2	4.3	3.8	137.50	68.9	-150.0	250.0	243.4	6.61	37.829	
1,700.0	1,684.7	1,667.9	1,659.0	4.6	4.0	138.37	75.2	-159.8	272.0	264.9	7.07	38.493	
1,800.0	1,783.3	1,765.4	1,755.7	4.9	4.3	139.11	81.5	-169.6	294.0	286.5	7.52	39.083	
1,900.0	1,881.9	1,862.9	1,852.5	5.3	4.6	139.74	87.9	-179.5	316.1	308.1	7.98	39.611	
2,000.0	1,980.4	1,960.4	1,949.3	5.6	4.8	140.29	94.2	-189.3	338.2	329.8	8.44	40.085	
2,100.0	2,079.0	2,057.8	2,046.0	6.0	5.1	140.78	100.6	-199.2	360.4	351.5	8.89	40.514	
2,200.0	2,177.6	2,155.3	2,142.8	6.3	5.4	141.21	106.9	-209.0	382.5	373.2	9.35	40.904	
2,300.0	2,276.2	2,252.8	2,239.6	6.6	5.6	141.59	113.3	-218.8	404.7	394.9	9.81	41.259	
2,400.0	2,374.8	2,350.3	2,336.4	7.0	5.9	141.93	119.6	-228.7	426.9	416.6	10.27	41.584	
2,500.0	2,473.3	2,447.7	2,433.1	7.3	6.2	142.24	126.0	-238.5	449.1	438.4	10.72	41.882	
2,600.0	2,571.9	2,545.2	2,529.9	7.7	6.4	142.52	132.3	-248.3	471.3	460.1	11.18	42.158	
2,700.0	2,670.5	2,642.7	2,626.7	8.0	6.7	142.77	138.6	-258.2	493.5	481.9	11.64	42.412	
2,800.0	2,769.1	2,740.2	2,723.4	8.3	7.0	143.01	145.0	-268.0	515.8	503.7	12.09	42.648	
2,900.0	2,867.7	2,837.6	2,820.2	8.7	7.2	143.22	151.3	-277.9	538.0	525.5	12.55	42.867	
3,000.0	2,966.2	2,935.1	2,917.0	9.0	7.5	143.41	157.7	-287.7	560.3	547.3	13.01	43.072	
3,100.0	3,064.8	3,032.6	3,013.8	9.4	7.8	143.60	164.0	-297.5	582.5	569.1	13.46	43.263	
3,200.0	3,163.4	3,130.1	3,110.5	9.7	8.0	143.76	170.4	-307.4	604.8	590.9	13.92	43.442	
3,300.0	3,262.0	3,227.5	3,207.3	10.0	8.3	143.92	176.7	-317.2	627.0	612.7	14.38	43.610	
3,400.0	3,360.6	3,325.0	3,304.1	10.4	8.6	144.06	183.0	-327.0	649.3	634.5	14.84	43.767	
3,500.0	3,459.2	3,422.5	3,400.8	10.7	8.8	144.20	189.4	-336.9	671.6	656.3	15.29	43.916	
3,600.0	3,557.7	3,520.0	3,497.6	11.1	9.1	144.33	195.7	-346.7	693.9	678.1	15.75	44.056	
3,700.0	3,656.3	3,617.5	3,594.4	11.4	9.4	144.45	202.1	-356.6	716.1	699.9	16.21	44.189	
3,800.0	3,754.9	3,714.9	3,691.2	11.7	9.6	144.56	208.4	-366.4	738.4	721.7	16.66	44.314	
3,900.0	3,853.5	3,812.4	3,787.9	12.1	9.9	144.66	214.8	-376.2	760.7	743.6	17.12	44.433	
4,000.0	3,952.1	3,909.9	3,884.7	12.4	10.2	144.76	221.1	-386.1	783.0	765.4	17.58	44.546	
4,100.0	4,050.6	4,007.4	3,981.5	12.8	10.4	144.86	227.4	-395.9	805.3	787.2	18.03	44.653	
4,200.0	4,149.2	4,104.8	4,078.2	13.1	10.7	144.94	233.8	-405.7	827.6	809.1	18.49	44.755	
4,300.0	4,247.8	4,202.3	4,175.0	13.4	11.0	145.03	240.1	-415.6	849.8	830.9	18.95	44.852	
4,400.0	4,346.4	4,299.8	4,271.8	13.8	11.2	145.11	246.5	-425.4	872.1	852.7	19.40	44.945	
4,500.0	4,445.0	4,397.3	4,368.6	14.1	11.5	145.18	252.8	-435.3	894.4	874.6	19.86	45.033	
4,600.0	4,543.5	4,494.7	4,465.3	14.5	11.8	145.26	259.2	-445.1	916.7	896.4	20.32	45.118	
4,700.0	4,642.1	4,592.2	4,562.1	14.8	12.0	145.33	265.5	-454.9	939.0	918.3	20.78	45.199	
4,800.0	4,740.7	4,689.7	4,658.9	15.2	12.3	145.39	271.9	-464.8	961.3	940.1	21.23	45.276	
4,900.0	4,839.3	4,787.2	4,755.6	15.5	12.6	145.45	278.2	-474.6	983.6	961.9	21.69	45.351	
5,000.0	4,937.9	4,884.6	4,852.4	15.8	12.8	145.51	284.5	-484.4	1,005.9	983.8	22.15	45.422	
5,100.0	5,036.4	4,982.1	4,949.2	16.2	13.1	145.57	290.9	-494.3	1,028.2	1,005.6	22.60	45.490	

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 Chevron 5-24D
Project:	Garfield County	TVD Reference:	KBE @ 8160.0ft (Original Well Elev)
Reference Site:	Chevron D05 696 Pad	MD Reference:	KBE @ 8160.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Chevron 5-24D	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 Chevron D05 696 Pad - Chevron 35-1D - DD - Plan #4													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	5,135.0	5,079.6	5,046.0	16.5	13.4	145.63	297.2	-504.1	1,050.5	1,027.5	23.06	45.556		
5,300.0	5,233.6	5,177.1	5,142.7	16.9	13.6	145.68	303.6	-514.0	1,072.8	1,049.3	23.52	45.619		
5,400.0	5,332.2	5,274.6	5,239.5	17.2	13.9	145.73	309.9	-523.8	1,095.1	1,071.2	23.97	45.680		
5,500.0	5,430.8	5,372.0	5,336.3	17.5	14.2	145.78	316.3	-533.6	1,117.4	1,093.0	24.43	45.739		
5,600.0	5,529.3	5,469.5	5,433.0	17.9	14.4	145.82	322.6	-543.5	1,139.7	1,114.9	24.89	45.795		
5,700.0	5,627.9	5,567.0	5,529.8	18.2	14.7	145.87	328.9	-553.3	1,162.1	1,136.7	25.34	45.850		
5,800.0	5,726.5	5,664.5	5,626.6	18.6	15.0	145.91	335.3	-563.1	1,184.4	1,158.6	25.80	45.903		
5,900.0	5,825.1	5,761.9	5,723.3	18.9	15.2	145.95	341.6	-573.0	1,206.7	1,180.4	26.26	45.953		

Cathedral Energy Services

Anticollision Report

Company:	Berry Petroleum Company (NAD 83)	Local Co-ordinate Reference:	Well Chevron 5-24D
Project:	Garfield County	TVD Reference:	KBE @ 8160.0ft (Original Well Elev)
Reference Site:	Chevron D05 696 Pad	MD Reference:	KBE @ 8160.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Chevron 5-24D	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 Chevron D05 696 Pad - Chevron 5-16D - DD - Plan #3														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	73.18	4.0	13.3	13.8						
100.0	100.0	100.0	100.0	0.1	0.1	73.18	4.0	13.3	13.8	13.6	0.29	48.363			
200.0	200.0	200.0	200.0	0.3	0.3	73.18	4.0	13.3	13.8	13.2	0.64	21.790 CC, ES			
300.0	300.0	299.5	299.5	0.5	0.5	74.20	4.2	15.0	15.6	14.6	0.98	15.806 SF			
400.0	400.0	398.7	398.5	0.7	0.7	-129.02	4.9	20.1	21.8	20.4	1.33	16.334			
500.0	499.8	497.0	496.5	0.9	0.9	-133.22	6.0	28.5	33.7	32.0	1.69	19.916			
600.0	599.5	595.3	594.2	1.1	1.1	-137.16	7.5	39.2	50.4	48.3	2.06	24.431			
700.0	698.7	693.3	691.5	1.3	1.4	-140.87	8.9	49.9	69.9	67.5	2.45	28.557			
800.0	797.5	790.6	788.3	1.6	1.6	-144.18	10.3	60.6	92.4	89.5	2.85	32.443			
900.0	896.1	887.7	884.8	1.9	1.9	-146.67	11.7	71.3	116.0	112.7	3.25	35.664			
1,000.0	994.6	984.7	981.2	2.3	2.1	-148.32	13.1	81.9	139.8	136.1	3.66	38.195			
1,100.0	1,093.2	1,081.8	1,077.7	2.6	2.4	-149.49	14.5	92.5	163.6	159.5	4.07	40.229			
1,200.0	1,191.8	1,178.9	1,174.2	2.9	2.6	-150.37	16.0	103.2	187.5	183.0	4.48	41.896			
1,300.0	1,290.4	1,275.9	1,270.6	3.3	2.9	-151.04	17.4	113.8	211.4	206.5	4.88	43.287			
1,400.0	1,389.0	1,373.0	1,367.1	3.6	3.1	-151.58	18.8	124.5	235.4	230.1	5.29	44.465			
1,500.0	1,487.5	1,470.1	1,463.6	3.9	3.4	-152.02	20.2	135.1	259.3	253.6	5.70	45.473			
1,600.0	1,586.1	1,567.2	1,560.1	4.3	3.6	-152.38	21.6	145.7	283.3	277.2	6.11	46.347			
1,700.0	1,684.7	1,664.2	1,656.5	4.6	3.9	-152.69	23.0	156.4	307.3	300.7	6.52	47.111			
1,800.0	1,783.3	1,761.3	1,753.0	4.9	4.1	-152.95	24.5	167.0	331.3	324.3	6.93	47.784			
1,900.0	1,881.9	1,858.4	1,849.5	5.3	4.4	-153.18	25.9	177.7	355.2	347.9	7.34	48.383			
2,000.0	1,980.4	1,955.4	1,946.0	5.6	4.7	-153.38	27.3	188.3	379.2	371.5	7.75	48.917			
2,100.0	2,079.0	2,052.5	2,042.4	6.0	4.9	-153.55	28.7	198.9	403.3	395.1	8.16	49.398			
2,200.0	2,177.6	2,149.6	2,138.9	6.3	5.2	-153.71	30.1	209.6	427.3	418.7	8.57	49.833			
2,300.0	2,276.2	2,246.6	2,235.4	6.6	5.4	-153.85	31.5	220.2	451.3	442.3	8.98	50.228			
2,400.0	2,374.8	2,343.7	2,331.9	7.0	5.7	-153.97	32.9	230.9	475.3	465.9	9.39	50.588			
2,500.0	2,473.3	2,440.8	2,428.3	7.3	5.9	-154.08	34.4	241.5	499.3	489.5	9.81	50.918			
2,600.0	2,571.9	2,537.9	2,524.8	7.7	6.2	-154.19	35.8	252.2	523.3	513.1	10.22	51.222			
2,700.0	2,670.5	2,634.9	2,621.3	8.0	6.4	-154.28	37.2	262.8	547.3	536.7	10.63	51.502			
2,800.0	2,769.1	2,732.0	2,717.8	8.3	6.7	-154.37	38.6	273.4	571.3	560.3	11.04	51.761			
2,900.0	2,867.7	2,829.1	2,814.2	8.7	6.9	-154.45	40.0	284.1	595.4	583.9	11.45	52.001			
3,000.0	2,966.2	2,926.1	2,910.7	9.0	7.2	-154.52	41.4	294.7	619.4	607.5	11.86	52.225			
3,100.0	3,064.8	3,023.2	3,007.2	9.4	7.4	-154.59	42.9	305.4	643.4	631.1	12.27	52.433			
3,200.0	3,163.4	3,120.3	3,103.7	9.7	7.7	-154.65	44.3	316.0	667.4	654.7	12.68	52.628			
3,300.0	3,262.0	3,217.3	3,200.1	10.0	7.9	-154.71	45.7	326.6	691.4	678.3	13.09	52.811			
3,400.0	3,360.6	3,314.4	3,296.6	10.4	8.2	-154.76	47.1	337.3	715.5	701.9	13.50	52.983			
3,500.0	3,459.2	3,411.5	3,393.1	10.7	8.4	-154.81	48.5	347.9	739.5	725.6	13.91	53.144			
3,600.0	3,557.7	3,508.6	3,489.6	11.1	8.7	-154.86	49.9	358.6	763.5	749.2	14.33	53.297			
3,700.0	3,656.3	3,605.6	3,586.0	11.4	9.0	-154.90	51.3	369.2	787.5	772.8	14.74	53.440			
3,800.0	3,754.9	3,702.7	3,682.5	11.7	9.2	-154.94	52.8	379.8	811.5	796.4	15.15	53.576			
3,900.0	3,853.5	3,799.8	3,779.0	12.1	9.5	-154.98	54.2	390.5	835.6	820.0	15.56	53.705			
4,000.0	3,952.1	3,896.8	3,875.5	12.4	9.7	-155.02	55.6	401.1	859.6	843.6	15.97	53.827			
4,100.0	4,050.6	3,993.9	3,971.9	12.8	10.0	-155.06	57.0	411.8	883.6	867.2	16.38	53.943			
4,200.0	4,149.2	4,091.0	4,068.4	13.1	10.2	-155.09	58.4	422.4	907.6	890.9	16.79	54.053			
4,300.0	4,247.8	4,188.0	4,164.9	13.4	10.5	-155.12	59.8	433.1	931.7	914.5	17.20	54.158			
4,400.0	4,346.4	4,285.1	4,261.4	13.8	10.7	-155.15	61.2	443.7	955.7	938.1	17.61	54.258			
4,500.0	4,445.0	4,382.2	4,357.8	14.1	11.0	-155.18	62.7	454.3	979.7	961.7	18.03	54.353			
4,600.0	4,543.5	4,479.3	4,454.3	14.5	11.2	-155.21	64.1	465.0	1,003.7	985.3	18.44	54.444			
4,700.0	4,642.1	4,576.3	4,550.8	14.8	11.5	-155.23	65.5	475.6	1,027.8	1,008.9	18.85	54.531			
4,800.0	4,740.7	4,673.4	4,647.2	15.2	11.7	-155.26	66.9	486.3	1,051.8	1,032.5	19.26	54.615			
4,900.0	4,839.3	4,770.5	4,743.7	15.5	12.0	-155.28	68.3	496.9	1,075.8	1,056.2	19.67	54.695			
5,000.0	4,937.9	4,867.5	4,840.2	15.8	12.2	-155.30	69.7	507.5	1,099.9	1,079.8	20.08	54.771			
5,100.0	5,036.4	4,964.6	4,936.7	16.2	12.5	-155.33	71.2	518.2	1,123.9	1,103.4	20.49	54.845			

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 Chevron 5-24D
Project:	Garfield County	TVD Reference:	KBE @ 8160.0ft (Original Well Elev)
Reference Site:	Chevron D05 696 Pad	MD Reference:	KBE @ 8160.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Chevron 5-24D	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											Chevron D05 696 Pad - Chevron 5-16D - DD - Plan #3			Offset Site Error:		0.0 ft
Survey Program: 0-MWD													Offset Well Error:		0.0 ft	
Reference		Offset		Semi Major Axis			Distance						Warning			
Measured Depth	Vertical Depth	Measured Depth	Vertical Depth	Reference	Offset	Highside Toolface	Offset Wellbore Centre		Between Centres	Between Ellipses	Total Uncertainty Axis	Separation Factor				
(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(°)	+N/-S (ft)	+E/-W (ft)	(ft)	(ft)						
5,200.0	5,135.0	5,061.7	5,033.1	16.5	12.8	-155.35	72.6	528.8	1,147.9	1,127.0	20.90	54.916				
5,300.0	5,233.6	5,158.7	5,129.6	16.9	13.0	-155.37	74.0	539.5	1,171.9	1,150.6	21.31	54.984				
5,400.0	5,332.2	5,255.8	5,226.1	17.2	13.3	-155.39	75.4	550.1	1,196.0	1,174.2	21.73	55.049				
5,500.0	5,430.8	5,352.9	5,322.6	17.5	13.5	-155.40	76.8	560.8	1,220.0	1,197.9	22.14	55.112				

Cathedral Energy Services

Anticollision Report

Company:	Berry Petroleum Company (NAD 83)	Local Co-ordinate Reference:	Well Chevron 5-24D
Project:	Garfield County	TVD Reference:	KBE @ 8160.0ft (Original Well Elev)
Reference Site:	Chevron D05 696 Pad	MD Reference:	KBE @ 8160.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Chevron 5-24D	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 Chevron D05 696 Pad - Chevron 5-26D - DD - Plan #2													Offset Site Error:	0.0 ft
Survey Program: O-MWD													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance				Total	Separation	Warning	
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Uncertainty Axis	Factor		
0.0	0.0	0.0	0.0	0.0	0.0	-108.23	-4.7	-14.4	15.1					
100.0	100.0	100.0	100.0	0.1	0.1	-108.23	-4.7	-14.4	15.1	14.9	0.29	52.887		
200.0	200.0	200.0	200.0	0.3	0.3	-108.23	-4.7	-14.4	15.1	14.5	0.64	23.828 CC, ES		
300.0	300.0	299.5	299.5	0.5	0.5	-111.42	-6.1	-15.5	16.6	15.6	0.98	16.909		
400.0	400.0	398.9	398.7	0.7	0.7	43.31	-10.1	-18.8	20.0	18.7	1.34	14.976		
500.0	499.8	498.3	497.7	0.9	0.9	42.96	-16.7	-24.2	24.0	22.3	1.70	14.102		
600.0	599.5	598.2	597.2	1.1	1.1	46.79	-24.2	-30.4	26.5	24.4	2.09	12.667		
700.0	698.7	698.1	696.6	1.3	1.4	55.64	-31.7	-36.6	27.0	24.5	2.55	10.588		
784.1	781.8	782.0	780.1	1.6	1.6	67.40	-38.1	-41.8	26.9	23.8	3.03	8.862		
800.0	797.5	797.9	795.9	1.6	1.6	70.56	-39.3	-42.8	26.8	23.7	3.13	8.556		
900.0	896.1	897.5	895.1	1.9	1.8	87.18	-46.8	-48.9	28.3	24.5	3.76	7.520		
1,000.0	994.6	997.2	994.3	2.3	2.1	101.11	-54.3	-55.1	31.8	27.5	4.34	7.345 SF		
1,100.0	1,093.2	1,096.9	1,093.5	2.6	2.3	111.78	-61.8	-61.3	36.9	32.0	4.84	7.624		
1,200.0	1,191.8	1,196.5	1,192.7	2.9	2.6	119.69	-69.3	-67.5	42.9	37.6	5.29	8.107		
1,300.0	1,290.4	1,296.2	1,291.9	3.3	2.8	125.58	-76.8	-73.6	49.5	43.7	5.71	8.661		
1,400.0	1,389.0	1,395.9	1,391.1	3.6	3.1	130.05	-84.3	-79.8	56.5	50.3	6.12	9.223		
1,500.0	1,487.5	1,495.5	1,490.3	3.9	3.3	133.52	-91.8	-86.0	63.7	57.2	6.52	9.765		
1,600.0	1,586.1	1,595.2	1,589.5	4.3	3.5	136.28	-99.3	-92.2	71.2	64.2	6.93	10.274		
1,700.0	1,684.7	1,694.9	1,688.6	4.6	3.8	138.51	-106.9	-98.3	78.7	71.4	7.33	10.746		
1,800.0	1,783.3	1,794.6	1,787.8	4.9	4.0	140.34	-114.4	-104.5	86.4	78.7	7.73	11.182		
1,900.0	1,881.9	1,894.2	1,887.0	5.3	4.3	141.88	-121.9	-110.7	94.2	86.0	8.13	11.584		
2,000.0	1,980.4	1,993.9	1,986.2	5.6	4.5	143.18	-129.4	-116.9	102.0	93.4	8.53	11.954		
2,100.0	2,079.0	2,093.6	2,085.4	6.0	4.7	144.30	-136.9	-123.1	109.8	100.9	8.93	12.294		
2,200.0	2,177.6	2,193.2	2,184.6	6.3	5.0	145.26	-144.4	-129.2	117.7	108.4	9.34	12.609		
2,300.0	2,276.2	2,292.9	2,283.8	6.6	5.2	146.11	-151.9	-135.4	125.6	115.9	9.74	12.899		
2,400.0	2,374.8	2,392.6	2,383.0	7.0	5.5	146.85	-159.4	-141.6	133.6	123.4	10.14	13.169		
2,500.0	2,473.3	2,492.2	2,482.2	7.3	5.7	147.51	-166.9	-147.8	141.5	131.0	10.55	13.418		
2,600.0	2,571.9	2,591.9	2,581.4	7.7	6.0	148.10	-174.5	-153.9	149.5	138.6	10.95	13.651		
2,700.0	2,670.5	2,691.6	2,680.6	8.0	6.2	148.63	-182.0	-160.1	157.5	146.2	11.36	13.868		
2,800.0	2,769.1	2,791.3	2,779.8	8.3	6.4	149.11	-189.5	-166.3	165.5	153.8	11.76	14.070		
2,900.0	2,867.7	2,890.9	2,879.0	8.7	6.7	149.55	-197.0	-172.5	173.5	161.4	12.17	14.259		
3,000.0	2,966.2	2,990.6	2,978.2	9.0	6.9	149.94	-204.5	-178.6	181.6	169.0	12.58	14.437		
3,100.0	3,064.8	3,090.3	3,077.4	9.4	7.2	150.31	-212.0	-184.8	189.6	176.6	12.98	14.604		
3,200.0	3,163.4	3,189.9	3,176.6	9.7	7.4	150.64	-219.5	-191.0	197.6	184.2	13.39	14.761		
3,300.0	3,262.0	3,289.6	3,275.8	10.0	7.7	150.95	-227.0	-197.2	205.7	191.9	13.80	14.908		
3,400.0	3,360.6	3,389.3	3,375.0	10.4	7.9	151.23	-234.6	-203.3	213.7	199.5	14.20	15.048		
3,500.0	3,459.2	3,488.9	3,474.1	10.7	8.2	151.50	-242.1	-209.5	221.8	207.2	14.61	15.180		
3,600.0	3,557.7	3,588.6	3,573.3	11.1	8.4	151.74	-249.6	-215.7	229.8	214.8	15.02	15.305		
3,700.0	3,656.3	3,688.3	3,672.5	11.4	8.6	151.97	-257.1	-221.9	237.9	222.5	15.42	15.423		
3,800.0	3,754.9	3,788.0	3,771.7	11.7	8.9	152.18	-264.6	-228.1	246.0	230.1	15.83	15.536		
3,900.0	3,853.5	3,887.6	3,870.9	12.1	9.1	152.38	-272.1	-234.2	254.0	237.8	16.24	15.643		
4,000.0	3,952.1	3,987.3	3,970.1	12.4	9.4	152.57	-279.6	-240.4	262.1	245.5	16.65	15.745		
4,100.0	4,050.6	4,087.0	4,069.3	12.8	9.6	152.75	-287.1	-246.6	270.2	253.1	17.06	15.842		
4,200.0	4,149.2	4,186.6	4,168.5	13.1	9.9	152.91	-294.6	-252.8	278.3	260.8	17.46	15.934		
4,300.0	4,247.8	4,286.3	4,267.7	13.4	10.1	153.07	-302.2	-258.9	286.3	268.5	17.87	16.022		
4,400.0	4,346.4	4,386.0	4,366.9	13.8	10.3	153.22	-309.7	-265.1	294.4	276.2	18.28	16.107		
4,500.0	4,445.0	4,485.6	4,466.1	14.1	10.6	153.36	-317.2	-271.3	302.5	283.8	18.69	16.187		
4,600.0	4,543.5	4,585.3	4,565.3	14.5	10.8	153.49	-324.7	-277.5	310.6	291.5	19.10	16.265		
4,700.0	4,642.1	4,685.0	4,664.5	14.8	11.1	153.62	-332.2	-283.6	318.7	299.2	19.51	16.339		
4,800.0	4,740.7	4,784.7	4,763.7	15.2	11.3	153.74	-339.7	-289.8	326.8	306.9	19.91	16.410		
4,900.0	4,839.3	4,884.3	4,862.9	15.5	11.6	153.85	-347.2	-296.0	334.9	314.5	20.32	16.478		
5,000.0	4,937.9	4,984.0	4,962.1	15.8	11.8	153.96	-354.7	-302.2	343.0	322.2	20.73	16.544		

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 Chevron 5-24D
Project:	Garfield County	TVD Reference:	KBE @ 8160.0ft (Original Well Elev)
Reference Site:	Chevron D05 696 Pad	MD Reference:	KBE @ 8160.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Chevron 5-24D	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 Chevron D05 696 Pad - Chevron 5-26D - DD - Plan #2													Offset Site Error: 0.0 ft			
Survey Program: O-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	5,036.4	5,083.7	5,061.3	16.2	12.0	154.06	-362.2	-308.3	351.1	329.9	21.14	16.607				
5,200.0	5,135.0	5,183.3	5,160.5	16.5	12.3	154.16	-369.8	-314.5	359.1	337.6	21.55	16.668				
5,300.0	5,233.6	5,283.0	5,259.6	16.9	12.5	154.26	-377.3	-320.7	367.2	345.3	21.96	16.726				
5,400.0	5,332.2	5,382.7	5,358.8	17.2	12.8	154.35	-384.8	-326.9	375.3	353.0	22.37	16.782				
5,500.0	5,430.8	5,482.3	5,458.0	17.5	13.0	154.44	-392.3	-333.1	383.4	360.7	22.77	16.837				
5,600.0	5,529.3	5,582.0	5,557.2	17.9	13.3	154.52	-399.8	-339.2	391.5	368.4	23.18	16.889				
5,700.0	5,627.9	5,681.7	5,656.4	18.2	13.5	154.60	-407.3	-345.4	399.6	376.0	23.59	16.940				
5,800.0	5,726.5	5,781.4	5,755.6	18.6	13.7	154.68	-414.8	-351.6	407.7	383.7	24.00	16.989				
5,900.0	5,825.1	5,881.0	5,854.8	18.9	14.0	154.75	-422.3	-357.8	415.8	391.4	24.41	17.036				
6,000.0	5,923.7	5,980.7	5,954.0	19.2	14.2	154.82	-429.9	-363.9	423.9	399.1	24.82	17.082				
6,100.0	6,022.2	6,080.4	6,053.2	19.6	14.5	154.89	-437.4	-370.1	432.0	406.8	25.23	17.126				
6,200.0	6,120.8	6,180.0	6,152.4	19.9	14.7	154.95	-444.9	-376.3	440.1	414.5	25.64	17.169				
6,300.0	6,219.4	6,279.7	6,251.6	20.3	15.0	155.02	-452.4	-382.5	448.2	422.2	26.05	17.210				
6,400.0	6,318.0	6,379.4	6,350.8	20.6	15.2	155.08	-459.9	-388.6	456.3	429.9	26.45	17.250				
6,500.0	6,416.6	6,479.0	6,450.0	21.0	15.4	155.14	-467.4	-394.8	464.4	437.6	26.86	17.289				
6,600.0	6,515.1	6,578.7	6,549.2	21.3	15.7	155.19	-474.9	-401.0	472.6	445.3	27.27	17.327				
6,700.0	6,613.7	6,678.4	6,648.4	21.6	15.9	155.25	-482.4	-407.2	480.7	453.0	27.68	17.364				
6,800.0	6,712.3	6,778.1	6,747.6	22.0	16.2	155.30	-489.9	-413.3	488.8	460.7	28.09	17.400				
6,900.0	6,810.9	6,877.7	6,846.8	22.3	16.4	155.35	-497.5	-419.5	496.9	468.4	28.50	17.434				
7,000.0	6,909.5	6,977.4	6,946.0	22.7	16.7	155.40	-505.0	-425.7	505.0	476.1	28.91	17.468				
7,100.0	7,008.1	7,077.1	7,045.1	23.0	16.9	155.45	-512.5	-431.9	513.1	483.8	29.32	17.501				
7,200.0	7,106.7	7,176.8	7,144.4	23.3	17.1	155.50	-520.0	-438.1	520.5	490.8	29.74	17.504				
7,300.0	7,205.9	7,276.7	7,243.8	23.6	17.4	155.41	-527.5	-444.2	525.0	494.8	30.17	17.399				
7,400.0	7,305.5	7,373.2	7,339.9	23.8	17.6	155.15	-534.7	-450.2	526.4	495.8	30.61	17.196				
7,500.0	7,405.3	7,461.3	7,427.7	23.9	17.8	154.91	-539.7	-454.3	526.4	495.4	30.98	16.991				
7,600.0	7,505.3	7,549.4	7,515.7	24.0	17.9	154.72	-542.6	-456.6	525.4	494.1	31.28	16.795				
7,694.1	7,599.4	7,633.1	7,599.4	24.1	18.0	120.09	-543.4	-457.3	524.9	493.3	31.56	16.632				
7,700.0	7,605.3	7,639.0	7,605.4	24.1	18.1	116.30	-543.4	-457.3	524.6	493.1	31.58	16.613				
7,800.0	7,705.3	7,740.1	7,706.4	24.3	18.2	116.33	-543.6	-457.6	524.8	492.9	31.88	16.459				
7,900.0	7,805.3	7,841.1	7,807.4	24.4	18.3	116.36	-543.9	-458.2	524.9	492.7	32.19	16.304				
8,000.0	7,905.2	7,942.1	7,908.4	24.5	18.5	116.39	-544.5	-459.2	525.0	492.5	32.51	16.148				
8,100.0	8,005.2	8,042.5	8,008.9	24.6	18.6	116.39	-545.3	-460.5	525.0	492.2	32.84	15.990				
8,200.0	8,105.2	8,142.5	8,108.9	24.7	18.8	116.39	-546.1	-461.9	525.0	491.9	33.16	15.833				
8,300.0	8,205.2	8,242.5	8,208.8	24.8	18.9	116.39	-546.8	-463.2	525.0	491.6	33.49	15.679				
8,400.0	8,305.2	8,342.5	8,308.8	25.0	19.1	116.39	-547.6	-464.6	525.0	491.2	33.81	15.528				
8,500.0	8,405.2	8,442.5	8,408.8	25.1	19.2	116.39	-548.4	-465.9	525.0	490.9	34.14	15.380				
8,600.0	8,505.2	8,542.5	8,508.8	25.2	19.4	116.39	-549.2	-467.3	525.0	490.6	34.46	15.234				
8,700.0	8,605.2	8,642.5	8,608.8	25.3	19.5	116.39	-550.0	-468.6	525.0	490.2	34.79	15.091				
8,800.0	8,705.1	8,742.5	8,708.8	25.4	19.7	116.39	-550.7	-469.9	525.0	489.9	35.12	14.950				
8,900.0	8,805.1	8,842.5	8,808.8	25.6	19.8	116.39	-551.5	-471.3	525.0	489.6	35.45	14.812				
9,000.0	8,905.1	8,942.5	8,908.8	25.7	20.0	116.39	-552.3	-472.6	525.0	489.3	35.78	14.676				
9,100.0	9,005.1	9,042.5	9,008.7	25.8	20.1	116.39	-553.1	-474.0	525.0	488.9	36.10	14.542				
9,200.0	9,105.1	9,142.5	9,108.7	25.9	20.3	116.39	-553.9	-475.3	525.0	488.6	36.43	14.410				
9,300.0	9,205.1	9,242.5	9,208.7	26.1	20.4	116.39	-554.6	-476.7	525.0	488.3	36.76	14.281				
9,400.0	9,305.1	9,342.5	9,308.7	26.2	20.6	116.39	-555.4	-478.0	525.0	487.9	37.09	14.154				
9,500.0	9,405.1	9,442.5	9,408.7	26.3	20.7	116.39	-556.2	-479.4	525.0	487.6	37.42	14.029				
9,600.0	9,505.0	9,542.5	9,508.7	26.4	20.9	116.39	-557.0	-480.7	525.0	487.3	37.76	13.906				
9,700.0	9,605.0	9,642.5	9,608.7	26.6	21.0	116.39	-557.7	-482.1	525.0	486.9	38.09	13.785				
9,800.0	9,705.0	9,742.5	9,708.7	26.7	21.2	116.39	-558.5	-483.4	525.0	486.6	38.42	13.665				
9,900.0	9,805.0	9,842.5	9,808.6	26.8	21.4	116.39	-559.3	-484.8	525.0	486.3	38.75	13.548				
10,000.0	9,905.0	9,942.5	9,908.6	26.9	21.5	116.39	-560.1	-486.1	525.0	485.9	39.08	13.433				
10,100.0	10,005.0	10,042.5	10,008.6	27.1	21.7	116.39	-560.9	-487.5	525.0	485.6	39.42	13.319				

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 Chevron 5-24D
Project:	Garfield County	TVD Reference:	KBE @ 8160.0ft (Original Well Elev)
Reference Site:	Chevron D05 696 Pad	MD Reference:	KBE @ 8160.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Chevron 5-24D	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													Chevron D05 696 Pad - Chevron 5-26D - 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											
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					
10,200.0	10,105.0	10,142.5	10,108.6	27.2	21.8	116.39	-561.6	-488.8	525.0	485.3	39.75	13.208						
10,300.0	10,205.0	10,242.5	10,208.6	27.3	22.0	116.39	-562.4	-490.2	525.0	484.9	40.08	13.098						
10,369.0	10,274.0	10,311.6	10,277.6	27.4	22.1	116.39	-563.0	-491.1	525.0	484.7	40.31	13.023						

Cathedral Energy Services

Anticollision Report

Company:	Berry Petroleum Company (NAD 83)	Local Co-ordinate Reference:	Well Chevron 5-24D
Project:	Garfield County	TVD Reference:	KBE @ 8160.0ft (Original Well Elev)
Reference Site:	Chevron D05 696 Pad	MD Reference:	KBE @ 8160.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Chevron 5-24D	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 Chevron D05 696 Pad - Chevron 5-27D - DD - Plan #3													Offset Site Error:	0.0 ft
Survey Program: O-MWD													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance				Total	Separation	Warning	
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Uncertainty Axis	Factor		
0.0	0.0	0.0	0.0	0.0	0.0	-107.16	-17.8	-57.8	60.5					
100.0	100.0	100.0	100.0	0.1	0.1	-107.16	-17.8	-57.8	60.5	60.2	0.29	211.326		
200.0	200.0	200.0	200.0	0.3	0.3	-107.16	-17.8	-57.8	60.5	59.9	0.64	95.213		
300.0	300.0	300.0	300.0	0.5	0.5	-107.16	-17.8	-57.8	60.5	59.5	0.98	61.449		
400.0	400.0	400.0	400.0	0.7	0.7	52.53	-17.8	-57.8	59.4	58.1	1.33	44.504		
500.0	499.8	499.8	499.8	0.9	0.8	56.80	-17.8	-57.8	56.4	54.7	1.70	33.256		
600.0	599.5	599.5	599.5	1.1	1.0	64.90	-17.8	-57.8	52.1	50.0	2.08	25.028		
700.0	698.7	698.7	698.7	1.3	1.2	78.11	-17.8	-57.8	48.2	45.7	2.52	19.136		
767.3	765.3	765.3	765.3	1.5	1.3	90.00	-17.8	-57.8	47.1	44.3	2.84	16.587 CC, ES		
800.0	797.5	797.5	797.5	1.6	1.4	96.65	-17.8	-57.8	47.5	44.5	2.99	15.861		
900.0	896.1	896.1	896.1	1.9	1.5	115.06	-17.8	-57.8	52.2	48.8	3.41	15.294 SF		
1,000.0	994.6	994.6	994.6	2.3	1.7	129.31	-17.8	-57.8	61.3	57.5	3.76	16.288		
1,100.0	1,093.2	1,091.8	1,091.8	2.6	1.9	138.42	-17.4	-59.2	74.0	69.9	4.09	18.088		
1,200.0	1,191.8	1,188.9	1,188.7	2.9	2.1	142.94	-16.1	-63.8	89.8	85.3	4.45	20.187		
1,300.0	1,290.4	1,286.2	1,285.7	3.3	2.2	144.66	-13.9	-71.3	107.5	102.6	4.84	22.209		
1,400.0	1,389.0	1,384.5	1,383.7	3.6	2.4	145.63	-11.4	-79.5	125.5	120.3	5.24	23.935		
1,500.0	1,487.5	1,482.9	1,481.7	3.9	2.6	146.36	-9.0	-87.7	143.6	138.0	5.66	25.393		
1,600.0	1,586.1	1,581.2	1,579.6	4.3	2.8	146.93	-6.6	-96.0	161.7	155.6	6.07	26.636		
1,700.0	1,684.7	1,679.5	1,677.6	4.6	3.0	147.38	-4.1	-104.2	179.8	173.3	6.49	27.706		
1,800.0	1,783.3	1,777.9	1,775.5	4.9	3.3	147.75	-1.7	-112.4	198.0	191.0	6.91	28.635		
1,900.0	1,881.9	1,876.2	1,873.5	5.3	3.5	148.06	0.7	-120.6	216.1	208.7	7.34	29.449		
2,000.0	1,980.4	1,974.5	1,971.5	5.6	3.7	148.32	3.2	-128.9	234.2	226.5	7.76	30.166		
2,100.0	2,079.0	2,072.9	2,069.4	6.0	3.9	148.54	5.6	-137.1	252.4	244.2	8.19	30.802		
2,200.0	2,177.6	2,171.2	2,167.4	6.3	4.1	148.74	8.0	-145.3	270.5	261.9	8.62	31.371		
2,300.0	2,276.2	2,269.6	2,265.4	6.6	4.3	148.90	10.5	-153.6	288.7	279.6	9.05	31.881		
2,400.0	2,374.8	2,367.9	2,363.3	7.0	4.5	149.05	12.9	-161.8	306.8	297.3	9.49	32.342		
2,500.0	2,473.3	2,466.2	2,461.3	7.3	4.8	149.19	15.3	-170.0	324.9	315.0	9.92	32.760		
2,600.0	2,571.9	2,564.6	2,559.2	7.7	5.0	149.30	17.8	-178.2	343.1	332.7	10.35	33.140		
2,700.0	2,670.5	2,662.9	2,657.2	8.0	5.2	149.41	20.2	-186.5	361.3	350.5	10.79	33.488		
2,800.0	2,769.1	2,761.2	2,755.2	8.3	5.4	149.51	22.6	-194.7	379.4	368.2	11.22	33.807		
2,900.0	2,867.7	2,859.6	2,853.1	8.7	5.7	149.59	25.1	-202.9	397.6	385.9	11.66	34.101		
3,000.0	2,966.2	2,957.9	2,951.1	9.0	5.9	149.67	27.5	-211.2	415.7	403.6	12.09	34.373		
3,100.0	3,064.8	3,056.2	3,049.0	9.4	6.1	149.75	29.9	-219.4	433.9	421.3	12.53	34.624		
3,200.0	3,163.4	3,154.6	3,147.0	9.7	6.3	149.81	32.4	-227.6	452.0	439.1	12.97	34.858		
3,300.0	3,262.0	3,252.9	3,245.0	10.0	6.5	149.87	34.8	-235.8	470.2	456.8	13.41	35.075		
3,400.0	3,360.6	3,351.3	3,342.9	10.4	6.8	149.93	37.2	-244.1	488.3	474.5	13.84	35.278		
3,500.0	3,459.2	3,449.6	3,440.9	10.7	7.0	149.99	39.7	-252.3	506.5	492.2	14.28	35.468		
3,600.0	3,557.7	3,547.9	3,538.8	11.1	7.2	150.03	42.1	-260.5	524.7	509.9	14.72	35.646		
3,700.0	3,656.3	3,646.3	3,636.8	11.4	7.4	150.08	44.5	-268.8	542.8	527.7	15.16	35.813		
3,800.0	3,754.9	3,744.6	3,734.8	11.7	7.7	150.12	47.0	-277.0	561.0	545.4	15.60	35.971		
3,900.0	3,853.5	3,842.9	3,832.7	12.1	7.9	150.16	49.4	-285.2	579.1	563.1	16.03	36.119		
4,000.0	3,952.1	3,941.3	3,930.7	12.4	8.1	150.20	51.8	-293.4	597.3	580.8	16.47	36.259		
4,100.0	4,050.6	4,039.6	4,028.7	12.8	8.3	150.24	54.3	-301.7	615.5	598.6	16.91	36.392		
4,200.0	4,149.2	4,138.0	4,126.6	13.1	8.6	150.27	56.7	-309.9	633.6	616.3	17.35	36.517		
4,300.0	4,247.8	4,236.3	4,224.6	13.4	8.8	150.30	59.1	-318.1	651.8	634.0	17.79	36.636		
4,400.0	4,346.4	4,334.6	4,322.5	13.8	9.0	150.33	61.6	-326.4	669.9	651.7	18.23	36.749		
4,500.0	4,445.0	4,433.0	4,420.5	14.1	9.3	150.36	64.0	-334.6	688.1	669.4	18.67	36.856		
4,600.0	4,543.5	4,531.3	4,518.5	14.5	9.5	150.39	66.4	-342.8	706.3	687.2	19.11	36.959		
4,700.0	4,642.1	4,629.6	4,616.4	14.8	9.7	150.42	68.9	-351.0	724.4	704.9	19.55	37.056		
4,800.0	4,740.7	4,728.0	4,714.4	15.2	9.9	150.44	71.3	-359.3	742.6	722.6	19.99	37.149		
4,900.0	4,839.3	4,826.3	4,812.3	15.5	10.2	150.46	73.7	-367.5	760.8	740.3	20.43	37.238		
5,000.0	4,937.9	4,924.6	4,910.3	15.8	10.4	150.49	76.2	-375.7	778.9	758.0	20.87	37.323		

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 Chevron 5-24D
Project:	Garfield County	TVD Reference:	KBE @ 8160.0ft (Original Well Elev)
Reference Site:	Chevron D05 696 Pad	MD Reference:	KBE @ 8160.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Chevron 5-24D	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 Chevron D05 696 Pad - Chevron 5-27D - DD - Plan #3													Offset Site Error: 0.0 ft	
Survey Program: O-MWD													Offset Well Error: 0.0 ft	
Reference		Offset		Semi Major Axis			Distance						Warning	
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor		
5,100.0	5,036.4	5,023.0	5,008.3	16.2	10.6	150.51	78.6	-384.0	797.1	775.8	21.31	37.405		
5,200.0	5,135.0	5,121.3	5,106.2	16.5	10.8	150.53	81.0	-392.2	815.2	793.5	21.75	37.483		
5,300.0	5,233.6	5,219.7	5,204.2	16.9	11.1	150.55	83.5	-400.4	833.4	811.2	22.19	37.557		
5,400.0	5,332.2	5,318.0	5,302.2	17.2	11.3	150.57	85.9	-408.6	851.6	828.9	22.63	37.629		
5,500.0	5,430.8	5,416.3	5,400.1	17.5	11.5	150.58	88.3	-416.9	869.7	846.7	23.07	37.698		
5,600.0	5,529.3	5,514.7	5,498.1	17.9	11.7	150.60	90.8	-425.1	887.9	864.4	23.51	37.764		
5,700.0	5,627.9	5,613.0	5,596.0	18.2	12.0	150.62	93.2	-433.3	906.1	882.1	23.95	37.828		
5,800.0	5,726.5	5,711.3	5,694.0	18.6	12.2	150.63	95.6	-441.6	924.2	899.8	24.39	37.889		
5,900.0	5,825.1	5,809.7	5,792.0	18.9	12.4	150.65	98.1	-449.8	942.4	917.5	24.83	37.948		
6,000.0	5,923.7	5,908.0	5,889.9	19.2	12.7	150.66	100.5	-458.0	960.5	935.3	25.27	38.005		
6,100.0	6,022.2	6,006.3	5,987.9	19.6	12.9	150.68	102.9	-466.2	978.7	953.0	25.71	38.060		
6,200.0	6,120.8	6,104.7	6,085.8	19.9	13.1	150.69	105.4	-474.5	996.9	970.7	26.16	38.113		
6,300.0	6,219.4	6,203.0	6,183.8	20.3	13.3	150.70	107.8	-482.7	1,015.0	988.4	26.60	38.164		
6,400.0	6,318.0	6,306.8	6,287.2	20.6	13.6	150.73	110.3	-491.2	1,033.1	1,006.1	27.04	38.204		
6,500.0	6,416.6	6,422.1	6,402.3	21.0	13.8	150.94	112.1	-497.1	1,050.0	1,022.5	27.44	38.261		
6,600.0	6,515.1	6,535.2	6,515.4	21.3	13.9	151.35	112.5	-498.8	1,065.3	1,037.5	27.78	38.346		
6,700.0	6,613.7	6,635.7	6,615.9	21.6	14.1	151.77	112.4	-499.0	1,080.0	1,051.9	28.10	38.436		
6,800.0	6,712.3	6,736.3	6,716.5	22.0	14.2	152.16	112.0	-499.6	1,094.6	1,066.1	28.42	38.511		
6,900.0	6,810.9	6,835.4	6,815.6	22.3	14.4	152.52	111.5	-500.5	1,109.1	1,080.3	28.75	38.580		
7,000.0	6,909.5	6,934.1	6,914.3	22.7	14.5	152.86	111.0	-501.4	1,123.6	1,094.5	29.07	38.649		
7,100.0	7,008.1	7,032.9	7,013.1	23.0	14.7	153.20	110.5	-502.3	1,138.2	1,108.8	29.40	38.718		
7,200.0	7,106.7	7,131.7	7,111.9	23.3	14.8	153.59	110.0	-503.2	1,152.1	1,122.4	29.74	38.739		
7,300.0	7,205.9	7,230.9	7,211.1	23.6	15.0	153.93	109.5	-504.1	1,163.2	1,133.1	30.08	38.669		
7,400.0	7,305.5	7,330.6	7,310.8	23.8	15.1	154.15	109.0	-504.9	1,171.2	1,140.8	30.41	38.519		
7,500.0	7,405.3	7,430.4	7,410.6	23.9	15.3	154.28	108.5	-505.8	1,176.0	1,145.3	30.71	38.291		
7,600.0	7,505.3	7,530.4	7,510.6	24.0	15.5	154.30	107.9	-506.7	1,177.8	1,146.8	31.00	37.988		
7,700.0	7,605.3	7,630.4	7,610.6	24.1	15.6	115.91	107.4	-507.6	1,177.4	1,146.1	31.31	37.601		
7,800.0	7,705.3	7,730.4	7,710.6	24.3	15.8	115.89	106.9	-508.5	1,177.2	1,145.6	31.63	37.217		
7,855.6	7,760.9	7,786.0	7,766.2	24.3	15.8	115.89	106.6	-509.0	1,177.2	1,145.4	31.81	37.008		
7,900.0	7,805.3	7,830.4	7,810.6	24.4	15.9	115.89	106.4	-509.4	1,177.2	1,145.3	31.95	36.845		
8,000.0	7,905.2	7,930.4	7,910.6	24.5	16.1	115.91	105.9	-510.3	1,177.4	1,145.1	32.27	36.486		
8,100.0	8,005.2	8,030.4	8,010.6	24.6	16.2	115.93	105.4	-511.2	1,177.6	1,145.0	32.59	36.136		
8,200.0	8,105.2	8,130.4	8,110.5	24.7	16.4	115.96	104.8	-512.1	1,177.8	1,144.9	32.91	35.793		
8,300.0	8,205.2	8,230.4	8,210.5	24.8	16.5	115.98	104.3	-513.0	1,178.1	1,144.8	33.23	35.456		
8,400.0	8,305.2	8,330.4	8,310.5	25.0	16.7	116.00	103.8	-513.9	1,178.3	1,144.8	33.55	35.125		
8,500.0	8,405.2	8,430.4	8,410.5	25.1	16.9	116.02	103.3	-514.8	1,178.5	1,144.7	33.87	34.799		
8,600.0	8,505.2	8,530.4	8,510.5	25.2	17.0	116.05	102.8	-515.7	1,178.8	1,144.6	34.19	34.478		
8,700.0	8,605.2	8,630.4	8,610.5	25.3	17.2	116.07	102.3	-516.6	1,179.0	1,144.5	34.51	34.164		
8,800.0	8,705.1	8,730.4	8,710.5	25.4	17.3	116.09	101.7	-517.5	1,179.2	1,144.4	34.83	33.854		
8,900.0	8,805.1	8,830.4	8,810.5	25.6	17.5	116.11	101.2	-518.4	1,179.4	1,144.3	35.16	33.550		
9,000.0	8,905.1	8,930.4	8,910.5	25.7	17.7	116.14	100.7	-519.3	1,179.7	1,144.2	35.48	33.250		
9,100.0	9,005.1	9,030.4	9,010.5	25.8	17.8	116.16	100.2	-520.2	1,179.9	1,144.1	35.80	32.956		
9,200.0	9,105.1	9,130.4	9,110.5	25.9	18.0	116.18	99.7	-521.1	1,180.1	1,144.0	36.13	32.666		
9,300.0	9,205.1	9,230.4	9,210.5	26.1	18.1	116.21	99.1	-522.0	1,180.4	1,143.9	36.45	32.381		
9,400.0	9,305.1	9,330.4	9,310.5	26.2	18.3	116.23	98.6	-522.8	1,180.6	1,143.8	36.78	32.101		
9,500.0	9,405.1	9,430.4	9,410.5	26.3	18.5	116.25	98.1	-523.7	1,180.8	1,143.7	37.10	31.826		
9,600.0	9,505.0	9,530.4	9,510.5	26.4	18.6	116.27	97.6	-524.6	1,181.1	1,143.6	37.43	31.554		
9,700.0	9,605.0	9,630.4	9,610.4	26.6	18.8	116.30	97.1	-525.5	1,181.3	1,143.5	37.76	31.287		
9,800.0	9,705.0	9,730.4	9,710.4	26.7	18.9	116.32	96.6	-526.4	1,181.5	1,143.4	38.08	31.025		
9,900.0	9,805.0	9,830.4	9,810.4	26.8	19.1	116.34	96.0	-527.3	1,181.7	1,143.3	38.41	30.766		
10,000.0	9,905.0	9,930.4	9,910.4	26.9	19.3	116.36	95.5	-528.2	1,182.0	1,143.2	38.74	30.512		
10,100.0	10,005.0	10,030.4	10,010.4	27.1	19.4	116.39	95.0	-529.1	1,182.2	1,143.1	39.07	30.261		

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 Chevron 5-24D
Project:	Garfield County	TVD Reference:	KBE @ 8160.0ft (Original Well Elev)
Reference Site:	Chevron D05 696 Pad	MD Reference:	KBE @ 8160.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Chevron 5-24D	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 Chevron D05 696 Pad - Chevron 5-27D - DD - Plan #3													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		
10,200.0	10,105.0	10,130.4	10,110.4	27.2	19.6	116.41	94.5	-530.0	1,182.4	1,143.0	39.40	30.015		
10,300.0	10,205.0	10,230.4	10,210.4	27.3	19.8	116.43	94.0	-530.9	1,182.7	1,142.9	39.72	29.772		
10,369.0	10,274.0	10,299.4	10,279.4	27.4	19.9	116.45	93.6	-531.5	1,182.8	1,142.9	39.95	29.606		

Cathedral Energy Services

Anticollision Report

Company:	Berry Petroleum Company (NAD 83)	Local Co-ordinate Reference:	Well Chevron 5-24D
Project:	Garfield County	TVD Reference:	KBE @ 8160.0ft (Original Well Elev)
Reference Site:	Chevron D05 696 Pad	MD Reference:	KBE @ 8160.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Chevron 5-24D	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 Chevron D05 696 Pad - Chevron 5-28D - DD - Plan #4													Offset Site Error: 0.0 ft	
Survey Program: 0-MWD													Offset Well Error: 0.0 ft	
Reference		Offset		Semi Major Axis			Distance						Warning	
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor		
0.0	0.0	0.0	0.0	0.0	0.0	-107.24	-13.5	-43.4	45.5					
100.0	100.0	100.0	100.0	0.1	0.2	-107.24	-13.5	-43.4	45.5	45.2	0.29	155.042		
200.0	200.0	200.0	200.0	0.3	0.3	-107.24	-13.5	-43.4	45.5	44.8	0.64	70.780		
300.0	300.0	299.8	299.7	0.5	0.5	-109.40	-15.2	-43.1	45.7	44.7	0.99	46.005		
400.0	400.0	399.4	399.2	0.7	0.7	44.15	-20.3	-42.2	45.6	44.2	1.36	33.438		
500.0	499.8	498.3	498.0	0.9	0.9	41.80	-26.4	-42.6	44.7	43.0	1.73	25.878		
600.0	599.5	597.2	596.7	1.1	1.1	45.77	-31.3	-46.1	43.7	41.6	2.10	20.761		
665.8	664.9	662.2	661.5	1.2	1.2	52.00	-33.7	-50.1	43.3	40.9	2.38	18.209	CC	
700.0	698.7	695.9	695.1	1.3	1.3	56.31	-34.7	-52.7	43.4	40.9	2.53	17.166	ES	
800.0	797.5	795.2	794.1	1.6	1.5	71.35	-37.7	-60.4	44.6	41.5	3.05	14.614		
900.0	896.1	894.4	892.9	1.9	1.7	86.16	-40.7	-68.2	48.5	44.9	3.61	13.445		
1,000.0	994.6	993.6	991.8	2.3	1.9	98.13	-43.8	-75.9	55.2	51.0	4.15	13.304	SF	
1,100.0	1,093.2	1,092.8	1,090.6	2.6	2.1	107.24	-46.8	-83.7	63.7	59.0	4.65	13.687		
1,200.0	1,191.8	1,192.0	1,189.4	2.9	2.3	114.10	-49.8	-91.4	73.4	68.3	5.13	14.299		
1,300.0	1,290.4	1,291.2	1,288.3	3.3	2.6	119.30	-52.8	-99.2	83.9	78.3	5.60	14.990		
1,400.0	1,389.0	1,390.4	1,387.1	3.6	2.8	123.33	-55.8	-107.0	95.0	88.9	6.05	15.686		
1,500.0	1,487.5	1,489.6	1,486.0	3.9	3.0	126.50	-58.8	-114.7	106.4	99.9	6.51	16.354		
1,600.0	1,586.1	1,588.8	1,584.8	4.3	3.2	129.06	-61.8	-122.5	118.1	111.1	6.95	16.980		
1,700.0	1,684.7	1,688.0	1,683.6	4.6	3.4	131.15	-64.8	-130.2	130.0	122.6	7.40	17.560		
1,800.0	1,783.3	1,787.2	1,782.5	4.9	3.7	132.89	-67.8	-138.0	142.0	134.1	7.85	18.094		
1,900.0	1,881.9	1,886.3	1,881.3	5.3	3.9	134.36	-70.8	-145.7	154.1	145.8	8.29	18.585		
2,000.0	1,980.4	1,985.5	1,980.2	5.6	4.1	135.61	-73.8	-153.5	166.3	157.6	8.74	19.036		
2,100.0	2,079.0	2,084.7	2,079.0	6.0	4.3	136.70	-76.8	-161.3	178.6	169.4	9.18	19.451		
2,200.0	2,177.6	2,183.9	2,177.8	6.3	4.6	137.64	-79.8	-169.0	190.9	181.3	9.63	19.833		
2,300.0	2,276.2	2,283.1	2,276.7	6.6	4.8	138.47	-82.8	-176.8	203.3	193.2	10.07	20.186		
2,400.0	2,374.8	2,382.3	2,375.5	7.0	5.0	139.20	-85.9	-184.5	215.7	205.2	10.52	20.513		
2,500.0	2,473.3	2,481.5	2,474.4	7.3	5.2	139.85	-88.9	-192.3	228.2	217.2	10.96	20.815		
2,600.0	2,571.9	2,580.7	2,573.2	7.7	5.5	140.44	-91.9	-200.0	240.7	229.2	11.41	21.096		
2,700.0	2,670.5	2,679.9	2,672.1	8.0	5.7	140.97	-94.9	-207.8	253.1	241.3	11.85	21.358		
2,800.0	2,769.1	2,779.1	2,770.9	8.3	5.9	141.45	-97.9	-215.6	265.7	253.4	12.30	21.602		
2,900.0	2,867.7	2,878.2	2,869.7	8.7	6.1	141.88	-100.9	-223.3	278.2	265.5	12.74	21.830		
3,000.0	2,966.2	2,977.4	2,968.6	9.0	6.4	142.28	-103.9	-231.1	290.7	277.6	13.19	22.044		
3,100.0	3,064.8	3,076.6	3,067.4	9.4	6.6	142.64	-106.9	-238.8	303.3	289.7	13.63	22.244		
3,200.0	3,163.4	3,175.8	3,166.3	9.7	6.8	142.98	-109.9	-246.6	315.9	301.8	14.08	22.433		
3,300.0	3,262.0	3,275.0	3,265.1	10.0	7.0	143.29	-112.9	-254.3	328.4	313.9	14.53	22.610		
3,400.0	3,360.6	3,374.2	3,363.9	10.4	7.3	143.58	-115.9	-262.1	341.0	326.1	14.97	22.777		
3,500.0	3,459.2	3,473.4	3,462.8	10.7	7.5	143.84	-118.9	-269.9	353.6	338.2	15.42	22.935		
3,600.0	3,557.7	3,572.6	3,561.6	11.1	7.7	144.09	-121.9	-277.6	366.2	350.4	15.86	23.085		
3,700.0	3,656.3	3,671.8	3,660.5	11.4	7.9	144.32	-124.9	-285.4	378.8	362.5	16.31	23.226		
3,800.0	3,754.9	3,771.0	3,759.3	11.7	8.2	144.54	-128.0	-293.1	391.5	374.7	16.76	23.360		
3,900.0	3,853.5	3,870.2	3,858.1	12.1	8.4	144.74	-131.0	-300.9	404.1	386.9	17.20	23.488		
4,000.0	3,952.1	3,969.3	3,957.0	12.4	8.6	144.93	-134.0	-308.6	416.7	399.1	17.65	23.609		
4,100.0	4,050.6	4,068.5	4,055.8	12.8	8.8	145.11	-137.0	-316.4	429.3	411.2	18.10	23.725		
4,200.0	4,149.2	4,167.7	4,154.7	13.1	9.1	145.28	-140.0	-324.2	442.0	423.4	18.54	23.835		
4,300.0	4,247.8	4,266.9	4,253.5	13.4	9.3	145.44	-143.0	-331.9	454.6	435.6	18.99	23.940		
4,400.0	4,346.4	4,366.1	4,352.3	13.8	9.5	145.60	-146.0	-339.7	467.2	447.8	19.44	24.040		
4,500.0	4,445.0	4,465.3	4,451.2	14.1	9.8	145.74	-149.0	-347.4	479.9	460.0	19.88	24.136		
4,600.0	4,543.5	4,564.5	4,550.0	14.5	10.0	145.87	-152.0	-355.2	492.5	472.2	20.33	24.228		
4,700.0	4,642.1	4,663.7	4,648.9	14.8	10.2	146.00	-155.0	-362.9	505.2	484.4	20.78	24.316		
4,800.0	4,740.7	4,762.9	4,747.7	15.2	10.4	146.13	-158.0	-370.7	517.8	496.6	21.22	24.400		
4,900.0	4,839.3	4,862.1	4,846.6	15.5	10.7	146.24	-161.0	-378.5	530.5	508.8	21.67	24.481		
5,000.0	4,937.9	4,961.2	4,945.4	15.8	10.9	146.36	-164.0	-386.2	543.1	521.0	22.12	24.558		

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 Chevron 5-24D
Project:	Garfield County	TVD Reference:	KBE @ 8160.0ft (Original Well Elev)
Reference Site:	Chevron D05 696 Pad	MD Reference:	KBE @ 8160.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Chevron 5-24D	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													Chevron D05 696 Pad - Chevron 5-28D - DD - Plan #4		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	5,036.4	5,060.4	5,044.2	16.2	11.1	146.46	-167.0	-394.0	555.8	533.2	22.56	24.633				
5,200.0	5,135.0	5,159.6	5,143.1	16.5	11.3	146.56	-170.1	-401.7	568.5	545.5	23.01	24.705				
5,300.0	5,233.6	5,258.8	5,241.9	16.9	11.6	146.66	-173.1	-409.5	581.1	557.7	23.46	24.774				
5,400.0	5,332.2	5,358.0	5,340.8	17.2	11.8	146.75	-176.1	-417.2	593.8	569.9	23.90	24.841				
5,500.0	5,430.8	5,457.2	5,439.6	17.5	12.0	146.84	-179.1	-425.0	606.5	582.1	24.35	24.905				
5,600.0	5,529.3	5,556.4	5,538.4	17.9	12.2	146.93	-182.1	-432.8	619.1	594.3	24.80	24.967				
5,700.0	5,627.9	5,655.6	5,637.3	18.2	12.5	147.01	-185.1	-440.5	631.8	606.5	25.24	25.026				
5,800.0	5,726.5	5,754.8	5,736.1	18.6	12.7	147.09	-188.1	-448.3	644.5	618.8	25.69	25.084				
5,900.0	5,825.1	5,854.0	5,835.0	18.9	12.9	147.17	-191.1	-456.0	657.1	631.0	26.14	25.140				
6,000.0	5,923.7	5,953.2	5,933.8	19.2	13.1	147.24	-194.1	-463.8	669.8	643.2	26.59	25.194				
6,100.0	6,022.2	6,052.3	6,032.6	19.6	13.4	147.31	-197.1	-471.5	682.5	655.4	27.03	25.246				
6,200.0	6,120.8	6,151.5	6,131.5	19.9	13.6	147.38	-200.1	-479.3	695.1	667.7	27.48	25.296				
6,300.0	6,219.4	6,250.7	6,230.3	20.3	13.8	147.44	-203.1	-487.0	707.8	679.9	27.93	25.345				
6,400.0	6,318.0	6,346.8	6,326.1	20.6	14.0	147.57	-205.8	-493.8	720.6	692.3	28.33	25.433				
6,500.0	6,416.6	6,441.3	6,420.5	21.0	14.2	147.91	-207.3	-497.7	734.1	705.4	28.66	25.611				
6,600.0	6,515.1	6,536.1	6,515.3	21.3	14.3	148.48	-207.7	-498.8	748.1	719.2	28.92	25.865				
6,700.0	6,613.7	6,635.9	6,615.1	21.6	14.5	149.13	-207.8	-499.0	762.5	733.3	29.18	26.132				
6,800.0	6,712.3	6,735.8	6,715.0	22.0	14.6	149.72	-208.2	-499.6	776.7	747.3	29.44	26.381				
6,900.0	6,810.9	6,834.8	6,814.0	22.3	14.8	150.27	-208.7	-500.5	790.9	761.2	29.71	26.619				
7,000.0	6,909.5	6,933.5	6,912.7	22.7	14.9	150.79	-209.2	-501.4	805.2	775.2	29.98	26.854				
7,100.0	7,008.1	7,032.2	7,011.4	23.0	15.1	151.29	-209.7	-502.3	819.5	789.3	30.26	27.085				
7,200.0	7,106.7	7,131.0	7,110.2	23.3	15.2	151.84	-210.2	-503.2	833.3	802.8	30.54	27.284				
7,300.0	7,205.9	7,230.3	7,209.4	23.6	15.4	152.29	-210.7	-504.0	844.3	813.4	30.83	27.388				
7,400.0	7,305.5	7,329.9	7,309.1	23.8	15.5	152.59	-211.2	-504.9	852.2	821.0	31.11	27.394				
7,500.0	7,405.3	7,429.8	7,408.9	23.9	15.7	152.76	-211.7	-505.8	857.0	825.6	31.38	27.305				
7,600.0	7,505.3	7,529.7	7,508.9	24.0	15.8	152.78	-212.2	-506.7	858.7	827.0	31.66	27.123				
7,700.0	7,605.3	7,629.7	7,608.9	24.1	16.0	114.39	-212.8	-507.6	858.4	826.4	31.97	26.852				
7,800.0	7,705.3	7,729.7	7,708.9	24.3	16.1	114.36	-213.3	-508.5	858.2	825.9	32.28	26.584				
7,853.6	7,758.9	7,783.3	7,762.5	24.3	16.2	114.36	-213.5	-509.0	858.1	825.7	32.45	26.444				
7,900.0	7,805.3	7,829.7	7,808.9	24.4	16.3	114.36	-213.8	-509.4	858.2	825.6	32.60	26.327				
8,000.0	7,905.2	7,929.7	7,908.9	24.5	16.4	114.38	-214.3	-510.3	858.3	825.4	32.91	26.082				
8,100.0	8,005.2	8,029.7	8,008.9	24.6	16.6	114.41	-214.8	-511.2	858.6	825.3	33.22	25.844				
8,200.0	8,105.2	8,129.7	8,108.9	24.7	16.8	114.45	-215.3	-512.0	858.8	825.2	33.53	25.611				
8,300.0	8,205.2	8,229.7	8,208.9	24.8	16.9	114.48	-215.8	-512.9	859.0	825.1	33.84	25.381				
8,400.0	8,305.2	8,329.7	8,308.8	25.0	17.1	114.51	-216.4	-513.8	859.2	825.1	34.16	25.155				
8,500.0	8,405.2	8,429.7	8,408.8	25.1	17.2	114.54	-216.9	-514.7	859.4	825.0	34.47	24.933				
8,600.0	8,505.2	8,529.7	8,508.8	25.2	17.4	114.57	-217.4	-515.6	859.7	824.9	34.78	24.714				
8,700.0	8,605.2	8,629.7	8,608.8	25.3	17.5	114.61	-217.9	-516.5	859.9	824.8	35.10	24.498				
8,800.0	8,705.1	8,729.7	8,708.8	25.4	17.7	114.64	-218.4	-517.4	860.1	824.7	35.42	24.286				
8,900.0	8,805.1	8,829.7	8,808.8	25.6	17.9	114.67	-218.9	-518.3	860.3	824.6	35.73	24.077				
9,000.0	8,905.1	8,929.7	8,908.8	25.7	18.0	114.70	-219.4	-519.2	860.5	824.5	36.05	23.872				
9,100.0	9,005.1	9,029.7	9,008.8	25.8	18.2	114.73	-219.9	-520.1	860.8	824.4	36.37	23.669				
9,200.0	9,105.1	9,129.7	9,108.8	25.9	18.3	114.77	-220.5	-520.9	861.0	824.3	36.68	23.470				
9,300.0	9,205.1	9,229.7	9,208.8	26.1	18.5	114.80	-221.0	-521.8	861.2	824.2	37.00	23.274				
9,400.0	9,305.1	9,329.7	9,308.8	26.2	18.7	114.83	-221.5	-522.7	861.4	824.1	37.32	23.081				
9,500.0	9,405.1	9,429.7	9,408.8	26.3	18.8	114.86	-222.0	-523.6	861.6	824.0	37.64	22.891				
9,600.0	9,505.0	9,529.7	9,508.8	26.4	19.0	114.89	-222.5	-524.5	861.9	823.9	37.96	22.704				
9,700.0	9,605.0	9,629.7	9,608.8	26.6	19.1	114.92	-223.0	-525.4	862.1	823.8	38.28	22.519				
9,800.0	9,705.0	9,729.7	9,708.8	26.7	19.3	114.96	-223.5	-526.3	862.3	823.7	38.60	22.338				
9,900.0	9,805.0	9,829.7	9,808.7	26.8	19.5	114.99	-224.0	-527.2	862.5	823.6	38.93	22.159				
10,000.0	9,905.0	9,929.7	9,908.7	26.9	19.6	115.02	-224.6	-528.1	862.8	823.5	39.25	21.982				
10,100.0	10,005.0	10,029.7	10,008.7	27.1	19.8	115.05	-225.1	-529.0	863.0	823.4	39.57	21.809				

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 Chevron 5-24D
Project:	Garfield County	TVD Reference:	KBE @ 8160.0ft (Original Well Elev)
Reference Site:	Chevron D05 696 Pad	MD Reference:	KBE @ 8160.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Chevron 5-24D	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 Chevron D05 696 Pad - Chevron 5-28D - DD - Plan #4													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		
10,200.0	10,105.0	10,129.7	10,108.7	27.2	20.0	115.08	-225.6	-529.8	863.2	823.3	39.89	21.638		
10,300.0	10,205.0	10,229.7	10,208.7	27.3	20.1	115.11	-226.1	-530.7	863.4	823.2	40.22	21.469		
10,369.0	10,274.0	10,298.7	10,277.8	27.4	20.2	115.14	-226.5	-531.3	863.6	823.2	40.44	21.354		

Cathedral Energy Services

Anticollision Report

Company:	Berry Petroleum Company (NAD 83)	Local Co-ordinate Reference:	Well Chevron 5-24D
Project:	Garfield County	TVD Reference:	KBE @ 8160.0ft (Original Well Elev)
Reference Site:	Chevron D05 696 Pad	MD Reference:	KBE @ 8160.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Chevron 5-24D	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 @ 8160.0ft (Original Well Elev)
Offset Depths are relative to Offset Datum
Central Meridian is -105.500000 °

Coordinates are relative to: Chevron 5-24D
Coordinate System is US State Plane 1983, Colorado Central Zone
Grid Convergence at Surface is: -1.66°

