



Cathedral Energy Services

Planning Report

Database:	EDM 5000.1 US Multi Users Db	Local Co-ordinate Reference:	Well Chevron 1-15D (I01 697 Pad)
Company:	Berry Petroleum Company (NAD 83)	TVD Reference:	KBE @ 8356.0ft (Original Well Elev)
Project:	Garfield County	MD Reference:	KBE @ 8356.0ft (Original Well Elev)
Site:	Chevron I01 697 Pad	North Reference:	True
Well:	Chevron 1-15D (I01 697-Pad)	Survey Calculation Method:	Minimum Curvature
Wellbore:	DD		
Design:	Plan #1		

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

Site	Chevron I01 697 Pad				
Site Position:		Northing:	1,636,614.31ft	Latitude:	39.551065
From:	Lat/Long	Easting:	2,249,127.68ft	Longitude:	-108.163257
Position Uncertainty:	0.0 ft	Slot Radius:	13.200in	Grid Convergence:	-1.68 °

Well	Chevron 1-15D (I01 697 Pad)					
Well Position	+N/-S	0.0 ft	Northing:	1,636,614.70ft	Latitude:	39.551065
	+E/-W	0.0 ft	Easting:	2,249,112.74 ft	Longitude:	-108.163310
Position Uncertainty	0.0 ft	Wellhead Elevation:	ft	Ground Level:	8,341.0ft	

Wellbore DD

Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF200510	2/24/2010	10.58	65.80	52,399

Design Plan #1

Audit Notes:

Version: **Phase:** PLAN **Tie On Depth:** 0.0

Vertical Section:	Depth From (TVD) (ft)	+N/-S (ft)	+E/-W (ft)	Direction (°)
	0.0	0.0	0.0	254.31

Plan Sections

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	TFO (°)	Target
0.0	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	
740.9	8.82	254.90	739.2	-8.8	-32.7	2.00	2.00	0.00	254.90	
6,574.5	8.82	254.90	6,503.8	-241.7	-896.2	0.00	0.00	0.00	0.00	
7,015.4	0.00	0.00	6,943.0	-250.6	-928.9	2.00	-2.00	0.00	180.00	Chevron 1-15D (I01
7,357.7	0.86	239.98	7,285.2	-251.8	-931.1	0.25	0.25	-35.07	239.98	
9,865.7	0.86	239.98	9,793.0	-270.6	-963.5	0.00	0.00	0.00	0.00	Chevron 1-15D (I01



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Project:	Garfield County	MD Reference:	KBE @ 8356.0ft (Original Well Elev)
Site:	Chevron I01 697 Pad	North Reference:	True
Well:	Chevron 1-15D (I01 697 Pad)	Survey Calculation Method:	Minimum Curvature
Wellbore:	DD		
Design:	Plan #1		

Planned Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Comments / Formations
2,500.0	8.82	254.90	2,477.5	-79.1	-293.1	303.5	0.00	0.00	
2,600.0	8.82	254.90	2,576.3	-83.0	-307.9	318.9	0.00	0.00	
2,700.0	8.82	254.90	2,675.1	-87.0	-322.7	334.2	0.00	0.00	
2,800.0	8.82	254.90	2,773.9	-91.0	-337.5	349.5	0.00	0.00	
2,900.0	8.82	254.90	2,872.7	-95.0	-352.3	364.9	0.00	0.00	
3,000.0	8.82	254.90	2,971.6	-99.0	-367.1	380.2	0.00	0.00	
3,001.5	8.82	254.90	2,973.0	-99.1	-367.3	380.4	0.00	0.00	Wasatch
3,100.0	8.82	254.90	3,070.4	-103.0	-381.9	395.5	0.00	0.00	
3,200.0	8.82	254.90	3,169.2	-107.0	-396.7	410.9	0.00	0.00	
3,300.0	8.82	254.90	3,268.0	-111.0	-411.5	426.2	0.00	0.00	
3,400.0	8.82	254.90	3,366.8	-115.0	-426.3	441.5	0.00	0.00	
3,500.0	8.82	254.90	3,465.6	-119.0	-441.1	456.8	0.00	0.00	
3,600.0	8.82	254.90	3,564.5	-123.0	-455.9	472.2	0.00	0.00	
3,700.0	8.82	254.90	3,663.3	-127.0	-470.7	487.5	0.00	0.00	
3,800.0	8.82	254.90	3,762.1	-131.0	-485.5	502.8	0.00	0.00	
3,900.0	8.82	254.90	3,860.9	-134.9	-500.3	518.2	0.00	0.00	
4,000.0	8.82	254.90	3,959.7	-138.9	-515.1	533.5	0.00	0.00	
4,100.0	8.82	254.90	4,058.5	-142.9	-529.9	548.8	0.00	0.00	
4,200.0	8.82	254.90	4,157.4	-146.9	-544.7	564.2	0.00	0.00	
4,300.0	8.82	254.90	4,256.2	-150.9	-559.5	579.5	0.00	0.00	
4,400.0	8.82	254.90	4,355.0	-154.9	-574.3	594.8	0.00	0.00	
4,500.0	8.82	254.90	4,453.8	-158.9	-589.1	610.1	0.00	0.00	
4,600.0	8.82	254.90	4,552.6	-162.9	-603.9	625.5	0.00	0.00	
4,700.0	8.82	254.90	4,651.5	-166.9	-618.7	640.8	0.00	0.00	
4,800.0	8.82	254.90	4,750.3	-170.9	-633.5	656.1	0.00	0.00	
4,900.0	8.82	254.90	4,849.1	-174.9	-648.3	671.5	0.00	0.00	
4,964.7	8.82	254.90	4,913.0	-177.5	-657.9	681.4	0.00	0.00	Fort Union
5,000.0	8.82	254.90	4,947.9	-178.9	-663.1	686.8	0.00	0.00	
5,100.0	8.82	254.90	5,046.7	-182.9	-677.9	702.1	0.00	0.00	
5,200.0	8.82	254.90	5,145.5	-186.9	-692.7	717.5	0.00	0.00	
5,300.0	8.82	254.90	5,244.4	-190.8	-707.5	732.8	0.00	0.00	
5,400.0	8.82	254.90	5,343.2	-194.8	-722.3	748.1	0.00	0.00	
5,470.7	8.82	254.90	5,413.0	-197.7	-732.8	759.0	0.00	0.00	Base Ft Union
5,500.0	8.82	254.90	5,442.0	-198.8	-737.1	763.5	0.00	0.00	
5,600.0	8.82	254.90	5,540.8	-202.8	-752.0	778.8	0.00	0.00	
5,700.0	8.82	254.90	5,639.6	-206.8	-766.8	794.1	0.00	0.00	
5,800.0	8.82	254.90	5,738.5	-210.8	-781.6	809.4	0.00	0.00	
5,900.0	8.82	254.90	5,837.3	-214.8	-796.4	824.8	0.00	0.00	
6,000.0	8.82	254.90	5,936.1	-218.8	-811.2	840.1	0.00	0.00	
6,100.0	8.82	254.90	6,034.9	-222.8	-826.0	855.4	0.00	0.00	
6,200.0	8.82	254.90	6,133.7	-226.8	-840.8	870.8	0.00	0.00	
6,300.0	8.82	254.90	6,232.5	-230.8	-855.6	886.1	0.00	0.00	
6,400.0	8.82	254.90	6,331.4	-234.8	-870.4	901.4	0.00	0.00	
6,500.0	8.82	254.90	6,430.2	-238.8	-885.2	916.8	0.00	0.00	
6,513.0	8.82	254.90	6,443.0	-239.3	-887.1	918.7	0.00	0.00	Ohio Creek
6,574.5	8.82	254.90	6,503.8	-241.7	-896.2	928.2	0.00	0.00	Start Drop -2.00
6,600.0	8.31	254.90	6,529.0	-242.7	-899.9	932.0	2.00	-2.00	
6,700.0	6.31	254.90	6,628.2	-246.0	-912.1	944.7	2.00	-2.00	
6,800.0	4.31	254.90	6,727.8	-248.4	-921.1	953.9	2.00	-2.00	
6,815.3	4.00	254.90	6,743.0	-248.7	-922.2	955.1	2.00	-2.00	Williams Fork
6,900.0	2.31	254.90	6,827.6	-249.9	-926.7	959.7	2.00	-2.00	
7,000.0	0.31	254.90	6,927.6	-250.5	-928.9	962.0	2.00	-2.00	



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Well:	Chevron 1-15D (I01 697 Pad)	Survey Calculation Method:	Minimum Curvature
Wellbore:	DD		
Design:	Plan #1		

Planned Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Comments / Formations
7,015.4	0.00	0.00	6,943.0	-250.6	-928.9	962.0	2.00	-2.00	EOD; Inc=0° - Approx TOG - Chevron 1-15
7,100.0	0.21	239.98	7,027.6	-250.6	-929.0	962.2	0.25	0.25	
7,200.0	0.46	239.98	7,127.6	-250.9	-929.5	962.8	0.25	0.25	
7,300.0	0.71	239.98	7,227.5	-251.4	-930.4	963.8	0.25	0.25	
7,357.7	0.86	239.98	7,285.2	-251.8	-931.1	964.5	0.25	0.25	
7,400.0	0.86	239.98	7,327.5	-252.1	-931.7	965.1	0.00	0.00	
7,500.0	0.86	239.98	7,427.5	-252.9	-933.0	966.6	0.00	0.00	
7,600.0	0.86	239.98	7,527.5	-253.6	-934.2	968.0	0.00	0.00	
7,700.0	0.86	239.98	7,627.5	-254.4	-935.5	969.5	0.00	0.00	
7,800.0	0.86	239.98	7,727.5	-255.1	-936.8	970.9	0.00	0.00	
7,900.0	0.86	239.98	7,827.5	-255.9	-938.1	972.4	0.00	0.00	
8,000.0	0.86	239.98	7,927.5	-256.6	-939.4	973.8	0.00	0.00	
8,100.0	0.86	239.98	8,027.5	-257.4	-940.7	975.3	0.00	0.00	
8,200.0	0.86	239.98	8,127.4	-258.1	-942.0	976.7	0.00	0.00	
8,300.0	0.86	239.98	8,227.4	-258.9	-943.3	978.2	0.00	0.00	
8,400.0	0.86	239.98	8,327.4	-259.6	-944.6	979.6	0.00	0.00	
8,500.0	0.86	239.98	8,427.4	-260.4	-945.9	981.0	0.00	0.00	
8,600.0	0.86	239.98	8,527.4	-261.1	-947.2	982.5	0.00	0.00	
8,700.0	0.86	239.98	8,627.4	-261.9	-948.5	983.9	0.00	0.00	
8,800.0	0.86	239.98	8,727.4	-262.6	-949.8	985.4	0.00	0.00	
8,900.0	0.86	239.98	8,827.4	-263.4	-951.1	986.8	0.00	0.00	
9,000.0	0.86	239.98	8,927.4	-264.1	-952.3	988.3	0.00	0.00	
9,100.0	0.86	239.98	9,027.3	-264.8	-953.6	989.7	0.00	0.00	
9,200.0	0.86	239.98	9,127.3	-265.6	-954.9	991.2	0.00	0.00	
9,300.0	0.86	239.98	9,227.3	-266.3	-956.2	992.6	0.00	0.00	
9,315.7	0.86	239.98	9,243.0	-266.5	-956.4	992.8	0.00	0.00	Cameo
9,400.0	0.86	239.98	9,327.3	-267.1	-957.5	994.1	0.00	0.00	
9,500.0	0.86	239.98	9,427.3	-267.8	-958.8	995.5	0.00	0.00	
9,600.0	0.86	239.98	9,527.3	-268.6	-960.1	997.0	0.00	0.00	
9,700.0	0.86	239.98	9,627.3	-269.3	-961.4	998.4	0.00	0.00	
9,715.7	0.86	239.98	9,643.0	-269.4	-961.6	998.6	0.00	0.00	Rollins SS
9,800.0	0.86	239.98	9,727.3	-270.1	-962.7	999.9	0.00	0.00	
9,865.7	0.86	239.98	9,793.0	-270.6	-963.5	1,000.8	0.00	0.00	TD at 9865.7 - Chevron 1-15D (I01 697 Pa

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 1-15D (I01 6	0.00	0.00	6,943.0	-250.6	-928.9	1,636,391.48	2,248,176.89	39.550377	-108.166604
- plan hits target center									
- Point									
Chevron 1-15D (I01 6	0.00	0.00	9,793.0	-270.6	-963.5	1,636,372.49	2,248,141.68	39.550322	-108.166727
- plan hits target center									
- Rectangle (sides W50.0 H100.0 D0.0)									



Cathedral Energy Services Planning Report

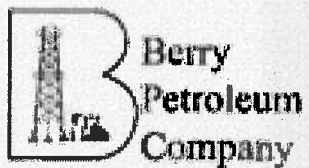
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Project:	Garfield County	MD Reference:	KBE @ 8356.0ft (Original Well Elev)
Site:	Chevron I01 697 Pad	North Reference:	True
Well:	Chevron 1-15D (I01 697 Pad)	Survey Calculation Method:	Minimum Curvature
Wellbore:	DD		
Design:	Plan #1		

Formations

Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)
3,001.5	2,973.0	Wasatch		0.00	
4,964.7	4,913.0	Fort Union		0.00	
5,470.7	5,413.0	Base Ft Union		0.00	
6,513.0	6,443.0	Ohio Creek		0.00	
6,815.3	6,743.0	Williams Fork		0.00	
7,015.4	6,943.0	Approx TOG		0.00	
9,315.7	9,243.0	Cameo		0.00	
9,715.7	9,643.0	Rollins SS		0.00	

Plan Annotations

Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment
		+N/-S (ft)	+E/-W (ft)	
300.0	300.0	0.0	0.0	KOP @ 300'
740.9	739.2	-8.8	-32.7	EOB; Inc=8.82°
6,574.5	6,503.8	-241.7	-896.2	Start Drop -2.00
7,015.4	6,943.0	-250.6	-928.9	EOD; Inc=0°
9,865.7	9,793.0	-251.8	-931.1	TD at 9865.7



Berry Petroleum Company (NAD 83)

Garfield County

Chevron I01 697 Pad

Chevron 1-15D (I01 697 Pad)

DD

Plan #1

Anticollision Report

25 February, 2010



Cathedral Energy Services Anticollision Report

Company:	Berry Petroleum Company (NAD 83)	Local Co-ordinate Reference:	Well Chevron 1-15D (I01 697 Pad)
Project:	Garfield County	TVD Reference:	KBE @ 8356.0ft (Original Well Elev)
Reference Site:	Chevron I01 697 Pad	MD Reference:	KBE @ 8356.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Chevron 1-15D (I01 697 Pad)	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	DD	Database:	EDM 5000.1 US Multi Users Db
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Reference	Plan #1
Filter type:	NO GLOBAL FILTER: Using user defined selection & filtering criteria
Interpolation Method:	MD Interval 100.0ft
Depth Range:	Unlimited
Results Limited by:	Maximum center-center distance of 500.0ft
Warning Levels Evaluated at:	2.00 Sigma
Error Model:	Systematic Ellipse
Scan Method:	Closest Approach 3D
Error Surface:	Elliptical Conic

Survey Tool Program	Date	2/25/2010
From (ft)	To (ft)	Survey (Wellbore)
0.0	9,865.7	Plan #1 (DD)
		Tool Name
		MWD
		Description
		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						
Chevron I01 697 Pad						
Chevron 1-14D - DD - Plan #1	336.1	341.3	14.9	13.8	13.297	CC
Chevron 1-14D - DD - Plan #1	400.0	405.5	15.0	13.7	11.150	ES
Chevron 1-14D - DD - Plan #1	9,826.2	9,844.4	315.2	266.0	6.404	SF
Chevron 1-16D (I01 697 Pad) - DD - Plan #1	300.0	300.0	14.9	14.0	15.026	CC
Chevron 1-16D (I01 697 Pad) - DD - Plan #1	500.0	498.9	15.3	13.6	9.016	ES
Chevron 1-16D (I01 697 Pad) - DD - Plan #1	1,000.0	997.4	26.0	21.8	6.097	SF



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Reference Site:	Chevron I01 697 Pad	MD Reference:	KBE @ 8356.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Chevron 1-15D (I01 697 Pad)	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	DD	Database:	EDM 5000.1 US Multi Users Db
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Offset Design Chevron I01 697 Pad - Chevron 1-14D - DD - Plan #1													Offset Site Error:	0.0 ft
Survey Program: 0-MWD													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis		Distance		Total		Separation		Warning		
Measured Depth	Vertical Depth	Measured Depth	Vertical Depth	Reference	Offset	Highside Toolface	Offset Wellbore Centre +N/-S	+E/-W	Between Centres	Between Ellipses	Uncertainty Axis	Factor		
(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(°)	(ft)	(ft)	(ft)	(ft)				
0.0	0.0	5.0	5.0	0.0	0.0	89.90	0.0	14.9	14.9					
100.0	100.0	105.0	105.0	0.1	0.1	89.90	0.0	14.9	14.9	14.6	0.30	50.370		
200.0	200.0	205.0	205.0	0.3	0.3	89.90	0.0	14.9	14.9	14.3	0.65	23.143		
300.0	300.0	305.0	305.0	0.5	0.5	89.91	0.0	14.9	14.9	13.9	0.99	15.017		
336.1	336.1	341.3	341.3	0.6	0.6	-164.62	-0.1	14.7	14.9	13.8	1.12	13.297 CC		
400.0	400.0	405.5	405.4	0.7	0.7	-162.79	-1.0	13.3	15.0	13.7	1.35	11.150 ES		
500.0	499.8	505.9	505.7	0.9	0.9	-157.19	-3.9	8.7	15.6	13.9	1.71	9.146		
600.0	599.5	606.2	605.7	1.1	1.1	-149.17	-8.7	1.1	16.9	14.9	2.10	8.083		
700.0	698.7	706.6	705.2	1.3	1.4	-140.26	-15.3	-9.4	19.3	16.8	2.56	7.546		
800.0	797.6	806.7	804.1	1.6	1.7	-130.95	-23.8	-22.8	22.5	19.4	3.13	7.196		
900.0	896.4	906.6	902.5	1.9	2.0	-122.28	-32.8	-37.1	26.0	22.3	3.77	6.906		
1,000.0	995.2	1,006.5	1,001.0	2.2	2.3	-115.77	-41.8	-51.4	30.0	25.6	4.43	6.770		
1,100.0	1,094.0	1,108.4	1,099.4	2.5	2.6	-110.82	-50.8	-65.7	34.2	29.1	5.09	6.721		
1,200.0	1,192.8	1,208.2	1,197.8	2.9	3.0	-106.98	-59.8	-80.0	38.7	32.9	5.75	6.719		
1,300.0	1,291.7	1,306.1	1,296.3	3.2	3.3	-103.94	-68.9	-94.3	43.2	36.8	6.41	6.742		
1,400.0	1,390.5	1,406.0	1,394.7	3.5	3.6	-101.49	-77.9	-108.6	47.9	40.8	7.07	6.777		
1,500.0	1,489.3	1,505.8	1,493.1	3.8	4.0	-99.48	-86.9	-122.9	52.7	44.9	7.72	6.819		
1,600.0	1,588.1	1,605.7	1,591.6	4.1	4.3	-97.80	-95.9	-137.2	57.5	49.1	8.37	6.862		
1,700.0	1,686.9	1,705.6	1,690.0	4.4	4.7	-96.38	-104.9	-151.5	62.3	53.3	9.02	6.905		
1,800.0	1,785.7	1,805.5	1,788.4	4.6	5.0	-95.17	-113.9	-165.8	67.2	57.5	9.67	6.947		
1,900.0	1,884.6	1,905.3	1,886.9	5.1	5.3	-94.12	-123.0	-180.1	72.1	61.8	10.32	6.987		
2,000.0	1,983.4	2,005.2	1,985.3	5.4	5.7	-93.20	-132.0	-194.4	77.0	66.0	10.96	7.025		
2,100.0	2,082.2	2,105.1	2,083.7	5.7	6.0	-92.40	-141.0	-208.7	81.9	70.3	11.60	7.061		
2,200.0	2,181.0	2,204.9	2,182.1	6.0	6.4	-91.69	-150.0	-223.0	86.9	74.6	12.25	7.095		
2,300.0	2,279.8	2,304.8	2,280.6	6.3	6.7	-91.05	-159.0	-237.3	91.9	79.0	12.89	7.127		
2,400.0	2,378.6	2,404.7	2,379.0	6.7	7.1	-90.46	-168.0	-251.6	96.8	83.3	13.53	7.157		
2,500.0	2,477.5	2,504.6	2,477.4	7.0	7.4	-89.96	-177.0	-265.9	101.8	87.6	14.17	7.185		
2,600.0	2,576.3	2,604.4	2,575.9	7.3	7.7	-89.50	-186.1	-280.2	106.8	92.0	14.81	7.211		
2,700.0	2,675.1	2,704.3	2,674.3	7.6	8.1	-89.07	-195.1	-294.5	111.8	96.4	15.45	7.236		
2,800.0	2,773.9	2,804.2	2,772.7	8.0	8.4	-88.68	-204.1	-308.8	116.8	100.7	16.09	7.259		
2,900.0	2,872.7	2,904.0	2,871.2	8.3	8.8	-88.33	-213.1	-323.1	121.8	105.1	16.73	7.281		
3,000.0	2,971.6	3,003.9	2,969.6	8.6	9.1	-88.00	-222.1	-337.4	126.8	109.5	17.37	7.302		
3,100.0	3,070.4	3,103.8	3,068.0	8.9	9.5	-87.69	-231.1	-351.7	131.8	113.8	18.01	7.321		
3,200.0	3,169.2	3,203.7	3,166.5	9.2	9.8	-87.41	-240.2	-366.0	136.9	118.2	18.65	7.339		
3,300.0	3,268.0	3,303.5	3,264.9	9.6	10.2	-87.15	-249.2	-380.3	141.9	122.6	19.29	7.357		
3,400.0	3,366.8	3,403.4	3,363.3	9.9	10.5	-86.91	-258.2	-394.6	146.9	127.0	19.93	7.373		
3,500.0	3,465.6	3,503.3	3,461.7	10.2	10.8	-86.68	-267.2	-408.9	151.9	131.4	20.56	7.389		
3,600.0	3,564.5	3,603.2	3,560.2	10.5	11.2	-86.47	-276.2	-423.2	157.0	135.8	21.20	7.404		
3,700.0	3,663.3	3,703.0	3,658.6	10.8	11.5	-86.27	-285.2	-437.5	162.0	140.2	21.84	7.418		
3,800.0	3,762.1	3,802.9	3,757.0	11.2	11.9	-86.08	-294.3	-451.8	167.0	144.6	22.48	7.432		
3,900.0	3,860.9	3,902.8	3,855.5	11.5	12.2	-85.90	-303.3	-466.1	172.1	149.0	23.12	7.444		
4,000.0	3,959.7	4,002.6	3,953.9	11.8	12.6	-85.74	-312.3	-480.4	177.1	153.4	23.75	7.457		
4,100.0	4,058.5	4,102.5	4,052.3	12.1	12.9	-85.58	-321.3	-494.7	182.2	157.8	24.39	7.468		
4,200.0	4,157.4	4,202.4	4,150.8	12.4	13.3	-85.43	-330.3	-509.0	187.2	162.2	25.03	7.479		
4,300.0	4,256.2	4,302.3	4,249.2	12.8	13.6	-85.29	-339.3	-523.3	192.2	166.6	25.67	7.490		
4,400.0	4,355.0	4,402.1	4,347.6	13.1	13.9	-85.16	-348.3	-537.6	197.3	171.0	26.30	7.500		
4,500.0	4,453.8	4,502.0	4,446.1	13.4	14.3	-85.03	-357.4	-551.9	202.3	175.4	26.94	7.510		
4,600.0	4,552.6	4,601.9	4,544.5	13.7	14.6	-84.91	-366.4	-566.2	207.4	179.8	27.58	7.519		
4,700.0	4,651.5	4,701.7	4,642.9	14.1	15.0	-84.79	-375.4	-580.5	212.4	184.2	28.21	7.528		
4,800.0	4,750.3	4,801.6	4,741.3	14.4	15.3	-84.68	-384.4	-594.8	217.5	188.6	28.85	7.537		
4,900.0	4,849.1	4,901.5	4,839.8	14.7	15.7	-84.58	-393.4	-609.1	222.5	193.0	29.49	7.545		
5,000.0	4,947.9	5,001.4	4,938.2	15.0	16.0	-84.48	-402.4	-623.4	227.6	197.4	30.13	7.553		

CC - Min centre to center distance or covergent 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 1-15D (I01 697 Pad)
Project:	Garfield County	TVD Reference:	KBE @ 8356.0ft (Original Well Elev)
Reference Site:	Chevron I01 697 Pad	MD Reference:	KBE @ 8356.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Chevron 1-15D (I01 697 Pad)	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	DD	Database:	EDM 5000.1 US Multi Users Db
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Offset Design Chevron I01 697 Pad - Chevron 1-14D - DD - Plan #1													Offset Site Error:	0.0 ft
Survey Program: 0-MWD													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Tooface (")	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor		
5,100.0	5,048.7	5,101.2	5,036.6	15.3	16.4	-84.38	-411.5	-637.7	232.6	201.8	30.76	7.581		
5,200.0	5,145.5	5,201.1	5,135.1	15.7	16.7	-84.29	-420.5	-652.0	237.7	206.3	31.40	7.588		
5,300.0	5,244.4	5,301.0	5,233.5	16.0	17.0	-84.20	-429.5	-666.3	242.7	210.7	32.04	7.576		
5,400.0	5,343.2	5,400.8	5,331.9	16.3	17.4	-84.12	-438.5	-680.6	247.8	215.1	32.67	7.583		
5,500.0	5,442.0	5,500.7	5,430.4	16.6	17.7	-84.04	-447.5	-694.9	252.8	219.5	33.31	7.589		
5,600.0	5,540.8	5,600.6	5,528.8	16.9	18.1	-83.96	-456.5	-709.2	257.9	223.9	33.95	7.596		
5,700.0	5,639.6	5,700.5	5,627.2	17.3	18.4	-83.88	-465.6	-723.5	262.9	228.3	34.58	7.602		
5,800.0	5,738.5	5,800.3	5,725.7	17.6	18.6	-83.81	-474.6	-737.8	268.0	232.7	35.22	7.608		
5,900.0	5,837.3	5,900.2	5,824.1	17.9	19.1	-83.74	-483.6	-752.1	273.0	237.2	35.86	7.614		
6,000.0	5,936.1	6,000.1	5,922.5	18.2	19.5	-83.67	-492.6	-766.4	278.1	241.6	36.50	7.619		
6,100.0	6,034.9	6,099.9	6,020.9	18.6	19.8	-83.61	-501.6	-780.7	283.1	246.0	37.13	7.625		
6,200.0	6,133.7	6,199.8	6,119.4	18.9	20.2	-83.55	-510.6	-795.0	288.2	250.4	37.77	7.630		
6,300.0	6,232.5	6,299.7	6,217.8	19.2	20.5	-83.49	-519.6	-809.3	293.2	254.8	38.41	7.635		
6,400.0	6,331.4	6,399.6	6,316.2	19.5	20.8	-83.43	-528.7	-823.6	298.3	259.2	39.04	7.640		
6,500.0	6,430.2	6,499.4	6,414.7	19.8	21.2	-83.37	-537.7	-837.9	303.3	263.7	39.68	7.645		
6,600.0	6,529.0	6,603.2	6,517.1	20.2	21.5	-83.36	-546.3	-851.6	307.9	267.5	40.32	7.636		
6,700.0	6,628.2	6,707.5	6,620.7	20.4	21.8	-83.94	-553.0	-862.2	311.2	270.4	40.86	7.616		
6,800.0	6,727.8	6,811.9	6,724.8	20.6	22.0	-84.27	-557.7	-869.8	313.6	272.3	41.31	7.591		
6,900.0	6,827.8	6,916.3	6,829.0	20.8	22.1	-84.55	-560.3	-873.8	314.8	273.2	41.64	7.561		
7,000.0	6,927.6	7,019.8	6,932.5	20.9	22.2	-84.78	-561.0	-874.8	315.1	273.2	41.88	7.523		
7,013.3	6,940.8	7,033.0	6,945.7	20.9	22.2	-83.39	-561.0	-874.8	315.1	273.2	41.91	7.518		
7,100.0	7,027.6	7,119.3	7,032.0	21.0	22.3	-69.84	-561.1	-875.1	315.1	273.0	42.10	7.486		
7,200.0	7,127.6	7,218.8	7,131.5	21.1	22.4	-69.81	-561.5	-875.7	315.2	272.9	42.32	7.447		
7,300.0	7,227.5	7,318.4	7,231.0	21.2	22.5	-69.79	-562.1	-876.7	315.2	272.7	42.56	7.407		
7,400.0	7,327.5	7,418.2	7,330.9	21.4	22.7	-69.78	-562.8	-878.0	315.3	272.4	42.81	7.364		
7,500.0	7,427.5	7,518.2	7,430.9	21.5	22.8	-69.78	-563.5	-879.3	315.3	272.2	43.06	7.322		
7,600.0	7,527.5	7,618.2	7,530.9	21.6	22.9	-69.78	-564.3	-880.6	315.3	271.9	43.31	7.279		
7,700.0	7,627.5	7,718.2	7,630.9	21.7	23.0	-69.78	-565.0	-881.9	315.3	271.7	43.56	7.237		
7,800.0	7,727.5	7,818.2	7,730.9	21.9	23.1	-69.78	-565.8	-883.2	315.3	271.4	43.82	7.195		
7,900.0	7,827.5	7,918.2	7,830.9	22.0	23.3	-69.78	-566.5	-884.5	315.3	271.2	44.07	7.153		
8,000.0	7,927.5	8,018.2	7,930.8	22.1	23.4	-69.78	-567.3	-885.7	315.3	270.9	44.33	7.112		
8,100.0	8,027.5	8,118.2	8,030.8	22.3	23.5	-69.78	-568.0	-887.0	315.3	270.7	44.59	7.071		
8,200.0	8,127.4	8,218.2	8,130.8	22.4	23.6	-69.78	-568.8	-888.3	315.2	270.4	44.85	7.030		
8,300.0	8,227.4	8,318.2	8,230.8	22.5	23.8	-69.78	-569.5	-889.6	315.2	270.1	45.11	6.989		
8,400.0	8,327.4	8,418.2	8,330.8	22.6	23.9	-69.78	-570.3	-890.9	315.2	269.9	45.37	6.949		
8,500.0	8,427.4	8,518.2	8,430.8	22.8	24.0	-69.78	-571.0	-892.2	315.2	269.6	45.63	6.909		
8,600.0	8,527.4	8,618.2	8,530.8	22.9	24.1	-69.78	-571.8	-893.5	315.2	269.4	45.90	6.869		
8,700.0	8,627.4	8,718.2	8,630.8	23.0	24.3	-69.78	-572.5	-894.8	315.2	269.1	46.16	6.829		
8,800.0	8,727.4	8,818.2	8,730.8	23.2	24.4	-69.78	-573.2	-896.1	315.2	268.8	46.43	6.790		
8,900.0	8,827.4	8,918.2	8,830.7	23.3	24.5	-69.78	-574.0	-897.4	315.2	268.5	46.70	6.751		
9,000.0	8,927.4	9,018.2	8,930.7	23.4	24.7	-69.78	-574.7	-898.7	315.2	268.3	46.96	6.712		
9,100.0	9,027.3	9,118.2	9,030.7	23.6	24.8	-69.78	-575.5	-899.9	315.2	268.0	47.23	6.674		
9,200.0	9,127.3	9,218.2	9,130.7	23.7	24.9	-69.78	-576.2	-901.2	315.2	267.7	47.51	6.636		
9,300.0	9,227.3	9,318.2	9,230.7	23.9	25.1	-69.78	-577.0	-902.5	315.2	267.5	47.78	6.598		
9,400.0	9,327.3	9,418.2	9,330.7	24.0	25.2	-69.78	-577.7	-903.8	315.2	267.2	48.05	6.561		
9,500.0	9,427.3	9,518.2	9,430.7	24.1	25.3	-69.78	-578.5	-905.1	315.2	266.9	48.32	6.523		
9,600.0	9,527.3	9,618.2	9,530.7	24.3	25.5	-69.78	-579.2	-906.4	315.2	266.6	48.60	6.486		
9,700.0	9,627.3	9,718.2	9,630.7	24.4	25.6	-69.78	-580.0	-907.7	315.2	266.4	48.88	6.450		
9,800.0	9,727.3	9,818.2	9,730.6	24.5	25.7	-69.78	-580.7	-909.0	315.2	266.1	49.15	6.413		
9,826.2	9,753.5	9,844.4	9,756.8	24.6	25.8	-69.78	-580.9	-909.3	315.2	266.0	49.23	6.404 SF		
9,865.7	9,793.0	9,850.6	9,783.0	24.6	25.8	-69.78	-580.9	-909.4	317.0	267.7	49.29	6.431		

CC - Min centre to center distance or covergent 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 1-15D (I01 697 Pad)
Project:	Garfield County	TVD Reference:	KBE @ 8356.0ft (Original Well Elev)
Reference Site:	Chevron I01 697 Pad	MD Reference:	KBE @ 8356.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Chevron 1-15D (I01 697 Pad)	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	DD	Database:	EDM 5000.1 US Multi Users Db
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Offset Design Chevron I01 697 Pad - Chevron 1-16D (I01 697 Pad) - DD - Plan #1														Offset Site Error:	0.0 ft
Survey Program: 0-MWD														Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis		Distance		Total		Separation		Warning			
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Footface (')	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	-91.26	-0.3	-14.9	14.9						
100.0	100.0	100.0	100.0	0.1	0.1	-91.26	-0.3	-14.9	14.9	14.7	0.30	50.382			
200.0	200.0	200.0	200.0	0.3	0.3	-91.26	-0.3	-14.9	14.9	14.3	0.85	23.148			
300.0	300.0	300.0	300.0	0.5	0.5	-91.26	-0.3	-14.9	14.9	14.0	0.99	15.026 CC			
400.0	400.0	399.5	399.5	0.7	0.7	16.03	-0.2	-16.7	15.0	13.7	1.34	11.166			
500.0	499.8	498.9	498.8	0.9	0.9	22.49	0.2	-21.8	15.3	13.6	1.69	9.016 ES			
600.0	599.5	598.4	597.8	1.1	1.1	32.54	0.8	-30.4	16.1	14.1	2.06	7.826			
700.0	698.7	697.8	696.6	1.3	1.3	44.52	1.6	-42.4	18.0	15.5	2.49	7.231			
800.0	797.6	797.7	795.6	1.6	1.6	58.77	2.5	-55.6	19.8	16.8	3.03	6.544			
900.0	896.4	897.6	894.5	1.9	1.9	70.74	3.5	-68.8	22.5	18.9	3.84	6.193			
1,000.0	995.2	997.4	993.5	2.2	2.1	78.83	4.4	-81.9	26.0	21.8	4.27	6.097 SF			
1,100.0	1,094.0	1,097.3	1,092.5	2.5	2.4	86.65	5.3	-95.1	30.0	25.1	4.89	6.132			
1,200.0	1,192.8	1,197.2	1,191.5	2.9	2.7	91.82	6.3	-108.3	34.3	28.8	5.51	6.229			
1,300.0	1,291.7	1,297.0	1,290.5	3.2	3.0	95.81	7.2	-121.5	38.8	32.7	6.11	6.352			
1,400.0	1,390.5	1,396.9	1,389.5	3.5	3.3	98.98	8.1	-134.7	43.5	36.8	6.71	6.483			
1,500.0	1,489.3	1,496.8	1,488.5	3.8	3.6	101.49	9.1	-147.9	48.3	41.0	7.30	6.611			
1,600.0	1,588.1	1,596.6	1,587.4	4.1	3.9	103.56	10.0	-161.0	53.1	45.3	7.89	6.734			
1,700.0	1,686.9	1,696.5	1,686.4	4.4	4.1	105.28	10.9	-174.2	58.1	49.6	8.48	6.849			
1,800.0	1,785.7	1,796.4	1,785.4	4.8	4.4	106.74	11.9	-187.4	63.0	54.0	9.06	6.957			
1,900.0	1,884.6	1,896.2	1,884.4	5.1	4.7	107.98	12.8	-200.6	68.0	58.4	9.64	7.056			
2,000.0	1,983.4	1,996.1	1,983.4	5.4	5.0	109.05	13.7	-213.8	73.0	62.8	10.22	7.148			
2,100.0	2,082.2	2,095.9	2,082.4	5.7	5.3	109.98	14.7	-226.9	78.1	67.3	10.79	7.232			
2,200.0	2,181.0	2,195.8	2,181.4	6.0	5.6	110.80	15.6	-240.1	83.1	71.8	11.37	7.311			
2,300.0	2,279.8	2,295.7	2,280.4	6.3	5.9	111.53	16.5	-253.3	88.2	76.3	11.95	7.383			
2,400.0	2,378.6	2,395.5	2,379.3	6.7	6.2	112.18	17.5	-266.5	93.3	80.8	12.52	7.451			
2,500.0	2,477.5	2,495.4	2,478.3	7.0	6.5	112.75	18.4	-279.7	98.4	85.3	13.09	7.513			
2,600.0	2,576.3	2,595.3	2,577.3	7.3	6.7	113.28	19.3	-292.9	103.5	89.8	13.67	7.571			
2,700.0	2,675.1	2,695.1	2,676.3	7.6	7.0	113.75	20.3	-306.0	108.6	94.4	14.24	7.626			
2,800.0	2,773.9	2,795.0	2,775.3	8.0	7.3	114.18	21.2	-319.2	113.7	98.9	14.82	7.676			
2,900.0	2,872.7	2,894.9	2,874.3	8.3	7.6	114.57	22.1	-332.4	118.9	103.5	15.39	7.724			
3,000.0	2,971.6	2,994.7	2,973.3	8.6	7.9	114.94	23.1	-345.6	124.0	108.0	15.96	7.768			
3,100.0	3,070.4	3,094.6	3,072.3	8.9	8.2	115.27	24.0	-358.8	129.1	112.6	16.53	7.810			
3,200.0	3,169.2	3,194.5	3,171.2	9.2	8.5	115.58	24.9	-371.9	134.3	117.2	17.11	7.849			
3,300.0	3,268.0	3,294.3	3,270.2	9.6	8.8	115.86	25.9	-385.1	139.4	121.7	17.68	7.886			
3,400.0	3,366.8	3,394.2	3,369.2	9.9	9.1	116.12	26.8	-398.3	144.5	126.3	18.25	7.921			
3,500.0	3,465.6	3,494.1	3,468.2	10.2	9.3	116.37	27.7	-411.5	149.7	130.9	18.82	7.954			
3,600.0	3,564.5	3,593.9	3,567.2	10.5	9.6	116.60	28.7	-424.7	154.9	135.5	19.39	7.985			
3,700.0	3,663.3	3,693.8	3,666.2	10.8	9.9	116.81	29.6	-437.9	160.0	140.0	19.96	8.014			
3,800.0	3,762.1	3,793.7	3,765.2	11.2	10.2	117.01	30.5	-451.0	165.2	144.6	20.54	8.043			
3,900.0	3,860.9	3,893.5	3,864.2	11.5	10.5	117.20	31.5	-464.2	170.3	149.2	21.11	8.069			
4,000.0	3,959.7	3,993.4	3,963.1	11.8	10.8	117.38	32.4	-477.4	175.5	153.8	21.68	8.095			
4,100.0	4,058.5	4,093.3	4,062.1	12.1	11.1	117.55	33.3	-490.6	180.6	158.4	22.25	8.119			
4,200.0	4,157.4	4,193.1	4,161.1	12.4	11.4	117.71	34.3	-503.8	185.8	163.0	22.82	8.142			
4,300.0	4,256.2	4,293.0	4,260.1	12.8	11.7	117.86	35.2	-516.9	191.0	167.6	23.39	8.164			
4,400.0	4,355.0	4,392.9	4,359.1	13.1	12.0	118.00	36.1	-530.1	196.1	172.2	23.96	8.185			
4,500.0	4,453.8	4,492.7	4,458.1	13.4	12.3	118.13	37.1	-543.3	201.3	176.8	24.54	8.205			
4,600.0	4,552.6	4,592.6	4,557.1	13.7	12.5	118.26	38.0	-556.5	206.5	181.4	25.11	8.224			
4,700.0	4,651.5	4,692.4	4,656.0	14.1	12.8	118.38	38.9	-569.7	211.6	186.0	25.68	8.242			
4,800.0	4,750.3	4,792.3	4,755.0	14.4	13.1	118.50	39.9	-582.9	216.8	190.6	26.25	8.260			
4,900.0	4,849.1	4,892.2	4,854.0	14.7	13.4	118.61	40.8	-596.0	222.0	195.2	26.82	8.277			
5,000.0	4,947.9	4,992.0	4,953.0	15.0	13.7	118.72	41.7	-609.2	227.2	199.8	27.39	8.293			
5,100.0	5,046.7	5,091.9	5,052.0	15.3	14.0	118.82	42.7	-622.4	232.3	204.4	27.96	8.309			

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 1-15D (I01 697 Pad)
Project:	Garfield County	TVD Reference:	KBE @ 8356.0ft (Original Well Elev)
Reference Site:	Chevron I01 697 Pad	MD Reference:	KBE @ 8356.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Chevron 1-15D (I01 697 Pad)	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	DD	Database:	EDM 5000.1 US Multi Users Db
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Offset Design Chevron I01 697 Pad - Chevron 1-16D (I01 697 Pad) - DD - Plan #1													Offset Site Error: 0.0 ft	
Survey Program: 0-MWD													Offset Well Error: 0.0 ft	
Reference		Offset		Semi Major Axis			Distance						Warning	
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Tooface (")	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor		
5,200.0	5,145.5	5,191.8	5,151.0	15.7	14.3	118.91	43.6	-635.6	237.5	209.0	28.53	8.324		
5,300.0	5,244.4	5,291.6	5,250.0	16.0	14.6	119.01	44.5	-648.8	242.7	213.6	29.10	8.338		
5,400.0	5,343.2	5,391.5	5,349.0	16.3	14.9	119.09	45.5	-661.9	247.8	218.2	29.67	8.352		
5,500.0	5,442.0	5,491.4	5,447.9	16.6	15.2	119.18	46.4	-675.1	253.0	222.8	30.25	8.366		
5,600.0	5,540.8	5,591.2	5,546.9	16.9	15.4	119.26	47.3	-688.3	258.2	227.4	30.82	8.379		
5,700.0	5,639.6	5,691.1	5,645.9	17.3	15.7	119.34	48.3	-701.5	263.4	232.0	31.39	8.391		
5,800.0	5,738.5	5,791.0	5,744.9	17.6	16.0	119.41	49.2	-714.7	268.6	236.6	31.96	8.403		
5,900.0	5,837.3	5,890.8	5,843.9	17.9	16.3	119.49	50.1	-727.9	273.7	241.2	32.53	8.415		
6,000.0	5,936.1	5,990.7	5,942.9	18.2	16.6	119.56	51.1	-741.0	278.9	245.8	33.10	8.426		
6,100.0	6,034.9	6,090.6	6,041.9	18.6	16.9	119.62	52.0	-754.2	284.1	250.4	33.67	8.437		
6,200.0	6,133.7	6,190.4	6,140.9	18.9	17.2	119.69	52.9	-767.4	289.3	255.0	34.24	8.448		
6,300.0	6,232.5	6,290.3	6,239.8	19.2	17.5	119.75	53.9	-780.6	294.4	259.6	34.81	8.458		
6,400.0	6,331.4	6,390.2	6,338.8	19.5	17.8	119.81	54.8	-793.8	299.6	264.2	35.38	8.468		
6,500.0	6,430.2	6,490.0	6,437.8	19.8	18.1	119.87	55.7	-806.9	304.8	268.8	35.95	8.478		
6,600.0	6,529.0	6,589.9	6,536.8	20.2	18.4	119.93	56.7	-820.1	309.9	273.4	36.52	8.485		
6,700.0	6,628.2	6,689.2	6,635.2	20.4	18.6	119.97	57.6	-833.1	313.8	276.7	37.09	8.491		
6,800.0	6,727.8	6,787.1	6,732.7	20.6	18.9	119.32	58.3	-843.3	316.5	278.9	37.57	8.424		
6,900.0	6,827.6	6,885.2	6,830.5	20.8	19.0	119.01	58.8	-850.1	318.1	280.1	37.95	8.382		
7,000.0	6,927.6	6,983.4	6,928.6	20.9	19.2	118.75	59.0	-853.7	318.6	280.3	38.23	8.332		
7,050.3	6,977.8	7,032.7	6,977.9	20.9	19.2	124.79	59.1	-854.2	318.6	280.3	38.36	8.307		
7,100.0	7,027.6	7,082.8	7,028.0	21.0	19.3	133.60	59.1	-854.2	318.6	280.1	38.47	8.281		
7,200.0	7,127.6	7,183.8	7,129.0	21.1	19.4	133.62	58.8	-854.6	318.7	280.0	38.71	8.233		
7,300.0	7,227.5	7,284.7	7,229.9	21.2	19.5	133.65	58.4	-855.3	318.8	279.9	38.96	8.183		
7,400.0	7,327.5	7,385.6	7,330.8	21.4	19.7	133.66	57.8	-856.5	318.9	279.7	39.21	8.132		
7,500.0	7,427.5	7,485.6	7,430.8	21.5	19.8	133.66	57.0	-857.8	318.9	279.4	39.47	8.079		
7,600.0	7,527.5	7,585.6	7,530.8	21.6	19.9	133.66	56.3	-859.1	318.9	279.2	39.73	8.026		
7,700.0	7,627.5	7,685.6	7,630.8	21.7	20.1	133.66	55.5	-860.4	318.9	278.9	39.99	7.974		
7,800.0	7,727.5	7,785.6	7,730.8	21.9	20.2	133.66	54.8	-861.6	318.9	278.6	40.26	7.922		
7,900.0	7,827.5	7,885.6	7,830.8	22.0	20.3	133.66	54.0	-862.9	318.9	278.4	40.52	7.870		
8,000.0	7,927.5	7,985.6	7,930.8	22.1	20.5	133.66	53.3	-864.2	318.9	278.1	40.78	7.819		
8,100.0	8,027.5	8,085.6	8,030.7	22.3	20.6	133.66	52.5	-865.5	318.9	277.9	41.05	7.768		
8,200.0	8,127.4	8,185.6	8,130.7	22.4	20.7	133.66	51.8	-866.8	318.9	277.6	41.32	7.718		
8,300.0	8,227.4	8,285.6	8,230.7	22.5	20.9	133.66	51.0	-868.1	318.9	277.3	41.59	7.668		
8,400.0	8,327.4	8,385.6	8,330.7	22.6	21.0	133.66	50.3	-869.4	318.9	277.0	41.86	7.619		
8,500.0	8,427.4	8,485.6	8,430.7	22.8	21.1	133.66	49.5	-870.7	318.9	276.8	42.13	7.570		
8,600.0	8,527.4	8,585.6	8,530.7	22.9	21.3	133.66	48.8	-872.0	318.9	276.5	42.40	7.521		
8,700.0	8,627.4	8,685.6	8,630.7	23.0	21.4	133.67	48.0	-873.3	318.9	276.2	42.67	7.473		
8,800.0	8,727.4	8,785.6	8,730.7	23.2	21.5	133.67	47.3	-874.6	318.9	275.9	42.95	7.425		
8,900.0	8,827.4	8,885.6	8,830.7	23.3	21.7	133.67	46.5	-875.9	318.9	275.7	43.23	7.378		
9,000.0	8,927.4	8,985.6	8,930.6	23.4	21.8	133.67	45.8	-877.1	318.9	275.4	43.50	7.331		
9,100.0	9,027.3	9,085.6	9,030.6	23.6	22.0	133.67	45.0	-878.4	318.9	275.1	43.78	7.284		
9,200.0	9,127.3	9,185.6	9,130.6	23.7	22.1	133.67	44.3	-879.7	318.9	274.8	44.06	7.238		
9,300.0	9,227.3	9,285.6	9,230.6	23.9	22.3	133.67	43.5	-881.0	318.9	274.6	44.34	7.192		
9,400.0	9,327.3	9,385.6	9,330.6	24.0	22.4	133.67	42.8	-882.3	318.9	274.3	44.62	7.147		
9,500.0	9,427.3	9,485.6	9,430.6	24.1	22.5	133.67	42.0	-883.6	318.9	274.0	44.90	7.102		
9,600.0	9,527.3	9,585.6	9,530.6	24.3	22.7	133.67	41.3	-884.9	318.9	273.7	45.18	7.056		
9,700.0	9,627.3	9,685.6	9,630.6	24.4	22.8	133.67	40.6	-886.2	318.9	273.4	45.47	7.013		
9,800.0	9,727.3	9,785.6	9,730.6	24.5	23.0	133.67	39.8	-887.5	318.9	273.1	45.75	6.970		
9,865.7	9,793.0	9,851.4	9,796.3	24.6	23.1	133.67	39.3	-888.3	318.9	273.0	45.94	6.941		

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



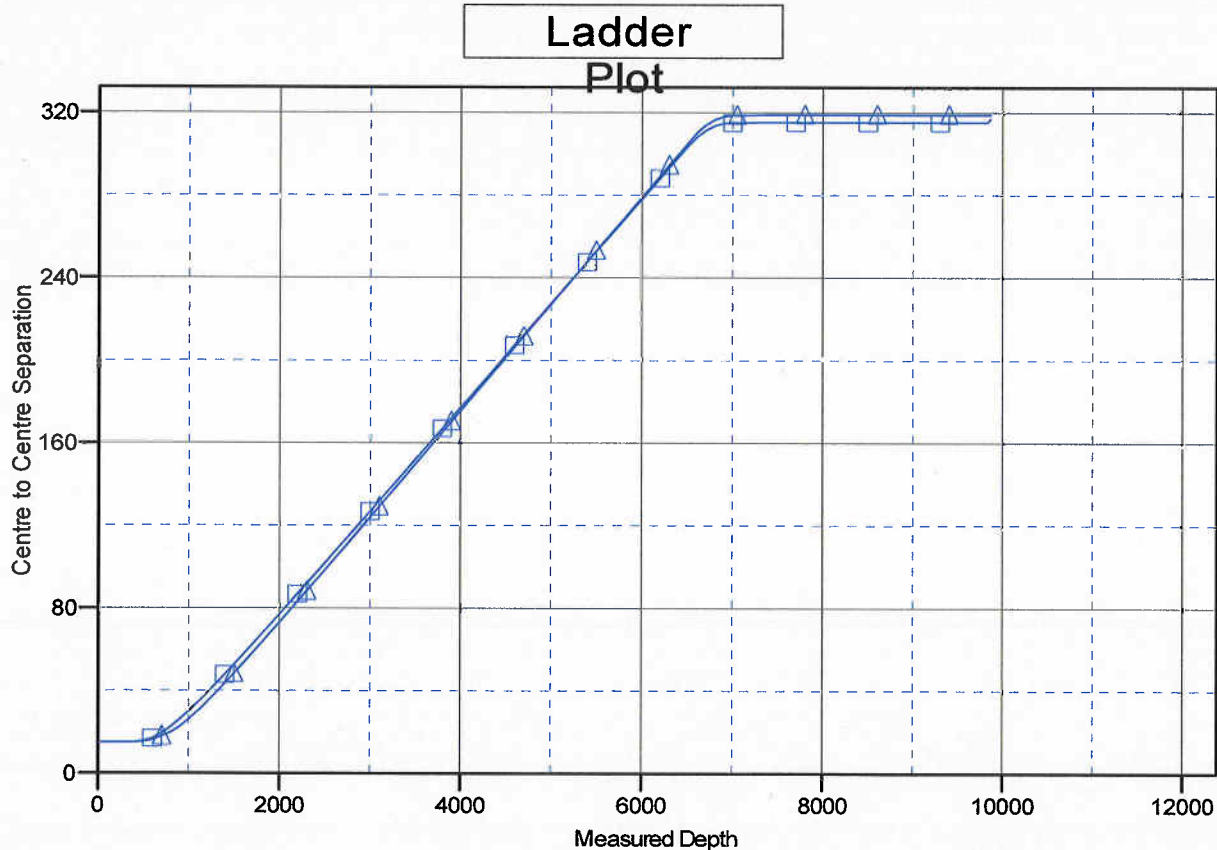
Cathedral Energy Services

Anticollision Report

Company:	Berry Petroleum Company (NAD 83)	Local Co-ordinate Reference:	Well Chevron 1-15D (I01 697 Pad)
Project:	Garfield County	TVD Reference:	KBE @ 8356.0ft (Original Well Elev)
Reference Site:	Chevron I01 697 Pad	MD Reference:	KBE @ 8356.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Chevron 1-15D (I01 697 Pad)	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	DD	Database:	EDM 5000.1 US Multi Users Db
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Reference Depths are relative to KBE @ 8356.0ft (Original Well Elev)
 Offset Depths are relative to Offset Datum
 Central Meridian is -105.500000 °

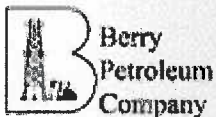
Coordinates are relative to: Chevron 1-15D (I01 697 Pad)
 Coordinate System is US State Plane 1983, Colorado Central Zone
 Grid Convergence at Surface is: -1.68°



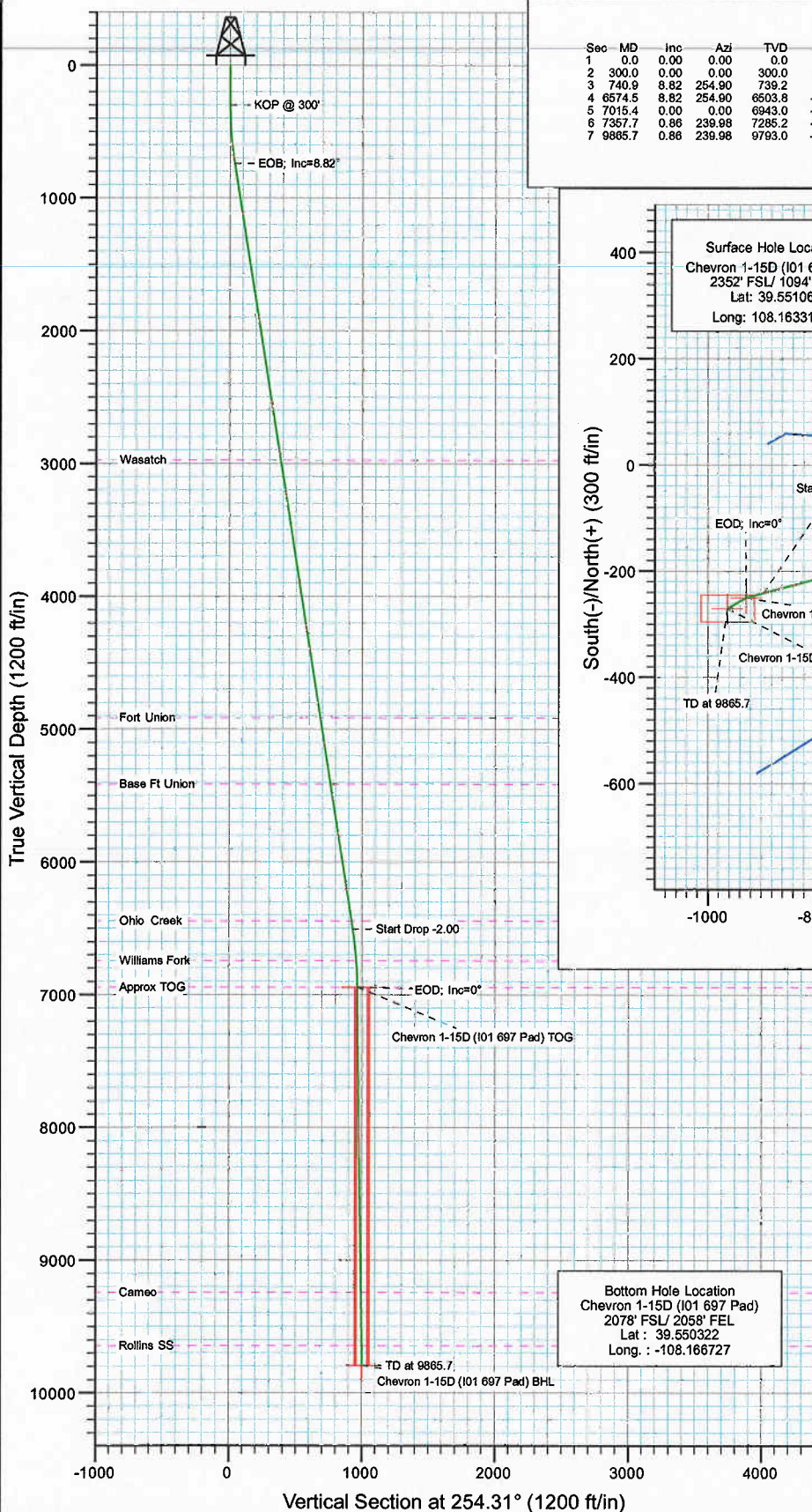
LEGEND

—■— Chevron 1-14D, DD, Plan #1 V0

—▲— Chevron 1-16D (I01 697 Pad), DD, Plan #1 V0

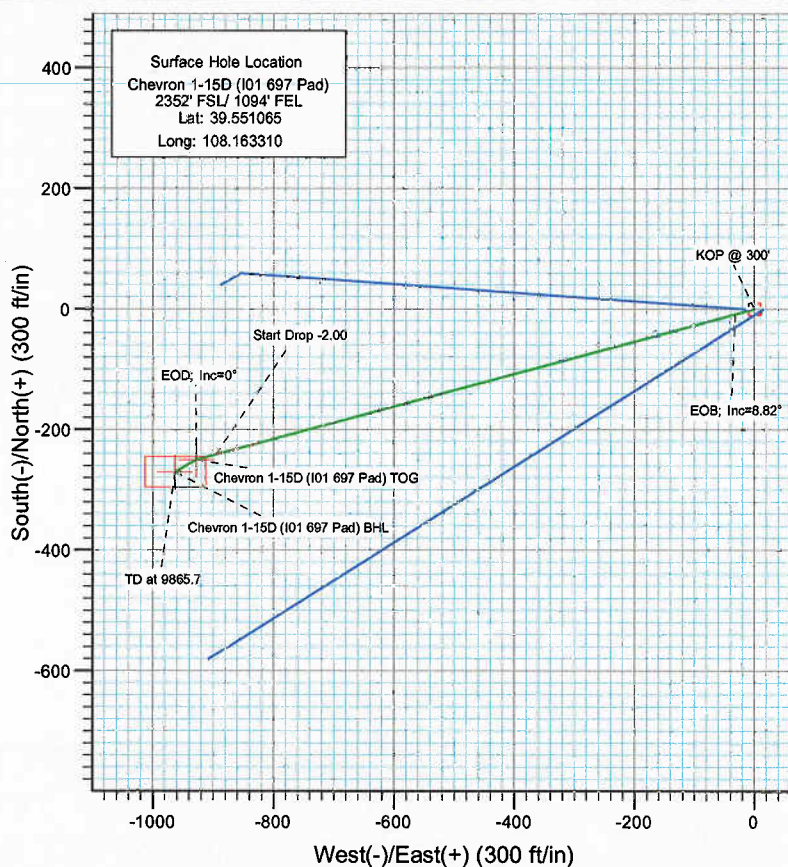


Project: Garfield County
 Site: Chevron I01 697 Pad
 Well: Chevron 1-15D (I01 697 Pad)
 Wellbore: DD
 Design: Plan #1



SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dip	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	740.9	8.82	254.90	739.2	-8.8	-32.7	2.00	254.90	33.9	
4	6574.5	8.82	254.90	6503.8	-241.7	-896.2	0.00	0.00	928.2	
5	7015.4	0.00	0.00	6943.0	-250.6	-928.9	2.00	180.00	962.0	Chevron 1-15D (I01 697 Pad) TOG
6	7357.7	0.86	239.98	7285.2	-251.8	-931.1	0.25	239.98	964.5	
7	9865.7	0.86	239.98	9793.0	-270.6	-963.5	0.00	0.00	1000.8	Chevron 1-15D (I01 697 Pad) BHL



Azimuths to True North
 Magnetic North: 10.58°

Magnetic Field
 Strength: 52399.4nT
 Dip Angle: 65.80°
 Date: 2/24/2010
 Model: IGRF200510

FORMATION TOP DETAILS

TVDPath	MDPath	Formation	DipAngle	DipDir
2973.0	3001.5	Wasatch	0.00	
4913.0	4964.7	Fort Union	0.00	
5413.0	5470.7	Base Ft Union	0.00	
6443.0	6513.0	Ohio Creek	0.00	
6743.0	6815.3	Williams Fork	0.00	
6943.0	7015.4	Approx TOG	0.00	
9243.0	9315.7	Cameo	0.00	
9643.0	9715.7	Rollins SS	0.00	

DESIGN DETAILS: Plan #1

105XXX; BH
 KBE @ 8356.0ft (Original Well Elev)

Target	Azimuth	Origin	N/S	E/W	From TVD
Chevron 1-15D (I01 697 Pad) BHL	254.31	Slot	0.0	0.0	0.0