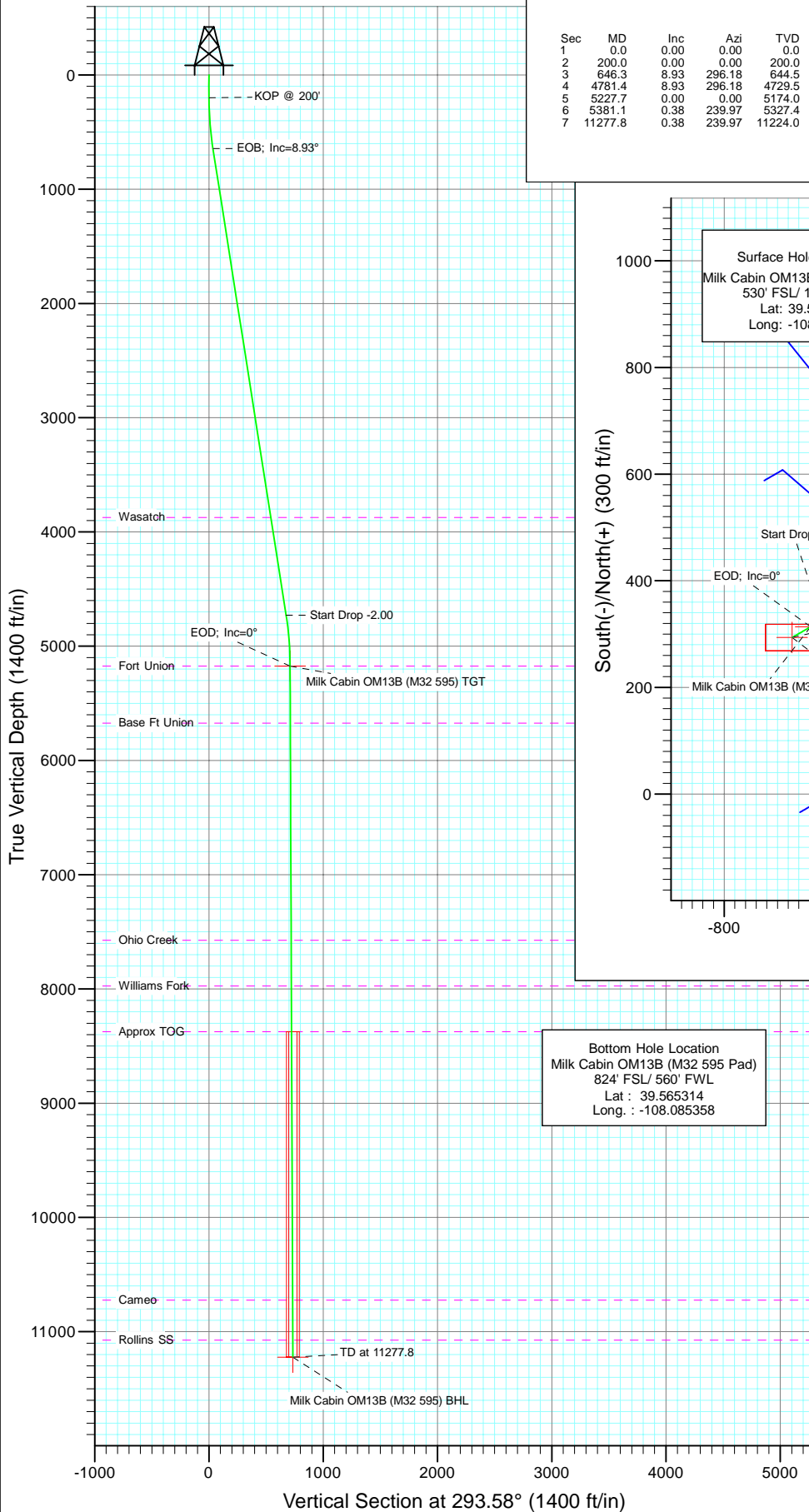
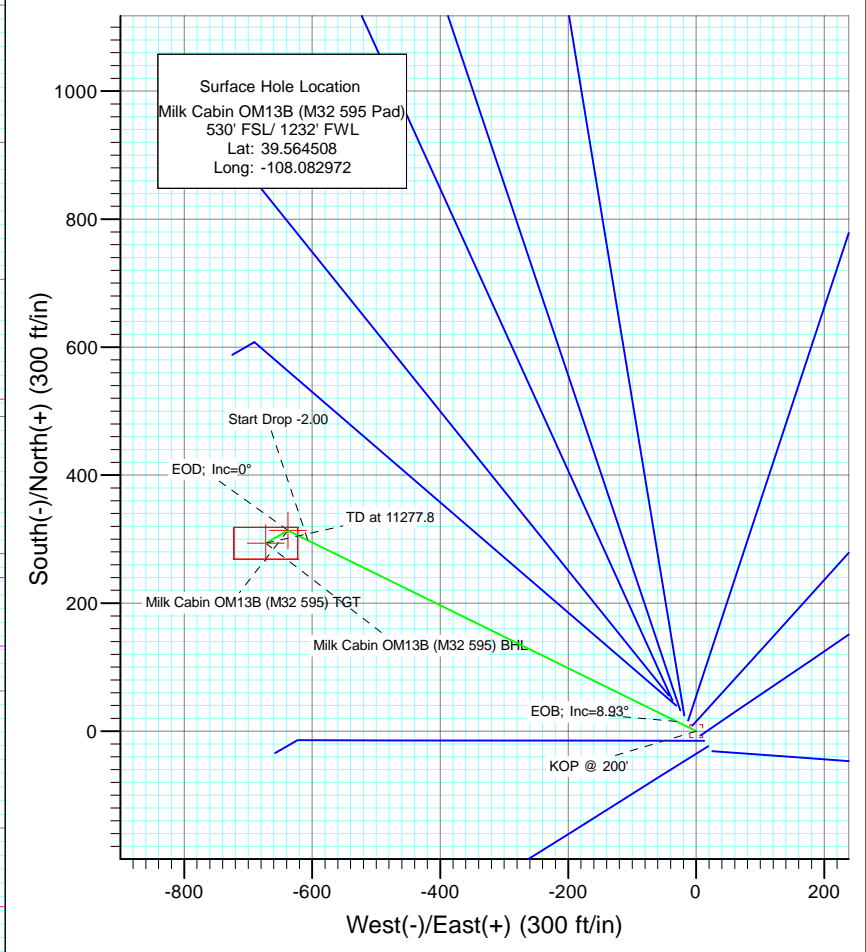




Project: Garfield County  
 Site: SWSW S32-T5S-R95W (M32 595 Pad)  
 Well: Milk Cabin OM13B (M32 595 Pad)  
 Wellbore: DD  
 Design: Plan #1



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	200.0	0.00	0.00	200.0	0.0	0.0	0.00	0.00	0.0		
3	646.3	8.93	296.18	644.5	15.3	-31.1	2.00	296.18	34.7		
4	4781.4	8.93	296.18	4729.5	298.3	-606.9	0.00	0.00	675.6		
5	5227.7	0.00	0.00	5174.0	313.6	-638.0	2.00	180.00	710.2	Milk Cabin OM13B (M32 595) TGT	
6	5381.1	0.38	239.97	5327.4	313.4	-638.5	0.25	239.97	710.5		
7	11277.8	0.38	239.97	11224.0	293.6	-672.7	0.00	0.00	734.0	Milk Cabin OM13B (M32 595) BHL	



Azimuths to True North  
 Magnetic North: 10.53°  
 Magnetic Field  
 Strength: 52359.3snT  
 Dip Angle: 65.81°  
 Date: 6/16/2010  
 Model: IGRF2010

#### FORMATION TOP DETAILS

TVDPPath	MDPath	Formation
3874.0	3915.4	Wasatch
5174.0	5227.7	Fort Union
5674.0	5727.7	Base Ft Union
7574.0	7627.7	Ohio Creek
7974.0	8027.7	Williams Fork
8374.0	8427.7	Approx TOG
10724.0	10777.8	Cameo
11074.0	11127.8	Rollins SS

#### DESIGN DETAILS: Plan #1

105XXX; BH					
KBE @ 8144.0ft (Original Well Elev)					
Target	Azimuth	Origin	N/S	E/W	From TVD
Milk Cabin OM13B (M32 595) BHL	293.58	Slot	0.0	0.0	0.0

# Cathedral Energy Services

## Planning Report

<b>Database:</b>	EDM 5000.1 US Multi Users DB	<b>Local Co-ordinate Reference:</b>	Well Milk Cabin OM13B (M32 595 Pad)
<b>Company:</b>	Berry Petroleum Company (NAD 83)	<b>TVD Reference:</b>	KBE @ 8144.0ft (Original Well Elev)
<b>Project:</b>	Garfield County	<b>MD Reference:</b>	KBE @ 8144.0ft (Original Well Elev)
<b>Site:</b>	SWSW S32-T5S-R95W (M32 595 Pad)	<b>North Reference:</b>	True
<b>Well:</b>	Milk Cabin OM13B (M32 595 Pad)	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	DD		
<b>Design:</b>	Plan #1		

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

Site		SWSW S32-T5S-R95W (M32 595 Pad)			
Site Position:		Northing:	1,640,872.06 ft	Latitude:	39.564553
From:	Lat/Long	Easting:	2,271,884.01 ft	Longitude:	-108.083017
Position Uncertainty:	0.0 ft	Slot Radius:	13.200 in	Grid Convergence:	-1.63 °

Well	Milk Cabin OM13B (M32 595 Pad)					
Well Position	+N/-S	0.0 ft	Northing:	1,640,855.30 ft	Latitude:	39.564508
	+E/-W	0.0 ft	Easting:	2,271,896.23 ft	Longitude:	-108.082972
Position Uncertainty		0.0 ft	Wellhead Elevation:	ft	Ground Level:	8,121.0 ft

<b>Wellbore</b>	DD				
<b>Magnetics</b>	<b>Model Name</b>	<b>Sample Date</b>	<b>Declination (°)</b>	<b>Dip Angle (°)</b>	<b>Field Strength (nT)</b>
	IGRF2010	6/16/2010	10.53	65.81	52,359

<b>Design</b>	Plan #1			
<b>Audit Notes:</b>				
<b>Version:</b>	<b>Phase:</b>	PLAN	<b>Tie On Depth:</b>	0.0
<b>Vertical Section:</b>	<b>Depth From (TVD) (ft)</b>	<b>+N/-S (ft)</b>	<b>+E/-W (ft)</b>	<b>Direction (°)</b>
	0.0	0.0	0.0	293.58

<b>Plan Sections</b>										
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	
200.0	0.00	0.00	200.0	0.0	0.0	0.00	0.00	0.00	0.00	
646.3	8.93	296.18	644.5	15.3	-31.1	2.00	2.00	0.00	296.18	
4,781.4	8.93	296.18	4,729.5	298.3	-606.9	0.00	0.00	0.00	0.00	
5,227.7	0.00	0.00	5,174.0	313.6	-638.0	2.00	-2.00	0.00	180.00	Milk Cabin OM13B (N
5,381.1	0.38	239.97	5,327.4	313.4	-638.5	0.25	0.25	-78.24	239.97	
11,277.8	0.38	239.97	11,224.0	293.6	-672.7	0.00	0.00	0.00	0.00	Milk Cabin OM13B (N

# Cathedral Energy Services

## Planning Report

<b>Database:</b>	EDM 5000.1 US Multi Users DB	<b>Local Co-ordinate Reference:</b>	Well Milk Cabin OM13B (M32 595 Pad)
<b>Company:</b>	Berry Petroleum Company (NAD 83)	<b>TVD Reference:</b>	KBE @ 8144.0ft (Original Well Elev)
<b>Project:</b>	Garfield County	<b>MD Reference:</b>	KBE @ 8144.0ft (Original Well Elev)
<b>Site:</b>	SWSW S32-T5S-R95W (M32 595 Pad)	<b>North Reference:</b>	True
<b>Well:</b>	Milk Cabin OM13B (M32 595 Pad)	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	DD		
<b>Design:</b>	Plan #1		

### Planned Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Comments / Formations
0.0	0.00	0.00	0.0	0.0	0.0	0.0	0.00	0.00	
30.0	0.00	0.00	30.0	0.0	0.0	0.0	0.00	0.00	
60.0	0.00	0.00	60.0	0.0	0.0	0.0	0.00	0.00	
90.0	0.00	0.00	90.0	0.0	0.0	0.0	0.00	0.00	
120.0	0.00	0.00	120.0	0.0	0.0	0.0	0.00	0.00	
150.0	0.00	0.00	150.0	0.0	0.0	0.0	0.00	0.00	
180.0	0.00	0.00	180.0	0.0	0.0	0.0	0.00	0.00	
200.0	0.00	0.00	200.0	0.0	0.0	0.0	0.00	0.00	KOP @ 200'
210.0	0.20	296.18	210.0	0.0	0.0	0.0	2.00	2.00	
240.0	0.80	296.18	240.0	0.1	-0.3	0.3	2.00	2.00	
270.0	1.40	296.18	270.0	0.4	-0.8	0.9	2.00	2.00	
300.0	2.00	296.18	300.0	0.8	-1.6	1.7	2.00	2.00	
330.0	2.60	296.18	330.0	1.3	-2.6	2.9	2.00	2.00	
360.0	3.20	296.18	359.9	2.0	-4.0	4.5	2.00	2.00	
390.0	3.80	296.18	389.9	2.8	-5.7	6.3	2.00	2.00	
420.0	4.40	296.18	419.8	3.7	-7.6	8.4	2.00	2.00	
450.0	5.00	296.18	449.7	4.8	-9.8	10.9	2.00	2.00	
480.0	5.60	296.18	479.6	6.0	-12.3	13.7	2.00	2.00	
510.0	6.20	296.18	509.4	7.4	-15.0	16.7	2.00	2.00	
540.0	6.80	296.18	539.2	8.9	-18.1	20.1	2.00	2.00	
570.0	7.40	296.18	569.0	10.5	-21.4	23.8	2.00	2.00	
600.0	8.00	296.18	598.7	12.3	-25.0	27.9	2.00	2.00	
630.0	8.60	296.18	628.4	14.2	-28.9	32.2	2.00	2.00	
646.3	8.93	296.18	644.5	15.3	-31.1	34.7	2.00	2.00	EOB; Inc=8.93°
660.0	8.93	296.18	658.0	16.2	-33.0	36.8	0.00	0.00	
690.0	8.93	296.18	687.7	18.3	-37.2	41.4	0.00	0.00	
720.0	8.93	296.18	717.3	20.3	-41.4	46.1	0.00	0.00	
750.0	8.93	296.18	746.9	22.4	-45.6	50.7	0.00	0.00	
780.0	8.93	296.18	776.6	24.5	-49.8	55.4	0.00	0.00	
810.0	8.93	296.18	806.2	26.5	-53.9	60.0	0.00	0.00	
840.0	8.93	296.18	835.9	28.6	-58.1	64.7	0.00	0.00	
870.0	8.93	296.18	865.5	30.6	-62.3	69.3	0.00	0.00	
900.0	8.93	296.18	895.1	32.7	-66.5	74.0	0.00	0.00	
930.0	8.93	296.18	924.8	34.7	-70.6	78.6	0.00	0.00	
960.0	8.93	296.18	954.4	36.8	-74.8	83.3	0.00	0.00	
990.0	8.93	296.18	984.0	38.8	-79.0	87.9	0.00	0.00	
1,020.0	8.93	296.18	1,013.7	40.9	-83.2	92.6	0.00	0.00	
1,050.0	8.93	296.18	1,043.3	42.9	-87.3	97.2	0.00	0.00	
1,080.0	8.93	296.18	1,072.9	45.0	-91.5	101.9	0.00	0.00	
1,110.0	8.93	296.18	1,102.6	47.0	-95.7	106.5	0.00	0.00	
1,140.0	8.93	296.18	1,132.2	49.1	-99.9	111.2	0.00	0.00	
1,170.0	8.93	296.18	1,161.9	51.1	-104.1	115.8	0.00	0.00	
1,200.0	8.93	296.18	1,191.5	53.2	-108.2	120.5	0.00	0.00	
1,230.0	8.93	296.18	1,221.1	55.3	-112.4	125.1	0.00	0.00	
1,260.0	8.93	296.18	1,250.8	57.3	-116.6	129.8	0.00	0.00	
1,290.0	8.93	296.18	1,280.4	59.4	-120.8	134.4	0.00	0.00	
1,320.0	8.93	296.18	1,310.0	61.4	-124.9	139.1	0.00	0.00	
1,350.0	8.93	296.18	1,339.7	63.5	-129.1	143.7	0.00	0.00	
1,380.0	8.93	296.18	1,369.3	65.5	-133.3	148.4	0.00	0.00	
1,410.0	8.93	296.18	1,398.9	67.6	-137.5	153.0	0.00	0.00	
1,440.0	8.93	296.18	1,428.6	69.6	-141.7	157.7	0.00	0.00	
1,470.0	8.93	296.18	1,458.2	71.7	-145.8	162.3	0.00	0.00	

# Cathedral Energy Services

## Planning Report

<b>Database:</b>	EDM 5000.1 US Multi Users DB	<b>Local Co-ordinate Reference:</b>	Well Milk Cabin OM13B (M32 595 Pad)
<b>Company:</b>	Berry Petroleum Company (NAD 83)	<b>TVD Reference:</b>	KBE @ 8144.0ft (Original Well Elev)
<b>Project:</b>	Garfield County	<b>MD Reference:</b>	KBE @ 8144.0ft (Original Well Elev)
<b>Site:</b>	SWSW S32-T5S-R95W (M32 595 Pad)	<b>North Reference:</b>	True
<b>Well:</b>	Milk Cabin OM13B (M32 595 Pad)	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	DD		
<b>Design:</b>	Plan #1		

### Planned Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Comments / Formations
1,500.0	8.93	296.18	1,487.9	73.7	-150.0	167.0	0.00	0.00	
1,530.0	8.93	296.18	1,517.5	75.8	-154.2	171.6	0.00	0.00	
1,560.0	8.93	296.18	1,547.1	77.8	-158.4	176.3	0.00	0.00	
1,590.0	8.93	296.18	1,576.8	79.9	-162.5	180.9	0.00	0.00	
1,620.0	8.93	296.18	1,606.4	81.9	-166.7	185.6	0.00	0.00	
1,650.0	8.93	296.18	1,636.0	84.0	-170.9	190.2	0.00	0.00	
1,680.0	8.93	296.18	1,665.7	86.1	-175.1	194.9	0.00	0.00	
1,710.0	8.93	296.18	1,695.3	88.1	-179.2	199.5	0.00	0.00	
1,740.0	8.93	296.18	1,725.0	90.2	-183.4	204.2	0.00	0.00	
1,770.0	8.93	296.18	1,754.6	92.2	-187.6	208.8	0.00	0.00	
1,800.0	8.93	296.18	1,784.2	94.3	-191.8	213.5	0.00	0.00	
1,830.0	8.93	296.18	1,813.9	96.3	-196.0	218.1	0.00	0.00	
1,860.0	8.93	296.18	1,843.5	98.4	-200.1	222.8	0.00	0.00	
1,890.0	8.93	296.18	1,873.1	100.4	-204.3	227.4	0.00	0.00	
1,920.0	8.93	296.18	1,902.8	102.5	-208.5	232.1	0.00	0.00	
1,950.0	8.93	296.18	1,932.4	104.5	-212.7	236.7	0.00	0.00	
1,980.0	8.93	296.18	1,962.0	106.6	-216.8	241.4	0.00	0.00	
2,010.0	8.93	296.18	1,991.7	108.6	-221.0	246.0	0.00	0.00	
2,040.0	8.93	296.18	2,021.3	110.7	-225.2	250.7	0.00	0.00	
2,070.0	8.93	296.18	2,051.0	112.7	-229.4	255.3	0.00	0.00	
2,100.0	8.93	296.18	2,080.6	114.8	-233.6	260.0	0.00	0.00	
2,130.0	8.93	296.18	2,110.2	116.9	-237.7	264.6	0.00	0.00	
2,160.0	8.93	296.18	2,139.9	118.9	-241.9	269.3	0.00	0.00	
2,190.0	8.93	296.18	2,169.5	121.0	-246.1	273.9	0.00	0.00	
2,220.0	8.93	296.18	2,199.1	123.0	-250.3	278.6	0.00	0.00	
2,250.0	8.93	296.18	2,228.8	125.1	-254.4	283.2	0.00	0.00	
2,280.0	8.93	296.18	2,258.4	127.1	-258.6	287.9	0.00	0.00	
2,310.0	8.93	296.18	2,288.1	129.2	-262.8	292.5	0.00	0.00	
2,340.0	8.93	296.18	2,317.7	131.2	-267.0	297.2	0.00	0.00	
2,370.0	8.93	296.18	2,347.3	133.3	-271.1	301.8	0.00	0.00	
2,400.0	8.93	296.18	2,377.0	135.3	-275.3	306.5	0.00	0.00	
2,430.0	8.93	296.18	2,406.6	137.4	-279.5	311.1	0.00	0.00	
2,460.0	8.93	296.18	2,436.2	139.4	-283.7	315.8	0.00	0.00	
2,490.0	8.93	296.18	2,465.9	141.5	-287.9	320.4	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									
Milk Cabin OM13B (M32	0.00	0.00	11,224.0	293.6	-672.7	1,641,167.92	2,271,232.18	39.565314	-108.085358
- plan misses target center by 8767.9ft at 2490.0ft MD (2465.9 TVD, 141.5 N, -287.9 E)									
- Rectangle (sides W50.0 H100.0 D0.0)									
Milk Cabin OM13B (M32	0.00	0.00	5,174.0	313.6	-638.0	1,641,186.93	2,271,267.35	39.565369	-108.085235
- plan misses target center by 2736.1ft at 2490.0ft MD (2465.9 TVD, 141.5 N, -287.9 E)									
- Point									

# Cathedral Energy Services

## Planning Report

<b>Database:</b>	EDM 5000.1 US Multi Users DB	<b>Local Co-ordinate Reference:</b>	Well Milk Cabin OM13B (M32 595 Pad)
<b>Company:</b>	Berry Petroleum Company (NAD 83)	<b>TVD Reference:</b>	KBE @ 8144.0ft (Original Well Elev)
<b>Project:</b>	Garfield County	<b>MD Reference:</b>	KBE @ 8144.0ft (Original Well Elev)
<b>Site:</b>	SWSW S32-T5S-R95W (M32 595 Pad)	<b>North Reference:</b>	True
<b>Well:</b>	Milk Cabin OM13B (M32 595 Pad)	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	DD		
<b>Design:</b>	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	8.93	296.18	2,475.7	142.2	-289.2	322.0	0.00	0.00	
2,600.0	8.93	296.18	2,574.5	149.0	-303.2	337.5	0.00	0.00	
2,700.0	8.93	296.18	2,673.3	155.9	-317.1	353.0	0.00	0.00	
2,800.0	8.93	296.18	2,772.1	162.7	-331.0	368.5	0.00	0.00	
2,900.0	8.93	296.18	2,870.9	169.5	-344.9	384.0	0.00	0.00	
3,000.0	8.93	296.18	2,969.7	176.4	-358.9	399.5	0.00	0.00	
3,100.0	8.93	296.18	3,068.5	183.2	-372.8	415.0	0.00	0.00	
3,200.0	8.93	296.18	3,167.3	190.1	-386.7	430.5	0.00	0.00	
3,300.0	8.93	296.18	3,266.1	196.9	-400.6	446.0	0.00	0.00	
3,400.0	8.93	296.18	3,364.9	203.8	-414.6	461.5	0.00	0.00	
3,500.0	8.93	296.18	3,463.6	210.6	-428.5	477.0	0.00	0.00	
3,600.0	8.93	296.18	3,562.4	217.5	-442.4	492.5	0.00	0.00	
3,700.0	8.93	296.18	3,661.2	224.3	-456.3	508.0	0.00	0.00	
3,800.0	8.93	296.18	3,760.0	231.1	-470.3	523.5	0.00	0.00	
3,900.0	8.93	296.18	3,858.8	238.0	-484.2	539.0	0.00	0.00	
3,915.4	8.93	296.18	3,874.0	239.0	-486.3	541.3	0.00	0.00	Wasatch
4,000.0	8.93	296.18	3,957.6	244.8	-498.1	554.5	0.00	0.00	
4,100.0	8.93	296.18	4,056.4	251.7	-512.0	570.0	0.00	0.00	
4,200.0	8.93	296.18	4,155.2	258.5	-526.0	585.5	0.00	0.00	
4,300.0	8.93	296.18	4,254.0	265.4	-539.9	601.0	0.00	0.00	
4,400.0	8.93	296.18	4,352.7	272.2	-553.8	616.5	0.00	0.00	
4,500.0	8.93	296.18	4,451.5	279.1	-567.7	632.0	0.00	0.00	
4,600.0	8.93	296.18	4,550.3	285.9	-581.7	647.5	0.00	0.00	
4,700.0	8.93	296.18	4,649.1	292.7	-595.6	663.0	0.00	0.00	
4,781.4	8.93	296.18	4,729.5	298.3	-606.9	675.6	0.00	0.00	Start Drop -2.00
4,800.0	8.55	296.18	4,747.9	299.6	-609.5	678.4	2.00	-2.00	
4,900.0	6.55	296.18	4,847.0	305.4	-621.2	691.5	2.00	-2.00	
5,000.0	4.55	296.18	4,946.6	309.6	-629.9	701.2	2.00	-2.00	
5,100.0	2.55	296.18	5,046.4	312.4	-635.5	707.4	2.00	-2.00	
5,200.0	0.55	296.18	5,146.3	313.6	-637.9	710.1	2.00	-2.00	
5,227.7	0.00	0.00	5,174.0	313.6	-638.0	710.2	2.00	-2.00	EOD; Inc=0° - Fort Union - Milk Cabin OM13B (
5,300.0	0.18	239.97	5,246.3	313.6	-638.1	710.3	0.25	0.25	
5,381.1	0.38	239.97	5,327.4	313.4	-638.5	710.5	0.25	0.25	
5,400.0	0.38	239.97	5,346.3	313.3	-638.6	710.6	0.00	0.00	
5,500.0	0.38	239.97	5,446.3	313.0	-639.2	711.0	0.00	0.00	
5,600.0	0.38	239.97	5,546.3	312.6	-639.8	711.4	0.00	0.00	
5,700.0	0.38	239.97	5,646.3	312.3	-640.3	711.8	0.00	0.00	
5,727.7	0.38	239.97	5,674.0	312.2	-640.5	711.9	0.00	0.00	Base Ft Union
5,800.0	0.38	239.97	5,746.3	312.0	-640.9	712.2	0.00	0.00	
5,900.0	0.38	239.97	5,846.3	311.6	-641.5	712.6	0.00	0.00	
6,000.0	0.38	239.97	5,946.3	311.3	-642.1	713.0	0.00	0.00	
6,100.0	0.38	239.97	6,046.3	311.0	-642.7	713.4	0.00	0.00	
6,200.0	0.38	239.97	6,146.3	310.6	-643.2	713.8	0.00	0.00	
6,300.0	0.38	239.97	6,246.3	310.3	-643.8	714.2	0.00	0.00	
6,400.0	0.38	239.97	6,346.3	309.9	-644.4	714.6	0.00	0.00	
6,500.0	0.38	239.97	6,446.3	309.6	-645.0	715.0	0.00	0.00	
6,600.0	0.38	239.97	6,546.3	309.3	-645.6	715.4	0.00	0.00	
6,700.0	0.38	239.97	6,646.3	308.9	-646.1	715.8	0.00	0.00	
6,800.0	0.38	239.97	6,746.3	308.6	-646.7	716.2	0.00	0.00	
6,900.0	0.38	239.97	6,846.3	308.3	-647.3	716.6	0.00	0.00	
7,000.0	0.38	239.97	6,946.3	307.9	-647.9	717.0	0.00	0.00	
7,100.0	0.38	239.97	7,046.3	307.6	-648.5	717.4	0.00	0.00	

# Cathedral Energy Services

## Planning Report

<b>Database:</b>	EDM 5000.1 US Multi Users DB	<b>Local Co-ordinate Reference:</b>	Well Milk Cabin OM13B (M32 595 Pad)
<b>Company:</b>	Berry Petroleum Company (NAD 83)	<b>TVD Reference:</b>	KBE @ 8144.0ft (Original Well Elev)
<b>Project:</b>	Garfield County	<b>MD Reference:</b>	KBE @ 8144.0ft (Original Well Elev)
<b>Site:</b>	SWSW S32-T5S-R95W (M32 595 Pad)	<b>North Reference:</b>	True
<b>Well:</b>	Milk Cabin OM13B (M32 595 Pad)	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	DD		
<b>Design:</b>	Plan #1		

Planned Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Comments / Formations
7,200.0	0.38	239.97	7,146.3	307.3	-649.0	717.8	0.00	0.00	
7,300.0	0.38	239.97	7,246.3	306.9	-649.6	718.2	0.00	0.00	
7,400.0	0.38	239.97	7,346.3	306.6	-650.2	718.6	0.00	0.00	
7,500.0	0.38	239.97	7,446.3	306.3	-650.8	719.0	0.00	0.00	
7,600.0	0.38	239.97	7,546.3	305.9	-651.4	719.3	0.00	0.00	
7,627.7	0.38	239.97	7,574.0	305.8	-651.5	719.5	0.00	0.00	Ohio Creek
7,700.0	0.38	239.97	7,646.3	305.6	-651.9	719.7	0.00	0.00	
7,800.0	0.38	239.97	7,746.3	305.3	-652.5	720.1	0.00	0.00	
7,900.0	0.38	239.97	7,846.3	304.9	-653.1	720.5	0.00	0.00	
8,000.0	0.38	239.97	7,946.3	304.6	-653.7	720.9	0.00	0.00	
8,027.7	0.38	239.97	7,974.0	304.5	-653.8	721.0	0.00	0.00	Williams Fork
8,100.0	0.38	239.97	8,046.3	304.3	-654.3	721.3	0.00	0.00	
8,200.0	0.38	239.97	8,146.3	303.9	-654.8	721.7	0.00	0.00	
8,300.0	0.38	239.97	8,246.3	303.6	-655.4	722.1	0.00	0.00	
8,400.0	0.38	239.97	8,346.3	303.2	-656.0	722.5	0.00	0.00	
8,427.7	0.38	239.97	8,374.0	303.2	-656.2	722.6	0.00	0.00	Approx TOG
8,500.0	0.38	239.97	8,446.2	302.9	-656.6	722.9	0.00	0.00	
8,600.0	0.38	239.97	8,546.2	302.6	-657.1	723.3	0.00	0.00	
8,700.0	0.38	239.97	8,646.2	302.2	-657.7	723.7	0.00	0.00	
8,800.0	0.38	239.97	8,746.2	301.9	-658.3	724.1	0.00	0.00	
8,900.0	0.38	239.97	8,846.2	301.6	-658.9	724.5	0.00	0.00	
9,000.0	0.38	239.97	8,946.2	301.2	-659.5	724.9	0.00	0.00	
9,100.0	0.38	239.97	9,046.2	300.9	-660.0	725.3	0.00	0.00	
9,200.0	0.38	239.97	9,146.2	300.6	-660.6	725.7	0.00	0.00	
9,300.0	0.38	239.97	9,246.2	300.2	-661.2	726.1	0.00	0.00	
9,400.0	0.38	239.97	9,346.2	299.9	-661.8	726.5	0.00	0.00	
9,500.0	0.38	239.97	9,446.2	299.6	-662.4	726.9	0.00	0.00	
9,600.0	0.38	239.97	9,546.2	299.2	-662.9	727.3	0.00	0.00	
9,700.0	0.38	239.97	9,646.2	298.9	-663.5	727.7	0.00	0.00	
9,800.0	0.38	239.97	9,746.2	298.6	-664.1	728.1	0.00	0.00	
9,900.0	0.38	239.97	9,846.2	298.2	-664.7	728.5	0.00	0.00	
10,000.0	0.38	239.97	9,946.2	297.9	-665.3	728.9	0.00	0.00	
10,100.0	0.38	239.97	10,046.2	297.6	-665.8	729.3	0.00	0.00	
10,200.0	0.38	239.97	10,146.2	297.2	-666.4	729.7	0.00	0.00	
10,300.0	0.38	239.97	10,246.2	296.9	-667.0	730.1	0.00	0.00	
10,400.0	0.38	239.97	10,346.2	296.6	-667.6	730.5	0.00	0.00	
10,500.0	0.38	239.97	10,446.2	296.2	-668.2	730.9	0.00	0.00	
10,600.0	0.38	239.97	10,546.2	295.9	-668.7	731.3	0.00	0.00	
10,700.0	0.38	239.97	10,646.2	295.5	-669.3	731.7	0.00	0.00	
10,777.8	0.38	239.97	10,724.0	295.3	-669.8	732.0	0.00	0.00	Cameo
10,800.0	0.38	239.97	10,746.2	295.2	-669.9	732.1	0.00	0.00	
10,900.0	0.38	239.97	10,846.2	294.9	-670.5	732.5	0.00	0.00	
11,000.0	0.38	239.97	10,946.2	294.5	-671.1	732.9	0.00	0.00	
11,100.0	0.38	239.97	11,046.2	294.2	-671.6	733.2	0.00	0.00	
11,127.8	0.38	239.97	11,074.0	294.1	-671.8	733.4	0.00	0.00	Rollins SS
11,200.0	0.38	239.97	11,146.2	293.9	-672.2	733.6	0.00	0.00	
11,277.8	0.38	239.97	11,224.0	293.6	-672.7	734.0	0.00	0.00	TD at 11277.8 - Milk Cabin OM13B (M32 595) E

# Cathedral Energy Services

## Planning Report

<b>Database:</b>	EDM 5000.1 US Multi Users DB	<b>Local Co-ordinate Reference:</b>	Well Milk Cabin OM13B (M32 595 Pad)
<b>Company:</b>	Berry Petroleum Company (NAD 83)	<b>TVD Reference:</b>	KBE @ 8144.0ft (Original Well Elev)
<b>Project:</b>	Garfield County	<b>MD Reference:</b>	KBE @ 8144.0ft (Original Well Elev)
<b>Site:</b>	SWSW S32-T5S-R95W (M32 595 Pad)	<b>North Reference:</b>	True
<b>Well:</b>	Milk Cabin OM13B (M32 595 Pad)	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	DD		
<b>Design:</b>	Plan #1		

Targets									
Target Name									
- hit/miss target	Dip Angle	Dip Dir.	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
- Shape	(°)	(°)	(ft)	(ft)	(ft)	(ft)	(ft)		
Milk Cabin OM13B (M32 - plan hits target center - Rectangle (sides W50.0 H100.0 D0.0)	0.00	0.00	11,224.0	293.6	-672.7	1,641,167.92	2,271,232.18	39.565314	-108.085358
Milk Cabin OM13B (M32 - plan hits target center - Point	0.00	0.00	5,174.0	313.6	-638.0	1,641,186.93	2,271,267.35	39.565369	-108.085235

Formations					
Measured Depth	Vertical Depth	Name	Lithology	Dip	Dip Direction
(ft)	(ft)			(°)	(°)
3,915.4	3,874.0	Wasatch		0.00	
5,227.7	5,174.0	Fort Union		0.00	
5,727.7	5,674.0	Base Ft Union		0.00	
7,627.7	7,574.0	Ohio Creek		0.00	
8,027.7	7,974.0	Williams Fork		0.00	
8,427.7	8,374.0	Approx TOG		0.00	
10,777.8	10,724.0	Cameo		0.00	
11,127.8	11,074.0	Rollins SS		0.00	

Plan Annotations				
Measured Depth	Vertical Depth	Local Coordinates		Comment
(ft)	(ft)	+N/-S (ft)	+E/-W (ft)	
200.0	200.0	0.0	0.0	KOP @ 200'
646.3	644.5	15.3	-31.1	EOB; Inc=8.93°
4,781.4	4,729.5	298.3	-606.9	Start Drop -2.00
5,227.7	5,174.0	313.6	-638.0	EOD; Inc=0°
11,277.8	11,224.0	293.6	-672.7	TD at 11277.8

# **Berry Petroleum Company (NAD 83)**

**Garfield County**

**SWSW S32-T5S-R95W (M32 595 Pad)**

**Milk Cabin OM13B (M32 595 Pad)**

**DD**

**Plan #1**

## **Anticollision Report**

**16 June, 2010**



# Cathedral Energy Services

## Anticollision Report

<b>Company:</b>	Berry Petroleum Company (NAD 83)	<b>Local Co-ordinate Reference:</b>	Well Milk Cabin OM13B (M32 595 Pad)
<b>Project:</b>	Garfield County	<b>TVD Reference:</b>	KBE @ 8144.0ft (Original Well Elev)
<b>Reference Site:</b>	SWSW S32-T5S-R95W (M32 595 Pad)	<b>MD Reference:</b>	KBE @ 8144.0ft (Original Well Elev)
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Milk Cabin OM13B (M32 595 Pad)	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	DD	<b>Database:</b>	EDM 5000.1 US Multi Users DB
<b>Reference Design:</b>	Plan #1	<b>Offset TVD Reference:</b>	Offset Datum

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

Survey Tool Program		Date	6/16/2010		
From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description	
0.0	11,277.8	Plan #1 (DD)	MWD	Geolink MWD	

Summary						
Site Name	Reference Measured Depth (ft)	Offset Measured Depth (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Separation Factor	Warning
Offset Well - Wellbore - Design						
SWSW S32-T5S-R95W (M32 595 Pad)						
Milk Cabin OM11B (M32 595 Pad) - DD - Plan #1	353.9	353.1	20.0	18.8	17.156	CC, ES
Milk Cabin OM11B (M32 595 Pad) - DD - Plan #1	500.0	497.4	25.0	23.3	14.438	SF
Milk Cabin OM11D (M32 595 Pad) - DD - Plan #1	327.5	327.3	9.4	8.3	8.747	CC, ES
Milk Cabin OM11D (M32 595 Pad) - DD - Plan #1	400.0	399.2	11.5	10.1	8.554	SF
Milk Cabin OM12A (M32 595 Pad) - DD - Plan #1	275.7	275.0	30.9	30.0	34.971	CC
Milk Cabin OM12A (M32 595 Pad) - DD - Plan #1	300.0	299.0	30.9	29.9	31.924	ES
Milk Cabin OM12A (M32 595 Pad) - DD - Plan #1	646.3	639.9	43.4	41.0	18.120	SF
Milk Cabin OM12B (M32 595 Pad) - DD - Plan #1	200.0	200.0	60.3	59.7	97.672	CC
Milk Cabin OM12B (M32 595 Pad) - DD - Plan #1	300.0	298.0	60.5	59.5	62.703	ES
Milk Cabin OM12B (M32 595 Pad) - DD - Plan #1	900.0	884.0	89.8	86.2	25.072	SF
Milk Cabin OM12C (M32 595 Pad) - DD - Plan #1	200.0	200.0	70.5	69.9	114.073	CC
Milk Cabin OM12C (M32 595 Pad) - DD - Plan #1	300.0	297.6	70.6	69.7	73.311	ES
Milk Cabin OM12C (M32 595 Pad) - DD - Plan #1	900.0	881.2	92.4	88.9	26.852	SF
Milk Cabin OM12D (M32 595 Pad) - DD - Plan #1	200.0	200.0	41.0	40.4	66.361	CC
Milk Cabin OM12D (M32 595 Pad) - DD - Plan #1	300.0	298.6	41.1	40.1	42.548	ES
Milk Cabin OM12D (M32 595 Pad) - DD - Plan #1	800.0	788.4	65.4	62.2	20.615	SF
Milk Cabin OM13A (M32 595 Pad) - DD - Plan #1	200.0	200.0	50.6	49.9	81.833	CC
Milk Cabin OM13A (M32 595 Pad) - DD - Plan #1	300.0	298.3	50.7	49.7	52.531	ES
Milk Cabin OM13A (M32 595 Pad) - DD - Plan #1	1,500.0	1,488.8	99.3	92.8	15.136	SF
Milk Cabin OM13C (M32 595 Pad) - DD - Plan #1	200.0	200.0	19.4	18.8	31.411	CC, ES
Milk Cabin OM13C (M32 595 Pad) - DD - Plan #1	1,600.0	1,599.0	95.9	87.8	11.927	SF
Milk Cabin OM13D (M32 595 Pad) - DD - Plan #1	200.0	200.0	29.8	29.2	48.265	CC, ES
Milk Cabin OM13D (M32 595 Pad) - DD - Plan #1	600.0	598.8	54.2	52.0	24.244	SF
Milk Cabin OM14B (M32 595 Pad) - DD - Plan #1	200.0	200.0	9.3	8.7	15.031	CC, ES
Milk Cabin OM14B (M32 595 Pad) - DD - Plan #1	300.0	299.9	11.4	10.4	11.746	SF
Milk Cabin OM14D (M32 595 Pad) - DD - Plan #1	200.0	200.0	40.1	39.5	64.949	CC, ES
Milk Cabin OM14D (M32 595 Pad) - DD - Plan #1	400.0	397.2	51.7	50.4	39.176	SF

# Cathedral Energy Services

## Anticollision Report

<b>Company:</b>	Berry Petroleum Company (NAD 83)	<b>Local Co-ordinate Reference:</b>	Well Milk Cabin OM13B (M32 595 Pad)
<b>Project:</b>	Garfield County	<b>TVD Reference:</b>	KBE @ 8144.0ft (Original Well Elev)
<b>Reference Site:</b>	SWSW S32-T5S-R95W (M32 595 Pad)	<b>MD Reference:</b>	KBE @ 8144.0ft (Original Well Elev)
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Milk Cabin OM13B (M32 595 Pad)	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	DD	<b>Database:</b>	EDM 5000.1 US Multi Users DB
<b>Reference Design:</b>	Plan #1	<b>Offset TVD Reference:</b>	Offset Datum

<b>Offset Design</b> SWSW S32-T5S-R95W (M32 595 Pad) - Milk Cabin OM11B (M32 595 Pad) - DD - Plan #1													<b>Offset Site Error:</b>	0.0 ft
Survey Program: 0-MWD													<b>Offset Well Error:</b>	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	-37.73	16.4	-12.7	20.7					
100.0	100.0	100.0	100.0	0.1	0.1	-37.73	16.4	-12.7	20.7	20.5	0.27	77.129		
200.0	200.0	200.0	200.0	0.3	0.3	-37.73	16.4	-12.7	20.7	20.1	0.62	33.553		
300.0	300.0	299.5	299.5	0.5	0.5	32.32	18.0	-12.1	20.3	19.3	0.97	20.900		
353.9	353.9	353.1	353.0	0.6	0.6	41.15	20.3	-11.4	20.0	18.8	1.17	17.156 CC, ES		
400.0	399.8	398.8	398.6	0.7	0.7	51.58	22.9	-10.5	20.4	19.0	1.34	15.244		
500.0	499.5	497.4	496.9	0.9	0.9	77.74	31.0	-7.9	25.0	23.3	1.73	14.438 SF		
600.0	598.7	595.1	593.9	1.2	1.2	97.54	42.2	-4.2	36.8	34.6	2.19	16.837		
646.3	644.5	639.9	638.2	1.3	1.3	103.62	48.4	-2.1	44.5	42.0	2.41	18.441		
700.0	697.5	691.7	689.3	1.5	1.5	108.58	56.4	0.5	54.7	52.0	2.68	20.444		
800.0	796.3	787.2	783.1	1.8	1.8	113.08	73.4	6.1	76.6	73.4	3.19	23.990		

# Cathedral Energy Services

## Anticollision Report

<b>Company:</b>	Berry Petroleum Company (NAD 83)	<b>Local Co-ordinate Reference:</b>	Well Milk Cabin OM13B (M32 595 Pad)
<b>Project:</b>	Garfield County	<b>TVD Reference:</b>	KBE @ 8144.0ft (Original Well Elev)
<b>Reference Site:</b>	SWSW S32-T5S-R95W (M32 595 Pad)	<b>MD Reference:</b>	KBE @ 8144.0ft (Original Well Elev)
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Milk Cabin OM13B (M32 595 Pad)	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	DD	<b>Database:</b>	EDM 5000.1 US Multi Users DB
<b>Reference Design:</b>	Plan #1	<b>Offset TVD Reference:</b>	Offset Datum

<b>Offset Design</b> SWSW S32-T5S-R95W (M32 595 Pad) - Milk Cabin OM11D (M32 595 Pad) - DD - Plan #1													<b>Offset Site Error:</b>	0.0 ft
Survey Program: 0-MWD													<b>Offset Well Error:</b>	0.0 ft
Reference		Offset		Semi Major Axis			Distance					Separation Factor	Warning	
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Total Uncertainty Axis			
0.0	0.0	0.0	0.0	0.0	0.0	-36.49	8.4	-6.2	10.4					
100.0	100.0	100.0	100.0	0.1	0.1	-36.49	8.4	-6.2	10.4	10.2	0.27	38.808		
200.0	200.0	200.0	200.0	0.3	0.3	-36.49	8.4	-6.2	10.4	9.8	0.62	16.883		
300.0	300.0	299.9	299.8	0.5	0.5	42.54	9.7	-5.0	9.6	8.6	0.97	9.842		
327.5	327.5	327.3	327.2	0.5	0.5	53.00	10.5	-4.3	9.4	8.3	1.07	8.747 CC, ES		
400.0	399.8	399.2	399.1	0.7	0.7	87.84	13.5	-1.6	11.5	10.1	1.34	8.554 SF		
500.0	499.5	497.7	497.2	0.9	0.9	117.86	19.8	4.2	22.5	20.8	1.72	13.044		
600.0	598.7	594.8	593.6	1.2	1.2	129.11	28.5	12.0	40.8	38.6	2.13	19.124		
646.3	644.5	639.2	637.5	1.3	1.3	131.81	33.3	16.4	51.3	48.9	2.33	21.983		
700.0	697.5	690.3	687.9	1.5	1.5	133.84	39.4	21.9	64.6	62.0	2.57	25.160		
800.0	796.3	784.3	780.3	1.8	1.8	135.21	52.4	33.7	91.6	88.6	3.02	30.299		

# Cathedral Energy Services

## Anticollision Report

<b>Company:</b>	Berry Petroleum Company (NAD 83)	<b>Local Co-ordinate Reference:</b>	Well Milk Cabin OM13B (M32 595 Pad)
<b>Project:</b>	Garfield County	<b>TVD Reference:</b>	KBE @ 8144.0ft (Original Well Elev)
<b>Reference Site:</b>	SWSW S32-T5S-R95W (M32 595 Pad)	<b>MD Reference:</b>	KBE @ 8144.0ft (Original Well Elev)
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Milk Cabin OM13B (M32 595 Pad)	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	DD	<b>Database:</b>	EDM 5000.1 US Multi Users DB
<b>Reference Design:</b>	Plan #1	<b>Offset TVD Reference:</b>	Offset Datum

<b>Offset Design</b> SWSW S32-T5S-R95W (M32 595 Pad) - Milk Cabin OM12A (M32 595 Pad) - DD - Plan #1													<b>Offset Site Error:</b>	0.0 ft
Survey Program: 0-MWD													<b>Offset Well Error:</b>	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	-37.73	24.4	-18.9	30.9					
100.0	100.0	100.0	100.0	0.1	0.1	-37.73	24.4	-18.9	30.9	30.6	0.27	114.830		
200.0	200.0	200.0	200.0	0.3	0.3	-37.73	24.4	-18.9	30.9	30.2	0.62	49.954		
275.7	275.7	275.0	275.0	0.4	0.4	27.77	25.4	-19.0	30.9	30.0	0.88	34.971 CC		
300.0	300.0	299.0	299.0	0.5	0.5	29.01	26.1	-19.2	30.9	29.9	0.97	31.924 ES		
400.0	399.8	397.9	397.8	0.7	0.7	37.66	31.2	-20.0	31.3	30.0	1.32	23.673		
500.0	499.5	496.5	496.0	0.9	0.9	50.89	39.5	-21.4	33.6	31.9	1.71	19.699		
600.0	598.7	594.7	593.4	1.2	1.2	65.58	51.2	-23.3	39.3	37.1	2.15	18.232		
646.3	644.5	639.9	638.2	1.3	1.3	71.86	57.7	-24.4	43.4	41.0	2.39	18.120 SF		
700.0	697.5	692.3	689.9	1.5	1.5	77.88	66.0	-25.7	49.4	46.7	2.69	18.395		
800.0	796.3	789.3	785.2	1.8	1.8	84.58	84.0	-28.7	63.9	60.6	3.25	19.626		
900.0	895.1	885.6	879.1	2.1	2.2	87.44	105.0	-32.1	81.6	77.8	3.84	21.234		

# Cathedral Energy Services

## Anticollision Report

<b>Company:</b>	Berry Petroleum Company (NAD 83)	<b>Local Co-ordinate Reference:</b>	Well Milk Cabin OM13B (M32 595 Pad)
<b>Project:</b>	Garfield County	<b>TVD Reference:</b>	KBE @ 8144.0ft (Original Well Elev)
<b>Reference Site:</b>	SWSW S32-T5S-R95W (M32 595 Pad)	<b>MD Reference:</b>	KBE @ 8144.0ft (Original Well Elev)
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Milk Cabin OM13B (M32 595 Pad)	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	DD	<b>Database:</b>	EDM 5000.1 US Multi Users DB
<b>Reference Design:</b>	Plan #1	<b>Offset TVD Reference:</b>	Offset Datum

<b>Offset Design</b> SWSW S32-T5S-R95W (M32 595 Pad) - Milk Cabin OM12B (M32 595 Pad) - DD - Plan #1													<b>Offset Site Error:</b>	0.0 ft
Survey Program: 0-MWD													<b>Offset Well Error:</b>	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	-37.73	47.7	-36.9	60.3					
100.0	100.0	100.0	100.0	0.1	0.1	-37.73	47.7	-36.9	60.3	60.1	0.27	224.519		
200.0	200.0	200.0	200.0	0.3	0.3	-37.73	47.7	-36.9	60.3	59.7	0.62	97.672 CC		
300.0	300.0	298.0	298.0	0.5	0.5	27.17	49.3	-37.6	60.5	59.5	0.96	62.703 ES		
400.0	399.8	395.9	395.7	0.7	0.7	30.37	53.8	-39.7	60.9	59.6	1.32	46.315		
500.0	499.5	493.6	493.1	0.9	0.9	35.54	61.4	-43.1	62.1	60.4	1.68	36.965		
600.0	598.7	591.1	589.9	1.2	1.2	42.35	72.0	-48.0	64.6	62.5	2.08	31.065		
646.3	644.5	636.2	634.5	1.3	1.3	45.89	77.9	-50.6	66.3	64.0	2.28	29.064		
700.0	697.5	688.4	686.0	1.5	1.5	49.91	85.5	-54.1	69.3	66.8	2.53	27.354		
800.0	796.3	785.3	781.2	1.8	1.8	55.92	102.0	-61.6	78.2	75.1	3.04	25.727		
900.0	895.1	884.0	877.7	2.1	2.2	60.26	120.7	-70.0	89.8	86.2	3.58	25.072 SF		

# Cathedral Energy Services

## Anticollision Report

<b>Company:</b>	Berry Petroleum Company (NAD 83)	<b>Local Co-ordinate Reference:</b>	Well Milk Cabin OM13B (M32 595 Pad)
<b>Project:</b>	Garfield County	<b>TVD Reference:</b>	KBE @ 8144.0ft (Original Well Elev)
<b>Reference Site:</b>	SWSW S32-T5S-R95W (M32 595 Pad)	<b>MD Reference:</b>	KBE @ 8144.0ft (Original Well Elev)
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Milk Cabin OM13B (M32 595 Pad)	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	DD	<b>Database:</b>	EDM 5000.1 US Multi Users DB
<b>Reference Design:</b>	Plan #1	<b>Offset TVD Reference:</b>	Offset Datum

<b>Offset Design</b> SWSW S32-T5S-R95W (M32 595 Pad) - Milk Cabin OM12C (M32 595 Pad) - DD - Plan #1													<b>Offset Site Error:</b> 0.0 ft
Survey Program: 0-MWD													<b>Offset Well Error:</b> 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	-37.74	55.7	-43.1	70.5				
100.0	100.0	100.0	100.0	0.1	0.1	-37.74	55.7	-43.1	70.5	70.2	0.27	262.220	
200.0	200.0	200.0	200.0	0.3	0.3	-37.74	55.7	-43.1	70.5	69.9	0.62	114.073 CC	
300.0	300.0	297.6	297.6	0.5	0.5	26.67	57.0	-44.2	70.6	69.7	0.96	73.311 ES	
400.0	399.8	395.2	395.0	0.7	0.7	28.40	60.9	-47.3	71.1	69.8	1.31	54.155	
500.0	499.5	492.7	492.2	0.9	0.9	31.22	67.4	-52.5	72.0	70.3	1.67	43.039	
600.0	598.7	590.1	588.9	1.2	1.2	35.02	76.4	-59.7	73.6	71.5	2.06	35.734	
646.3	644.5	635.1	633.5	1.3	1.3	37.07	81.4	-63.8	74.6	72.3	2.25	33.120	
700.0	697.5	687.4	685.0	1.5	1.5	39.42	88.0	-69.0	76.4	74.0	2.49	30.739	
800.0	796.3	784.5	780.4	1.8	1.8	42.93	102.0	-80.4	82.7	79.7	2.95	28.020	
900.0	895.1	881.2	874.8	2.1	2.2	45.19	118.6	-93.6	92.4	88.9	3.44	26.852 SF	

# Cathedral Energy Services

## Anticollision Report

<b>Company:</b>	Berry Petroleum Company (NAD 83)	<b>Local Co-ordinate Reference:</b>	Well Milk Cabin OM13B (M32 595 Pad)
<b>Project:</b>	Garfield County	<b>TVD Reference:</b>	KBE @ 8144.0ft (Original Well Elev)
<b>Reference Site:</b>	SWSW S32-T5S-R95W (M32 595 Pad)	<b>MD Reference:</b>	KBE @ 8144.0ft (Original Well Elev)
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Milk Cabin OM13B (M32 595 Pad)	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	DD	<b>Database:</b>	EDM 5000.1 US Multi Users DB
<b>Reference Design:</b>	Plan #1	<b>Offset TVD Reference:</b>	Offset Datum

<b>Offset Design</b> SWSW S32-T5S-R95W (M32 595 Pad) - Milk Cabin OM12D (M32 595 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 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	-37.73	32.4	-25.1	41.0					
100.0	100.0	100.0	100.0	0.1	0.1	-37.73	32.4	-25.1	41.0	40.7	0.27	152.544		
200.0	200.0	200.0	200.0	0.3	0.3	-37.73	32.4	-25.1	41.0	40.4	0.62	66.361 CC		
300.0	300.0	298.6	298.6	0.5	0.5	27.93	34.0	-25.6	41.1	40.1	0.97	42.548 ES		
400.0	399.8	397.2	397.0	0.7	0.7	33.36	38.9	-27.2	41.6	40.3	1.32	31.518		
500.0	499.5	495.5	495.0	0.9	0.9	41.94	46.9	-29.9	43.2	41.5	1.69	25.540		
600.0	598.7	593.6	592.3	1.2	1.2	52.54	58.0	-33.6	47.0	44.9	2.12	22.203		
646.3	644.5	638.8	637.1	1.3	1.3	57.64	64.2	-35.7	49.7	47.4	2.34	21.245		
700.0	697.5	691.2	688.8	1.5	1.5	63.01	72.3	-38.4	54.0	51.4	2.62	20.628		
800.0	796.3	788.4	784.3	1.8	1.8	69.94	89.5	-44.2	65.4	62.2	3.17	20.615 SF		
900.0	895.1	885.0	878.5	2.1	2.2	73.58	109.7	-50.9	80.4	76.6	3.75	21.424		
1,000.0	993.9	980.8	971.1	2.4	2.7	75.08	132.7	-58.6	98.4	94.0	4.34	22.665		

# Cathedral Energy Services

## Anticollision Report

<b>Company:</b>	Berry Petroleum Company (NAD 83)	<b>Local Co-ordinate Reference:</b>	Well Milk Cabin OM13B (M32 595 Pad)
<b>Project:</b>	Garfield County	<b>TVD Reference:</b>	KBE @ 8144.0ft (Original Well Elev)
<b>Reference Site:</b>	SWSW S32-T5S-R95W (M32 595 Pad)	<b>MD Reference:</b>	KBE @ 8144.0ft (Original Well Elev)
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Milk Cabin OM13B (M32 595 Pad)	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	DD	<b>Database:</b>	EDM 5000.1 US Multi Users DB
<b>Reference Design:</b>	Plan #1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design SWSW S32-T5S-R95W (M32 595 Pad) - Milk Cabin OM13A (M32 595 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 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	-38.24	39.7	-31.3	50.6				
100.0	100.0	100.0	100.0	0.1	0.1	-38.24	39.7	-31.3	50.6	50.3	0.27	188.109	
200.0	200.0	200.0	200.0	0.3	0.3	-38.24	39.7	-31.3	50.6	49.9	0.62	81.833 CC	
300.0	300.0	298.3	298.3	0.5	0.5	26.06	40.8	-32.6	50.7	49.7	0.96	52.531 ES	
400.0	399.8	396.6	396.4	0.7	0.7	27.46	44.1	-36.4	51.0	49.7	1.32	38.781	
500.0	499.5	494.8	494.3	0.9	0.9	29.76	49.6	-42.8	51.7	50.0	1.68	30.782	
600.0	598.7	593.1	591.9	1.2	1.2	32.86	57.3	-51.7	52.7	50.7	2.07	25.488	
646.3	644.5	638.5	636.8	1.3	1.3	34.53	61.6	-56.7	53.4	51.1	2.27	23.571	
700.0	697.5	691.3	688.9	1.5	1.5	36.34	67.1	-63.1	54.7	52.2	2.50	21.872	
800.0	796.3	790.0	785.8	1.8	1.8	38.51	79.1	-77.0	59.6	56.6	2.96	20.105	
900.0	895.1	889.8	883.8	2.1	2.2	40.08	91.7	-91.6	65.2	61.7	3.44	18.922	
1,000.0	993.9	989.6	981.7	2.4	2.5	41.40	104.3	-106.2	70.8	66.9	3.94	17.969	
1,100.0	1,092.7	1,089.4	1,079.7	2.7	2.9	42.53	116.9	-120.8	76.5	72.0	4.45	17.188	
1,200.0	1,191.5	1,189.3	1,177.6	3.0	3.3	43.50	129.5	-135.4	82.2	77.2	4.97	16.541	
1,300.0	1,290.3	1,289.1	1,275.6	3.4	3.7	44.34	142.1	-150.0	87.9	82.4	5.49	15.996	
1,400.0	1,389.1	1,388.9	1,373.5	3.7	4.0	45.09	154.7	-164.6	93.6	87.6	6.03	15.534	
1,500.0	1,487.9	1,488.8	1,471.5	4.0	4.4	45.74	167.2	-179.2	99.3	92.8	6.56	15.136 SF	



# Cathedral Energy Services

## Anticollision Report

<b>Company:</b>	Berry Petroleum Company (NAD 83)	<b>Local Co-ordinate Reference:</b>	Well Milk Cabin OM13B (M32 595 Pad)
<b>Project:</b>	Garfield County	<b>TVD Reference:</b>	KBE @ 8144.0ft (Original Well Elev)
<b>Reference Site:</b>	SWSW S32-T5S-R95W (M32 595 Pad)	<b>MD Reference:</b>	KBE @ 8144.0ft (Original Well Elev)
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Milk Cabin OM13B (M32 595 Pad)	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	DD	<b>Database:</b>	EDM 5000.1 US Multi Users DB
<b>Reference Design:</b>	Plan #1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design SWSW S32-T5S-R95W (M32 595 Pad) - Milk Cabin OM13C (M32 595 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							
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	140.27	-14.9	12.4	19.4				
100.0	100.0	100.0	100.0	0.1	0.1	140.27	-14.9	12.4	19.4	19.1	0.27	72.205	
200.0	200.0	200.0	200.0	0.3	0.3	140.27	-14.9	12.4	19.4	18.8	0.62	31.411 CC, ES	
300.0	300.0	300.4	300.4	0.5	0.5	-154.07	-14.9	10.6	19.9	18.9	0.97	20.492	
400.0	399.8	400.8	400.7	0.7	0.7	-149.07	-14.9	5.4	21.4	20.1	1.34	15.990	
500.0	499.5	501.1	500.6	0.9	0.9	-142.25	-14.9	-3.4	24.3	22.6	1.76	13.840	
600.0	598.7	601.3	600.0	1.2	1.2	-135.15	-14.9	-15.7	28.8	26.5	2.26	12.766	
646.3	644.5	647.5	645.8	1.3	1.3	-132.83	-14.9	-22.1	31.6	29.0	2.50	12.604	
700.0	697.5	701.1	698.8	1.5	1.5	-131.17	-14.9	-29.5	35.1	32.3	2.79	12.556	
800.0	796.3	800.9	797.6	1.8	1.7	-128.84	-14.9	-43.3	41.7	38.4	3.35	12.447	
900.0	895.1	900.6	896.4	2.1	2.0	-127.16	-14.8	-57.1	48.4	44.5	3.92	12.345	
1,000.0	993.9	1,000.4	995.2	2.4	2.3	-125.88	-14.8	-70.9	55.2	50.7	4.50	12.254	
1,100.0	1,092.7	1,100.2	1,094.0	2.7	2.6	-124.88	-14.8	-84.8	61.9	56.8	5.09	12.177	
1,200.0	1,191.5	1,199.9	1,192.9	3.0	2.9	-124.08	-14.8	-98.6	68.7	63.0	5.67	12.111	
1,300.0	1,290.3	1,299.7	1,291.7	3.4	3.2	-123.42	-14.8	-112.4	75.5	69.2	6.26	12.055	
1,400.0	1,389.1	1,399.5	1,390.5	3.7	3.5	-122.87	-14.8	-126.2	82.3	75.4	6.85	12.007	
1,500.0	1,487.9	1,499.2	1,489.3	4.0	3.8	-122.41	-14.8	-140.0	89.1	81.6	7.44	11.964	
1,600.0	1,586.6	1,599.0	1,588.1	4.3	4.1	-122.01	-14.7	-153.9	95.9	87.8	8.04	11.927 SF	

# Cathedral Energy Services

## Anticollision Report

<b>Company:</b>	Berry Petroleum Company (NAD 83)	<b>Local Co-ordinate Reference:</b>	Well Milk Cabin OM13B (M32 595 Pad)
<b>Project:</b>	Garfield County	<b>TVD Reference:</b>	KBE @ 8144.0ft (Original Well Elev)
<b>Reference Site:</b>	SWSW S32-T5S-R95W (M32 595 Pad)	<b>MD Reference:</b>	KBE @ 8144.0ft (Original Well Elev)
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Milk Cabin OM13B (M32 595 Pad)	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	DD	<b>Database:</b>	EDM 5000.1 US Multi Users DB
<b>Reference Design:</b>	Plan #1	<b>Offset TVD Reference:</b>	Offset Datum

<b>Offset Design</b> SWSW S32-T5S-R95W (M32 595 Pad) - Milk Cabin OM13D (M32 595 Pad) - DD - Plan #1													<b>Offset Site Error:</b>	0.0 ft
Survey Program: 0-MWD													<b>Offset Well Error:</b>	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	141.39	-23.3	18.6	29.8					
100.0	100.0	100.0	100.0	0.1	0.1	141.39	-23.3	18.6	29.8	29.6	0.27	110.947		
200.0	200.0	200.0	200.0	0.3	0.3	141.39	-23.3	18.6	29.8	29.2	0.62	48.265 CC, ES		
300.0	300.0	300.1	300.1	0.5	0.5	-152.95	-24.2	17.1	31.2	30.2	0.97	32.139		
400.0	399.8	400.0	399.8	0.7	0.7	-148.33	-27.0	12.7	35.6	34.2	1.35	26.417		
500.0	499.5	499.6	499.0	0.9	0.9	-142.75	-31.6	5.4	43.2	41.4	1.77	24.457		
600.0	598.7	598.8	597.5	1.2	1.2	-137.96	-37.9	-4.6	54.2	52.0	2.24	24.244 SF		
646.3	644.5	644.6	643.0	1.3	1.3	-136.85	-40.9	-9.4	60.3	57.8	2.46	24.474		
700.0	697.5	697.8	695.8	1.5	1.4	-136.16	-44.4	-14.9	67.7	65.0	2.73	24.774		
800.0	796.3	796.9	794.1	1.8	1.7	-135.20	-50.9	-25.3	81.5	78.2	3.24	25.129		
900.0	895.1	895.9	892.4	2.1	2.0	-134.52	-57.4	-35.6	95.3	91.5	3.76	25.341		

# Cathedral Energy Services

## Anticollision Report

<b>Company:</b>	Berry Petroleum Company (NAD 83)	<b>Local Co-ordinate Reference:</b>	Well Milk Cabin OM13B (M32 595 Pad)
<b>Project:</b>	Garfield County	<b>TVD Reference:</b>	KBE @ 8144.0ft (Original Well Elev)
<b>Reference Site:</b>	SWSW S32-T5S-R95W (M32 595 Pad)	<b>MD Reference:</b>	KBE @ 8144.0ft (Original Well Elev)
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Milk Cabin OM13B (M32 595 Pad)	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	DD	<b>Database:</b>	EDM 5000.1 US Multi Users DB
<b>Reference Design:</b>	Plan #1	<b>Offset TVD Reference:</b>	Offset Datum

<b>Offset Design</b>												<b>Offset Site Error:</b>	0.0 ft
Survey Program: 0-MWD												<b>Offset Well Error:</b>	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	138.10	-6.9	6.2	9.3				
100.0	100.0	100.0	100.0	0.1	0.1	138.10	-6.9	6.2	9.3	9.0	0.27	34.552	
200.0	200.0	200.0	200.0	0.3	0.3	138.10	-6.9	6.2	9.3	8.7	0.62	15.031 CC, ES	
300.0	300.0	299.9	299.8	0.5	0.5	-170.11	-5.9	7.6	11.4	10.4	0.97	11.746 SF	
400.0	399.8	399.2	399.0	0.7	0.7	172.33	-3.0	11.9	19.2	17.9	1.33	14.453	
500.0	499.5	497.4	496.9	0.9	0.9	162.49	1.8	19.0	33.5	31.9	1.70	19.757	
600.0	598.7	594.1	592.9	1.2	1.2	157.57	8.3	28.6	54.1	52.0	2.08	25.951	
646.3	644.5	638.2	636.5	1.3	1.3	156.14	11.9	33.9	65.6	63.3	2.27	28.888	
700.0	697.5	688.9	686.5	1.5	1.5	154.85	16.5	40.6	80.0	77.6	2.49	32.133	

# Cathedral Energy Services

## Anticollision Report

<b>Company:</b>	Berry Petroleum Company (NAD 83)	<b>Local Co-ordinate Reference:</b>	Well Milk Cabin OM13B (M32 595 Pad)
<b>Project:</b>	Garfield County	<b>TVD Reference:</b>	KBE @ 8144.0ft (Original Well Elev)
<b>Reference Site:</b>	SWSW S32-T5S-R95W (M32 595 Pad)	<b>MD Reference:</b>	KBE @ 8144.0ft (Original Well Elev)
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Milk Cabin OM13B (M32 595 Pad)	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	DD	<b>Database:</b>	EDM 5000.1 US Multi Users DB
<b>Reference Design:</b>	Plan #1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design													SWSW S32-T5S-R95W (M32 595 Pad) - Milk Cabin OM14D (M32 595 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										
Measured Depth	Vertical Depth	Measured Depth	Vertical Depth	Reference	Offset	Highside Toolface	Offset Wellbore Centre		Between Centres	Between Ellipses	Total Uncertainty	Separation	Warning				
(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(°)	+N/-S (ft)	+E/-W (ft)		(ft)	Axis	Factor					
0.0	0.0	0.0	0.0	0.0	0.0	141.30	-31.3	25.1	40.1								
100.0	100.0	100.0	100.0	0.1	0.1	141.30	-31.3	25.1	40.1	39.9	0.27	149.299					
200.0	200.0	200.0	200.0	0.3	0.3	141.30	-31.3	25.1	40.1	39.5	0.62	64.949	CC, ES				
300.0	300.0	298.9	298.9	0.5	0.5	-157.51	-31.4	26.8	42.9	42.0	0.97	44.385					
400.0	399.8	397.2	397.0	0.7	0.7	-163.62	-31.8	31.9	51.7	50.4	1.32	39.176	SF				
500.0	499.5	494.1	493.6	0.9	0.9	-170.09	-32.4	40.1	67.2	65.6	1.67	40.185					
600.0	598.7	589.0	587.8	1.2	1.1	-175.29	-33.2	51.4	89.6	87.6	2.02	44.390					

# Cathedral Energy Services

## Anticollision Report

<b>Company:</b>	Berry Petroleum Company (NAD 83)	<b>Local Co-ordinate Reference:</b>	Well Milk Cabin OM13B (M32 595 Pad)
<b>Project:</b>	Garfield County	<b>TVD Reference:</b>	KBE @ 8144.0ft (Original Well Elev)
<b>Reference Site:</b>	SWSW S32-T5S-R95W (M32 595 Pad)	<b>MD Reference:</b>	KBE @ 8144.0ft (Original Well Elev)
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Milk Cabin OM13B (M32 595 Pad)	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	DD	<b>Database:</b>	EDM 5000.1 US Multi Users DB
<b>Reference Design:</b>	Plan #1	<b>Offset TVD Reference:</b>	Offset Datum

Reference Depths are relative to KBE @ 8144.0ft (Original Well Elev)  
Offset Depths are relative to Offset Datum  
Central Meridian is -105.500000 °

Coordinates are relative to: Milk Cabin OM13B (M32 595 Pad)  
Coordinate System is US State Plane 1983, Colorado Central Zone  
Grid Convergence at Surface is: -1.63°

