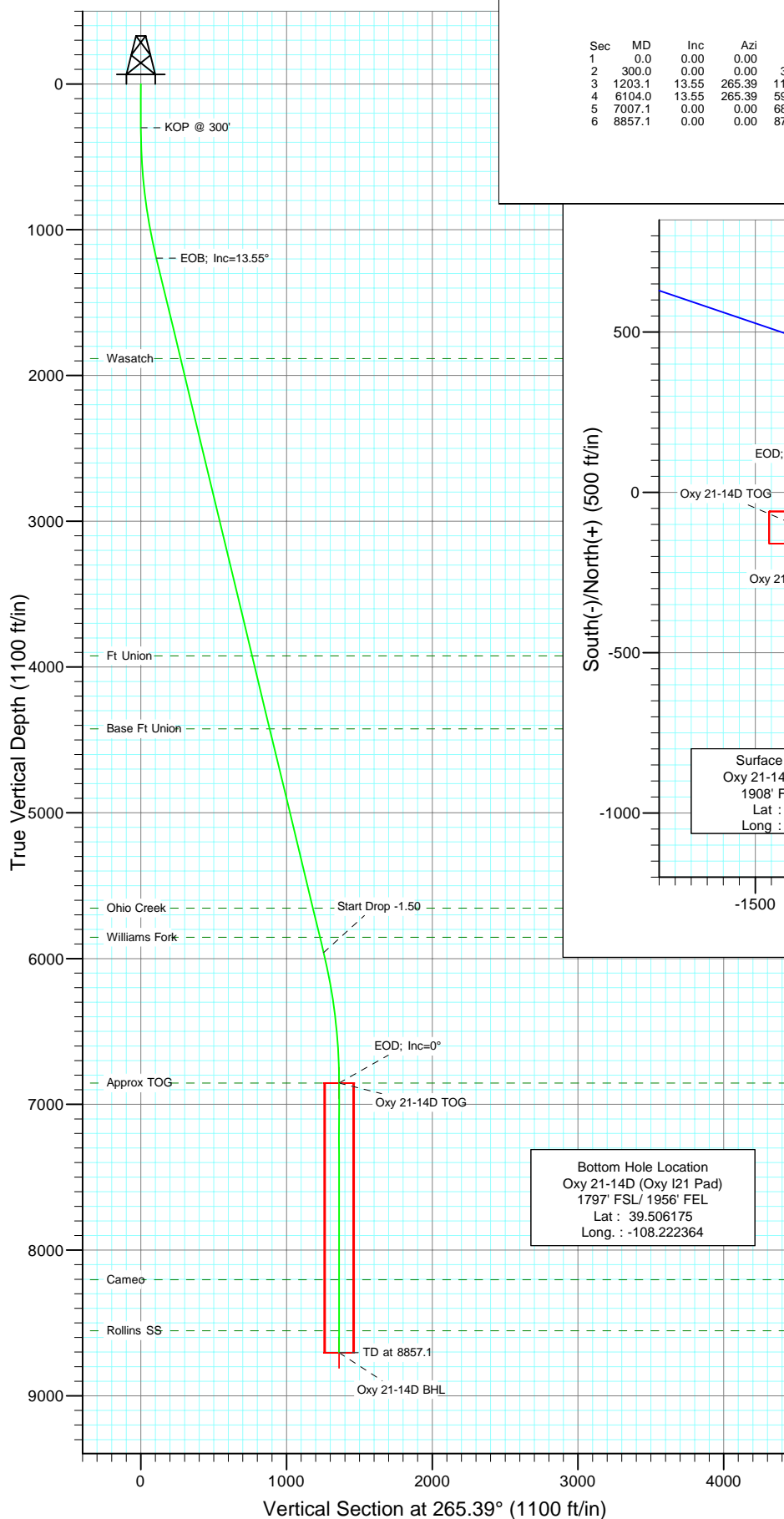




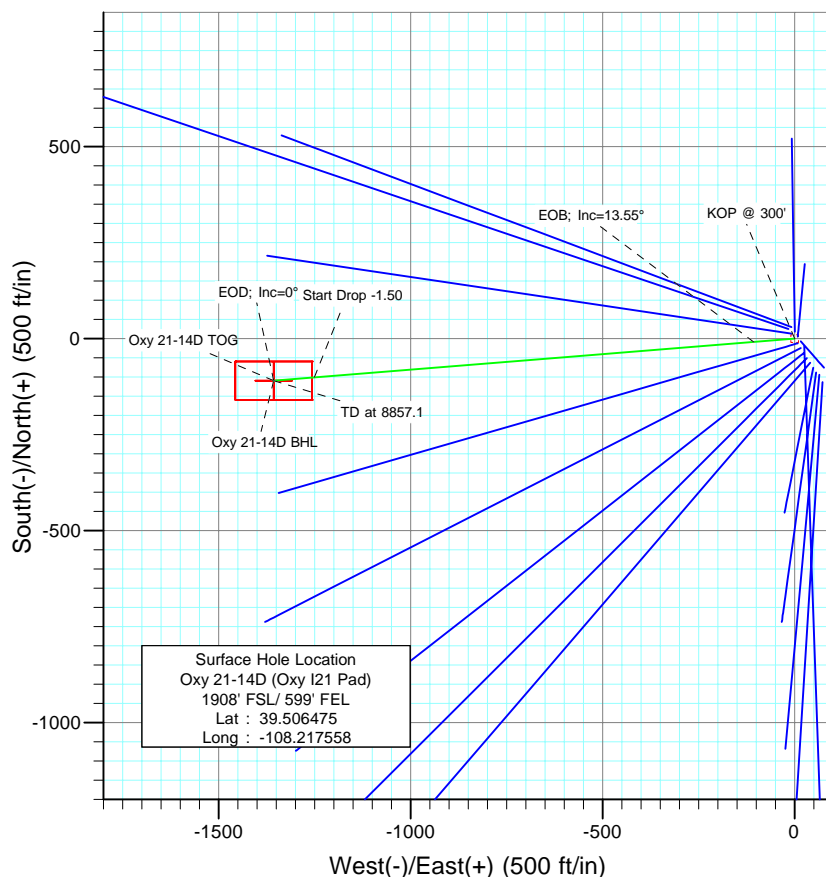
Berry Petroleum Company

Project: Garfield County  
Site: NESE S21-T6S-R97W (Oxy I21 pad)  
Well: Oxy 21-14D (Oxy I21 Pad)  
Wellbore: DD  
Design: Plan #1



#### SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	DLeg	TFace	VSec	Target
1	0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.0	
2	300.0	0.00	0.00	300.0	0.0	0.0	0.00	0.00	0.0	
3	1203.1	13.55	265.39	1194.7	-8.5	-105.9	1.50	265.39	106.3	
4	6104.0	13.55	265.39	5958.3	-100.7	-1250.1	0.00	0.00	1254.2	
5	7007.1	0.00	0.00	6854.0	-109.2	-1356.1	1.50	180.00	1360.5	Oxy 21-14D TOG
6	8857.1	0.00	0.00	8704.0	-109.2	-1356.1	0.00	0.00	1360.5	Oxy 21-14D BHL



#### FORMATION TOP DETAILS

TVDPath	MDPath	Formation
1884.0	1912.1	Wasatch
3924.0	4010.5	Ft Union
4424.0	4524.8	Base Ft Union
5654.0	5790.0	Ohio Creek
5854.0	5995.7	Williams Fork
6854.0	7007.1	Approx TOG
8204.0	8357.1	Cameo
8554.0	8707.1	Rollins SS



Azimuths to True North  
Magnetic North: 10.65°

Magnetic Field  
Strength: 52405.2snT  
Dip Angle: 65.76°  
Date: 10/6/2009  
Model: IGRF200510

#### DESIGN DETAILS: Plan #1

95XXX; BH  
KBE @ 8381.0ft (Original Well Elev)

Target	Azimuth	Origin	N/S	E/W	From TVD
Oxy 21-14D BHL	265.39	Slot	0.0	0.0	0.0

## Planning Report

<b>Database:</b>	EDM 2003.21 US Multi User DB	<b>Local Co-ordinate Reference:</b>	Well Oxy 21-14D (Oxy I21 Pad)
<b>Company:</b>	Berry Petroleum Company (NAD 83)	<b>TVD Reference:</b>	KBE @ 8381.0ft (Original Well Elev)
<b>Project:</b>	Garfield County	<b>MD Reference:</b>	KBE @ 8381.0ft (Original Well Elev)
<b>Site:</b>	NESE S21-T6S-R97W (Oxy I21 pad)	<b>North Reference:</b>	True
<b>Well:</b>	Oxy 21-14D (Oxy I21 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		

<b>Site</b>	NESE S21-T6S-R97W (Oxy I21 pad)			
<b>Site Position:</b>		<b>Northing:</b>	1,620,717.92 ft	<b>Latitude:</b> 39.506164
<b>From:</b>	Lat/Long	<b>Easting:</b>	2,233,406.18 ft	<b>Longitude:</b> -108.217300
<b>Position Uncertainty:</b>	0.0 ft	<b>Slot Radius:</b>	in	<b>Grid Convergence:</b> -1.71 °

<b>Well</b>	Oxy 21-14D (Oxy I21 Pad)			
<b>Well Position</b>	<b>+N/-S</b>	0.0 ft	<b>Northing:</b>	1,620,833.32 ft
	<b>+E/-W</b>	0.0 ft	<b>Easting:</b>	2,233,336.80 ft
<b>Position Uncertainty</b>		0.0 ft	<b>Wellhead Elevation:</b>	ft
			<b>Ground Level:</b>	8,366.0 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>
	IGRF200510	10/6/2009	10.65	65.76	52,405

<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	265.39

<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	
300.0	0.00	0.00	300.0	0.0	0.0	0.00	0.00	0.00	0.00	
1,203.1	13.55	265.39	1,194.7	-8.5	-105.9	1.50	1.50	0.00	265.39	
6,104.0	13.55	265.39	5,959.3	-100.7	-1,250.1	0.00	0.00	0.00	0.00	
7,007.1	0.00	0.00	6,854.0	-109.2	-1,356.1	1.50	-1.50	0.00	180.00	Oxy 21-14D TOG
8,857.1	0.00	0.00	8,704.0	-109.2	-1,356.1	0.00	0.00	0.00	0.00	Oxy 21-14D BHL

# Planning Report

<b>Database:</b>	EDM 2003.21 US Multi User DB	<b>Local Co-ordinate Reference:</b>	Well Oxy 21-14D (Oxy I21 Pad)
<b>Company:</b>	Berry Petroleum Company (NAD 83)	<b>TVD Reference:</b>	KBE @ 8381.0ft (Original Well Elev)
<b>Project:</b>	Garfield County	<b>MD Reference:</b>	KBE @ 8381.0ft (Original Well Elev)
<b>Site:</b>	NESE S21-T6S-R97W (Oxy I21 pad)	<b>North Reference:</b>	True
<b>Well:</b>	Oxy 21-14D (Oxy I21 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	
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'
330.0	0.45	265.39	330.0	0.0	-0.1	0.1	1.50	1.50	
360.0	0.90	265.39	360.0	0.0	-0.5	0.5	1.50	1.50	
390.0	1.35	265.39	390.0	-0.1	-1.1	1.1	1.50	1.50	
420.0	1.80	265.39	420.0	-0.2	-1.9	1.9	1.50	1.50	
450.0	2.25	265.39	450.0	-0.2	-2.9	2.9	1.50	1.50	
480.0	2.70	265.39	479.9	-0.3	-4.2	4.2	1.50	1.50	
510.0	3.15	265.39	509.9	-0.5	-5.8	5.8	1.50	1.50	
540.0	3.60	265.39	539.8	-0.6	-7.5	7.5	1.50	1.50	
570.0	4.05	265.39	569.8	-0.8	-9.5	9.5	1.50	1.50	
600.0	4.50	265.39	599.7	-0.9	-11.7	11.8	1.50	1.50	
630.0	4.95	265.39	629.6	-1.1	-14.2	14.2	1.50	1.50	
660.0	5.40	265.39	659.5	-1.4	-16.9	17.0	1.50	1.50	
690.0	5.85	265.39	689.3	-1.6	-19.8	19.9	1.50	1.50	
720.0	6.30	265.39	719.2	-1.9	-23.0	23.1	1.50	1.50	
750.0	6.75	265.39	749.0	-2.1	-26.4	26.5	1.50	1.50	
780.0	7.20	265.39	778.7	-2.4	-30.0	30.1	1.50	1.50	
810.0	7.65	265.39	808.5	-2.7	-33.9	34.0	1.50	1.50	
840.0	8.10	265.39	838.2	-3.1	-38.0	38.1	1.50	1.50	
870.0	8.55	265.39	867.9	-3.4	-42.3	42.5	1.50	1.50	
900.0	9.00	265.39	897.5	-3.8	-46.9	47.0	1.50	1.50	
930.0	9.45	265.39	927.1	-4.2	-51.7	51.8	1.50	1.50	
960.0	9.90	265.39	956.7	-4.6	-56.7	56.9	1.50	1.50	
990.0	10.35	265.39	986.3	-5.0	-62.0	62.2	1.50	1.50	
1,020.0	10.80	265.39	1,015.7	-5.4	-67.4	67.7	1.50	1.50	
1,050.0	11.25	265.39	1,045.2	-5.9	-73.2	73.4	1.50	1.50	
1,080.0	11.70	265.39	1,074.6	-6.4	-79.1	79.4	1.50	1.50	
1,110.0	12.15	265.39	1,103.9	-6.9	-85.3	85.6	1.50	1.50	
1,140.0	12.60	265.39	1,133.2	-7.4	-91.7	92.0	1.50	1.50	
1,170.0	13.05	265.39	1,162.5	-7.9	-98.3	98.7	1.50	1.50	
1,200.0	13.50	265.39	1,191.7	-8.5	-105.2	105.5	1.50	1.50	
1,203.1	13.55	265.39	1,194.7	-8.5	-105.9	106.3	1.50	1.50	EOB; Inc=13.55°
1,230.0	13.55	265.39	1,220.9	-9.0	-112.2	112.6	0.00	0.00	
1,260.0	13.55	265.39	1,250.0	-9.6	-119.2	119.6	0.00	0.00	
1,290.0	13.55	265.39	1,279.2	-10.2	-126.2	126.6	0.00	0.00	
1,320.0	13.55	265.39	1,308.4	-10.7	-133.2	133.6	0.00	0.00	
1,350.0	13.55	265.39	1,337.5	-11.3	-140.2	140.7	0.00	0.00	
1,380.0	13.55	265.39	1,366.7	-11.9	-147.2	147.7	0.00	0.00	
1,410.0	13.55	265.39	1,395.9	-12.4	-154.2	154.7	0.00	0.00	
1,440.0	13.55	265.39	1,425.0	-13.0	-161.2	161.8	0.00	0.00	
1,470.0	13.55	265.39	1,454.2	-13.6	-168.2	168.8	0.00	0.00	
1,500.0	13.55	265.39	1,483.4	-14.1	-175.2	175.8	0.00	0.00	

# Planning Report

<b>Database:</b>	EDM 2003.21 US Multi User DB	<b>Local Co-ordinate Reference:</b>	Well Oxy 21-14D (Oxy I21 Pad)
<b>Company:</b>	Berry Petroleum Company (NAD 83)	<b>TVD Reference:</b>	KBE @ 8381.0ft (Original Well Elev)
<b>Project:</b>	Garfield County	<b>MD Reference:</b>	KBE @ 8381.0ft (Original Well Elev)
<b>Site:</b>	NESE S21-T6S-R97W (Oxy I21 pad)	<b>North Reference:</b>	True
<b>Well:</b>	Oxy 21-14D (Oxy I21 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
1,530.0	13.55	265.39	1,512.5	-14.7	-182.2	182.8	0.00	0.00	
1,560.0	13.55	265.39	1,541.7	-15.2	-189.2	189.9	0.00	0.00	
1,590.0	13.55	265.39	1,570.8	-15.8	-196.3	196.9	0.00	0.00	
1,620.0	13.55	265.39	1,600.0	-16.4	-203.3	203.9	0.00	0.00	
1,650.0	13.55	265.39	1,629.2	-16.9	-210.3	210.9	0.00	0.00	
1,680.0	13.55	265.39	1,658.3	-17.5	-217.3	218.0	0.00	0.00	
1,710.0	13.55	265.39	1,687.5	-18.1	-224.3	225.0	0.00	0.00	
1,740.0	13.55	265.39	1,716.7	-18.6	-231.3	232.0	0.00	0.00	
1,770.0	13.55	265.39	1,745.8	-19.2	-238.3	239.0	0.00	0.00	
1,800.0	13.55	265.39	1,775.0	-19.8	-245.3	246.1	0.00	0.00	
1,830.0	13.55	265.39	1,804.2	-20.3	-252.3	253.1	0.00	0.00	
1,860.0	13.55	265.39	1,833.3	-20.9	-259.3	260.1	0.00	0.00	
1,890.0	13.55	265.39	1,862.5	-21.4	-266.3	267.2	0.00	0.00	
1,912.1	13.55	265.39	1,884.0	-21.9	-271.5	272.3	0.00	0.00	Wasatch
1,920.0	13.55	265.39	1,891.7	-22.0	-273.3	274.2	0.00	0.00	
1,950.0	13.55	265.39	1,920.8	-22.6	-280.3	281.2	0.00	0.00	
1,980.0	13.55	265.39	1,950.0	-23.1	-287.3	288.2	0.00	0.00	
2,010.0	13.55	265.39	1,979.2	-23.7	-294.3	295.3	0.00	0.00	
2,040.0	13.55	265.39	2,008.3	-24.3	-301.3	302.3	0.00	0.00	
2,070.0	13.55	265.39	2,037.5	-24.8	-308.3	309.3	0.00	0.00	
2,100.0	13.55	265.39	2,066.7	-25.4	-315.3	316.3	0.00	0.00	
2,130.0	13.55	265.39	2,095.8	-26.0	-322.3	323.4	0.00	0.00	
2,160.0	13.55	265.39	2,125.0	-26.5	-329.3	330.4	0.00	0.00	
2,190.0	13.55	265.39	2,154.2	-27.1	-336.3	337.4	0.00	0.00	
2,220.0	13.55	265.39	2,183.3	-27.7	-343.3	344.4	0.00	0.00	
2,250.0	13.55	265.39	2,212.5	-28.2	-350.3	351.5	0.00	0.00	
2,280.0	13.55	265.39	2,241.7	-28.8	-357.3	358.5	0.00	0.00	
2,310.0	13.55	265.39	2,270.8	-29.3	-364.3	365.5	0.00	0.00	
2,340.0	13.55	265.39	2,300.0	-29.9	-371.4	372.6	0.00	0.00	
2,370.0	13.55	265.39	2,329.1	-30.5	-378.4	379.6	0.00	0.00	
2,400.0	13.55	265.39	2,358.3	-31.0	-385.4	386.6	0.00	0.00	
2,430.0	13.55	265.39	2,387.5	-31.6	-392.4	393.6	0.00	0.00	
2,460.0	13.55	265.39	2,416.6	-32.2	-399.4	400.7	0.00	0.00	
2,490.0	13.55	265.39	2,445.8	-32.7	-406.4	407.7	0.00	0.00	

## Targets

Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (ft)	Easting (ft)	Latitude	Longitude
- hit/miss target									
- Shape									
Oxy 21-14D TOG	0.00	0.00	6,854.0	-109.2	-1,356.1	1,620,764.70	2,231,978.08	39.506175	-108.222364
- plan misses target center by 4510.0ft at 2490.0ft MD (2445.8 TVD, -32.7 N, -406.4 E)									
- Point									
Oxy 21-14D BHL	0.00	0.00	8,704.0	-109.2	-1,356.1	1,620,764.70	2,231,978.08	39.506175	-108.222364
- plan misses target center by 6330.3ft at 2490.0ft MD (2445.8 TVD, -32.7 N, -406.4 E)									
- Rectangle (sides W100.0 H200.0 D0.0)									

# Planning Report

<b>Database:</b>	EDM 2003.21 US Multi User DB	<b>Local Co-ordinate Reference:</b>	Well Oxy 21-14D (Oxy I21 Pad)
<b>Company:</b>	Berry Petroleum Company (NAD 83)	<b>TVD Reference:</b>	KBE @ 8381.0ft (Original Well Elev)
<b>Project:</b>	Garfield County	<b>MD Reference:</b>	KBE @ 8381.0ft (Original Well Elev)
<b>Site:</b>	NESE S21-T6S-R97W (Oxy I21 pad)	<b>North Reference:</b>	True
<b>Well:</b>	Oxy 21-14D (Oxy I21 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	13.55	265.39	2,455.5	-32.9	-408.7	410.0	0.00	0.00	
2,600.0	13.55	265.39	2,552.8	-34.8	-432.1	433.5	0.00	0.00	
2,700.0	13.55	265.39	2,650.0	-36.7	-455.4	456.9	0.00	0.00	
2,800.0	13.55	265.39	2,747.2	-38.6	-478.8	480.3	0.00	0.00	
2,900.0	13.55	265.39	2,844.4	-40.4	-502.1	503.7	0.00	0.00	
3,000.0	13.55	265.39	2,941.6	-42.3	-525.4	527.1	0.00	0.00	
3,100.0	13.55	265.39	3,038.8	-44.2	-548.8	550.6	0.00	0.00	
3,200.0	13.55	265.39	3,136.1	-46.1	-572.1	574.0	0.00	0.00	
3,300.0	13.55	265.39	3,233.3	-48.0	-595.5	597.4	0.00	0.00	
3,400.0	13.55	265.39	3,330.5	-49.8	-618.8	620.8	0.00	0.00	
3,500.0	13.55	265.39	3,427.7	-51.7	-642.2	644.3	0.00	0.00	
3,600.0	13.55	265.39	3,524.9	-53.6	-665.5	667.7	0.00	0.00	
3,700.0	13.55	265.39	3,622.2	-55.5	-688.9	691.1	0.00	0.00	
3,800.0	13.55	265.39	3,719.4	-57.4	-712.2	714.5	0.00	0.00	
3,900.0	13.55	265.39	3,816.6	-59.2	-735.6	738.0	0.00	0.00	
4,000.0	13.55	265.39	3,913.8	-61.1	-758.9	761.4	0.00	0.00	
4,010.5	13.55	265.39	3,924.0	-61.3	-761.4	763.8	0.00	0.00	Ft Union
4,100.0	13.55	265.39	4,011.0	-63.0	-782.3	784.8	0.00	0.00	
4,200.0	13.55	265.39	4,108.2	-64.9	-805.6	808.2	0.00	0.00	
4,300.0	13.55	265.39	4,205.5	-66.8	-829.0	831.6	0.00	0.00	
4,400.0	13.55	265.39	4,302.7	-68.7	-852.3	855.1	0.00	0.00	
4,500.0	13.55	265.39	4,399.9	-70.5	-875.7	878.5	0.00	0.00	
4,524.8	13.55	265.39	4,424.0	-71.0	-881.4	884.3	0.00	0.00	Base Ft Union
4,600.0	13.55	265.39	4,497.1	-72.4	-899.0	901.9	0.00	0.00	
4,700.0	13.55	265.39	4,594.3	-74.3	-922.3	925.3	0.00	0.00	
4,800.0	13.55	265.39	4,691.6	-76.2	-945.7	948.8	0.00	0.00	
4,900.0	13.55	265.39	4,788.8	-78.1	-969.0	972.2	0.00	0.00	
5,000.0	13.55	265.39	4,886.0	-79.9	-992.4	995.6	0.00	0.00	
5,100.0	13.55	265.39	4,983.2	-81.8	-1,015.7	1,019.0	0.00	0.00	
5,200.0	13.55	265.39	5,080.4	-83.7	-1,039.1	1,042.4	0.00	0.00	
5,300.0	13.55	265.39	5,177.6	-85.6	-1,062.4	1,065.9	0.00	0.00	
5,400.0	13.55	265.39	5,274.9	-87.5	-1,085.8	1,089.3	0.00	0.00	
5,500.0	13.55	265.39	5,372.1	-89.3	-1,109.1	1,112.7	0.00	0.00	
5,600.0	13.55	265.39	5,469.3	-91.2	-1,132.5	1,136.1	0.00	0.00	
5,700.0	13.55	265.39	5,566.5	-93.1	-1,155.8	1,159.6	0.00	0.00	
5,790.0	13.55	265.39	5,654.0	-94.8	-1,176.8	1,180.6	0.00	0.00	Ohio Creek
5,800.0	13.55	265.39	5,663.7	-95.0	-1,179.2	1,183.0	0.00	0.00	
5,900.0	13.55	265.39	5,761.0	-96.9	-1,202.5	1,206.4	0.00	0.00	
5,995.7	13.55	265.39	5,854.0	-98.7	-1,224.9	1,228.8	0.00	0.00	Williams Fork
6,000.0	13.55	265.39	5,858.2	-98.7	-1,225.9	1,229.8	0.00	0.00	
6,100.0	13.55	265.39	5,955.4	-100.6	-1,249.2	1,253.2	0.00	0.00	
6,104.0	13.55	265.39	5,959.3	-100.7	-1,250.1	1,254.2	0.00	0.00	Start Drop -1.50
6,200.0	12.11	265.39	6,052.9	-102.4	-1,271.4	1,275.5	1.50	-1.50	
6,300.0	10.61	265.39	6,150.9	-104.0	-1,291.0	1,295.2	1.50	-1.50	
6,400.0	9.11	265.39	6,249.4	-105.4	-1,308.1	1,312.3	1.50	-1.50	
6,500.0	7.61	265.39	6,348.4	-106.5	-1,322.6	1,326.8	1.50	-1.50	
6,600.0	6.11	265.39	6,447.7	-107.5	-1,334.5	1,338.8	1.50	-1.50	
6,700.0	4.61	265.39	6,547.2	-108.2	-1,343.8	1,348.1	1.50	-1.50	
6,800.0	3.11	265.39	6,647.0	-108.8	-1,350.5	1,354.8	1.50	-1.50	
6,900.0	1.61	265.39	6,746.9	-109.1	-1,354.6	1,359.0	1.50	-1.50	
7,000.0	0.11	265.39	6,846.9	-109.2	-1,356.1	1,360.4	1.50	-1.50	
7,007.1	0.00	0.00	6,854.0	-109.2	-1,356.1	1,360.5	1.50	-1.50	EOD; Inc=0° - Approx TOG - Oxy 21-14D TOG

# Planning Report

<b>Database:</b>	EDM 2003.21 US Multi User DB	<b>Local Co-ordinate Reference:</b>	Well Oxy 21-14D (Oxy I21 Pad)
<b>Company:</b>	Berry Petroleum Company (NAD 83)	<b>TVD Reference:</b>	KBE @ 8381.0ft (Original Well Elev)
<b>Project:</b>	Garfield County	<b>MD Reference:</b>	KBE @ 8381.0ft (Original Well Elev)
<b>Site:</b>	NESE S21-T6S-R97W (Oxy I21 pad)	<b>North Reference:</b>	True
<b>Well:</b>	Oxy 21-14D (Oxy I21 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
7,100.0	0.00	0.00	6,946.9	-109.2	-1,356.1	1,360.5	0.00	0.00	
7,200.0	0.00	0.00	7,046.9	-109.2	-1,356.1	1,360.5	0.00	0.00	
7,300.0	0.00	0.00	7,146.9	-109.2	-1,356.1	1,360.5	0.00	0.00	
7,400.0	0.00	0.00	7,246.9	-109.2	-1,356.1	1,360.5	0.00	0.00	
7,500.0	0.00	0.00	7,346.9	-109.2	-1,356.1	1,360.5	0.00	0.00	
7,600.0	0.00	0.00	7,446.9	-109.2	-1,356.1	1,360.5	0.00	0.00	
7,700.0	0.00	0.00	7,546.9	-109.2	-1,356.1	1,360.5	0.00	0.00	
7,800.0	0.00	0.00	7,646.9	-109.2	-1,356.1	1,360.5	0.00	0.00	
7,900.0	0.00	0.00	7,746.9	-109.2	-1,356.1	1,360.5	0.00	0.00	
8,000.0	0.00	0.00	7,846.9	-109.2	-1,356.1	1,360.5	0.00	0.00	
8,100.0	0.00	0.00	7,946.9	-109.2	-1,356.1	1,360.5	0.00	0.00	
8,200.0	0.00	0.00	8,046.9	-109.2	-1,356.1	1,360.5	0.00	0.00	
8,300.0	0.00	0.00	8,146.9	-109.2	-1,356.1	1,360.5	0.00	0.00	
8,357.1	0.00	0.00	8,204.0	-109.2	-1,356.1	1,360.5	0.00	0.00	Cameo
8,400.0	0.00	0.00	8,246.9	-109.2	-1,356.1	1,360.5	0.00	0.00	
8,500.0	0.00	0.00	8,346.9	-109.2	-1,356.1	1,360.5	0.00	0.00	
8,600.0	0.00	0.00	8,446.9	-109.2	-1,356.1	1,360.5	0.00	0.00	
8,700.0	0.00	0.00	8,546.9	-109.2	-1,356.1	1,360.5	0.00	0.00	
8,707.1	0.00	0.00	8,554.0	-109.2	-1,356.1	1,360.5	0.00	0.00	Rollins SS
8,800.0	0.00	0.00	8,646.9	-109.2	-1,356.1	1,360.5	0.00	0.00	
8,857.1	0.00	0.00	8,704.0	-109.2	-1,356.1	1,360.5	0.00	0.00	TD at 8857.1 - Oxy 21-14D BHL

Targets									
Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (ft)	Easting (ft)	Latitude	Longitude
Oxy 21-14D TOG - hit/miss target - Shape - Point	0.00	0.00	6,854.0	-109.2	-1,356.1	1,620,764.70	2,231,978.08	39.506175	-108.222364
Oxy 21-14D BHL - plan hits target center - Rectangle (sides W100.0 H200.0 D0.0)	0.00	0.00	8,704.0	-109.2	-1,356.1	1,620,764.70	2,231,978.08	39.506175	-108.222364

Formations						
Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)	
1,912.1	1,884.0	Wasatch		0.00		
4,010.5	3,924.0	Ft Union		0.00		
4,524.8	4,424.0	Base Ft Union		0.00		
5,790.0	5,654.0	Ohio Creek		0.00		
5,995.7	5,854.0	Williams Fork		0.00		
7,007.1	6,854.0	Approx TOG		0.00		
8,357.1	8,204.0	Cameo		0.00		
8,707.1	8,554.0	Rollins SS		0.00		

## Planning Report

<b>Database:</b>	EDM 2003.21 US Multi User DB	<b>Local Co-ordinate Reference:</b>	Well Oxy 21-14D (Oxy I21 Pad)
<b>Company:</b>	Berry Petroleum Company (NAD 83)	<b>TVD Reference:</b>	KBE @ 8381.0ft (Original Well Elev)
<b>Project:</b>	Garfield County	<b>MD Reference:</b>	KBE @ 8381.0ft (Original Well Elev)
<b>Site:</b>	NESE S21-T6S-R97W (Oxy I21 pad)	<b>North Reference:</b>	True
<b>Well:</b>	Oxy 21-14D (Oxy I21 Pad)	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	DD		
<b>Design:</b>	Plan #1		

### 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'
1,203.1	1,194.7	-8.5	-105.9	EOB; Inc=13.55°
6,104.0	5,959.3	-100.7	-1,250.1	Start Drop -1.50
7,007.1	6,854.0	-109.2	-1,356.1	EOD; Inc=0°
8,857.1	8,704.0	-109.2	-1,356.1	TD at 8857.1

## Directional Plus

### Anticollision Report

<b>Company:</b>	Berry Petroleum Company (NAD 83)	<b>Local Co-ordinate Reference:</b>	Well Oxy 21-14D (Oxy I21 Pad)
<b>Project:</b>	Garfield County	<b>TVD Reference:</b>	KBE @ 8381.0ft (Original Well Elev)
<b>Reference Site:</b>	NESE S21-T6S-R97W (Oxy I21 pad)	<b>MD Reference:</b>	KBE @ 8381.0ft (Original Well Elev)
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Oxy 21-14D (Oxy I21 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 2003.21 US Multi User Db
<b>Reference Design:</b>	Plan #1	<b>Offset TVD Reference:</b>	Offset Datum

<b>Reference</b>	Plan #1		
<b>Filter type:</b>	NO GLOBAL FILTER: Using user defined selection & filtering criteria		
<b>Interpolation Method:</b>	MD Interval 100.0ft	<b>Error Model:</b>	Systematic Ellipse
<b>Depth Range:</b>	Unlimited	<b>Scan Method:</b>	Closest Approach 3D
<b>Results Limited by:</b>	Maximum center-center distance of 1,111.9ft	<b>Error Surface:</b>	Elliptical Conic
<b>Warning Levels Evaluated at:</b>	2.00 Sigma		

<b>Survey Tool Program</b>		<b>Date</b>	10/7/2009		
<b>From (ft)</b>	<b>To (ft)</b>	<b>Survey (Wellbore)</b>	<b>Tool Name</b>	<b>Description</b>	
0.0	8,857.1	Plan #1 (DD)	MWD	Geolink MWD	



# Directional Plus

## Anticollision Report

<b>Company:</b>	Berry Petroleum Company (NAD 83)	<b>Local Co-ordinate Reference:</b>	Well Oxy 21-14D (Oxy I21 Pad)
<b>Project:</b>	Garfield County	<b>TVD Reference:</b>	KBE @ 8381.0ft (Original Well Elev)
<b>Reference Site:</b>	NESE S21-T6S-R97W (Oxy I21 pad)	<b>MD Reference:</b>	KBE @ 8381.0ft (Original Well Elev)
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Oxy 21-14D (Oxy I21 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 2003.21 US Multi User Db
<b>Reference Design:</b>	Plan #1	<b>Offset TVD Reference:</b>	Offset Datum

### Summary

Site Name Offset Well - Wellbore - Design	Reference Measured Depth	Offset Measured Depth	Distance		Separation Factor	Warning
	(ft)	(ft)	Between Centres (ft)	Between Ellipses (ft)		
NESE S21-T6S-R97W (Oxy I21 pad)						
Oxy 21-10D (Oxy I21 Pad) - DD - Plan #1	200.0	200.0	60.0	59.3	92.886	CC
Oxy 21-10D (Oxy I21 Pad) - DD - Plan #1	300.0	299.6	60.3	59.3	60.618	ES
Oxy 21-10D (Oxy I21 Pad) - DD - Plan #1	1,500.0	1,475.7	197.0	188.5	23.233	SF
Oxy 21-11D (Oxy I21 Pad) - DD - Plan #1	300.0	300.0	44.7	43.7	44.912	CC, ES
Oxy 21-11D (Oxy I21 Pad) - DD - Plan #1	8,857.1	8,918.2	966.2	908.2	16.670	SF
Oxy 21-12D (Oxy I21 Pad) - DD - Plan #1	300.0	300.0	29.4	28.4	29.536	CC, ES
Oxy 21-12D (Oxy I21 Pad) - DD - Plan #1	8,857.1	8,890.4	629.0	571.4	10.912	SF
Oxy 21-13D (Oxy I21 Pad) - DD - Plan #1	300.0	300.0	14.7	13.7	14.778	CC
Oxy 21-13D (Oxy I21 Pad) - DD - Plan #1	400.0	400.1	14.9	13.6	11.094	ES
Oxy 21-13D (Oxy I21 Pad) - DD - Plan #1	8,857.1	8,863.4	292.8	235.1	5.074	SF
Oxy 21-15D (Oxy I21 Pad) - DD - Plan #1	300.0	300.0	15.3	14.3	15.388	CC
Oxy 21-15D (Oxy I21 Pad) - DD - Plan #1	400.0	399.7	15.6	14.2	11.562	ES
Oxy 21-15D (Oxy I21 Pad) - DD - Plan #1	8,857.1	8,861.7	326.1	268.6	5.672	SF
Oxy 21-16D (Oxy I21 Pad) - DD - Plan #1	300.0	300.0	31.2	30.3	31.409	CC, ES
Oxy 21-16D (Oxy I21 Pad) - DD - Plan #1	8,857.1	8,870.7	638.8	581.6	11.168	SF
Oxy 21-17D (Oxy I21 pad) - DD - Plan #1	200.0	200.0	29.7	29.0	45.971	CC, ES
Oxy 21-17D (Oxy I21 pad) - DD - Plan #1	1,300.0	1,286.5	92.4	85.9	14.411	SF
Oxy 21-1D (Oxy I21 Pad) - DD - Plan #1	300.0	300.0	134.6	133.7	135.349	CC, ES
Oxy 21-1D (Oxy I21 Pad) - DD - Plan #1	3,700.0	3,495.0	1,108.1	1,085.3	48.450	SF
Oxy 21-2D (Oxy I21 Pad) - DD - Plan #1	200.0	200.0	32.4	31.7	50.099	CC, ES
Oxy 21-2D (Oxy I21 Pad) - DD - Plan #1	500.0	497.7	44.1	42.4	25.742	SF
Oxy 21-3D (Oxy I21 Pad) - DD - Plan #1	300.0	300.0	114.2	113.2	114.797	CC, ES
Oxy 21-3D (Oxy I21 Pad) - DD - Plan #1	4,600.0	4,453.7	1,111.3	1,086.0	44.057	SF
Oxy 21-4D (Oxy I21 Pad) - DD - Plan #1	300.0	300.0	104.7	103.7	105.206	CC, ES
Oxy 21-4D (Oxy I21 Pad) - DD - Plan #1	1,100.0	1,085.1	175.8	171.6	42.396	SF
Oxy 21-5D (Oxy I21 Pad) - DD - Plan #1	300.0	300.0	90.0	89.0	90.440	CC, ES
Oxy 21-5D (Oxy I21 Pad) - DD - Plan #1	1,000.0	991.7	140.5	136.8	38.330	SF
Oxy 21-6D (Oxy I21 Pad) - DD - Plan #1	200.0	500.0	17.8	17.1	27.515	CC, ES
Oxy 21-6D (Oxy I21 Pad) - DD - Plan #1	400.0	698.9	23.7	22.3	17.615	SF
Oxy 21-7D (Oxy I21 Pad) - DD - Plan #1	300.0	300.0	9.9	8.9	9.933	CC, ES
Oxy 21-7D (Oxy I21 Pad) - DD - Plan #1	400.0	400.0	11.1	9.7	8.237	SF
Oxy 21-8D (Oxy I21 Pad) - DD - Plan #1	300.0	300.0	18.2	17.2	18.315	CC
Oxy 21-8D (Oxy I21 Pad) - DD - Plan #1	400.0	400.0	18.4	17.1	13.686	ES
Oxy 21-8D (Oxy I21 Pad) - DD - Plan #1	500.0	499.9	19.5	17.8	11.461	SF
Oxy 21-9D (Oxy I21 Pad) - DD - Plan #1	200.0	200.0	74.7	74.0	115.631	CC, ES
Oxy 21-9D (Oxy I21 Pad) - DD - Plan #1	1,600.0	1,564.4	248.0	238.7	26.717	SF

# Directional Plus

## Anticollision Report

<b>Company:</b>	Berry Petroleum Company (NAD 83)	<b>Local Co-ordinate Reference:</b>	Well Oxy 21-14D (Oxy I21 Pad)
<b>Project:</b>	Garfield County	<b>TVD Reference:</b>	KBE @ 8381.0ft (Original Well Elev)
<b>Reference Site:</b>	NESE S21-T6S-R97W (Oxy I21 pad)	<b>MD Reference:</b>	KBE @ 8381.0ft (Original Well Elev)
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Oxy 21-14D (Oxy I21 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 2003.21 US Multi User Db
<b>Reference Design:</b>	Plan #1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design NESE S21-T6S-R97W (Oxy I21 pad) - Oxy 21-10D (Oxy I21 Pad) - DD - Plan #1													Offset Site Error:	0.0 ft
Survey Program: O-MWD													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis		Distance		Total		Separation		Warning		
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Uncertainty Axis	Factor		
0.0	0.0	0.0	0.0	0.0	0.0	147.57	-50.6	32.2	60.0					
100.0	100.0	100.0	100.0	0.1	0.1	147.57	-50.6	32.2	60.0	59.7	0.30	202.164		
200.0	200.0	200.0	200.0	0.3	0.3	147.57	-50.6	32.2	60.0	59.3	0.65	92.886 CC		
300.0	300.0	299.6	299.6	0.5	0.5	148.78	-51.5	31.2	60.3	59.3	0.99	60.618 ES		
400.0	400.0	399.2	399.1	0.7	0.7	-114.17	-54.3	28.5	61.9	60.5	1.36	45.601		
500.0	499.9	498.6	498.3	0.9	0.9	-111.79	-58.9	23.9	65.3	63.6	1.74	37.580		
600.0	599.7	597.8	597.1	1.1	1.1	-109.65	-65.3	17.5	70.7	68.5	2.15	32.814		
700.0	699.3	696.8	695.4	1.3	1.4	-107.84	-73.4	9.3	77.9	75.3	2.62	29.790		
800.0	798.6	795.6	793.2	1.5	1.7	-106.40	-83.4	-0.6	87.0	83.9	3.13	27.774		
900.0	897.5	894.0	890.2	1.8	2.0	-105.29	-95.1	-12.3	97.9	94.2	3.71	26.370		
1,000.0	996.1	992.1	986.4	2.1	2.4	-104.46	-108.5	-25.7	110.5	106.2	4.36	25.353		
1,100.0	1,094.2	1,089.7	1,081.7	2.5	2.8	-103.85	-123.5	-40.8	124.9	119.8	5.08	24.591		
1,200.0	1,191.7	1,186.9	1,176.0	2.9	3.2	-103.41	-140.2	-57.5	141.0	135.1	5.88	23.997		
1,300.0	1,288.9	1,283.7	1,269.2	3.4	3.7	-102.92	-158.5	-75.9	158.5	151.8	6.72	23.601		
1,400.0	1,386.1	1,380.0	1,361.3	3.8	4.2	-101.82	-178.4	-95.8	177.1	169.6	7.59	23.349		
1,500.0	1,483.4	1,475.7	1,452.1	4.2	4.8	-100.30	-199.8	-117.2	197.0	188.5	8.48	23.233 SF		
1,600.0	1,580.6	1,571.8	1,542.6	4.7	5.4	-98.54	-222.7	-140.1	218.1	208.8	9.38	23.258		
1,700.0	1,677.8	1,669.3	1,634.3	5.1	6.0	-97.00	-246.2	-163.6	239.6	229.3	10.28	23.305		
1,800.0	1,775.0	1,766.8	1,725.9	5.5	6.6	-95.71	-269.6	-187.1	261.2	250.0	11.18	23.363		
1,900.0	1,872.2	1,864.3	1,817.6	6.0	7.2	-94.62	-293.1	-210.6	282.9	270.9	12.08	23.426		
2,000.0	1,969.4	1,961.8	1,909.2	6.4	7.8	-93.68	-316.6	-234.1	304.7	291.8	12.97	23.490		
2,100.0	2,066.7	2,059.2	2,000.8	6.9	8.4	-92.87	-340.1	-257.6	326.6	312.8	13.87	23.553		
2,200.0	2,163.9	2,156.7	2,092.5	7.3	9.0	-92.16	-363.6	-281.1	348.5	333.8	14.76	23.615		
2,300.0	2,261.1	2,254.2	2,184.1	7.8	9.6	-91.53	-387.0	-304.6	370.5	354.9	15.65	23.675		
2,400.0	2,358.3	2,351.7	2,275.8	8.2	10.2	-90.97	-410.5	-328.1	392.5	376.0	16.54	23.732		
2,500.0	2,455.5	2,449.2	2,367.4	8.7	10.8	-90.48	-434.0	-351.6	414.6	397.1	17.43	23.786		
2,600.0	2,552.8	2,546.6	2,459.1	9.1	11.5	-90.03	-457.5	-375.2	436.6	418.3	18.32	23.837		
2,700.0	2,650.0	2,644.1	2,550.7	9.6	12.1	-89.62	-480.9	-398.7	458.7	439.5	19.21	23.886		
2,800.0	2,747.2	2,741.6	2,642.4	10.0	12.7	-89.26	-504.4	-422.2	480.8	460.7	20.09	23.932		
2,900.0	2,844.4	2,839.1	2,734.0	10.5	13.3	-88.92	-527.9	-445.7	503.0	482.0	20.98	23.976		
3,000.0	2,941.6	2,936.6	2,825.7	10.9	13.9	-88.62	-551.4	-469.2	525.1	503.2	21.86	24.017		
3,100.0	3,038.8	3,034.0	2,917.3	11.4	14.5	-88.33	-574.8	-492.7	547.3	524.5	22.75	24.056		
3,200.0	3,136.1	3,131.5	3,008.9	11.9	15.2	-88.07	-598.3	-516.2	569.4	545.8	23.63	24.093		
3,300.0	3,233.3	3,229.0	3,100.6	12.3	15.8	-87.83	-621.8	-539.7	591.6	567.1	24.52	24.129		
3,400.0	3,330.5	3,326.5	3,192.2	12.8	16.4	-87.61	-645.3	-563.2	613.8	588.4	25.40	24.162		
3,500.0	3,427.7	3,424.0	3,283.9	13.2	17.0	-87.40	-668.8	-586.7	636.0	609.7	26.29	24.194		
3,600.0	3,524.9	3,521.5	3,375.5	13.7	17.6	-87.21	-692.2	-610.2	658.2	631.0	27.17	24.224		
3,700.0	3,622.2	3,618.9	3,467.2	14.1	18.2	-87.03	-715.7	-633.7	680.4	652.4	28.06	24.252		
3,800.0	3,719.4	3,716.4	3,558.8	14.6	18.9	-86.86	-739.2	-657.2	702.6	673.7	28.94	24.280		
3,900.0	3,816.6	3,813.9	3,650.5	15.0	19.5	-86.70	-762.7	-680.7	724.8	695.0	29.82	24.306		
4,000.0	3,913.8	3,911.4	3,742.1	15.5	20.1	-86.55	-786.1	-704.2	747.1	716.4	30.71	24.330		
4,100.0	4,011.0	4,008.9	3,833.8	15.9	20.7	-86.41	-809.6	-727.7	769.3	737.7	31.59	24.354		
4,200.0	4,108.2	4,106.3	3,925.4	16.4	21.3	-86.28	-833.1	-751.2	791.5	759.1	32.47	24.377		
4,300.0	4,205.5	4,203.8	4,017.0	16.8	22.0	-86.15	-856.6	-774.7	813.8	780.4	33.35	24.398		
4,400.0	4,302.7	4,301.3	4,108.7	17.3	22.6	-86.03	-880.0	-798.2	836.0	801.8	34.24	24.419		
4,500.0	4,399.9	4,398.8	4,200.3	17.7	23.2	-85.92	-903.5	-821.7	858.3	823.1	35.12	24.439		
4,600.0	4,497.1	4,496.3	4,292.0	18.2	23.8	-85.81	-927.0	-845.3	880.5	844.5	36.00	24.458		
4,700.0	4,594.3	4,593.7	4,383.6	18.7	24.4	-85.71	-950.5	-868.8	902.8	865.9	36.88	24.476		
4,800.0	4,691.6	4,691.2	4,475.3	19.1	25.1	-85.61	-974.0	-892.3	925.0	887.2	37.77	24.493		
4,900.0	4,788.8	4,788.7	4,566.9	19.6	25.7	-85.52	-997.4	-915.8	947.3	908.6	38.65	24.510		
5,000.0	4,886.0	4,886.2	4,658.6	20.0	26.3	-85.43	-1,020.9	-939.3	969.5	930.0	39.53	24.526		
5,100.0	4,983.2	4,983.7	4,750.2	20.5	26.9	-85.35	-1,044.4	-962.8	991.8	951.4	40.41	24.542		

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

# Directional Plus

## Anticollision Report

<b>Company:</b>	Berry Petroleum Company (NAD 83)	<b>Local Co-ordinate Reference:</b>	Well Oxy 21-14D (Oxy I21 Pad)
<b>Project:</b>	Garfield County	<b>TVD Reference:</b>	KBE @ 8381.0ft (Original Well Elev)
<b>Reference Site:</b>	NESE S21-T6S-R97W (Oxy I21 pad)	<b>MD Reference:</b>	KBE @ 8381.0ft (Original Well Elev)
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Oxy 21-14D (Oxy I21 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 2003.21 US Multi User Db
<b>Reference Design:</b>	Plan #1	<b>Offset TVD Reference:</b>	Offset Datum

<b>Offset Design</b> NESE S21-T6S-R97W (Oxy I21 pad) - Oxy 21-10D (Oxy I21 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	
5,200.0	5,080.4	5,081.1	4,841.8	20.9	27.5	-85.27	-1,067.9	-986.3	1,014.0	972.8	41.29	24.557	
5,300.0	5,177.6	5,178.6	4,933.5	21.4	28.2	-85.19	-1,091.3	-1,009.8	1,036.3	994.1	42.18	24.571	
5,400.0	5,274.9	5,276.1	5,025.1	21.8	28.8	-85.12	-1,114.8	-1,033.3	1,058.6	1,015.5	43.06	24.585	
5,500.0	5,372.1	5,373.6	5,116.8	22.3	29.4	-85.05	-1,138.3	-1,056.8	1,080.8	1,036.9	43.94	24.599	
5,600.0	5,469.3	5,471.1	5,208.4	22.7	30.0	-84.98	-1,161.8	-1,080.3	1,103.1	1,058.3	44.82	24.612	

# Directional Plus

## Anticollision Report

<b>Company:</b>	Berry Petroleum Company (NAD 83)	<b>Local Co-ordinate Reference:</b>	Well Oxy 21-14D (Oxy I21 Pad)
<b>Project:</b>	Garfield County	<b>TVD Reference:</b>	KBE @ 8381.0ft (Original Well Elev)
<b>Reference Site:</b>	NESE S21-T6S-R97W (Oxy I21 pad)	<b>MD Reference:</b>	KBE @ 8381.0ft (Original Well Elev)
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Oxy 21-14D (Oxy I21 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 2003.21 US Multi User Db
<b>Reference Design:</b>	Plan #1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design NESE S21-T6S-R97W (Oxy I21 pad) - Oxy 21-11D (Oxy I21 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 Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Uncertainty Axis			
0.0	0.0	0.0	0.0	0.0	0.0	147.11	-37.5	24.3	44.7					
100.0	100.0	100.0	100.0	0.1	0.1	147.11	-37.5	24.3	44.7	44.4	0.30	150.588		
200.0	200.0	200.0	200.0	0.3	0.3	147.11	-37.5	24.3	44.7	44.0	0.65	69.189		
300.0	300.0	300.0	300.0	0.5	0.5	147.11	-37.5	24.3	44.7	43.7	0.99	44.912 CC, ES		
400.0	400.0	399.9	399.9	0.7	0.7	-118.09	-38.3	23.2	45.4	44.1	1.35	33.734		
500.0	499.9	499.7	499.7	0.9	0.9	-117.53	-40.7	20.2	47.6	45.9	1.71	27.828		
600.0	599.7	599.5	599.2	1.1	1.1	-116.71	-44.8	15.0	51.3	49.2	2.11	24.387		
700.0	699.3	699.2	698.5	1.3	1.3	-115.73	-50.4	7.9	56.5	54.0	2.54	22.255		
800.0	798.6	798.8	797.4	1.5	1.5	-114.69	-57.6	-1.3	63.2	60.2	3.03	20.870		
900.0	897.5	898.2	895.7	1.8	1.8	-113.69	-66.3	-12.5	71.4	67.8	3.58	19.933		
1,000.0	996.1	997.3	993.5	2.1	2.1	-112.74	-76.6	-25.7	81.0	76.8	4.20	19.275		
1,100.0	1,094.2	1,096.3	1,090.6	2.5	2.5	-111.88	-88.5	-40.9	92.2	87.3	4.90	18.794		
1,200.0	1,191.7	1,195.0	1,186.8	2.9	2.9	-111.11	-101.9	-57.9	104.8	99.1	5.69	18.429		
1,300.0	1,288.9	1,293.5	1,282.3	3.4	3.3	-110.05	-116.7	-76.9	118.4	111.9	6.52	18.156		
1,400.0	1,386.1	1,391.6	1,376.8	3.8	3.8	-108.15	-133.0	-97.7	132.7	125.3	7.41	17.910		
1,500.0	1,483.4	1,489.6	1,470.5	4.2	4.4	-105.71	-150.7	-120.3	147.8	139.5	8.33	17.752		
1,600.0	1,580.6	1,588.2	1,564.6	4.7	4.9	-103.50	-168.9	-143.6	163.3	154.1	9.25	17.662		
1,700.0	1,677.8	1,686.8	1,658.7	5.1	5.4	-101.67	-187.1	-166.8	179.0	168.8	10.16	17.612		
1,800.0	1,775.0	1,785.4	1,752.8	5.5	6.0	-100.14	-205.3	-190.0	194.9	183.8	11.08	17.588		
1,900.0	1,872.2	1,884.1	1,846.9	6.0	6.5	-98.84	-223.5	-213.3	210.8	198.8	11.99	17.581		
2,000.0	1,969.4	1,982.7	1,941.0	6.4	7.0	-97.72	-241.7	-236.5	226.9	214.0	12.90	17.584		
2,100.0	2,066.7	2,081.3	2,035.1	6.9	7.6	-96.75	-259.8	-259.7	243.0	229.2	13.81	17.595		
2,200.0	2,163.9	2,179.9	2,129.2	7.3	8.1	-95.90	-278.0	-282.9	259.2	244.5	14.72	17.611		
2,300.0	2,261.1	2,278.5	2,223.3	7.8	8.7	-95.15	-296.2	-306.2	275.4	259.8	15.62	17.629		
2,400.0	2,358.3	2,377.1	2,317.4	8.2	9.2	-94.49	-314.4	-329.4	291.7	275.2	16.53	17.650		
2,500.0	2,455.5	2,475.7	2,411.5	8.7	9.8	-93.89	-332.6	-352.6	308.0	290.6	17.43	17.671		
2,600.0	2,552.8	2,574.3	2,505.6	9.1	10.3	-93.36	-350.8	-375.9	324.4	306.1	18.33	17.693		
2,700.0	2,650.0	2,673.0	2,599.6	9.6	10.9	-92.87	-369.0	-399.1	340.8	321.5	19.24	17.715		
2,800.0	2,747.2	2,771.6	2,693.7	10.0	11.4	-92.43	-387.2	-422.3	357.1	337.0	20.14	17.736		
2,900.0	2,844.4	2,870.2	2,787.8	10.5	12.0	-92.03	-405.3	-445.5	373.6	352.5	21.04	17.758		
3,000.0	2,941.6	2,968.8	2,881.9	10.9	12.5	-91.67	-423.5	-468.8	390.0	368.0	21.94	17.778		
3,100.0	3,038.8	3,067.4	2,976.0	11.4	13.1	-91.33	-441.7	-492.0	406.4	383.6	22.83	17.798		
3,200.0	3,136.1	3,166.0	3,070.1	11.9	13.7	-91.02	-459.9	-515.2	422.9	399.1	23.73	17.818		
3,300.0	3,233.3	3,264.6	3,164.2	12.3	14.2	-90.73	-478.1	-538.5	439.3	414.7	24.63	17.837		
3,400.0	3,330.5	3,363.2	3,258.3	12.8	14.8	-90.46	-496.3	-561.7	455.8	430.3	25.53	17.855		
3,500.0	3,427.7	3,461.8	3,352.4	13.2	15.3	-90.21	-514.5	-584.9	472.3	445.9	26.43	17.872		
3,600.0	3,524.9	3,560.5	3,446.5	13.7	15.9	-89.98	-532.6	-608.2	488.8	461.5	27.32	17.889		
3,700.0	3,622.2	3,659.1	3,540.6	14.1	16.4	-89.76	-550.8	-631.4	505.3	477.1	28.22	17.905		
3,800.0	3,719.4	3,757.7	3,634.7	14.6	17.0	-89.56	-569.0	-654.6	521.8	492.7	29.12	17.921		
3,900.0	3,816.6	3,856.3	3,728.8	15.0	17.5	-89.37	-587.2	-677.8	538.3	508.3	30.01	17.936		
4,000.0	3,913.8	3,954.9	3,822.9	15.5	18.1	-89.19	-605.4	-701.1	554.8	523.9	30.91	17.951		
4,100.0	4,011.0	4,053.5	3,917.0	15.9	18.6	-89.02	-623.6	-724.3	571.3	539.5	31.80	17.964		
4,200.0	4,108.2	4,152.1	4,011.1	16.4	19.2	-88.86	-641.8	-747.5	587.9	555.2	32.70	17.978		
4,300.0	4,205.5	4,250.7	4,105.2	16.8	19.8	-88.71	-659.9	-770.8	604.4	570.8	33.60	17.991		
4,400.0	4,302.7	4,349.4	4,199.3	17.3	20.3	-88.57	-678.1	-794.0	620.9	586.4	34.49	18.003		
4,500.0	4,399.9	4,448.0	4,293.4	17.7	20.9	-88.43	-696.3	-817.2	637.5	602.1	35.39	18.015		
4,600.0	4,497.1	4,546.6	4,387.5	18.2	21.4	-88.31	-714.5	-840.5	654.0	617.7	36.28	18.027		
4,700.0	4,594.3	4,645.2	4,481.6	18.7	22.0	-88.18	-732.7	-863.7	670.6	633.4	37.18	18.038		
4,800.0	4,691.6	4,743.8	4,575.7	19.1	22.5	-88.07	-750.9	-886.9	687.1	649.0	38.07	18.049		
4,900.0	4,788.8	4,842.4	4,669.8	19.6	23.1	-87.96	-769.1	-910.1	703.7	664.7	38.96	18.059		
5,000.0	4,886.0	4,941.0	4,763.8	20.0	23.6	-87.85	-787.3	-933.4	720.2	680.3	39.86	18.069		
5,100.0	4,983.2	5,039.6	4,857.9	20.5	24.2	-87.75	-805.4	-956.6	736.8	696.0	40.75	18.078		

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

# Directional Plus

## Anticollision Report

<b>Company:</b>	Berry Petroleum Company (NAD 83)	<b>Local Co-ordinate Reference:</b>	Well Oxy 21-14D (Oxy I21 Pad)
<b>Project:</b>	Garfield County	<b>TVD Reference:</b>	KBE @ 8381.0ft (Original Well Elev)
<b>Reference Site:</b>	NESE S21-T6S-R97W (Oxy I21 pad)	<b>MD Reference:</b>	KBE @ 8381.0ft (Original Well Elev)
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Oxy 21-14D (Oxy I21 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 2003.21 US Multi User Db
<b>Reference Design:</b>	Plan #1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design NESE S21-T6S-R97W (Oxy I21 pad) - Oxy 21-11D (Oxy I21 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		Warning	
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Uncertainty Axis	Separation Factor		
5,200.0	5,080.4	5,138.3	4,952.0	20.9	24.7	-87.65	-823.6	-979.8	753.3	711.7	41.65	18.088		
5,300.0	5,177.6	5,236.9	5,046.1	21.4	25.3	-87.56	-841.8	-1,003.1	769.9	727.3	42.54	18.097		
5,400.0	5,274.9	5,335.5	5,140.2	21.8	25.9	-87.47	-860.0	-1,026.3	786.4	743.0	43.44	18.106		
5,500.0	5,372.1	5,434.1	5,234.3	22.3	26.4	-87.39	-878.2	-1,049.5	803.0	758.7	44.33	18.114		
5,600.0	5,469.3	5,532.7	5,328.4	22.7	27.0	-87.31	-896.4	-1,072.7	819.6	774.3	45.22	18.122		
5,700.0	5,566.5	5,631.3	5,422.5	23.2	27.5	-87.23	-914.6	-1,096.0	836.1	790.0	46.12	18.130		
5,800.0	5,663.7	5,729.9	5,516.6	23.6	28.1	-87.15	-932.7	-1,119.2	852.7	805.7	47.01	18.138		
5,900.0	5,761.0	5,828.5	5,610.7	24.1	28.6	-87.08	-950.9	-1,142.4	869.3	821.4	47.91	18.145		
6,000.0	5,858.2	5,930.2	5,707.7	24.6	29.2	-87.01	-969.6	-1,166.3	885.8	837.0	48.81	18.149		
6,100.0	5,955.4	6,044.4	5,817.4	25.0	29.8	-87.06	-989.3	-1,191.4	901.2	851.4	49.75	18.113		
6,200.0	6,052.9	6,159.2	5,928.6	25.4	30.3	-87.40	-1,007.0	-1,214.1	914.9	864.2	50.69	18.048		
6,300.0	6,150.9	6,274.5	6,040.9	25.8	30.8	-87.70	-1,022.7	-1,234.1	927.0	875.5	51.54	17.987		
6,400.0	6,249.4	6,390.1	6,154.5	26.1	31.2	-87.96	-1,036.4	-1,251.6	937.5	885.3	52.29	17.930		
6,500.0	6,348.4	6,506.1	6,268.9	26.4	31.5	-88.18	-1,047.9	-1,266.3	946.4	893.5	52.94	17.876		
6,600.0	6,447.7	6,622.4	6,384.2	26.6	31.8	-88.37	-1,057.4	-1,278.4	953.6	900.1	53.50	17.826		
6,700.0	6,547.2	6,738.9	6,500.1	26.8	32.1	-88.53	-1,064.6	-1,287.7	959.2	905.2	53.96	17.776		
6,800.0	6,647.0	6,855.6	6,616.4	27.0	32.3	-88.65	-1,069.7	-1,294.2	963.1	908.8	54.33	17.728		
6,900.0	6,746.9	6,972.3	6,733.1	27.1	32.4	-88.74	-1,072.6	-1,297.9	965.3	910.7	54.60	17.679		
7,000.0	6,846.9	7,086.1	6,846.9	27.2	32.5	-88.79	-1,073.4	-1,298.8	965.8	911.1	54.79	17.629		
7,040.9	6,887.8	7,127.0	6,887.8	27.2	32.5	-88.79	-1,073.4	-1,298.8	965.8	911.0	54.85	17.608		
7,100.0	6,946.9	7,186.1	6,946.9	27.3	32.5	176.60	-1,073.4	-1,298.8	965.8	910.9	54.94	17.579		
7,200.0	7,046.9	7,286.1	7,046.9	27.4	32.6	176.60	-1,073.4	-1,298.8	965.8	910.7	55.10	17.528		
7,300.0	7,146.9	7,386.1	7,146.9	27.4	32.7	176.60	-1,073.4	-1,298.8	965.8	910.6	55.26	17.477		
7,400.0	7,246.9	7,486.1	7,246.9	27.5	32.7	176.60	-1,073.4	-1,298.8	965.8	910.4	55.43	17.426		
7,500.0	7,346.9	7,586.1	7,346.9	27.6	32.8	176.60	-1,073.4	-1,298.8	965.8	910.3	55.59	17.374		
7,600.0	7,446.9	7,686.1	7,446.9	27.7	32.9	176.60	-1,073.4	-1,298.8	965.8	910.1	55.76	17.323		
7,700.0	7,546.9	7,786.1	7,546.9	27.8	32.9	176.60	-1,073.4	-1,298.8	965.8	909.9	55.92	17.271		
7,800.0	7,646.9	7,886.1	7,646.9	27.9	33.0	176.60	-1,073.4	-1,298.8	965.8	909.8	56.09	17.219		
7,900.0	7,746.9	7,986.1	7,746.9	27.9	33.1	176.60	-1,073.4	-1,298.8	965.8	909.6	56.26	17.166		
8,000.0	7,846.9	8,086.1	7,846.9	28.0	33.2	176.60	-1,073.4	-1,298.8	965.8	909.4	56.44	17.114		
8,100.0	7,946.9	8,186.1	7,946.9	28.1	33.2	176.60	-1,073.4	-1,298.8	965.8	909.2	56.61	17.061		
8,200.0	8,046.9	8,286.1	8,046.9	28.2	33.3	176.60	-1,073.4	-1,298.8	965.8	909.1	56.79	17.008		
8,300.0	8,146.9	8,386.1	8,146.9	28.3	33.4	176.60	-1,073.4	-1,298.8	965.8	908.9	56.96	16.955		
8,400.0	8,246.9	8,486.1	8,246.9	28.4	33.5	176.60	-1,073.4	-1,298.8	965.8	908.7	57.14	16.902		
8,500.0	8,346.9	8,586.1	8,346.9	28.5	33.5	176.60	-1,073.4	-1,298.8	965.8	908.5	57.32	16.849		
8,600.0	8,446.9	8,686.1	8,446.9	28.6	33.6	176.60	-1,073.4	-1,298.8	965.8	908.3	57.51	16.796		
8,700.0	8,546.9	8,786.1	8,546.9	28.7	33.7	176.60	-1,073.4	-1,298.8	965.8	908.2	57.69	16.742		
8,800.0	8,646.9	8,886.1	8,646.9	28.7	33.8	176.60	-1,073.4	-1,298.8	965.8	908.0	57.87	16.689		
8,823.3	8,670.1	8,909.4	8,670.1	28.8	33.8	176.60	-1,073.4	-1,298.8	965.8	907.9	57.92	16.676		
8,857.1	8,704.0	8,918.2	8,679.0	28.8	33.8	176.60	-1,073.4	-1,298.8	966.2	908.2	57.96	16.670 SF		

# Directional Plus

## Anticollision Report

<b>Company:</b>	Berry Petroleum Company (NAD 83)	<b>Local Co-ordinate Reference:</b>	Well Oxy 21-14D (Oxy I21 Pad)
<b>Project:</b>	Garfield County	<b>TVD Reference:</b>	KBE @ 8381.0ft (Original Well Elev)
<b>Reference Site:</b>	NESE S21-T6S-R97W (Oxy I21 pad)	<b>MD Reference:</b>	KBE @ 8381.0ft (Original Well Elev)
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Oxy 21-14D (Oxy I21 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 2003.21 US Multi User Db
<b>Reference Design:</b>	Plan #1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design NESE S21-T6S-R97W (Oxy I21 pad) - Oxy 21-12D (Oxy I21 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		Highside Toolface (°)	Distance		Total Uncertainty Axis	Separation Factor	Warning			
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)		Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)						
0.0	0.0	0.0	0.0	0.0	0.0	146.15	-24.4	16.4	29.4					
100.0	100.0	100.0	100.0	0.1	0.1	146.15	-24.4	16.4	29.4	29.1	0.30	99.032		
200.0	200.0	200.0	200.0	0.3	0.3	146.15	-24.4	16.4	29.4	28.7	0.65	45.501		
300.0	300.0	300.0	300.0	0.5	0.5	146.15	-24.4	16.4	29.4	28.4	0.99	29.536 CC, ES		
400.0	400.0	400.1	400.1	0.7	0.7	-118.93	-25.0	15.2	29.9	28.5	1.35	22.179		
500.0	499.9	500.2	500.1	0.9	0.9	-118.05	-26.8	11.7	31.3	29.6	1.71	18.294		
600.0	599.7	600.2	599.9	1.1	1.1	-116.76	-29.8	5.9	33.8	31.7	2.11	16.032		
700.0	699.3	700.2	699.5	1.3	1.3	-115.23	-33.9	-2.3	37.2	34.7	2.54	14.629		
800.0	798.6	800.1	798.7	1.5	1.5	-113.64	-39.3	-12.7	41.7	38.6	3.04	13.717		
900.0	897.5	900.0	897.5	1.8	1.8	-112.09	-45.8	-25.5	47.2	43.6	3.60	13.096		
1,000.0	996.1	999.7	995.8	2.1	2.1	-110.66	-53.5	-40.5	53.6	49.4	4.24	12.657		
1,100.0	1,094.2	1,099.4	1,093.6	2.5	2.5	-109.38	-62.3	-57.8	61.1	56.2	4.96	12.334		
1,200.0	1,191.7	1,198.9	1,190.7	2.9	2.9	-108.25	-72.3	-77.4	69.7	63.9	5.76	12.086		
1,300.0	1,288.9	1,298.3	1,287.0	3.4	3.4	-106.54	-83.5	-99.1	78.8	72.2	6.63	11.884		
1,400.0	1,386.1	1,397.6	1,382.6	3.8	3.9	-103.60	-95.6	-123.0	88.3	80.8	7.55	11.708		
1,500.0	1,483.4	1,497.0	1,478.2	4.2	4.4	-100.87	-108.1	-147.4	98.2	89.7	8.46	11.599		
1,600.0	1,580.6	1,596.5	1,573.7	4.7	4.9	-98.64	-120.6	-171.8	108.2	98.8	9.38	11.533		
1,700.0	1,677.8	1,695.9	1,669.3	5.1	5.4	-96.79	-133.1	-196.2	118.3	108.1	10.30	11.494		
1,800.0	1,775.0	1,795.3	1,764.9	5.5	5.9	-95.23	-145.6	-220.7	128.6	117.4	11.21	11.474		
1,900.0	1,872.2	1,894.7	1,860.4	6.0	6.4	-93.90	-158.1	-245.1	138.9	126.8	12.12	11.465		
2,000.0	1,969.4	1,994.1	1,956.0	6.4	6.9	-92.76	-170.5	-269.5	149.3	136.3	13.03	11.465		
2,100.0	2,066.7	2,093.6	2,051.5	6.9	7.4	-91.77	-183.0	-293.9	159.8	145.9	13.93	11.470		
2,200.0	2,163.9	2,193.0	2,147.1	7.3	7.9	-90.89	-195.5	-318.3	170.3	155.4	14.83	11.479		
2,300.0	2,261.1	2,292.4	2,242.7	7.8	8.4	-90.12	-208.0	-342.8	180.8	165.1	15.74	11.490		
2,400.0	2,358.3	2,391.8	2,338.2	8.2	9.0	-89.44	-220.5	-367.2	191.4	174.7	16.64	11.502		
2,500.0	2,455.5	2,491.2	2,433.8	8.7	9.5	-88.83	-232.9	-391.6	201.9	184.4	17.54	11.516		
2,600.0	2,552.8	2,590.6	2,529.3	9.1	10.0	-88.27	-245.4	-416.0	212.5	194.1	18.43	11.529		
2,700.0	2,650.0	2,690.1	2,624.9	9.6	10.5	-87.77	-257.9	-440.4	223.2	203.8	19.33	11.543		
2,800.0	2,747.2	2,789.5	2,720.5	10.0	11.0	-87.32	-270.4	-464.8	233.8	213.6	20.23	11.557		
2,900.0	2,844.4	2,888.9	2,816.0	10.5	11.5	-86.90	-282.9	-489.3	244.4	223.3	21.12	11.571		
3,000.0	2,941.6	2,988.3	2,911.6	10.9	12.1	-86.52	-295.4	-513.7	255.1	233.1	22.02	11.584		
3,100.0	3,038.8	3,087.7	3,007.1	11.4	12.6	-86.17	-307.8	-538.1	265.8	242.8	22.91	11.597		
3,200.0	3,136.1	3,187.1	3,102.7	11.9	13.1	-85.85	-320.3	-562.5	276.4	252.6	23.81	11.610		
3,300.0	3,233.3	3,286.6	3,198.3	12.3	13.6	-85.55	-332.8	-586.9	287.1	262.4	24.70	11.623		
3,400.0	3,330.5	3,386.0	3,293.8	12.8	14.1	-85.27	-345.3	-611.3	297.8	272.2	25.60	11.635		
3,500.0	3,427.7	3,485.4	3,389.4	13.2	14.7	-85.02	-357.8	-635.8	308.5	282.0	26.49	11.646		
3,600.0	3,524.9	3,584.8	3,484.9	13.7	15.2	-84.77	-370.3	-660.2	319.2	291.8	27.38	11.657		
3,700.0	3,622.2	3,684.2	3,580.5	14.1	15.7	-84.55	-382.7	-684.6	329.9	301.6	28.28	11.668		
3,800.0	3,719.4	3,783.6	3,676.1	14.6	16.2	-84.34	-395.2	-709.0	340.6	311.5	29.17	11.678		
3,900.0	3,816.6	3,883.1	3,771.6	15.0	16.7	-84.14	-407.7	-733.4	351.3	321.3	30.06	11.688		
4,000.0	3,913.8	3,982.5	3,867.2	15.5	17.3	-83.95	-420.2	-757.9	362.1	331.1	30.95	11.698		
4,100.0	4,011.0	4,081.9	3,962.7	15.9	17.8	-83.78	-432.7	-782.3	372.8	341.0	31.84	11.707		
4,200.0	4,108.2	4,181.3	4,058.3	16.4	18.3	-83.61	-445.1	-806.7	383.5	350.8	32.73	11.716		
4,300.0	4,205.5	4,280.7	4,153.9	16.8	18.8	-83.45	-457.6	-831.1	394.3	360.6	33.63	11.725		
4,400.0	4,302.7	4,380.1	4,249.4	17.3	19.4	-83.31	-470.1	-855.5	405.0	370.5	34.52	11.735		
4,500.0	4,399.9	4,479.6	4,345.0	17.7	19.9	-83.17	-482.6	-879.9	415.7	380.3	35.41	11.741		
4,600.0	4,497.1	4,579.0	4,440.5	18.2	20.4	-83.03	-495.1	-904.4	426.5	390.2	36.30	11.749		
4,700.0	4,594.3	4,678.4	4,536.1	18.7	20.9	-82.90	-507.6	-928.8	437.2	400.0	37.19	11.756		
4,800.0	4,691.6	4,777.8	4,631.7	19.1	21.4	-82.78	-520.0	-953.2	448.0	409.9	38.08	11.764		
4,900.0	4,788.8	4,877.2	4,727.2	19.6	22.0	-82.67	-532.5	-977.6	458.7	419.7	38.97	11.770		
5,000.0	4,886.0	4,976.6	4,822.8	20.0	22.5	-82.56	-545.0	-1,002.0	469.4	429.6	39.86	11.777		
5,100.0	4,983.2	5,076.1	4,918.3	20.5	23.0	-82.45	-557.5	-1,026.4	480.2	439.4	40.75	11.784		

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

# Directional Plus

## Anticollision Report

<b>Company:</b>	Berry Petroleum Company (NAD 83)	<b>Local Co-ordinate Reference:</b>	Well Oxy 21-14D (Oxy I21 Pad)
<b>Project:</b>	Garfield County	<b>TVD Reference:</b>	KBE @ 8381.0ft (Original Well Elev)
<b>Reference Site:</b>	NESE S21-T6S-R97W (Oxy I21 pad)	<b>MD Reference:</b>	KBE @ 8381.0ft (Original Well Elev)
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Oxy 21-14D (Oxy I21 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 2003.21 US Multi User Db
<b>Reference Design:</b>	Plan #1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design NESE S21-T6S-R97W (Oxy I21 pad) - Oxy 21-12D (Oxy I21 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 Uncertainty Axis	Separation Factor	Warning	
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)				
5,200.0	5,080.4	5,175.5	5,013.9	20.9	23.5	-82.35	-570.0	-1,050.9	490.9	449.3	41.64	11.790		
5,300.0	5,177.6	5,274.9	5,109.5	21.4	24.0	-82.26	-582.5	-1,075.3	501.7	459.2	42.53	11.796		
5,400.0	5,274.9	5,374.3	5,205.0	21.8	24.6	-82.16	-594.9	-1,099.7	512.5	469.0	43.42	11.802		
5,500.0	5,372.1	5,473.7	5,300.6	22.3	25.1	-82.07	-607.4	-1,124.1	523.2	478.9	44.31	11.808		
5,600.0	5,469.3	5,573.1	5,396.1	22.7	25.6	-81.99	-619.9	-1,148.5	534.0	488.8	45.20	11.813		
5,700.0	5,566.5	5,672.6	5,491.7	23.2	26.1	-81.91	-632.4	-1,173.0	544.7	498.6	46.09	11.818		
5,800.0	5,663.7	5,772.0	5,587.3	23.6	26.7	-81.83	-644.9	-1,197.4	555.5	508.5	46.98	11.824		
5,900.0	5,761.0	5,871.4	5,682.8	24.1	27.2	-81.75	-657.3	-1,221.8	566.2	518.4	47.87	11.829		
6,000.0	5,858.2	5,970.8	5,778.4	24.6	27.7	-81.68	-669.8	-1,246.2	577.0	528.2	48.76	11.833		
6,100.0	5,955.4	6,078.4	5,882.1	25.0	28.2	-81.73	-682.7	-1,271.4	587.1	537.4	49.68	11.818		
6,200.0	6,052.9	6,186.3	5,987.0	25.4	28.7	-82.03	-694.3	-1,294.0	595.9	545.4	50.57	11.784		
6,300.0	6,150.9	6,294.4	6,092.8	25.8	29.1	-82.30	-704.5	-1,314.0	603.8	552.4	51.38	11.752		
6,400.0	6,249.4	6,402.7	6,199.3	26.1	29.5	-82.54	-713.4	-1,331.4	610.5	558.4	52.09	11.721		
6,500.0	6,348.4	6,511.1	6,306.5	26.4	29.8	-82.75	-720.9	-1,346.1	616.2	563.5	52.70	11.692		
6,600.0	6,447.7	6,619.7	6,414.1	26.6	30.1	-82.92	-727.0	-1,358.1	620.9	567.6	53.23	11.664		
6,700.0	6,547.2	6,728.3	6,522.3	26.8	30.3	-83.07	-731.7	-1,367.3	624.4	570.8	53.67	11.635		
6,800.0	6,647.0	6,836.9	6,630.7	27.0	30.4	-83.19	-735.1	-1,373.8	626.9	572.9	54.02	11.606		
6,900.0	6,746.9	6,945.6	6,739.3	27.1	30.6	-83.28	-737.0	-1,377.6	628.4	574.1	54.28	11.577		
7,000.0	6,846.9	7,053.2	6,846.9	27.2	30.6	-83.33	-737.5	-1,378.7	628.7	574.3	54.46	11.544		
7,040.9	6,887.8	7,094.1	6,887.8	27.2	30.7	-83.34	-737.5	-1,378.7	628.7	574.2	54.53	11.530		
7,100.0	6,946.9	7,153.2	6,946.9	27.3	30.7	-177.94	-737.5	-1,378.7	628.7	574.1	54.62	11.511		
7,200.0	7,046.9	7,253.2	7,046.9	27.4	30.8	-177.94	-737.5	-1,378.7	628.7	573.9	54.78	11.477		
7,300.0	7,146.9	7,353.2	7,146.9	27.4	30.8	-177.94	-737.5	-1,378.7	628.7	573.8	54.94	11.444		
7,400.0	7,246.9	7,453.2	7,246.9	27.5	30.9	-177.94	-737.5	-1,378.7	628.7	573.6	55.10	11.410		
7,500.0	7,346.9	7,553.2	7,346.9	27.6	31.0	-177.94	-737.5	-1,378.7	628.7	573.5	55.27	11.376		
7,600.0	7,446.9	7,653.2	7,446.9	27.7	31.1	-177.94	-737.5	-1,378.7	628.7	573.3	55.44	11.342		
7,700.0	7,546.9	7,753.2	7,546.9	27.8	31.1	-177.94	-737.5	-1,378.7	628.7	573.1	55.60	11.307		
7,800.0	7,646.9	7,853.2	7,646.9	27.9	31.2	-177.94	-737.5	-1,378.7	628.7	572.9	55.77	11.273		
7,900.0	7,746.9	7,953.2	7,746.9	27.9	31.3	-177.94	-737.5	-1,378.7	628.7	572.8	55.94	11.238		
8,000.0	7,846.9	8,053.2	7,846.9	28.0	31.4	-177.94	-737.5	-1,378.7	628.7	572.6	56.12	11.204		
8,100.0	7,946.9	8,153.2	7,946.9	28.1	31.5	-177.94	-737.5	-1,378.7	628.7	572.4	56.29	11.169		
8,200.0	8,046.9	8,253.2	8,046.9	28.2	31.5	-177.94	-737.5	-1,378.7	628.7	572.3	56.47	11.134		
8,300.0	8,146.9	8,353.2	8,146.9	28.3	31.6	-177.94	-737.5	-1,378.7	628.7	572.1	56.65	11.099		
8,400.0	8,246.9	8,453.2	8,246.9	28.4	31.7	-177.94	-737.5	-1,378.7	628.7	571.9	56.83	11.064		
8,500.0	8,346.9	8,553.2	8,346.9	28.5	31.8	-177.94	-737.5	-1,378.7	628.7	571.7	57.01	11.029		
8,600.0	8,446.9	8,653.2	8,446.9	28.6	31.9	-177.94	-737.5	-1,378.7	628.7	571.5	57.19	10.993		
8,700.0	8,546.9	8,753.2	8,546.9	28.7	31.9	-177.94	-737.5	-1,378.7	628.7	571.3	57.37	10.958		
8,800.0	8,646.9	8,853.2	8,646.9	28.7	32.0	-177.94	-737.5	-1,378.7	628.7	571.2	57.56	10.923		
8,827.8	8,674.7	8,881.1	8,674.7	28.8	32.0	-177.94	-737.5	-1,378.7	628.7	571.1	57.61	10.913		
8,857.1	8,704.0	8,890.4	8,684.0	28.8	32.1	-177.94	-737.5	-1,378.7	629.0	571.4	57.65	10.912 SF		

# Directional Plus

## Anticollision Report

<b>Company:</b>	Berry Petroleum Company (NAD 83)	<b>Local Co-ordinate Reference:</b>	Well Oxy 21-14D (Oxy I21 Pad)
<b>Project:</b>	Garfield County	<b>TVD Reference:</b>	KBE @ 8381.0ft (Original Well Elev)
<b>Reference Site:</b>	NESE S21-T6S-R97W (Oxy I21 pad)	<b>MD Reference:</b>	KBE @ 8381.0ft (Original Well Elev)
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Oxy 21-14D (Oxy I21 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 2003.21 US Multi User Db
<b>Reference Design:</b>	Plan #1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design NESE S21-T6S-R97W (Oxy I21 pad) - Oxy 21-13D (Oxy I21 Pad) - DD - Plan #1													Offset Site Error:	0.0 ft
Survey Program: O-MWD													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis		Distance		Total		Separation		Warning		
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Uncertainty Axis	Factor		
0.0	0.0	0.0	0.0	0.0	0.0	144.85	-12.0	8.5	14.7					
100.0	100.0	100.0	100.0	0.1	0.1	144.85	-12.0	8.5	14.7	14.4	0.30	49.549		
200.0	200.0	200.0	200.0	0.3	0.3	144.85	-12.0	8.5	14.7	14.1	0.65	22.766		
300.0	300.0	300.0	300.0	0.5	0.5	144.85	-12.0	8.5	14.7	13.7	0.99	14.778	CC	
400.0	400.0	400.1	400.1	0.7	0.7	-120.12	-12.4	7.2	14.9	13.6	1.35	11.094	ES	
500.0	499.9	500.2	500.2	0.9	0.9	-118.90	-13.5	3.4	15.7	13.9	1.71	9.146		
600.0	599.7	600.4	600.0	1.1	1.1	-117.11	-15.3	-2.9	16.9	14.8	2.10	8.012		
700.0	699.3	700.5	699.7	1.3	1.3	-115.00	-17.8	-11.7	18.6	16.0	2.54	7.310		
800.0	798.6	800.5	799.1	1.5	1.5	-112.79	-21.1	-23.0	20.8	17.8	3.04	6.852		
900.0	897.5	900.6	898.1	1.8	1.8	-110.66	-25.1	-36.8	23.6	20.0	3.60	6.541		
1,000.0	996.1	1,000.6	996.7	2.1	2.1	-108.71	-29.8	-53.1	26.8	22.6	4.25	6.321		
1,100.0	1,094.2	1,100.7	1,094.8	2.5	2.5	-106.98	-35.2	-71.9	30.7	25.7	4.98	6.159		
1,200.0	1,191.7	1,200.6	1,192.3	2.9	2.9	-105.47	-41.3	-93.1	35.0	29.2	5.80	6.034		
1,300.0	1,288.9	1,300.5	1,289.3	3.4	3.4	-103.21	-48.0	-116.3	39.6	32.9	6.67	5.937		
1,400.0	1,386.1	1,400.4	1,386.1	3.8	3.8	-101.17	-54.7	-139.6	44.2	36.7	7.55	5.857		
1,500.0	1,483.4	1,500.3	1,483.0	4.2	4.3	-99.52	-61.4	-163.0	48.9	40.5	8.44	5.793		
1,600.0	1,580.6	1,600.2	1,579.9	4.7	4.7	-98.16	-68.2	-186.4	53.6	44.3	9.33	5.742		
1,700.0	1,677.8	1,700.1	1,676.8	5.1	5.2	-97.02	-74.9	-209.7	58.3	48.1	10.23	5.701		
1,800.0	1,775.0	1,799.9	1,773.6	5.5	5.6	-96.05	-81.7	-233.1	63.1	52.0	11.13	5.668		
1,900.0	1,872.2	1,899.8	1,870.5	6.0	6.1	-95.22	-88.4	-256.5	67.9	55.8	12.04	5.640		
2,000.0	1,969.4	1,999.7	1,967.4	6.4	6.5	-94.50	-95.1	-279.8	72.7	59.7	12.94	5.616		
2,100.0	2,066.7	2,099.6	2,064.3	6.9	7.0	-93.87	-101.9	-303.2	77.5	63.6	13.84	5.596		
2,200.0	2,163.9	2,199.5	2,161.1	7.3	7.5	-93.31	-108.6	-326.6	82.3	67.5	14.75	5.579		
2,300.0	2,261.1	2,299.4	2,258.0	7.8	7.9	-92.81	-115.3	-349.9	87.1	71.4	15.65	5.564		
2,400.0	2,358.3	2,399.2	2,354.9	8.2	8.4	-92.36	-122.1	-373.3	91.9	75.3	16.55	5.551		
2,500.0	2,455.5	2,499.1	2,451.8	8.7	8.9	-91.96	-128.8	-396.7	96.7	79.3	17.46	5.540		
2,600.0	2,552.8	2,599.0	2,548.6	9.1	9.3	-91.60	-135.5	-420.0	101.5	83.2	18.36	5.530		
2,700.0	2,650.0	2,698.9	2,645.5	9.6	9.8	-91.27	-142.3	-443.4	106.4	87.1	19.27	5.521		
2,800.0	2,747.2	2,798.8	2,742.4	10.0	10.3	-90.97	-149.0	-466.8	111.2	91.0	20.17	5.513		
2,900.0	2,844.4	2,898.6	2,839.3	10.5	10.7	-90.69	-155.7	-490.1	116.0	95.0	21.08	5.505		
3,000.0	2,941.6	2,998.5	2,936.2	10.9	11.2	-90.44	-162.5	-513.5	120.9	98.9	21.98	5.499		
3,100.0	3,038.8	3,098.4	3,033.0	11.4	11.7	-90.20	-169.2	-536.9	125.7	102.8	22.89	5.493		
3,200.0	3,136.1	3,198.3	3,129.9	11.9	12.1	-89.99	-176.0	-560.2	130.6	106.8	23.79	5.487		
3,300.0	3,233.3	3,298.2	3,226.8	12.3	12.6	-89.78	-182.7	-583.6	135.4	110.7	24.70	5.483		
3,400.0	3,330.5	3,398.0	3,323.7	12.8	13.1	-89.60	-189.4	-607.0	140.3	114.6	25.60	5.478		
3,500.0	3,427.7	3,497.9	3,420.5	13.2	13.5	-89.42	-196.2	-630.3	145.1	118.6	26.51	5.474		
3,600.0	3,524.9	3,597.8	3,517.4	13.7	14.0	-89.26	-202.9	-653.7	149.9	122.5	27.41	5.470		
3,700.0	3,622.2	3,697.7	3,614.3	14.1	14.5	-89.10	-209.6	-677.1	154.8	126.5	28.32	5.467		
3,800.0	3,719.4	3,797.6	3,711.2	14.6	14.9	-88.96	-216.4	-700.4	159.6	130.4	29.22	5.463		
3,900.0	3,816.6	3,897.5	3,808.0	15.0	15.4	-88.82	-223.1	-723.8	164.5	134.4	30.13	5.460		
4,000.0	3,913.8	3,997.3	3,904.9	15.5	15.9	-88.70	-229.8	-747.2	169.4	138.3	31.03	5.457		
4,100.0	4,011.0	4,097.2	4,001.8	15.9	16.3	-88.57	-236.6	-770.5	174.2	142.3	31.94	5.455		
4,200.0	4,108.2	4,197.1	4,098.7	16.4	16.8	-88.46	-243.3	-793.9	179.1	146.2	32.84	5.452		
4,300.0	4,205.5	4,297.0	4,195.5	16.8	17.3	-88.35	-250.0	-817.2	183.9	150.2	33.75	5.450		
4,400.0	4,302.7	4,396.9	4,292.4	17.3	17.7	-88.25	-256.8	-840.6	188.8	154.1	34.65	5.448		
4,500.0	4,399.9	4,496.7	4,389.3	17.7	18.2	-88.15	-263.5	-864.0	193.6	158.1	35.56	5.446		
4,600.0	4,497.1	4,596.6	4,486.2	18.2	18.7	-88.06	-270.3	-887.3	198.5	162.0	36.46	5.444		
4,700.0	4,594.3	4,696.5	4,583.0	18.7	19.2	-87.97	-277.0	-910.7	203.3	166.0	37.37	5.442		
4,800.0	4,691.6	4,796.4	4,679.9	19.1	19.6	-87.89	-283.7	-934.1	208.2	169.9	38.27	5.440		
4,900.0	4,788.8	4,896.3	4,776.8	19.6	20.1	-87.81	-290.5	-957.4	213.1	173.9	39.18	5.438		
5,000.0	4,886.0	4,996.2	4,873.7	20.0	20.6	-87.73	-297.2	-980.8	217.9	177.8	40.08	5.437		
5,100.0	4,983.2	5,096.0	4,970.6	20.5	21.0	-87.66	-303.9	-1,004.2	222.8	181.8	40.99	5.435		

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



# Directional Plus

## Anticollision Report

<b>Company:</b>	Berry Petroleum Company (NAD 83)	<b>Local Co-ordinate Reference:</b>	Well Oxy 21-14D (Oxy I21 Pad)
<b>Project:</b>	Garfield County	<b>TVD Reference:</b>	KBE @ 8381.0ft (Original Well Elev)
<b>Reference Site:</b>	NESE S21-T6S-R97W (Oxy I21 pad)	<b>MD Reference:</b>	KBE @ 8381.0ft (Original Well Elev)
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Oxy 21-14D (Oxy I21 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 2003.21 US Multi User Db
<b>Reference Design:</b>	Plan #1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design NESE S21-T6S-R97W (Oxy I21 pad) - Oxy 21-13D (Oxy I21 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		Warning	
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Uncertainty Axis	Separation Factor		
5,200.0	5,080.4	5,195.9	5,067.4	20.9	21.5	-87.59	-310.7	-1,027.5	227.6	185.7	41.89	5.434		
5,300.0	5,177.6	5,295.8	5,164.3	21.4	22.0	-87.52	-317.4	-1,050.9	232.5	189.7	42.80	5.433		
5,400.0	5,274.9	5,395.7	5,261.2	21.8	22.4	-87.45	-324.1	-1,074.3	237.4	193.7	43.70	5.431		
5,500.0	5,372.1	5,495.6	5,358.1	22.3	22.9	-87.39	-330.9	-1,097.6	242.2	197.6	44.61	5.430		
5,600.0	5,469.3	5,595.4	5,454.9	22.7	23.4	-87.33	-337.6	-1,121.0	247.1	201.6	45.51	5.429		
5,700.0	5,566.5	5,695.3	5,551.8	23.2	23.8	-87.27	-344.3	-1,144.4	251.9	205.5	46.42	5.428		
5,800.0	5,663.7	5,795.2	5,648.7	23.6	24.3	-87.22	-351.1	-1,167.7	256.8	209.5	47.32	5.427		
5,900.0	5,761.0	5,895.1	5,745.6	24.1	24.8	-87.17	-357.8	-1,191.1	261.7	213.4	48.22	5.426		
6,000.0	5,858.2	5,995.0	5,842.4	24.6	25.2	-87.12	-364.6	-1,214.5	266.5	217.4	49.13	5.425		
6,100.0	5,955.4	6,095.2	5,939.7	25.0	25.7	-87.08	-371.3	-1,237.9	271.4	221.3	50.03	5.424		
6,200.0	6,052.9	6,196.9	6,038.7	25.4	26.1	-87.23	-377.6	-1,259.9	275.8	225.0	50.88	5.422		
6,300.0	6,150.9	6,298.6	6,138.4	25.8	26.5	-87.36	-383.2	-1,279.3	279.8	228.2	51.63	5.419		
6,400.0	6,249.4	6,400.3	6,238.6	26.1	26.9	-87.48	-388.1	-1,296.2	283.2	230.9	52.29	5.416		
6,500.0	6,348.4	6,502.1	6,339.3	26.4	27.1	-87.58	-392.3	-1,310.6	286.1	233.2	52.87	5.411		
6,600.0	6,447.7	6,603.9	6,440.3	26.6	27.4	-87.67	-395.6	-1,322.3	288.5	235.1	53.37	5.406		
6,700.0	6,547.2	6,705.7	6,541.7	26.8	27.6	-87.74	-398.3	-1,331.5	290.4	236.6	53.78	5.399		
6,800.0	6,647.0	6,807.5	6,643.3	27.0	27.8	-87.80	-400.2	-1,338.1	291.7	237.6	54.10	5.391		
6,900.0	6,746.9	6,909.4	6,745.0	27.1	27.9	-87.84	-401.3	-1,342.0	292.5	238.1	54.35	5.382		
7,000.0	6,846.9	7,011.2	6,846.8	27.2	28.0	-87.88	-401.7	-1,343.4	292.8	238.2	54.51	5.371		
7,100.0	6,946.9	7,111.2	6,946.9	27.3	28.0	177.52	-401.7	-1,343.4	292.8	238.1	54.67	5.355		
7,200.0	7,046.9	7,211.2	7,046.9	27.4	28.1	177.52	-401.7	-1,343.4	292.8	237.9	54.83	5.340		
7,300.0	7,146.9	7,311.2	7,146.9	27.4	28.2	177.52	-401.7	-1,343.4	292.8	237.8	54.99	5.324		
7,400.0	7,246.9	7,411.2	7,246.9	27.5	28.3	177.52	-401.7	-1,343.4	292.8	237.6	55.15	5.308		
7,500.0	7,346.9	7,511.2	7,346.9	27.6	28.4	177.52	-401.7	-1,343.4	292.8	237.4	55.32	5.293		
7,600.0	7,446.9	7,611.2	7,446.9	27.7	28.4	177.52	-401.7	-1,343.4	292.8	237.3	55.48	5.277		
7,700.0	7,546.9	7,711.2	7,546.9	27.8	28.5	177.52	-401.7	-1,343.4	292.8	237.1	55.65	5.261		
7,800.0	7,646.9	7,811.2	7,646.9	27.9	28.6	177.52	-401.7	-1,343.4	292.8	236.9	55.82	5.245		
7,900.0	7,746.9	7,911.2	7,746.9	27.9	28.7	177.52	-401.7	-1,343.4	292.8	236.8	55.99	5.229		
8,000.0	7,846.9	8,011.2	7,846.9	28.0	28.8	177.52	-401.7	-1,343.4	292.8	236.6	56.16	5.213		
8,100.0	7,946.9	8,111.2	7,946.9	28.1	28.8	177.52	-401.7	-1,343.4	292.8	236.4	56.34	5.197		
8,200.0	8,046.9	8,211.2	8,046.9	28.2	28.9	177.52	-401.7	-1,343.4	292.8	236.2	56.51	5.181		
8,300.0	8,146.9	8,311.2	8,146.9	28.3	29.0	177.52	-401.7	-1,343.4	292.8	236.1	56.69	5.164		
8,400.0	8,246.9	8,411.2	8,246.9	28.4	29.1	177.52	-401.7	-1,343.4	292.8	235.9	56.87	5.148		
8,500.0	8,346.9	8,511.2	8,346.9	28.5	29.2	177.52	-401.7	-1,343.4	292.8	235.7	57.05	5.132		
8,600.0	8,446.9	8,611.2	8,446.9	28.6	29.3	177.52	-401.7	-1,343.4	292.8	235.5	57.23	5.115		
8,700.0	8,546.9	8,711.2	8,546.9	28.7	29.4	177.52	-401.7	-1,343.4	292.8	235.3	57.41	5.099		
8,800.0	8,646.9	8,811.2	8,646.9	28.7	29.5	177.52	-401.7	-1,343.4	292.8	235.2	57.60	5.083		
8,836.2	8,683.1	8,847.5	8,683.1	28.8	29.5	177.52	-401.7	-1,343.4	292.8	235.1	57.67	5.077		
8,857.1	8,704.0	8,863.4	8,699.0	28.8	29.5	177.52	-401.7	-1,343.4	292.8	235.1	57.70	5.074 SF		

# Directional Plus

## Anticollision Report

<b>Company:</b>	Berry Petroleum Company (NAD 83)	<b>Local Co-ordinate Reference:</b>	Well Oxy 21-14D (Oxy I21 Pad)
<b>Project:</b>	Garfield County	<b>TVD Reference:</b>	KBE @ 8381.0ft (Original Well Elev)
<b>Reference Site:</b>	NESE S21-T6S-R97W (Oxy I21 pad)	<b>MD Reference:</b>	KBE @ 8381.0ft (Original Well Elev)
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Oxy 21-14D (Oxy I21 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 2003.21 US Multi User Db
<b>Reference Design:</b>	Plan #1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design NESE S21-T6S-R97W (Oxy I21 pad) - Oxy 21-15D (Oxy I21 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	-31.07	13.1	-7.9	15.3						
100.0	100.0	100.0	100.0	0.1	0.1	-31.07	13.1	-7.9	15.3	15.0	0.30	51.596			
200.0	200.0	200.0	200.0	0.3	0.3	-31.07	13.1	-7.9	15.3	14.7	0.65	23.706			
300.0	300.0	300.0	300.0	0.5	0.5	-31.07	13.1	-7.9	15.3	14.3	0.99	15.388	CC		
400.0	400.0	399.7	399.7	0.7	0.7	64.14	13.3	-9.2	15.6	14.2	1.35	11.562	ES		
500.0	499.9	499.5	499.4	0.9	0.9	65.83	13.9	-13.1	16.3	14.6	1.71	9.550			
600.0	599.7	599.2	598.9	1.1	1.1	68.33	14.8	-19.5	17.6	15.5	2.10	8.396			
700.0	699.3	698.9	698.2	1.3	1.3	71.26	16.2	-28.5	19.4	16.9	2.53	7.698			
800.0	798.6	798.6	797.2	1.5	1.5	74.27	17.9	-40.0	21.9	18.9	3.01	7.259			
900.0	897.5	898.3	895.8	1.8	1.8	77.14	20.0	-54.2	24.9	21.3	3.57	6.972			
1,000.0	996.1	997.9	994.1	2.1	2.1	79.73	22.5	-70.8	28.6	24.4	4.21	6.779			
1,100.0	1,094.2	1,097.5	1,091.7	2.5	2.5	81.99	25.3	-90.0	32.8	27.9	4.94	6.644			
1,200.0	1,191.7	1,197.1	1,188.9	2.9	2.9	83.91	28.6	-111.6	37.7	31.9	5.76	6.545			
1,300.0	1,288.9	1,296.9	1,285.8	3.4	3.3	85.04	32.0	-135.0	43.0	36.4	6.60	6.514			
1,400.0	1,386.1	1,396.7	1,382.8	3.8	3.8	85.86	35.5	-158.5	48.4	40.9	7.46	6.481			
1,500.0	1,483.4	1,496.6	1,479.8	4.2	4.2	86.51	39.0	-182.0	53.7	45.4	8.33	6.447			
1,600.0	1,580.6	1,596.5	1,576.8	4.7	4.7	87.05	42.5	-205.5	59.1	49.9	9.21	6.415			
1,700.0	1,677.8	1,696.3	1,673.8	5.1	5.1	87.50	46.0	-229.0	64.4	54.3	10.09	6.386			
1,800.0	1,775.0	1,796.2	1,770.8	5.5	5.6	87.88	49.5	-252.5	69.8	58.8	10.98	6.359			
1,900.0	1,872.2	1,896.0	1,867.7	6.0	6.0	88.20	53.0	-276.0	75.2	63.3	11.86	6.335			
2,000.0	1,969.4	1,995.9	1,964.7	6.4	6.5	88.48	56.5	-299.5	80.5	67.8	12.76	6.313			
2,100.0	2,066.7	2,095.7	2,061.7	6.9	6.9	88.73	60.0	-323.0	85.9	72.3	13.65	6.293			
2,200.0	2,163.9	2,195.6	2,158.7	7.3	7.4	88.95	63.5	-346.5	91.3	76.7	14.55	6.275			
2,300.0	2,261.1	2,295.4	2,255.7	7.8	7.8	89.14	67.0	-370.0	96.7	81.2	15.44	6.258			
2,400.0	2,358.3	2,395.3	2,352.7	8.2	8.3	89.31	70.5	-393.4	102.0	85.7	16.34	6.243			
2,500.0	2,455.5	2,495.1	2,449.7	8.7	8.7	89.47	74.0	-416.9	107.4	90.2	17.24	6.229			
2,600.0	2,552.8	2,595.0	2,546.7	9.1	9.2	89.61	77.5	-440.4	112.8	94.6	18.14	6.217			
2,700.0	2,650.0	2,694.9	2,643.7	9.6	9.7	89.74	81.0	-463.9	118.2	99.1	19.04	6.205			
2,800.0	2,747.2	2,794.7	2,740.7	10.0	10.1	89.85	84.5	-487.4	123.5	103.6	19.95	6.194			
2,900.0	2,844.4	2,894.6	2,837.6	10.5	10.6	89.96	88.0	-510.9	128.9	108.1	20.85	6.184			
3,000.0	2,941.6	2,994.4	2,934.6	10.9	11.0	90.06	91.5	-534.4	134.3	112.6	21.75	6.175			
3,100.0	3,038.8	3,094.3	3,031.6	11.4	11.5	90.15	95.0	-557.9	139.7	117.0	22.65	6.166			
3,200.0	3,136.1	3,194.1	3,128.6	11.9	11.9	90.23	98.5	-581.4	145.1	121.5	23.56	6.158			
3,300.0	3,233.3	3,294.0	3,225.6	12.3	12.4	90.31	102.0	-604.9	150.5	126.0	24.46	6.151			
3,400.0	3,330.5	3,393.8	3,322.6	12.8	12.9	90.39	105.5	-628.4	155.8	130.5	25.36	6.144			
3,500.0	3,427.7	3,493.7	3,419.6	13.2	13.3	90.45	109.0	-651.8	161.2	134.9	26.27	6.137			
3,600.0	3,524.9	3,593.5	3,516.6	13.7	13.8	90.52	112.5	-675.3	166.6	139.4	27.17	6.131			
3,700.0	3,622.2	3,693.4	3,613.6	14.1	14.2	90.58	116.0	-698.8	172.0	143.9	28.08	6.125			
3,800.0	3,719.4	3,793.3	3,710.5	14.6	14.7	90.63	119.5	-722.3	177.4	148.4	28.98	6.120			
3,900.0	3,816.6	3,893.1	3,807.5	15.0	15.1	90.68	123.0	-745.8	182.7	152.9	29.89	6.114			
4,000.0	3,913.8	3,993.0	3,904.5	15.5	15.6	90.73	126.5	-769.3	188.1	157.3	30.79	6.110			
4,100.0	4,011.0	4,092.8	4,001.5	15.9	16.1	90.78	130.0	-792.8	193.5	161.8	31.70	6.105			
4,200.0	4,108.2	4,192.7	4,098.5	16.4	16.5	90.83	133.5	-816.3	198.9	166.3	32.60	6.100			
4,300.0	4,205.5	4,292.5	4,195.5	16.8	17.0	90.87	137.0	-839.8	204.3	170.8	33.51	6.096			
4,400.0	4,302.7	4,392.4	4,292.5	17.3	17.4	90.91	140.5	-863.3	209.7	175.2	34.41	6.092			
4,500.0	4,399.9	4,492.2	4,389.5	17.7	17.9	90.94	144.0	-886.8	215.0	179.7	35.32	6.088			
4,600.0	4,497.1	4,592.1	4,486.5	18.2	18.4	90.98	147.5	-910.2	220.4	184.2	36.22	6.085			
4,700.0	4,594.3	4,692.0	4,583.5	18.7	18.8	91.01	151.0	-933.7	225.8	188.7	37.13	6.081			
4,800.0	4,691.6	4,791.8	4,680.4	19.1	19.3	91.05	154.5	-957.2	231.2	193.2	38.04	6.078			
4,900.0	4,788.8	4,891.7	4,777.4	19.6	19.7	91.08	158.0	-980.7	236.6	197.6	38.94	6.075			
5,000.0	4,886.0	4,991.5	4,874.4	20.0	20.2	91.11	161.5	-1,004.2	242.0	202.1	39.85	6.072			
5,100.0	4,983.2	5,091.4	4,971.4	20.5	20.7	91.14	165.0	-1,027.7	247.3	206.6	40.75	6.069			

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

# Directional Plus

## Anticollision Report

<b>Company:</b>	Berry Petroleum Company (NAD 83)	<b>Local Co-ordinate Reference:</b>	Well Oxy 21-14D (Oxy I21 Pad)
<b>Project:</b>	Garfield County	<b>TVD Reference:</b>	KBE @ 8381.0ft (Original Well Elev)
<b>Reference Site:</b>	NESE S21-T6S-R97W (Oxy I21 pad)	<b>MD Reference:</b>	KBE @ 8381.0ft (Original Well Elev)
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Oxy 21-14D (Oxy I21 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 2003.21 US Multi User Db
<b>Reference Design:</b>	Plan #1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design NESE S21-T6S-R97W (Oxy I21 pad) - Oxy 21-15D (Oxy I21 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 Uncertainty Axis	Separation Factor	Warning	
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)				
5,200.0	5,080.4	5,191.2	5,068.4	20.9	21.1	91.16	168.5	-1,051.2	252.7	211.1	41.66	6.066		
5,300.0	5,177.6	5,291.1	5,165.4	21.4	21.6	91.19	171.9	-1,074.7	258.1	215.5	42.57	6.064		
5,400.0	5,274.9	5,390.9	5,262.4	21.8	22.0	91.22	175.4	-1,098.2	263.5	220.0	43.47	6.061		
5,500.0	5,372.1	5,490.8	5,359.4	22.3	22.5	91.24	178.9	-1,121.7	268.9	224.5	44.38	6.059		
5,600.0	5,469.3	5,590.6	5,456.4	22.7	23.0	91.26	182.4	-1,145.2	274.3	229.0	45.29	6.056		
5,700.0	5,566.5	5,690.5	5,553.3	23.2	23.4	91.28	185.9	-1,168.6	279.6	233.5	46.19	6.054		
5,800.0	5,663.7	5,790.4	5,650.3	23.6	23.9	91.31	189.4	-1,192.1	285.0	237.9	47.10	6.052		
5,900.0	5,761.0	5,890.2	5,747.3	24.1	24.3	91.33	192.9	-1,215.6	290.4	242.4	48.01	6.050		
6,000.0	5,858.2	5,990.1	5,844.3	24.6	24.8	91.35	196.4	-1,239.1	295.8	246.9	48.91	6.047		
6,100.0	5,955.4	6,089.9	5,941.3	25.0	25.3	91.37	199.9	-1,262.6	301.2	251.4	49.82	6.046		
6,200.0	6,052.9	6,191.2	6,040.0	25.4	25.7	91.43	203.3	-1,285.4	306.3	255.7	50.66	6.047		
6,300.0	6,150.9	6,292.7	6,139.4	25.8	26.1	91.49	206.3	-1,305.6	310.9	259.5	51.41	6.047		
6,400.0	6,249.4	6,394.3	6,239.4	26.1	26.4	91.53	209.0	-1,323.2	314.8	262.8	52.07	6.046		
6,500.0	6,348.4	6,495.9	6,339.8	26.4	26.7	91.57	211.2	-1,338.2	318.2	265.6	52.65	6.044		
6,600.0	6,447.7	6,597.5	6,440.7	26.6	26.9	91.59	213.0	-1,350.5	321.0	267.8	53.14	6.040		
6,700.0	6,547.2	6,699.2	6,541.9	26.8	27.2	91.61	214.5	-1,360.2	323.2	269.6	53.55	6.035		
6,800.0	6,647.0	6,800.9	6,643.3	27.0	27.3	91.61	215.5	-1,367.2	324.7	270.9	53.88	6.027		
6,900.0	6,746.9	6,902.6	6,745.0	27.1	27.4	91.60	216.2	-1,371.6	325.7	271.6	54.12	6.018		
7,000.0	6,846.9	7,004.4	6,846.7	27.2	27.5	91.58	216.4	-1,373.2	326.1	271.8	54.29	6.007		
7,100.0	6,946.9	7,104.6	6,946.9	27.3	27.6	-3.02	216.4	-1,373.3	326.1	271.6	54.44	5.989		
7,200.0	7,046.9	7,204.6	7,046.9	27.4	27.7	-3.02	216.4	-1,373.3	326.1	271.5	54.60	5.972		
7,300.0	7,146.9	7,304.6	7,146.9	27.4	27.8	-3.02	216.4	-1,373.3	326.1	271.3	54.76	5.954		
7,400.0	7,246.9	7,404.6	7,246.9	27.5	27.9	-3.02	216.4	-1,373.3	326.1	271.2	54.93	5.937		
7,500.0	7,346.9	7,504.6	7,346.9	27.6	27.9	-3.02	216.4	-1,373.3	326.1	271.0	55.09	5.919		
7,600.0	7,446.9	7,604.6	7,446.9	27.7	28.0	-3.02	216.4	-1,373.3	326.1	270.8	55.26	5.901		
7,700.0	7,546.9	7,704.6	7,546.9	27.8	28.1	-3.02	216.4	-1,373.3	326.1	270.7	55.43	5.883		
7,800.0	7,646.9	7,804.6	7,646.9	27.9	28.2	-3.02	216.4	-1,373.3	326.1	270.5	55.60	5.865		
7,900.0	7,746.9	7,904.6	7,746.9	27.9	28.3	-3.02	216.4	-1,373.3	326.1	270.3	55.77	5.847		
8,000.0	7,846.9	8,004.6	7,846.9	28.0	28.4	-3.02	216.4	-1,373.3	326.1	270.1	55.94	5.829		
8,100.0	7,946.9	8,104.6	7,946.9	28.1	28.4	-3.02	216.4	-1,373.3	326.1	270.0	56.12	5.811		
8,200.0	8,046.9	8,204.6	8,046.9	28.2	28.5	-3.02	216.4	-1,373.3	326.1	269.8	56.29	5.793		
8,300.0	8,146.9	8,304.6	8,146.9	28.3	28.6	-3.02	216.4	-1,373.3	326.1	269.6	56.47	5.775		
8,400.0	8,246.9	8,404.6	8,246.9	28.4	28.7	-3.02	216.4	-1,373.3	326.1	269.4	56.65	5.756		
8,500.0	8,346.9	8,504.6	8,346.9	28.5	28.8	-3.02	216.4	-1,373.3	326.1	269.3	56.83	5.738		
8,600.0	8,446.9	8,604.6	8,446.9	28.6	28.9	-3.02	216.4	-1,373.3	326.1	269.1	57.01	5.719		
8,700.0	8,546.9	8,704.6	8,546.9	28.7	29.0	-3.02	216.4	-1,373.3	326.1	268.9	57.20	5.701		
8,800.0	8,646.9	8,804.6	8,646.9	28.7	29.1	-3.02	216.4	-1,373.3	326.1	268.7	57.38	5.683		
8,857.1	8,704.0	8,861.7	8,704.0	28.8	29.1	-3.02	216.4	-1,373.3	326.1	268.6	57.49	5.672 SF		

# Directional Plus

## Anticollision Report

<b>Company:</b>	Berry Petroleum Company (NAD 83)	<b>Local Co-ordinate Reference:</b>	Well Oxy 21-14D (Oxy I21 Pad)
<b>Project:</b>	Garfield County	<b>TVD Reference:</b>	KBE @ 8381.0ft (Original Well Elev)
<b>Reference Site:</b>	NESE S21-T6S-R97W (Oxy I21 pad)	<b>MD Reference:</b>	KBE @ 8381.0ft (Original Well Elev)
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Oxy 21-14D (Oxy I21 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 2003.21 US Multi User Db
<b>Reference Design:</b>	Plan #1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design NESE S21-T6S-R97W (Oxy I21 pad) - Oxy 21-16D (Oxy I21 Pad) - DD - Plan #1													Offset Site Error:	0.0 ft
Survey Program: O-MWD													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis		Distance		Total		Separation		Warning		
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Uncertainty Axis			
0.0	0.0	0.0	0.0	0.0	0.0	-14.65	30.2	-7.9	31.2					
100.0	100.0	100.0	100.0	0.1	0.1	-14.65	30.2	-7.9	31.2	31.0	0.30	105.314		
200.0	200.0	200.0	200.0	0.3	0.3	-14.65	30.2	-7.9	31.2	30.6	0.65	48.388		
300.0	300.0	300.0	300.0	0.5	0.5	-14.65	30.2	-7.9	31.2	30.3	0.99	31.409 CC, ES		
400.0	400.0	399.5	399.5	0.7	0.7	80.36	30.7	-9.1	31.8	30.4	1.35	23.611		
500.0	499.9	499.0	498.9	0.9	0.9	81.47	32.1	-12.8	33.4	31.6	1.71	19.508		
600.0	599.7	598.5	598.2	1.1	1.1	83.10	34.3	-18.8	36.0	33.9	2.10	17.140		
700.0	699.3	697.9	697.2	1.3	1.3	85.01	37.5	-27.3	39.8	37.2	2.53	15.693		
800.0	798.6	797.3	795.9	1.5	1.5	86.98	41.6	-38.2	44.7	41.6	3.02	14.770		
900.0	897.5	896.5	894.1	1.8	1.8	88.85	46.6	-51.4	50.7	47.1	3.58	14.157		
1,000.0	896.1	895.6	891.8	2.1	2.1	90.55	52.5	-67.0	57.8	53.6	4.21	13.734		
1,100.0	1,094.2	1,094.6	1,088.9	2.5	2.5	92.03	59.2	-85.0	66.1	61.2	4.92	13.432		
1,200.0	1,191.7	1,193.5	1,185.4	2.9	2.9	93.30	66.8	-105.3	75.6	69.8	5.72	13.206		
1,300.0	1,288.9	1,292.6	1,281.5	3.4	3.3	93.88	75.2	-127.7	85.9	79.4	6.55	13.110		
1,400.0	1,386.1	1,392.0	1,377.9	3.8	3.8	94.15	83.8	-150.5	96.4	89.0	7.40	13.024		
1,500.0	1,483.4	1,491.5	1,474.3	4.2	4.2	94.37	92.4	-173.3	106.9	98.6	8.26	12.939		
1,600.0	1,580.6	1,590.9	1,570.8	4.7	4.7	94.54	101.0	-196.1	117.4	108.3	9.13	12.859		
1,700.0	1,677.8	1,690.4	1,667.2	5.1	5.1	94.69	109.5	-218.9	127.9	117.9	10.00	12.786		
1,800.0	1,775.0	1,789.8	1,763.6	5.5	5.6	94.82	118.1	-241.7	138.4	127.5	10.88	12.720		
1,900.0	1,872.2	1,889.3	1,860.0	6.0	6.1	94.92	126.7	-264.5	148.9	137.1	11.76	12.660		
2,000.0	1,969.4	1,988.7	1,956.4	6.4	6.5	95.02	135.2	-287.3	159.4	146.7	12.64	12.605		
2,100.0	2,066.7	2,088.2	2,052.8	6.9	7.0	95.10	143.8	-310.1	169.9	156.3	13.53	12.556		
2,200.0	2,163.9	2,187.6	2,149.3	7.3	7.4	95.17	152.4	-332.9	180.4	165.9	14.41	12.512		
2,300.0	2,261.1	2,287.0	2,245.7	7.8	7.9	95.24	161.0	-355.7	190.8	175.5	15.30	12.471		
2,400.0	2,358.3	2,386.5	2,342.1	8.2	8.4	95.29	169.5	-378.5	201.3	185.2	16.19	12.434		
2,500.0	2,455.5	2,485.9	2,438.5	8.7	8.8	95.35	178.1	-401.3	211.8	194.8	17.08	12.400		
2,600.0	2,552.8	2,585.4	2,534.9	9.1	9.3	95.39	186.7	-424.1	222.3	204.4	17.98	12.369		
2,700.0	2,650.0	2,684.8	2,631.3	9.6	9.8	95.44	195.2	-447.0	232.8	214.0	18.87	12.340		
2,800.0	2,747.2	2,784.3	2,727.8	10.0	10.2	95.47	203.8	-469.8	243.3	223.6	19.76	12.314		
2,900.0	2,844.4	2,883.7	2,824.2	10.5	10.7	95.51	212.4	-492.6	253.8	233.2	20.65	12.289		
3,000.0	2,941.6	2,983.2	2,920.6	10.9	11.2	95.54	221.0	-515.4	264.3	242.8	21.55	12.266		
3,100.0	3,038.8	3,082.6	3,017.0	11.4	11.6	95.57	229.5	-538.2	274.8	252.4	22.44	12.245		
3,200.0	3,136.1	3,182.1	3,113.4	11.9	12.1	95.60	238.1	-561.0	285.3	262.0	23.34	12.226		
3,300.0	3,233.3	3,281.5	3,209.9	12.3	12.6	95.63	246.7	-583.8	295.8	271.6	24.23	12.207		
3,400.0	3,330.5	3,381.0	3,306.3	12.8	13.0	95.65	255.2	-606.6	306.3	281.2	25.13	12.190		
3,500.0	3,427.7	3,480.4	3,402.7	13.2	13.5	95.68	263.8	-629.4	316.8	290.8	26.02	12.173		
3,600.0	3,524.9	3,579.9	3,499.1	13.7	14.0	95.70	272.4	-652.2	327.3	300.4	26.92	12.158		
3,700.0	3,622.2	3,679.3	3,595.5	14.1	14.4	95.72	281.0	-675.0	337.8	310.0	27.82	12.144		
3,800.0	3,719.4	3,778.8	3,691.9	14.6	14.9	95.74	289.5	-697.8	348.3	319.6	28.71	12.130		
3,900.0	3,816.6	3,878.2	3,788.4	15.0	15.4	95.75	298.1	-720.6	358.8	329.2	29.61	12.117		
4,000.0	3,913.8	3,977.7	3,884.8	15.5	15.8	95.77	306.7	-743.4	369.3	338.8	30.50	12.105		
4,100.0	4,011.0	4,077.1	3,981.2	15.9	16.3	95.79	315.2	-766.2	379.8	348.4	31.40	12.094		
4,200.0	4,108.2	4,176.5	4,077.6	16.4	16.8	95.80	323.8	-789.0	390.3	358.0	32.30	12.083		
4,300.0	4,205.5	4,276.0	4,174.0	16.8	17.2	95.82	332.4	-811.8	400.8	367.6	33.20	12.073		
4,400.0	4,302.7	4,375.4	4,270.4	17.3	17.7	95.83	341.0	-834.6	411.3	377.2	34.09	12.063		
4,500.0	4,399.9	4,474.9	4,366.9	17.7	18.2	95.84	349.5	-857.4	421.8	386.8	34.99	12.053		
4,600.0	4,497.1	4,574.3	4,463.3	18.2	18.7	95.85	358.1	-880.3	432.2	396.4	35.89	12.044		
4,700.0	4,594.3	4,673.8	4,559.7	18.7	19.1	95.87	366.7	-903.1	442.7	406.0	36.79	12.036		
4,800.0	4,691.6	4,773.2	4,656.1	19.1	19.6	95.88	375.2	-925.9	453.2	415.6	37.68	12.028		
4,900.0	4,788.8	4,872.7	4,752.5	19.6	20.1	95.89	383.8	-948.7	463.7	425.2	38.58	12.020		
5,000.0	4,886.0	4,972.1	4,848.9	20.0	20.5	95.90	392.4	-971.5	474.2	434.8	39.48	12.012		
5,100.0	4,983.2	5,071.6	4,945.4	20.5	21.0	95.91	401.0	-994.3	484.7	444.4	40.38	12.005		

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

# Directional Plus

## Anticollision Report

<b>Company:</b>	Berry Petroleum Company (NAD 83)	<b>Local Co-ordinate Reference:</b>	Well Oxy 21-14D (Oxy I21 Pad)
<b>Project:</b>	Garfield County	<b>TVD Reference:</b>	KBE @ 8381.0ft (Original Well Elev)
<b>Reference Site:</b>	NESE S21-T6S-R97W (Oxy I21 pad)	<b>MD Reference:</b>	KBE @ 8381.0ft (Original Well Elev)
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Oxy 21-14D (Oxy I21 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 2003.21 US Multi User Db
<b>Reference Design:</b>	Plan #1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design NESE S21-T6S-R97W (Oxy I21 pad) - Oxy 21-16D (Oxy I21 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		Warning	
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Uncertainty Axis	Separation Factor		
5,200.0	5,080.4	5,171.0	5,041.8	20.9	21.5	95.92	409.5	-1,017.1	495.2	454.0	41.27	11.998		
5,300.0	5,177.6	5,270.5	5,138.2	21.4	21.9	95.92	418.1	-1,039.9	505.7	463.6	42.17	11.992		
5,400.0	5,274.9	5,369.9	5,234.6	21.8	22.4	95.93	426.7	-1,062.7	516.2	473.1	43.07	11.985		
5,500.0	5,372.1	5,469.4	5,331.0	22.3	22.9	95.94	435.2	-1,085.5	526.7	482.7	43.97	11.979		
5,600.0	5,469.3	5,568.8	5,427.4	22.7	23.3	95.95	443.8	-1,108.3	537.2	492.3	44.87	11.973		
5,700.0	5,566.5	5,668.3	5,523.9	23.2	23.8	95.96	452.4	-1,131.1	547.7	501.9	45.77	11.968		
5,800.0	5,663.7	5,767.7	5,620.3	23.6	24.3	95.96	461.0	-1,153.9	558.2	511.5	46.66	11.962		
5,900.0	5,761.0	5,867.2	5,716.7	24.1	24.7	95.97	469.5	-1,176.7	568.7	521.1	47.56	11.957		
6,000.0	5,858.2	5,966.6	5,813.1	24.6	25.2	95.98	478.1	-1,199.5	579.2	530.7	48.46	11.952		
6,100.0	5,955.4	6,066.1	5,909.5	25.0	25.7	95.98	486.7	-1,222.3	589.7	540.3	49.36	11.947		
6,200.0	6,052.9	6,169.7	6,010.3	25.4	26.1	96.10	495.3	-1,245.3	599.8	549.6	50.22	11.944		
6,300.0	6,150.9	6,274.6	6,112.8	25.8	26.5	96.20	503.0	-1,265.9	608.7	557.8	50.99	11.938		
6,400.0	6,249.4	6,379.7	6,216.1	26.1	26.9	96.28	509.8	-1,283.9	616.6	564.9	51.68	11.931		
6,500.0	6,348.4	6,484.9	6,320.0	26.4	27.2	96.35	515.6	-1,299.3	623.2	570.9	52.28	11.921		
6,600.0	6,447.7	6,590.3	6,424.5	26.6	27.5	96.40	520.4	-1,312.0	628.7	575.9	52.79	11.909		
6,700.0	6,547.2	6,695.8	6,529.4	26.8	27.7	96.43	524.1	-1,322.0	633.0	579.8	53.21	11.895		
6,800.0	6,647.0	6,801.3	6,634.7	27.0	27.9	96.45	526.9	-1,329.3	636.1	582.6	53.55	11.878		
6,900.0	6,746.9	6,907.0	6,740.3	27.1	28.0	96.45	528.6	-1,333.8	638.1	584.3	53.81	11.858		
7,000.0	6,846.9	7,012.6	6,845.9	27.2	28.1	96.43	529.3	-1,335.7	638.8	584.8	53.98	11.835		
7,100.0	6,946.9	7,113.6	6,946.9	27.3	28.2	1.83	529.3	-1,335.7	638.8	584.7	54.14	11.800		
7,200.0	7,046.9	7,213.6	7,046.9	27.4	28.3	1.83	529.3	-1,335.7	638.8	584.5	54.30	11.765		
7,300.0	7,146.9	7,313.6	7,146.9	27.4	28.4	1.83	529.3	-1,335.7	638.8	584.4	54.46	11.730		
7,400.0	7,246.9	7,413.6	7,246.9	27.5	28.4	1.83	529.3	-1,335.7	638.8	584.2	54.63	11.695		
7,500.0	7,346.9	7,513.6	7,346.9	27.6	28.5	1.83	529.3	-1,335.7	638.8	584.0	54.79	11.659		
7,600.0	7,446.9	7,613.6	7,446.9	27.7	28.6	1.83	529.3	-1,335.7	638.8	583.9	54.96	11.624		
7,700.0	7,546.9	7,713.6	7,546.9	27.8	28.7	1.83	529.3	-1,335.7	638.8	583.7	55.13	11.588		
7,800.0	7,646.9	7,813.6	7,646.9	27.9	28.8	1.83	529.3	-1,335.7	638.8	583.5	55.30	11.552		
7,900.0	7,746.9	7,913.6	7,746.9	27.9	28.8	1.83	529.3	-1,335.7	638.8	583.4	55.47	11.516		
8,000.0	7,846.9	8,013.6	7,846.9	28.0	28.9	1.83	529.3	-1,335.7	638.8	583.2	55.65	11.480		
8,100.0	7,946.9	8,113.6	7,946.9	28.1	29.0	1.83	529.3	-1,335.7	638.8	583.0	55.82	11.444		
8,200.0	8,046.9	8,213.6	8,046.9	28.2	29.1	1.83	529.3	-1,335.7	638.8	582.8	56.00	11.408		
8,300.0	8,146.9	8,313.6	8,146.9	28.3	29.2	1.83	529.3	-1,335.7	638.8	582.7	56.18	11.372		
8,400.0	8,246.9	8,413.6	8,246.9	28.4	29.3	1.83	529.3	-1,335.7	638.8	582.5	56.36	11.335		
8,500.0	8,346.9	8,513.6	8,346.9	28.5	29.4	1.83	529.3	-1,335.7	638.8	582.3	56.54	11.299		
8,600.0	8,446.9	8,613.6	8,446.9	28.6	29.4	1.83	529.3	-1,335.7	638.8	582.1	56.72	11.262		
8,700.0	8,546.9	8,713.6	8,546.9	28.7	29.5	1.83	529.3	-1,335.7	638.8	581.9	56.91	11.225		
8,800.0	8,646.9	8,813.6	8,646.9	28.7	29.6	1.83	529.3	-1,335.7	638.8	581.7	57.10	11.189		
8,857.1	8,704.0	8,870.7	8,704.0	28.8	29.7	1.83	529.3	-1,335.7	638.8	581.6	57.20	11.168 SF		

# Directional Plus

## Anticollision Report

<b>Company:</b>	Berry Petroleum Company (NAD 83)	<b>Local Co-ordinate Reference:</b>	Well Oxy 21-14D (Oxy I21 Pad)
<b>Project:</b>	Garfield County	<b>TVD Reference:</b>	KBE @ 8381.0ft (Original Well Elev)
<b>Reference Site:</b>	NESE S21-T6S-R97W (Oxy I21 pad)	<b>MD Reference:</b>	KBE @ 8381.0ft (Original Well Elev)
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Oxy 21-14D (Oxy I21 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 2003.21 US Multi User Db
<b>Reference Design:</b>	Plan #1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design NESE S21-T6S-R97W (Oxy I21 pad) - Oxy 21-17D (Oxy I21 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		Highside Toolface (°)	Distance		Total Uncertainty Axis	Separation Factor	Warning			
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)		Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)						
0.0	0.0	0.0	0.0	0.0	0.0	-32.16	25.1	-15.8	29.7					
100.0	100.0	100.0	100.0	0.1	0.1	-32.16	25.1	-15.8	29.7	29.4	0.30	100.055		
200.0	200.0	200.0	200.0	0.3	0.3	-32.16	25.1	-15.8	29.7	29.0	0.65	45.971 CC, ES		
300.0	300.0	299.4	299.4	0.5	0.5	-33.68	25.5	-17.0	30.7	29.7	0.99	30.865		
400.0	400.0	398.7	398.6	0.7	0.7	58.77	26.8	-20.7	33.2	31.8	1.35	24.629		
500.0	499.9	497.9	497.6	0.9	0.9	58.08	28.9	-26.8	36.4	34.7	1.71	21.296		
600.0	599.7	597.0	596.3	1.1	1.1	58.54	31.7	-35.3	40.5	38.4	2.10	19.298		
700.0	699.3	696.0	694.6	1.3	1.4	59.82	35.4	-46.3	45.2	42.7	2.51	17.986		
800.0	798.6	794.8	792.4	1.5	1.7	61.61	40.0	-59.6	50.8	47.8	2.98	17.042		
900.0	897.5	893.5	889.7	1.8	2.0	63.69	45.3	-75.3	57.2	53.7	3.51	16.302		
1,000.0	996.1	992.1	986.4	2.1	2.4	65.89	51.4	-93.3	64.5	60.4	4.11	15.682		
1,100.0	1,094.2	1,090.4	1,082.4	2.5	2.8	68.07	58.3	-113.7	72.7	67.9	4.80	15.141		
1,200.0	1,191.7	1,188.6	1,177.6	2.9	3.2	70.18	65.9	-136.3	81.9	76.3	5.58	14.659		
1,300.0	1,288.9	1,286.5	1,271.9	3.4	3.7	71.57	74.3	-161.2	92.4	85.9	6.41	14.411 SF		
1,400.0	1,386.1	1,384.1	1,365.3	3.8	4.3	71.63	83.5	-188.3	104.5	97.3	7.23	14.451		
1,500.0	1,483.4	1,481.3	1,457.4	4.2	4.8	70.76	93.4	-217.5	118.4	110.3	8.05	14.709		
1,600.0	1,580.6	1,577.9	1,548.2	4.7	5.5	69.28	104.0	-248.7	134.0	125.1	8.84	15.150		
1,700.0	1,677.8	1,673.7	1,637.4	5.1	6.1	67.45	115.2	-281.8	151.4	141.7	9.61	15.750		
1,800.0	1,775.0	1,768.8	1,725.1	5.5	6.8	65.45	127.0	-316.7	170.7	160.3	10.35	16.497		
1,900.0	1,872.2	1,862.9	1,810.9	6.0	7.6	63.38	139.4	-353.3	192.0	180.9	11.05	17.376		
2,000.0	1,969.4	1,956.1	1,894.9	6.4	8.3	61.34	152.3	-391.5	215.3	203.6	11.72	18.377		
2,100.0	2,066.7	2,048.1	1,976.8	6.9	9.1	59.37	165.7	-431.1	240.8	228.5	12.36	19.487		
2,200.0	2,163.9	2,138.9	2,056.7	7.3	10.0	57.50	179.6	-472.0	268.4	255.4	12.97	20.698		
2,300.0	2,261.1	2,228.5	2,134.5	7.8	10.9	55.75	193.8	-514.1	298.1	284.6	13.55	21.998		
2,400.0	2,358.3	2,316.7	2,210.0	8.2	11.7	54.12	208.4	-557.3	330.0	315.9	14.11	23.380		
2,500.0	2,455.5	2,406.3	2,285.8	8.7	12.7	52.59	223.8	-602.6	363.8	349.1	14.66	24.820		
2,600.0	2,552.8	2,499.9	2,364.6	9.1	13.7	51.22	239.9	-650.3	398.1	382.9	15.21	26.182		
2,700.0	2,650.0	2,593.4	2,443.4	9.6	14.6	50.07	256.0	-697.9	432.6	416.9	15.76	27.450		
2,800.0	2,747.2	2,686.9	2,522.3	10.0	15.6	49.08	272.2	-745.6	467.3	451.0	16.32	28.632		
2,900.0	2,844.4	2,780.4	2,601.1	10.5	16.6	48.24	288.3	-793.3	502.0	485.2	16.88	29.734		
3,000.0	2,941.6	2,874.0	2,680.0	10.9	17.6	47.50	304.4	-840.9	536.9	519.4	17.45	30.764		
3,100.0	3,038.8	2,967.5	2,758.8	11.4	18.6	46.85	320.6	-888.6	571.8	553.8	18.02	31.727		
3,200.0	3,136.1	3,061.0	2,837.6	11.9	19.6	46.28	336.7	-936.2	606.8	588.2	18.60	32.630		
3,300.0	3,233.3	3,154.5	2,916.5	12.3	20.6	45.77	352.8	-983.9	641.8	622.6	19.17	33.477		
3,400.0	3,330.5	3,248.0	2,995.3	12.8	21.6	45.31	369.0	-1,031.6	676.8	657.1	19.75	34.274		
3,500.0	3,427.7	3,341.6	3,074.1	13.2	22.5	44.90	385.1	-1,079.2	711.9	691.6	20.33	35.023		
3,600.0	3,524.9	3,435.1	3,153.0	13.7	23.5	44.52	401.2	-1,126.9	747.0	726.1	20.91	35.731		
3,700.0	3,622.2	3,528.6	3,231.8	14.1	24.5	44.18	417.4	-1,174.5	782.2	760.7	21.49	36.398		
3,800.0	3,719.4	3,622.1	3,310.6	14.6	25.5	43.87	433.5	-1,222.2	817.4	795.3	22.07	37.030		
3,900.0	3,816.6	3,715.7	3,389.5	15.0	26.5	43.58	449.6	-1,269.8	852.5	829.9	22.66	37.628		
4,000.0	3,913.8	3,809.2	3,468.3	15.5	27.5	43.32	465.8	-1,317.5	887.8	864.5	23.24	38.196		
4,100.0	4,011.0	3,902.7	3,547.1	15.9	28.5	43.08	481.9	-1,365.2	923.0	899.1	23.83	38.734		
4,200.0	4,108.2	3,996.2	3,626.0	16.4	29.5	42.85	498.0	-1,412.8	958.2	933.8	24.42	39.246		
4,300.0	4,205.5	4,089.8	3,704.8	16.8	30.5	42.64	514.2	-1,460.5	993.5	968.4	25.00	39.734		
4,400.0	4,302.7	4,183.3	3,783.6	17.3	31.5	42.45	530.3	-1,508.1	1,028.7	1,003.1	25.59	40.198		
4,500.0	4,399.9	4,276.8	3,862.5	17.7	32.5	42.26	546.4	-1,555.8	1,064.0	1,037.8	26.18	40.641		
4,600.0	4,497.1	4,370.3	3,941.3	18.2	33.5	42.09	562.6	-1,603.4	1,099.2	1,072.5	26.77	41.065		

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

# Directional Plus

## Anticollision Report

<b>Company:</b>	Berry Petroleum Company (NAD 83)	<b>Local Co-ordinate Reference:</b>	Well Oxy 21-14D (Oxy I21 Pad)
<b>Project:</b>	Garfield County	<b>TVD Reference:</b>	KBE @ 8381.0ft (Original Well Elev)
<b>Reference Site:</b>	NESE S21-T6S-R97W (Oxy I21 pad)	<b>MD Reference:</b>	KBE @ 8381.0ft (Original Well Elev)
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Oxy 21-14D (Oxy I21 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 2003.21 US Multi User Db
<b>Reference Design:</b>	Plan #1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design NESE S21-T6S-R97W (Oxy I21 pad) - Oxy 21-1D (Oxy I21 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		Highside Toolface (°)	Distance		Total Uncertainty Axis	Separation Factor	Warning			
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)		Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)						
0.0	0.0	0.0	0.0	0.0	0.0	147.27	-113.3	72.8	134.6					
100.0	100.0	100.0	100.0	0.1	0.1	147.27	-113.3	72.8	134.6	134.4	0.30	453.815		
200.0	200.0	200.0	200.0	0.3	0.3	147.27	-113.3	72.8	134.6	134.0	0.65	208.510		
300.0	300.0	300.0	300.0	0.5	0.5	147.27	-113.3	72.8	134.6	133.7	0.99	135.349 CC, ES		
400.0	400.0	397.2	397.2	0.7	0.7	-118.26	-114.5	72.7	136.3	135.0	1.34	101.658		
500.0	499.9	494.3	494.2	0.9	0.8	-118.67	-118.2	72.5	141.2	139.5	1.69	83.327		
600.0	599.7	591.0	590.7	1.1	1.0	-119.28	-124.3	72.1	149.5	147.4	2.07	72.358		
700.0	699.3	687.2	686.5	1.3	1.3	-120.02	-132.8	71.6	161.0	158.5	2.46	65.424		
800.0	798.6	782.8	781.5	1.5	1.5	-120.81	-143.7	70.9	175.8	172.9	2.89	60.888		
900.0	897.5	877.6	875.4	1.8	1.8	-121.59	-156.8	70.1	193.9	190.5	3.35	57.856		
1,000.0	996.1	971.4	968.0	2.1	2.0	-122.31	-172.0	69.2	215.2	211.3	3.86	55.799		
1,100.0	1,094.2	1,064.2	1,059.1	2.5	2.4	-122.95	-189.3	68.1	239.7	235.3	4.41	54.393		
1,200.0	1,191.7	1,155.8	1,148.6	2.9	2.7	-123.49	-208.6	66.9	267.4	262.4	5.01	53.420		
1,300.0	1,288.9	1,246.2	1,236.6	3.4	3.1	-124.13	-229.7	65.6	297.5	291.9	5.63	52.802		
1,400.0	1,386.1	1,335.8	1,323.2	3.8	3.5	-124.39	-252.6	64.2	329.3	323.0	6.29	52.368		
1,500.0	1,483.4	1,425.2	1,409.0	4.2	4.0	-124.36	-277.5	62.6	362.6	355.6	6.96	52.092		
1,600.0	1,580.6	1,519.3	1,499.1	4.7	4.4	-124.25	-304.4	60.9	396.5	388.8	7.66	51.764		
1,700.0	1,677.8	1,613.4	1,589.3	5.1	4.9	-124.15	-331.4	59.3	430.3	422.0	8.36	51.452		
1,800.0	1,775.0	1,707.5	1,679.4	5.5	5.4	-124.07	-358.3	57.6	464.2	455.2	9.07	51.161		
1,900.0	1,872.2	1,801.5	1,769.5	6.0	5.9	-124.00	-385.3	55.9	498.1	488.3	9.79	50.892		
2,000.0	1,969.4	1,895.6	1,859.6	6.4	6.4	-123.94	-412.2	54.2	532.0	521.5	10.50	50.646		
2,100.0	2,066.7	1,989.7	1,949.7	6.9	6.9	-123.88	-439.2	52.6	565.9	554.7	11.22	50.420		
2,200.0	2,163.9	2,083.8	2,039.9	7.3	7.4	-123.84	-466.1	50.9	599.8	587.8	11.94	50.212		
2,300.0	2,261.1	2,177.9	2,130.0	7.8	7.9	-123.79	-493.1	49.2	633.7	621.0	12.67	50.022		
2,400.0	2,358.3	2,271.9	2,220.1	8.2	8.3	-123.76	-520.0	47.6	667.6	654.2	13.39	49.848		
2,500.0	2,455.5	2,366.0	2,310.2	8.7	8.8	-123.72	-547.0	45.9	701.4	687.3	14.12	49.687		
2,600.0	2,552.8	2,460.1	2,400.4	9.1	9.3	-123.69	-573.9	44.2	735.3	720.5	14.84	49.539		
2,700.0	2,650.0	2,554.2	2,490.5	9.6	9.8	-123.66	-600.9	42.5	769.2	753.7	15.57	49.402		
2,800.0	2,747.2	2,648.3	2,580.6	10.0	10.3	-123.64	-627.8	40.9	803.1	786.8	16.30	49.275		
2,900.0	2,844.4	2,742.3	2,670.7	10.5	10.8	-123.61	-654.8	39.2	837.0	820.0	17.03	49.157		
3,000.0	2,941.6	2,836.4	2,760.9	10.9	11.3	-123.59	-681.7	37.5	870.9	853.1	17.76	49.047		
3,100.0	3,038.8	2,930.5	2,851.0	11.4	11.8	-123.57	-708.7	35.9	904.8	886.3	18.49	48.944		
3,200.0	3,136.1	3,024.6	2,941.1	11.9	12.3	-123.55	-735.6	34.2	938.7	919.5	19.22	48.848		
3,300.0	3,233.3	3,118.7	3,031.2	12.3	12.8	-123.53	-762.6	32.5	972.6	952.6	19.95	48.759		
3,400.0	3,330.5	3,212.8	3,121.4	12.8	13.3	-123.52	-789.5	30.8	1,006.5	985.8	20.68	48.674		
3,500.0	3,427.7	3,306.8	3,211.5	13.2	13.8	-123.50	-816.5	29.2	1,040.3	1,018.9	21.41	48.595		
3,600.0	3,524.9	3,400.9	3,301.6	13.7	14.3	-123.49	-843.4	27.5	1,074.2	1,052.1	22.14	48.521		
3,700.0	3,622.2	3,495.0	3,391.7	14.1	14.8	-123.47	-870.4	25.8	1,108.1	1,085.3	22.87	48.450 SF		

# Directional Plus

## Anticollision Report

<b>Company:</b>	Berry Petroleum Company (NAD 83)	<b>Local Co-ordinate Reference:</b>	Well Oxy 21-14D (Oxy I21 Pad)
<b>Project:</b>	Garfield County	<b>TVD Reference:</b>	KBE @ 8381.0ft (Original Well Elev)
<b>Reference Site:</b>	NESE S21-T6S-R97W (Oxy I21 pad)	<b>MD Reference:</b>	KBE @ 8381.0ft (Original Well Elev)
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Oxy 21-14D (Oxy I21 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 2003.21 US Multi User Db
<b>Reference Design:</b>	Plan #1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design NESE S21-T6S-R97W (Oxy I21 pad) - Oxy 21-2D (Oxy I21 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	129.09	-20.4	25.1	32.4							
100.0	100.0	100.0	100.0	0.1	0.1	129.09	-20.4	25.1	32.4	32.1	0.30	109.039				
200.0	200.0	200.0	200.0	0.3	0.3	129.09	-20.4	25.1	32.4	31.7	0.65	50.099	CC, ES			
300.0	300.0	299.4	299.4	0.5	0.5	130.77	-21.7	25.2	33.2	32.2	0.99	33.390				
400.0	400.0	398.7	398.6	0.7	0.7	-131.60	-25.6	25.3	36.8	35.5	1.35	27.308				
500.0	499.9	497.7	497.4	0.9	0.9	-129.45	-32.0	25.5	44.1	42.4	1.71	25.742	SF			
600.0	599.7	596.1	595.4	1.1	1.1	-128.25	-40.9	25.8	55.0	52.9	2.10	26.225				
700.0	699.3	693.9	692.5	1.3	1.4	-127.71	-52.3	26.2	69.4	66.9	2.51	27.697				
800.0	798.6	790.7	788.4	1.5	1.6	-127.55	-66.0	26.7	87.3	84.4	2.95	29.628				
900.0	897.5	886.6	882.9	1.8	2.0	-127.56	-81.9	27.2	108.7	105.2	3.43	31.726				
1,000.0	996.1	981.2	975.8	2.1	2.3	-127.65	-100.0	27.8	133.4	129.5	3.94	33.830				
1,100.0	1,094.2	1,074.5	1,066.9	2.5	2.7	-127.74	-120.0	28.5	161.4	156.9	4.50	35.861				
1,200.0	1,191.7	1,169.1	1,158.9	2.9	3.1	-127.99	-141.8	29.3	192.2	187.1	5.10	37.667				
1,300.0	1,288.9	1,263.9	1,251.2	3.4	3.5	-128.73	-163.8	30.0	223.8	218.1	5.73	39.088				
1,400.0	1,386.1	1,358.7	1,343.4	3.8	3.9	-129.29	-185.7	30.8	255.5	249.1	6.36	40.178				
1,500.0	1,483.4	1,453.6	1,435.7	4.2	4.3	-129.73	-207.6	31.5	287.2	280.2	7.00	41.038				
1,600.0	1,580.6	1,548.4	1,527.9	4.7	4.7	-130.08	-229.5	32.3	318.8	311.2	7.64	41.731				
1,700.0	1,677.8	1,643.2	1,620.2	5.1	5.1	-130.37	-251.4	33.0	350.5	342.3	8.29	42.301				
1,800.0	1,775.0	1,738.1	1,712.5	5.5	5.5	-130.61	-273.4	33.8	382.2	373.3	8.94	42.776				
1,900.0	1,872.2	1,832.9	1,804.7	6.0	5.9	-130.82	-295.3	34.5	413.9	404.4	9.59	43.178				
2,000.0	1,969.4	1,927.7	1,897.0	6.4	6.3	-130.99	-317.2	35.3	445.7	435.4	10.24	43.521				
2,100.0	2,066.7	2,022.6	1,989.2	6.9	6.7	-131.14	-339.1	36.0	477.4	466.5	10.89	43.819				
2,200.0	2,163.9	2,117.4	2,081.5	7.3	7.2	-131.28	-361.1	36.8	509.1	497.5	11.55	44.078				
2,300.0	2,261.1	2,212.2	2,173.8	7.8	7.6	-131.39	-383.0	37.5	540.8	528.6	12.21	44.306				
2,400.0	2,358.3	2,307.1	2,266.0	8.2	8.0	-131.50	-404.9	38.3	572.5	559.7	12.86	44.509				
2,500.0	2,455.5	2,401.9	2,358.3	8.7	8.4	-131.59	-426.8	39.0	604.2	590.7	13.52	44.689				
2,600.0	2,552.8	2,496.7	2,450.5	9.1	8.8	-131.67	-448.8	39.8	636.0	621.8	14.18	44.851				
2,700.0	2,650.0	2,591.6	2,542.8	9.6	9.2	-131.75	-470.7	40.6	667.7	652.8	14.84	44.997				
2,800.0	2,747.2	2,686.4	2,635.1	10.0	9.6	-131.82	-492.6	41.3	699.4	683.9	15.50	45.129				
2,900.0	2,844.4	2,781.2	2,727.3	10.5	10.1	-131.88	-514.5	42.1	731.1	715.0	16.16	45.250				
3,000.0	2,941.6	2,876.1	2,819.6	10.9	10.5	-131.94	-536.4	42.8	762.9	746.0	16.82	45.360				
3,100.0	3,038.8	2,970.9	2,911.8	11.4	10.9	-131.99	-558.4	43.6	794.6	777.1	17.48	45.461				
3,200.0	3,136.1	3,065.7	3,004.1	11.9	11.3	-132.04	-580.3	44.3	826.3	808.2	18.14	45.554				
3,300.0	3,233.3	3,160.5	3,096.4	12.3	11.7	-132.09	-602.2	45.1	858.0	839.2	18.80	45.640				
3,400.0	3,330.5	3,255.4	3,188.6	12.8	12.1	-132.13	-624.1	45.8	889.8	870.3	19.46	45.719				
3,500.0	3,427.7	3,350.2	3,280.9	13.2	12.6	-132.17	-646.1	46.6	921.5	901.4	20.12	45.793				
3,600.0	3,524.9	3,445.0	3,373.1	13.7	13.0	-132.20	-668.0	47.3	953.2	932.4	20.78	45.862				
3,700.0	3,622.2	3,539.9	3,465.4	14.1	13.4	-132.24	-689.9	48.1	985.0	963.5	21.45	45.926				
3,800.0	3,719.4	3,634.7	3,557.7	14.6	13.8	-132.27	-711.8	48.8	1,016.7	994.6	22.11	45.986				
3,900.0	3,816.6	3,729.5	3,649.9	15.0	14.2	-132.30	-733.7	49.6	1,048.4	1,025.6	22.77	46.042				
4,000.0	3,913.8	3,824.4	3,742.2	15.5	14.6	-132.33	-755.7	50.3	1,080.1	1,056.7	23.43	46.095				
4,100.0	4,011.0	3,919.2	3,834.4	15.9	15.1	-132.36	-777.6	51.1	1,111.9	1,087.8	24.10	46.145				



# Directional Plus

## Anticollision Report

<b>Company:</b>	Berry Petroleum Company (NAD 83)	<b>Local Co-ordinate Reference:</b>	Well Oxy 21-14D (Oxy I21 Pad)
<b>Project:</b>	Garfield County	<b>TVD Reference:</b>	KBE @ 8381.0ft (Original Well Elev)
<b>Reference Site:</b>	NESE S21-T6S-R97W (Oxy I21 pad)	<b>MD Reference:</b>	KBE @ 8381.0ft (Original Well Elev)
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Oxy 21-14D (Oxy I21 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 2003.21 US Multi User Db
<b>Reference Design:</b>	Plan #1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design NESE S21-T6S-R97W (Oxy I21 pad) - Oxy 21-3D (Oxy I21 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	145.37	-94.0	64.9	114.2							
100.0	100.0	100.0	100.0	0.1	0.1	145.37	-94.0	64.9	114.2	113.9	0.30	384.909				
200.0	200.0	200.0	200.0	0.3	0.3	145.37	-94.0	64.9	114.2	113.6	0.65	176.850				
300.0	300.0	300.0	300.0	0.5	0.5	145.37	-94.0	64.9	114.2	113.2	0.99	114.797 CC, ES				
400.0	400.0	400.0	400.0	0.7	0.7	-120.58	-94.0	64.9	114.9	113.5	1.34	85.404				
500.0	499.9	499.9	499.9	0.9	0.8	-122.21	-94.0	64.9	116.9	115.2	1.70	68.757				
600.0	599.7	597.5	597.5	1.1	1.0	-124.31	-95.2	64.8	121.4	119.4	2.06	58.895				
700.0	699.3	694.8	694.7	1.3	1.2	-126.33	-98.9	64.4	129.4	127.0	2.44	53.068				
800.0	798.6	791.7	791.4	1.5	1.4	-128.13	-105.1	63.9	140.9	138.1	2.84	49.649				
900.0	897.5	888.1	887.4	1.8	1.6	-129.64	-113.6	63.1	155.8	152.5	3.26	47.718				
1,000.0	996.1	983.7	982.4	2.1	1.8	-130.82	-124.4	62.1	174.0	170.2	3.72	46.713				
1,100.0	1,094.2	1,078.5	1,076.3	2.5	2.1	-131.71	-137.5	60.9	195.5	191.2	4.22	46.280				
1,200.0	1,191.7	1,173.0	1,169.6	2.9	2.3	-132.36	-152.8	59.5	220.1	215.4	4.76	46.218				
1,300.0	1,288.9	1,269.5	1,264.7	3.4	2.6	-133.23	-169.1	58.1	246.2	240.8	5.33	46.222				
1,400.0	1,386.1	1,366.0	1,359.8	3.8	2.9	-133.93	-185.3	56.6	272.2	266.4	5.90	46.155				
1,500.0	1,483.4	1,462.5	1,454.9	4.2	3.2	-134.52	-201.6	55.1	298.4	291.9	6.48	46.052				
1,600.0	1,580.6	1,559.0	1,550.0	4.7	3.6	-135.00	-217.9	53.6	324.5	317.4	7.06	45.933				
1,700.0	1,677.8	1,655.5	1,645.1	5.1	3.9	-135.42	-234.1	52.2	350.6	343.0	7.65	45.809				
1,800.0	1,775.0	1,752.0	1,740.2	5.5	4.2	-135.78	-250.4	50.7	376.8	368.6	8.25	45.687				
1,900.0	1,872.2	1,848.5	1,835.3	6.0	4.5	-136.09	-266.6	49.2	403.0	394.1	8.84	45.569				
2,000.0	1,969.4	1,945.0	1,930.4	6.4	4.8	-136.37	-282.9	47.7	429.2	419.7	9.44	45.456				
2,100.0	2,066.7	2,041.5	2,025.5	6.9	5.1	-136.61	-299.2	46.2	455.4	445.3	10.04	45.351				
2,200.0	2,163.9	2,137.9	2,120.6	7.3	5.5	-136.82	-315.4	44.8	481.6	470.9	10.64	45.251				
2,300.0	2,261.1	2,234.4	2,215.7	7.8	5.8	-137.02	-331.7	43.3	507.8	496.5	11.24	45.158				
2,400.0	2,358.3	2,330.9	2,310.8	8.2	6.1	-137.19	-347.9	41.8	534.0	522.2	11.85	45.072				
2,500.0	2,455.5	2,427.4	2,405.9	8.7	6.4	-137.35	-364.2	40.3	560.2	547.8	12.45	44.990				
2,600.0	2,552.8	2,523.9	2,501.0	9.1	6.8	-137.50	-380.5	38.8	586.4	573.4	13.06	44.915				
2,700.0	2,650.0	2,620.4	2,596.1	9.6	7.1	-137.63	-396.7	37.4	612.7	599.0	13.66	44.844				
2,800.0	2,747.2	2,716.9	2,691.2	10.0	7.4	-137.75	-413.0	35.9	638.9	624.6	14.27	44.777				
2,900.0	2,844.4	2,813.4	2,786.3	10.5	7.8	-137.86	-429.3	34.4	665.1	650.3	14.87	44.715				
3,000.0	2,941.6	2,909.9	2,881.4	10.9	8.1	-137.96	-445.5	32.9	691.4	675.9	15.48	44.657				
3,100.0	3,038.8	3,006.4	2,976.5	11.4	8.4	-138.06	-461.8	31.5	717.6	701.5	16.09	44.602				
3,200.0	3,136.1	3,102.9	3,071.6	11.9	8.7	-138.15	-478.0	30.0	743.8	727.1	16.70	44.550				
3,300.0	3,233.3	3,199.3	3,166.7	12.3	9.1	-138.23	-494.3	28.5	770.1	752.8	17.30	44.502				
3,400.0	3,330.5	3,295.8	3,261.8	12.8	9.4	-138.31	-510.6	27.0	796.3	778.4	17.91	44.456				
3,500.0	3,427.7	3,392.3	3,356.9	13.2	9.7	-138.38	-526.8	25.5	822.5	804.0	18.52	44.412				
3,600.0	3,524.9	3,488.8	3,452.0	13.7	10.0	-138.45	-543.1	24.1	848.8	829.7	19.13	44.371				
3,700.0	3,622.2	3,585.3	3,547.1	14.1	10.4	-138.51	-559.3	22.6	875.0	855.3	19.74	44.332				
3,800.0	3,719.4	3,681.8	3,642.2	14.6	10.7	-138.57	-575.6	21.1	901.3	880.9	20.35	44.295				
3,900.0	3,816.6	3,778.3	3,737.3	15.0	11.0	-138.63	-591.9	19.6	927.5	906.6	20.96	44.260				
4,000.0	3,913.8	3,874.8	3,832.4	15.5	11.4	-138.68	-608.1	18.1	953.8	932.2	21.57	44.227				
4,100.0	4,011.0	3,971.3	3,927.4	15.9	11.7	-138.73	-624.4	16.7	980.0	957.8	22.17	44.195				
4,200.0	4,108.2	4,067.8	4,022.5	16.4	12.0	-138.78	-640.7	15.2	1,006.3	983.5	22.78	44.165				
4,300.0	4,205.5	4,164.3	4,117.6	16.8	12.4	-138.83	-656.9	13.7	1,032.5	1,009.1	23.39	44.136				
4,400.0	4,302.7	4,260.7	4,212.7	17.3	12.7	-138.87	-673.2	12.2	1,058.8	1,034.7	24.00	44.109				
4,500.0	4,399.9	4,357.2	4,307.8	17.7	13.0	-138.91	-689.4	10.7	1,085.0	1,060.4	24.61	44.083				
4,600.0	4,497.1	4,453.7	4,402.9	18.2	13.3	-138.95	-705.7	9.3	1,111.3	1,086.0	25.22	44.057 SF				

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

# Directional Plus

## Anticollision Report

<b>Company:</b>	Berry Petroleum Company (NAD 83)	<b>Local Co-ordinate Reference:</b>	Well Oxy 21-14D (Oxy I21 Pad)
<b>Project:</b>	Garfield County	<b>TVD Reference:</b>	KBE @ 8381.0ft (Original Well Elev)
<b>Reference Site:</b>	NESE S21-T6S-R97W (Oxy I21 pad)	<b>MD Reference:</b>	KBE @ 8381.0ft (Original Well Elev)
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Oxy 21-14D (Oxy I21 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 2003.21 US Multi User Db
<b>Reference Design:</b>	Plan #1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design NESE S21-T6S-R97W (Oxy I21 pad) - Oxy 21-4D (Oxy I21 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 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	147.37	-88.1	56.4	104.7				
100.0	100.0	100.0	100.0	0.1	0.1	147.37	-88.1	56.4	104.7	104.4	0.30	352.750	
200.0	200.0	200.0	200.0	0.3	0.3	147.37	-88.1	56.4	104.7	104.0	0.65	162.074	
300.0	300.0	300.0	300.0	0.5	0.5	147.37	-88.1	56.4	104.7	103.7	0.99	105.206 CC, ES	
400.0	400.0	400.0	400.0	0.7	0.7	-118.64	-88.1	56.4	105.3	103.9	1.35	78.277	
500.0	499.9	499.9	499.9	0.9	0.8	-120.46	-88.1	56.4	107.2	105.5	1.70	63.046	
600.0	599.7	599.7	599.7	1.1	1.0	-123.33	-88.1	56.4	110.7	108.6	2.07	53.576	
700.0	699.3	697.3	697.3	1.3	1.2	-126.49	-89.4	56.3	116.8	114.4	2.44	47.868	
800.0	798.6	794.7	794.6	1.5	1.4	-129.30	-93.1	55.8	126.5	123.6	2.83	44.694	
900.0	897.5	891.7	891.4	1.8	1.6	-131.60	-99.2	54.9	139.6	136.4	3.24	43.090	
1,000.0	996.1	988.0	987.4	2.1	1.8	-133.38	-107.7	53.7	156.2	152.5	3.68	42.454	
1,100.0	1,094.2	1,085.1	1,083.8	2.5	2.0	-134.81	-118.2	52.3	175.8	171.6	4.15	42.396 SF	
1,200.0	1,191.7	1,182.5	1,180.7	2.9	2.2	-136.38	-129.0	50.8	197.4	192.8	4.64	42.596	
1,300.0	1,288.9	1,279.7	1,277.2	3.4	2.4	-138.07	-139.8	49.3	220.3	215.1	5.13	42.943	
1,400.0	1,386.1	1,376.9	1,373.8	3.8	2.7	-139.45	-150.5	47.8	243.2	237.6	5.63	43.229	
1,500.0	1,483.4	1,474.0	1,470.3	4.2	2.9	-140.59	-161.3	46.4	266.3	260.2	6.13	43.473	
1,600.0	1,580.6	1,571.2	1,566.9	4.7	3.1	-141.55	-172.1	44.9	289.5	282.9	6.63	43.682	
1,700.0	1,677.8	1,668.4	1,663.5	5.1	3.4	-142.37	-182.8	43.4	312.7	305.6	7.13	43.865	
1,800.0	1,775.0	1,765.6	1,760.0	5.5	3.6	-143.07	-193.6	41.9	336.0	328.4	7.63	44.027	
1,900.0	1,872.2	1,862.7	1,856.6	6.0	3.9	-143.69	-204.3	40.4	359.4	351.2	8.14	44.170	
2,000.0	1,969.4	1,959.9	1,953.2	6.4	4.1	-144.22	-215.1	38.9	382.7	374.1	8.64	44.299	
2,100.0	2,066.7	2,057.1	2,049.7	6.9	4.4	-144.70	-225.9	37.5	406.1	397.0	9.14	44.414	
2,200.0	2,163.9	2,154.2	2,146.3	7.3	4.6	-145.13	-236.6	36.0	429.5	419.9	9.65	44.519	
2,300.0	2,261.1	2,251.4	2,242.9	7.8	4.9	-145.51	-247.4	34.5	453.0	442.8	10.15	44.615	
2,400.0	2,358.3	2,348.6	2,339.4	8.2	5.1	-145.85	-258.2	33.0	476.4	465.8	10.66	44.702	
2,500.0	2,455.5	2,445.8	2,436.0	8.7	5.4	-146.16	-268.9	31.5	499.9	488.7	11.16	44.782	
2,600.0	2,552.8	2,542.9	2,532.5	9.1	5.6	-146.44	-279.7	30.0	523.4	511.7	11.67	44.856	
2,700.0	2,650.0	2,640.1	2,629.1	9.6	5.9	-146.70	-290.5	28.6	546.9	534.7	12.17	44.924	
2,800.0	2,747.2	2,737.3	2,725.7	10.0	6.1	-146.94	-301.2	27.1	570.4	557.7	12.68	44.987	
2,900.0	2,844.4	2,834.5	2,822.2	10.5	6.4	-147.16	-312.0	25.6	593.9	580.7	13.18	45.046	
3,000.0	2,941.6	2,931.6	2,918.8	10.9	6.6	-147.36	-322.8	24.1	617.4	603.7	13.69	45.101	
3,100.0	3,038.8	3,028.8	3,015.4	11.4	6.9	-147.55	-333.5	22.6	640.9	626.7	14.19	45.153	
3,200.0	3,136.1	3,126.0	3,111.9	11.9	7.1	-147.72	-344.3	21.2	664.5	649.8	14.70	45.201	
3,300.0	3,233.3	3,223.2	3,208.5	12.3	7.4	-147.88	-355.1	19.7	688.0	672.8	15.21	45.246	
3,400.0	3,330.5	3,320.3	3,305.1	12.8	7.6	-148.03	-365.8	18.2	711.5	695.8	15.71	45.288	
3,500.0	3,427.7	3,417.5	3,401.6	13.2	7.9	-148.18	-376.6	16.7	735.1	718.9	16.22	45.328	
3,600.0	3,524.9	3,514.7	3,498.2	13.7	8.1	-148.31	-387.4	15.2	758.6	741.9	16.72	45.366	
3,700.0	3,622.2	3,611.8	3,594.7	14.1	8.4	-148.43	-398.1	13.7	782.2	765.0	17.23	45.402	
3,800.0	3,719.4	3,709.0	3,691.3	14.6	8.6	-148.55	-408.9	12.3	805.7	788.0	17.73	45.436	
3,900.0	3,816.6	3,806.2	3,787.9	15.0	8.9	-148.66	-419.6	10.8	829.3	811.1	18.24	45.468	
4,000.0	3,913.8	3,903.4	3,884.4	15.5	9.1	-148.77	-430.4	9.3	852.9	834.1	18.75	45.498	
4,100.0	4,011.0	4,000.5	3,981.0	15.9	9.4	-148.87	-441.2	7.8	876.4	857.2	19.25	45.527	
4,200.0	4,108.2	4,097.7	4,077.6	16.4	9.6	-148.96	-451.9	6.3	900.0	880.2	19.76	45.555	
4,300.0	4,205.5	4,194.9	4,174.1	16.8	9.9	-149.05	-462.7	4.8	923.6	903.3	20.26	45.581	
4,400.0	4,302.7	4,292.1	4,270.7	17.3	10.2	-149.13	-473.5	3.4	947.1	926.4	20.77	45.606	
4,500.0	4,399.9	4,389.2	4,367.2	17.7	10.4	-149.21	-484.2	1.9	970.7	949.4	21.27	45.630	
4,600.0	4,497.1	4,486.4	4,463.8	18.2	10.7	-149.29	-495.0	0.4	994.3	972.5	21.78	45.653	
4,700.0	4,594.3	4,583.6	4,560.4	18.7	10.9	-149.36	-505.8	-1.1	1,017.9	995.6	22.28	45.675	
4,800.0	4,691.6	4,680.7	4,656.9	19.1	11.2	-149.43	-516.5	-2.6	1,041.4	1,018.6	22.79	45.696	
4,900.0	4,788.8	4,777.9	4,753.5	19.6	11.4	-149.50	-527.3	-4.1	1,065.0	1,041.7	23.30	45.716	
5,000.0	4,886.0	4,875.1	4,850.1	20.0	11.7	-149.57	-538.1	-5.5	1,088.6	1,064.8	23.80	45.735	

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

# Directional Plus

## Anticollision Report

<b>Company:</b>	Berry Petroleum Company (NAD 83)	<b>Local Co-ordinate Reference:</b>	Well Oxy 21-14D (Oxy I21 Pad)
<b>Project:</b>	Garfield County	<b>TVD Reference:</b>	KBE @ 8381.0ft (Original Well Elev)
<b>Reference Site:</b>	NESE S21-T6S-R97W (Oxy I21 pad)	<b>MD Reference:</b>	KBE @ 8381.0ft (Original Well Elev)
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Oxy 21-14D (Oxy I21 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 2003.21 US Multi User Db
<b>Reference Design:</b>	Plan #1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design NESE S21-T6S-R97W (Oxy I21 pad) - Oxy 21-5D (Oxy I21 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 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	147.36	-75.8	48.5	90.0					
100.0	100.0	100.0	100.0	0.1	0.1	147.36	-75.8	48.5	90.0	89.7	0.30	303.241		
200.0	200.0	200.0	200.0	0.3	0.3	147.36	-75.8	48.5	90.0	89.3	0.65	139.327		
300.0	300.0	300.0	300.0	0.5	0.5	147.36	-75.8	48.5	90.0	89.0	0.99	90.440 CC, ES		
400.0	400.0	400.0	400.0	0.7	0.7	-118.76	-75.8	48.5	90.6	89.3	1.35	67.357		
500.0	499.9	499.9	499.9	0.9	0.8	-120.86	-75.8	48.5	92.5	90.8	1.70	54.421		
600.0	599.7	599.7	599.7	1.1	1.0	-124.17	-75.8	48.5	96.1	94.0	2.07	46.515		
700.0	699.3	697.7	697.7	1.3	1.2	-127.73	-77.0	48.3	102.2	99.8	2.44	41.925		
800.0	798.6	795.5	795.4	1.5	1.4	-130.75	-80.7	47.6	111.9	109.1	2.83	39.577		
900.0	897.5	893.1	892.8	1.8	1.6	-133.11	-86.8	46.4	124.9	121.7	3.24	38.595		
1,000.0	996.1	991.7	991.1	2.1	1.7	-135.36	-94.0	44.9	140.5	136.8	3.67	38.330 SF		
1,100.0	1,094.2	1,089.9	1,089.0	2.5	1.9	-137.77	-101.3	43.5	158.2	154.1	4.11	38.527		
1,200.0	1,191.7	1,187.6	1,186.5	2.9	2.1	-140.18	-108.5	42.1	178.1	173.5	4.55	39.109		
1,300.0	1,288.9	1,285.0	1,283.6	3.4	2.3	-142.51	-115.6	40.7	199.4	194.4	5.00	39.877		
1,400.0	1,386.1	1,382.4	1,380.8	3.8	2.6	-144.39	-122.8	39.2	220.9	215.4	5.44	40.583		
1,500.0	1,483.4	1,479.8	1,477.9	4.2	2.8	-145.95	-130.0	37.8	242.6	236.7	5.88	41.231		
1,600.0	1,580.6	1,577.3	1,575.1	4.7	3.0	-147.24	-137.1	36.4	264.4	258.1	6.32	41.822		
1,700.0	1,677.8	1,674.7	1,672.2	5.1	3.2	-148.34	-144.3	35.0	286.4	279.6	6.76	42.362		
1,800.0	1,775.0	1,772.1	1,769.3	5.5	3.4	-149.28	-151.5	33.6	308.5	301.3	7.20	42.855		
1,900.0	1,872.2	1,869.5	1,866.5	6.0	3.6	-150.10	-158.6	32.2	330.6	322.9	7.63	43.306		
2,000.0	1,969.4	1,967.0	1,963.6	6.4	3.8	-150.81	-165.8	30.8	352.8	344.7	8.07	43.720		
2,100.0	2,066.7	2,064.4	2,060.8	6.9	4.0	-151.44	-173.0	29.3	375.0	366.5	8.50	44.100		
2,200.0	2,163.9	2,161.8	2,157.9	7.3	4.2	-152.00	-180.2	27.9	397.2	388.3	8.94	44.451		
2,300.0	2,261.1	2,259.2	2,255.1	7.8	4.4	-152.50	-187.3	26.5	419.5	410.2	9.37	44.775		
2,400.0	2,358.3	2,356.6	2,352.2	8.2	4.6	-152.95	-194.5	25.1	441.8	432.0	9.80	45.075		
2,500.0	2,455.5	2,454.1	2,449.4	8.7	4.8	-153.35	-201.7	23.7	464.2	454.0	10.23	45.353		
2,600.0	2,552.8	2,551.5	2,546.5	9.1	5.1	-153.72	-208.8	22.3	486.5	475.9	10.67	45.612		
2,700.0	2,650.0	2,648.9	2,643.7	9.6	5.3	-154.06	-216.0	20.8	508.9	497.8	11.10	45.853		
2,800.0	2,747.2	2,746.3	2,740.8	10.0	5.5	-154.37	-223.2	19.4	531.3	519.8	11.53	46.079		
2,900.0	2,844.4	2,843.8	2,838.0	10.5	5.7	-154.65	-230.3	18.0	553.7	541.8	11.96	46.290		
3,000.0	2,941.6	2,941.2	2,935.1	10.9	5.9	-154.91	-237.5	16.6	576.2	563.8	12.39	46.488		
3,100.0	3,038.8	3,038.6	3,032.3	11.4	6.1	-155.15	-244.7	15.2	598.6	585.8	12.82	46.675		
3,200.0	3,136.1	3,136.0	3,129.4	11.9	6.3	-155.38	-251.8	13.8	621.0	607.8	13.26	46.850		
3,300.0	3,233.3	3,233.4	3,226.6	12.3	6.5	-155.59	-259.0	12.4	643.5	629.8	13.69	47.015		
3,400.0	3,330.5	3,330.9	3,323.7	12.8	6.7	-155.78	-266.2	10.9	665.9	651.8	14.12	47.172		
3,500.0	3,427.7	3,428.3	3,420.9	13.2	6.9	-155.96	-273.4	9.5	688.4	673.8	14.55	47.319		
3,600.0	3,524.9	3,525.7	3,518.0	13.7	7.2	-156.13	-280.5	8.1	710.9	695.9	14.98	47.459		
3,700.0	3,622.2	3,623.1	3,615.1	14.1	7.4	-156.29	-287.7	6.7	733.3	717.9	15.41	47.592		
3,800.0	3,719.4	3,720.5	3,712.3	14.6	7.6	-156.44	-294.9	5.3	755.8	740.0	15.84	47.718		
3,900.0	3,816.6	3,818.0	3,809.4	15.0	7.8	-156.59	-302.0	3.9	778.3	762.0	16.27	47.838		
4,000.0	3,913.8	3,915.4	3,906.6	15.5	8.0	-156.72	-309.2	2.4	800.8	784.1	16.70	47.952		
4,100.0	4,011.0	4,012.8	4,003.7	15.9	8.2	-156.85	-316.4	1.0	823.3	806.2	17.13	48.061		
4,200.0	4,108.2	4,110.2	4,100.9	16.4	8.4	-156.96	-323.5	-0.4	845.8	828.2	17.56	48.164		
4,300.0	4,205.5	4,207.7	4,198.0	16.8	8.6	-157.08	-330.7	-1.8	868.3	850.3	17.99	48.264		
4,400.0	4,302.7	4,305.1	4,295.2	17.3	8.9	-157.19	-337.9	-3.2	890.8	872.4	18.42	48.358		
4,500.0	4,399.9	4,402.5	4,392.3	17.7	9.1	-157.29	-345.0	-4.6	913.3	894.4	18.85	48.449		
4,600.0	4,497.1	4,499.9	4,489.5	18.2	9.3	-157.39	-352.2	-6.0	935.8	916.5	19.28	48.536		
4,700.0	4,594.3	4,597.3	4,586.6	18.7	9.5	-157.48	-359.4	-7.5	958.3	938.6	19.71	48.619		
4,800.0	4,691.6	4,694.8	4,683.8	19.1	9.7	-157.57	-366.6	-8.9	980.8	960.7	20.14	48.699		
4,900.0	4,788.8	4,792.2	4,780.9	19.6	9.9	-157.65	-373.7	-10.3	1,003.3	982.8	20.57	48.776		
5,000.0	4,886.0	4,889.6	4,878.1	20.0	10.1	-157.73	-380.9	-11.7	1,025.9	1,004.9	21.00	48.850		
5,100.0	4,983.2	4,987.0	4,975.2	20.5	10.3	-157.81	-388.1	-13.1	1,048.4	1,026.9	21.43	48.921		

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

# Directional Plus

## Anticollision Report

<b>Company:</b>	Berry Petroleum Company (NAD 83)	<b>Local Co-ordinate Reference:</b>	Well Oxy 21-14D (Oxy I21 Pad)
<b>Project:</b>	Garfield County	<b>TVD Reference:</b>	KBE @ 8381.0ft (Original Well Elev)
<b>Reference Site:</b>	NESE S21-T6S-R97W (Oxy I21 pad)	<b>MD Reference:</b>	KBE @ 8381.0ft (Original Well Elev)
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Oxy 21-14D (Oxy I21 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 2003.21 US Multi User Db
<b>Reference Design:</b>	Plan #1	<b>Offset TVD Reference:</b>	Offset Datum

<b>Offset Design</b> NESE S21-T6S-R97W (Oxy I21 pad) - Oxy 21-5D (Oxy I21 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		
5,200.0	5,080.4	5,084.5	5,072.4	20.9	10.6	-157.89	-395.2	-14.5	1,070.9	1,049.0	21.86	48.989		
5,300.0	5,177.6	5,181.9	5,169.5	21.4	10.8	-157.96	-402.4	-16.0	1,093.4	1,071.1	22.29	49.055		

# Directional Plus

## Anticollision Report

<b>Company:</b>	Berry Petroleum Company (NAD 83)	<b>Local Co-ordinate Reference:</b>	Well Oxy 21-14D (Oxy I21 Pad)
<b>Project:</b>	Garfield County	<b>TVD Reference:</b>	KBE @ 8381.0ft (Original Well Elev)
<b>Reference Site:</b>	NESE S21-T6S-R97W (Oxy I21 pad)	<b>MD Reference:</b>	KBE @ 8381.0ft (Original Well Elev)
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Oxy 21-14D (Oxy I21 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 2003.21 US Multi User Db
<b>Reference Design:</b>	Plan #1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design NESE S21-T6S-R97W (Oxy I21 pad) - Oxy 21-6D (Oxy I21 Pad) - DD - Plan #1													Offset Site Error:	0.0 ft
Survey Program: O-MWD													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis		Distance		Total		Separation		Warning		
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Uncertainty Axis			
0.0	0.0	300.0	300.0	0.0	0.0	112.92	-6.9	16.4	17.8					
100.0	100.0	400.0	400.0	0.1	0.1	112.92	-6.9	16.4	17.8	17.5	0.30	59.885		
200.0	200.0	500.0	500.0	0.3	0.3	112.92	-6.9	16.4	17.8	17.1	0.65	27.515 CC, ES		
300.0	300.0	599.6	599.5	0.5	0.5	114.63	-7.9	17.2	19.0	18.0	1.00	19.028		
400.0	400.0	698.9	698.8	0.7	0.7	-148.42	-10.8	19.8	23.7	22.3	1.34	17.615 SF		
500.0	499.9	798.0	797.7	0.9	0.9	-147.79	-15.6	24.0	33.0	31.3	1.70	19.439		
600.0	599.7	897.3	896.7	1.1	1.1	-148.83	-20.9	28.7	45.2	43.1	2.05	21.996		
700.0	699.3	996.2	995.4	1.3	1.3	-150.67	-26.3	33.3	59.6	57.2	2.42	24.686		
800.0	798.6	1,094.7	1,093.7	1.5	1.5	-152.67	-31.6	38.0	76.4	73.6	2.78	27.474		
900.0	897.5	1,192.8	1,191.5	1.8	1.7	-154.60	-36.8	42.6	95.6	92.4	3.15	30.347		
1,000.0	996.1	1,290.4	1,288.8	2.1	1.9	-156.37	-42.1	47.2	117.2	113.7	3.52	33.294		
1,100.0	1,094.2	1,387.4	1,385.6	2.5	2.1	-157.95	-47.3	51.8	141.2	137.3	3.89	36.306		
1,200.0	1,191.7	1,483.7	1,481.7	2.9	2.3	-159.35	-52.5	56.3	167.7	163.5	4.26	39.377		
1,300.0	1,288.9	1,579.7	1,577.4	3.4	2.5	-160.61	-57.6	60.9	195.6	190.9	4.64	42.169		
1,400.0	1,386.1	1,675.7	1,673.1	3.8	2.7	-161.56	-62.8	65.4	223.5	218.5	5.02	44.556		
1,500.0	1,483.4	1,771.6	1,768.8	4.2	2.9	-162.31	-68.0	69.9	251.4	246.0	5.39	46.620		
1,600.0	1,580.6	1,873.1	1,870.1	4.7	3.1	-163.08	-72.6	74.0	278.5	272.8	5.77	48.276		
1,700.0	1,677.8	1,976.0	1,973.0	5.1	3.3	-164.04	-75.2	76.2	303.7	297.5	6.13	49.508		
1,800.0	1,775.0	2,078.1	2,075.0	5.5	3.5	-165.13	-75.8	76.7	326.9	320.4	6.48	50.416		
1,900.0	1,872.2	2,175.3	2,172.2	6.0	3.6	-166.12	-75.8	76.7	349.6	342.8	6.82	51.245		
2,000.0	1,969.4	2,272.5	2,269.4	6.4	3.8	-166.98	-75.8	76.7	372.4	365.2	7.16	52.016		
2,100.0	2,066.7	2,369.7	2,366.7	6.9	3.9	-167.75	-75.8	76.7	395.3	387.8	7.50	52.734		
2,200.0	2,163.9	2,466.9	2,463.9	7.3	4.1	-168.43	-75.8	76.7	418.2	410.4	7.83	53.401		
2,300.0	2,261.1	2,564.1	2,561.1	7.8	4.2	-169.04	-75.8	76.7	441.2	433.1	8.17	54.022		
2,400.0	2,358.3	2,661.4	2,658.3	8.2	4.4	-169.58	-75.8	76.7	464.3	455.8	8.50	54.600		
2,500.0	2,455.5	2,758.6	2,755.5	8.7	4.6	-170.08	-75.8	76.7	487.3	478.5	8.84	55.139		
2,600.0	2,552.8	2,855.8	2,852.8	9.1	4.7	-170.53	-75.8	76.7	510.4	501.3	9.17	55.641		
2,700.0	2,650.0	2,953.0	2,950.0	9.6	4.9	-170.95	-75.8	76.7	533.6	524.1	9.51	56.111		
2,800.0	2,747.2	3,050.2	3,047.2	10.0	5.0	-171.33	-75.8	76.7	556.7	546.9	9.85	56.550		
2,900.0	2,844.4	3,147.5	3,144.4	10.5	5.2	-171.68	-75.8	76.7	579.9	569.7	10.18	56.962		
3,000.0	2,941.6	3,244.7	3,241.6	10.9	5.4	-172.00	-75.8	76.7	603.1	592.6	10.52	57.349		
3,100.0	3,038.8	3,341.9	3,338.8	11.4	5.5	-172.30	-75.8	76.7	626.3	615.5	10.85	57.712		
3,200.0	3,136.1	3,439.1	3,436.1	11.9	5.7	-172.57	-75.8	76.7	649.6	638.4	11.19	58.053		
3,300.0	3,233.3	3,536.3	3,533.3	12.3	5.8	-172.83	-75.8	76.7	672.8	661.3	11.53	58.375		
3,400.0	3,330.5	3,633.5	3,630.5	12.8	6.0	-173.07	-75.8	76.7	696.1	684.2	11.86	58.679		
3,500.0	3,427.7	3,730.8	3,727.7	13.2	6.2	-173.30	-75.8	76.7	719.3	707.1	12.20	58.966		
3,600.0	3,524.9	3,828.0	3,824.9	13.7	6.3	-173.51	-75.8	76.7	742.6	730.1	12.54	59.238		
3,700.0	3,622.2	3,925.2	3,922.2	14.1	6.5	-173.70	-75.8	76.7	765.9	753.0	12.87	59.495		
3,800.0	3,719.4	4,022.4	4,019.4	14.6	6.7	-173.89	-75.8	76.7	789.2	776.0	13.21	59.739		
3,900.0	3,816.6	4,119.6	4,116.6	15.0	6.8	-174.07	-75.8	76.7	812.5	798.9	13.55	59.971		
4,000.0	3,913.8	4,216.9	4,213.8	15.5	7.0	-174.23	-75.8	76.7	835.8	821.9	13.89	60.191		
4,100.0	4,011.0	4,314.1	4,311.0	15.9	7.2	-174.39	-75.8	76.7	859.1	844.9	14.22	60.400		
4,200.0	4,108.2	4,411.3	4,408.2	16.4	7.3	-174.54	-75.8	76.7	882.4	867.9	14.56	60.600		
4,300.0	4,205.5	4,508.5	4,505.5	16.8	7.5	-174.68	-75.8	76.7	905.7	890.8	14.90	60.790		
4,400.0	4,302.7	4,605.7	4,602.7	17.3	7.7	-174.81	-75.8	76.7	929.1	913.8	15.24	60.972		
4,500.0	4,399.9	4,702.9	4,699.9	17.7	7.8	-174.94	-75.8	76.7	952.4	936.8	15.58	61.145		
4,600.0	4,497.1	4,800.2	4,797.1	18.2	8.0	-175.06	-75.8	76.7	975.8	959.8	15.91	61.311		
4,700.0	4,594.3	4,897.4	4,894.3	18.7	8.2	-175.18	-75.8	76.7	999.1	982.8	16.25	61.470		
4,800.0	4,691.6	4,994.6	4,991.6	19.1	8.3	-175.29	-75.8	76.7	1,022.4	1,005.8	16.59	61.622		
4,900.0	4,788.8	5,091.8	5,088.8	19.6	8.5	-175.39	-75.8	76.7	1,045.8	1,028.9	16.93	61.768		
5,000.0	4,886.0	5,189.0	5,186.0	20.0	8.7	-175.49	-75.8	76.7	1,069.1	1,051.9	17.27	61.908		
5,100.0	4,983.2	5,286.3	5,283.2	20.5	8.8	-175.59	-75.8	76.7	1,092.5	1,074.9	17.61	62.042		

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

## Directional Plus

### Anticollision Report

<b>Company:</b>	Berry Petroleum Company (NAD 83)	<b>Local Co-ordinate Reference:</b>	Well Oxy 21-14D (Oxy I21 Pad)
<b>Project:</b>	Garfield County	<b>TVD Reference:</b>	KBE @ 8381.0ft (Original Well Elev)
<b>Reference Site:</b>	NESE S21-T6S-R97W (Oxy I21 pad)	<b>MD Reference:</b>	KBE @ 8381.0ft (Original Well Elev)
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Oxy 21-14D (Oxy I21 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 2003.21 US Multi User Db
<b>Reference Design:</b>	Plan #1	<b>Offset TVD Reference:</b>	Offset Datum

# Directional Plus

## Anticollision Report

<b>Company:</b>	Berry Petroleum Company (NAD 83)	<b>Local Co-ordinate Reference:</b>	Well Oxy 21-14D (Oxy I21 Pad)
<b>Project:</b>	Garfield County	<b>TVD Reference:</b>	KBE @ 8381.0ft (Original Well Elev)
<b>Reference Site:</b>	NESE S21-T6S-R97W (Oxy I21 pad)	<b>MD Reference:</b>	KBE @ 8381.0ft (Original Well Elev)
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Oxy 21-14D (Oxy I21 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 2003.21 US Multi User Db
<b>Reference Design:</b>	Plan #1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design NESE S21-T6S-R97W (Oxy I21 pad) - Oxy 21-7D (Oxy I21 Pad) - DD - Plan #1														Offset Site Error:	0.0 ft
Survey Program: O-MWD														Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis		Distance		Total		Separation		Warning			
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Uncertainty Axis	Factor			
0.0	0.0	0.0	0.0	0.0	0.0	58.93	5.1	8.5	9.9						
100.0	100.0	100.0	100.0	0.1	0.1	58.93	5.1	8.5	9.9	9.6	0.30	33.306			
200.0	200.0	200.0	200.0	0.3	0.3	58.93	5.1	8.5	9.9	9.2	0.65	15.303			
300.0	300.0	300.0	300.0	0.5	0.5	58.93	5.1	8.5	9.9	8.9	0.99	9.933 CC, ES			
400.0	400.0	400.0	400.0	0.7	0.7	156.55	5.1	8.5	11.1	9.7	1.34	8.237 SF			
500.0	499.9	499.9	499.9	0.9	0.8	162.61	5.1	8.5	14.8	13.1	1.69	8.717			
600.0	599.7	599.5	599.5	1.1	1.0	164.71	6.4	8.6	21.6	19.6	2.04	10.585			
700.0	699.3	698.6	698.5	1.3	1.2	162.68	10.2	9.0	32.1	29.7	2.40	13.402			
800.0	798.6	797.2	796.9	1.5	1.4	159.89	16.5	9.6	46.3	43.6	2.76	16.764			
900.0	897.5	895.7	895.2	1.8	1.6	158.61	23.6	10.2	63.4	60.2	3.14	20.199			
1,000.0	996.1	993.8	993.0	2.1	1.8	158.51	30.7	10.9	82.9	79.3	3.52	23.553			
1,100.0	1,094.2	1,091.4	1,090.3	2.5	2.0	158.93	37.7	11.6	104.7	100.8	3.90	26.844			
1,200.0	1,191.7	1,188.4	1,187.1	2.9	2.2	159.58	44.7	12.2	129.0	124.7	4.29	30.091			
1,300.0	1,288.9	1,285.0	1,283.5	3.4	2.4	160.28	51.6	12.9	154.5	149.8	4.68	33.006			
1,400.0	1,386.1	1,381.7	1,379.9	3.8	2.6	160.79	58.5	13.6	180.1	175.0	5.08	35.454			
1,500.0	1,483.4	1,478.4	1,476.3	4.2	2.8	161.18	65.5	14.2	205.6	200.2	5.48	37.540			
1,600.0	1,580.6	1,575.1	1,572.7	4.7	3.0	161.48	72.4	14.9	231.2	225.3	5.88	39.335			
1,700.0	1,677.8	1,671.7	1,669.1	5.1	3.2	161.72	79.4	15.6	256.8	250.5	6.28	40.897			
1,800.0	1,775.0	1,768.4	1,765.6	5.5	3.4	161.91	86.3	16.2	282.4	275.7	6.68	42.267			
1,900.0	1,872.2	1,865.1	1,862.0	6.0	3.6	162.07	93.3	16.9	307.9	300.9	7.08	43.479			
2,000.0	1,969.4	1,961.7	1,958.4	6.4	3.8	162.21	100.2	17.6	333.5	326.0	7.49	44.557			
2,100.0	2,066.7	2,058.4	2,054.8	6.9	4.0	162.33	107.2	18.2	359.1	351.2	7.89	45.523			
2,200.0	2,163.9	2,155.1	2,151.2	7.3	4.2	162.43	114.1	18.9	384.7	376.4	8.29	46.394			
2,300.0	2,261.1	2,251.7	2,247.6	7.8	4.4	162.52	121.1	19.5	410.3	401.6	8.70	47.181			
2,400.0	2,358.3	2,348.4	2,344.1	8.2	4.6	162.60	128.0	20.2	435.9	426.8	9.10	47.898			
2,500.0	2,455.5	2,445.1	2,440.5	8.7	4.8	162.67	135.0	20.9	461.5	452.0	9.50	48.552			
2,600.0	2,552.8	2,541.7	2,536.9	9.1	5.0	162.74	141.9	21.5	487.1	477.1	9.91	49.152			
2,700.0	2,650.0	2,638.4	2,633.3	9.6	5.3	162.79	148.9	22.2	512.6	502.3	10.31	49.704			
2,800.0	2,747.2	2,735.1	2,729.7	10.0	5.5	162.85	155.8	22.9	538.2	527.5	10.72	50.214			
2,900.0	2,844.4	2,831.8	2,826.1	10.5	5.7	162.89	162.8	23.5	563.8	552.7	11.12	50.686			
3,000.0	2,941.6	2,928.4	2,922.6	10.9	5.9	162.94	169.7	24.2	589.4	577.9	11.53	51.124			
3,100.0	3,038.8	3,025.1	3,019.0	11.4	6.1	162.97	176.6	24.9	615.0	603.1	11.93	51.532			
3,200.0	3,136.1	3,121.8	3,115.4	11.9	6.3	163.01	183.6	25.5	640.6	628.3	12.34	51.913			
3,300.0	3,233.3	3,225.8	3,219.3	12.3	6.5	163.14	189.9	26.1	665.7	653.0	12.74	52.268			
3,400.0	3,330.5	3,331.1	3,324.5	12.8	6.7	163.48	193.4	26.5	689.6	676.5	13.10	52.657			
3,500.0	3,427.7	3,434.3	3,427.7	13.2	6.8	163.99	194.1	26.5	712.5	699.0	13.42	53.073			
3,600.0	3,524.9	3,531.6	3,524.9	13.7	7.0	164.50	194.1	26.5	735.1	721.3	13.74	53.492			
3,700.0	3,622.2	3,628.8	3,622.2	14.1	7.1	164.97	194.1	26.5	757.7	743.6	14.06	53.895			
3,800.0	3,719.4	3,726.0	3,719.4	14.6	7.3	165.41	194.1	26.5	780.4	766.0	14.38	54.281			
3,900.0	3,816.6	3,823.2	3,816.6	15.0	7.4	165.83	194.1	26.5	803.1	788.4	14.70	54.652			
4,000.0	3,913.8	3,920.4	3,913.8	15.5	7.6	166.23	194.1	26.5	825.9	810.9	15.01	55.008			
4,100.0	4,011.0	4,017.6	4,011.0	15.9	7.7	166.61	194.1	26.5	848.7	833.4	15.33	55.349			
4,200.0	4,108.2	4,114.9	4,108.2	16.4	7.9	166.96	194.1	26.5	871.5	855.9	15.65	55.677			
4,300.0	4,205.5	4,212.1	4,205.5	16.8	8.0	167.30	194.1	26.5	894.4	878.4	15.97	55.991			
4,400.0	4,302.7	4,309.3	4,302.7	17.3	8.2	167.62	194.1	26.5	917.3	901.0	16.29	56.294			
4,500.0	4,399.9	4,406.5	4,399.9	17.7	8.4	167.93	194.1	26.5	940.2	923.6	16.62	56.584			
4,600.0	4,497.1	4,503.7	4,497.1	18.2	8.5	168.22	194.1	26.5	963.1	946.2	16.94	56.863			
4,700.0	4,594.3	4,601.0	4,594.3	18.7	8.7	168.50	194.1	26.5	986.1	968.8	17.26	57.131			
4,800.0	4,691.6	4,698.2	4,691.6	19.1	8.8	168.76	194.1	26.5	1,009.1	991.5	17.58	57.389			
4,900.0	4,788.8	4,795.4	4,788.8	19.6	9.0	169.01	194.1	26.5	1,032.1	1,014.2	17.91	57.637			
5,000.0	4,886.0	4,892.6	4,886.0	20.0	9.1	169.26	194.1	26.5	1,055.1	1,036.9	18.23	57.876			
5,100.0	4,983.2	4,989.8	4,983.2	20.5	9.3	169.49	194.1	26.5	1,078.2	1,059.6	18.56	58.105			

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

# Directional Plus

## Anticollision Report

<b>Company:</b>	Berry Petroleum Company (NAD 83)	<b>Local Co-ordinate Reference:</b>	Well Oxy 21-14D (Oxy I21 Pad)
<b>Project:</b>	Garfield County	<b>TVD Reference:</b>	KBE @ 8381.0ft (Original Well Elev)
<b>Reference Site:</b>	NESE S21-T6S-R97W (Oxy I21 pad)	<b>MD Reference:</b>	KBE @ 8381.0ft (Original Well Elev)
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Oxy 21-14D (Oxy I21 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 2003.21 US Multi User Db
<b>Reference Design:</b>	Plan #1	<b>Offset TVD Reference:</b>	Offset Datum

<b>Offset Design</b> NESE S21-T6S-R97W (Oxy I21 pad) - Oxy 21-7D (Oxy I21 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	Vertical Depth	Measured Depth	Vertical Depth	Reference	Offset	Highside Toolface	Offset Wellbore Centre +N/-S	+E/-W	Between Centres	Between Ellipses	Total Uncertainty Axis	Separation Factor		
(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(°)	(ft)	(ft)	(ft)	(ft)				
5,200.0	5,080.4	5,087.0	5,080.4	20.9	9.5	169.71	194.1	26.5	1,101.2	1,082.3	18.88	58.327		



# Directional Plus

## Anticollision Report

<b>Company:</b>	Berry Petroleum Company (NAD 83)	<b>Local Co-ordinate Reference:</b>	Well Oxy 21-14D (Oxy I21 Pad)
<b>Project:</b>	Garfield County	<b>TVD Reference:</b>	KBE @ 8381.0ft (Original Well Elev)
<b>Reference Site:</b>	NESE S21-T6S-R97W (Oxy I21 pad)	<b>MD Reference:</b>	KBE @ 8381.0ft (Original Well Elev)
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Oxy 21-14D (Oxy I21 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 2003.21 US Multi User Db
<b>Reference Design:</b>	Plan #1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design NESE S21-T6S-R97W (Oxy I21 pad) - Oxy 21-8D (Oxy I21 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	1.77	18.2	0.6	18.2					
100.0	100.0	100.0	100.0	0.1	0.1	1.77	18.2	0.6	18.2	17.9	0.30	61.410		
200.0	200.0	200.0	200.0	0.3	0.3	1.77	18.2	0.6	18.2	17.6	0.65	28.216		
300.0	300.0	300.0	300.0	0.5	0.5	1.77	18.2	0.6	18.2	17.2	0.99	18.315 CC		
400.0	400.0	400.0	400.0	0.7	0.7	100.43	18.2	0.6	18.4	17.1	1.35	13.686 ES		
500.0	499.9	499.9	499.9	0.9	0.8	111.82	18.2	0.6	19.5	17.8	1.70	11.461 SF		
600.0	599.7	599.2	599.2	1.1	1.0	125.43	19.5	0.5	23.9	21.8	2.06	11.558		
700.0	699.3	698.1	698.0	1.3	1.2	134.74	23.3	0.5	32.9	30.5	2.43	13.540		
800.0	798.6	796.4	796.1	1.5	1.4	139.66	29.7	0.4	46.2	43.4	2.81	16.451		
900.0	897.5	894.7	894.1	1.8	1.6	142.49	37.9	0.3	63.0	59.8	3.21	19.657		
1,000.0	996.1	992.8	991.8	2.1	1.8	145.10	46.1	0.1	82.0	78.4	3.61	22.727		
1,100.0	1,094.2	1,090.5	1,089.1	2.5	2.0	147.46	54.3	0.0	103.3	99.3	4.02	25.704		
1,200.0	1,191.7	1,187.5	1,185.8	2.9	2.2	149.56	62.5	-0.1	127.0	122.5	4.43	28.625		
1,300.0	1,288.9	1,284.3	1,282.2	3.4	2.4	151.39	70.6	-0.2	151.9	147.0	4.86	31.282		
1,400.0	1,386.1	1,381.0	1,378.6	3.8	2.6	152.70	78.8	-0.4	176.9	171.6	5.28	33.522		
1,500.0	1,483.4	1,477.8	1,475.1	4.2	2.9	153.69	86.9	-0.5	202.0	196.3	5.70	35.433		
1,600.0	1,580.6	1,574.5	1,571.5	4.7	3.1	154.46	95.0	-0.6	227.2	221.1	6.13	37.079		
1,700.0	1,677.8	1,671.2	1,667.9	5.1	3.3	155.08	103.2	-0.7	252.4	245.8	6.55	38.510		
1,800.0	1,775.0	1,768.0	1,764.3	5.5	3.5	155.59	111.3	-0.8	277.6	270.6	6.98	39.766		
1,900.0	1,872.2	1,864.7	1,860.7	6.0	3.7	156.01	119.4	-1.0	302.8	295.4	7.41	40.876		
2,000.0	1,969.4	1,961.5	1,957.1	6.4	3.9	156.37	127.6	-1.1	328.0	320.2	7.84	41.863		
2,100.0	2,066.7	2,058.2	2,053.5	6.9	4.1	156.67	135.7	-1.2	353.3	345.0	8.26	42.747		
2,200.0	2,163.9	2,155.0	2,149.9	7.3	4.4	156.94	143.8	-1.3	378.5	369.8	8.69	43.543		
2,300.0	2,261.1	2,251.7	2,246.3	7.8	4.6	157.17	152.0	-1.5	403.8	394.6	9.12	44.263		
2,400.0	2,358.3	2,348.5	2,342.7	8.2	4.8	157.37	160.1	-1.6	429.0	419.5	9.55	44.918		
2,500.0	2,455.5	2,445.2	2,439.1	8.7	5.0	157.55	168.2	-1.7	454.3	444.3	9.98	45.515		
2,600.0	2,552.8	2,542.0	2,535.5	9.1	5.2	157.72	176.4	-1.8	479.6	469.2	10.41	46.063		
2,700.0	2,650.0	2,638.7	2,631.9	9.6	5.5	157.86	184.5	-2.0	504.8	494.0	10.84	46.567		
2,800.0	2,747.2	2,735.4	2,728.3	10.0	5.7	157.99	192.6	-2.1	530.1	518.8	11.27	47.032		
2,900.0	2,844.4	2,832.2	2,824.7	10.5	5.9	158.11	200.8	-2.2	555.4	543.7	11.70	47.462		
3,000.0	2,941.6	2,928.9	2,921.1	10.9	6.1	158.22	208.9	-2.3	580.7	568.5	12.13	47.861		
3,100.0	3,038.8	3,025.7	3,017.5	11.4	6.3	158.33	217.0	-2.4	606.0	593.4	12.56	48.233		
3,200.0	3,136.1	3,122.4	3,113.9	11.9	6.6	158.42	225.2	-2.6	631.3	618.3	12.99	48.580		
3,300.0	3,233.3	3,219.2	3,210.3	12.3	6.8	158.50	233.3	-2.7	656.5	643.1	13.43	48.904		
3,400.0	3,330.5	3,315.9	3,306.7	12.8	7.0	158.58	241.4	-2.8	681.8	668.0	13.86	49.208		
3,500.0	3,427.7	3,412.7	3,403.1	13.2	7.2	158.66	249.6	-2.9	707.1	692.8	14.29	49.493		
3,600.0	3,524.9	3,509.4	3,499.5	13.7	7.4	158.72	257.7	-3.1	732.4	717.7	14.72	49.761		
3,700.0	3,622.2	3,606.2	3,595.9	14.1	7.7	158.79	265.8	-3.2	757.7	742.5	15.15	50.014		
3,800.0	3,719.4	3,702.9	3,692.3	14.6	7.9	158.85	274.0	-3.3	783.0	767.4	15.58	50.253		
3,900.0	3,816.6	3,799.6	3,788.7	15.0	8.1	158.90	282.1	-3.4	808.3	792.3	16.01	50.479		
4,000.0	3,913.8	3,896.4	3,885.1	15.5	8.3	158.96	290.2	-3.6	833.6	817.1	16.44	50.693		
4,100.0	4,011.0	3,993.1	3,981.5	15.9	8.5	159.01	298.4	-3.7	858.9	842.0	16.88	50.896		
4,200.0	4,108.2	4,089.9	4,077.9	16.4	8.8	159.05	306.5	-3.8	884.2	866.9	17.31	51.088		
4,300.0	4,205.5	4,186.6	4,174.3	16.8	9.0	159.10	314.6	-3.9	909.5	891.7	17.74	51.271		
4,400.0	4,302.7	4,283.4	4,270.7	17.3	9.2	159.14	322.8	-4.0	934.8	916.6	18.17	51.446		
4,500.0	4,399.9	4,380.1	4,367.1	17.7	9.4	159.18	330.9	-4.2	960.1	941.5	18.60	51.612		
4,600.0	4,497.1	4,476.9	4,463.5	18.2	9.6	159.22	339.0	-4.3	985.3	966.3	19.03	51.770		
4,700.0	4,594.3	4,573.6	4,559.9	18.7	9.9	159.25	347.2	-4.4	1,010.6	991.2	19.46	51.922		
4,800.0	4,691.6	4,670.4	4,656.4	19.1	10.1	159.28	355.3	-4.5	1,035.9	1,016.0	19.90	52.067		
4,900.0	4,788.8	4,767.1	4,752.8	19.6	10.3	159.32	363.4	-4.7	1,061.2	1,040.9	20.33	52.205		
5,000.0	4,886.0	4,863.8	4,849.2	20.0	10.5	159.35	371.6	-4.8	1,086.5	1,065.8	20.76	52.338		
5,100.0	4,983.2	4,960.6	4,945.6	20.5	10.7	159.38	379.7	-4.9	1,111.8	1,090.6	21.19	52.465		

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

## Directional Plus

### Anticollision Report

<b>Company:</b>	Berry Petroleum Company (NAD 83)	<b>Local Co-ordinate Reference:</b>	Well Oxy 21-14D (Oxy I21 Pad)
<b>Project:</b>	Garfield County	<b>TVD Reference:</b>	KBE @ 8381.0ft (Original Well Elev)
<b>Reference Site:</b>	NESE S21-T6S-R97W (Oxy I21 pad)	<b>MD Reference:</b>	KBE @ 8381.0ft (Original Well Elev)
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Oxy 21-14D (Oxy I21 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 2003.21 US Multi User Db
<b>Reference Design:</b>	Plan #1	<b>Offset TVD Reference:</b>	Offset Datum

# Directional Plus

## Anticollision Report

<b>Company:</b>	Berry Petroleum Company (NAD 83)	<b>Local Co-ordinate Reference:</b>	Well Oxy 21-14D (Oxy I21 Pad)
<b>Project:</b>	Garfield County	<b>TVD Reference:</b>	KBE @ 8381.0ft (Original Well Elev)
<b>Reference Site:</b>	NESE S21-T6S-R97W (Oxy I21 pad)	<b>MD Reference:</b>	KBE @ 8381.0ft (Original Well Elev)
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Oxy 21-14D (Oxy I21 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 2003.21 US Multi User Db
<b>Reference Design:</b>	Plan #1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design NESE S21-T6S-R97W (Oxy I21 pad) - Oxy 21-9D (Oxy I21 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	147.03	-62.6	40.6	74.7							
100.0	100.0	100.0	100.0	0.1	0.1	147.03	-62.6	40.6	74.7	74.4	0.30	251.668	CC, ES			
200.0	200.0	200.0	200.0	0.3	0.3	147.03	-62.6	40.6	74.7	74.0	0.65	115.631				
300.0	300.0	299.4	299.4	0.5	0.5	147.98	-63.6	39.8	75.0	74.1	0.99	75.491				
400.0	400.0	398.8	398.7	0.7	0.7	-115.49	-66.6	37.3	76.9	75.5	1.36	56.716				
500.0	499.9	497.9	497.6	0.9	0.9	-113.61	-71.5	33.1	80.7	79.0	1.74	46.516				
600.0	599.7	596.9	596.2	1.1	1.1	-111.89	-78.3	27.2	86.7	84.5	2.15	40.324				
700.0	699.3	695.7	694.3	1.3	1.4	-110.42	-87.0	19.7	94.6	92.0	2.61	36.299				
800.0	798.6	794.1	791.7	1.5	1.7	-109.21	-97.6	10.6	104.6	101.5	3.12	33.547				
900.0	897.5	892.1	888.3	1.8	2.0	-108.25	-110.1	-0.1	116.5	112.8	3.69	31.585				
1,000.0	996.1	989.7	984.1	2.1	2.3	-107.50	-124.4	-12.4	130.4	126.1	4.33	30.136				
1,100.0	1,094.2	1,086.9	1,079.0	2.5	2.7	-106.93	-140.4	-26.1	146.2	141.1	5.03	29.035				
1,200.0	1,191.7	1,183.6	1,172.7	2.9	3.2	-106.50	-158.2	-41.4	163.9	158.0	5.82	28.171				
1,300.0	1,288.9	1,279.7	1,265.4	3.4	3.7	-106.08	-177.7	-58.1	183.1	176.4	6.64	27.559				
1,400.0	1,386.1	1,375.3	1,356.8	3.8	4.2	-105.13	-198.8	-76.2	203.4	195.9	7.50	27.122				
1,500.0	1,483.4	1,470.2	1,446.9	4.2	4.7	-103.82	-221.4	-95.7	225.0	216.6	8.38	26.846				
1,600.0	1,580.6	1,564.4	1,535.5	4.7	5.3	-102.26	-245.6	-116.4	248.0	238.7	9.28	26.717	SF			
1,700.0	1,677.8	1,657.6	1,622.5	5.1	5.9	-100.56	-271.1	-138.3	272.4	262.2	10.19	26.726				
1,800.0	1,775.0	1,750.1	1,707.9	5.5	6.6	-98.76	-298.0	-161.4	298.3	287.2	11.10	26.883				
1,900.0	1,872.2	1,846.0	1,796.0	6.0	7.3	-97.04	-326.7	-186.1	325.1	313.1	12.01	27.069				
2,000.0	1,969.4	1,941.9	1,884.2	6.4	7.9	-95.57	-355.4	-210.7	352.2	339.2	12.92	27.264				
2,100.0	2,066.7	2,037.8	1,972.3	6.9	8.6	-94.32	-384.1	-235.3	379.4	365.6	13.82	27.459				
2,200.0	2,163.9	2,133.7	2,060.5	7.3	9.3	-93.23	-412.7	-259.9	406.8	392.1	14.71	27.650				
2,300.0	2,261.1	2,229.6	2,148.6	7.8	10.0	-92.28	-441.4	-284.5	434.3	418.7	15.60	27.834				
2,400.0	2,358.3	2,325.5	2,236.8	8.2	10.7	-91.44	-470.1	-309.1	461.9	445.4	16.49	28.011				
2,500.0	2,455.5	2,421.4	2,324.9	8.7	11.4	-90.69	-498.8	-333.7	489.6	472.2	17.37	28.178				
2,600.0	2,552.8	2,517.4	2,413.1	9.1	12.1	-90.03	-527.4	-358.4	517.3	499.1	18.26	28.337				
2,700.0	2,650.0	2,613.3	2,501.2	9.6	12.8	-89.43	-556.1	-383.0	545.1	526.0	19.14	28.488				
2,800.0	2,747.2	2,709.2	2,589.4	10.0	13.5	-88.89	-584.8	-407.6	573.0	553.0	20.01	28.630				
2,900.0	2,844.4	2,805.1	2,677.5	10.5	14.2	-88.40	-613.4	-432.2	600.9	580.0	20.89	28.765				
3,000.0	2,941.6	2,901.0	2,765.7	10.9	14.9	-87.96	-642.1	-456.8	628.8	607.1	21.76	28.892				
3,100.0	3,038.8	2,996.9	2,853.8	11.4	15.6	-87.55	-670.8	-481.4	656.8	634.2	22.64	29.013				
3,200.0	3,136.1	3,092.8	2,942.0	11.9	16.3	-87.17	-699.5	-506.0	684.8	661.3	23.51	29.127				
3,300.0	3,233.3	3,188.7	3,030.1	12.3	17.0	-86.83	-728.1	-530.7	712.8	688.4	24.38	29.235				
3,400.0	3,330.5	3,284.6	3,118.3	12.8	17.7	-86.51	-756.8	-555.3	740.9	715.6	25.25	29.337				
3,500.0	3,427.7	3,380.5	3,206.4	13.2	18.4	-86.21	-785.5	-579.9	768.9	742.8	26.12	29.434				
3,600.0	3,524.9	3,476.4	3,294.6	13.7	19.1	-85.94	-814.2	-604.5	797.0	770.0	26.99	29.526				
3,700.0	3,622.2	3,572.3	3,382.7	14.1	19.8	-85.68	-842.8	-629.1	825.1	797.2	27.86	29.614				
3,800.0	3,719.4	3,668.2	3,470.9	14.6	20.5	-85.44	-871.5	-653.7	853.2	824.5	28.73	29.697				
3,900.0	3,816.6	3,764.2	3,559.0	15.0	21.2	-85.22	-900.2	-678.3	881.3	851.7	29.60	29.777				
4,000.0	3,913.8	3,860.1	3,647.2	15.5	21.9	-85.01	-928.8	-703.0	909.5	879.0	30.47	29.852				
4,100.0	4,011.0	3,956.0	3,735.3	15.9	22.6	-84.81	-957.5	-727.6	937.6	906.3	31.33	29.924				
4,200.0	4,108.2	4,051.9	3,823.5	16.4	23.3	-84.62	-986.2	-752.2	965.8	933.6	32.20	29.993				
4,300.0	4,205.5	4,147.8	3,911.6	16.8	24.0	-84.45	-1,014.9	-776.8	994.0	960.9	33.07	30.059				
4,400.0	4,302.7	4,243.7	3,999.8	17.3	24.7	-84.28	-1,043.5	-801.4	1,022.1	988.2	33.93	30.122				
4,500.0	4,399.9	4,339.6	4,087.9	17.7	25.4	-84.12	-1,072.2	-826.0	1,050.3	1,015.5	34.80	30.182				
4,600.0	4,497.1	4,435.5	4,176.1	18.2	26.1	-83.97	-1,100.9	-850.6	1,078.5	1,042.8	35.66	30.240				
4,700.0	4,594.3	4,531.4	4,264.2	18.7	26.8	-83.83	-1,129.6	-875.3	1,106.7	1,070.2	36.53	30.296				

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

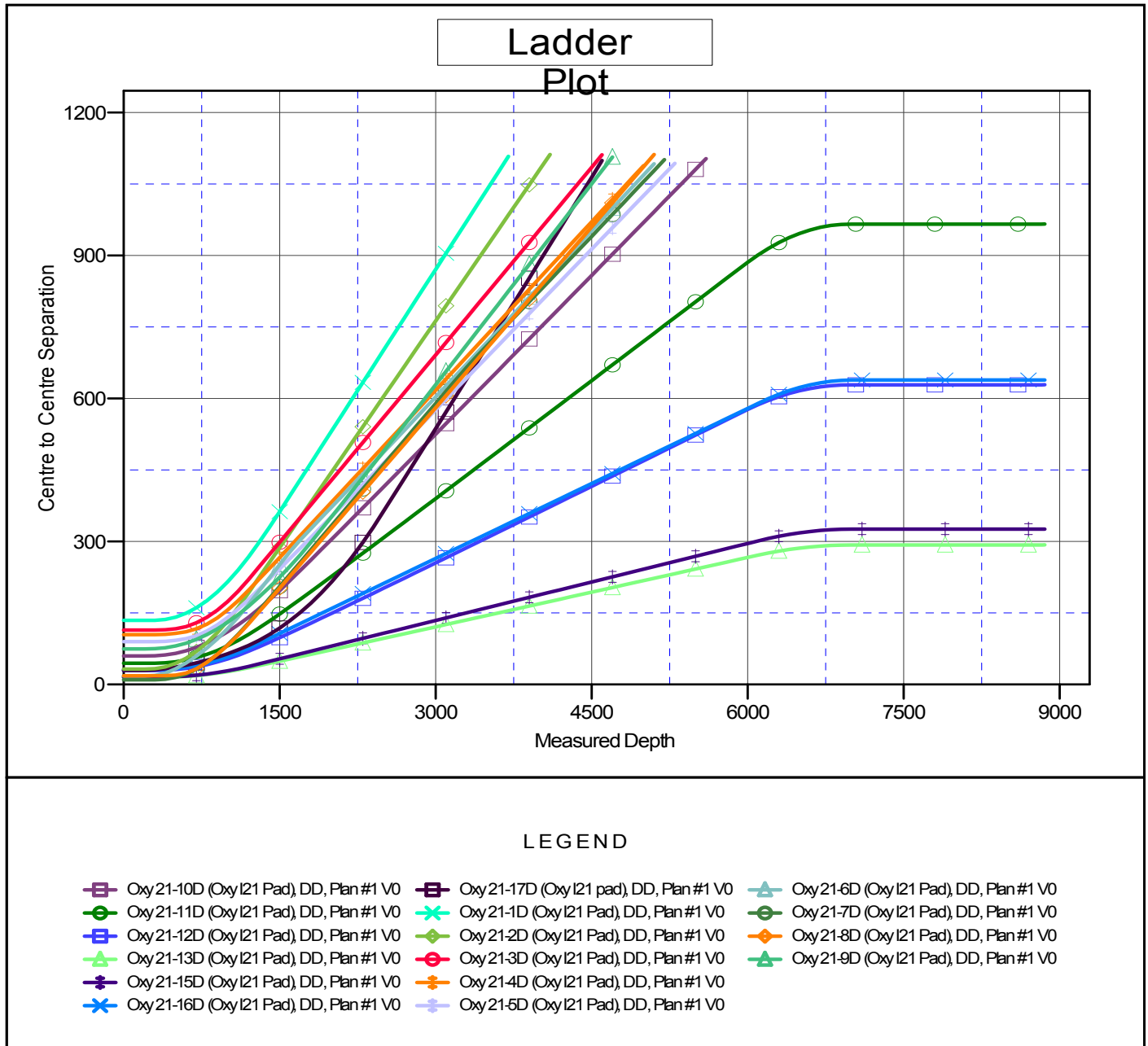
# Directional Plus

## Anticollision Report

<b>Company:</b>	Berry Petroleum Company (NAD 83)	<b>Local Co-ordinate Reference:</b>	Well Oxy 21-14D (Oxy I21 Pad)
<b>Project:</b>	Garfield County	<b>TVD Reference:</b>	KBE @ 8381.0ft (Original Well Elev)
<b>Reference Site:</b>	NESE S21-T6S-R97W (Oxy I21 pad)	<b>MD Reference:</b>	KBE @ 8381.0ft (Original Well Elev)
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Oxy 21-14D (Oxy I21 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 2003.21 US Multi User Db
<b>Reference Design:</b>	Plan #1	<b>Offset TVD Reference:</b>	Offset Datum

Reference Depths are relative to KBE @ 8381.0ft (Original Well Elev)  
Offset Depths are relative to Offset Datum  
Central Meridian is -105.500000 °

Coordinates are relative to: Oxy 21-14D (Oxy I21 Pad)  
Coordinate System is US State Plane 1983, Colorado Central Zone  
Grid Convergence at Surface is: -1.71°



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