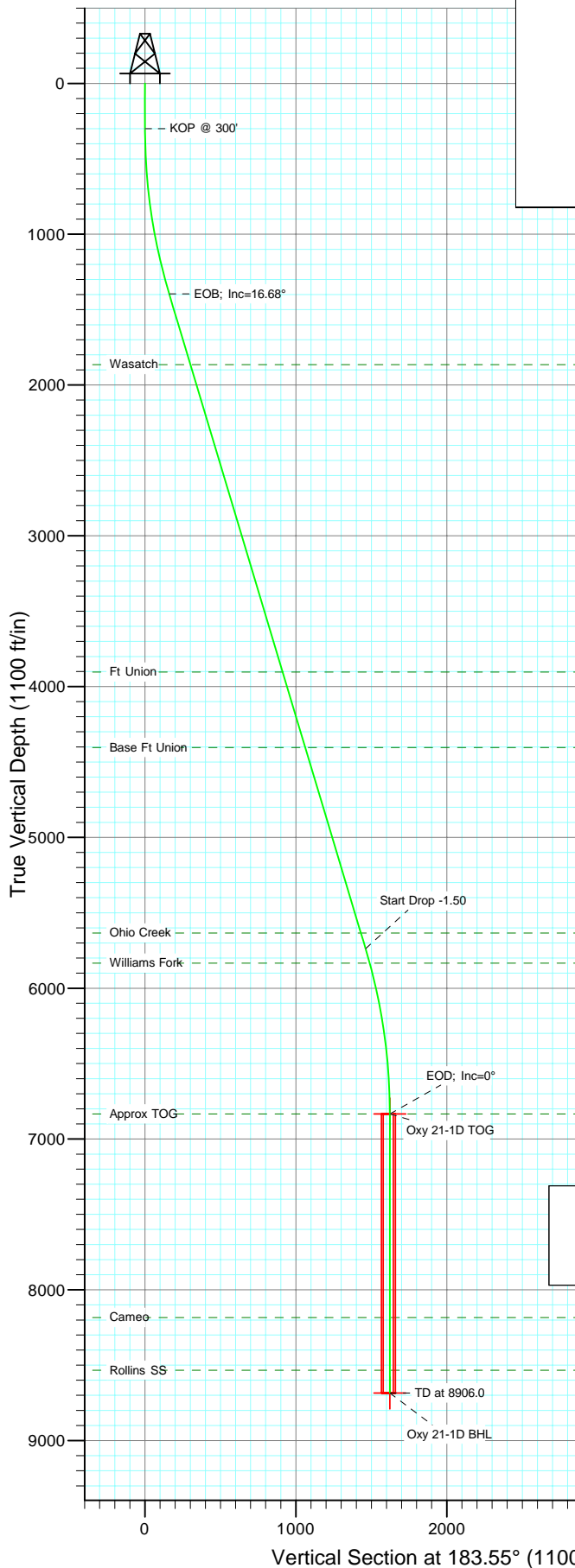


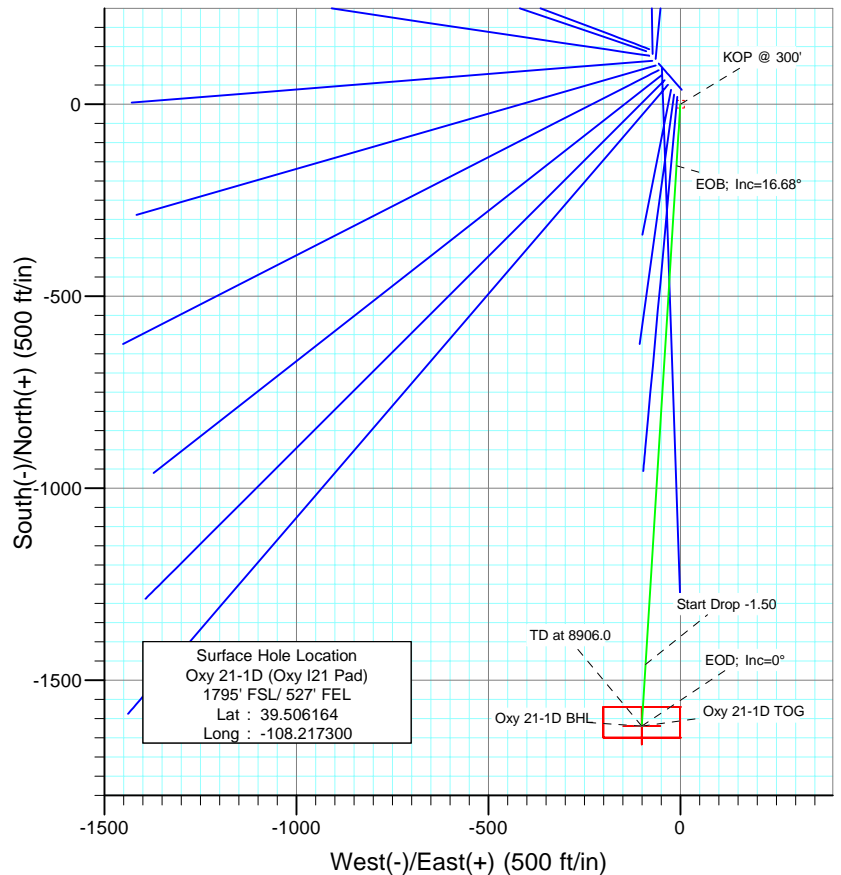


Berry Petroleum Company

Project: Garfield County  
Site: NESE S21-T6S-R97W (Oxy I21 pad)  
Well: Oxy 21-1D (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	1411.9	16.68	183.55	1396.3	-160.4	-10.0	1.50	183.55	160.7	
4	5944.0	16.68	183.55	5737.7	-1458.7	-90.5	0.00	0.00	1461.5	
5	7056.0	0.00	0.00	6834.0	-1619.0	-100.5	1.50	180.00	1622.2	Oxy 21-1D TOG
6	8906.0	0.00	0.00	8684.0	-1619.0	-100.5	0.00	0.00	1622.2	Oxy 21-1D BHL



#### FORMATION TOP DETAILS

TVDPath	MDPath	Formation
1864.0	1900.2	Wasatch
3904.0	4029.8	Ft Union
4404.0	4551.7	Base Ft Union
5634.0	5835.8	Ohio Creek
5834.0	6044.2	Williams Fork
6834.0	7056.0	Approx TOG
8184.0	8406.0	Cameo
8534.0	8756.0	Rollins SS



Azimuths to True North  
Magnetic North: 10.65°

Magnetic Field  
Strength: 52405.3snT  
Dip Angle: 65.76°  
Date: 10/5/2009  
Model: IGRF200510

#### DESIGN DETAILS: Plan #1

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

Target	Azimuth	Origin	N/S	E/W	From TVD
Oxy 21-1D BHL	183.55	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 21-1D (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 21-1D (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		

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

Well	Oxy 21-1D (Oxy I21 Pad)					
Well Position	+N/-S	0.0 ft	Northing:	1,620,717.92 ft	Latitude:	39.506164
	+E/-W	0.0 ft	Easting:	2,233,406.18 ft	Longitude:	-108.217300
Position Uncertainty		0.0 ft	Wellhead Elevation:	ft	Ground Level:	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	10/5/2009	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	183.55

<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	
1,411.9	16.68	183.55	1,396.3	-160.4	-10.0	1.50	1.50	0.00	183.55	
5,944.0	16.68	183.55	5,737.7	-1,458.7	-90.5	0.00	0.00	0.00	0.00	
7,056.0	0.00	0.00	6,834.0	-1,619.0	-100.5	1.50	-1.50	0.00	180.00	Oxy 21-1D TOG
8,906.0	0.00	0.00	8,684.0	-1,619.0	-100.5	0.00	0.00	0.00	0.00	Oxy 21-1D BHL

# Planning Report

<b>Database:</b>	EDM 2003.21 US Multi User DB	<b>Local Co-ordinate Reference:</b>	Well Oxy 21-1D (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 21-1D (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	183.55	330.0	-0.1	0.0	0.1	1.50	1.50	
360.0	0.90	183.55	360.0	-0.5	0.0	0.5	1.50	1.50	
390.0	1.35	183.55	390.0	-1.1	-0.1	1.1	1.50	1.50	
420.0	1.80	183.55	420.0	-1.9	-0.1	1.9	1.50	1.50	
450.0	2.25	183.55	450.0	-2.9	-0.2	2.9	1.50	1.50	
480.0	2.70	183.55	479.9	-4.2	-0.3	4.2	1.50	1.50	
510.0	3.15	183.55	509.9	-5.8	-0.4	5.8	1.50	1.50	
540.0	3.60	183.55	539.8	-7.5	-0.5	7.5	1.50	1.50	
570.0	4.05	183.55	569.8	-9.5	-0.6	9.5	1.50	1.50	
600.0	4.50	183.55	599.7	-11.8	-0.7	11.8	1.50	1.50	
630.0	4.95	183.55	629.6	-14.2	-0.9	14.2	1.50	1.50	
660.0	5.40	183.55	659.5	-16.9	-1.0	17.0	1.50	1.50	
690.0	5.85	183.55	689.3	-19.9	-1.2	19.9	1.50	1.50	
720.0	6.30	183.55	719.2	-23.0	-1.4	23.1	1.50	1.50	
750.0	6.75	183.55	749.0	-26.4	-1.6	26.5	1.50	1.50	
780.0	7.20	183.55	778.7	-30.1	-1.9	30.1	1.50	1.50	
810.0	7.65	183.55	808.5	-33.9	-2.1	34.0	1.50	1.50	
840.0	8.10	183.55	838.2	-38.0	-2.4	38.1	1.50	1.50	
870.0	8.55	183.55	867.9	-42.4	-2.6	42.5	1.50	1.50	
900.0	9.00	183.55	897.5	-46.9	-2.9	47.0	1.50	1.50	
930.0	9.45	183.55	927.1	-51.7	-3.2	51.8	1.50	1.50	
960.0	9.90	183.55	956.7	-56.8	-3.5	56.9	1.50	1.50	
990.0	10.35	183.55	986.3	-62.0	-3.8	62.2	1.50	1.50	
1,020.0	10.80	183.55	1,015.7	-67.5	-4.2	67.7	1.50	1.50	
1,050.0	11.25	183.55	1,045.2	-73.3	-4.5	73.4	1.50	1.50	
1,080.0	11.70	183.55	1,074.6	-79.2	-4.9	79.4	1.50	1.50	
1,110.0	12.15	183.55	1,103.9	-85.4	-5.3	85.6	1.50	1.50	
1,140.0	12.60	183.55	1,133.2	-91.8	-5.7	92.0	1.50	1.50	
1,170.0	13.05	183.55	1,162.5	-98.5	-6.1	98.7	1.50	1.50	
1,200.0	13.50	183.55	1,191.7	-105.3	-6.5	105.5	1.50	1.50	
1,230.0	13.95	183.55	1,220.8	-112.4	-7.0	112.7	1.50	1.50	
1,260.0	14.40	183.55	1,249.9	-119.8	-7.4	120.0	1.50	1.50	
1,290.0	14.85	183.55	1,279.0	-127.3	-7.9	127.6	1.50	1.50	
1,320.0	15.30	183.55	1,307.9	-135.1	-8.4	135.4	1.50	1.50	
1,350.0	15.75	183.55	1,336.8	-143.1	-8.9	143.4	1.50	1.50	
1,380.0	16.20	183.55	1,365.7	-151.4	-9.4	151.7	1.50	1.50	
1,410.0	16.65	183.55	1,394.4	-159.8	-9.9	160.1	1.50	1.50	
1,411.9	16.68	183.55	1,396.3	-160.4	-10.0	160.7	1.50	1.50	EOB; Inc=16.68°
1,440.0	16.68	183.55	1,423.2	-168.4	-10.5	168.8	0.00	0.00	
1,470.0	16.68	183.55	1,451.9	-177.0	-11.0	177.4	0.00	0.00	
1,500.0	16.68	183.55	1,480.7	-185.6	-11.5	186.0	0.00	0.00	

# Planning Report

<b>Database:</b>	EDM 2003.21 US Multi User DB	<b>Local Co-ordinate Reference:</b>	Well Oxy 21-1D (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 21-1D (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	16.68	183.55	1,509.4	-194.2	-12.1	194.6	0.00	0.00	
1,560.0	16.68	183.55	1,538.1	-202.8	-12.6	203.2	0.00	0.00	
1,590.0	16.68	183.55	1,566.9	-211.4	-13.1	211.8	0.00	0.00	
1,620.0	16.68	183.55	1,595.6	-220.0	-13.7	220.4	0.00	0.00	
1,650.0	16.68	183.55	1,624.3	-228.6	-14.2	229.0	0.00	0.00	
1,680.0	16.68	183.55	1,653.1	-237.2	-14.7	237.6	0.00	0.00	
1,710.0	16.68	183.55	1,681.8	-245.8	-15.2	246.3	0.00	0.00	
1,740.0	16.68	183.55	1,710.6	-254.4	-15.8	254.9	0.00	0.00	
1,770.0	16.68	183.55	1,739.3	-263.0	-16.3	263.5	0.00	0.00	
1,800.0	16.68	183.55	1,768.0	-271.6	-16.8	272.1	0.00	0.00	
1,830.0	16.68	183.55	1,796.8	-280.2	-17.4	280.7	0.00	0.00	
1,860.0	16.68	183.55	1,825.5	-288.7	-17.9	289.3	0.00	0.00	
1,890.0	16.68	183.55	1,854.2	-297.3	-18.4	297.9	0.00	0.00	
1,900.2	16.68	183.55	1,864.0	-300.3	-18.6	300.8	0.00	0.00	Wasatch
1,920.0	16.68	183.55	1,883.0	-305.9	-19.0	306.5	0.00	0.00	
1,950.0	16.68	183.55	1,911.7	-314.5	-19.5	315.1	0.00	0.00	
1,980.0	16.68	183.55	1,940.5	-323.1	-20.0	323.7	0.00	0.00	
2,010.0	16.68	183.55	1,969.2	-331.7	-20.6	332.4	0.00	0.00	
2,040.0	16.68	183.55	1,997.9	-340.3	-21.1	341.0	0.00	0.00	
2,070.0	16.68	183.55	2,026.7	-348.9	-21.6	349.6	0.00	0.00	
2,100.0	16.68	183.55	2,055.4	-357.5	-22.2	358.2	0.00	0.00	
2,130.0	16.68	183.55	2,084.2	-366.1	-22.7	366.8	0.00	0.00	
2,160.0	16.68	183.55	2,112.9	-374.7	-23.2	375.4	0.00	0.00	
2,190.0	16.68	183.55	2,141.6	-383.3	-23.8	384.0	0.00	0.00	
2,220.0	16.68	183.55	2,170.4	-391.9	-24.3	392.6	0.00	0.00	
2,250.0	16.68	183.55	2,199.1	-400.5	-24.8	401.2	0.00	0.00	
2,280.0	16.68	183.55	2,227.8	-409.1	-25.4	409.8	0.00	0.00	
2,310.0	16.68	183.55	2,256.6	-417.7	-25.9	418.5	0.00	0.00	
2,340.0	16.68	183.55	2,285.3	-426.2	-26.4	427.1	0.00	0.00	
2,370.0	16.68	183.55	2,314.1	-434.8	-27.0	435.7	0.00	0.00	
2,400.0	16.68	183.55	2,342.8	-443.4	-27.5	444.3	0.00	0.00	
2,430.0	16.68	183.55	2,371.5	-452.0	-28.0	452.9	0.00	0.00	
2,460.0	16.68	183.55	2,400.3	-460.6	-28.6	461.5	0.00	0.00	
2,490.0	16.68	183.55	2,429.0	-469.2	-29.1	470.1	0.00	0.00	

## Targets

Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (ft)	Easting (ft)	Latitude	Longitude
- hit/miss target									
- Shape									
Oxy 21-1D TOG	0.00	0.00	6,834.0	-1,619.0	-100.5	1,619,102.60	2,233,257.35	39.501719	-108.217656
- plan misses target center by 4553.2ft at 2490.0ft MD (2429.0 TVD, -469.2 N, -29.1 E)									
- Point									
Oxy 21-1D BHL	0.00	0.00	8,684.0	-1,619.0	-100.5	1,619,102.60	2,233,257.35	39.501719	-108.217656
- plan misses target center by 6360.2ft at 2490.0ft MD (2429.0 TVD, -469.2 N, -29.1 E)									
- Polygon									
Point 1			8,684.0	50.0	100.0	1,619,149.59	2,233,358.80		
Point 2			8,684.0	50.0	-100.0	1,619,155.57	2,233,158.89		
Point 3			8,684.0	-30.0	-100.0	1,619,075.60	2,233,156.50		
Point 4			8,684.0	-30.0	100.0	1,619,069.62	2,233,356.41		

# Planning Report

<b>Database:</b>	EDM 2003.21 US Multi User DB	<b>Local Co-ordinate Reference:</b>	Well Oxy 21-1D (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 21-1D (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	16.68	183.55	2,438.6	-472.1	-29.3	473.0	0.00	0.00	
2,600.0	16.68	183.55	2,534.4	-500.7	-31.1	501.7	0.00	0.00	
2,700.0	16.68	183.55	2,630.2	-529.4	-32.8	530.4	0.00	0.00	
2,800.0	16.68	183.55	2,726.0	-558.0	-34.6	559.1	0.00	0.00	
2,900.0	16.68	183.55	2,821.8	-586.7	-36.4	587.8	0.00	0.00	
3,000.0	16.68	183.55	2,917.5	-615.3	-38.2	616.5	0.00	0.00	
3,100.0	16.68	183.55	3,013.3	-644.0	-40.0	645.2	0.00	0.00	
3,200.0	16.68	183.55	3,109.1	-672.6	-41.7	673.9	0.00	0.00	
3,300.0	16.68	183.55	3,204.9	-701.2	-43.5	702.6	0.00	0.00	
3,400.0	16.68	183.55	3,300.7	-729.9	-45.3	731.3	0.00	0.00	
3,500.0	16.68	183.55	3,396.5	-758.5	-47.1	760.0	0.00	0.00	
3,600.0	16.68	183.55	3,492.3	-787.2	-48.8	788.7	0.00	0.00	
3,700.0	16.68	183.55	3,588.1	-815.8	-50.6	817.4	0.00	0.00	
3,800.0	16.68	183.55	3,683.9	-844.5	-52.4	846.1	0.00	0.00	
3,900.0	16.68	183.55	3,779.7	-873.1	-54.2	874.8	0.00	0.00	
4,000.0	16.68	183.55	3,875.5	-901.8	-56.0	903.5	0.00	0.00	
4,029.8	16.68	183.55	3,904.0	-910.3	-56.5	912.1	0.00	0.00	Ft Union
4,100.0	16.68	183.55	3,971.3	-930.4	-57.7	932.2	0.00	0.00	
4,200.0	16.68	183.55	4,067.1	-959.1	-59.5	960.9	0.00	0.00	
4,300.0	16.68	183.55	4,162.9	-987.7	-61.3	989.6	0.00	0.00	
4,400.0	16.68	183.55	4,258.6	-1,016.4	-63.1	1,018.3	0.00	0.00	
4,500.0	16.68	183.55	4,354.4	-1,045.0	-64.8	1,047.0	0.00	0.00	
4,551.7	16.68	183.55	4,404.0	-1,059.8	-65.8	1,061.9	0.00	0.00	Base Ft Union
4,600.0	16.68	183.55	4,450.2	-1,073.6	-66.6	1,075.7	0.00	0.00	
4,700.0	16.68	183.55	4,546.0	-1,102.3	-68.4	1,104.4	0.00	0.00	
4,800.0	16.68	183.55	4,641.8	-1,130.9	-70.2	1,133.1	0.00	0.00	
4,900.0	16.68	183.55	4,737.6	-1,159.6	-71.9	1,161.8	0.00	0.00	
5,000.0	16.68	183.55	4,833.4	-1,188.2	-73.7	1,190.5	0.00	0.00	
5,100.0	16.68	183.55	4,929.2	-1,216.9	-75.5	1,219.2	0.00	0.00	
5,200.0	16.68	183.55	5,025.0	-1,245.5	-77.3	1,247.9	0.00	0.00	
5,300.0	16.68	183.55	5,120.8	-1,274.2	-79.1	1,276.6	0.00	0.00	
5,400.0	16.68	183.55	5,216.6	-1,302.8	-80.8	1,305.3	0.00	0.00	
5,500.0	16.68	183.55	5,312.4	-1,331.5	-82.6	1,334.0	0.00	0.00	
5,600.0	16.68	183.55	5,408.2	-1,360.1	-84.4	1,362.7	0.00	0.00	
5,700.0	16.68	183.55	5,504.0	-1,388.8	-86.2	1,391.4	0.00	0.00	
5,800.0	16.68	183.55	5,599.7	-1,417.4	-87.9	1,420.1	0.00	0.00	
5,835.8	16.68	183.55	5,634.0	-1,427.6	-88.6	1,430.4	0.00	0.00	Ohio Creek
5,900.0	16.68	183.55	5,695.5	-1,446.0	-89.7	1,448.8	0.00	0.00	
5,944.0	16.68	183.55	5,737.7	-1,458.7	-90.5	1,461.5	0.00	0.00	Start Drop -1.50
6,000.0	15.84	183.55	5,791.4	-1,474.3	-91.5	1,477.1	1.50	-1.50	
6,044.2	15.18	183.55	5,834.0	-1,486.1	-92.2	1,488.9	1.50	-1.50	Williams Fork
6,100.0	14.34	183.55	5,888.0	-1,500.3	-93.1	1,503.2	1.50	-1.50	
6,200.0	12.84	183.55	5,985.2	-1,523.7	-94.5	1,526.7	1.50	-1.50	
6,300.0	11.34	183.55	6,083.0	-1,544.6	-95.8	1,547.6	1.50	-1.50	
6,400.0	9.84	183.55	6,181.3	-1,563.0	-97.0	1,566.0	1.50	-1.50	
6,500.0	8.34	183.55	6,280.0	-1,578.7	-98.0	1,581.8	1.50	-1.50	
6,600.0	6.84	183.55	6,379.1	-1,591.9	-98.8	1,595.0	1.50	-1.50	
6,700.0	5.34	183.55	6,478.6	-1,602.5	-99.4	1,605.6	1.50	-1.50	
6,800.0	3.84	183.55	6,578.2	-1,610.5	-99.9	1,613.6	1.50	-1.50	
6,900.0	2.34	183.55	6,678.1	-1,615.9	-100.3	1,619.0	1.50	-1.50	
7,000.0	0.84	183.55	6,778.1	-1,618.6	-100.4	1,621.8	1.50	-1.50	
7,056.0	0.00	0.00	6,834.0	-1,619.0	-100.5	1,622.2	1.50	-1.50	EOD; Inc=0° - Approx TOG - Oxy 21-1D TOG

# Planning Report

<b>Database:</b>	EDM 2003.21 US Multi User DB	<b>Local Co-ordinate Reference:</b>	Well Oxy 21-1D (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 21-1D (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	6,878.0	-1,619.0	-100.5	1,622.2	0.00	0.00	
7,200.0	0.00	0.00	6,978.0	-1,619.0	-100.5	1,622.2	0.00	0.00	
7,300.0	0.00	0.00	7,078.0	-1,619.0	-100.5	1,622.2	0.00	0.00	
7,400.0	0.00	0.00	7,178.0	-1,619.0	-100.5	1,622.2	0.00	0.00	
7,500.0	0.00	0.00	7,278.0	-1,619.0	-100.5	1,622.2	0.00	0.00	
7,600.0	0.00	0.00	7,378.0	-1,619.0	-100.5	1,622.2	0.00	0.00	
7,700.0	0.00	0.00	7,478.0	-1,619.0	-100.5	1,622.2	0.00	0.00	
7,800.0	0.00	0.00	7,578.0	-1,619.0	-100.5	1,622.2	0.00	0.00	
7,900.0	0.00	0.00	7,678.0	-1,619.0	-100.5	1,622.2	0.00	0.00	
8,000.0	0.00	0.00	7,778.0	-1,619.0	-100.5	1,622.2	0.00	0.00	
8,100.0	0.00	0.00	7,878.0	-1,619.0	-100.5	1,622.2	0.00	0.00	
8,200.0	0.00	0.00	7,978.0	-1,619.0	-100.5	1,622.2	0.00	0.00	
8,300.0	0.00	0.00	8,078.0	-1,619.0	-100.5	1,622.2	0.00	0.00	
8,400.0	0.00	0.00	8,178.0	-1,619.0	-100.5	1,622.2	0.00	0.00	
8,406.0	0.00	0.00	8,184.0	-1,619.0	-100.5	1,622.2	0.00	0.00	Cameo
8,500.0	0.00	0.00	8,278.0	-1,619.0	-100.5	1,622.2	0.00	0.00	
8,600.0	0.00	0.00	8,378.0	-1,619.0	-100.5	1,622.2	0.00	0.00	
8,700.0	0.00	0.00	8,478.0	-1,619.0	-100.5	1,622.2	0.00	0.00	
8,756.0	0.00	0.00	8,534.0	-1,619.0	-100.5	1,622.2	0.00	0.00	Rollins SS
8,800.0	0.00	0.00	8,578.0	-1,619.0	-100.5	1,622.2	0.00	0.00	
8,900.0	0.00	0.00	8,678.0	-1,619.0	-100.5	1,622.2	0.00	0.00	
8,906.0	0.00	0.00	8,684.0	-1,619.0	-100.5	1,622.2	0.00	0.00	TD at 8906.0 - Oxy 21-1D BHL

Targets									
Target Name - hit/miss target - Shape	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (ft)	Easting (ft)	Latitude	Longitude
Oxy 21-1D TOG - plan hits target center - Point	0.00	0.00	6,834.0	-1,619.0	-100.5	1,619,102.60	2,233,257.35	39.501719	-108.217656
Oxy 21-1D BHL - plan hits target center - Polygon	0.00	0.00	8,684.0	-1,619.0	-100.5	1,619,102.60	2,233,257.35	39.501719	-108.217656
Point 1			8,684.0	50.0	100.0	1,619,149.59	2,233,358.80		
Point 2			8,684.0	50.0	-100.0	1,619,155.57	2,233,158.89		
Point 3			8,684.0	-30.0	-100.0	1,619,075.60	2,233,156.50		
Point 4			8,684.0	-30.0	100.0	1,619,069.62	2,233,356.41		

## Planning Report

<b>Database:</b>	EDM 2003.21 US Multi User DB	<b>Local Co-ordinate Reference:</b>	Well Oxy 21-1D (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 21-1D (Oxy I21 Pad)	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	DD		
<b>Design:</b>	Plan #1		

Formations						
Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)	
1,900.2	1,864.0	Wasatch		0.00		
4,029.8	3,904.0	Ft Union		0.00		
4,551.7	4,404.0	Base Ft Union		0.00		
5,835.8	5,634.0	Ohio Creek		0.00		
6,044.2	5,834.0	Williams Fork		0.00		
7,056.0	6,834.0	Approx TOG		0.00		
8,406.0	8,184.0	Cameo		0.00		
8,756.0	8,534.0	Rollins SS		0.00		

Plan Annotations					
Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates			
		+N/-S (ft)	+E/-W (ft)	Comment	
300.0	300.0	0.0	0.0	KOP @ 300'	
1,411.9	1,396.3	-160.4	-10.0	EOB; Inc=16.68°	
5,944.0	5,737.7	-1,458.7	-90.5	Start Drop -1.50	
7,056.0	6,834.0	-1,619.0	-100.5	EOD; Inc=0°	
8,906.0	8,684.0	-1,619.0	-100.5	TD at 8906.0	

# Directional Plus

## Anticollision Report

<b>Company:</b>	Berry Petroleum Company (NAD 83)	<b>Local Co-ordinate Reference:</b>	Well Oxy 21-1D (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 21-1D (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	Plan #1		
Filter type:	NO GLOBAL FILTER: Using user defined selection & filtering criteria		
Interpolation Method:	MD Interval 100.0ft	Error Model:	Systematic Ellipse
Depth Range:	Unlimited	Scan Method:	Closest Approach 3D
Results Limited by:	Maximum center-center distance of 1,111.9ft	Error Surface:	Elliptical Conic
Warning Levels Evaluated at:	2.00 Sigma		

Survey Tool Program		Date	10/7/2009		
From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description	
0.0	8,906.0	Plan #1 (DD)	MWD	Geolink MWD	

Summary						
Site Name	Reference Measured Depth (ft)	Offset Measured Depth (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Separation Factor	Warning
Offset Well - Wellbore - Design						
NESE S21-T6S-R97W (Oxy I21 pad)						
Oxy 21-10D (Oxy I21 Pad) - DD - Plan #1	329.9	330.3	74.3	73.2	67.258	CC, ES
Oxy 21-10D (Oxy I21 Pad) - DD - Plan #1	5,500.0	5,378.8	1,108.3	1,057.9	22.004	SF
Oxy 21-11D (Oxy I21 Pad) - DD - Plan #1	300.0	300.0	90.0	89.0	90.437	CC, ES
Oxy 21-11D (Oxy I21 Pad) - DD - Plan #1	5,100.0	4,979.7	1,089.4	1,046.1	25.166	SF
Oxy 21-12D (Oxy I21 Pad) - DD - Plan #1	300.0	300.0	105.3	104.3	105.820	CC, ES
Oxy 21-12D (Oxy I21 Pad) - DD - Plan #1	4,500.0	4,355.4	1,108.9	1,074.3	32.058	SF
Oxy 21-13D (Oxy I21 Pad) - DD - Plan #1	300.0	300.0	120.0	119.0	120.586	CC, ES
Oxy 21-13D (Oxy I21 Pad) - DD - Plan #1	4,000.0	3,843.0	1,085.0	1,057.9	39.972	SF
Oxy 21-14D (Oxy I21 Pad) - DD - Plan #1	300.0	300.0	134.6	133.7	135.349	CC, ES
Oxy 21-14D (Oxy I21 Pad) - DD - Plan #1	3,600.0	3,423.2	1,078.1	1,056.0	48.645	SF
Oxy 21-15D (Oxy I21 Pad) - DD - Plan #1	300.0	300.0	150.0	149.0	150.731	CC, ES
Oxy 21-15D (Oxy I21 Pad) - DD - Plan #1	3,300.0	3,092.6	1,096.4	1,077.9	59.459	SF
Oxy 21-16D (Oxy I21 Pad) - DD - Plan #1	300.0	300.0	164.6	163.6	165.494	CC, ES
Oxy 21-16D (Oxy I21 Pad) - DD - Plan #1	3,000.0	2,772.3	1,076.9	1,061.7	71.116	SF
Oxy 21-17D (Oxy I21 pad) - DD - Plan #1	200.0	200.0	164.3	163.7	254.479	CC, ES
Oxy 21-17D (Oxy I21 pad) - DD - Plan #1	1,300.0	1,219.3	383.8	378.5	73.067	SF
Oxy 21-2D (Oxy I21 Pad) - DD - Plan #1	1,239.4	1,258.4	76.3	71.4	15.613	CC, ES
Oxy 21-2D (Oxy I21 Pad) - DD - Plan #1	8,906.0	8,836.1	360.1	326.5	10.719	SF
Oxy 21-3D (Oxy I21 Pad) - DD - Plan #1	300.0	300.0	20.9	19.9	20.963	CC, ES
Oxy 21-3D (Oxy I21 Pad) - DD - Plan #1	1,100.0	1,105.3	56.1	52.3	14.729	SF
Oxy 21-4D (Oxy I21 Pad) - DD - Plan #1	300.0	300.0	30.0	29.0	30.143	CC, ES
Oxy 21-4D (Oxy I21 Pad) - DD - Plan #1	600.0	599.7	40.1	38.0	19.577	SF
Oxy 21-5D (Oxy I21 Pad) - DD - Plan #1	300.0	300.0	44.7	43.7	44.909	CC, ES
Oxy 21-5D (Oxy I21 Pad) - DD - Plan #1	900.0	902.9	76.6	73.5	24.516	SF
Oxy 21-6D (Oxy I21 Pad) - DD - Plan #1	589.6	897.5	112.3	110.3	55.267	CC
Oxy 21-6D (Oxy I21 Pad) - DD - Plan #1	600.0	907.9	112.3	110.2	54.279	ES
Oxy 21-6D (Oxy I21 Pad) - DD - Plan #1	1,100.0	1,404.7	149.4	145.5	38.563	SF
Oxy 21-7D (Oxy I21 Pad) - DD - Plan #1	300.0	300.0	134.7	133.7	135.425	CC, ES
Oxy 21-7D (Oxy I21 Pad) - DD - Plan #1	900.0	885.3	193.0	189.9	62.365	SF
Oxy 21-8D (Oxy I21 Pad) - DD - Plan #1	300.0	300.0	150.0	149.0	150.800	CC, ES
Oxy 21-8D (Oxy I21 Pad) - DD - Plan #1	1,000.0	978.2	233.2	229.7	67.738	SF
Oxy 21-9D (Oxy I21 Pad) - DD - Plan #1	347.1	347.7	59.4	58.3	50.919	CC, ES
Oxy 21-9D (Oxy I21 Pad) - DD - Plan #1	1,700.0	1,679.8	218.3	207.3	19.932	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 21-1D (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 21-1D (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: 0-MWD													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance				Total Uncertainty Axis	Separation Factor	Warning	
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)				
0.0	0.0	0.0	0.0	0.0	0.0	-32.97	62.6	-40.6	74.7					
100.0	100.0	100.0	100.0	0.1	0.1	-32.97	62.6	-40.6	74.7	74.4	0.30	251.656		
200.0	200.0	200.0	200.0	0.3	0.3	-32.97	62.6	-40.6	74.7	74.0	0.65	115.626		
300.0	300.0	300.4	300.4	0.5	0.5	-33.96	61.7	-41.6	74.4	73.4	1.00	74.584		
329.9	329.9	330.3	330.3	0.5	0.6	141.86	61.1	-42.2	74.3	73.2	1.11	67.258 CC, ES		
400.0	400.0	400.7	400.6	0.7	0.7	140.12	58.9	-44.4	74.8	73.4	1.36	54.996		
500.0	499.9	500.8	500.5	0.9	0.9	137.14	54.3	-49.0	76.9	75.1	1.74	44.132		
600.0	599.7	600.8	600.0	1.1	1.1	133.77	47.8	-55.5	80.9	78.7	2.16	37.477		
700.0	699.3	700.5	699.1	1.3	1.4	130.30	39.5	-63.8	86.9	84.3	2.62	33.153		
800.0	798.6	800.0	797.5	1.5	1.7	126.94	29.4	-73.9	94.9	91.8	3.14	30.229		
900.0	897.5	899.0	895.1	1.8	2.0	123.85	17.6	-85.8	105.0	101.3	3.72	28.200		
1,000.0	996.1	997.7	991.9	2.1	2.4	121.11	4.0	-99.4	117.1	112.7	4.38	26.756		
1,100.0	1,094.2	1,096.0	1,087.8	2.5	2.8	118.74	-11.3	-114.6	131.2	126.1	5.10	25.712		
1,200.0	1,191.7	1,193.8	1,182.7	2.9	3.2	116.71	-28.2	-131.6	147.2	141.3	5.90	24.944		
1,300.0	1,288.6	1,291.1	1,276.4	3.4	3.7	114.99	-46.7	-150.1	165.1	158.3	6.77	24.370		
1,400.0	1,384.9	1,387.9	1,368.8	3.8	4.2	113.53	-66.8	-170.3	184.8	177.1	7.72	23.937		
1,500.0	1,480.7	1,484.1	1,460.1	4.4	4.8	112.29	-88.5	-191.9	205.9	197.2	8.72	23.616		
1,600.0	1,576.4	1,580.8	1,551.0	4.9	5.4	110.80	-111.6	-215.1	227.8	218.1	9.74	23.380		
1,700.0	1,672.2	1,678.1	1,642.6	5.4	6.0	109.51	-135.0	-238.5	249.9	239.1	10.78	23.186		
1,800.0	1,768.0	1,775.5	1,734.1	5.9	6.6	108.42	-158.5	-262.0	272.1	260.3	11.82	23.029		
1,900.0	1,863.8	1,872.9	1,825.7	6.4	7.2	107.50	-181.9	-285.5	294.4	281.5	12.86	22.900		
2,000.0	1,959.6	1,970.3	1,917.2	6.9	7.8	106.71	-205.4	-309.0	316.7	302.8	13.90	22.794		
2,100.0	2,055.4	2,067.7	2,008.8	7.4	8.4	106.02	-228.8	-332.5	339.1	324.2	14.94	22.704		
2,200.0	2,151.2	2,165.1	2,100.3	8.0	9.0	105.42	-252.3	-355.9	361.5	345.6	15.98	22.628		
2,300.0	2,247.0	2,262.5	2,191.9	8.5	9.7	104.89	-275.7	-379.4	384.0	367.0	17.02	22.563		
2,400.0	2,342.8	2,359.9	2,283.5	9.0	10.3	104.42	-299.2	-402.9	406.5	388.4	18.06	22.506		
2,500.0	2,438.6	2,457.2	2,375.0	9.5	10.9	103.99	-322.7	-426.4	429.0	409.9	19.10	22.457		
2,600.0	2,534.4	2,554.6	2,466.6	10.1	11.5	103.61	-346.1	-449.9	451.6	431.4	20.15	22.414		
2,700.0	2,630.2	2,652.0	2,558.1	10.6	12.1	103.27	-369.6	-473.4	474.1	452.9	21.19	22.376		
2,800.0	2,726.0	2,749.4	2,649.7	11.1	12.7	102.95	-393.0	-496.8	496.7	474.4	22.23	22.342		
2,900.0	2,821.8	2,846.8	2,741.2	11.7	13.4	102.67	-416.5	-520.3	519.3	496.0	23.27	22.311		
3,000.0	2,917.5	2,944.2	2,832.8	12.2	14.0	102.40	-439.9	-543.8	541.8	517.5	24.32	22.284		
3,100.0	3,013.3	3,041.6	2,924.4	12.7	14.6	102.16	-463.4	-567.3	564.4	539.1	25.36	22.259		
3,200.0	3,109.1	3,138.9	3,015.9	13.2	15.2	101.94	-486.8	-590.8	587.1	560.7	26.40	22.237		
3,300.0	3,204.9	3,236.3	3,107.5	13.8	15.8	101.73	-510.3	-614.2	609.7	582.2	27.44	22.216		
3,400.0	3,300.7	3,333.7	3,199.0	14.3	16.4	101.54	-533.7	-637.7	632.3	603.8	28.49	22.198		
3,500.0	3,396.5	3,431.1	3,290.6	14.8	17.1	101.36	-557.2	-661.2	654.9	625.4	29.53	22.181		
3,600.0	3,492.3	3,528.5	3,382.1	15.3	17.7	101.19	-580.6	-684.7	677.6	647.0	30.57	22.165		
3,700.0	3,588.1	3,625.9	3,473.7	15.9	18.3	101.04	-604.1	-708.2	700.2	668.6	31.61	22.150		
3,800.0	3,683.9	3,723.3	3,565.2	16.4	18.9	100.89	-627.6	-731.7	722.9	690.2	32.65	22.137		
3,900.0	3,779.7	3,820.6	3,656.8	16.9	19.5	100.76	-651.0	-755.1	745.5	711.8	33.70	22.125		
4,000.0	3,875.5	3,918.0	3,748.4	17.5	20.1	100.63	-674.5	-778.6	768.2	733.4	34.74	22.113		
4,100.0	3,971.3	4,015.4	3,839.9	18.0	20.8	100.50	-697.9	-802.1	790.8	755.0	35.78	22.102		
4,200.0	4,067.1	4,112.8	3,931.5	18.5	21.4	100.39	-721.4	-825.6	813.5	776.7	36.82	22.092		
4,300.0	4,162.9	4,210.2	4,023.0	19.1	22.0	100.28	-744.8	-849.1	836.2	798.3	37.86	22.083		
4,400.0	4,258.6	4,307.6	4,114.6	19.6	22.6	100.18	-768.3	-872.6	858.8	819.9	38.91	22.074		
4,500.0	4,354.4	4,405.0	4,206.1	20.1	23.2	100.08	-791.7	-896.0	881.5	841.5	39.95	22.066		
4,600.0	4,450.2	4,502.3	4,297.7	20.6	23.9	99.99	-815.2	-919.5	904.2	863.2	40.99	22.058		
4,700.0	4,546.0	4,599.7	4,389.2	21.2	24.5	99.90	-838.6	-943.0	926.8	884.8	42.03	22.051		
4,800.0	4,641.8	4,697.1	4,480.8	21.7	25.1	99.82	-862.1	-966.5	949.5	906.4	43.07	22.044		
4,900.0	4,737.6	4,794.5	4,572.4	22.2	25.7	99.74	-885.6	-990.0	972.2	928.1	44.12	22.037		

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 21-1D (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 21-1D (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		
5,000.0	4,833.4	4,891.9	4,663.9	22.8	26.3	99.66	-909.0	-1,013.4	994.9	949.7	45.16	22.031		
5,100.0	4,929.2	4,989.3	4,755.5	23.3	26.9	99.59	-932.5	-1,036.9	1,017.6	971.4	46.20	22.025		
5,200.0	5,025.0	5,086.7	4,847.0	23.8	27.6	99.52	-955.9	-1,060.4	1,040.2	993.0	47.24	22.019		
5,300.0	5,120.8	5,184.0	4,938.6	24.3	28.2	99.45	-979.4	-1,083.9	1,062.9	1,014.6	48.28	22.014		
5,400.0	5,216.6	5,281.4	5,030.1	24.9	28.8	99.39	-1,002.8	-1,107.4	1,085.6	1,036.3	49.33	22.009		
5,500.0	5,312.4	5,378.8	5,121.7	25.4	29.4	99.32	-1,026.3	-1,130.9	1,108.3	1,057.9	50.37	22.004 SF		

# Directional Plus

## Anticollision Report

<b>Company:</b>	Berry Petroleum Company (NAD 83)	<b>Local Co-ordinate Reference:</b>	Well Oxy 21-1D (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 21-1D (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 Uncertainty Axis	Separation Factor	Warning	
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)				
0.0	0.0	0.0	0.0	0.0	0.0	-32.64	75.8	-48.5	90.0					
100.0	100.0	100.0	100.0	0.1	0.1	-32.64	75.8	-48.5	90.0	89.7	0.30	303.228		
200.0	200.0	200.0	200.0	0.3	0.3	-32.64	75.8	-48.5	90.0	89.3	0.65	139.321		
300.0	300.0	300.0	300.0	0.5	0.5	-32.64	75.8	-48.5	90.0	89.0	0.99	90.437 CC, ES		
400.0	400.0	400.2	400.2	0.7	0.7	143.46	74.9	-49.6	90.9	89.6	1.35	67.526		
500.0	499.9	500.4	500.3	0.9	0.9	142.47	72.5	-52.7	93.7	92.0	1.71	54.876		
600.0	599.7	600.4	600.0	1.1	1.1	140.94	68.5	-57.8	98.5	96.4	2.09	47.086		
700.0	699.3	700.2	699.4	1.3	1.3	139.03	62.8	-65.0	105.2	102.7	2.51	41.942		
800.0	798.6	799.7	798.3	1.5	1.5	136.90	55.6	-74.2	114.0	111.1	2.97	38.368		
900.0	897.5	898.9	896.4	1.8	1.8	134.71	46.9	-85.4	124.9	121.4	3.49	35.786		
1,000.0	996.1	997.6	993.8	2.1	2.1	132.55	36.6	-98.6	138.0	133.9	4.07	33.863		
1,100.0	1,094.2	1,096.0	1,090.2	2.5	2.5	130.51	24.8	-113.6	153.2	148.5	4.73	32.400		
1,200.0	1,191.7	1,193.7	1,185.6	2.9	2.9	128.62	11.6	-130.5	170.5	165.1	5.45	31.267		
1,300.0	1,288.6	1,291.0	1,279.9	3.4	3.3	126.89	-3.0	-149.2	190.0	183.7	6.25	30.380		
1,400.0	1,384.9	1,387.5	1,372.9	3.8	3.8	125.32	-19.0	-169.6	211.5	204.4	7.13	29.680		
1,500.0	1,480.7	1,483.8	1,465.0	4.4	4.3	123.98	-36.4	-191.8	234.5	226.5	8.05	29.137		
1,600.0	1,576.4	1,580.9	1,557.7	4.9	4.8	122.74	-54.3	-214.6	257.9	248.9	9.00	28.661		
1,700.0	1,672.2	1,678.1	1,650.3	5.4	5.4	121.71	-72.2	-237.5	281.3	271.3	9.95	28.260		
1,800.0	1,768.0	1,775.2	1,743.0	5.9	5.9	120.84	-90.1	-260.4	304.7	293.8	10.91	27.920		
1,900.0	1,863.8	1,872.3	1,835.6	6.4	6.4	120.09	-108.0	-283.3	328.3	316.4	11.88	27.630		
2,000.0	1,959.6	1,969.4	1,928.3	6.9	7.0	119.44	-125.9	-306.1	351.9	339.0	12.85	27.379		
2,100.0	2,055.4	2,066.5	2,021.0	7.4	7.5	118.87	-143.8	-329.0	375.5	361.7	13.82	27.162		
2,200.0	2,151.2	2,163.6	2,113.6	8.0	8.0	118.38	-161.8	-351.9	399.1	384.3	14.80	26.971		
2,300.0	2,247.0	2,260.7	2,206.3	8.5	8.6	117.93	-179.7	-374.8	422.8	407.0	15.78	26.803		
2,400.0	2,342.8	2,357.8	2,298.9	9.0	9.1	117.53	-197.6	-397.6	446.5	429.8	16.75	26.653		
2,500.0	2,438.6	2,454.9	2,391.6	9.5	9.7	117.18	-215.5	-420.5	470.2	452.5	17.73	26.520		
2,600.0	2,534.4	2,552.0	2,484.3	10.1	10.2	116.85	-233.4	-443.4	494.0	475.3	18.71	26.400		
2,700.0	2,630.2	2,649.1	2,576.9	10.6	10.8	116.56	-251.3	-466.3	517.7	498.0	19.69	26.292		
2,800.0	2,726.0	2,746.2	2,669.6	11.1	11.3	116.29	-269.2	-489.1	541.5	520.8	20.67	26.194		
2,900.0	2,821.8	2,843.3	2,762.2	11.7	11.8	116.05	-287.1	-512.0	565.2	543.6	21.65	26.105		
3,000.0	2,917.5	2,940.4	2,854.9	12.2	12.4	115.82	-305.0	-534.9	589.0	566.4	22.63	26.023		
3,100.0	3,013.3	3,037.6	2,947.6	12.7	12.9	115.62	-322.9	-557.8	612.8	589.2	23.62	25.948		
3,200.0	3,109.1	3,134.7	3,040.2	13.2	13.5	115.42	-340.8	-580.6	636.6	612.0	24.60	25.879		
3,300.0	3,204.9	3,231.8	3,132.9	13.8	14.0	115.25	-358.7	-603.5	660.4	634.8	25.58	25.816		
3,400.0	3,300.7	3,328.9	3,225.5	14.3	14.6	115.08	-376.7	-626.4	684.2	657.6	26.56	25.757		
3,500.0	3,396.5	3,426.0	3,318.2	14.8	15.1	114.92	-394.6	-649.3	708.0	680.5	27.55	25.702		
3,600.0	3,492.3	3,523.1	3,410.9	15.3	15.7	114.78	-412.5	-672.1	731.8	703.3	28.53	25.651		
3,700.0	3,588.1	3,620.2	3,503.5	15.9	16.2	114.64	-430.4	-695.0	755.6	726.1	29.51	25.604		
3,800.0	3,683.9	3,717.3	3,596.2	16.4	16.7	114.52	-448.3	-717.9	779.5	749.0	30.50	25.559		
3,900.0	3,779.7	3,814.4	3,688.8	16.9	17.3	114.40	-466.2	-740.8	803.3	771.8	31.48	25.517		
4,000.0	3,875.5	3,911.5	3,781.5	17.5	17.8	114.28	-484.1	-763.6	827.1	794.6	32.46	25.478		
4,100.0	3,971.3	4,008.6	3,874.1	18.0	18.4	114.18	-502.0	-786.5	850.9	817.5	33.45	25.441		
4,200.0	4,067.1	4,105.7	3,966.8	18.5	18.9	114.08	-519.9	-809.4	874.8	840.3	34.43	25.407		
4,300.0	4,162.9	4,202.8	4,059.5	19.1	19.5	113.98	-537.8	-832.3	898.6	863.2	35.41	25.374		
4,400.0	4,258.6	4,299.9	4,152.1	19.6	20.0	113.89	-555.7	-855.1	922.4	886.0	36.40	25.343		
4,500.0	4,354.4	4,397.1	4,244.8	20.1	20.6	113.81	-573.7	-878.0	946.3	908.9	37.38	25.313		
4,600.0	4,450.2	4,494.2	4,337.4	20.6	21.1	113.72	-591.6	-900.9	970.1	931.8	38.37	25.286		
4,700.0	4,546.0	4,591.3	4,430.1	21.2	21.7	113.65	-609.5	-923.8	994.0	954.6	39.35	25.259		
4,800.0	4,641.8	4,688.4	4,522.8	21.7	22.2	113.57	-627.4	-946.6	1,017.8	977.5	40.34	25.234		
4,900.0	4,737.6	4,785.5	4,615.4	22.2	22.8	113.50	-645.3	-969.5	1,041.7	1,000.3	41.32	25.210		
5,000.0	4,833.4	4,882.6	4,708.1	22.8	23.3	113.43	-663.2	-992.4	1,065.5	1,023.2	42.30	25.187		
5,100.0	4,929.2	4,979.7	4,800.7	23.3	23.9	113.37	-681.1	-1,015.3	1,089.4	1,046.1	43.29	25.166 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 21-1D (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 21-1D (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 21-1D (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 21-1D (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	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	-32.42	88.9	-56.4	105.3					
100.0	100.0	100.0	100.0	0.1	0.1	-32.42	88.9	-56.4	105.3	105.0	0.30	354.808		
200.0	200.0	200.0	200.0	0.3	0.3	-32.42	88.9	-56.4	105.3	104.6	0.65	163.020		
300.0	300.0	300.0	300.0	0.5	0.5	-32.42	88.9	-56.4	105.3	104.3	0.99	105.820 CC, ES		
400.0	400.0	399.7	399.7	0.7	0.7	143.74	88.3	-57.6	106.5	105.1	1.35	79.131		
500.0	499.9	499.4	499.3	0.9	0.9	142.89	86.5	-61.1	110.0	108.3	1.71	64.494		
600.0	599.7	598.8	598.5	1.1	1.1	141.59	83.6	-66.8	116.0	113.9	2.09	55.578		
700.0	699.3	697.9	697.2	1.3	1.3	139.98	79.4	-74.9	124.4	121.9	2.50	49.777		
800.0	798.6	796.7	795.3	1.5	1.5	138.19	74.2	-85.1	135.4	132.4	2.95	45.824		
900.0	897.5	894.9	892.5	1.8	1.8	136.36	67.8	-97.6	148.9	145.4	3.46	43.035		
1,000.0	996.1	992.6	988.8	2.1	2.1	134.57	60.4	-112.2	164.9	160.9	4.02	41.011		
1,100.0	1,094.2	1,089.6	1,084.0	2.5	2.5	132.87	51.9	-128.8	183.5	178.8	4.64	39.508		
1,200.0	1,191.7	1,185.8	1,177.9	2.9	2.9	131.30	42.3	-147.5	204.6	199.3	5.33	38.372		
1,300.0	1,288.6	1,281.3	1,270.5	3.4	3.3	129.85	31.8	-168.0	228.2	222.1	6.08	37.504		
1,400.0	1,384.9	1,376.0	1,361.8	3.8	3.8	128.54	20.3	-190.5	254.3	247.4	6.90	36.875		
1,500.0	1,480.7	1,472.1	1,454.2	4.4	4.2	127.74	8.3	-214.1	281.7	273.9	7.74	36.373		
1,600.0	1,576.4	1,568.2	1,546.6	4.9	4.7	127.12	-3.8	-237.7	309.1	300.5	8.60	35.924		
1,700.0	1,672.2	1,664.3	1,639.0	5.4	5.2	126.60	-15.9	-261.3	336.6	327.1	9.47	35.528		
1,800.0	1,768.0	1,760.5	1,731.4	5.9	5.7	126.16	-27.9	-284.9	364.1	353.7	10.35	35.178		
1,900.0	1,863.8	1,856.6	1,823.7	6.4	6.2	125.78	-40.0	-308.5	391.6	380.4	11.23	34.870		
2,000.0	1,959.6	1,952.7	1,916.1	6.9	6.7	125.45	-52.1	-332.1	419.1	407.0	12.11	34.597		
2,100.0	2,055.4	2,048.8	2,008.5	7.4	7.2	125.16	-64.1	-355.7	446.7	433.7	13.00	34.354		
2,200.0	2,151.2	2,144.9	2,100.9	8.0	7.7	124.90	-76.2	-379.3	474.2	460.3	13.89	34.136		
2,300.0	2,247.0	2,241.0	2,193.3	8.5	8.2	124.67	-88.3	-402.9	501.8	487.0	14.78	33.941		
2,400.0	2,342.8	2,337.1	2,285.7	9.0	8.7	124.47	-100.3	-426.5	529.3	513.7	15.68	33.765		
2,500.0	2,438.6	2,433.2	2,378.0	9.5	9.2	124.28	-112.4	-450.1	556.9	540.3	16.57	33.605		
2,600.0	2,534.4	2,529.3	2,470.4	10.1	9.7	124.12	-124.5	-473.7	584.5	567.0	17.47	33.460		
2,700.0	2,630.2	2,625.4	2,562.8	10.6	10.2	123.97	-136.5	-497.4	612.1	593.7	18.37	33.328		
2,800.0	2,726.0	2,721.5	2,655.2	11.1	10.7	123.83	-148.6	-521.0	639.7	620.4	19.26	33.207		
2,900.0	2,821.8	2,817.7	2,747.6	11.7	11.2	123.70	-160.7	-544.6	667.2	647.1	20.16	33.095		
3,000.0	2,917.5	2,913.8	2,839.9	12.2	11.7	123.58	-172.7	-568.2	694.8	673.8	21.06	32.992		
3,100.0	3,013.3	3,009.9	2,932.3	12.7	12.2	123.48	-184.8	-591.8	722.4	700.5	21.96	32.897		
3,200.0	3,109.1	3,106.0	3,024.7	13.2	12.7	123.38	-196.9	-615.4	750.0	727.2	22.86	32.808		
3,300.0	3,204.9	3,202.1	3,117.1	13.8	13.2	123.28	-208.9	-639.0	777.6	753.9	23.76	32.726		
3,400.0	3,300.7	3,298.2	3,209.5	14.3	13.7	123.20	-221.0	-662.6	805.2	780.6	24.66	32.650		
3,500.0	3,396.5	3,394.3	3,301.8	14.8	14.2	123.12	-233.1	-686.2	832.8	807.2	25.56	32.578		
3,600.0	3,492.3	3,490.4	3,394.2	15.3	14.7	123.04	-245.1	-709.8	860.4	833.9	26.47	32.511		
3,700.0	3,588.1	3,586.5	3,486.6	15.9	15.2	122.97	-257.2	-733.4	888.0	860.6	27.37	32.448		
3,800.0	3,683.9	3,682.6	3,579.0	16.4	15.7	122.90	-269.3	-757.0	915.6	887.4	28.27	32.389		
3,900.0	3,779.7	3,778.8	3,671.4	16.9	16.2	122.84	-281.3	-780.6	943.2	914.1	29.17	32.334		
4,000.0	3,875.5	3,874.9	3,763.7	17.5	16.7	122.78	-293.4	-804.2	970.8	940.8	30.07	32.281		
4,100.0	3,971.3	3,971.0	3,856.1	18.0	17.2	122.72	-305.5	-827.8	998.4	967.5	30.98	32.232		
4,200.0	4,067.1	4,067.1	3,948.5	18.5	17.7	122.67	-317.5	-851.4	1,026.0	994.2	31.88	32.185		
4,300.0	4,162.9	4,163.2	4,040.9	19.1	18.2	122.62	-329.6	-875.0	1,053.7	1,020.9	32.78	32.140		
4,400.0	4,258.6	4,259.3	4,133.3	19.6	18.7	122.57	-341.7	-898.6	1,081.3	1,047.6	33.69	32.098		
4,500.0	4,354.4	4,355.4	4,225.6	20.1	19.2	122.53	-353.7	-922.2	1,108.9	1,074.3	34.59	32.058 SF		

# Directional Plus

## Anticollision Report

<b>Company:</b>	Berry Petroleum Company (NAD 83)	<b>Local Co-ordinate Reference:</b>	Well Oxy 21-1D (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 21-1D (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 Uncertainty Axis	Separation Factor	Warning	
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)				
0.0	0.0	0.0	0.0	0.0	0.0	-32.43	101.3	-64.3	120.0					
100.0	100.0	100.0	100.0	0.1	0.1	-32.43	101.3	-64.3	120.0	119.7	0.30	404.317		
200.0	200.0	200.0	200.0	0.3	0.3	-32.43	101.3	-64.3	120.0	119.3	0.65	185.767		
300.0	300.0	300.0	300.0	0.5	0.5	-32.43	101.3	-64.3	120.0	119.0	0.99	120.586 CC, ES		
400.0	400.0	399.1	399.1	0.7	0.7	143.78	100.9	-65.6	121.4	120.0	1.34	90.312		
500.0	499.9	498.1	498.0	0.9	0.9	143.11	99.8	-69.3	125.7	124.0	1.70	73.813		
600.0	599.7	596.8	596.5	1.1	1.1	142.08	98.1	-75.4	132.8	130.8	2.08	63.872		
700.0	699.3	695.1	694.4	1.3	1.3	140.81	95.6	-83.9	142.9	140.4	2.49	57.507		
800.0	798.6	792.9	791.5	1.5	1.5	139.41	92.5	-94.8	155.9	153.0	2.93	53.264		
900.0	897.5	890.0	887.7	1.8	1.8	137.97	88.7	-108.0	171.9	168.4	3.41	50.352		
1,000.0	996.1	986.4	982.7	2.1	2.1	136.56	84.2	-123.4	190.7	186.8	3.95	48.305		
1,100.0	1,094.2	1,081.9	1,076.4	2.5	2.4	135.22	79.2	-141.0	212.5	208.0	4.54	46.841		
1,200.0	1,191.7	1,176.4	1,168.7	2.9	2.8	133.97	73.5	-160.5	237.1	231.9	5.18	45.778		
1,300.0	1,288.6	1,270.7	1,260.4	3.4	3.2	132.84	67.3	-182.1	264.5	258.7	5.87	45.060		
1,400.0	1,384.9	1,366.3	1,353.0	3.8	3.7	132.11	60.9	-204.5	293.9	287.3	6.60	44.520		
1,500.0	1,480.7	1,461.6	1,445.4	4.4	4.1	131.98	54.4	-226.7	324.3	317.0	7.36	44.095		
1,600.0	1,576.4	1,556.8	1,537.8	4.9	4.5	131.90	48.0	-249.0	354.8	346.6	8.12	43.692		
1,700.0	1,672.2	1,652.1	1,630.2	5.4	4.9	131.84	41.6	-271.3	385.2	376.3	8.89	43.325		
1,800.0	1,768.0	1,747.3	1,722.6	5.9	5.4	131.78	35.2	-293.6	415.6	405.9	9.67	42.993		
1,900.0	1,863.8	1,842.6	1,815.0	6.4	5.8	131.74	28.7	-315.9	446.0	435.6	10.45	42.694		
2,000.0	1,959.6	1,937.9	1,907.4	6.9	6.3	131.70	22.3	-338.2	476.5	465.2	11.23	42.425		
2,100.0	2,055.4	2,033.1	1,999.8	7.4	6.7	131.66	15.9	-360.4	506.9	494.9	12.02	42.181		
2,200.0	2,151.2	2,128.4	2,092.2	8.0	7.1	131.63	9.5	-382.7	537.3	524.5	12.81	41.961		
2,300.0	2,247.0	2,223.6	2,184.6	8.5	7.6	131.60	3.0	-405.0	567.7	554.2	13.60	41.760		
2,400.0	2,342.8	2,318.9	2,277.0	9.0	8.0	131.57	-3.4	-427.3	598.2	583.8	14.39	41.578		
2,500.0	2,438.6	2,414.1	2,369.4	9.5	8.5	131.55	-9.8	-449.6	628.6	613.4	15.18	41.411		
2,600.0	2,534.4	2,509.4	2,461.7	10.1	8.9	131.53	-16.2	-471.9	659.0	643.1	15.97	41.258		
2,700.0	2,630.2	2,604.7	2,554.1	10.6	9.4	131.51	-22.6	-494.2	689.5	672.7	16.77	41.117		
2,800.0	2,726.0	2,699.9	2,646.5	11.1	9.8	131.49	-29.1	-516.4	719.9	702.3	17.56	40.987		
2,900.0	2,821.8	2,795.2	2,738.9	11.7	10.2	131.48	-35.5	-538.7	750.3	732.0	18.36	40.867		
3,000.0	2,917.5	2,890.4	2,831.3	12.2	10.7	131.46	-41.9	-561.0	780.7	761.6	19.16	40.756		
3,100.0	3,013.3	2,985.7	2,923.7	12.7	11.1	131.45	-48.3	-583.3	811.2	791.2	19.95	40.653		
3,200.0	3,109.1	3,080.9	3,016.1	13.2	11.6	131.44	-54.8	-605.6	841.6	820.8	20.75	40.556		
3,300.0	3,204.9	3,176.2	3,108.5	13.8	12.0	131.42	-61.2	-627.9	872.0	850.5	21.55	40.466		
3,400.0	3,300.7	3,271.5	3,200.9	14.3	12.5	131.41	-67.6	-650.1	902.5	880.1	22.35	40.382		
3,500.0	3,396.5	3,366.7	3,293.3	14.8	12.9	131.40	-74.0	-672.4	932.9	909.7	23.15	40.303		
3,600.0	3,492.3	3,462.0	3,385.7	15.3	13.4	131.39	-80.5	-694.7	963.3	939.4	23.95	40.228		
3,700.0	3,588.1	3,557.2	3,478.1	15.9	13.8	131.38	-86.9	-717.0	993.7	969.0	24.75	40.159		
3,800.0	3,683.9	3,652.5	3,570.4	16.4	14.3	131.38	-93.3	-739.3	1,024.2	998.6	25.55	40.093		
3,900.0	3,779.7	3,747.8	3,662.8	16.9	14.7	131.37	-99.7	-761.6	1,054.6	1,028.3	26.34	40.030		
4,000.0	3,875.5	3,843.0	3,755.2	17.5	15.2	131.36	-106.2	-783.8	1,085.0	1,057.9	27.15	39.972 SF		

# Directional Plus

## Anticollision Report

<b>Company:</b>	Berry Petroleum Company (NAD 83)	<b>Local Co-ordinate Reference:</b>	Well Oxy 21-1D (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 21-1D (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 21-14D (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)				
0.0	0.0	0.0	0.0	0.0	0.0	-32.73	113.3	-72.8	134.6					
100.0	100.0	100.0	100.0	0.1	0.1	-32.73	113.3	-72.8	134.6	134.4	0.30	453.815		
200.0	200.0	200.0	200.0	0.3	0.3	-32.73	113.3	-72.8	134.6	134.0	0.65	208.510		
300.0	300.0	300.0	300.0	0.5	0.5	-32.73	113.3	-72.8	134.6	133.7	0.99	135.349 CC, ES		
400.0	400.0	398.3	398.3	0.7	0.7	143.56	113.2	-74.1	136.3	135.0	1.34	101.533		
500.0	499.9	496.5	496.4	0.9	0.9	143.09	112.9	-77.8	141.3	139.6	1.70	83.208		
600.0	599.7	594.3	594.0	1.1	1.0	142.37	112.4	-84.1	149.6	147.6	2.07	72.290		
700.0	699.3	691.7	691.0	1.3	1.3	141.49	111.7	-92.8	161.3	158.8	2.47	65.423		
800.0	798.6	788.3	787.0	1.5	1.5	140.51	110.8	-103.9	176.3	173.4	2.89	60.961		
900.0	897.5	884.2	881.9	1.8	1.8	139.50	109.7	-117.2	194.5	191.2	3.35	58.003		
1,000.0	996.1	979.1	975.5	2.1	2.1	138.51	108.4	-132.8	216.1	212.3	3.86	56.019		
1,100.0	1,094.2	1,072.9	1,067.6	2.5	2.4	137.56	107.0	-150.5	240.9	236.5	4.41	54.683		
1,200.0	1,191.7	1,165.4	1,158.0	2.9	2.8	136.66	105.4	-170.1	268.9	263.9	5.00	53.780		
1,300.0	1,288.6	1,259.0	1,249.0	3.4	3.2	135.88	103.7	-191.8	299.8	294.2	5.64	53.202		
1,400.0	1,384.9	1,353.4	1,340.9	3.8	3.6	135.45	101.9	-213.8	332.6	326.3	6.30	52.774		
1,500.0	1,480.7	1,447.5	1,432.3	4.4	4.0	135.53	100.1	-235.8	366.5	359.5	6.99	52.413		
1,600.0	1,576.4	1,541.6	1,523.8	4.9	4.4	135.64	98.4	-257.7	400.3	392.7	7.69	52.052		
1,700.0	1,672.2	1,635.7	1,615.3	5.4	4.8	135.73	96.6	-279.7	434.2	425.8	8.40	51.713		
1,800.0	1,768.0	1,729.8	1,706.7	5.9	5.2	135.81	94.8	-301.7	468.1	459.0	9.11	51.402		
1,900.0	1,863.8	1,823.8	1,798.2	6.4	5.7	135.88	93.1	-323.6	502.0	492.2	9.82	51.116		
2,000.0	1,959.6	1,917.9	1,889.6	6.9	6.1	135.94	91.3	-345.6	535.9	525.4	10.54	50.856		
2,100.0	2,055.4	2,012.0	1,981.1	7.4	6.5	136.00	89.5	-367.6	569.8	558.5	11.26	50.618		
2,200.0	2,151.2	2,106.1	2,072.6	8.0	6.9	136.04	87.8	-389.5	603.7	591.7	11.98	50.401		
2,300.0	2,247.0	2,200.2	2,164.0	8.5	7.3	136.08	86.0	-411.5	637.6	624.9	12.70	50.202		
2,400.0	2,342.8	2,294.3	2,255.5	9.0	7.8	136.12	84.2	-433.5	671.4	658.0	13.42	50.020		
2,500.0	2,438.6	2,388.3	2,347.0	9.5	8.2	136.16	82.5	-455.4	705.3	691.2	14.15	49.853		
2,600.0	2,534.4	2,482.4	2,438.4	10.1	8.6	136.19	80.7	-477.4	739.2	724.4	14.87	49.699		
2,700.0	2,630.2	2,576.5	2,529.9	10.6	9.0	136.22	78.9	-499.4	773.1	757.5	15.60	49.556		
2,800.0	2,726.0	2,670.6	2,621.4	11.1	9.5	136.24	77.1	-521.3	807.0	790.7	16.33	49.425		
2,900.0	2,821.8	2,764.7	2,712.8	11.7	9.9	136.27	75.4	-543.3	840.9	823.8	17.06	49.302		
3,000.0	2,917.5	2,858.7	2,804.3	12.2	10.3	136.29	73.6	-565.3	874.8	857.0	17.78	49.188		
3,100.0	3,013.3	2,952.8	2,895.8	12.7	10.7	136.31	71.8	-587.2	908.7	890.2	18.51	49.082		
3,200.0	3,109.1	3,046.9	2,987.2	13.2	11.2	136.33	70.1	-609.2	942.6	923.3	19.24	48.983		
3,300.0	3,204.9	3,141.0	3,078.7	13.8	11.6	136.34	68.3	-631.2	976.5	956.5	19.97	48.891		
3,400.0	3,300.7	3,235.1	3,170.2	14.3	12.0	136.36	66.5	-653.1	1,010.3	989.6	20.70	48.804		
3,500.0	3,396.5	3,329.1	3,261.6	14.8	12.4	136.38	64.8	-675.1	1,044.2	1,022.8	21.43	48.722		
3,600.0	3,492.3	3,423.2	3,353.1	15.3	12.9	136.39	63.0	-697.1	1,078.1	1,056.0	22.16	48.645 SF		

# Directional Plus

## Anticollision Report

<b>Company:</b>	Berry Petroleum Company (NAD 83)	<b>Local Co-ordinate Reference:</b>	Well Oxy 21-1D (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 21-1D (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		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		
0.0	0.0	0.0	0.0	0.0	0.0	-32.56	126.4	-80.7	150.0					
100.0	100.0	100.0	100.0	0.1	0.1	-32.56	126.4	-80.7	150.0	149.7	0.30	505.392		
200.0	200.0	200.0	200.0	0.3	0.3	-32.56	126.4	-80.7	150.0	149.3	0.65	232.207		
300.0	300.0	300.0	300.0	0.5	0.5	-32.56	126.4	-80.7	150.0	149.0	0.99	150.731 CC, ES		
400.0	400.0	397.5	397.4	0.7	0.7	143.80	126.6	-81.9	151.8	150.5	1.34	113.263		
500.0	499.9	494.7	494.6	0.9	0.8	143.55	127.1	-85.6	157.5	155.8	1.69	93.068		
600.0	599.7	591.5	591.2	1.1	1.0	143.17	128.0	-91.7	167.0	164.9	2.06	81.183		
700.0	699.3	687.7	687.1	1.3	1.3	142.70	129.3	-100.1	180.2	177.8	2.44	73.865		
800.0	798.6	783.1	781.8	1.5	1.5	142.16	130.9	-110.9	197.1	194.3	2.85	69.267		
900.0	897.5	877.5	875.3	1.8	1.8	141.61	132.8	-123.8	217.7	214.5	3.28	66.375		
1,000.0	996.1	970.7	967.2	2.1	2.1	141.05	135.0	-138.8	242.0	238.2	3.75	64.585		
1,100.0	1,094.2	1,062.5	1,057.5	2.5	2.4	140.50	137.6	-155.7	269.8	265.6	4.25	63.525		
1,200.0	1,191.7	1,152.8	1,145.8	2.9	2.7	139.96	140.4	-174.5	301.1	296.3	4.78	62.954		
1,300.0	1,288.6	1,243.0	1,233.4	3.4	3.1	139.45	143.4	-195.2	335.8	330.4	5.35	62.737		
1,400.0	1,384.9	1,335.9	1,323.7	3.8	3.5	139.14	146.7	-217.0	372.7	366.8	5.96	62.561		
1,500.0	1,480.7	1,428.4	1,413.5	4.4	3.9	139.32	149.9	-238.8	410.8	404.2	6.59	62.374		
1,600.0	1,576.4	1,520.8	1,503.3	4.9	4.3	139.51	153.2	-260.5	448.9	441.6	7.22	62.140		
1,700.0	1,672.2	1,613.3	1,593.1	5.4	4.7	139.67	156.4	-282.3	486.9	479.1	7.87	61.898		
1,800.0	1,768.0	1,705.7	1,682.9	5.9	5.2	139.80	159.6	-304.0	525.0	516.5	8.51	61.661		
1,900.0	1,863.8	1,798.2	1,772.7	6.4	5.6	139.92	162.9	-325.8	563.1	553.9	9.17	61.434		
2,000.0	1,959.6	1,890.7	1,862.5	6.9	6.0	140.02	166.1	-347.5	601.2	591.4	9.82	61.220		
2,100.0	2,055.4	1,983.1	1,952.3	7.4	6.4	140.11	169.4	-369.3	639.3	628.8	10.48	61.020		
2,200.0	2,151.2	2,075.6	2,042.2	8.0	6.8	140.19	172.6	-391.0	677.4	666.2	11.13	60.833		
2,300.0	2,247.0	2,168.0	2,132.0	8.5	7.2	140.26	175.8	-412.8	715.5	703.7	11.79	60.660		
2,400.0	2,342.8	2,260.5	2,221.8	9.0	7.7	140.33	179.1	-434.5	753.5	741.1	12.46	60.499		
2,500.0	2,438.6	2,352.9	2,311.6	9.5	8.1	140.39	182.3	-456.3	791.6	778.5	13.12	60.349		
2,600.0	2,534.4	2,445.4	2,401.4	10.1	8.5	140.44	185.5	-478.0	829.7	815.9	13.78	60.209		
2,700.0	2,630.2	2,537.9	2,491.2	10.6	8.9	140.49	188.8	-499.8	867.8	853.4	14.44	60.080		
2,800.0	2,726.0	2,630.3	2,581.0	11.1	9.4	140.53	192.0	-521.5	905.9	890.8	15.11	59.958		
2,900.0	2,821.8	2,722.8	2,670.8	11.7	9.8	140.57	195.3	-543.3	944.0	928.2	15.77	59.845		
3,000.0	2,917.5	2,815.2	2,760.6	12.2	10.2	140.61	198.5	-565.0	982.1	965.7	16.44	59.739		
3,100.0	3,013.3	2,907.7	2,850.4	12.7	10.6	140.64	201.7	-586.8	1,020.2	1,003.1	17.11	59.640		
3,200.0	3,109.1	3,000.2	2,940.2	13.2	11.1	140.68	205.0	-608.5	1,058.3	1,040.5	17.77	59.546		
3,300.0	3,204.9	3,092.6	3,030.0	13.8	11.5	140.71	208.2	-630.3	1,096.4	1,077.9	18.44	59.459 SF		



# Directional Plus

## Anticollision Report

<b>Company:</b>	Berry Petroleum Company (NAD 83)	<b>Local Co-ordinate Reference:</b>	Well Oxy 21-1D (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 21-1D (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		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	-29.35	143.5	-80.7	164.6					
100.0	100.0	100.0	100.0	0.1	0.1	-29.35	143.5	-80.7	164.6	164.3	0.30	554.892		
200.0	200.0	200.0	200.0	0.3	0.3	-29.35	143.5	-80.7	164.6	164.0	0.65	254.950		
300.0	300.0	300.0	300.0	0.5	0.5	-29.35	143.5	-80.7	164.6	163.6	0.99	165.494 CC, ES		
400.0	400.0	396.8	396.8	0.7	0.7	147.05	143.9	-81.8	166.7	165.4	1.34	124.489		
500.0	499.9	493.3	493.2	0.9	0.8	146.90	145.2	-85.3	172.9	171.2	1.69	102.444		
600.0	599.7	589.3	589.0	1.1	1.0	146.67	147.4	-90.9	183.2	181.2	2.05	89.576		
700.0	699.3	684.6	684.0	1.3	1.2	146.38	150.3	-98.8	197.6	195.2	2.42	81.783		
800.0	798.6	779.0	777.7	1.5	1.5	146.05	154.1	-108.8	216.0	213.2	2.80	77.036		
900.0	897.5	872.1	870.0	1.8	1.7	145.70	158.6	-120.7	238.5	235.3	3.21	74.212		
1,000.0	996.1	963.9	960.6	2.1	2.0	145.34	163.8	-134.6	264.8	261.2	3.65	72.643		
1,100.0	1,094.2	1,054.1	1,049.2	2.5	2.3	144.97	169.6	-150.2	295.0	290.9	4.10	71.908		
1,200.0	1,191.7	1,142.6	1,135.7	2.9	2.7	144.60	176.1	-167.3	328.9	324.3	4.58	71.734		
1,300.0	1,288.6	1,229.1	1,220.0	3.4	3.1	144.23	183.1	-186.0	366.5	361.4	5.09	71.984		
1,400.0	1,384.9	1,319.3	1,307.4	3.8	3.4	143.92	190.8	-206.6	407.1	401.5	5.63	72.264		
1,500.0	1,480.7	1,410.1	1,395.4	4.4	3.9	144.07	198.7	-227.4	448.9	442.7	6.20	72.395		
1,600.0	1,576.4	1,500.9	1,483.5	4.9	4.3	144.23	206.5	-248.2	490.8	484.0	6.78	72.407		
1,700.0	1,672.2	1,591.7	1,571.5	5.4	4.7	144.37	214.3	-269.1	532.6	525.3	7.36	72.359		
1,800.0	1,768.0	1,682.5	1,659.6	5.9	5.1	144.49	222.1	-289.9	574.5	566.6	7.95	72.281		
1,900.0	1,863.8	1,773.3	1,747.6	6.4	5.5	144.59	230.0	-310.7	616.4	607.8	8.54	72.184		
2,000.0	1,959.6	1,864.1	1,835.7	6.9	5.9	144.68	237.8	-331.5	658.2	649.1	9.13	72.080		
2,100.0	2,055.4	1,954.9	1,923.7	7.4	6.4	144.75	245.6	-352.4	700.1	690.4	9.73	71.971		
2,200.0	2,151.2	2,045.8	2,011.7	8.0	6.8	144.82	253.4	-373.2	741.9	731.6	10.32	71.863		
2,300.0	2,247.0	2,136.6	2,099.8	8.5	7.2	144.89	261.3	-394.0	783.8	772.9	10.92	71.756		
2,400.0	2,342.8	2,227.4	2,187.8	9.0	7.6	144.94	269.1	-414.8	825.7	814.2	11.52	71.652		
2,500.0	2,438.6	2,318.2	2,275.9	9.5	8.0	144.99	276.9	-435.7	867.5	855.4	12.12	71.552		
2,600.0	2,534.4	2,409.0	2,363.9	10.1	8.5	145.04	284.7	-456.5	909.4	896.7	12.73	71.456		
2,700.0	2,630.2	2,499.8	2,452.0	10.6	8.9	145.08	292.6	-477.3	951.3	937.9	13.33	71.365		
2,800.0	2,726.0	2,590.6	2,540.0	11.1	9.3	145.12	300.4	-498.1	993.1	979.2	13.93	71.278		
2,900.0	2,821.8	2,681.4	2,628.1	11.7	9.7	145.15	308.2	-519.0	1,035.0	1,020.5	14.54	71.195		
3,000.0	2,917.5	2,772.3	2,716.1	12.2	10.2	145.19	316.1	-539.8	1,076.9	1,061.7	15.14	71.116 SF		

# Directional Plus

## Anticollision Report

<b>Company:</b>	Berry Petroleum Company (NAD 83)	<b>Local Co-ordinate Reference:</b>	Well Oxy 21-1D (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 21-1D (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			Distance				Total Uncertainty Axis	Separation Factor	Warning	
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)				
0.0	0.0	0.0	0.0	0.0	0.0	-32.62	138.4	-88.6	164.3					
100.0	100.0	100.0	100.0	0.1	0.1	-32.62	138.4	-88.6	164.3	164.0	0.30	553.867		
200.0	200.0	200.0	200.0	0.3	0.3	-32.62	138.4	-88.6	164.3	163.7	0.65	254.479	CC, ES	
300.0	300.0	296.7	296.7	0.5	0.5	-32.89	138.8	-89.8	165.3	164.3	0.99	167.028		
400.0	400.0	393.3	393.2	0.7	0.7	143.01	140.0	-93.2	169.4	168.0	1.34	126.620		
500.0	499.9	489.5	489.2	0.9	0.9	142.46	141.9	-99.0	177.5	175.8	1.69	104.852		
600.0	599.7	585.1	584.4	1.1	1.1	141.95	144.6	-107.0	189.7	187.6	2.06	92.072		
700.0	699.3	679.8	678.6	1.3	1.3	141.49	148.1	-117.1	205.9	203.4	2.44	84.245		
800.0	798.6	773.5	771.4	1.5	1.6	141.08	152.2	-129.3	226.0	223.2	2.85	79.376		
900.0	897.5	865.9	862.6	1.8	1.9	140.72	157.0	-143.4	250.1	246.8	3.27	76.368		
1,000.0	996.1	956.9	952.0	2.1	2.2	140.40	162.4	-159.4	278.0	274.3	3.73	74.570		
1,100.0	1,094.2	1,046.2	1,039.3	2.5	2.6	140.11	168.3	-177.0	309.6	305.4	4.21	73.580		
1,200.0	1,191.7	1,133.8	1,124.5	2.9	3.0	139.83	174.8	-196.2	344.9	340.2	4.72	73.136		
1,300.0	1,288.6	1,219.3	1,207.3	3.4	3.4	139.56	181.8	-216.7	383.8	378.5	5.25	73.067	SF	
1,400.0	1,384.9	1,300.0	1,284.9	3.8	3.8	139.27	188.8	-237.6	426.1	420.2	5.81	73.374		
1,500.0	1,480.7	1,384.5	1,365.6	4.4	4.3	139.35	196.8	-261.2	471.0	464.6	6.41	73.434		
1,600.0	1,576.4	1,464.7	1,441.7	4.9	4.7	139.33	204.9	-285.1	517.5	510.4	7.03	73.617		
1,700.0	1,672.2	1,543.5	1,516.0	5.4	5.2	139.20	213.4	-310.1	565.4	557.7	7.66	73.847		
1,800.0	1,768.0	1,620.9	1,588.3	5.9	5.7	138.99	222.2	-336.0	614.8	606.5	8.29	74.126		
1,900.0	1,863.8	1,700.0	1,661.7	6.4	6.3	138.71	231.6	-364.0	665.6	656.6	8.95	74.345		
2,000.0	1,959.6	1,771.1	1,727.1	6.9	6.8	138.41	240.6	-390.3	717.7	708.1	9.60	74.774		
2,100.0	2,055.4	1,843.9	1,793.6	7.4	7.4	138.07	250.1	-418.5	771.2	761.0	10.26	75.151		
2,200.0	2,151.2	1,915.2	1,858.2	8.0	8.0	137.70	259.8	-447.3	826.0	815.1	10.93	75.576		
2,300.0	2,247.0	1,985.0	1,920.8	8.5	8.6	137.33	269.7	-476.5	882.2	870.6	11.60	76.025		
2,400.0	2,342.8	2,053.3	1,981.5	9.0	9.2	136.95	279.8	-506.2	939.5	927.2	12.28	76.497		
2,500.0	2,438.6	2,120.1	2,040.3	9.5	9.8	136.56	289.9	-536.2	998.1	985.2	12.96	77.013		
2,600.0	2,534.4	2,185.4	2,097.2	10.1	10.4	136.18	300.2	-566.4	1,057.9	1,044.3	13.64	77.554		

# Directional Plus

## Anticollision Report

<b>Company:</b>	Berry Petroleum Company (NAD 83)	<b>Local Co-ordinate Reference:</b>	Well Oxy 21-1D (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 21-1D (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						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	-27.18	92.9	-47.7	104.4					
100.0	100.0	100.0	100.0	0.1	0.1	-27.18	92.9	-47.7	104.4	104.1	0.30	351.874		
200.0	200.0	200.0	200.0	0.3	0.3	-27.18	92.9	-47.7	104.4	103.8	0.65	161.672		
300.0	300.0	302.5	302.5	0.5	0.5	-27.50	91.5	-47.6	103.2	102.2	1.00	103.212		
400.0	400.0	404.9	404.8	0.7	0.7	148.35	87.4	-47.5	100.7	99.3	1.36	74.261		
500.0	499.9	507.3	506.9	0.9	0.9	147.84	80.5	-47.3	98.0	96.3	1.72	57.049		
600.0	599.7	609.5	608.8	1.1	1.1	147.41	71.0	-46.9	95.2	93.1	2.09	45.516		
700.0	699.3	711.7	710.2	1.3	1.4	147.08	58.7	-46.5	92.2	89.7	2.48	37.173		
800.0	798.6	813.8	811.2	1.5	1.7	146.86	43.7	-46.0	89.0	86.1	2.89	30.819		
900.0	897.5	915.8	911.6	1.8	2.1	146.74	26.0	-45.4	85.6	82.3	3.32	25.806		
1,000.0	996.1	1,017.7	1,011.5	2.1	2.4	146.76	5.7	-44.7	82.1	78.3	3.77	21.756		
1,100.0	1,094.2	1,119.1	1,110.2	2.5	2.9	146.94	-17.0	-43.9	78.5	74.2	4.25	18.470		
1,200.0	1,191.7	1,219.0	1,207.5	2.9	3.3	147.95	-40.1	-43.1	76.4	71.7	4.71	16.228		
1,239.4	1,229.9	1,258.4	1,245.8	3.1	3.5	148.64	-49.2	-42.8	76.3	71.4	4.88	15.613	CC, ES	
1,300.0	1,288.6	1,319.0	1,304.7	3.4	3.7	150.01	-63.2	-42.3	76.7	71.6	5.13	14.944		
1,400.0	1,384.9	1,418.9	1,401.9	3.8	4.1	152.91	-86.3	-41.5	79.4	73.9	5.50	14.444		
1,500.0	1,480.7	1,518.7	1,499.0	4.4	4.6	156.08	-109.4	-40.7	83.7	77.9	5.81	14.400		
1,600.0	1,576.4	1,618.5	1,596.1	4.9	5.0	158.94	-132.4	-40.0	88.3	82.2	6.11	14.447		
1,700.0	1,672.2	1,718.3	1,693.2	5.4	5.4	161.52	-155.5	-39.2	93.0	86.7	6.40	14.548		
1,800.0	1,768.0	1,818.1	1,790.3	5.9	5.9	163.84	-178.6	-38.4	98.0	91.3	6.68	14.678		
1,900.0	1,863.8	1,917.9	1,887.4	6.4	6.3	165.93	-201.7	-37.6	103.1	96.1	6.96	14.819		
2,000.0	1,959.6	2,017.7	1,984.5	6.9	6.7	167.83	-224.7	-36.8	108.3	101.1	7.24	14.961		
2,100.0	2,055.4	2,117.5	2,081.6	7.4	7.2	169.55	-247.8	-36.0	113.6	106.1	7.53	15.094		
2,200.0	2,151.2	2,217.3	2,178.7	8.0	7.6	171.11	-270.9	-35.2	119.0	111.2	7.82	15.214		
2,300.0	2,247.0	2,317.1	2,275.8	8.5	8.0	172.54	-293.9	-34.4	124.5	116.4	8.13	15.319		
2,400.0	2,342.8	2,416.9	2,372.9	9.0	8.5	173.84	-317.0	-33.6	130.1	121.6	8.44	15.407		
2,500.0	2,438.6	2,516.7	2,470.0	9.5	8.9	175.04	-340.1	-32.8	135.7	126.9	8.77	15.478		
2,600.0	2,534.4	2,616.5	2,567.1	10.1	9.3	176.14	-363.2	-32.0	141.4	132.3	9.10	15.533		
2,700.0	2,630.2	2,716.3	2,664.2	10.6	9.8	177.16	-386.2	-31.3	147.1	137.7	9.45	15.573		
2,800.0	2,726.0	2,816.1	2,761.3	11.1	10.2	178.10	-409.3	-30.5	152.9	143.1	9.80	15.599		
2,900.0	2,821.8	2,915.9	2,858.4	11.7	10.7	178.97	-432.4	-29.7	158.7	148.5	10.16	15.614		
3,000.0	2,917.5	3,015.7	2,955.5	12.2	11.1	179.78	-455.5	-28.9	164.6	154.0	10.54	15.618		
3,100.0	3,013.3	3,115.5	3,052.6	12.7	11.5	-179.46	-478.5	-28.1	170.4	159.5	10.92	15.613		
3,200.0	3,109.1	3,215.3	3,149.7	13.2	12.0	-178.76	-501.6	-27.3	176.3	165.0	11.30	15.601		
3,300.0	3,204.9	3,315.1	3,246.7	13.8	12.4	-178.10	-524.7	-26.5	182.3	170.6	11.70	15.582		
3,400.0	3,300.7	3,414.9	3,343.8	14.3	12.8	-177.48	-547.7	-25.7	188.2	176.1	12.10	15.558		
3,500.0	3,396.5	3,514.7	3,440.9	14.8	13.3	-176.90	-570.8	-24.9	194.2	181.7	12.50	15.530		
3,600.0	3,492.3	3,614.5	3,538.0	15.3	13.7	-176.36	-593.9	-24.1	200.2	187.3	12.92	15.498		
3,700.0	3,588.1	3,714.3	3,635.1	15.9	14.2	-175.85	-617.0	-23.3	206.2	192.8	13.33	15.463		
3,800.0	3,683.9	3,814.1	3,732.2	16.4	14.6	-175.36	-640.0	-22.6	212.2	198.4	13.76	15.426		
3,900.0	3,779.7	3,913.9	3,829.3	16.9	15.0	-174.91	-663.1	-21.8	218.2	204.1	14.18	15.388		
4,000.0	3,875.5	4,013.7	3,926.4	17.5	15.5	-174.47	-686.2	-21.0	224.3	209.7	14.61	15.348		
4,100.0	3,971.3	4,113.5	4,023.5	18.0	15.9	-174.06	-709.2	-20.2	230.3	215.3	15.05	15.307		
4,200.0	4,067.1	4,213.3	4,120.6	18.5	16.3	-173.67	-732.3	-19.4	236.4	220.9	15.49	15.266		
4,300.0	4,162.9	4,313.2	4,217.7	19.1	16.8	-173.31	-755.4	-18.6	242.5	226.6	15.93	15.225		
4,400.0	4,258.6	4,413.0	4,314.8	19.6	17.2	-172.95	-778.5	-17.8	248.6	232.2	16.37	15.184		
4,500.0	4,354.4	4,512.8	4,411.9	20.1	17.7	-172.62	-801.5	-17.0	254.7	237.9	16.82	15.142		
4,600.0	4,450.2	4,612.6	4,509.0	20.6	18.1	-172.30	-824.6	-16.2	260.8	243.5	17.27	15.101		
4,700.0	4,546.0	4,712.4	4,606.1	21.2	18.5	-172.00	-847.7	-15.4	266.9	249.2	17.72	15.061		
4,800.0	4,641.8	4,812.2	4,703.2	21.7	19.0	-171.71	-870.7	-14.6	273.0	254.9	18.18	15.021		
4,900.0	4,737.6	4,912.0	4,800.3	22.2	19.4	-171.43	-893.8	-13.8	279.2	260.5	18.64	14.981		
5,000.0	4,833.4	5,011.8	4,897.4	22.8	19.9	-171.16	-916.9	-13.1	285.3	266.2	19.09	14.942		

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 21-1D (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 21-1D (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						Warning	
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor		
5,100.0	4,929.2	5,111.6	4,994.5	23.3	20.3	-170.91	-940.0	-12.3	291.5	271.9	19.56	14.904		
5,200.0	5,025.0	5,211.4	5,091.6	23.8	20.7	-170.66	-963.0	-11.5	297.6	277.6	20.02	14.867		
5,300.0	5,120.8	5,311.2	5,188.7	24.3	21.2	-170.43	-986.1	-10.7	303.8	283.3	20.48	14.830		
5,400.0	5,216.6	5,411.0	5,285.8	24.9	21.6	-170.21	-1,009.2	-9.9	309.9	289.0	20.95	14.794		
5,500.0	5,312.4	5,510.8	5,382.9	25.4	22.0	-169.99	-1,032.2	-9.1	316.1	294.7	21.42	14.759		
5,600.0	5,408.2	5,610.6	5,480.0	25.9	22.5	-169.78	-1,055.3	-8.3	322.2	300.4	21.88	14.725		
5,700.0	5,504.0	5,710.4	5,577.1	26.5	22.9	-169.58	-1,078.4	-7.5	328.4	306.1	22.35	14.691		
5,800.0	5,599.7	5,810.2	5,674.2	27.0	23.4	-169.39	-1,101.5	-6.7	334.6	311.8	22.83	14.658		
5,900.0	5,695.5	5,910.0	5,771.3	27.5	23.8	-169.20	-1,124.5	-5.9	340.8	317.5	23.30	14.626		
6,000.0	5,791.4	6,009.8	5,868.4	28.0	24.2	-169.02	-1,147.6	-5.1	346.5	322.8	23.79	14.569		
6,100.0	5,888.0	6,109.3	5,965.2	28.5	24.7	-168.77	-1,170.6	-4.4	350.0	325.7	24.30	14.403		
6,200.0	5,985.2	6,200.0	6,053.7	28.9	25.0	-168.52	-1,190.4	-3.7	352.2	327.4	24.78	14.211		
6,300.0	6,083.0	6,293.0	6,144.9	29.3	25.4	-168.30	-1,208.5	-3.1	354.1	328.9	25.25	14.027		
6,400.0	6,181.3	6,384.9	6,235.4	29.7	25.7	-168.11	-1,224.2	-2.5	355.8	330.1	25.68	13.857		
6,500.0	6,280.0	6,476.7	6,326.2	30.0	25.9	-167.94	-1,237.8	-2.1	357.2	331.1	26.08	13.697		
6,600.0	6,379.1	6,568.5	6,417.3	30.2	26.2	-167.80	-1,249.1	-1.7	358.3	331.9	26.45	13.547		
6,700.0	6,478.6	6,660.3	6,508.6	30.4	26.4	-167.69	-1,258.3	-1.3	359.2	332.4	26.79	13.407		
6,800.0	6,578.2	6,752.0	6,600.1	30.6	26.5	-167.60	-1,265.2	-1.1	359.8	332.7	27.10	13.274		
6,900.0	6,678.1	6,843.8	6,691.7	30.7	26.6	-167.54	-1,270.0	-0.9	360.1	332.7	27.39	13.150		
7,000.0	6,778.1	6,935.6	6,783.5	30.8	26.7	-167.50	-1,272.5	-0.9	360.2	332.5	27.64	13.033		
7,100.0	6,878.0	7,030.1	6,878.0	30.9	26.8	16.06	-1,273.0	-0.8	360.1	332.2	27.90	12.906		
7,200.0	6,978.0	7,130.1	6,978.0	31.0	26.9	16.06	-1,273.0	-0.8	360.1	331.9	28.21	12.765		
7,300.0	7,078.0	7,230.1	7,078.0	31.0	27.0	16.06	-1,273.0	-0.8	360.1	331.6	28.52	12.627		
7,400.0	7,178.0	7,330.1	7,178.0	31.1	27.1	16.06	-1,273.0	-0.8	360.1	331.3	28.83	12.491		
7,500.0	7,278.0	7,430.1	7,278.0	31.2	27.1	16.06	-1,273.0	-0.8	360.1	330.9	29.14	12.357		
7,600.0	7,378.0	7,530.1	7,378.0	31.3	27.2	16.06	-1,273.0	-0.8	360.1	330.6	29.45	12.226		
7,700.0	7,478.0	7,630.1	7,478.0	31.3	27.3	16.06	-1,273.0	-0.8	360.1	330.3	29.76	12.098		
7,800.0	7,578.0	7,730.1	7,578.0	31.4	27.4	16.06	-1,273.0	-0.8	360.1	330.0	30.08	11.972		
7,900.0	7,678.0	7,830.1	7,678.0	31.5	27.5	16.06	-1,273.0	-0.8	360.1	329.7	30.39	11.848		
8,000.0	7,778.0	7,930.1	7,778.0	31.6	27.6	16.06	-1,273.0	-0.8	360.1	329.4	30.71	11.726		
8,100.0	7,878.0	8,030.1	7,878.0	31.6	27.7	16.06	-1,273.0	-0.8	360.1	329.1	31.02	11.607		
8,200.0	7,978.0	8,130.1	7,978.0	31.7	27.7	16.06	-1,273.0	-0.8	360.1	328.7	31.34	11.490		
8,300.0	8,078.0	8,230.1	8,078.0	31.8	27.8	16.06	-1,273.0	-0.8	360.1	328.4	31.66	11.374		
8,400.0	8,178.0	8,330.1	8,178.0	31.9	27.9	16.06	-1,273.0	-0.8	360.1	328.1	31.98	11.261		
8,500.0	8,278.0	8,430.1	8,278.0	32.0	28.0	16.06	-1,273.0	-0.8	360.1	327.8	32.29	11.150		
8,600.0	8,378.0	8,530.1	8,378.0	32.0	28.1	16.06	-1,273.0	-0.8	360.1	327.5	32.61	11.041		
8,700.0	8,478.0	8,630.1	8,478.0	32.1	28.2	16.06	-1,273.0	-0.8	360.1	327.1	32.93	10.934		
8,800.0	8,578.0	8,730.1	8,578.0	32.2	28.3	16.06	-1,273.0	-0.8	360.1	326.8	33.25	10.828		
8,900.0	8,678.0	8,830.1	8,678.0	32.3	28.4	16.06	-1,273.0	-0.8	360.1	326.5	33.57	10.725		
8,906.0	8,684.0	8,836.1	8,684.0	32.3	28.4	16.06	-1,273.0	-0.8	360.1	326.5	33.59	10.719 SF		

# Directional Plus

## Anticollision Report

<b>Company:</b>	Berry Petroleum Company (NAD 83)	<b>Local Co-ordinate Reference:</b>	Well Oxy 21-1D (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 21-1D (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: O-MWD													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance				Total Uncertainty Axis	Separation Factor	Warning	
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)				
0.0	0.0	0.0	0.0	0.0	0.0	-22.26	19.3	-7.9	20.9					
100.0	100.0	100.0	100.0	0.1	0.1	-22.26	19.3	-7.9	20.9	20.6	0.30	70.288		
200.0	200.0	200.0	200.0	0.3	0.3	-22.26	19.3	-7.9	20.9	20.2	0.65	32.294		
300.0	300.0	300.0	300.0	0.5	0.5	-22.26	19.3	-7.9	20.9	19.9	0.99	20.963 CC, ES		
400.0	400.0	400.0	400.0	0.7	0.7	155.66	19.3	-7.9	22.0	20.7	1.34	16.400		
500.0	499.9	499.9	499.9	0.9	0.8	159.26	19.3	-7.9	25.7	24.0	1.69	15.161		
600.0	599.7	600.5	600.5	1.1	1.0	162.66	18.0	-8.0	30.6	28.6	2.04	14.989		
700.0	699.3	701.2	701.1	1.3	1.2	164.98	14.0	-8.4	35.7	33.3	2.39	14.899		
800.0	798.6	802.0	801.7	1.5	1.4	166.61	7.4	-9.0	40.8	38.0	2.75	14.844		
900.0	897.5	903.0	902.2	1.8	1.6	167.78	-1.8	-9.8	45.9	42.8	3.10	14.803		
1,000.0	996.1	1,004.1	1,002.6	2.1	1.9	168.63	-13.8	-10.9	51.0	47.5	3.45	14.767		
1,100.0	1,094.2	1,105.3	1,102.8	2.5	2.1	169.24	-28.4	-12.2	56.1	52.3	3.81	14.729 SF		
1,200.0	1,191.7	1,205.8	1,201.9	2.9	2.4	169.75	-45.1	-13.8	61.6	57.4	4.16	14.797		
1,300.0	1,288.6	1,305.5	1,300.1	3.4	2.7	170.49	-61.9	-15.3	69.4	64.9	4.51	15.391		
1,400.0	1,384.9	1,405.0	1,398.2	3.8	3.1	171.36	-78.6	-16.8	79.8	75.0	4.85	16.454		
1,500.0	1,480.7	1,504.2	1,496.0	4.4	3.4	172.19	-95.3	-18.3	91.8	86.6	5.20	17.650		
1,600.0	1,576.4	1,603.5	1,593.8	4.9	3.7	172.83	-112.1	-19.8	103.9	98.3	5.56	18.696		
1,700.0	1,672.2	1,702.8	1,691.7	5.4	4.0	173.34	-128.8	-21.4	115.9	110.0	5.91	19.619		
1,800.0	1,768.0	1,802.0	1,789.5	5.9	4.3	173.75	-145.5	-22.9	128.0	121.7	6.26	20.441		
1,900.0	1,863.8	1,901.3	1,887.3	6.4	4.7	174.09	-162.3	-24.4	140.1	133.4	6.61	21.175		
2,000.0	1,959.6	2,000.6	1,985.2	6.9	5.0	174.38	-179.0	-25.9	152.1	145.2	6.97	21.837		
2,100.0	2,055.4	2,099.8	2,083.0	7.4	5.3	174.62	-195.7	-27.5	164.2	156.9	7.32	22.435		
2,200.0	2,151.2	2,199.1	2,180.8	8.0	5.7	174.83	-212.5	-29.0	176.3	168.6	7.67	22.979		
2,300.0	2,247.0	2,298.4	2,278.7	8.5	6.0	175.02	-229.2	-30.5	188.4	180.3	8.02	23.476		
2,400.0	2,342.8	2,397.6	2,376.5	9.0	6.3	175.18	-245.9	-32.0	200.4	192.1	8.38	23.931		
2,500.0	2,438.6	2,496.9	2,474.3	9.5	6.7	175.32	-262.6	-33.5	212.5	203.8	8.73	24.350		
2,600.0	2,534.4	2,596.2	2,572.2	10.1	7.0	175.45	-279.4	-35.1	224.6	215.5	9.08	24.737		
2,700.0	2,630.2	2,695.4	2,670.0	10.6	7.4	175.56	-296.1	-36.6	236.7	227.2	9.43	25.095		
2,800.0	2,726.0	2,794.7	2,767.8	11.1	7.7	175.67	-312.8	-38.1	248.8	239.0	9.78	25.427		
2,900.0	2,821.8	2,894.0	2,865.7	11.7	8.0	175.76	-329.6	-39.6	260.9	250.7	10.14	25.737		
3,000.0	2,917.5	2,993.2	2,963.5	12.2	8.4	175.85	-346.3	-41.1	272.9	262.4	10.49	26.026		
3,100.0	3,013.3	3,092.5	3,061.3	12.7	8.7	175.93	-363.0	-42.7	285.0	274.2	10.84	26.296		
3,200.0	3,109.1	3,191.8	3,159.2	13.2	9.0	176.00	-379.7	-44.2	297.1	285.9	11.19	26.549		
3,300.0	3,204.9	3,291.0	3,257.0	13.8	9.4	176.06	-396.5	-45.7	309.2	297.7	11.54	26.787		
3,400.0	3,300.7	3,390.3	3,354.8	14.3	9.7	176.13	-413.2	-47.2	321.3	309.4	11.89	27.011		
3,500.0	3,396.5	3,489.6	3,452.7	14.8	10.1	176.18	-429.9	-48.8	333.4	321.1	12.25	27.222		
3,600.0	3,492.3	3,588.8	3,550.5	15.3	10.4	176.24	-446.7	-50.3	345.5	332.9	12.60	27.421		
3,700.0	3,588.1	3,688.1	3,648.3	15.9	10.7	176.28	-463.4	-51.8	357.6	344.6	12.95	27.610		
3,800.0	3,683.9	3,787.4	3,746.2	16.4	11.1	176.33	-480.1	-53.3	369.6	356.3	13.30	27.788		
3,900.0	3,779.7	3,886.6	3,844.0	16.9	11.4	176.37	-496.9	-54.8	381.7	368.1	13.65	27.958		
4,000.0	3,875.5	3,985.9	3,941.8	17.5	11.7	176.41	-513.6	-56.4	393.8	379.8	14.01	28.119		
4,100.0	3,971.3	4,085.2	4,039.7	18.0	12.1	176.45	-530.3	-57.9	405.9	391.6	14.36	28.272		
4,200.0	4,067.1	4,184.4	4,137.5	18.5	12.4	176.49	-547.0	-59.4	418.0	403.3	14.71	28.418		
4,300.0	4,162.9	4,283.7	4,235.4	19.1	12.8	176.52	-563.8	-60.9	430.1	415.0	15.06	28.557		
4,400.0	4,258.6	4,382.9	4,332.2	19.6	13.1	176.56	-580.5	-62.4	442.2	426.8	15.41	28.690		
4,500.0	4,354.4	4,482.2	4,431.0	20.1	13.4	176.59	-597.2	-64.0	454.3	438.5	15.76	28.816		
4,600.0	4,450.2	4,581.5	4,528.9	20.6	13.8	176.61	-614.0	-65.5	466.4	450.2	16.12	28.938		
4,700.0	4,546.0	4,680.7	4,626.7	21.2	14.1	176.64	-630.7	-67.0	478.5	462.0	16.47	29.054		
4,800.0	4,641.8	4,780.0	4,724.5	21.7	14.5	176.67	-647.4	-68.5	490.5	473.7	16.82	29.165		
4,900.0	4,737.6	4,879.3	4,822.4	22.2	14.8	176.69	-664.2	-70.1	502.6	485.5	17.17	29.272		
5,000.0	4,833.4	4,978.5	4,920.2	22.8	15.1	176.72	-680.9	-71.6	514.7	497.2	17.52	29.374		
5,100.0	4,929.2	5,077.8	5,018.0	23.3	15.5	176.74	-697.6	-73.1	526.8	508.9	17.87	29.473		

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 21-1D (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 21-1D (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		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)						
5,200.0	5,025.0	5,177.1	5,115.9	23.8	15.8	176.76	-714.3	-74.6	538.9	520.7	18.23	29.568		
5,300.0	5,120.8	5,276.3	5,213.7	24.3	16.2	176.78	-731.1	-76.1	551.0	532.4	18.58	29.659		
5,400.0	5,216.6	5,375.6	5,311.5	24.9	16.5	176.80	-747.8	-77.7	563.1	544.2	18.93	29.746		
5,500.0	5,312.4	5,474.9	5,409.4	25.4	16.8	176.82	-764.5	-79.2	575.2	555.9	19.28	29.831		
5,600.0	5,408.2	5,574.1	5,507.2	25.9	17.2	176.84	-781.3	-80.7	587.3	567.6	19.63	29.912		
5,700.0	5,504.0	5,673.4	5,605.0	26.5	17.5	176.85	-798.0	-82.2	599.4	579.4	19.98	29.991		
5,800.0	5,599.7	5,772.7	5,702.9	27.0	17.9	176.87	-814.7	-83.7	611.5	591.1	20.34	30.067		
5,900.0	5,695.5	5,871.9	5,800.7	27.5	18.2	176.89	-831.4	-85.3	623.5	602.9	20.69	30.140		
6,000.0	5,791.4	5,971.3	5,898.6	28.0	18.5	176.91	-848.2	-86.8	635.2	614.2	21.06	30.167		
6,100.0	5,888.0	6,070.8	5,996.7	28.5	18.9	176.91	-865.0	-88.3	644.6	623.1	21.43	30.073		
6,200.0	5,985.2	6,170.6	6,095.0	28.9	19.2	176.91	-881.8	-89.8	651.3	629.5	21.80	29.874		
6,300.0	6,083.0	6,270.5	6,193.5	29.3	19.6	176.89	-898.6	-91.4	655.4	633.3	22.16	29.575		
6,400.0	6,181.3	6,357.2	6,279.1	29.7	19.8	176.87	-912.5	-92.6	657.8	635.4	22.49	29.255		
6,500.0	6,280.0	6,442.5	6,363.6	30.0	20.1	176.85	-924.2	-93.7	659.9	637.1	22.80	28.943		
6,600.0	6,379.1	6,527.8	6,448.3	30.2	20.3	176.83	-934.0	-94.6	661.5	638.4	23.10	28.637		
6,700.0	6,478.6	6,613.1	6,533.2	30.4	20.5	176.82	-942.0	-95.3	662.8	639.4	23.39	28.336		
6,800.0	6,578.2	6,700.0	6,619.9	30.6	20.6	176.81	-948.2	-95.9	663.6	640.0	23.67	28.036		
6,900.0	6,678.1	6,783.5	6,703.3	30.7	20.7	176.80	-952.3	-96.3	664.1	640.2	23.93	27.746		
7,000.0	6,778.1	6,868.8	6,788.5	30.8	20.8	176.79	-954.6	-96.5	664.2	640.0	24.19	27.456		
7,100.0	6,878.0	6,958.3	6,878.0	30.9	20.9	0.34	-955.0	-96.5	664.0	639.5	24.48	27.127		
7,200.0	6,978.0	7,058.3	6,978.0	31.0	21.0	0.34	-955.0	-96.5	664.0	639.2	24.83	26.745		
7,300.0	7,078.0	7,158.3	7,078.0	31.0	21.1	0.34	-955.0	-96.5	664.0	638.8	25.18	26.375		
7,400.0	7,178.0	7,258.3	7,178.0	31.1	21.2	0.34	-955.0	-96.5	664.0	638.5	25.53	26.014		
7,500.0	7,278.0	7,358.3	7,278.0	31.2	21.4	0.34	-955.0	-96.5	664.0	638.1	25.87	25.663		
7,600.0	7,378.0	7,458.3	7,378.0	31.3	21.5	0.34	-955.0	-96.5	664.0	637.8	26.22	25.321		
7,700.0	7,478.0	7,558.3	7,478.0	31.3	21.6	0.34	-955.0	-96.5	664.0	637.5	26.57	24.988		
7,800.0	7,578.0	7,658.3	7,578.0	31.4	21.7	0.34	-955.0	-96.5	664.0	637.1	26.92	24.664		
7,900.0	7,678.0	7,758.3	7,678.0	31.5	21.8	0.34	-955.0	-96.5	664.0	636.8	27.27	24.349		
8,000.0	7,778.0	7,858.3	7,778.0	31.6	21.9	0.34	-955.0	-96.5	664.0	636.4	27.62	24.041		
8,100.0	7,878.0	7,958.3	7,878.0	31.6	22.0	0.34	-955.0	-96.5	664.0	636.1	27.97	23.741		
8,200.0	7,978.0	8,058.3	7,978.0	31.7	22.1	0.34	-955.0	-96.5	664.0	635.7	28.32	23.448		
8,300.0	8,078.0	8,158.3	8,078.0	31.8	22.2	0.34	-955.0	-96.5	664.0	635.4	28.67	23.163		
8,400.0	8,178.0	8,258.3	8,178.0	31.9	22.3	0.34	-955.0	-96.5	664.0	635.0	29.02	22.884		
8,500.0	8,278.0	8,358.3	8,278.0	32.0	22.4	0.34	-955.0	-96.5	664.0	634.7	29.37	22.612		
8,600.0	8,378.0	8,458.3	8,378.0	32.0	22.6	0.34	-955.0	-96.5	664.0	634.3	29.72	22.346		
8,700.0	8,478.0	8,558.3	8,478.0	32.1	22.7	0.34	-955.0	-96.5	664.0	634.0	30.06	22.087		
8,800.0	8,578.0	8,658.3	8,578.0	32.2	22.8	0.34	-955.0	-96.5	664.0	633.6	30.41	21.833		
8,900.0	8,678.0	8,758.3	8,678.0	32.3	22.9	0.34	-955.0	-96.5	664.0	633.3	30.76	21.585		
8,906.0	8,684.0	8,764.2	8,684.0	32.3	22.9	0.34	-955.0	-96.5	664.0	633.2	30.78	21.571		

# Directional Plus

## Anticollision Report

<b>Company:</b>	Berry Petroleum Company (NAD 83)	<b>Local Co-ordinate Reference:</b>	Well Oxy 21-1D (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 21-1D (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 Uncertainty Axis	Separation Factor	Warning	
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)				
0.0	0.0	0.0	0.0	0.0	0.0	-33.07	25.1	-16.4	30.0					
100.0	100.0	100.0	100.0	0.1	0.1	-33.07	25.1	-16.4	30.0	29.7	0.30	101.068		
200.0	200.0	200.0	200.0	0.3	0.3	-33.07	25.1	-16.4	30.0	29.3	0.65	46.437		
300.0	300.0	300.0	300.0	0.5	0.5	-33.07	25.1	-16.4	30.0	29.0	0.99	30.143 CC, ES		
400.0	400.0	400.0	400.0	0.7	0.7	144.81	25.1	-16.4	31.0	29.7	1.34	23.097		
500.0	499.9	499.9	499.9	0.9	0.8	148.56	25.1	-16.4	34.3	32.6	1.69	20.256		
600.0	599.7	599.7	599.7	1.1	1.0	153.40	25.1	-16.4	40.1	38.0	2.05	19.577 SF		
700.0	699.3	700.4	700.4	1.3	1.2	157.56	23.8	-16.5	47.2	44.8	2.40	19.695		
800.0	798.6	801.3	801.2	1.5	1.4	160.40	19.9	-17.1	54.7	51.9	2.75	19.858		
900.0	897.5	902.4	902.1	1.8	1.6	162.38	13.3	-18.0	62.2	59.1	3.11	20.018		
1,000.0	996.1	1,003.7	1,003.0	2.1	1.8	163.76	4.0	-19.3	69.9	66.4	3.47	20.154		
1,100.0	1,094.2	1,103.8	1,102.4	2.5	2.0	164.90	-7.0	-20.8	78.3	74.5	3.83	20.476		
1,200.0	1,191.7	1,203.2	1,201.2	2.9	2.2	166.19	-18.0	-22.3	89.2	85.1	4.18	21.363		
1,300.0	1,288.6	1,302.2	1,299.6	3.4	2.5	167.51	-29.0	-23.8	102.7	98.2	4.52	22.711		
1,400.0	1,384.9	1,400.9	1,397.7	3.8	2.7	168.76	-39.9	-25.3	118.8	113.9	4.86	24.428		
1,500.0	1,480.7	1,499.3	1,495.5	4.4	3.0	169.87	-50.8	-26.8	136.5	131.3	5.21	26.181		
1,600.0	1,576.4	1,597.7	1,593.2	4.9	3.2	170.73	-61.7	-28.3	154.2	148.6	5.56	27.716		
1,700.0	1,672.2	1,696.1	1,691.0	5.4	3.5	171.41	-72.6	-29.8	172.0	166.1	5.91	29.075		
1,800.0	1,768.0	1,794.5	1,788.8	5.9	3.7	171.97	-83.5	-31.3	189.7	183.5	6.26	30.287		
1,900.0	1,863.8	1,892.9	1,886.6	6.4	3.9	172.43	-94.4	-32.8	207.5	200.9	6.62	31.372		
2,000.0	1,959.6	1,991.3	1,984.3	6.9	4.2	172.81	-105.3	-34.3	225.3	218.4	6.97	32.351		
2,100.0	2,055.4	2,089.7	2,082.1	7.4	4.4	173.14	-116.2	-35.8	243.1	235.8	7.32	33.238		
2,200.0	2,151.2	2,188.0	2,179.9	8.0	4.7	173.43	-127.1	-37.3	261.0	253.3	7.67	34.045		
2,300.0	2,247.0	2,286.4	2,277.7	8.5	5.0	173.68	-138.0	-38.8	278.8	270.8	8.01	34.782		
2,400.0	2,342.8	2,384.8	2,375.4	9.0	5.2	173.90	-148.9	-40.3	296.6	288.2	8.36	35.458		
2,500.0	2,438.6	2,483.2	2,473.2	9.5	5.5	174.09	-159.8	-41.8	314.4	305.7	8.71	36.081		
2,600.0	2,534.4	2,581.6	2,571.0	10.1	5.7	174.26	-170.7	-43.3	332.3	323.2	9.06	36.656		
2,700.0	2,630.2	2,680.0	2,668.8	10.6	6.0	174.42	-181.6	-44.8	350.1	340.7	9.41	37.189		
2,800.0	2,726.0	2,778.4	2,766.5	11.1	6.2	174.56	-192.5	-46.3	367.9	358.2	9.76	37.684		
2,900.0	2,821.8	2,876.8	2,864.3	11.7	6.5	174.69	-203.4	-47.8	385.8	375.7	10.11	38.145		
3,000.0	2,917.5	2,975.2	2,962.1	12.2	6.7	174.80	-214.3	-49.3	403.6	393.2	10.46	38.575		
3,100.0	3,013.3	3,073.6	3,059.9	12.7	7.0	174.91	-225.2	-50.8	421.5	410.6	10.81	38.978		
3,200.0	3,109.1	3,172.0	3,157.6	13.2	7.2	175.01	-236.1	-52.3	439.3	428.1	11.16	39.355		
3,300.0	3,204.9	3,270.4	3,255.4	13.8	7.5	175.10	-247.0	-53.8	457.1	445.6	11.51	39.710		
3,400.0	3,300.7	3,368.8	3,353.2	14.3	7.8	175.18	-257.9	-55.3	475.0	463.1	11.86	40.044		
3,500.0	3,396.5	3,467.2	3,451.0	14.8	8.0	175.26	-268.8	-56.9	492.8	480.6	12.21	40.359		
3,600.0	3,492.3	3,565.5	3,548.7	15.3	8.3	175.33	-279.7	-58.4	510.7	498.1	12.56	40.657		
3,700.0	3,588.1	3,663.9	3,646.5	15.9	8.5	175.40	-290.6	-59.9	528.5	515.6	12.91	40.938		
3,800.0	3,683.9	3,762.3	3,744.3	16.4	8.8	175.46	-301.5	-61.4	546.4	533.1	13.26	41.205		
3,900.0	3,779.7	3,860.7	3,842.1	16.9	9.0	175.52	-312.4	-62.9	564.2	550.6	13.61	41.458		
4,000.0	3,875.5	3,959.1	3,939.8	17.5	9.3	175.57	-323.3	-64.4	582.1	568.1	13.96	41.698		
4,100.0	3,971.3	4,057.5	4,037.6	18.0	9.5	175.62	-334.2	-65.9	599.9	585.6	14.31	41.927		
4,200.0	4,067.1	4,155.9	4,135.4	18.5	9.8	175.67	-345.1	-67.4	617.8	603.1	14.66	42.145		
4,300.0	4,162.9	4,254.3	4,233.2	19.1	10.1	175.72	-356.0	-68.9	635.6	620.6	15.01	42.353		
4,400.0	4,258.6	4,352.7	4,330.9	19.6	10.3	175.76	-366.9	-70.4	653.5	638.1	15.36	42.551		
4,500.0	4,354.4	4,451.1	4,428.7	20.1	10.6	175.80	-377.8	-71.9	671.3	655.6	15.71	42.741		
4,600.0	4,450.2	4,549.5	4,526.5	20.6	10.8	175.84	-388.7	-73.4	689.2	673.1	16.06	42.922		
4,700.0	4,546.0	4,647.9	4,624.3	21.2	11.1	175.88	-399.6	-74.9	707.0	690.6	16.41	43.096		
4,800.0	4,641.8	4,746.3	4,722.0	21.7	11.3	175.92	-410.5	-76.4	724.9	708.1	16.76	43.262		
4,900.0	4,737.6	4,844.6	4,819.8	22.2	11.6	175.95	-421.4	-77.9	742.8	725.6	17.11	43.422		
5,000.0	4,833.4	4,943.0	4,917.6	22.8	11.9	175.98	-432.3	-79.4	760.6	743.2	17.46	43.575		
5,100.0	4,929.2	5,041.4	5,015.4	23.3	12.1	176.01	-443.2	-80.9	778.5	760.7	17.80	43.722		

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 21-1D (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 21-1D (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						Warning	
Measured Depth	Vertical Depth	Measured Depth	Vertical Depth	Reference	Offset	Highside Toolface	Offset Wellbore Centre		Between Centres	Between Ellipses	Total Uncertainty Axis	Separation Factor		
(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(°)	+N/-S (ft)	+E/-W (ft)	(ft)	(ft)				
5,200.0	5,025.0	5,139.8	5,113.1	23.8	12.4	176.04	-454.1	-82.4	796.3	778.2	18.15	43.864		
5,300.0	5,120.8	5,238.2	5,210.9	24.3	12.6	176.07	-465.0	-83.9	814.2	795.7	18.50	44.000		
5,400.0	5,216.6	5,336.6	5,308.7	24.9	12.9	176.10	-475.9	-85.4	832.0	813.2	18.85	44.131		
5,500.0	5,312.4	5,435.0	5,406.5	25.4	13.1	176.12	-486.8	-86.9	849.9	830.7	19.20	44.258		
5,600.0	5,408.2	5,533.4	5,504.2	25.9	13.4	176.15	-497.7	-88.4	867.7	848.2	19.55	44.380		
5,700.0	5,504.0	5,631.8	5,602.0	26.5	13.6	176.17	-508.6	-89.9	885.6	865.7	19.90	44.498		
5,800.0	5,599.7	5,730.2	5,699.8	27.0	13.9	176.19	-519.5	-91.4	903.4	883.2	20.25	44.611		
5,900.0	5,695.5	5,828.6	5,797.6	27.5	14.2	176.21	-530.4	-92.9	921.3	900.7	20.60	44.721		
6,000.0	5,791.4	5,927.0	5,895.4	28.0	14.4	176.24	-541.3	-94.4	938.7	917.8	20.97	44.762		
6,100.0	5,888.0	6,025.9	5,993.6	28.5	14.7	176.27	-552.3	-95.9	953.9	932.5	21.35	44.668		
6,200.0	5,985.2	6,125.1	6,092.2	28.9	14.9	176.28	-563.3	-97.4	966.4	944.7	21.73	44.475		
6,300.0	6,083.0	6,224.6	6,191.1	29.3	15.2	176.28	-574.3	-98.9	976.4	954.3	22.10	44.187		
6,400.0	6,181.3	6,324.3	6,290.2	29.7	15.5	176.26	-585.3	-100.4	983.7	961.2	22.45	43.808		
6,500.0	6,280.0	6,424.2	6,389.5	30.0	15.7	176.24	-596.4	-102.0	988.4	965.6	22.80	43.344		
6,600.0	6,379.1	6,511.4	6,476.2	30.2	15.9	176.21	-605.7	-103.3	990.9	967.8	23.12	42.859		
6,700.0	6,478.6	6,600.0	6,564.4	30.4	16.1	176.18	-613.4	-104.3	992.8	969.4	23.43	42.377		
6,800.0	6,578.2	6,670.5	6,634.7	30.6	16.3	176.17	-618.1	-105.0	994.0	970.4	23.69	41.958		
6,900.0	6,678.1	6,750.0	6,714.1	30.7	16.4	176.15	-621.8	-105.5	994.8	970.8	23.96	41.521		
7,000.0	6,778.1	6,829.5	6,793.6	30.8	16.5	176.14	-623.8	-105.7	994.9	970.7	24.21	41.090		
7,100.0	6,878.0	6,913.9	6,878.0	30.9	16.6	-0.31	-624.3	-105.8	994.8	970.3	24.50	40.606		
7,200.0	6,978.0	7,013.9	6,978.0	31.0	16.7	-0.31	-624.3	-105.8	994.8	969.9	24.85	40.037		
7,300.0	7,078.0	7,113.9	7,078.0	31.0	16.9	-0.31	-624.3	-105.8	994.8	969.6	25.19	39.485		
7,400.0	7,178.0	7,213.9	7,178.0	31.1	17.0	-0.31	-624.3	-105.8	994.8	969.2	25.54	38.947		
7,500.0	7,278.0	7,313.9	7,278.0	31.2	17.1	-0.31	-624.3	-105.8	994.8	968.9	25.89	38.424		
7,600.0	7,378.0	7,413.9	7,378.0	31.3	17.3	-0.31	-624.3	-105.8	994.8	968.5	26.24	37.914		
7,700.0	7,478.0	7,513.9	7,478.0	31.3	17.4	-0.31	-624.3	-105.8	994.8	968.2	26.59	37.418		
7,800.0	7,578.0	7,613.9	7,578.0	31.4	17.5	-0.31	-624.3	-105.8	994.8	967.8	26.93	36.934		
7,900.0	7,678.0	7,713.9	7,678.0	31.5	17.7	-0.31	-624.3	-105.8	994.8	967.5	27.28	36.463		
8,000.0	7,778.0	7,813.9	7,778.0	31.6	17.8	-0.31	-624.3	-105.8	994.8	967.1	27.63	36.004		
8,100.0	7,878.0	7,913.9	7,878.0	31.6	17.9	-0.31	-624.3	-105.8	994.8	966.8	27.98	35.556		
8,200.0	7,978.0	8,013.9	7,978.0	31.7	18.1	-0.31	-624.3	-105.8	994.8	966.4	28.33	35.119		
8,300.0	8,078.0	8,113.9	8,078.0	31.8	18.2	-0.31	-624.3	-105.8	994.8	966.1	28.67	34.693		
8,400.0	8,178.0	8,213.9	8,178.0	31.9	18.3	-0.31	-624.3	-105.8	994.8	965.7	29.02	34.277		
8,500.0	8,278.0	8,313.9	8,278.0	32.0	18.5	-0.31	-624.3	-105.8	994.8	965.4	29.37	33.870		
8,600.0	8,378.0	8,413.9	8,378.0	32.0	18.6	-0.31	-624.3	-105.8	994.8	965.0	29.72	33.474		
8,700.0	8,478.0	8,513.9	8,478.0	32.1	18.7	-0.31	-624.3	-105.8	994.8	964.7	30.07	33.086		
8,800.0	8,578.0	8,613.9	8,578.0	32.2	18.9	-0.31	-624.3	-105.8	994.8	964.3	30.41	32.707		
8,900.0	8,678.0	8,713.9	8,678.0	32.3	19.0	-0.31	-624.3	-105.8	994.8	964.0	30.76	32.337		
8,906.0	8,684.0	8,719.9	8,684.0	32.3	19.0	-0.31	-624.3	-105.8	994.8	964.0	30.78	32.315		



# Directional Plus

## Anticollision Report

<b>Company:</b>	Berry Petroleum Company (NAD 83)	<b>Local Co-ordinate Reference:</b>	Well Oxy 21-1D (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 21-1D (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			
0.0	0.0	0.0	0.0	0.0	0.0	-32.90	37.5	-24.3	44.7					
100.0	100.0	100.0	100.0	0.1	0.1	-32.90	37.5	-24.3	44.7	44.4	0.30	150.576		
200.0	200.0	200.0	200.0	0.3	0.3	-32.90	37.5	-24.3	44.7	44.0	0.65	69.183		
300.0	300.0	300.0	300.0	0.5	0.5	-32.90	37.5	-24.3	44.7	43.7	0.99	44.909 CC, ES		
400.0	400.0	400.0	400.0	0.7	0.7	144.52	37.5	-24.3	45.7	44.4	1.34	34.024		
500.0	499.9	499.9	499.9	0.9	0.8	147.16	37.5	-24.3	49.0	47.3	1.70	28.898		
600.0	599.7	599.7	599.7	1.1	1.0	150.84	37.5	-24.3	54.6	52.6	2.05	26.664		
700.0	699.3	700.6	700.6	1.3	1.2	154.25	36.2	-24.5	61.7	59.3	2.40	25.651		
800.0	798.6	801.8	801.7	1.5	1.4	156.68	32.3	-25.3	69.0	66.3	2.76	24.983		
900.0	897.5	902.9	902.6	1.8	1.6	158.39	25.8	-26.6	76.6	73.5	3.13	24.516 SF		
1,000.0	996.1	1,002.4	1,001.8	2.1	1.8	160.08	18.4	-28.0	85.9	82.4	3.49	24.647		
1,100.0	1,094.2	1,101.7	1,100.8	2.5	2.0	161.90	11.1	-29.5	97.8	93.9	3.84	25.438		
1,200.0	1,191.7	1,200.6	1,199.4	2.9	2.2	163.70	3.9	-30.9	112.2	108.0	4.19	26.744		
1,300.0	1,288.6	1,299.0	1,297.6	3.4	2.4	165.37	-3.4	-32.3	129.1	124.6	4.54	28.456		
1,400.0	1,384.9	1,397.0	1,395.3	3.8	2.6	166.87	-10.6	-33.8	148.7	143.8	4.88	30.497		
1,500.0	1,480.7	1,494.7	1,492.7	4.4	2.8	168.18	-17.8	-35.2	169.9	164.7	5.22	32.528		
1,600.0	1,576.4	1,592.3	1,590.1	4.9	3.0	169.21	-25.0	-36.6	191.2	185.6	5.57	34.314		
1,700.0	1,672.2	1,690.0	1,687.5	5.4	3.2	170.03	-32.2	-38.0	212.6	206.6	5.92	35.900		
1,800.0	1,768.0	1,787.7	1,784.8	5.9	3.4	170.70	-39.3	-39.4	233.9	227.7	6.27	37.318		
1,900.0	1,863.8	1,885.3	1,882.2	6.4	3.6	171.26	-46.5	-40.9	255.3	248.7	6.62	38.591		
2,000.0	1,959.6	1,983.0	1,979.6	6.9	3.8	171.73	-53.7	-42.3	276.7	269.8	6.96	39.741		
2,100.0	2,055.4	2,080.6	2,077.0	7.4	4.0	172.14	-60.9	-43.7	298.2	290.8	7.31	40.784		
2,200.0	2,151.2	2,178.3	2,174.4	8.0	4.2	172.49	-68.1	-45.1	319.6	311.9	7.66	41.734		
2,300.0	2,247.0	2,275.9	2,271.8	8.5	4.5	172.79	-75.3	-46.5	341.1	333.0	8.01	42.604		
2,400.0	2,342.8	2,373.6	2,369.1	9.0	4.7	173.06	-82.5	-47.9	362.5	354.2	8.35	43.402		
2,500.0	2,438.6	2,471.2	2,466.5	9.5	4.9	173.30	-89.6	-49.4	384.0	375.3	8.70	44.138		
2,600.0	2,534.4	2,568.9	2,563.9	10.1	5.1	173.52	-96.8	-50.8	405.4	396.4	9.05	44.818		
2,700.0	2,630.2	2,666.6	2,661.3	10.6	5.3	173.71	-104.0	-52.2	426.9	417.5	9.39	45.448		
2,800.0	2,726.0	2,764.2	2,758.7	11.1	5.5	173.89	-111.2	-53.6	448.4	438.7	9.74	46.034		
2,900.0	2,821.8	2,861.9	2,856.0	11.7	5.7	174.05	-118.4	-55.0	469.9	459.8	10.09	46.580		
3,000.0	2,917.5	2,959.5	2,953.4	12.2	5.9	174.19	-125.6	-56.5	491.4	480.9	10.44	47.090		
3,100.0	3,013.3	3,057.2	3,050.8	12.7	6.1	174.32	-132.8	-57.9	512.9	502.1	10.78	47.567		
3,200.0	3,109.1	3,154.8	3,148.2	13.2	6.4	174.44	-140.0	-59.3	534.4	523.2	11.13	48.015		
3,300.0	3,204.9	3,252.5	3,245.6	13.8	6.6	174.56	-147.1	-60.7	555.9	544.4	11.48	48.436		
3,400.0	3,300.7	3,350.2	3,343.0	14.3	6.8	174.66	-154.3	-62.1	577.4	565.5	11.82	48.832		
3,500.0	3,396.5	3,447.8	3,440.3	14.8	7.0	174.76	-161.5	-63.6	598.9	586.7	12.17	49.206		
3,600.0	3,492.3	3,545.5	3,537.7	15.3	7.2	174.85	-168.7	-65.0	620.4	607.8	12.52	49.559		
3,700.0	3,588.1	3,643.1	3,635.1	15.9	7.4	174.93	-175.9	-66.4	641.9	629.0	12.86	49.894		
3,800.0	3,683.9	3,740.8	3,732.5	16.4	7.6	175.01	-183.1	-67.8	663.4	650.2	13.21	50.211		
3,900.0	3,779.7	3,838.4	3,829.9	16.9	7.8	175.08	-190.3	-69.2	684.9	671.3	13.56	50.511		
4,000.0	3,875.5	3,936.1	3,927.2	17.5	8.1	175.15	-197.5	-70.6	706.4	692.5	13.91	50.797		
4,100.0	3,971.3	4,033.8	4,024.6	18.0	8.3	175.22	-204.6	-72.1	727.9	713.6	14.25	51.069		
4,200.0	4,067.1	4,131.4	4,122.0	18.5	8.5	175.28	-211.8	-73.5	749.4	734.8	14.60	51.328		
4,300.0	4,162.9	4,229.1	4,219.4	19.1	8.7	175.34	-219.0	-74.9	770.9	755.9	14.95	51.575		
4,400.0	4,258.6	4,326.7	4,316.8	19.6	8.9	175.39	-226.2	-76.3	792.4	777.1	15.29	51.811		
4,500.0	4,354.4	4,424.4	4,414.1	20.1	9.1	175.44	-233.4	-77.7	813.9	798.3	15.64	52.036		
4,600.0	4,450.2	4,522.0	4,511.5	20.6	9.3	175.49	-240.6	-79.2	835.4	819.4	15.99	52.252		
4,700.0	4,546.0	4,619.7	4,608.9	21.2	9.5	175.54	-247.8	-80.6	856.9	840.6	16.34	52.459		
4,800.0	4,641.8	4,717.4	4,706.3	21.7	9.8	175.58	-254.9	-82.0	878.4	861.8	16.68	52.657		
4,900.0	4,737.6	4,815.0	4,803.7	22.2	10.0	175.63	-262.1	-83.4	900.0	882.9	17.03	52.847		
5,000.0	4,833.4	4,912.7	4,901.1	22.8	10.2	175.67	-269.3	-84.8	921.5	904.1	17.38	53.029		
5,100.0	4,929.2	5,010.3	4,998.4	23.3	10.4	175.71	-276.5	-86.3	943.0	925.3	17.72	53.204		

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 21-1D (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 21-1D (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	5,025.0	5,108.0	5,095.8	23.8	10.6	175.74	-283.7	-87.7	964.5	946.4	18.07	53.373		
5,300.0	5,120.8	5,205.6	5,193.2	24.3	10.8	175.78	-290.9	-89.1	986.0	967.6	18.42	53.535		
5,400.0	5,216.6	5,303.3	5,290.6	24.9	11.0	175.81	-298.1	-90.5	1,007.5	988.8	18.77	53.691		
5,500.0	5,312.4	5,401.0	5,388.0	25.4	11.2	175.84	-305.3	-91.9	1,029.0	1,009.9	19.11	53.842		
5,600.0	5,408.2	5,498.6	5,485.3	25.9	11.5	175.87	-312.4	-93.3	1,050.5	1,031.1	19.46	53.987		
5,700.0	5,504.0	5,596.3	5,582.7	26.5	11.7	175.90	-319.6	-94.8	1,072.1	1,052.3	19.81	54.127		
5,800.0	5,599.7	5,693.9	5,680.1	27.0	11.9	175.93	-326.8	-96.2	1,093.6	1,073.4	20.15	54.262		

# Directional Plus

## Anticollision Report

<b>Company:</b>	Berry Petroleum Company (NAD 83)	<b>Local Co-ordinate Reference:</b>	Well Oxy 21-1D (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 21-1D (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: 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	300.0	300.0	0.0	0.0	-27.95	106.4	-56.4	120.4							
100.0	100.0	400.0	400.0	0.1	0.1	-27.95	106.4	-56.4	120.4	120.1	0.30	405.783				
200.0	200.0	500.0	500.0	0.3	0.3	-27.95	106.4	-56.4	120.4	119.8	0.65	186.441				
300.0	300.0	603.1	603.1	0.5	0.5	-27.80	105.3	-55.5	119.1	118.1	1.00	119.031				
400.0	400.0	706.2	706.1	0.7	0.7	149.50	102.2	-52.8	116.3	114.9	1.36	85.749				
500.0	499.9	808.0	807.7	0.9	0.9	151.38	97.1	-48.3	113.3	111.6	1.71	66.185				
589.6	589.3	897.5	896.9	1.0	1.1	153.70	92.3	-44.1	112.3	110.3	2.03	55.267 CC				
600.0	599.7	907.9	907.3	1.1	1.1	154.00	91.8	-43.6	112.3	110.2	2.07	54.279 ES				
700.0	699.3	1,007.7	1,006.8	1.3	1.3	157.16	86.4	-38.9	113.9	111.5	2.43	46.896				
800.0	798.6	1,107.3	1,106.2	1.5	1.5	160.64	81.0	-34.2	118.4	115.6	2.79	42.395				
900.0	897.5	1,206.8	1,205.4	1.8	1.7	164.17	75.7	-29.5	125.7	122.6	3.15	39.855				
1,000.0	996.1	1,305.9	1,304.3	2.1	1.9	167.53	70.4	-24.9	136.1	132.5	3.52	38.704				
1,100.0	1,094.2	1,404.7	1,402.9	2.5	2.2	170.58	65.0	-20.2	149.4	145.5	3.87	38.563 SF				
1,200.0	1,191.7	1,503.1	1,501.0	2.9	2.4	173.23	59.7	-15.5	165.6	161.4	4.23	39.167				
1,300.0	1,288.6	1,601.1	1,598.7	3.4	2.6	175.47	54.5	-10.9	184.7	180.1	4.58	40.328				
1,400.0	1,384.9	1,698.4	1,695.8	3.8	2.8	177.33	49.2	-6.3	206.6	201.6	4.93	41.915				
1,500.0	1,480.7	1,794.8	1,791.9	4.4	3.0	178.84	44.1	-1.8	230.2	224.9	5.29	43.502				
1,600.0	1,576.4	1,887.3	1,884.3	4.9	3.2	179.79	40.2	1.6	255.0	249.4	5.64	45.238				
1,700.0	1,672.2	1,979.1	1,976.1	5.4	3.3	-179.76	38.1	3.5	281.6	275.6	5.97	47.162				
1,800.0	1,768.0	2,071.1	2,068.0	5.9	3.5	-179.69	37.5	4.0	309.8	303.5	6.30	49.199				
1,900.0	1,863.8	2,166.9	2,163.8	6.4	3.6	-179.71	37.5	4.0	338.5	331.9	6.63	51.078				
2,000.0	1,959.6	2,262.7	2,259.6	6.9	3.8	-179.74	37.5	4.0	367.2	360.2	6.96	52.774				
2,100.0	2,055.4	2,358.5	2,355.4	7.4	3.9	-179.76	37.5	4.0	395.9	388.6	7.29	54.310				
2,200.0	2,151.2	2,454.3	2,451.2	8.0	4.1	-179.77	37.5	4.0	424.6	417.0	7.62	55.708				
2,300.0	2,247.0	2,550.0	2,547.0	8.5	4.2	-179.79	37.5	4.0	453.3	445.3	7.95	56.986				
2,400.0	2,342.8	2,645.8	2,642.8	9.0	4.4	-179.80	37.5	4.0	482.0	473.7	8.29	58.157				
2,500.0	2,438.6	2,741.6	2,738.6	9.5	4.5	-179.81	37.5	4.0	510.7	502.1	8.62	59.236				
2,600.0	2,534.4	2,837.4	2,834.4	10.1	4.7	-179.82	37.5	4.0	539.4	530.4	8.96	60.231				
2,700.0	2,630.2	2,933.2	2,930.2	10.6	4.8	-179.83	37.5	4.0	568.1	558.8	9.29	61.152				
2,800.0	2,726.0	3,029.0	3,026.0	11.1	5.0	-179.84	37.5	4.0	596.8	587.2	9.62	62.008				
2,900.0	2,821.8	3,124.8	3,121.8	11.7	5.2	-179.85	37.5	4.0	625.5	615.5	9.96	62.804				
3,000.0	2,917.5	3,220.6	3,217.5	12.2	5.3	-179.85	37.5	4.0	654.2	643.9	10.29	63.547				
3,100.0	3,013.3	3,316.4	3,313.3	12.7	5.5	-179.86	37.5	4.0	682.9	672.3	10.63	64.242				
3,200.0	3,109.1	3,412.2	3,409.1	13.2	5.6	-179.86	37.5	4.0	711.6	700.6	10.97	64.893				
3,300.0	3,204.9	3,508.0	3,504.9	13.8	5.8	-179.87	37.5	4.0	740.3	729.0	11.30	65.505				
3,400.0	3,300.7	3,603.8	3,600.7	14.3	6.0	-179.87	37.5	4.0	769.0	757.4	11.64	66.080				
3,500.0	3,396.5	3,699.6	3,696.5	14.8	6.1	-179.88	37.5	4.0	797.7	785.7	11.97	66.622				
3,600.0	3,492.3	3,795.4	3,792.3	15.3	6.3	-179.88	37.5	4.0	826.4	814.1	12.31	67.133				
3,700.0	3,588.1	3,891.1	3,888.1	15.9	6.4	-179.89	37.5	4.0	855.1	842.5	12.65	67.617				
3,800.0	3,683.9	3,986.9	3,983.9	16.4	6.6	-179.89	37.5	4.0	883.8	870.8	12.98	68.075				
3,900.0	3,779.7	4,082.7	4,079.7	16.9	6.8	-179.89	37.5	4.0	912.5	899.2	13.32	68.509				
4,000.0	3,875.5	4,178.5	4,175.5	17.5	6.9	-179.90	37.5	4.0	941.2	927.5	13.66	68.921				
4,100.0	3,971.3	4,274.3	4,271.3	18.0	7.1	-179.90	37.5	4.0	969.9	955.9	13.99	69.313				
4,200.0	4,067.1	4,370.1	4,367.1	18.5	7.3	-179.90	37.5	4.0	998.6	984.3	14.33	69.686				
4,300.0	4,162.9	4,465.9	4,462.9	19.1	7.4	-179.91	37.5	4.0	1,027.3	1,012.6	14.67	70.042				
4,400.0	4,258.6	4,561.7	4,558.6	19.6	7.6	-179.91	37.5	4.0	1,056.0	1,041.0	15.00	70.381				
4,500.0	4,354.4	4,657.5	4,654.4	20.1	7.7	-179.91	37.5	4.0	1,084.7	1,069.4	15.34	70.705				

# Directional Plus

## Anticollision Report

<b>Company:</b>	Berry Petroleum Company (NAD 83)	<b>Local Co-ordinate Reference:</b>	Well Oxy 21-1D (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 21-1D (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:		0-MWD											Offset Well Error:		0.0 ft
Reference		Offset		Semi Major Axis			Distance								Warning
Measured Depth	Vertical Depth	Measured Depth	Vertical Depth	Reference	Offset	Highside Toolface	Offset Wellbore Centre		Between Centres	Between Ellipses	Total Uncertainty Axis	Separation Factor			
(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(°)	+N/-S (ft)	+E/-W (ft)	(ft)	(ft)					
0.0	0.0	0.0	0.0	0.0	0.0	-28.52	118.4	-64.3	134.7						
100.0	100.0	100.0	100.0	0.1	0.1	-28.52	118.4	-64.3	134.7	134.4	0.30	454.072			
200.0	200.0	200.0	200.0	0.3	0.3	-28.52	118.4	-64.3	134.7	134.1	0.65	208.628			
300.0	300.0	300.0	300.0	0.5	0.5	-28.52	118.4	-64.3	134.7	133.7	0.99	135.425	CC, ES		
400.0	400.0	400.0	400.0	0.7	0.7	148.21	118.4	-64.3	135.8	134.5	1.34	101.061			
500.0	499.9	499.9	499.9	0.9	0.8	149.04	118.4	-64.3	139.2	137.5	1.69	82.128			
600.0	599.7	596.5	596.5	1.1	1.0	150.53	119.6	-64.2	145.9	143.9	2.04	71.436			
700.0	699.3	692.4	692.3	1.3	1.2	152.72	123.2	-63.9	157.2	154.8	2.39	65.727			
800.0	798.6	787.6	787.3	1.5	1.4	155.31	129.1	-63.3	173.3	170.6	2.74	63.208			
900.0	897.5	885.3	884.8	1.8	1.6	157.91	136.1	-62.6	193.0	189.9	3.09	62.365	SF		
1,000.0	996.1	982.4	981.6	2.1	1.8	160.25	143.1	-62.0	215.4	212.0	3.44	62.569			
1,100.0	1,094.2	1,078.8	1,077.7	2.5	2.0	162.31	150.1	-61.3	240.6	236.8	3.79	63.544			
1,200.0	1,191.7	1,174.5	1,173.2	2.9	2.2	164.12	156.9	-60.6	268.4	264.3	4.12	65.103			
1,300.0	1,288.6	1,269.3	1,267.8	3.4	2.4	165.69	163.7	-60.0	298.9	294.5	4.45	67.115			
1,400.0	1,384.9	1,363.4	1,361.6	3.8	2.5	167.06	170.5	-59.4	332.1	327.3	4.78	69.486			
1,500.0	1,480.7	1,456.9	1,454.8	4.4	2.7	168.33	177.2	-58.7	366.8	361.7	5.11	71.746			
1,600.0	1,576.4	1,550.3	1,548.1	4.9	2.9	169.38	183.9	-58.1	401.7	396.3	5.45	73.753			
1,700.0	1,672.2	1,643.8	1,641.3	5.4	3.1	170.27	190.7	-57.4	436.7	431.0	5.78	75.562			
1,800.0	1,768.0	1,737.3	1,734.5	5.9	3.3	171.03	197.4	-56.8	471.8	465.7	6.11	77.198			
1,900.0	1,863.8	1,830.7	1,827.8	6.4	3.5	171.68	204.1	-56.1	507.0	500.5	6.44	78.682			
2,000.0	1,959.6	1,924.2	1,921.0	6.9	3.7	172.25	210.8	-55.5	542.2	535.4	6.77	80.034			
2,100.0	2,055.4	2,017.7	2,014.2	7.4	3.9	172.75	217.5	-54.9	577.4	570.3	7.11	81.268			
2,200.0	2,151.2	2,111.2	2,107.4	8.0	4.1	173.19	224.2	-54.2	612.7	605.3	7.44	82.399			
2,300.0	2,247.0	2,204.6	2,200.7	8.5	4.3	173.58	231.0	-53.6	648.0	640.2	7.77	83.439			
2,400.0	2,342.8	2,298.1	2,293.9	9.0	4.5	173.93	237.7	-52.9	683.3	675.2	8.10	84.398			
2,500.0	2,438.6	2,391.6	2,387.1	9.5	4.7	174.25	244.4	-52.3	718.7	710.3	8.43	85.284			
2,600.0	2,534.4	2,485.0	2,480.3	10.1	4.9	174.54	251.1	-51.7	754.1	745.3	8.76	86.105			
2,700.0	2,630.2	2,578.5	2,573.6	10.6	5.1	174.80	257.8	-51.0	789.4	780.4	9.09	86.868			
2,800.0	2,726.0	2,672.0	2,666.8	11.1	5.3	175.04	264.5	-50.4	824.8	815.4	9.42	87.578			
2,900.0	2,821.8	2,765.5	2,760.0	11.7	5.5	175.26	271.3	-49.7	860.2	850.5	9.75	88.242			
3,000.0	2,917.5	2,858.9	2,853.3	12.2	5.7	175.47	278.0	-49.1	895.7	885.6	10.08	88.862			
3,100.0	3,013.3	2,952.4	2,946.5	12.7	5.9	175.65	284.7	-48.4	931.1	920.7	10.41	89.443			
3,200.0	3,109.1	3,045.9	3,039.7	13.2	6.1	175.83	291.4	-47.8	966.5	955.8	10.74	89.989			
3,300.0	3,204.9	3,142.4	3,136.0	13.8	6.3	175.99	298.3	-47.1	1,002.0	990.9	11.08	90.460			
3,400.0	3,300.7	3,270.6	3,264.0	14.3	6.6	176.18	305.0	-46.5	1,035.6	1,024.1	11.46	90.331			
3,500.0	3,396.5	3,401.8	3,395.2	14.8	6.8	176.34	307.4	-46.3	1,066.0	1,054.1	11.86	89.888			
3,600.0	3,492.3	3,498.9	3,492.3	15.3	6.9	176.43	307.4	-46.3	1,094.6	1,082.4	12.20	89.729			

# Directional Plus

## Anticollision Report

<b>Company:</b>	Berry Petroleum Company (NAD 83)	<b>Local Co-ordinate Reference:</b>	Well Oxy 21-1D (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 21-1D (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		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	-28.78	131.5	-72.2	150.0					
100.0	100.0	100.0	100.0	0.1	0.1	-28.78	131.5	-72.2	150.0	149.7	0.30	505.622		
200.0	200.0	200.0	200.0	0.3	0.3	-28.78	131.5	-72.2	150.0	149.4	0.65	232.313		
300.0	300.0	300.0	300.0	0.5	0.5	-28.78	131.5	-72.2	150.0	149.0	0.99	150.800 CC, ES		
400.0	400.0	400.0	400.0	0.7	0.7	147.92	131.5	-72.2	151.1	149.8	1.34	112.437		
500.0	499.9	499.9	499.9	0.9	0.8	148.67	131.5	-72.2	154.5	152.8	1.69	91.140		
600.0	599.7	596.0	596.0	1.1	1.0	149.98	132.7	-72.3	161.2	159.2	2.04	78.956		
700.0	699.3	691.4	691.3	1.3	1.2	151.87	136.3	-72.3	172.6	170.3	2.39	72.203		
800.0	798.6	785.7	785.4	1.5	1.4	154.10	142.2	-72.4	188.9	186.1	2.74	68.918		
900.0	897.5	881.4	880.8	1.8	1.6	156.44	150.0	-72.5	209.6	206.5	3.09	67.790		
1,000.0	996.1	978.2	977.3	2.1	1.8	158.63	158.2	-72.6	233.2	229.7	3.44	67.738 SF		
1,100.0	1,094.2	1,074.3	1,073.0	2.5	2.0	160.58	166.3	-72.8	259.4	255.6	3.79	68.489		
1,200.0	1,191.7	1,169.6	1,168.0	2.9	2.2	162.31	174.3	-72.9	288.3	284.2	4.13	69.848		
1,300.0	1,288.6	1,264.1	1,262.2	3.4	2.4	163.83	182.2	-73.0	319.9	315.4	4.46	71.682		
1,400.0	1,384.9	1,357.8	1,355.5	3.8	2.6	165.17	190.1	-73.1	354.0	349.3	4.79	73.893		
1,500.0	1,480.7	1,450.8	1,448.2	4.4	2.8	166.43	197.9	-73.2	389.8	384.7	5.13	76.019		
1,600.0	1,576.4	1,543.9	1,540.9	4.9	3.0	167.50	205.7	-73.4	425.8	420.3	5.46	77.916		
1,700.0	1,672.2	1,636.9	1,633.7	5.4	3.2	168.41	213.6	-73.5	461.8	456.0	5.80	79.635		
1,800.0	1,768.0	1,730.0	1,726.4	5.9	3.4	169.18	221.4	-73.6	497.9	491.8	6.13	81.196		
1,900.0	1,863.8	1,823.0	1,819.1	6.4	3.6	169.85	229.2	-73.7	534.1	527.7	6.47	82.618		
2,000.0	1,959.6	1,916.1	1,911.8	6.9	3.8	170.43	237.0	-73.8	570.4	563.6	6.80	83.917		
2,100.0	2,055.4	2,009.1	2,004.5	7.4	4.0	170.94	244.8	-73.9	606.7	599.6	7.13	85.107		
2,200.0	2,151.2	2,102.2	2,097.2	8.0	4.2	171.40	252.7	-74.1	643.0	635.6	7.46	86.201		
2,300.0	2,247.0	2,195.2	2,190.0	8.5	4.5	171.81	260.5	-74.2	679.4	671.6	7.79	87.209		
2,400.0	2,342.8	2,288.3	2,282.7	9.0	4.7	172.17	268.3	-74.3	715.8	707.7	8.12	88.139		
2,500.0	2,438.6	2,381.3	2,375.4	9.5	4.9	172.50	276.1	-74.4	752.2	743.8	8.45	89.001		
2,600.0	2,534.4	2,474.4	2,468.1	10.1	5.1	172.81	284.0	-74.5	788.7	779.9	8.78	89.802		
2,700.0	2,630.2	2,567.4	2,560.8	10.6	5.3	173.08	291.8	-74.7	825.1	816.0	9.11	90.547		
2,800.0	2,726.0	2,660.4	2,653.6	11.1	5.5	173.33	299.6	-74.8	861.6	852.2	9.44	91.241		
2,900.0	2,821.8	2,753.5	2,746.3	11.7	5.7	173.56	307.4	-74.9	898.1	888.3	9.77	91.891		
3,000.0	2,917.5	2,846.5	2,839.0	12.2	5.9	173.77	315.3	-75.0	934.6	924.5	10.10	92.499		
3,100.0	3,013.3	2,939.6	2,931.7	12.7	6.1	173.97	323.1	-75.1	971.1	960.7	10.43	93.069		
3,200.0	3,109.1	3,032.6	3,024.4	13.2	6.4	174.15	330.9	-75.3	1,007.6	996.9	10.76	93.605		
3,300.0	3,204.9	3,125.7	3,117.1	13.8	6.6	174.32	338.7	-75.4	1,044.2	1,033.1	11.10	94.110		
3,400.0	3,300.7	3,218.7	3,209.9	14.3	6.8	174.48	346.5	-75.5	1,080.7	1,069.3	11.43	94.586		

# Directional Plus

## Anticollision Report

<b>Company:</b>	Berry Petroleum Company (NAD 83)	<b>Local Co-ordinate Reference:</b>	Well Oxy 21-1D (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 21-1D (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	-32.43	50.6	-32.2	60.0					
100.0	100.0	100.0	100.0	0.1	0.1	-32.43	50.6	-32.2	60.0	59.7	0.30	202.152		
200.0	200.0	200.0	200.0	0.3	0.3	-32.43	50.6	-32.2	60.0	59.3	0.65	92.881		
300.0	300.0	300.4	300.4	0.5	0.5	-33.65	49.6	-33.0	59.6	58.6	1.00	59.751		
347.1	347.1	347.7	347.7	0.6	0.6	141.55	48.5	-34.0	59.4	58.3	1.17	50.919	CC, ES	
400.0	400.0	400.8	400.7	0.7	0.7	139.91	46.6	-35.6	59.7	58.3	1.36	43.897		
500.0	499.9	501.0	500.7	0.9	0.9	136.26	41.6	-39.9	61.3	59.6	1.74	35.205		
600.0	599.7	601.0	600.3	1.1	1.1	132.19	34.7	-45.9	64.7	62.6	2.16	29.976		
700.0	699.3	700.9	699.4	1.3	1.4	128.06	25.7	-53.5	70.0	67.4	2.63	26.661		
800.0	798.6	800.5	798.0	1.5	1.7	124.16	14.9	-62.8	77.2	74.0	3.15	24.490		
900.0	897.5	899.8	895.9	1.8	2.0	120.67	2.1	-73.8	86.2	82.5	3.74	23.036		
1,000.0	996.1	998.8	993.0	2.1	2.4	117.66	-12.5	-86.4	97.1	92.7	4.41	22.044		
1,100.0	1,094.2	1,097.4	1,089.2	2.5	2.8	115.13	-29.0	-100.5	109.8	104.7	5.14	21.356		
1,200.0	1,191.7	1,195.6	1,184.4	2.9	3.2	113.02	-47.3	-116.2	124.3	118.4	5.96	20.873		
1,300.0	1,288.6	1,293.4	1,278.6	3.4	3.7	111.28	-67.3	-133.4	140.5	133.6	6.84	20.528		
1,400.0	1,384.9	1,390.8	1,371.6	3.8	4.3	109.84	-89.1	-152.1	158.3	150.5	7.81	20.278		
1,500.0	1,480.7	1,487.7	1,463.4	4.4	4.8	108.58	-112.5	-172.2	177.4	168.6	8.82	20.111		
1,600.0	1,576.4	1,584.1	1,554.0	4.9	5.4	106.91	-137.6	-193.7	197.3	187.5	9.87	19.988		
1,700.0	1,672.2	1,679.8	1,643.1	5.4	6.1	104.94	-164.2	-216.6	218.3	207.3	10.95	19.932	SF	
1,800.0	1,768.0	1,775.5	1,731.3	5.9	6.8	102.80	-192.4	-240.8	240.3	228.3	12.04	19.966		
1,900.0	1,863.8	1,872.6	1,820.5	6.4	7.5	100.86	-221.4	-265.7	262.9	249.8	13.12	20.033		
2,000.0	1,959.6	1,969.7	1,909.7	6.9	8.1	99.24	-250.4	-290.6	285.7	271.5	14.20	20.118		
2,100.0	2,055.4	2,066.7	1,998.9	7.4	8.8	97.85	-279.4	-315.5	308.7	293.5	15.28	20.212		
2,200.0	2,151.2	2,163.8	2,088.1	8.0	9.5	96.65	-308.4	-340.4	331.9	315.6	16.34	20.308		
2,300.0	2,247.0	2,260.8	2,177.3	8.5	10.2	95.61	-337.5	-365.3	355.2	337.8	17.41	20.405		
2,400.0	2,342.8	2,357.9	2,266.5	9.0	10.9	94.70	-366.5	-390.2	378.5	360.1	18.47	20.500		
2,500.0	2,438.6	2,455.0	2,355.8	9.5	11.6	93.90	-395.5	-415.1	402.0	382.5	19.52	20.591		
2,600.0	2,534.4	2,552.0	2,445.0	10.1	12.3	93.18	-424.5	-440.1	425.5	404.9	20.58	20.679		
2,700.0	2,630.2	2,649.1	2,534.2	10.6	13.1	92.54	-453.5	-465.0	449.1	427.5	21.63	20.763		
2,800.0	2,726.0	2,746.2	2,623.4	11.1	13.8	91.96	-482.6	-489.9	472.7	450.0	22.68	20.843		
2,900.0	2,821.8	2,843.2	2,712.6	11.7	14.5	91.44	-511.6	-514.8	496.4	472.7	23.73	20.919		
3,000.0	2,917.5	2,940.3	2,801.8	12.2	15.2	90.96	-540.6	-539.7	520.1	495.3	24.78	20.992		
3,100.0	3,013.3	3,037.4	2,891.0	12.7	15.9	90.53	-569.6	-564.6	543.8	518.0	25.82	21.060		
3,200.0	3,109.1	3,134.4	2,980.2	13.2	16.6	90.13	-598.6	-589.5	567.6	540.7	26.87	21.125		
3,300.0	3,204.9	3,231.5	3,069.4	13.8	17.3	89.76	-627.6	-614.4	591.4	563.5	27.91	21.187		
3,400.0	3,300.7	3,328.5	3,158.7	14.3	18.0	89.42	-656.7	-639.3	615.2	586.2	28.96	21.245		
3,500.0	3,396.5	3,425.6	3,247.9	14.8	18.7	89.11	-685.7	-664.3	639.0	609.0	30.00	21.301		
3,600.0	3,492.3	3,522.7	3,337.1	15.3	19.4	88.82	-714.7	-689.2	662.8	631.8	31.04	21.354		
3,700.0	3,588.1	3,619.7	3,426.3	15.9	20.1	88.55	-743.7	-714.1	686.7	654.6	32.08	21.404		
3,800.0	3,683.9	3,716.8	3,515.5	16.4	20.8	88.30	-772.7	-739.0	710.6	677.4	33.12	21.451		
3,900.0	3,779.7	3,813.9	3,604.7	16.9	21.5	88.06	-801.8	-763.9	734.4	700.3	34.17	21.497		
4,000.0	3,875.5	3,910.9	3,693.9	17.5	22.2	87.84	-830.8	-788.8	758.3	723.1	35.21	21.540		
4,100.0	3,971.3	4,008.0	3,783.1	18.0	22.9	87.64	-859.8	-813.7	782.2	746.0	36.25	21.582		
4,200.0	4,067.1	4,105.1	3,872.4	18.5	23.7	87.44	-888.8	-838.6	806.1	768.9	37.29	21.621		
4,300.0	4,162.9	4,202.1	3,961.6	19.1	24.4	87.26	-917.8	-863.5	830.1	791.7	38.32	21.659		
4,400.0	4,258.6	4,299.2	4,050.8	19.6	25.1	87.08	-946.9	-888.4	854.0	814.6	39.36	21.695		
4,500.0	4,354.4	4,396.2	4,140.0	20.1	25.8	86.92	-975.9	-913.4	877.9	837.5	40.40	21.730		
4,600.0	4,450.2	4,493.3	4,229.2	20.6	26.5	86.77	-1,004.9	-938.3	901.9	860.4	41.44	21.763		
4,700.0	4,546.0	4,590.4	4,318.4	21.2	27.2	86.62	-1,033.9	-963.2	925.8	883.3	42.48	21.794		
4,800.0	4,641.8	4,687.4	4,407.6	21.7	27.9	86.48	-1,062.9	-988.1	949.8	906.2	43.52	21.825		
4,900.0	4,737.6	4,784.5	4,496.8	22.2	28.6	86.35	-1,091.9	-1,013.0	973.7	929.2	44.56	21.854		
5,000.0	4,833.4	4,881.6	4,586.0	22.8	29.3	86.22	-1,121.0	-1,037.9	997.7	952.1	45.59	21.882		

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 21-1D (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 21-1D (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 21-9D (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	
5,100.0	4,929.2	4,978.6	4,675.3	23.3	30.0	86.10	-1,150.0	-1,062.8	1,021.6	975.0	46.63	21.909	
5,200.0	5,025.0	5,075.7	4,764.5	23.8	30.7	85.98	-1,179.0	-1,087.7	1,045.6	997.9	47.67	21.935	
5,300.0	5,120.8	5,172.8	4,853.7	24.3	31.4	85.87	-1,208.0	-1,112.6	1,069.6	1,020.9	48.71	21.960	
5,400.0	5,216.6	5,269.8	4,942.9	24.9	32.2	85.77	-1,237.0	-1,137.6	1,093.6	1,043.8	49.74	21.984	

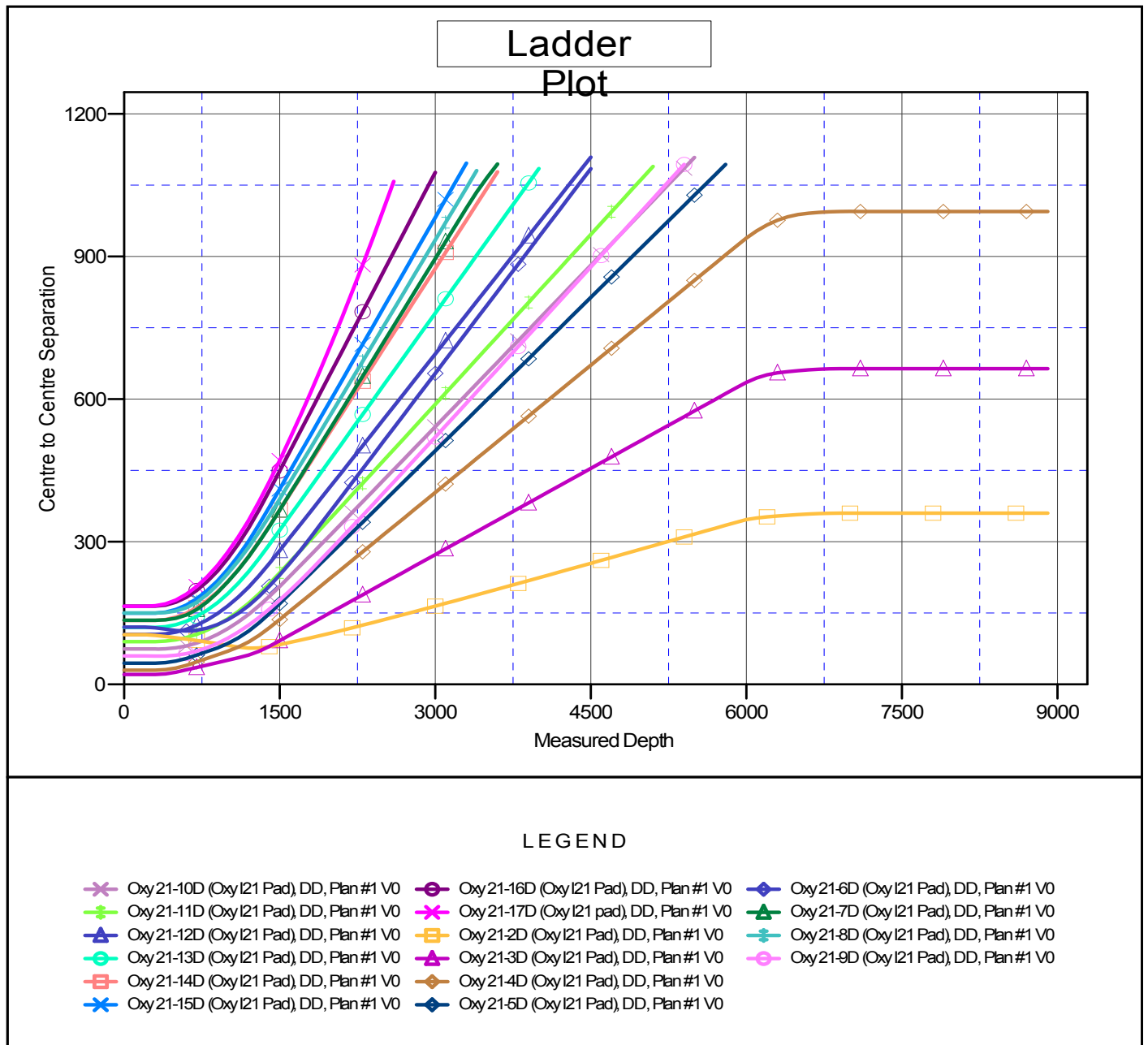
# Directional Plus

## Anticollision Report

<b>Company:</b>	Berry Petroleum Company (NAD 83)	<b>Local Co-ordinate Reference:</b>	Well Oxy 21-1D (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 21-1D (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 21-1D (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