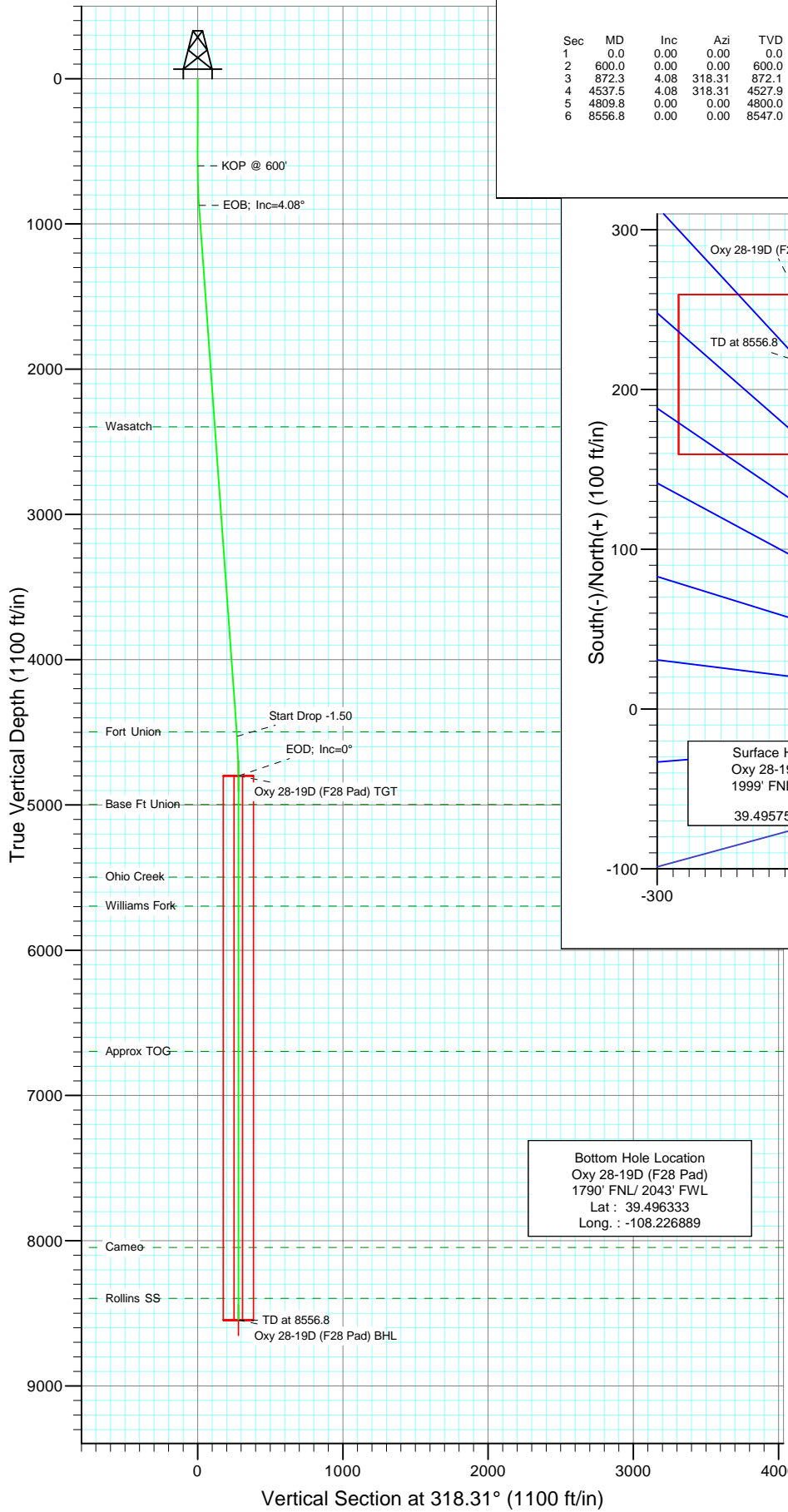


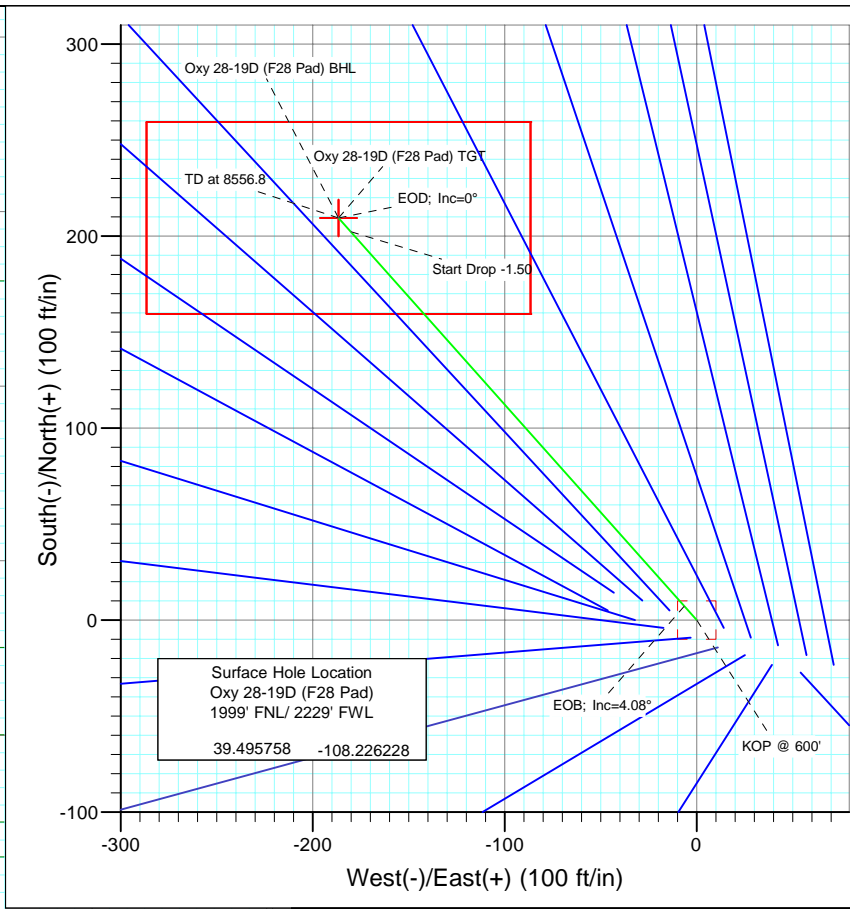


Berry Petroleum Company

Project: Garfield County
 Site: SENW S28-T6S-R97W (F28 Pad)
 Well: Oxy 28-19D (F28 Pad)
 Wellbore: DD
 Design: Plan #1

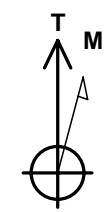


SECTION DETAILS										
Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	DLeg	TFace	VSec	Target
1	0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.0	
2	600.0	0.00	0.00	600.0	0.0	0.0	0.00	0.00	0.0	
3	872.3	4.08	318.31	872.1	7.2	-6.5	1.50	318.31	9.7	
4	4537.5	4.08	318.31	4527.9	202.2	-180.1	0.00	0.00	270.8	
5	4809.8	0.00	0.00	4800.0	209.4	-186.5	1.50	180.00	280.5	Oxy 28-19D (F28 Pad) TGT
6	8556.8	0.00	0.00	8547.0	209.4	-186.5	0.00	0.00	280.5	Oxy 28-19D (F28 Pad) BHL



FORMATION TOP DETAILS		
TVDPath	MDPath	Formation
2397.0	2401.1	Wasatch
4497.0	4506.5	Fort Union
4997.0	5006.8	Base Ft Union
5497.0	5506.8	Ohio Creek
5697.0	5706.8	Williams Fork
6697.0	6706.8	Approx TOG
8047.0	8056.8	Cameo
8397.0	8406.8	Rollins SS

Bottom Hole Location
 Oxy 28-19D (F28 Pad)
 1790' FNL/ 2043' FWL
 Lat : 39.496333
 Long. : -108.226889



Azimuths to True North
 Magnetic North: 10.64°
 Magnetic Field
 Strength: 52394.8snT
 Dip Angle: 65.75°
 Date: 10/21/2009
 Model: IGRF200510

DESIGN DETAILS: Plan #1					
95XXX; BH					
KBE @ 8308.0ft (Original Well Elev)					
Target	Azimuth	Origin	N/S	E/W	From TVD
Oxy 28-19D (F28 Pad) BHL	8.31	Slot	0.0	0.0	0.0

Directional Plus

Planning Report

Database:	EDM 2003.21 US Multi User Db	Local Co-ordinate Reference:	Well Oxy 28-19D (F28 Pad)
Company:	Berry Petroleum Company (NAD 83)	TVD Reference:	KBE @ 8308.0ft (Original Well Elev)
Project:	Garfield County	MD Reference:	KBE @ 8308.0ft (Original Well Elev)
Site:	SENW S28-T6S-R97W (F28 Pad)	North Reference:	True
Well:	Oxy 28-19D (F28 Pad)	Survey Calculation Method:	Minimum Curvature
Wellbore:	DD		
Design:	Plan #1		

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

Site	SENW S28-T6S-R97W (F28 Pad)				
Site Position:		Northing:	1,616,975.87 ft	Latitude:	39.495683
From:	Lat/Long	Easting:	2,230,827.80 ft	Longitude:	-108.226036
Position Uncertainty:	0.0 ft	Slot Radius:	in	Grid Convergence:	-1.72 °

Well	Oxy 28-19D (F28 Pad)					
Well Position	+N/-S	0.0 ft	Northing:	1,617,004.79 ft	Latitude:	39.495758
	+E/-W	0.0 ft	Easting:	2,230,774.46 ft	Longitude:	-108.226228
Position Uncertainty		0.0 ft	Wellhead Elevation:	ft	Ground Level:	8,293.0 ft

Wellbore	DD				
Magnetics	Model Name	Sample Date	Declination	Dip Angle	Field Strength
	IGRF200510	10/21/2009	(°)	(°)	(nT)
			10.64	65.75	52,395

Design	Plan #1			
Audit Notes:				
Version:	Phase:	PLAN	Tie On Depth:	0.0
Vertical Section:	Depth From (TVD)	+N/-S	+E/-W	Direction
	(ft)	(ft)	(ft)	(°)
	0.0	0.0	0.0	318.31

Plan Sections										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	TFO (°)	Target
0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.00	0.00	
600.0	0.00	0.00	600.0	0.0	0.0	0.00	0.00	0.00	0.00	
872.3	4.08	318.31	872.1	7.2	-6.5	1.50	1.50	0.00	318.31	
4,537.5	4.08	318.31	4,527.9	202.2	-180.1	0.00	0.00	0.00	0.00	
4,809.8	0.00	0.00	4,800.0	209.4	-186.5	1.50	-1.50	0.00	180.00	Oxy 28-19D (F28 Pad)
8,556.8	0.00	0.00	8,547.0	209.4	-186.5	0.00	0.00	0.00	0.00	Oxy 28-19D (F28 Pad)

Directional Plus

Planning Report

Database:	EDM 2003.21 US Multi User Db	Local Co-ordinate Reference:	Well Oxy 28-19D (F28 Pad)
Company:	Berry Petroleum Company (NAD 83)	TVD Reference:	KBE @ 8308.0ft (Original Well Elev)
Project:	Garfield County	MD Reference:	KBE @ 8308.0ft (Original Well Elev)
Site:	SENW S28-T6S-R97W (F28 Pad)	North Reference:	True
Well:	Oxy 28-19D (F28 Pad)	Survey Calculation Method:	Minimum Curvature
Wellbore:	DD		
Design:	Plan #1		

Planned Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Comments / Formations
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	
330.0	0.00	0.00	330.0	0.0	0.0	0.0	0.00	0.00	
360.0	0.00	0.00	360.0	0.0	0.0	0.0	0.00	0.00	
390.0	0.00	0.00	390.0	0.0	0.0	0.0	0.00	0.00	
420.0	0.00	0.00	420.0	0.0	0.0	0.0	0.00	0.00	
450.0	0.00	0.00	450.0	0.0	0.0	0.0	0.00	0.00	
480.0	0.00	0.00	480.0	0.0	0.0	0.0	0.00	0.00	
510.0	0.00	0.00	510.0	0.0	0.0	0.0	0.00	0.00	
540.0	0.00	0.00	540.0	0.0	0.0	0.0	0.00	0.00	
570.0	0.00	0.00	570.0	0.0	0.0	0.0	0.00	0.00	
600.0	0.00	0.00	600.0	0.0	0.0	0.0	0.00	0.00	KOP @ 600'
630.0	0.45	318.31	630.0	0.1	-0.1	0.1	1.50	1.50	
660.0	0.90	318.31	660.0	0.4	-0.3	0.5	1.50	1.50	
690.0	1.35	318.31	690.0	0.8	-0.7	1.1	1.50	1.50	
720.0	1.80	318.31	720.0	1.4	-1.3	1.9	1.50	1.50	
750.0	2.25	318.31	750.0	2.2	-2.0	2.9	1.50	1.50	
780.0	2.70	318.31	779.9	3.2	-2.8	4.2	1.50	1.50	
810.0	3.15	318.31	809.9	4.3	-3.8	5.8	1.50	1.50	
840.0	3.60	318.31	839.8	5.6	-5.0	7.5	1.50	1.50	
870.0	4.05	318.31	869.8	7.1	-6.3	9.5	1.50	1.50	
872.3	4.08	318.31	872.1	7.2	-6.5	9.7	1.50	1.50	EOB; Inc=4.08°
900.0	4.08	318.31	899.7	8.7	-7.8	11.7	0.00	0.00	
930.0	4.08	318.31	929.6	10.3	-9.2	13.8	0.00	0.00	
960.0	4.08	318.31	959.5	11.9	-10.6	15.9	0.00	0.00	
990.0	4.08	318.31	989.5	13.5	-12.0	18.1	0.00	0.00	
1,020.0	4.08	318.31	1,019.4	15.1	-13.4	20.2	0.00	0.00	
1,050.0	4.08	318.31	1,049.3	16.7	-14.9	22.4	0.00	0.00	
1,080.0	4.08	318.31	1,079.2	18.3	-16.3	24.5	0.00	0.00	
1,110.0	4.08	318.31	1,109.2	19.9	-17.7	26.6	0.00	0.00	
1,140.0	4.08	318.31	1,139.1	21.5	-19.1	28.8	0.00	0.00	
1,170.0	4.08	318.31	1,169.0	23.1	-20.6	30.9	0.00	0.00	
1,200.0	4.08	318.31	1,198.9	24.7	-22.0	33.0	0.00	0.00	
1,230.0	4.08	318.31	1,228.9	26.3	-23.4	35.2	0.00	0.00	
1,260.0	4.08	318.31	1,258.8	27.9	-24.8	37.3	0.00	0.00	
1,290.0	4.08	318.31	1,288.7	29.5	-26.2	39.5	0.00	0.00	
1,320.0	4.08	318.31	1,318.6	31.1	-27.7	41.6	0.00	0.00	
1,350.0	4.08	318.31	1,348.6	32.7	-29.1	43.7	0.00	0.00	
1,380.0	4.08	318.31	1,378.5	34.3	-30.5	45.9	0.00	0.00	
1,410.0	4.08	318.31	1,408.4	35.8	-31.9	48.0	0.00	0.00	
1,440.0	4.08	318.31	1,438.3	37.4	-33.3	50.1	0.00	0.00	
1,470.0	4.08	318.31	1,468.3	39.0	-34.8	52.3	0.00	0.00	
1,500.0	4.08	318.31	1,498.2	40.6	-36.2	54.4	0.00	0.00	

Directional Plus

Planning Report

Database:	EDM 2003.21 US Multi User Db	Local Co-ordinate Reference:	Well Oxy 28-19D (F28 Pad)
Company:	Berry Petroleum Company (NAD 83)	TVD Reference:	KBE @ 8308.0ft (Original Well Elev)
Project:	Garfield County	MD Reference:	KBE @ 8308.0ft (Original Well Elev)
Site:	SENW S28-T6S-R97W (F28 Pad)	North Reference:	True
Well:	Oxy 28-19D (F28 Pad)	Survey Calculation Method:	Minimum Curvature
Wellbore:	DD		
Design:	Plan #1		

Planned Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Comments / Formations
1,530.0	4.08	318.31	1,528.1	42.2	-37.6	56.5	0.00	0.00	
1,560.0	4.08	318.31	1,558.0	43.8	-39.0	58.7	0.00	0.00	
1,590.0	4.08	318.31	1,587.9	45.4	-40.5	60.8	0.00	0.00	
1,620.0	4.08	318.31	1,617.9	47.0	-41.9	63.0	0.00	0.00	
1,650.0	4.08	318.31	1,647.8	48.6	-43.3	65.1	0.00	0.00	
1,680.0	4.08	318.31	1,677.7	50.2	-44.7	67.2	0.00	0.00	
1,710.0	4.08	318.31	1,707.6	51.8	-46.1	69.4	0.00	0.00	
1,740.0	4.08	318.31	1,737.6	53.4	-47.6	71.5	0.00	0.00	
1,770.0	4.08	318.31	1,767.5	55.0	-49.0	73.6	0.00	0.00	
1,800.0	4.08	318.31	1,797.4	56.6	-50.4	75.8	0.00	0.00	
1,830.0	4.08	318.31	1,827.3	58.2	-51.8	77.9	0.00	0.00	
1,860.0	4.08	318.31	1,857.3	59.8	-53.2	80.1	0.00	0.00	
1,890.0	4.08	318.31	1,887.2	61.4	-54.7	82.2	0.00	0.00	
1,920.0	4.08	318.31	1,917.1	63.0	-56.1	84.3	0.00	0.00	
1,950.0	4.08	318.31	1,947.0	64.6	-57.5	86.5	0.00	0.00	
1,980.0	4.08	318.31	1,977.0	66.2	-58.9	88.6	0.00	0.00	
2,010.0	4.08	318.31	2,006.9	67.8	-60.3	90.7	0.00	0.00	
2,040.0	4.08	318.31	2,036.8	69.4	-61.8	92.9	0.00	0.00	
2,070.0	4.08	318.31	2,066.7	71.0	-63.2	95.0	0.00	0.00	
2,100.0	4.08	318.31	2,096.7	72.5	-64.6	97.1	0.00	0.00	
2,130.0	4.08	318.31	2,126.6	74.1	-66.0	99.3	0.00	0.00	
2,160.0	4.08	318.31	2,156.5	75.7	-67.5	101.4	0.00	0.00	
2,190.0	4.08	318.31	2,186.4	77.3	-68.9	103.6	0.00	0.00	
2,220.0	4.08	318.31	2,216.3	78.9	-70.3	105.7	0.00	0.00	
2,250.0	4.08	318.31	2,246.3	80.5	-71.7	107.8	0.00	0.00	
2,280.0	4.08	318.31	2,276.2	82.1	-73.1	110.0	0.00	0.00	
2,310.0	4.08	318.31	2,306.1	83.7	-74.6	112.1	0.00	0.00	
2,340.0	4.08	318.31	2,336.0	85.3	-76.0	114.2	0.00	0.00	
2,370.0	4.08	318.31	2,366.0	86.9	-77.4	116.4	0.00	0.00	
2,400.0	4.08	318.31	2,395.9	88.5	-78.8	118.5	0.00	0.00	
2,401.1	4.08	318.31	2,397.0	88.6	-78.9	118.6	0.00	0.00	Wasatch
2,430.0	4.08	318.31	2,425.8	90.1	-80.2	120.7	0.00	0.00	
2,460.0	4.08	318.31	2,455.7	91.7	-81.7	122.8	0.00	0.00	
2,490.0	4.08	318.31	2,485.7	93.3	-83.1	124.9	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
Oxy 28-19D (F28 Pad) E	0.00	0.00	8,547.0	209.4	-186.5	1,617,219.74	2,230,594.29	39.496333	-108.226889
- plan misses target center by 6063.3ft at 2490.0ft MD (2485.7 TVD, 93.3 N, -83.1 E)									
- Rectangle (sides W100.0 H200.0 D0.0)									
Oxy 28-19D (F28 Pad) T	0.00	0.00	4,800.0	209.4	-186.5	1,617,219.74	2,230,594.29	39.496333	-108.226889
- plan misses target center by 2319.6ft at 2490.0ft MD (2485.7 TVD, 93.3 N, -83.1 E)									
- Point									

Directional Plus

Planning Report

Database:	EDM 2003.21 US Multi User Db	Local Co-ordinate Reference:	Well Oxy 28-19D (F28 Pad)
Company:	Berry Petroleum Company (NAD 83)	TVD Reference:	KBE @ 8308.0ft (Original Well Elev)
Project:	Garfield County	MD Reference:	KBE @ 8308.0ft (Original Well Elev)
Site:	SENW S28-T6S-R97W (F28 Pad)	North Reference:	True
Well:	Oxy 28-19D (F28 Pad)	Survey Calculation Method:	Minimum Curvature
Wellbore:	DD		
Design:	Plan #1		

Planned Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Comments / Formations
2,500.0	4.08	318.31	2,495.6	93.8	-83.6	125.6	0.00	0.00	
2,600.0	4.08	318.31	2,595.4	99.1	-88.3	132.8	0.00	0.00	
2,700.0	4.08	318.31	2,695.1	104.5	-93.0	139.9	0.00	0.00	
2,800.0	4.08	318.31	2,794.9	109.8	-97.8	147.0	0.00	0.00	
2,900.0	4.08	318.31	2,894.6	115.1	-102.5	154.1	0.00	0.00	
3,000.0	4.08	318.31	2,994.4	120.4	-107.2	161.3	0.00	0.00	
3,100.0	4.08	318.31	3,094.1	125.7	-112.0	168.4	0.00	0.00	
3,200.0	4.08	318.31	3,193.9	131.1	-116.7	175.5	0.00	0.00	
3,300.0	4.08	318.31	3,293.6	136.4	-121.5	182.6	0.00	0.00	
3,400.0	4.08	318.31	3,393.3	141.7	-126.2	189.7	0.00	0.00	
3,500.0	4.08	318.31	3,493.1	147.0	-130.9	196.9	0.00	0.00	
3,600.0	4.08	318.31	3,592.8	152.3	-135.7	204.0	0.00	0.00	
3,700.0	4.08	318.31	3,692.6	157.7	-140.4	211.1	0.00	0.00	
3,800.0	4.08	318.31	3,792.3	163.0	-145.1	218.2	0.00	0.00	
3,900.0	4.08	318.31	3,892.1	168.3	-149.9	225.4	0.00	0.00	
4,000.0	4.08	318.31	3,991.8	173.6	-154.6	232.5	0.00	0.00	
4,100.0	4.08	318.31	4,091.6	178.9	-159.4	239.6	0.00	0.00	
4,200.0	4.08	318.31	4,191.3	184.3	-164.1	246.7	0.00	0.00	
4,300.0	4.08	318.31	4,291.1	189.6	-168.8	253.9	0.00	0.00	
4,400.0	4.08	318.31	4,390.8	194.9	-173.6	261.0	0.00	0.00	
4,500.0	4.08	318.31	4,490.6	200.2	-178.3	268.1	0.00	0.00	
4,506.5	4.08	318.31	4,497.0	200.6	-178.6	268.6	0.00	0.00	Fort Union
4,537.5	4.08	318.31	4,527.9	202.2	-180.1	270.8	0.00	0.00	Start Drop -1.50
4,600.0	3.15	318.31	4,590.3	205.1	-182.7	274.7	1.50	-1.50	
4,700.0	1.65	318.31	4,690.2	208.3	-185.5	278.9	1.50	-1.50	
4,800.0	0.15	318.31	4,790.2	209.4	-186.5	280.5	1.50	-1.50	
4,809.8	0.00	0.00	4,800.0	209.4	-186.5	280.5	1.50	-1.50	EOD; Inc=0° - Oxy 28-19D (F28 Pad) TGT
4,900.0	0.00	0.00	4,890.2	209.4	-186.5	280.5	0.00	0.00	
5,000.0	0.00	0.00	4,990.2	209.4	-186.5	280.5	0.00	0.00	
5,006.8	0.00	0.00	4,997.0	209.4	-186.5	280.5	0.00	0.00	Base Ft Union
5,100.0	0.00	0.00	5,090.2	209.4	-186.5	280.5	0.00	0.00	
5,200.0	0.00	0.00	5,190.2	209.4	-186.5	280.5	0.00	0.00	
5,300.0	0.00	0.00	5,290.2	209.4	-186.5	280.5	0.00	0.00	
5,400.0	0.00	0.00	5,390.2	209.4	-186.5	280.5	0.00	0.00	
5,500.0	0.00	0.00	5,490.2	209.4	-186.5	280.5	0.00	0.00	
5,506.8	0.00	0.00	5,497.0	209.4	-186.5	280.5	0.00	0.00	Ohio Creek
5,600.0	0.00	0.00	5,590.2	209.4	-186.5	280.5	0.00	0.00	
5,700.0	0.00	0.00	5,690.2	209.4	-186.5	280.5	0.00	0.00	
5,706.8	0.00	0.00	5,697.0	209.4	-186.5	280.5	0.00	0.00	Williams Fork
5,800.0	0.00	0.00	5,790.2	209.4	-186.5	280.5	0.00	0.00	
5,900.0	0.00	0.00	5,890.2	209.4	-186.5	280.5	0.00	0.00	
6,000.0	0.00	0.00	5,990.2	209.4	-186.5	280.5	0.00	0.00	
6,100.0	0.00	0.00	6,090.2	209.4	-186.5	280.5	0.00	0.00	
6,200.0	0.00	0.00	6,190.2	209.4	-186.5	280.5	0.00	0.00	
6,300.0	0.00	0.00	6,290.2	209.4	-186.5	280.5	0.00	0.00	
6,400.0	0.00	0.00	6,390.2	209.4	-186.5	280.5	0.00	0.00	
6,500.0	0.00	0.00	6,490.2	209.4	-186.5	280.5	0.00	0.00	
6,600.0	0.00	0.00	6,590.2	209.4	-186.5	280.5	0.00	0.00	
6,700.0	0.00	0.00	6,690.2	209.4	-186.5	280.5	0.00	0.00	
6,706.8	0.00	0.00	6,697.0	209.4	-186.5	280.5	0.00	0.00	Approx TOG
6,800.0	0.00	0.00	6,790.2	209.4	-186.5	280.5	0.00	0.00	
6,900.0	0.00	0.00	6,890.2	209.4	-186.5	280.5	0.00	0.00	

Directional Plus

Planning Report

Database: EDM 2003.21 US Multi User Db	Local Co-ordinate Reference: Well Oxy 28-19D (F28 Pad)
Company: Berry Petroleum Company (NAD 83)	TVD Reference: KBE @ 8308.0ft (Original Well Elev)
Project: Garfield County	MD Reference: KBE @ 8308.0ft (Original Well Elev)
Site: SENW S28-T6S-R97W (F28 Pad)	North Reference: True
Well: Oxy 28-19D (F28 Pad)	Survey Calculation Method: Minimum Curvature
Wellbore: DD	
Design: Plan #1	

Planned Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Comments / Formations
7,000.0	0.00	0.00	6,990.2	209.4	-186.5	280.5	0.00	0.00	
7,100.0	0.00	0.00	7,090.2	209.4	-186.5	280.5	0.00	0.00	
7,200.0	0.00	0.00	7,190.2	209.4	-186.5	280.5	0.00	0.00	
7,300.0	0.00	0.00	7,290.2	209.4	-186.5	280.5	0.00	0.00	
7,400.0	0.00	0.00	7,390.2	209.4	-186.5	280.5	0.00	0.00	
7,500.0	0.00	0.00	7,490.2	209.4	-186.5	280.5	0.00	0.00	
7,600.0	0.00	0.00	7,590.2	209.4	-186.5	280.5	0.00	0.00	
7,700.0	0.00	0.00	7,690.2	209.4	-186.5	280.5	0.00	0.00	
7,800.0	0.00	0.00	7,790.2	209.4	-186.5	280.5	0.00	0.00	
7,900.0	0.00	0.00	7,890.2	209.4	-186.5	280.5	0.00	0.00	
8,000.0	0.00	0.00	7,990.2	209.4	-186.5	280.5	0.00	0.00	
8,056.8	0.00	0.00	8,047.0	209.4	-186.5	280.5	0.00	0.00	Cameo
8,100.0	0.00	0.00	8,090.2	209.4	-186.5	280.5	0.00	0.00	
8,200.0	0.00	0.00	8,190.2	209.4	-186.5	280.5	0.00	0.00	
8,300.0	0.00	0.00	8,290.2	209.4	-186.5	280.5	0.00	0.00	
8,400.0	0.00	0.00	8,390.2	209.4	-186.5	280.5	0.00	0.00	
8,406.8	0.00	0.00	8,397.0	209.4	-186.5	280.5	0.00	0.00	Rollins SS
8,500.0	0.00	0.00	8,490.2	209.4	-186.5	280.5	0.00	0.00	
8,556.8	0.00	0.00	8,547.0	209.4	-186.5	280.5	0.00	0.00	TD at 8556.8 - Oxy 28-19D (F28 Pad) BHL

Targets									
Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (ft)	Easting (ft)	Latitude	Longitude
Oxy 28-19D (F28 Pad) E - hit/miss target - Shape - Rectangle (sides W100.0 H200.0 D0.0)	0.00	0.00	8,547.0	209.4	-186.5	1,617,219.74	2,230,594.29	39.496333	-108.226889
Oxy 28-19D (F28 Pad) T - plan hits target center - Point	0.00	0.00	4,800.0	209.4	-186.5	1,617,219.74	2,230,594.29	39.496333	-108.226889

Formations					
Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)
2,401.1	2,397.0	Wasatch		0.00	
4,506.5	4,497.0	Fort Union		0.00	
5,006.8	4,997.0	Base Ft Union		0.00	
5,506.8	5,497.0	Ohio Creek		0.00	
5,706.8	5,697.0	Williams Fork		0.00	
6,706.8	6,697.0	Approx TOG		0.00	
8,056.8	8,047.0	Cameo		0.00	
8,406.8	8,397.0	Rollins SS		0.00	

Directional Plus

Planning Report

Database:	EDM 2003.21 US Multi User Db	Local Co-ordinate Reference:	Well Oxy 28-19D (F28 Pad)
Company:	Berry Petroleum Company (NAD 83)	TVD Reference:	KBE @ 8308.0ft (Original Well Elev)
Project:	Garfield County	MD Reference:	KBE @ 8308.0ft (Original Well Elev)
Site:	SENW S28-T6S-R97W (F28 Pad)	North Reference:	True
Well:	Oxy 28-19D (F28 Pad)	Survey Calculation Method:	Minimum Curvature
Wellbore:	DD		
Design:	Plan #1		

Plan Annotations				
Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment
		+N/-S (ft)	+E/-W (ft)	
600.0	600.0	0.0	0.0	KOP @ 600'
872.3	872.1	7.2	-6.5	EOB; Inc=4.08°
4,537.5	4,527.9	202.2	-180.1	Start Drop -1.50
4,809.8	4,800.0	209.4	-186.5	EOD; Inc=0°
8,556.8	8,547.0	209.4	-186.5	TD at 8556.8

Directional Plus

Anticollision Report

Company:	Berry Petroleum Company (NAD 83)	Local Co-ordinate Reference:	Well Oxy 28-19D (F28 Pad)
Project:	Garfield County	TVD Reference:	KBE @ 8308.0ft (Original Well Elev)
Reference Site:	SENW S28-T6S-R97W (F28 Pad)	MD Reference:	KBE @ 8308.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Oxy 28-19D (F28 Pad)	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	DD	Database:	EDM 2003.21 US Multi User Db
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Reference	Plan #1		
Filter type:	NO GLOBAL FILTER: Using user defined selection & filtering criteria		
Interpolation Method:	MD Interval 100.0ft	Error Model:	Systematic Ellipse
Depth Range:	Unlimited	Scan Method:	Closest Approach 3D
Results Limited by:	Maximum center-center distance of 200.0ft	Error Surface:	Elliptical Conic
Warning Levels Evaluated at:	2.00 Sigma		

Survey Tool Program	Date	10/26/2009		
From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description
0.0	8,556.8	Plan #1 (DD)	MWD	Geolink MWD

Summary	Reference Measured Depth (ft)	Offset Measured Depth (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Separation Factor	Warning
Site Name						
Offset Well - Wellbore - Design						
SENW S28-T6S-R97W (F28 Pad)						
687-28A-18 (Marathon offset) - DD - Plan #1						Out of range
Oxy 28-15D (F28 Pad) - DD - Plan #1	500.0	500.0	60.7	59.0	35.841	CC, ES
Oxy 28-15D (F28 Pad) - DD - Plan #1	700.0	696.8	66.8	64.4	27.979	SF
Oxy 28-17D (F28 Pad) - DD - Plan #1	600.0	600.0	45.6	43.6	22.345	CC, ES
Oxy 28-17D (F28 Pad) - DD - Plan #1	800.0	799.7	50.9	48.2	18.554	SF
Oxy 28-18D (F28 pad) - DD - Plan #1	600.0	600.0	31.0	29.0	15.193	CC, ES
Oxy 28-18D (F28 pad) - DD - Plan #1	800.0	800.4	34.6	31.8	12.600	SF
Oxy 28-20D (F28 Pad) - DD - Plan #1	761.1	761.6	12.3	9.7	4.704	CC
Oxy 28-20D (F28 Pad) - DD - Plan #1	800.0	800.5	12.4	9.7	4.492	ES
Oxy 28-20D (F28 Pad) - DD - Plan #1	900.0	900.5	13.6	10.5	4.303	SF
Oxy 28-21D (F28 Pad) - DD - Plan #1	723.5	724.3	25.3	22.8	10.061	CC, ES
Oxy 28-21D (F28 Pad) - DD - Plan #1	900.0	900.5	28.8	25.6	8.860	SF
Oxy 28-22D (F28 Pad) - DD - Plan #1	714.1	716.1	73.7	71.3	30.058	CC, ES
Oxy 28-22D (F28 Pad) - DD - Plan #1	1,400.0	1,400.9	93.1	87.5	16.494	SF
Oxy 28-23D (F28 Pad) - DD - Plan #1	714.5	715.6	42.9	40.4	17.487	CC, ES
Oxy 28-23D (F28 Pad) - DD - Plan #1	1,200.0	1,200.6	54.9	50.4	12.017	SF
Oxy 28-24D (F28 Pad) - DD - Plan #1	710.1	711.9	53.7	51.2	21.314	CC, ES
Oxy 28-24D (F28 Pad) - DD - Plan #1	1,000.0	1,000.0	64.0	60.2	16.550	SF
Oxy 28-25D (F28 Pad) - DD - Plan #1	613.2	613.3	16.6	14.5	7.924	CC, ES
Oxy 28-25D (F28 Pad) - DD - Plan #1	700.0	700.0	18.3	15.9	7.552	SF
Oxy 28-26D (F28 Pad) - DD - Plan #1	400.0	400.0	9.6	8.3	7.159	CC, ES
Oxy 28-26D (F28 Pad) - DD - Plan #1	500.0	499.9	10.2	8.5	6.032	SF
Oxy 28-27D (F28 Pad) - DD - Plan #1	400.0	400.0	17.7	16.3	13.152	CC, ES
Oxy 28-27D (F28 Pad) - DD - Plan #1	600.0	599.0	22.6	20.6	11.086	SF
Oxy 28-28D (F28 Pad) - DD - Plan #1	400.0	400.0	32.2	30.8	23.938	CC, ES
Oxy 28-28D (F28 Pad) - DD - Plan #1	800.0	795.8	48.5	45.8	17.716	SF
Oxy 28-29D (F28 Pad) - DD - Plan #1	400.0	400.0	46.6	45.2	34.646	CC, ES
Oxy 28-29D (F28 Pad) - DD - Plan #1	1,000.0	990.7	75.8	72.4	21.892	SF
Oxy 28-30D (F28 Pad) - DD - Plan #1	200.0	200.0	45.5	44.8	70.387	CC, ES
Oxy 28-30D (F28 Pad) - DD - Plan #1	900.0	886.3	96.6	93.6	31.365	SF
Oxy 28-31D (F28 Pad) - DD - Plan #1	300.0	300.0	30.0	29.0	30.162	CC, ES
Oxy 28-31D (F28 Pad) - DD - Plan #1	600.0	597.2	41.1	39.1	20.108	SF
Oxy 28-32D (F28 Pad) - DD - Plan #1	200.0	200.0	15.0	14.4	23.233	CC, ES
Oxy 28-32D (F28 Pad) - DD - Plan #1	400.0	399.1	19.8	18.4	14.714	SF

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

Directional Plus Anticollision Report

Company:	Berry Petroleum Company (NAD 83)	Local Co-ordinate Reference:	Well Oxy 28-19D (F28 Pad)
Project:	Garfield County	TVD Reference:	KBE @ 8308.0ft (Original Well Elev)
Reference Site:	SENW S28-T6S-R97W (F28 Pad)	MD Reference:	KBE @ 8308.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Oxy 28-19D (F28 Pad)	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	DD	Database:	EDM 2003.21 US Multi User Db
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Offset Design													Offset Site Error:	0.0 ft	
Survey Program: 0-MWD													Offset Well Error:		0.0 ft
Reference		Offset		Semi Major Axis			Distance				Total 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	116.75	-27.3	54.2	60.7						
100.0	100.0	100.0	100.0	0.1	0.1	116.75	-27.3	54.2	60.7	60.4	0.30	204.505			
200.0	200.0	200.0	200.0	0.3	0.3	116.75	-27.3	54.2	60.7	60.0	0.65	93.962			
300.0	300.0	300.0	300.0	0.5	0.5	116.75	-27.3	54.2	60.7	59.7	0.99	60.993			
400.0	400.0	400.0	400.0	0.7	0.7	116.75	-27.3	54.2	60.7	59.3	1.34	45.151			
500.0	500.0	500.0	500.0	0.8	0.8	116.75	-27.3	54.2	60.7	59.0	1.69	35.841	CC, ES		
600.0	600.0	598.5	598.5	1.0	1.0	117.17	-28.2	55.0	61.9	59.8	2.04	30.343			
700.0	700.0	696.8	696.7	1.2	1.2	160.36	-31.0	57.6	66.8	64.4	2.39	27.979	SF		
800.0	799.9	794.5	794.2	1.4	1.4	162.81	-35.7	61.9	76.6	73.9	2.73	28.052			
900.0	899.7	891.3	890.6	1.6	1.6	165.48	-42.1	67.7	91.4	88.4	3.07	29.748			
1,000.0	999.4	987.1	985.8	1.8	1.8	167.77	-50.2	75.2	109.5	106.1	3.42	32.054			
1,100.0	1,099.2	1,082.0	1,079.7	2.0	2.1	169.58	-59.9	84.1	130.1	126.4	3.76	34.637			
1,200.0	1,198.9	1,175.7	1,172.2	2.2	2.4	171.02	-71.2	94.5	153.2	149.1	4.09	37.419			
1,300.0	1,298.7	1,268.4	1,263.2	2.4	2.7	172.17	-84.1	106.3	178.7	174.3	4.43	40.348			

Directional Plus Anticollision Report

Company:	Berry Petroleum Company (NAD 83)	Local Co-ordinate Reference:	Well Oxy 28-19D (F28 Pad)
Project:	Garfield County	TVD Reference:	KBE @ 8308.0ft (Original Well Elev)
Reference Site:	SENW S28-T6S-R97W (F28 Pad)	MD Reference:	KBE @ 8308.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Oxy 28-19D (F28 Pad)	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	DD	Database:	EDM 2003.21 US Multi User Db
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Offset Design													Offset Site Error:	0.0 ft							
Survey Program: 0-MWD													Offset Well Error:		0.0 ft						
Reference													Offset		Semi Major Axis		Distance				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	120.72	-23.3	39.2	45.6												
100.0	100.0	100.0	100.0	0.1	0.1	120.72	-23.3	39.2	45.6	45.3	0.30	153.789									
200.0	200.0	200.0	200.0	0.3	0.3	120.72	-23.3	39.2	45.6	45.0	0.65	70.660									
300.0	300.0	300.0	300.0	0.5	0.5	120.72	-23.3	39.2	45.6	44.6	0.99	45.867									
400.0	400.0	400.0	400.0	0.7	0.7	120.72	-23.3	39.2	45.6	44.3	1.34	33.953									
500.0	500.0	500.0	500.0	0.8	0.8	120.72	-23.3	39.2	45.6	43.9	1.69	26.953									
600.0	600.0	600.0	600.0	1.0	1.0	120.72	-23.3	39.2	45.6	43.6	2.04	22.345	CC, ES								
700.0	700.0	700.0	700.0	1.2	1.2	164.49	-24.4	38.5	46.9	44.5	2.39	19.598									
800.0	799.9	799.7	799.6	1.4	1.4	170.07	-27.7	36.4	50.9	48.2	2.74	18.554	SF								
900.0	899.7	898.9	898.6	1.6	1.6	177.50	-33.2	33.0	58.4	55.3	3.11	18.817									
1,000.0	999.4	998.0	997.3	1.8	1.8	-175.12	-40.5	28.3	68.1	64.7	3.48	19.602									
1,100.0	1,099.2	1,097.1	1,096.0	2.0	2.0	-169.44	-48.0	23.5	78.8	75.0	3.85	20.468									
1,200.0	1,198.9	1,196.3	1,194.8	2.2	2.2	-165.14	-55.5	18.7	90.1	85.8	4.23	21.309									
1,300.0	1,298.7	1,295.4	1,293.6	2.4	2.4	-161.81	-63.1	14.0	101.7	97.1	4.60	22.091									
1,400.0	1,398.4	1,394.6	1,392.3	2.6	2.6	-159.17	-70.6	9.2	113.6	108.6	4.98	22.804									
1,500.0	1,498.2	1,493.8	1,491.1	2.8	2.8	-157.03	-78.1	4.4	125.7	120.3	5.36	23.450									
1,600.0	1,597.9	1,592.9	1,589.8	3.0	3.1	-155.27	-85.7	-0.4	137.9	132.2	5.74	24.032									
1,700.0	1,697.7	1,692.1	1,688.6	3.2	3.3	-153.80	-93.2	-5.2	150.3	144.2	6.12	24.558									
1,800.0	1,797.4	1,791.3	1,787.4	3.4	3.5	-152.55	-100.7	-10.0	162.7	156.2	6.50	25.033									
1,900.0	1,897.2	1,890.4	1,886.1	3.6	3.8	-151.48	-108.3	-14.8	175.2	168.4	6.88	25.463									
2,000.0	1,996.9	1,989.6	1,984.9	3.8	4.0	-150.55	-115.8	-19.5	187.8	180.5	7.26	25.855									

Directional Plus Anticollision Report

Company:	Berry Petroleum Company (NAD 83)	Local Co-ordinate Reference:	Well Oxy 28-19D (F28 Pad)
Project:	Garfield County	TVD Reference:	KBE @ 8308.0ft (Original Well Elev)
Reference Site:	SENW S28-T6S-R97W (F28 Pad)	MD Reference:	KBE @ 8308.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Oxy 28-19D (F28 Pad)	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	DD	Database:	EDM 2003.21 US Multi User Db
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Offset Design													Offset Site Error:	0.0 ft	
Survey Program: 0-MWD													Offset Well Error:		0.0 ft
Reference															
Offset				Semi Major Axis			Distance								
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning		
0.0	0.0	0.0	0.0	0.0	0.0	125.95	-18.2	25.1	31.0						
100.0	100.0	100.0	100.0	0.1	0.1	125.95	-18.2	25.1	31.0	30.7	0.30	104.561			
200.0	200.0	200.0	200.0	0.3	0.3	125.95	-18.2	25.1	31.0	30.4	0.65	48.042			
300.0	300.0	300.0	300.0	0.5	0.5	125.95	-18.2	25.1	31.0	30.0	0.99	31.185			
400.0	400.0	400.0	400.0	0.7	0.7	125.95	-18.2	25.1	31.0	29.7	1.34	23.085			
500.0	500.0	500.0	500.0	0.8	0.8	125.95	-18.2	25.1	31.0	29.3	1.69	18.325			
600.0	600.0	600.0	600.0	1.0	1.0	125.95	-18.2	25.1	31.0	29.0	2.04	15.193 CC, ES			
700.0	700.0	700.3	700.3	1.2	1.2	170.32	-18.9	24.0	31.8	29.4	2.39	13.304			
800.0	799.9	800.4	800.3	1.4	1.4	177.55	-20.9	20.6	34.6	31.8	2.75	12.600 SF			
900.0	899.7	900.2	899.9	1.6	1.6	-173.08	-24.2	15.1	40.1	37.0	3.11	12.901			
1,000.0	999.4	999.8	999.2	1.8	1.8	-165.54	-27.8	9.1	47.1	43.6	3.48	13.537			
1,100.0	1,099.2	1,099.4	1,098.6	2.0	2.0	-160.02	-31.4	3.0	54.7	50.8	3.85	14.186			
1,200.0	1,198.9	1,199.0	1,197.9	2.2	2.2	-155.87	-35.0	-3.0	62.7	58.4	4.24	14.796			
1,300.0	1,298.7	1,298.6	1,297.3	2.4	2.4	-152.67	-38.6	-9.0	70.9	66.3	4.62	15.351			
1,400.0	1,398.4	1,398.1	1,396.6	2.6	2.6	-150.14	-42.3	-15.1	79.3	74.3	5.00	15.848			
1,500.0	1,498.2	1,497.7	1,495.9	2.8	2.8	-148.10	-45.9	-21.1	87.8	82.4	5.39	16.292			
1,600.0	1,597.9	1,597.3	1,595.3	3.0	3.0	-146.42	-49.5	-27.1	96.5	90.7	5.78	16.689			
1,700.0	1,697.7	1,696.9	1,694.6	3.2	3.2	-145.02	-53.1	-33.1	105.1	99.0	6.17	17.044			
1,800.0	1,797.4	1,796.5	1,794.0	3.4	3.4	-143.83	-56.7	-39.2	113.9	107.3	6.56	17.362			
1,900.0	1,897.2	1,896.1	1,893.3	3.6	3.6	-142.81	-60.3	-45.2	122.7	115.7	6.95	17.648			
2,000.0	1,996.9	1,995.7	1,992.7	3.8	3.8	-141.93	-63.9	-51.2	131.5	124.1	7.34	17.908			
2,100.0	2,096.7	2,095.3	2,092.0	4.0	4.0	-141.16	-67.5	-57.3	140.3	132.6	7.73	18.143			
2,200.0	2,196.4	2,194.9	2,191.4	4.3	4.2	-140.48	-71.1	-63.3	149.2	141.1	8.13	18.357			
2,300.0	2,296.1	2,294.5	2,290.7	4.5	4.4	-139.87	-74.7	-69.3	158.1	149.6	8.52	18.553			
2,400.0	2,395.9	2,394.1	2,390.0	4.7	4.7	-139.33	-78.3	-75.4	167.0	158.1	8.91	18.732			
2,500.0	2,495.6	2,493.7	2,489.4	4.9	4.9	-138.85	-82.0	-81.4	175.9	166.6	9.31	18.898			
2,600.0	2,595.4	2,593.2	2,588.7	5.1	5.1	-138.41	-85.6	-87.4	184.8	175.1	9.70	19.050			
2,700.0	2,695.1	2,692.8	2,688.1	5.3	5.3	-138.01	-89.2	-93.5	193.8	183.7	10.10	19.192			

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

Directional Plus Anticollision Report

Company:	Berry Petroleum Company (NAD 83)	Local Co-ordinate Reference:	Well Oxy 28-19D (F28 Pad)
Project:	Garfield County	TVD Reference:	KBE @ 8308.0ft (Original Well Elev)
Reference Site:	SENW S28-T6S-R97W (F28 Pad)	MD Reference:	KBE @ 8308.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Oxy 28-19D (F28 Pad)	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	DD	Database:	EDM 2003.21 US Multi User Db
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Offset Design													Offset Site Error:	0.0 ft								
Survey Program: 0-MWD													Offset Well Error:		0.0 ft							
Reference													Offset		Semi Major Axis		Distance				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	Warning									
0.0	0.0	0.0	0.0	0.0	0.0	105.85	-4.0	14.1	14.7	14.4	0.30	49.436										
100.0	100.0	100.0	100.0	0.1	0.1	105.85	-4.0	14.1	14.7	14.4	0.65	22.714										
200.0	200.0	200.0	200.0	0.3	0.3	105.85	-4.0	14.1	14.7	14.0	0.99	14.744										
300.0	300.0	300.0	300.0	0.5	0.5	105.85	-4.0	14.1	14.7	13.7	1.34	10.914										
400.0	400.0	400.0	400.0	0.7	0.7	105.85	-4.0	14.1	14.7	13.3	1.69	8.664										
500.0	500.0	500.0	500.0	0.8	0.8	105.85	-4.0	14.1	14.7	13.0	2.04	6.758										
600.0	600.0	600.2	600.2	1.0	1.0	101.87	-2.8	13.5	13.8	11.8	2.40	5.245										
700.0	700.0	700.4	700.3	1.2	1.2	133.14	0.7	11.7	12.6	10.2	2.62	4.704 CC										
761.1	761.0	761.6	761.3	1.3	1.3	125.15	3.9	10.0	12.3	9.7	2.77	4.492 ES										
800.0	799.9	800.5	800.2	1.4	1.4	119.74	6.5	8.7	12.4	9.7	3.17	4.303 SF										
900.0	899.7	900.5	899.8	1.6	1.6	108.09	14.2	4.7	13.6	10.5	3.58	4.309										
1,000.0	999.4	1,000.4	999.4	1.8	1.8	100.49	22.0	0.7	15.4	11.8	3.99	4.361										
1,100.0	1,099.2	1,100.4	1,098.9	2.0	2.0	94.53	29.8	-3.4	17.4	13.4	4.40	4.435										
1,200.0	1,198.9	1,200.4	1,198.5	2.2	2.3	89.84	37.7	-7.4	19.5	15.1	4.82	4.519										
1,300.0	1,298.7	1,300.3	1,298.1	2.4	2.5	86.10	45.5	-11.5	21.8	17.0	5.23	4.604										
1,400.0	1,398.4	1,400.3	1,397.7	2.6	2.7	83.06	53.4	-15.5	24.1	18.9	5.65	4.687										
1,500.0	1,498.2	1,500.3	1,497.2	2.8	2.9	80.56	61.2	-19.5	26.5	20.8	6.06	4.766										
1,600.0	1,597.9	1,600.2	1,596.8	3.0	3.2	78.48	69.0	-23.6	28.9	22.8	6.47	4.841										
1,700.0	1,697.7	1,700.2	1,696.4	3.2	3.4	76.72	76.9	-27.6	31.3	24.9	6.89	4.911										
1,800.0	1,797.4	1,800.2	1,796.0	3.4	3.6	75.22	84.7	-31.7	33.8	26.9	7.30	4.976										
1,900.0	1,897.2	1,900.1	1,895.5	3.6	3.8	73.92	92.5	-35.7	36.3	29.0	7.71	5.037										
2,000.0	1,996.9	2,000.1	1,995.1	3.8	4.1	72.79	100.4	-39.8	38.8	31.1	8.12	5.093										
2,100.0	2,096.7	2,100.1	2,094.7	4.0	4.3	71.79	108.2	-43.8	41.3	33.2	8.53	5.146										
2,200.0	2,196.4	2,200.0	2,194.3	4.3	4.5	70.92	116.1	-47.9	43.9	35.4	8.94	5.195										
2,300.0	2,296.1	2,300.0	2,293.8	4.5	4.8	70.13	123.9	-51.9	46.4	37.5	9.35	5.240										
2,400.0	2,395.9	2,399.9	2,393.4	4.7	5.0	69.43	131.7	-55.9	49.0	39.6	9.75	5.283										
2,500.0	2,495.6	2,499.9	2,493.0	4.9	5.2	68.80	139.6	-60.0	51.5	41.8	10.16	5.323										
2,600.0	2,595.4	2,599.9	2,592.6	5.1	5.4	68.23	147.4	-64.0	54.1	43.9	10.57	5.360										
2,700.0	2,695.1	2,699.8	2,692.1	5.3	5.7	67.71	155.2	-68.1	56.7	46.1	10.98	5.395										
2,800.0	2,794.9	2,799.8	2,791.7	5.5	5.9	67.24	163.1	-72.1	59.2	48.3	11.39	5.428										
2,900.0	2,894.6	2,899.8	2,891.3	5.7	6.1	66.80	170.9	-76.2	61.8	50.4	11.80	5.459										
3,000.0	2,994.4	2,999.7	2,990.9	6.0	6.4	66.40	178.8	-80.2	64.4	52.6	12.20	5.488										
3,100.0	3,094.1	3,099.7	3,090.4	6.2	6.6	66.03	186.6	-84.3	67.0	54.8	12.61	5.516										
3,200.0	3,193.9	3,199.7	3,190.0	6.4	6.8	65.69	194.4	-88.3	69.6	57.0	13.02	5.542										
3,300.0	3,293.6	3,299.6	3,289.6	6.6	7.1	65.37	202.3	-92.3	72.1	59.1	13.43	5.566										
3,400.0	3,393.3	3,399.6	3,389.2	6.8	7.3	65.08	210.1	-96.4	74.7	61.3	13.83	5.590										
3,500.0	3,493.1	3,499.6	3,488.8	7.0	7.5	64.80	217.9	-100.4	77.3	63.5	14.24	5.612										
3,600.0	3,592.8	3,599.5	3,588.3	7.2	7.8	64.54	225.8	-104.5	79.9	65.7	14.65	5.633										
3,700.0	3,692.6	3,699.5	3,687.9	7.4	8.0	64.30	233.6	-108.5	82.5	67.9	15.06	5.653										
3,800.0	3,792.3	3,799.5	3,787.5	7.7	8.2	64.07	241.5	-112.6	85.1	70.1	15.46	5.672										
3,900.0	3,892.1	3,899.4	3,887.1	7.9	8.5	63.86	249.3	-116.6	87.7	72.2	15.87	5.690										
4,000.0	3,991.8	3,999.4	3,986.6	8.1	8.7	63.66	257.1	-120.7	90.3	74.4	16.28	5.708										
4,100.0	4,091.6	4,099.4	4,086.2	8.3	8.9	63.47	265.0	-124.7	92.9	76.6	16.69	5.724										
4,200.0	4,191.3	4,199.3	4,185.8	8.5	9.2	63.29	272.8	-128.8	95.5	78.8	17.09	5.740										
4,300.0	4,291.1	4,299.3	4,285.4	8.7	9.4	63.12	280.6	-132.8	98.1	81.0	17.50	5.755										
4,400.0	4,390.8	4,399.3	4,384.9	8.9	9.6	62.96	288.5	-136.8	100.7	83.2	17.91	5.770										
4,500.0	4,490.6	4,499.2	4,484.5	9.2	9.8	62.81	296.3	-140.9	103.3	85.4	18.29	5.803										
4,600.0	4,590.3	4,599.2	4,584.1	9.4	10.1	62.64	304.2	-144.9	106.2	87.9	18.59	5.924										
4,700.0	4,690.2	4,699.1	4,683.6	9.5	10.3	61.00	312.0	-149.0	110.2	91.6	18.81	6.144										
4,800.0	4,790.2	4,798.8	4,782.9	9.7	10.5	58.57	319.8	-153.0	115.6	96.8	19.00	6.425										
4,900.0	4,890.2	4,898.4	4,882.1	9.8	10.8	14.01	327.6	-157.0	122.1	103.1	19.20	6.710										
5,000.0	4,990.2	4,998.0	4,981.3	10.0	11.0	11.43	335.4	-161.1	128.8	109.6	19.20	6.710										

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

Directional Plus Anticollision Report

Company:	Berry Petroleum Company (NAD 83)	Local Co-ordinate Reference:	Well Oxy 28-19D (F28 Pad)
Project:	Garfield County	TVD Reference:	KBE @ 8308.0ft (Original Well Elev)
Reference Site:	SENW S28-T6S-R97W (F28 Pad)	MD Reference:	KBE @ 8308.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Oxy 28-19D (F28 Pad)	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	DD	Database:	EDM 2003.21 US Multi User Db
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Offset Design													Offset Site Error:	0.0 ft	
Survey Program: 0-MWD													Offset Well Error:		0.0 ft
Reference		Offset		Semi Major Axis			Distance						Warning		
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor			
5,100.0	5,090.2	5,097.6	5,080.6	10.1	11.2	9.10	343.2	-165.1	135.8	116.4	19.41	6.997			
5,200.0	5,190.2	5,197.2	5,179.8	10.3	11.5	7.01	351.1	-169.1	143.0	123.4	19.64	7.284			
5,300.0	5,290.2	5,296.8	5,279.0	10.4	11.7	5.12	358.9	-173.2	150.4	130.6	19.88	7.568			
5,400.0	5,390.2	5,396.5	5,378.2	10.6	11.9	3.40	366.7	-177.2	158.0	137.8	20.12	7.849			
5,500.0	5,490.2	5,496.1	5,477.5	10.8	12.2	1.84	374.5	-181.2	165.6	145.2	20.38	8.126			
5,600.0	5,590.2	5,595.7	5,576.7	10.9	12.4	0.43	382.3	-185.3	173.4	152.7	20.65	8.397			
5,700.0	5,690.2	5,695.3	5,675.9	11.1	12.6	-0.87	390.1	-189.3	181.2	160.3	20.92	8.663			
5,800.0	5,790.2	5,794.9	5,775.1	11.2	12.9	-2.06	397.9	-193.3	189.2	168.0	21.20	8.923			
5,900.0	5,890.2	5,894.5	5,874.3	11.4	13.1	-3.15	405.7	-197.3	197.2	175.7	21.49	9.177			

Directional Plus Anticollision Report

Company:	Berry Petroleum Company (NAD 83)	Local Co-ordinate Reference:	Well Oxy 28-19D (F28 Pad)
Project:	Garfield County	TVD Reference:	KBE @ 8308.0ft (Original Well Elev)
Reference Site:	SENW S28-T6S-R97W (F28 Pad)	MD Reference:	KBE @ 8308.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Oxy 28-19D (F28 Pad)	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	DD	Database:	EDM 2003.21 US Multi User Db
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Offset Design													Offset Site Error:	0.0 ft	
Survey Program: 0-MWD													Offset Well Error:		0.0 ft
Reference															
Offset				Semi Major Axis			Distance								
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning		
0.0	0.0	0.0	0.0	0.0	0.0	107.88	-9.1	28.2	29.7						
100.0	100.0	100.0	100.0	0.1	0.1	107.88	-9.1	28.2	29.7	29.4	0.30	99.941			
200.0	200.0	200.0	200.0	0.3	0.3	107.88	-9.1	28.2	29.7	29.0	0.65	45.919			
300.0	300.0	300.0	300.0	0.5	0.5	107.88	-9.1	28.2	29.7	28.7	0.99	29.807			
400.0	400.0	400.0	400.0	0.7	0.7	107.88	-9.1	28.2	29.7	28.3	1.34	22.065			
500.0	500.0	500.4	500.4	0.8	0.8	105.77	-7.9	27.8	28.9	27.2	1.69	17.058			
600.0	600.0	600.7	600.6	1.0	1.0	98.79	-4.1	26.5	26.9	24.8	2.04	13.142			
700.0	700.0	700.8	700.5	1.2	1.2	129.11	2.1	24.5	25.4	22.9	2.42	10.473			
723.5	723.4	724.3	723.9	1.2	1.3	126.14	3.9	23.9	25.3	22.8	2.52	10.061	CC, ES		
800.0	799.9	800.8	800.1	1.4	1.4	116.25	10.8	21.6	26.0	23.1	2.82	9.206			
900.0	899.7	900.5	899.1	1.6	1.7	104.23	22.0	17.8	28.8	25.6	3.25	8.860	SF		
1,000.0	999.4	1,000.2	997.8	1.8	2.0	92.76	34.9	13.5	33.4	29.7	3.69	9.047			
1,100.0	1,099.2	1,099.9	1,096.6	2.0	2.2	84.15	47.9	9.1	39.0	34.9	4.11	9.477			
1,200.0	1,198.9	1,199.6	1,195.3	2.2	2.5	77.81	60.9	4.8	45.2	40.7	4.52	9.995			
1,300.0	1,298.7	1,299.3	1,294.1	2.4	2.8	73.04	74.0	0.4	51.9	47.0	4.93	10.527			
1,400.0	1,398.4	1,399.0	1,392.8	2.6	3.1	69.38	87.0	-3.9	58.8	53.5	5.33	11.041			
1,500.0	1,498.2	1,498.7	1,491.6	2.8	3.4	66.50	100.0	-8.3	66.0	60.2	5.72	11.522			
1,600.0	1,597.9	1,598.4	1,590.3	3.0	3.6	64.19	113.1	-12.7	73.2	67.1	6.12	11.967			
1,700.0	1,697.7	1,698.1	1,689.1	3.2	3.9	62.29	126.1	-17.0	80.6	74.1	6.51	12.375			
1,800.0	1,797.4	1,797.8	1,787.8	3.4	4.2	60.72	139.1	-21.4	88.0	81.1	6.90	12.750			
1,900.0	1,897.2	1,897.5	1,886.5	3.6	4.5	59.39	152.2	-25.8	95.5	88.2	7.30	13.093			
2,000.0	1,996.9	1,997.2	1,985.3	3.8	4.8	58.25	165.2	-30.1	103.1	95.4	7.69	13.408			
2,100.0	2,096.7	2,096.9	2,084.0	4.0	5.1	57.27	178.2	-34.5	110.6	102.5	8.08	13.697			
2,200.0	2,196.4	2,196.6	2,182.8	4.3	5.4	56.42	191.3	-38.8	118.2	109.8	8.47	13.964			
2,300.0	2,296.1	2,296.3	2,281.5	4.5	5.7	55.67	204.3	-43.2	125.8	117.0	8.86	14.210			
2,400.0	2,395.9	2,396.0	2,380.3	4.7	6.0	55.00	217.3	-47.6	133.5	124.2	9.25	14.437			
2,500.0	2,495.6	2,495.7	2,479.0	4.9	6.3	54.41	230.4	-51.9	141.1	131.5	9.64	14.648			
2,600.0	2,595.4	2,595.4	2,577.8	5.1	6.6	53.88	243.4	-56.3	148.8	138.8	10.03	14.844			
2,700.0	2,695.1	2,695.0	2,676.5	5.3	6.9	53.40	256.4	-60.6	156.5	146.1	10.41	15.026			
2,800.0	2,794.9	2,794.7	2,775.2	5.5	7.1	52.96	269.5	-65.0	164.2	153.4	10.80	15.197			
2,900.0	2,894.6	2,894.4	2,874.0	5.7	7.4	52.56	282.5	-69.4	171.9	160.7	11.19	15.356			
3,000.0	2,994.4	2,994.1	2,972.7	6.0	7.7	52.20	295.5	-73.7	179.6	168.0	11.58	15.506			
3,100.0	3,094.1	3,093.8	3,071.5	6.2	8.0	51.87	308.6	-78.1	187.3	175.3	11.97	15.646			
3,200.0	3,193.9	3,193.5	3,170.2	6.4	8.3	51.56	321.6	-82.5	195.0	182.7	12.36	15.778			

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

Directional Plus Anticollision Report

Company:	Berry Petroleum Company (NAD 83)	Local Co-ordinate Reference:	Well Oxy 28-19D (F28 Pad)
Project:	Garfield County	TVD Reference:	KBE @ 8308.0ft (Original Well Elev)
Reference Site:	SENW S28-T6S-R97W (F28 Pad)	MD Reference:	KBE @ 8308.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Oxy 28-19D (F28 Pad)	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	DD	Database:	EDM 2003.21 US Multi User Db
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Offset Design													Offset Site Error:	0.0 ft	
Survey Program: 0-MWD													Offset Well Error:		0.0 ft
Reference															
Offset				Semi Major Axis			Distance								
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning		
0.0	0.0	0.0	0.0	0.0	0.0	108.08	-23.3	71.4	75.1						
100.0	100.0	100.0	100.0	0.1	0.1	108.08	-23.3	71.4	75.1	74.8	0.30	253.134			
200.0	200.0	200.0	200.0	0.3	0.3	108.08	-23.3	71.4	75.1	74.5	0.65	116.305			
300.0	300.0	300.0	300.0	0.5	0.5	108.08	-23.3	71.4	75.1	74.1	0.99	75.496			
400.0	400.0	400.0	400.0	0.7	0.7	108.08	-23.3	71.4	75.1	73.8	1.34	55.887			
500.0	500.0	500.0	500.0	0.8	0.8	108.08	-23.3	71.4	75.1	73.4	1.69	44.364			
600.0	600.0	601.0	600.9	1.0	1.0	107.19	-22.0	71.1	74.5	72.4	2.04	36.434			
700.0	700.0	701.8	701.7	1.2	1.2	146.69	-18.1	70.3	73.7	71.3	2.40	30.715			
714.1	714.1	716.1	715.9	1.2	1.2	146.31	-17.3	70.2	73.7	71.3	2.45	30.058	CC, ES		
800.0	799.9	802.6	802.3	1.4	1.4	143.76	-11.6	69.0	74.2	71.4	2.77	26.784			
900.0	899.7	903.2	902.4	1.6	1.6	140.20	-2.5	67.2	75.8	72.7	3.16	23.982			
1,000.0	999.4	1,003.6	1,002.1	1.8	1.9	135.31	9.2	64.8	77.5	73.9	3.59	21.597			
1,100.0	1,099.2	1,103.6	1,101.1	2.0	2.1	128.82	23.3	62.0	79.3	75.3	4.06	19.531			
1,200.0	1,198.9	1,203.1	1,199.1	2.2	2.4	120.91	39.9	58.6	82.0	77.4	4.58	17.916			
1,300.0	1,298.7	1,302.0	1,296.1	2.4	2.8	112.00	58.9	54.8	86.5	81.4	5.12	16.890			
1,400.0	1,398.4	1,400.9	1,392.9	2.6	3.1	103.58	78.7	50.8	93.1	87.5	5.65	16.494	SF		
1,500.0	1,498.2	1,499.8	1,489.7	2.8	3.5	96.40	98.6	46.7	101.5	95.4	6.14	16.525			
1,600.0	1,597.9	1,598.7	1,586.5	3.0	3.9	90.37	118.4	42.7	111.3	104.6	6.61	16.828			
1,700.0	1,697.7	1,697.6	1,683.3	3.2	4.2	85.35	138.2	38.7	122.0	115.0	7.06	17.293			
1,800.0	1,797.4	1,796.5	1,780.1	3.4	4.6	81.17	158.1	34.7	133.6	126.1	7.48	17.850			
1,900.0	1,897.2	1,895.4	1,876.9	3.6	5.0	77.66	177.9	30.7	145.7	137.8	7.90	18.451			
2,000.0	1,996.9	1,994.3	1,973.7	3.8	5.4	74.69	197.8	26.7	158.3	150.0	8.30	19.069			
2,100.0	2,096.7	2,093.2	2,070.5	4.0	5.8	72.17	217.6	22.7	171.3	162.6	8.70	19.684			
2,200.0	2,196.4	2,192.1	2,167.3	4.3	6.1	70.00	237.4	18.7	184.5	175.4	9.10	20.287			
2,300.0	2,296.1	2,291.0	2,264.1	4.5	6.5	68.12	257.3	14.6	198.0	188.5	9.49	20.870			

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

Directional Plus Anticollision Report

Company:	Berry Petroleum Company (NAD 83)	Local Co-ordinate Reference:	Well Oxy 28-19D (F28 Pad)
Project:	Garfield County	TVD Reference:	KBE @ 8308.0ft (Original Well Elev)
Reference Site:	SENW S28-T6S-R97W (F28 Pad)	MD Reference:	KBE @ 8308.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Oxy 28-19D (F28 Pad)	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	DD	Database:	EDM 2003.21 US Multi User Db
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Offset Design													Offset Site Error:	0.0 ft	
Survey Program: 0-MWD													Offset Well Error:		0.0 ft
Reference															
Offset				Semi Major Axis			Distance								
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning		
0.0	0.0	0.0	0.0	0.0	0.0	107.21	-13.1	42.3	44.3						
100.0	100.0	100.0	100.0	0.1	0.1	107.21	-13.1	42.3	44.3	44.0	0.30	149.356			
200.0	200.0	200.0	200.0	0.3	0.3	107.21	-13.1	42.3	44.3	43.7	0.65	68.623			
300.0	300.0	300.0	300.0	0.5	0.5	107.21	-13.1	42.3	44.3	43.3	0.99	44.545			
400.0	400.0	400.0	400.0	0.7	0.7	107.21	-13.1	42.3	44.3	43.0	1.34	32.975			
500.0	500.0	500.0	500.0	0.8	0.8	107.21	-13.1	42.3	44.3	42.6	1.69	26.176			
600.0	600.0	600.6	600.6	1.0	1.0	105.72	-11.8	42.0	43.7	41.6	2.04	21.366			
700.0	700.0	701.1	701.0	1.2	1.2	143.74	-8.0	41.1	42.9	40.5	2.40	17.880			
714.5	714.4	715.6	715.5	1.2	1.2	143.11	-7.2	40.9	42.9	40.4	2.45	17.487	CC, ES		
800.0	799.9	801.4	801.1	1.4	1.4	138.96	-1.6	39.5	43.4	40.6	2.77	15.661			
900.0	899.7	901.7	901.0	1.6	1.6	133.38	7.4	37.3	45.1	42.0	3.16	14.264			
1,000.0	999.4	1,001.7	1,000.3	1.8	1.9	125.83	18.9	34.5	47.3	43.7	3.60	13.143			
1,100.0	1,099.2	1,101.4	1,098.9	2.0	2.1	116.09	32.8	31.1	50.2	46.1	4.07	12.328			
1,200.0	1,198.9	1,200.6	1,196.7	2.2	2.4	105.03	49.1	27.2	54.9	50.4	4.57	12.017	SF		
1,300.0	1,298.7	1,299.2	1,293.4	2.4	2.8	93.85	67.8	22.6	62.4	57.3	5.06	12.330			
1,400.0	1,398.4	1,397.0	1,388.8	2.6	3.2	83.66	88.7	17.5	73.1	67.6	5.51	13.266			
1,500.0	1,498.2	1,494.0	1,482.8	2.8	3.6	75.05	111.8	11.9	87.3	81.4	5.92	14.738			
1,600.0	1,597.9	1,590.8	1,576.1	3.0	4.0	68.08	137.0	5.8	104.6	98.3	6.30	16.616			
1,700.0	1,697.7	1,688.5	1,670.1	3.2	4.5	62.96	162.8	-0.5	123.4	116.7	6.66	18.536			
1,800.0	1,797.4	1,786.2	1,764.1	3.4	4.9	59.20	188.5	-6.8	142.9	135.9	7.02	20.365			
1,900.0	1,897.2	1,883.9	1,858.2	3.6	5.4	56.34	214.3	-13.1	162.8	155.5	7.38	22.077			
2,000.0	1,996.9	1,981.6	1,952.2	3.8	5.9	54.11	240.1	-19.4	183.1	175.4	7.74	23.664			

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

Directional Plus Anticollision Report

Company:	Berry Petroleum Company (NAD 83)	Local Co-ordinate Reference:	Well Oxy 28-19D (F28 Pad)
Project:	Garfield County	TVD Reference:	KBE @ 8308.0ft (Original Well Elev)
Reference Site:	SENW S28-T6S-R97W (F28 Pad)	MD Reference:	KBE @ 8308.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Oxy 28-19D (F28 Pad)	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	DD	Database:	EDM 2003.21 US Multi User Db
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Offset Design													Offset Site Error:	0.0 ft	
Survey Program: 0-MWD													Offset Well Error:		0.0 ft
Reference															
Offset				Semi Major Axis			Distance								
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning		
0.0	0.0	0.0	0.0	0.0	0.0	107.64	-18.2	57.3	60.1						
100.0	100.0	100.0	100.0	0.1	0.1	107.64	-18.2	57.3	60.1	59.8	0.30	202.598			
200.0	200.0	200.0	200.0	0.3	0.3	107.64	-18.2	57.3	60.1	59.5	0.65	93.086			
300.0	300.0	300.0	300.0	0.5	0.5	107.64	-18.2	57.3	60.1	59.1	0.99	60.424			
400.0	400.0	400.8	400.8	0.7	0.7	106.52	-16.9	57.0	59.5	58.1	1.35	44.200			
500.0	500.0	501.4	501.3	0.8	0.9	103.05	-13.0	56.2	57.7	56.0	1.70	33.983			
600.0	600.0	601.7	601.4	1.0	1.1	96.84	-6.6	54.8	55.2	53.1	2.05	26.869			
700.0	700.0	701.8	701.0	1.2	1.3	130.16	2.4	52.8	53.7	51.3	2.48	21.695			
710.1	710.1	711.9	711.1	1.2	1.3	129.26	3.5	52.6	53.7	51.2	2.52	21.314	CC, ES		
800.0	799.9	801.6	800.1	1.4	1.5	121.12	13.9	50.4	54.8	51.9	2.91	18.822			
900.0	899.7	901.0	898.6	1.6	1.8	112.36	27.9	47.4	58.4	55.0	3.38	17.277			
1,000.0	999.4	1,000.0	996.1	1.8	2.1	103.19	44.3	43.8	64.0	60.2	3.87	16.550	SF		
1,100.0	1,099.2	1,098.5	1,092.7	2.0	2.5	93.83	63.1	39.8	72.2	67.8	4.36	16.562			
1,200.0	1,198.9	1,196.1	1,187.9	2.2	2.9	85.10	84.1	35.3	83.2	78.4	4.82	17.272			
1,300.0	1,298.7	1,292.9	1,281.8	2.4	3.3	77.44	107.2	30.3	97.5	92.2	5.25	18.575			
1,400.0	1,398.4	1,388.8	1,374.1	2.6	3.8	70.99	132.5	24.9	114.9	109.2	5.65	20.348			
1,500.0	1,498.2	1,483.5	1,464.7	2.8	4.3	65.68	159.6	19.0	135.4	129.3	6.02	22.478			
1,600.0	1,597.9	1,577.1	1,553.4	3.0	4.8	61.34	188.6	12.8	158.8	152.4	6.38	24.872			
1,700.0	1,697.7	1,672.3	1,643.1	3.2	5.4	57.78	219.6	6.1	184.4	177.6	6.73	27.383			

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

Directional Plus Anticollision Report

Company:	Berry Petroleum Company (NAD 83)	Local Co-ordinate Reference:	Well Oxy 28-19D (F28 Pad)
Project:	Garfield County	TVD Reference:	KBE @ 8308.0ft (Original Well Elev)
Reference Site:	SENW S28-T6S-R97W (F28 Pad)	MD Reference:	KBE @ 8308.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Oxy 28-19D (F28 Pad)	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	DD	Database:	EDM 2003.21 US Multi User Db
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Offset Design													Offset Site Error:	0.0 ft	
Survey Program: 0-MWD													Offset Well Error:		0.0 ft
Reference															
Offset				Semi Major Axis			Distance								
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning		
0.0	0.0	0.0	0.0	0.0	0.0	142.23	-14.2	11.0	18.0						
100.0	100.0	100.0	100.0	0.1	0.1	142.23	-14.2	11.0	18.0	17.7	0.30	60.565			
200.0	200.0	200.0	200.0	0.3	0.3	142.23	-14.2	11.0	18.0	17.3	0.65	27.827			
300.0	300.0	300.0	300.0	0.5	0.5	142.23	-14.2	11.0	18.0	17.0	0.99	18.063			
400.0	400.0	400.0	400.0	0.7	0.7	142.23	-14.2	11.0	18.0	16.6	1.34	13.372			
500.0	500.0	500.2	500.1	0.8	0.8	146.20	-14.5	9.7	17.5	15.8	1.69	10.334			
600.0	600.0	600.2	600.1	1.0	1.0	159.11	-15.6	5.9	16.7	14.6	2.05	8.141			
613.2	613.2	613.3	613.2	1.0	1.1	-156.79	-15.8	5.3	16.6	14.5	2.10	7.924	CC, ES		
700.0	700.0	700.0	699.7	1.2	1.2	-139.90	-17.3	-0.4	18.3	15.9	2.42	7.552	SF		
800.0	799.9	799.4	798.7	1.4	1.4	-124.69	-19.7	-9.1	24.3	21.5	2.80	8.673			
900.0	899.7	898.4	897.0	1.6	1.7	-116.18	-22.7	-20.3	34.0	30.8	3.20	10.629			
1,000.0	999.4	996.9	994.5	1.8	2.0	-109.96	-26.4	-33.9	46.0	42.4	3.60	12.774			
1,100.0	1,099.2	1,094.8	1,091.0	2.0	2.3	-104.70	-30.7	-49.8	60.3	56.3	4.02	15.013			
1,200.0	1,198.9	1,191.9	1,186.3	2.2	2.6	-100.32	-35.7	-67.9	76.9	72.5	4.43	17.350			
1,300.0	1,298.7	1,288.2	1,280.2	2.4	3.0	-96.67	-41.2	-88.2	95.8	91.0	4.85	19.775			
1,400.0	1,398.4	1,383.5	1,372.6	2.6	3.4	-93.62	-47.2	-110.5	117.2	111.9	5.26	22.278			
1,500.0	1,498.2	1,477.7	1,463.4	2.8	3.9	-91.05	-53.8	-134.7	140.8	135.2	5.67	24.844			
1,600.0	1,597.9	1,570.7	1,552.5	3.0	4.4	-88.87	-60.9	-160.8	166.9	160.8	6.08	27.463			
1,700.0	1,697.7	1,662.5	1,639.6	3.2	4.9	-87.01	-68.4	-188.5	195.2	188.7	6.48	30.137			

Directional Plus Anticollision Report

Company:	Berry Petroleum Company (NAD 83)	Local Co-ordinate Reference:	Well Oxy 28-19D (F28 Pad)
Project:	Garfield County	TVD Reference:	KBE @ 8308.0ft (Original Well Elev)
Reference Site:	SENW S28-T6S-R97W (F28 Pad)	MD Reference:	KBE @ 8308.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Oxy 28-19D (F28 Pad)	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	DD	Database:	EDM 2003.21 US Multi User Db
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Offset Design													Offset Site Error:	0.0 ft	
Survey Program: 0-MWD													Offset Well Error:		0.0 ft
Reference													Warning		
Offset				Semi Major Axis			Distance								
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning		
0.0	0.0	0.0	0.0	0.0	0.0	-161.18	-9.1	-3.1	9.6						
100.0	100.0	100.0	100.0	0.1	0.1	-161.18	-9.1	-3.1	9.6	9.3	0.30	32.425			
200.0	200.0	200.0	200.0	0.3	0.3	-161.18	-9.1	-3.1	9.6	9.0	0.65	14.898			
300.0	300.0	300.0	300.0	0.5	0.5	-161.18	-9.1	-3.1	9.6	8.6	0.99	9.671			
400.0	400.0	400.0	400.0	0.7	0.7	-161.18	-9.1	-3.1	9.6	8.3	1.34	7.159 CC, ES			
500.0	500.0	499.9	499.9	0.8	0.8	-154.44	-9.2	-4.4	10.2	8.5	1.69	6.032 SF			
600.0	600.0	599.6	599.5	1.0	1.0	-138.92	-9.5	-8.3	12.6	10.6	2.04	6.194			
700.0	700.0	699.1	698.8	1.2	1.2	-86.63	-10.0	-14.8	17.8	15.4	2.40	7.408			
800.0	799.9	798.4	797.7	1.4	1.4	-83.91	-10.8	-23.8	25.2	22.4	2.76	9.104			
900.0	899.7	897.3	895.9	1.6	1.7	-84.41	-11.7	-35.3	34.5	31.4	3.15	10.967			
1,000.0	999.4	995.7	993.3	1.8	2.0	-83.90	-12.8	-49.3	46.0	42.4	3.54	12.983			
1,100.0	1,099.2	1,093.6	1,089.8	2.0	2.3	-82.34	-14.2	-65.7	59.7	55.7	3.94	15.132			
1,200.0	1,198.9	1,190.8	1,185.2	2.2	2.6	-80.45	-15.7	-84.4	75.6	71.2	4.35	17.394			
1,300.0	1,298.7	1,287.2	1,279.2	2.4	3.0	-78.54	-17.3	-105.3	93.8	89.1	4.75	19.755			
1,400.0	1,398.4	1,382.7	1,371.9	2.6	3.4	-76.74	-19.2	-128.4	114.4	109.2	5.15	22.201			
1,500.0	1,498.2	1,477.1	1,462.9	2.8	3.9	-75.10	-21.2	-153.5	137.2	131.7	5.55	24.721			
1,600.0	1,597.9	1,570.7	1,552.5	3.0	4.4	-73.63	-23.4	-180.5	162.4	156.4	5.95	27.308			
1,700.0	1,697.7	1,667.2	1,644.5	3.2	4.9	-72.40	-25.7	-209.3	188.5	182.2	6.35	29.706			

Directional Plus Anticollision Report

Company:	Berry Petroleum Company (NAD 83)	Local Co-ordinate Reference:	Well Oxy 28-19D (F28 Pad)
Project:	Garfield County	TVD Reference:	KBE @ 8308.0ft (Original Well Elev)
Reference Site:	SENW S28-T6S-R97W (F28 Pad)	MD Reference:	KBE @ 8308.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Oxy 28-19D (F28 Pad)	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	DD	Database:	EDM 2003.21 US Multi User Db
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Offset Design													Offset Site Error:	0.0 ft	
Survey Program: 0-MWD													Offset Well Error:		0.0 ft
Reference													Warning		
Offset				Semi Major Axis			Distance				Separation				
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	-103.10	-4.0	-17.2	17.7						
100.0	100.0	100.0	100.0	0.1	0.1	-103.10	-4.0	-17.2	17.7	17.4	0.30	59.569			
200.0	200.0	200.0	200.0	0.3	0.3	-103.10	-4.0	-17.2	17.7	17.0	0.65	27.369			
300.0	300.0	300.0	300.0	0.5	0.5	-103.10	-4.0	-17.2	17.7	16.7	0.99	17.766			
400.0	400.0	400.0	400.0	0.7	0.7	-103.10	-4.0	-17.2	17.7	16.3	1.34	13.152 CC, ES			
500.0	500.0	499.5	499.5	0.8	0.8	-101.75	-3.8	-18.5	18.9	17.2	1.69	11.170			
600.0	600.0	599.0	598.9	1.0	1.0	-98.59	-3.4	-22.4	22.6	20.6	2.04	11.086 SF			
700.0	700.0	698.2	697.9	1.2	1.2	-55.51	-2.6	-28.8	28.2	25.8	2.39	11.796			
800.0	799.9	797.1	796.4	1.4	1.4	-57.07	-1.5	-37.7	34.8	32.1	2.75	12.677			
900.0	899.7	895.9	894.5	1.6	1.7	-59.96	-0.1	-49.1	42.6	39.5	3.11	13.681			
1,000.0	999.4	994.2	991.8	1.8	2.0	-61.66	1.6	-63.0	52.6	49.1	3.49	15.045			
1,100.0	1,099.2	1,092.0	1,088.3	2.0	2.3	-62.00	3.6	-79.3	64.9	61.0	3.88	16.736			
1,200.0	1,198.9	1,189.2	1,183.6	2.2	2.6	-61.57	5.9	-97.9	79.7	75.4	4.27	18.664			
1,300.0	1,298.7	1,285.7	1,277.8	2.4	3.0	-60.77	8.5	-118.7	96.7	92.1	4.66	20.774			
1,400.0	1,398.4	1,381.2	1,370.5	2.6	3.4	-59.81	11.3	-141.6	116.2	111.1	5.04	23.030			
1,500.0	1,498.2	1,475.8	1,461.7	2.8	3.9	-58.82	14.3	-166.6	138.0	132.5	5.43	25.404			
1,600.0	1,597.9	1,570.7	1,552.5	3.0	4.4	-57.85	17.7	-193.7	161.9	156.1	5.81	27.848			
1,700.0	1,697.7	1,667.6	1,645.1	3.2	4.9	-57.07	21.1	-221.9	186.4	180.2	6.20	30.052			

Directional Plus Anticollision Report

Company:	Berry Petroleum Company (NAD 83)	Local Co-ordinate Reference:	Well Oxy 28-19D (F28 Pad)
Project:	Garfield County	TVD Reference:	KBE @ 8308.0ft (Original Well Elev)
Reference Site:	SENW S28-T6S-R97W (F28 Pad)	MD Reference:	KBE @ 8308.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Oxy 28-19D (F28 Pad)	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	DD	Database:	EDM 2003.21 US Multi User Db
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Offset Design													Offset Site Error:	0.0 ft	
Survey Program: 0-MWD													Offset Well Error:		0.0 ft
Reference															
Offset				Semi Major Axis			Distance								
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning		
0.0	0.0	0.0	0.0	0.0	0.0	-90.00	0.0	-32.2	32.2						
100.0	100.0	100.0	100.0	0.1	0.1	-90.00	0.0	-32.2	32.2	31.9	0.30	108.427			
200.0	200.0	200.0	200.0	0.3	0.3	-90.00	0.0	-32.2	32.2	31.5	0.65	49.818			
300.0	300.0	300.0	300.0	0.5	0.5	-90.00	0.0	-32.2	32.2	31.2	0.99	32.338			
400.0	400.0	400.0	400.0	0.7	0.7	-90.00	0.0	-32.2	32.2	30.8	1.34	23.938	CC, ES		
500.0	500.0	499.2	499.2	0.8	0.8	-89.35	0.4	-33.4	33.4	31.7	1.69	19.751			
600.0	600.0	598.2	598.1	1.0	1.0	-87.65	1.5	-37.1	37.2	35.1	2.04	18.209			
700.0	700.0	697.1	696.8	1.2	1.2	-44.95	3.4	-43.2	42.5	40.1	2.39	17.806			
800.0	799.9	795.8	795.0	1.4	1.4	-45.59	6.1	-51.7	48.5	45.8	2.74	17.716	SF		
900.0	899.7	894.2	892.8	1.6	1.7	-47.26	9.4	-62.7	55.3	52.2	3.10	17.840			
1,000.0	999.4	992.4	990.0	1.8	1.9	-48.37	13.5	-76.0	64.2	60.7	3.47	18.481			
1,100.0	1,099.2	1,090.0	1,086.3	2.0	2.3	-48.61	18.4	-91.6	75.4	71.6	3.85	19.611			
1,200.0	1,198.9	1,187.1	1,181.5	2.2	2.6	-48.30	23.9	-109.4	89.1	84.9	4.22	21.102			
1,300.0	1,298.7	1,283.4	1,275.6	2.4	3.0	-47.67	30.1	-129.3	105.2	100.6	4.60	22.869			
1,400.0	1,398.4	1,379.0	1,368.3	2.6	3.4	-46.89	36.9	-151.4	123.7	118.7	4.98	24.855			
1,500.0	1,498.2	1,473.6	1,459.5	2.8	3.9	-46.06	44.3	-175.4	144.5	139.1	5.35	27.017			
1,600.0	1,597.9	1,567.1	1,549.0	3.0	4.4	-45.24	52.3	-201.2	167.7	162.0	5.72	29.322			
1,700.0	1,697.7	1,660.3	1,637.6	3.2	4.9	-44.45	60.9	-229.0	193.1	187.1	6.09	31.739			

Directional Plus Anticollision Report

Company:	Berry Petroleum Company (NAD 83)	Local Co-ordinate Reference:	Well Oxy 28-19D (F28 Pad)
Project:	Garfield County	TVD Reference:	KBE @ 8308.0ft (Original Well Elev)
Reference Site:	SENW S28-T6S-R97W (F28 Pad)	MD Reference:	KBE @ 8308.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Oxy 28-19D (F28 Pad)	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	DD	Database:	EDM 2003.21 US Multi User Db
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Offset Design													Offset Site Error:	0.0 ft	
Survey Program: 0-MWD													Offset Well Error:		0.0 ft
Reference													Warning		
Offset				Semi Major Axis			Distance				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)	Total Uncertainty Axis	Separation Factor	Warning		
0.0	0.0	0.0	0.0	0.0	0.0	-83.71	5.1	-46.3	46.6						
100.0	100.0	100.0	100.0	0.1	0.1	-83.71	5.1	-46.3	46.6	46.3	0.30	156.927			
200.0	200.0	200.0	200.0	0.3	0.3	-83.71	5.1	-46.3	46.6	45.9	0.65	72.102			
300.0	300.0	300.0	300.0	0.5	0.5	-83.71	5.1	-46.3	46.6	45.6	0.99	46.803			
400.0	400.0	400.0	400.0	0.7	0.7	-83.71	5.1	-46.3	46.6	45.2	1.34	34.646	CC, ES		
500.0	500.0	498.9	498.8	0.8	0.8	-83.14	5.7	-47.4	47.8	46.1	1.69	28.244			
600.0	600.0	597.6	597.5	1.0	1.0	-81.58	7.5	-50.8	51.4	49.4	2.04	25.205			
700.0	700.0	696.1	695.8	1.2	1.2	-38.49	10.5	-56.4	56.5	54.1	2.39	23.658			
800.0	799.9	794.5	793.8	1.4	1.4	-38.06	14.7	-64.2	62.0	59.2	2.74	22.626			
900.0	899.7	892.8	891.4	1.6	1.7	-38.34	20.1	-74.2	68.0	64.9	3.10	21.932			
1,000.0	999.4	990.7	988.4	1.8	1.9	-38.31	26.7	-86.4	75.8	72.4	3.46	21.892	SF		
1,100.0	1,099.2	1,088.2	1,084.5	2.0	2.3	-37.77	34.4	-100.8	86.1	82.3	3.83	22.479			
1,200.0	1,198.9	1,185.2	1,179.6	2.2	2.6	-36.91	43.1	-117.1	98.8	94.6	4.20	23.539			
1,300.0	1,298.7	1,281.4	1,273.6	2.4	3.0	-35.89	53.0	-135.5	114.0	109.4	4.56	24.967			
1,400.0	1,398.4	1,376.9	1,366.3	2.6	3.4	-34.84	63.9	-155.7	131.5	126.6	4.93	26.687			
1,500.0	1,498.2	1,471.4	1,457.4	2.8	3.9	-33.82	75.7	-177.8	151.5	146.2	5.29	28.642			
1,600.0	1,597.9	1,565.0	1,547.0	3.0	4.3	-32.86	88.5	-201.6	173.8	168.2	5.65	30.788			
1,700.0	1,697.7	1,658.2	1,635.6	3.2	4.9	-31.98	102.3	-227.2	198.5	192.5	6.00	33.087			

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

Directional Plus Anticollision Report

Company:	Berry Petroleum Company (NAD 83)	Local Co-ordinate Reference:	Well Oxy 28-19D (F28 Pad)
Project:	Garfield County	TVD Reference:	KBE @ 8308.0ft (Original Well Elev)
Reference Site:	SENW S28-T6S-R97W (F28 Pad)	MD Reference:	KBE @ 8308.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Oxy 28-19D (F28 Pad)	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	DD	Database:	EDM 2003.21 US Multi User Db
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Offset Design													Offset Site Error:	0.0 ft	
Survey Program: 0-MWD													Offset Well Error:		0.0 ft
Reference															
Offset				Semi Major Axis			Distance								
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning		
0.0	0.0	0.0	0.0	0.0	0.0	-71.79	14.2	-43.2	45.5						
100.0	100.0	100.0	100.0	0.1	0.1	-71.79	14.2	-43.2	45.5	45.2	0.30	153.194			
200.0	200.0	200.0	200.0	0.3	0.3	-71.79	14.2	-43.2	45.5	44.8	0.65	70.387	CC, ES		
300.0	300.0	298.8	298.8	0.5	0.5	-71.36	14.9	-44.2	46.7	45.7	0.99	47.017			
400.0	400.0	397.6	397.5	0.7	0.7	-70.20	17.1	-47.4	50.4	49.1	1.34	37.576			
500.0	500.0	496.0	495.7	0.8	0.9	-68.61	20.6	-52.7	56.7	55.0	1.70	33.445			
600.0	600.0	594.1	593.4	1.0	1.1	-66.89	25.6	-60.0	65.6	63.5	2.06	31.868			
700.0	700.0	691.8	690.4	1.2	1.4	-23.92	31.9	-69.3	75.8	73.4	2.38	31.797			
800.0	799.9	789.2	786.8	1.4	1.6	-23.33	39.6	-80.7	86.1	83.4	2.73	31.531			
900.0	899.7	886.3	882.6	1.6	2.0	-23.23	48.7	-94.1	96.6	93.6	3.08	31.365	SF		
1,000.0	999.4	983.0	977.5	1.8	2.3	-23.11	59.1	-109.4	109.1	105.6	3.43	31.757			
1,100.0	1,099.2	1,079.0	1,071.2	2.0	2.7	-22.85	70.7	-126.5	123.9	120.2	3.79	32.732			
1,200.0	1,198.9	1,174.2	1,163.7	2.2	3.1	-22.49	83.5	-145.5	141.3	137.1	4.14	34.141			
1,300.0	1,298.7	1,268.5	1,254.7	2.4	3.6	-22.09	97.5	-166.1	161.0	156.5	4.49	35.882			
1,400.0	1,398.4	1,361.9	1,344.1	2.6	4.1	-21.68	112.6	-188.4	183.1	178.3	4.83	37.883			

Directional Plus

Anticollision Report

Company:	Berry Petroleum Company (NAD 83)	Local Co-ordinate Reference:	Well Oxy 28-19D (F28 Pad)
Project:	Garfield County	TVD Reference:	KBE @ 8308.0ft (Original Well Elev)
Reference Site:	SENW S28-T6S-R97W (F28 Pad)	MD Reference:	KBE @ 8308.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Oxy 28-19D (F28 Pad)	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	DD	Database:	EDM 2003.21 US Multi User Db
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Offset Design													Offset Site Error:	0.0 ft	
Survey Program: 0-MWD													Offset Well Error:		0.0 ft
Reference															
Offset				Semi Major Axis			Distance								
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning		
0.0	0.0	0.0	0.0	0.0	0.0	-70.13	10.2	-28.2	30.0						
100.0	100.0	100.0	100.0	0.1	0.1	-70.13	10.2	-28.2	30.0	29.7	0.30	101.132			
200.0	200.0	200.0	200.0	0.3	0.3	-70.13	10.2	-28.2	30.0	29.4	0.65	46.466			
300.0	300.0	300.0	300.0	0.5	0.5	-70.13	10.2	-28.2	30.0	29.0	0.99	30.162	CC, ES		
400.0	400.0	399.3	399.2	0.7	0.7	-69.27	11.0	-29.2	31.2	29.9	1.34	23.250			
500.0	500.0	498.4	498.3	0.8	0.9	-67.05	13.6	-32.1	34.9	33.2	1.69	20.626			
600.0	600.0	597.2	596.9	1.0	1.1	-64.25	17.8	-36.9	41.1	39.1	2.04	20.108	SF		
700.0	700.0	695.8	695.1	1.2	1.3	-20.30	23.7	-43.6	48.7	46.3	2.39	20.379			
800.0	799.9	794.2	792.8	1.4	1.5	-18.96	31.2	-52.2	56.3	53.6	2.74	20.582			
900.0	899.7	892.3	890.0	1.6	1.8	-18.21	40.4	-62.7	64.2	61.1	3.09	20.779			
1,000.0	999.4	990.1	986.4	1.8	2.1	-17.44	51.1	-75.0	73.9	70.4	3.44	21.472			
1,100.0	1,099.2	1,087.4	1,081.8	2.0	2.5	-16.57	63.4	-89.1	86.1	82.3	3.79	22.706			
1,200.0	1,198.9	1,184.0	1,176.1	2.2	2.9	-15.71	77.2	-104.9	100.8	96.6	4.14	24.347			
1,300.0	1,298.7	1,279.7	1,269.0	2.4	3.3	-14.89	92.5	-122.3	118.0	113.5	4.49	26.297			
1,400.0	1,398.4	1,374.6	1,360.5	2.6	3.7	-14.16	109.1	-141.2	137.6	132.8	4.83	28.489			
1,500.0	1,498.2	1,468.5	1,450.4	2.8	4.2	-13.52	127.0	-161.7	159.7	154.5	5.17	30.872			
1,600.0	1,597.9	1,561.3	1,538.5	3.0	4.8	-12.96	146.1	-183.5	184.1	178.6	5.51	33.406			

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

Directional Plus Anticollision Report

Company:	Berry Petroleum Company (NAD 83)	Local Co-ordinate Reference:	Well Oxy 28-19D (F28 Pad)
Project:	Garfield County	TVD Reference:	KBE @ 8308.0ft (Original Well Elev)
Reference Site:	SENW S28-T6S-R97W (F28 Pad)	MD Reference:	KBE @ 8308.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Oxy 28-19D (F28 Pad)	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	DD	Database:	EDM 2003.21 US Multi User Db
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Offset Design													Offset Site Error:	0.0 ft	
Survey Program: 0-MWD													Offset Well Error:		0.0 ft
Reference															
Offset				Semi Major Axis			Distance								
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning		
0.0	0.0	0.0	0.0	0.0	0.0	-70.13	5.1	-14.1	15.0						
100.0	100.0	100.0	100.0	0.1	0.1	-70.13	5.1	-14.1	15.0	14.7	0.30	50.566			
200.0	200.0	200.0	200.0	0.3	0.3	-70.13	5.1	-14.1	15.0	14.4	0.65	23.233	CC, ES		
300.0	300.0	299.6	299.6	0.5	0.5	-68.01	6.1	-15.0	16.2	15.2	0.99	16.264			
400.0	400.0	399.1	399.0	0.7	0.7	-63.19	8.9	-17.6	19.8	18.4	1.34	14.714	SF		
500.0	500.0	498.3	498.0	0.8	0.9	-58.19	13.7	-22.0	26.0	24.3	1.70	15.293			
600.0	600.0	597.2	596.5	1.0	1.1	-54.23	20.3	-28.1	34.8	32.8	2.06	16.888			
700.0	700.0	695.6	694.2	1.2	1.4	-9.94	28.7	-35.9	45.0	42.6	2.39	18.855			
800.0	799.9	793.8	791.4	1.4	1.7	-8.36	38.9	-45.4	55.3	52.5	2.73	20.205			
900.0	899.7	891.7	888.0	1.6	2.0	-7.31	51.0	-56.5	65.6	62.5	3.08	21.280			
1,000.0	999.4	989.2	983.6	1.8	2.3	-6.43	64.8	-69.2	77.7	74.3	3.43	22.683			
1,100.0	1,099.2	1,085.9	1,078.0	2.0	2.7	-5.67	80.2	-83.5	92.4	88.7	3.77	24.508			
1,200.0	1,198.9	1,181.9	1,171.1	2.2	3.2	-5.03	97.3	-99.3	109.6	105.5	4.12	26.645			
1,300.0	1,298.7	1,277.0	1,262.8	2.4	3.6	-4.49	115.9	-116.5	129.3	124.9	4.46	29.018			
1,400.0	1,398.4	1,371.1	1,352.8	2.6	4.2	-4.05	135.9	-135.0	151.4	146.6	4.80	31.573			
1,500.0	1,498.2	1,464.0	1,441.1	2.8	4.7	-3.69	157.3	-154.8	175.9	170.7	5.13	34.269			

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

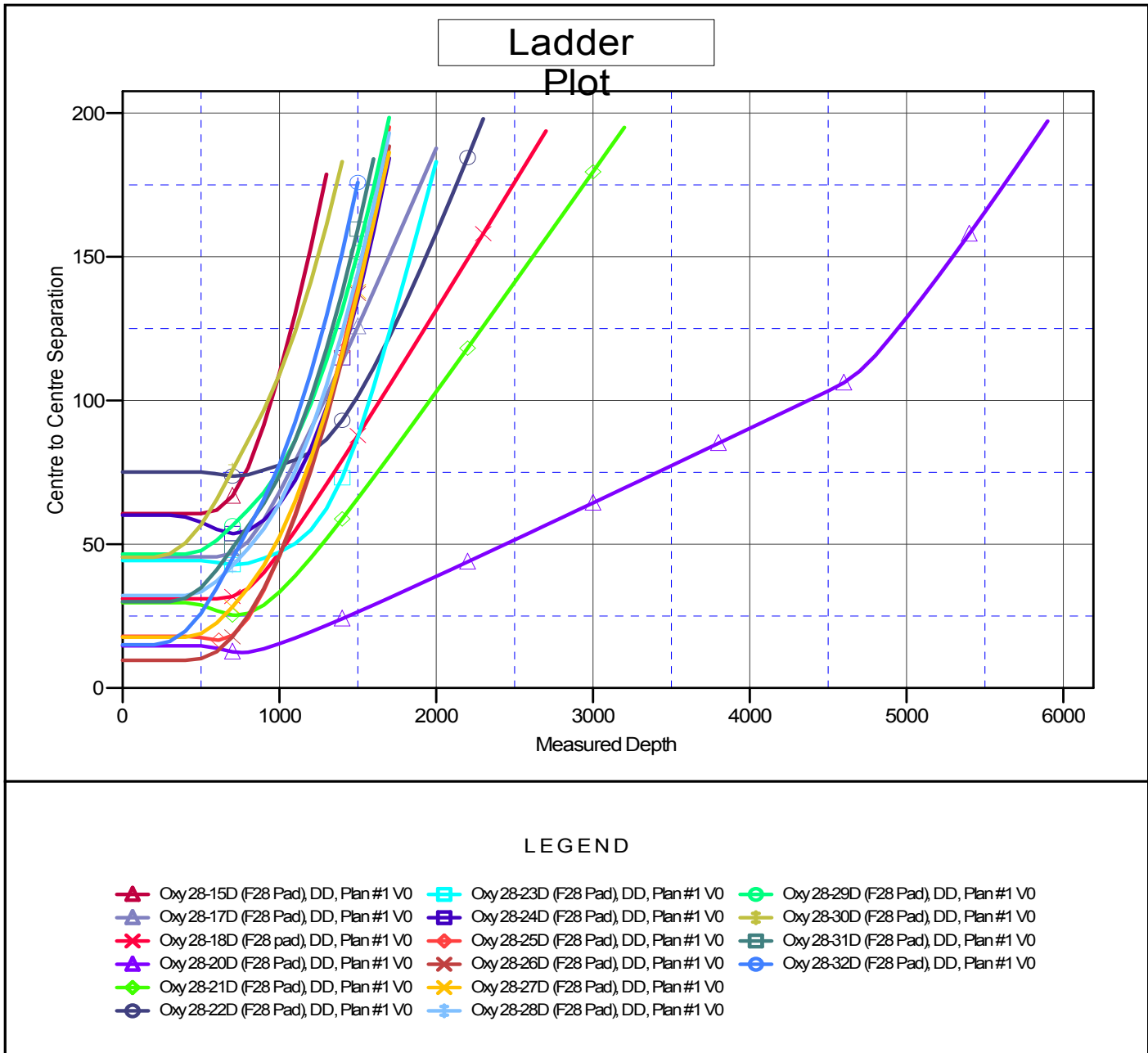
Directional Plus

Anticollision Report

Company: Berry Petroleum Company (NAD 83)	Local Co-ordinate Reference: Well Oxy 28-19D (F28 Pad)	
Project: Garfield County	TVD Reference: KBE @ 8308.0ft (Original Well Elev)	
Reference Site: SENW S28-T6S-R97W (F28 Pad)	MD Reference: KBE @ 8308.0ft (Original Well Elev)	
Site Error: 0.0ft	North Reference: True	
Reference Well: Oxy 28-19D (F28 Pad)	Survey Calculation Method: Minimum Curvature	
Well Error: 0.0ft	Output errors are at 2.00 sigma	
Reference Wellbore DD	Database: EDM 2003.21 US Multi User Db	
Reference Design: Plan #1	Offset TVD Reference: Offset Datum	

Reference Depths are relative to KBE @ 8308.0ft (Original Well Elev)
 Offset Depths are relative to Offset Datum
 Central Meridian is -105.500000 °

Coordinates are relative to: Oxy 28-19D (F28 Pad)
 Coordinate System is US State Plane 1983, Colorado Central Zone
 Grid Convergence at Surface is: -1.72°



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