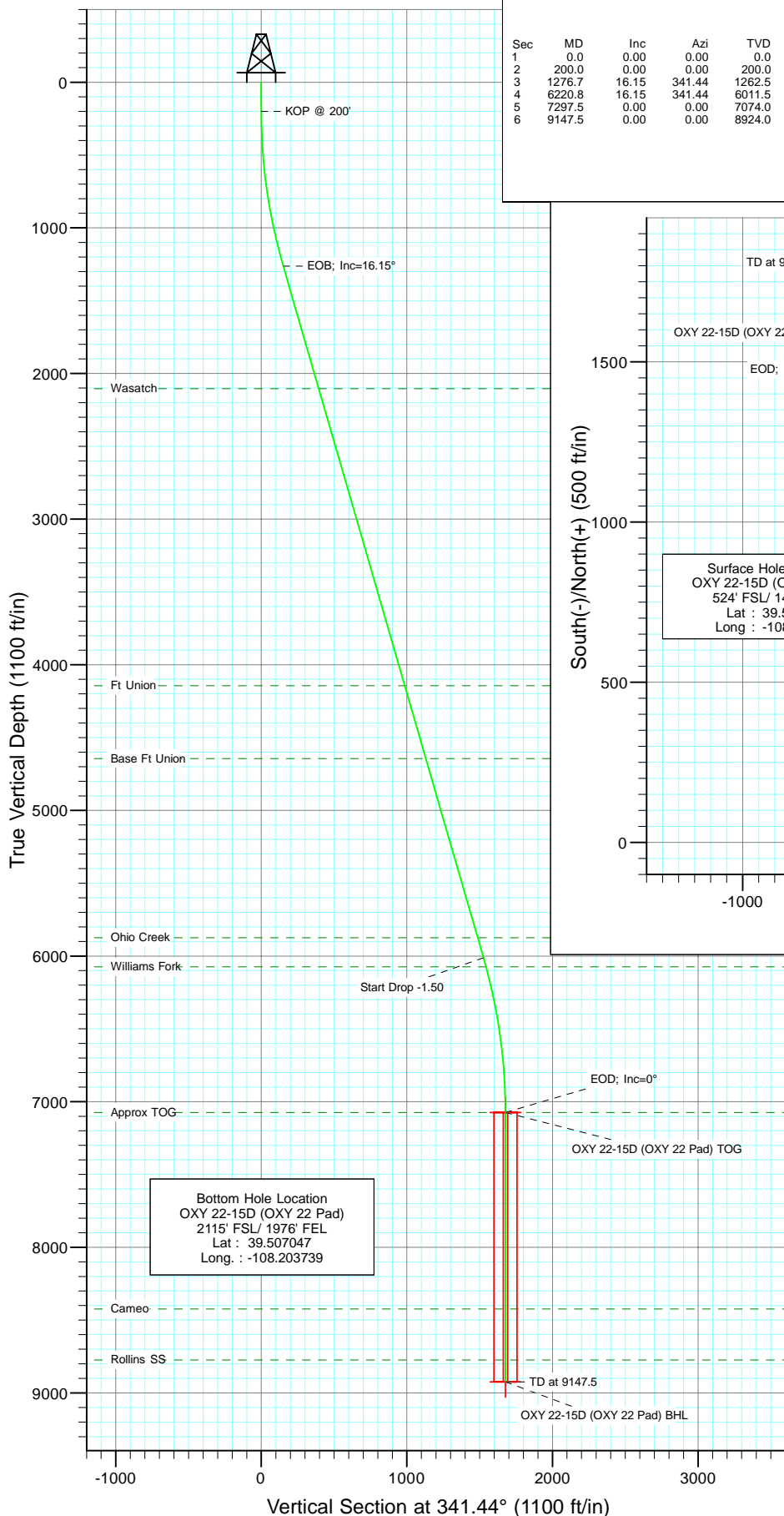




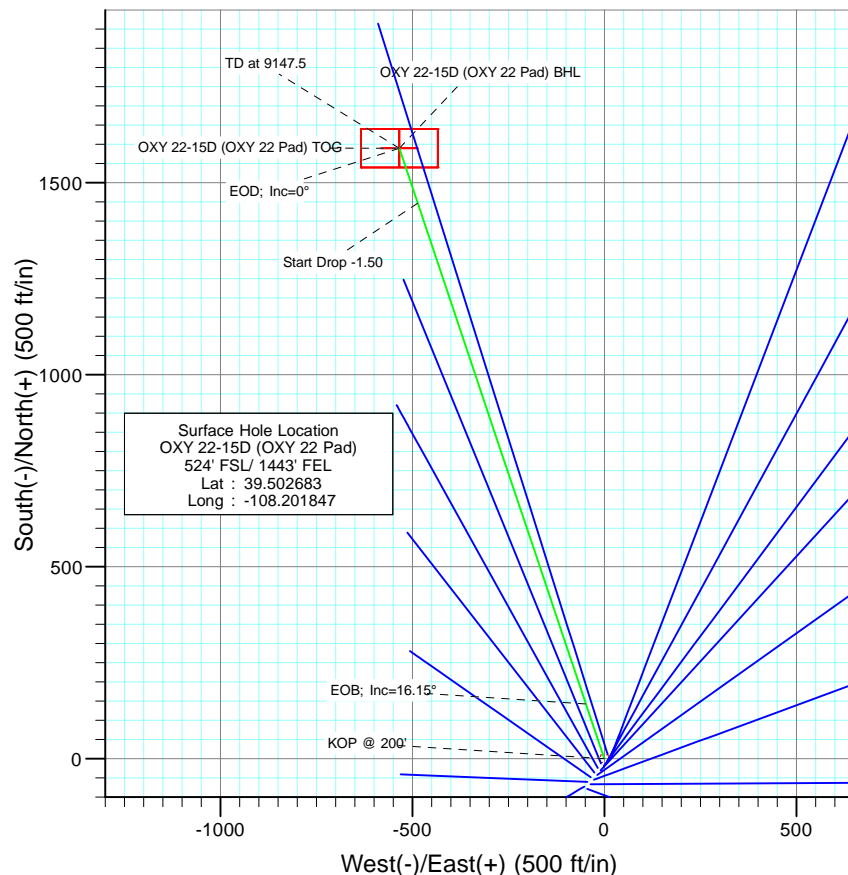
Berry Petroleum Company

Project: Garfield County
Site: SWSE S22-T6S-R97W
Well: OXY 22-15D (OXY 22 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	200.0	0.00	0.00	200.0	0.0	0.0	0.00	0.00	0.0	
3	1276.7	16.15	341.44	1262.5	142.9	-48.0	1.50	341.44	150.8	
4	6220.8	16.15	341.44	6011.5	1446.6	-485.8	0.00	0.00	1526.1	
5	7297.5	0.00	0.00	7074.0	1589.6	-533.8	1.50	180.00	1676.8	OXY 22-15D (OXY 22 Pad) TOG
6	9147.5	0.00	0.00	8924.0	1589.6	-533.8	0.00	0.00	1676.8	OXY 22-15D (OXY 22 Pad) BHL



FORMATION TOP DETAILS

TVDPath	MDPath	Formation
2104.0	2152.8	Wasatch
4144.0	4276.6	Ft Union
4644.0	4797.1	Base Ft Union
5874.0	6077.7	Ohio Creek
6074.0	6285.8	Williams Fork
7074.0	7297.5	Approx TOG
8424.0	8647.5	Cameo
8774.0	8997.5	Rollins SS



Azimuths to True North
Magnetic North: 10.64°

Magnetic Field
Strength: 52406.1snT
Dip Angle: 65.76°
Date: 9/29/2009
Model: IGRF200510

DESIGN DETAILS: Plan #1

95XXX; BH
KBE @ 8506.0ft (Original Well Elev)

Target	Azimuth	Origin	N/S	E/W	From TVD
OXY 22-15D (OXY 22 Pad) BHL	341.44	Slot	0.0	0.0	0.0

Cathedral Energy Services

Planning Report

Database:	US EDM 2003.21 Multi Users DB	Local Co-ordinate Reference:	Well OXY 22-15D (OXY 22 Pad)
Company:	Berry Petroleum Company (NAD 83)	TVD Reference:	KBE @ 8506.0ft (Original Well Elev)
Project:	Garfield County	MD Reference:	KBE @ 8506.0ft (Original Well Elev)
Site:	SWSE S22-T6S-R97W	North Reference:	True
Well:	OXY 22-15D (OXY 22 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		SWSE S22-T6S-R97W			
Site Position:		Northing:	1,619,243.22 ft	Latitude:	39.502467
From:	Lat/Long	Easting:	2,237,679.58 ft	Longitude:	-108.202006
Position Uncertainty:	0.0 ft	Slot Radius:	in	Grid Convergence:	-1.70 °

Well	OXY 22-15D (OXY 22 Pad)					
Well Position	+N/-S	0.0 ft	Northing:	1,619,320.52 ft	Latitude:	39.502683
	+E/-W	0.0 ft	Easting:	2,237,726.76 ft	Longitude:	-108.201847
Position Uncertainty		0.0 ft	Wellhead Elevation:	ft	Ground Level:	8,491.0 ft

Wellbore	DD				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF200510	9/29/2009	10.64	65.76	52,406

Design	Plan #1			
Audit Notes:				
Version:	Phase:	PLAN	Tie On Depth:	0.0
Vertical Section:	Depth From (TVD) (ft)	+N/-S (ft)	+E/-W (ft)	Direction (°)
	0.0	0.0	0.0	341.44

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	
200.0	0.00	0.00	200.0	0.0	0.0	0.00	0.00	0.00	0.00	
1,276.7	16.15	341.44	1,262.5	142.9	-48.0	1.50	1.50	0.00	341.44	
6,220.8	16.15	341.44	6,011.5	1,446.6	-485.8	0.00	0.00	0.00	0.00	
7,297.5	0.00	0.00	7,074.0	1,589.6	-533.8	1.50	-1.50	0.00	180.00	OXY 22-15D (OXY 22
9,147.5	0.00	0.00	8,924.0	1,589.6	-533.8	0.00	0.00	0.00	0.00	OXY 22-15D (OXY 22

Cathedral Energy Services

Planning Report

Database:	US EDM 2003.21 Multi Users DB	Local Co-ordinate Reference:	Well OXY 22-15D (OXY 22 Pad)
Company:	Berry Petroleum Company (NAD 83)	TVD Reference:	KBE @ 8506.0ft (Original Well Elev)
Project:	Garfield County	MD Reference:	KBE @ 8506.0ft (Original Well Elev)
Site:	SWSE S22-T6S-R97W	North Reference:	True
Well:	OXY 22-15D (OXY 22 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	
200.0	0.00	0.00	200.0	0.0	0.0	0.0	0.00	0.00	KOP @ 200'
210.0	0.15	341.44	210.0	0.0	0.0	0.0	1.50	1.50	
240.0	0.60	341.44	240.0	0.2	-0.1	0.2	1.50	1.50	
270.0	1.05	341.44	270.0	0.6	-0.2	0.6	1.50	1.50	
300.0	1.50	341.44	300.0	1.2	-0.4	1.3	1.50	1.50	
330.0	1.95	341.44	330.0	2.1	-0.7	2.2	1.50	1.50	
360.0	2.40	341.44	360.0	3.2	-1.1	3.4	1.50	1.50	
390.0	2.85	341.44	389.9	4.5	-1.5	4.7	1.50	1.50	
420.0	3.30	341.44	419.9	6.0	-2.0	6.3	1.50	1.50	
450.0	3.75	341.44	449.8	7.8	-2.6	8.2	1.50	1.50	
480.0	4.20	341.44	479.7	9.7	-3.3	10.3	1.50	1.50	
510.0	4.65	341.44	509.7	11.9	-4.0	12.6	1.50	1.50	
540.0	5.10	341.44	539.6	14.3	-4.8	15.1	1.50	1.50	
570.0	5.55	341.44	569.4	17.0	-5.7	17.9	1.50	1.50	
600.0	6.00	341.44	599.3	19.8	-6.7	20.9	1.50	1.50	
630.0	6.45	341.44	629.1	22.9	-7.7	24.2	1.50	1.50	
660.0	6.90	341.44	658.9	26.2	-8.8	27.7	1.50	1.50	
690.0	7.35	341.44	688.7	29.8	-10.0	31.4	1.50	1.50	
720.0	7.80	341.44	718.4	33.5	-11.3	35.3	1.50	1.50	
750.0	8.25	341.44	748.1	37.5	-12.6	39.5	1.50	1.50	
780.0	8.70	341.44	777.8	41.7	-14.0	44.0	1.50	1.50	
810.0	9.15	341.44	807.4	46.1	-15.5	48.6	1.50	1.50	
840.0	9.60	341.44	837.0	50.7	-17.0	53.5	1.50	1.50	
870.0	10.05	341.44	866.6	55.6	-18.7	58.6	1.50	1.50	
900.0	10.50	341.44	896.1	60.6	-20.4	64.0	1.50	1.50	
930.0	10.95	341.44	925.6	65.9	-22.1	69.5	1.50	1.50	
960.0	11.40	341.44	955.0	71.4	-24.0	75.4	1.50	1.50	
990.0	11.85	341.44	984.4	77.2	-25.9	81.4	1.50	1.50	
1,020.0	12.30	341.44	1,013.7	83.1	-27.9	87.7	1.50	1.50	
1,050.0	12.75	341.44	1,043.0	89.3	-30.0	94.2	1.50	1.50	
1,080.0	13.20	341.44	1,072.2	95.7	-32.1	100.9	1.50	1.50	
1,110.0	13.65	341.44	1,101.4	102.3	-34.3	107.9	1.50	1.50	
1,140.0	14.10	341.44	1,130.5	109.1	-36.6	115.1	1.50	1.50	
1,170.0	14.55	341.44	1,159.6	116.1	-39.0	122.5	1.50	1.50	
1,200.0	15.00	341.44	1,188.6	123.4	-41.4	130.2	1.50	1.50	
1,230.0	15.45	341.44	1,217.6	130.8	-43.9	138.0	1.50	1.50	
1,260.0	15.90	341.44	1,246.4	138.5	-46.5	146.1	1.50	1.50	
1,276.7	16.15	341.44	1,262.5	142.9	-48.0	150.8	1.50	1.50	EOB; Inc=16.15°
1,290.0	16.15	341.44	1,275.3	146.4	-49.2	154.4	0.00	0.00	
1,320.0	16.15	341.44	1,304.1	154.3	-51.8	162.8	0.00	0.00	
1,350.0	16.15	341.44	1,332.9	162.2	-54.5	171.1	0.00	0.00	
1,380.0	16.15	341.44	1,361.7	170.1	-57.1	179.5	0.00	0.00	
1,410.0	16.15	341.44	1,390.5	178.1	-59.8	187.8	0.00	0.00	
1,440.0	16.15	341.44	1,419.4	186.0	-62.5	196.2	0.00	0.00	
1,470.0	16.15	341.44	1,448.2	193.9	-65.1	204.5	0.00	0.00	

Cathedral Energy Services

Planning Report

Database:	US EDM 2003.21 Multi Users DB	Local Co-ordinate Reference:	Well OXY 22-15D (OXY 22 Pad)
Company:	Berry Petroleum Company (NAD 83)	TVD Reference:	KBE @ 8506.0ft (Original Well Elev)
Project:	Garfield County	MD Reference:	KBE @ 8506.0ft (Original Well Elev)
Site:	SWSE S22-T6S-R97W	North Reference:	True
Well:	OXY 22-15D (OXY 22 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
1,500.0	16.15	341.44	1,477.0	201.8	-67.8	212.9	0.00	0.00	
1,530.0	16.15	341.44	1,505.8	209.7	-70.4	221.2	0.00	0.00	
1,560.0	16.15	341.44	1,534.6	217.6	-73.1	229.6	0.00	0.00	
1,590.0	16.15	341.44	1,563.4	225.5	-75.7	237.9	0.00	0.00	
1,620.0	16.15	341.44	1,592.2	233.4	-78.4	246.2	0.00	0.00	
1,650.0	16.15	341.44	1,621.1	241.3	-81.1	254.6	0.00	0.00	
1,680.0	16.15	341.44	1,649.9	249.3	-83.7	262.9	0.00	0.00	
1,710.0	16.15	341.44	1,678.7	257.2	-86.4	271.3	0.00	0.00	
1,740.0	16.15	341.44	1,707.5	265.1	-89.0	279.6	0.00	0.00	
1,770.0	16.15	341.44	1,736.3	273.0	-91.7	288.0	0.00	0.00	
1,800.0	16.15	341.44	1,765.1	280.9	-94.3	296.3	0.00	0.00	
1,830.0	16.15	341.44	1,794.0	288.8	-97.0	304.7	0.00	0.00	
1,860.0	16.15	341.44	1,822.8	296.7	-99.7	313.0	0.00	0.00	
1,890.0	16.15	341.44	1,851.6	304.6	-102.3	321.3	0.00	0.00	
1,920.0	16.15	341.44	1,880.4	312.5	-105.0	329.7	0.00	0.00	
1,950.0	16.15	341.44	1,909.2	320.5	-107.6	338.0	0.00	0.00	
1,980.0	16.15	341.44	1,938.0	328.4	-110.3	346.4	0.00	0.00	
2,010.0	16.15	341.44	1,966.9	336.3	-112.9	354.7	0.00	0.00	
2,040.0	16.15	341.44	1,995.7	344.2	-115.6	363.1	0.00	0.00	
2,070.0	16.15	341.44	2,024.5	352.1	-118.2	371.4	0.00	0.00	
2,100.0	16.15	341.44	2,053.3	360.0	-120.9	379.8	0.00	0.00	
2,130.0	16.15	341.44	2,082.1	367.9	-123.6	388.1	0.00	0.00	
2,152.8	16.15	341.44	2,104.0	373.9	-125.6	394.4	0.00	0.00	Wasatch
2,160.0	16.15	341.44	2,110.9	375.8	-126.2	396.5	0.00	0.00	
2,190.0	16.15	341.44	2,139.8	383.7	-128.9	404.8	0.00	0.00	
2,220.0	16.15	341.44	2,168.6	391.6	-131.5	413.1	0.00	0.00	
2,250.0	16.15	341.44	2,197.4	399.6	-134.2	421.5	0.00	0.00	
2,280.0	16.15	341.44	2,226.2	407.5	-136.8	429.8	0.00	0.00	
2,310.0	16.15	341.44	2,255.0	415.4	-139.5	438.2	0.00	0.00	
2,340.0	16.15	341.44	2,283.8	423.3	-142.2	446.5	0.00	0.00	
2,370.0	16.15	341.44	2,312.6	431.2	-144.8	454.9	0.00	0.00	
2,400.0	16.15	341.44	2,341.5	439.1	-147.5	463.2	0.00	0.00	
2,430.0	16.15	341.44	2,370.3	447.0	-150.1	471.6	0.00	0.00	
2,460.0	16.15	341.44	2,399.1	454.9	-152.8	479.9	0.00	0.00	
2,490.0	16.15	341.44	2,427.9	462.8	-155.4	488.3	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 22-15D (OXY 22 P	0.00	0.00	7,074.0	1,589.6	-533.8	1,620,925.26	2,237,240.43	39.507047	-108.203739
- plan misses target center by 4795.7ft at 2490.0ft MD (2427.9 TVD, 462.8 N, -155.4 E)									
- Point									
OXY 22-15D (OXY 22 P	0.00	0.00	8,924.0	1,589.6	-533.8	1,620,925.26	2,237,240.43	39.507047	-108.203739
- plan misses target center by 6603.9ft at 2490.0ft MD (2427.9 TVD, 462.8 N, -155.4 E)									
- Rectangle (sides W200.0 H100.0 D0.0)									

Cathedral Energy Services

Planning Report

Database:	US EDM 2003.21 Multi Users DB	Local Co-ordinate Reference:	Well OXY 22-15D (OXY 22 Pad)
Company:	Berry Petroleum Company (NAD 83)	TVD Reference:	KBE @ 8506.0ft (Original Well Elev)
Project:	Garfield County	MD Reference:	KBE @ 8506.0ft (Original Well Elev)
Site:	SWSE S22-T6S-R97W	North Reference:	True
Well:	OXY 22-15D (OXY 22 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	16.15	341.44	2,437.5	465.5	-156.3	491.0	0.00	0.00	
2,600.0	16.15	341.44	2,533.6	491.9	-165.2	518.9	0.00	0.00	
2,700.0	16.15	341.44	2,629.6	518.2	-174.0	546.7	0.00	0.00	
2,800.0	16.15	341.44	2,725.7	544.6	-182.9	574.5	0.00	0.00	
2,900.0	16.15	341.44	2,821.7	571.0	-191.8	602.3	0.00	0.00	
3,000.0	16.15	341.44	2,917.8	597.3	-200.6	630.1	0.00	0.00	
3,100.0	16.15	341.44	3,013.8	623.7	-209.5	657.9	0.00	0.00	
3,200.0	16.15	341.44	3,109.9	650.1	-218.3	685.8	0.00	0.00	
3,300.0	16.15	341.44	3,205.9	676.4	-227.2	713.6	0.00	0.00	
3,400.0	16.15	341.44	3,302.0	702.8	-236.0	741.4	0.00	0.00	
3,500.0	16.15	341.44	3,398.0	729.2	-244.9	769.2	0.00	0.00	
3,600.0	16.15	341.44	3,494.1	755.6	-253.7	797.0	0.00	0.00	
3,700.0	16.15	341.44	3,590.2	781.9	-262.6	824.8	0.00	0.00	
3,800.0	16.15	341.44	3,686.2	808.3	-271.5	852.7	0.00	0.00	
3,900.0	16.15	341.44	3,782.3	834.7	-280.3	880.5	0.00	0.00	
4,000.0	16.15	341.44	3,878.3	861.0	-289.2	908.3	0.00	0.00	
4,100.0	16.15	341.44	3,974.4	887.4	-298.0	936.1	0.00	0.00	
4,200.0	16.15	341.44	4,070.4	913.8	-306.9	963.9	0.00	0.00	
4,276.6	16.15	341.44	4,144.0	934.0	-313.7	985.2	0.00	0.00	Ft Union
4,300.0	16.15	341.44	4,166.5	940.1	-315.7	991.7	0.00	0.00	
4,400.0	16.15	341.44	4,262.5	966.5	-324.6	1,019.6	0.00	0.00	
4,500.0	16.15	341.44	4,358.6	992.9	-333.4	1,047.4	0.00	0.00	
4,600.0	16.15	341.44	4,454.6	1,019.2	-342.3	1,075.2	0.00	0.00	
4,700.0	16.15	341.44	4,550.7	1,045.6	-351.2	1,103.0	0.00	0.00	
4,797.1	16.15	341.44	4,644.0	1,071.2	-359.8	1,130.0	0.00	0.00	Base Ft Union
4,800.0	16.15	341.44	4,646.7	1,072.0	-360.0	1,130.8	0.00	0.00	
4,900.0	16.15	341.44	4,742.8	1,098.4	-368.9	1,158.6	0.00	0.00	
5,000.0	16.15	341.44	4,838.8	1,124.7	-377.7	1,186.5	0.00	0.00	
5,100.0	16.15	341.44	4,934.9	1,151.1	-386.6	1,214.3	0.00	0.00	
5,200.0	16.15	341.44	5,031.0	1,177.5	-395.4	1,242.1	0.00	0.00	
5,300.0	16.15	341.44	5,127.0	1,203.8	-404.3	1,269.9	0.00	0.00	
5,400.0	16.15	341.44	5,223.1	1,230.2	-413.2	1,297.7	0.00	0.00	
5,500.0	16.15	341.44	5,319.1	1,256.6	-422.0	1,325.5	0.00	0.00	
5,600.0	16.15	341.44	5,415.2	1,282.9	-430.9	1,353.4	0.00	0.00	
5,700.0	16.15	341.44	5,511.2	1,309.3	-439.7	1,381.2	0.00	0.00	
5,800.0	16.15	341.44	5,607.3	1,335.7	-448.6	1,409.0	0.00	0.00	
5,900.0	16.15	341.44	5,703.3	1,362.1	-457.4	1,436.8	0.00	0.00	
6,000.0	16.15	341.44	5,799.4	1,388.4	-466.3	1,464.6	0.00	0.00	
6,077.7	16.15	341.44	5,874.0	1,408.9	-473.2	1,486.2	0.00	0.00	Ohio Creek
6,100.0	16.15	341.44	5,895.4	1,414.8	-475.1	1,492.4	0.00	0.00	
6,200.0	16.15	341.44	5,991.5	1,441.2	-484.0	1,520.3	0.00	0.00	
6,220.8	16.15	341.44	6,011.5	1,446.6	-485.8	1,526.1	0.00	0.00	Start Drop -1.50
6,285.8	15.18	341.44	6,074.0	1,463.3	-491.4	1,543.6	1.50	-1.50	Williams Fork
6,300.0	14.96	341.44	6,087.8	1,466.8	-492.6	1,547.3	1.50	-1.50	
6,400.0	13.46	341.44	6,184.7	1,490.1	-500.4	1,571.8	1.50	-1.50	
6,500.0	11.96	341.44	6,282.2	1,510.9	-507.4	1,593.9	1.50	-1.50	
6,600.0	10.46	341.44	6,380.3	1,529.4	-513.6	1,613.3	1.50	-1.50	
6,700.0	8.96	341.44	6,478.9	1,545.3	-519.0	1,630.2	1.50	-1.50	
6,800.0	7.46	341.44	6,577.9	1,558.9	-523.5	1,644.5	1.50	-1.50	
6,900.0	5.96	341.44	6,677.2	1,570.0	-527.3	1,656.1	1.50	-1.50	
7,000.0	4.46	341.44	6,776.8	1,578.6	-530.2	1,665.2	1.50	-1.50	
7,100.0	2.96	341.44	6,876.5	1,584.7	-532.2	1,671.7	1.50	-1.50	

Cathedral Energy Services

Planning Report

Database:	US EDM 2003.21 Multi Users DB	Local Co-ordinate Reference:	Well OXY 22-15D (OXY 22 Pad)
Company:	Berry Petroleum Company (NAD 83)	TVD Reference:	KBE @ 8506.0ft (Original Well Elev)
Project:	Garfield County	MD Reference:	KBE @ 8506.0ft (Original Well Elev)
Site:	SWSE S22-T6S-R97W	North Reference:	True
Well:	OXY 22-15D (OXY 22 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
7,200.0	1.46	341.44	6,976.5	1,588.4	-533.4	1,675.6	1.50	-1.50	
7,297.5	0.00	0.00	7,074.0	1,589.6	-533.8	1,676.8	1.50	-1.50	EOD; Inc=0° - Approx TOG - OXY 22-15D (OXY 22 Pad)
7,300.0	0.00	0.00	7,076.5	1,589.6	-533.8	1,676.8	0.00	0.00	
7,400.0	0.00	0.00	7,176.5	1,589.6	-533.8	1,676.8	0.00	0.00	
7,500.0	0.00	0.00	7,276.5	1,589.6	-533.8	1,676.8	0.00	0.00	
7,600.0	0.00	0.00	7,376.5	1,589.6	-533.8	1,676.8	0.00	0.00	
7,700.0	0.00	0.00	7,476.5	1,589.6	-533.8	1,676.8	0.00	0.00	
7,800.0	0.00	0.00	7,576.5	1,589.6	-533.8	1,676.8	0.00	0.00	
7,900.0	0.00	0.00	7,676.5	1,589.6	-533.8	1,676.8	0.00	0.00	
8,000.0	0.00	0.00	7,776.5	1,589.6	-533.8	1,676.8	0.00	0.00	
8,100.0	0.00	0.00	7,876.5	1,589.6	-533.8	1,676.8	0.00	0.00	
8,200.0	0.00	0.00	7,976.5	1,589.6	-533.8	1,676.8	0.00	0.00	
8,300.0	0.00	0.00	8,076.5	1,589.6	-533.8	1,676.8	0.00	0.00	
8,400.0	0.00	0.00	8,176.5	1,589.6	-533.8	1,676.8	0.00	0.00	
8,500.0	0.00	0.00	8,276.5	1,589.6	-533.8	1,676.8	0.00	0.00	
8,600.0	0.00	0.00	8,376.5	1,589.6	-533.8	1,676.8	0.00	0.00	
8,647.5	0.00	0.00	8,424.0	1,589.6	-533.8	1,676.8	0.00	0.00	Cameo
8,700.0	0.00	0.00	8,476.5	1,589.6	-533.8	1,676.8	0.00	0.00	
8,800.0	0.00	0.00	8,576.5	1,589.6	-533.8	1,676.8	0.00	0.00	
8,900.0	0.00	0.00	8,676.5	1,589.6	-533.8	1,676.8	0.00	0.00	
8,997.5	0.00	0.00	8,774.0	1,589.6	-533.8	1,676.8	0.00	0.00	Rollins SS
9,000.0	0.00	0.00	8,776.5	1,589.6	-533.8	1,676.8	0.00	0.00	
9,100.0	0.00	0.00	8,876.5	1,589.6	-533.8	1,676.8	0.00	0.00	
9,147.5	0.00	0.00	8,924.0	1,589.6	-533.8	1,676.8	0.00	0.00	TD at 9147.5 - OXY 22-15D (OXY 22 Pad) BHL

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 22-15D (OXY 22 P	0.00	0.00	7,074.0	1,589.6	-533.8	1,620,925.26	2,237,240.43	39.507047	-108.203739
- plan hits target center									
- Point									
OXY 22-15D (OXY 22 P	0.00	0.00	8,924.0	1,589.6	-533.8	1,620,925.26	2,237,240.43	39.507047	-108.203739
- plan hits target center									
- Rectangle (sides W100.0 H200.0 D0.0)									

Cathedral Energy Services

Planning Report

Database:	US EDM 2003.21 Multi Users DB	Local Co-ordinate Reference:	Well OXY 22-15D (OXY 22 Pad)
Company:	Berry Petroleum Company (NAD 83)	TVD Reference:	KBE @ 8506.0ft (Original Well Elev)
Project:	Garfield County	MD Reference:	KBE @ 8506.0ft (Original Well Elev)
Site:	SWSE S22-T6S-R97W	North Reference:	True
Well:	OXY 22-15D (OXY 22 Pad)	Survey Calculation Method:	Minimum Curvature
Wellbore:	DD		
Design:	Plan #1		

Formations						
Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)	
2,152.8	2,104.0	Wasatch		0.00		
4,276.6	4,144.0	Ft Union		0.00		
4,797.1	4,644.0	Base Ft Union		0.00		
6,077.7	5,874.0	Ohio Creek		0.00		
6,285.8	6,074.0	Williams Fork		0.00		
7,297.5	7,074.0	Approx TOG		0.00		
8,647.5	8,424.0	Cameo		0.00		
8,997.5	8,774.0	Rollins SS		0.00		

Plan Annotations					
Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates			
		+N/-S (ft)	+E/-W (ft)	Comment	
200.0	200.0	0.0	0.0	KOP @ 200'	
1,276.7	1,262.5	142.9	-48.0	EOB; Inc=16.15°	
6,220.8	6,011.5	1,446.6	-485.8	Start Drop -1.50	
7,297.5	7,074.0	1,589.6	-533.8	EOD; Inc=0°	
9,147.5	8,924.0	1,589.6	-533.8	TD at 9147.5	

Cathedral Energy Services

Anticollision Report

Company:	Berry Petroleum Company (NAD 83)	Local Co-ordinate Reference:	Well OXY 22-15D (OXY 22 Pad)
Project:	Garfield County	TVD Reference:	KBE @ 8506.0ft (Original Well Elev)
Reference Site:	SWSE S22-T6S-R97W	MD Reference:	KBE @ 8506.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	OXY 22-15D (OXY 22 Pad)	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	DD	Database:	US EDM 2003.21 Multi Users DB
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

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

Survey Tool Program		Date	10/1/2009		
From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description	
0.0	9,147.5	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						
SWSE S22-T6S-R97W						
OXY 22-10D (OXY 22 Pad) - DD - Plan #1	200.0	200.0	74.8	74.1	115.815	CC, ES
OXY 22-10D (OXY 22 Pad) - DD - Plan #1	900.0	893.5	130.1	126.8	38.727	SF
OXY 22-11D (OXY 22 Pad) - DD - Plan #1	200.0	200.0	59.9	59.3	92.795	CC, ES
OXY 22-11D (OXY 22 Pad) - DD - Plan #1	1,000.0	997.7	111.2	107.2	27.961	SF
OXY 22-12D (OXY 22 Pad) - DD - Plan #1	200.0	200.0	44.7	44.1	69.264	CC, ES
OXY 22-12D (OXY 22 Pad) - DD - Plan #1	1,000.0	1,001.4	78.3	74.2	19.277	SF
OXY 22-13D (OXY 22 Pad) - DD - Plan #1	200.0	200.0	29.6	28.9	45.785	CC, ES
OXY 22-13D (OXY 22 Pad) - DD - Plan #1	1,100.0	1,103.3	57.7	53.1	12.537	SF
OXY 22-14D (OXY 22 Pad) - DD - Plan #1	200.0	200.0	14.9	14.2	23.020	CC, ES
OXY 22-14D (OXY 22 Pad) - DD - Plan #1	1,200.0	1,204.2	38.4	33.6	8.096	SF
OXY 22-16D (OXY 22 Pad) - DD - Plan #1	200.0	200.0	15.0	14.4	23.229	CC
OXY 22-16D (OXY 22 Pad) - DD - Plan #1	1,300.0	1,297.4	17.4	10.5	2.548	ES
OXY 22-16D (OXY 22 Pad) - DD - Plan #1	1,400.0	1,397.1	18.8	11.3	2.506	SF
OXY 22-1D (OXY 22 Pad) - DD - Plan #1	200.0	200.0	90.6	89.9	140.256	CC, ES
OXY 22-1D (OXY 22 Pad) - DD - Plan #1	800.0	794.7	130.7	127.9	46.076	SF
OXY 22-2D (OXY 22 Pad) - DD - Plan #1	200.0	200.0	75.5	74.9	116.991	CC, ES
OXY 22-2D (OXY 22 Pad) - DD - Plan #1	800.0	798.3	111.1	108.3	39.262	SF
OXY 22-3D (OXY 22 Pad) - DD - Plan #1	200.0	200.0	60.9	60.2	94.241	CC, ES
OXY 22-3D (OXY 22 Pad) - DD - Plan #1	800.0	800.6	89.9	87.1	31.134	SF
OXY 22-4D (OXY 22 Pad) - DD - Plan #1	200.0	200.0	45.9	45.3	71.154	CC, ES
OXY 22-4D (OXY 22 Pad) - DD - Plan #1	800.0	801.6	71.8	69.0	24.957	SF
OXY 22-5D (OXY 22 Pad) - DD - Plan #1	357.3	358.4	31.5	30.3	26.264	CC
OXY 22-5D (OXY 22 Pad) - DD - Plan #1	400.0	401.4	31.6	30.3	23.361	ES
OXY 22-5D (OXY 22 Pad) - DD - Plan #1	700.0	701.6	43.6	41.0	16.972	SF
OXY 22-6D (OXY 22 Pad) - DD - Plan #1	200.0	200.0	18.2	17.6	28.256	CC
OXY 22-6D (OXY 22 Pad) - DD - Plan #1	300.0	300.4	18.4	17.4	18.485	ES
OXY 22-6D (OXY 22 Pad) - DD - Plan #1	500.0	500.8	22.3	20.5	12.885	SF
OXY 22-7D (OXY 22 Pad) - DD - Plan #1	200.0	200.0	9.8	9.2	15.203	CC, ES
OXY 22-7D (OXY 22 Pad) - DD - Plan #1	400.0	400.0	13.6	12.2	9.947	SF
OXY 22-8D (OXY 22 Pad) - DD - Plan #1	200.0	200.0	18.3	17.6	28.327	CC, ES
OXY 22-8D (OXY 22 Pad) - DD - Plan #1	600.0	598.3	31.8	29.6	14.439	SF
OXY 22-9D (OXY 22 Pad) - DD - Plan #1	200.0	200.0	89.8	89.1	139.036	CC, ES
OXY 22-9D (OXY 22 Pad) - DD - Plan #1	900.0	885.8	158.8	155.5	48.176	SF

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

Cathedral Energy Services

Anticollision Report

Company:	Berry Petroleum Company (NAD 83)	Local Co-ordinate Reference:	Well OXY 22-15D (OXY 22 Pad)
Project:	Garfield County	TVD Reference:	KBE @ 8506.0ft (Original Well Elev)
Reference Site:	SWSE S22-T6S-R97W	MD Reference:	KBE @ 8506.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	OXY 22-15D (OXY 22 Pad)	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	DD	Database:	US EDM 2003.21 Multi Users DB
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Offset Design SWSE S22-T6S-R97W - OXY 22-10D (OXY 22 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	-143.94	-60.5	-44.0	74.8					
100.0	100.0	100.0	100.0	0.1	0.1	-143.94	-60.5	-44.0	74.8	74.5	0.30	252.068		
200.0	200.0	200.0	200.0	0.3	0.3	-143.94	-60.5	-44.0	74.8	74.1	0.65	115.815 CC, ES		
300.0	300.0	300.0	300.0	0.5	0.5	-126.18	-60.5	-44.0	75.6	74.6	1.00	75.851		
400.0	399.9	399.9	399.9	0.7	0.7	-128.48	-60.5	-44.0	77.9	76.6	1.35	57.652		
500.0	499.7	498.7	498.7	0.9	0.8	-131.17	-60.4	-45.3	82.8	81.0	1.72	48.251		
600.0	599.3	597.3	597.2	1.1	1.0	-133.26	-60.3	-49.1	90.7	88.6	2.09	43.284		
700.0	698.6	695.7	695.4	1.4	1.2	-134.68	-60.0	-55.4	101.6	99.1	2.50	40.661		
800.0	797.5	794.8	794.2	1.7	1.4	-136.17	-59.7	-63.0	114.9	111.9	2.92	39.301		
900.0	896.1	893.5	892.6	2.0	1.6	-138.08	-59.4	-70.5	130.1	126.8	3.36	38.727 SF		
1,000.0	994.2	991.8	990.7	2.4	1.8	-140.21	-59.1	-78.0	147.5	143.7	3.81	38.751		
1,100.0	1,091.7	1,089.7	1,088.2	2.8	2.0	-142.40	-58.8	-85.5	167.1	162.9	4.26	39.249		
1,200.0	1,188.6	1,187.0	1,185.2	3.2	2.2	-144.54	-58.5	-92.9	189.0	184.3	4.71	40.134		

Cathedral Energy Services

Anticollision Report

Company:	Berry Petroleum Company (NAD 83)	Local Co-ordinate Reference:	Well OXY 22-15D (OXY 22 Pad)
Project:	Garfield County	TVD Reference:	KBE @ 8506.0ft (Original Well Elev)
Reference Site:	SWSE S22-T6S-R97W	MD Reference:	KBE @ 8506.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	OXY 22-15D (OXY 22 Pad)	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	DD	Database:	US EDM 2003.21 Multi Users DB
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Offset Design SWSE S22-T6S-R97W - OXY 22-11D (OXY 22 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	-143.94	-48.4	-35.3	59.9					
100.0	100.0	100.0	100.0	0.1	0.1	-143.94	-48.4	-35.3	59.9	59.6	0.30	201.965		
200.0	200.0	200.0	200.0	0.3	0.3	-143.94	-48.4	-35.3	59.9	59.3	0.65	92.795 CC, ES		
300.0	300.0	300.0	300.0	0.5	0.5	-126.38	-48.4	-35.3	60.7	59.7	1.00	60.929		
400.0	399.9	400.0	400.0	0.7	0.7	-128.03	-47.7	-36.3	63.1	61.7	1.35	46.579		
500.0	499.7	499.9	499.9	0.9	0.9	-129.04	-45.4	-39.6	67.0	65.3	1.73	38.740		
600.0	599.3	599.9	599.6	1.1	1.1	-129.44	-41.7	-44.9	72.5	70.3	2.13	33.944		
700.0	698.6	699.7	699.0	1.4	1.3	-129.64	-36.7	-52.0	79.5	76.9	2.57	30.903		
800.0	797.5	799.3	798.2	1.7	1.5	-130.94	-31.7	-59.3	88.2	85.2	3.03	29.102		
900.0	896.1	898.6	897.2	2.0	1.7	-133.10	-26.6	-66.6	98.7	95.2	3.50	28.191		
1,000.0	994.2	997.7	995.9	2.4	1.9	-135.77	-21.5	-73.9	111.2	107.2	3.98	27.961 SF		
1,100.0	1,091.7	1,096.5	1,094.2	2.8	2.2	-138.65	-16.5	-81.1	125.8	121.4	4.45	28.279		
1,200.0	1,188.6	1,194.8	1,192.1	3.2	2.4	-141.54	-11.4	-88.3	142.8	137.9	4.91	29.049		
1,276.7	1,262.5	1,269.9	1,266.9	3.6	2.6	-143.69	-7.6	-93.8	157.4	152.1	5.26	29.906		
1,300.0	1,284.9	1,292.6	1,289.5	3.7	2.6	-144.35	-6.4	-95.4	162.0	156.7	5.37	30.195		
1,400.0	1,380.9	1,390.2	1,386.8	4.2	2.8	-146.80	-1.5	-102.6	182.3	176.5	5.81	31.377		
1,500.0	1,477.0	1,487.9	1,484.1	4.7	3.1	-148.76	3.5	-109.7	202.8	196.5	6.25	32.465		

Cathedral Energy Services

Anticollision Report

Company:	Berry Petroleum Company (NAD 83)	Local Co-ordinate Reference:	Well OXY 22-15D (OXY 22 Pad)
Project:	Garfield County	TVD Reference:	KBE @ 8506.0ft (Original Well Elev)
Reference Site:	SWSE S22-T6S-R97W	MD Reference:	KBE @ 8506.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	OXY 22-15D (OXY 22 Pad)	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	DD	Database:	US EDM 2003.21 Multi Users DB
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Offset Design SWSE S22-T6S-R97W - OXY 22-12D (OXY 22 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	-144.52	-36.4	-26.0	44.7					
100.0	100.0	100.0	100.0	0.1	0.1	-144.52	-36.4	-26.0	44.7	44.4	0.30	150.750		
200.0	200.0	200.0	200.0	0.3	0.3	-144.52	-36.4	-26.0	44.7	44.1	0.65	69.264	CC, ES	
300.0	300.0	300.0	300.0	0.5	0.5	-127.28	-36.4	-26.0	45.5	44.5	1.00	45.689		
400.0	399.9	400.4	400.3	0.7	0.7	-129.53	-35.4	-26.8	47.5	46.2	1.35	35.102		
500.0	499.7	500.8	500.7	0.9	0.9	-131.04	-32.3	-29.2	50.3	48.6	1.73	29.136		
600.0	599.3	601.2	600.9	1.1	1.1	-131.86	-27.1	-33.3	53.9	51.8	2.13	25.336		
700.0	698.6	701.7	701.0	1.4	1.3	-132.09	-19.8	-38.9	58.3	55.7	2.57	22.696		
800.0	797.5	802.0	800.6	1.7	1.5	-131.88	-10.5	-46.2	63.3	60.3	3.05	20.773		
900.0	896.1	901.8	899.6	2.0	1.8	-132.69	-0.6	-53.8	69.9	66.3	3.55	19.671		
1,000.0	994.2	1,001.4	998.4	2.4	2.1	-134.73	9.2	-61.5	78.3	74.2	4.06	19.277	SF	
1,100.0	1,091.7	1,100.8	1,097.0	2.8	2.3	-137.50	19.0	-69.1	88.6	84.1	4.56	19.448		
1,200.0	1,188.6	1,199.9	1,195.3	3.2	2.6	-140.61	28.8	-76.8	101.1	96.1	5.03	20.089		
1,276.7	1,262.5	1,275.6	1,270.5	3.6	2.8	-143.05	36.3	-82.6	112.3	107.0	5.39	20.861		
1,300.0	1,284.9	1,298.6	1,293.2	3.7	2.9	-143.79	38.6	-84.3	116.0	110.5	5.49	21.127		
1,400.0	1,380.9	1,397.2	1,391.0	4.2	3.1	-146.51	48.3	-91.9	131.7	125.8	5.93	22.213		
1,500.0	1,477.0	1,495.7	1,488.8	4.7	3.4	-148.64	58.1	-99.5	147.7	141.3	6.36	23.205		
1,600.0	1,573.0	1,594.3	1,586.6	5.2	3.7	-150.36	67.8	-107.1	163.8	157.0	6.79	24.107		
1,700.0	1,669.1	1,692.9	1,684.5	5.7	3.9	-151.77	77.6	-114.7	180.0	172.8	7.22	24.926		
1,800.0	1,765.1	1,791.5	1,782.3	6.3	4.2	-152.95	87.3	-122.3	196.3	188.7	7.65	25.672		

Cathedral Energy Services

Anticollision Report

Company:	Berry Petroleum Company (NAD 83)	Local Co-ordinate Reference:	Well OXY 22-15D (OXY 22 Pad)
Project:	Garfield County	TVD Reference:	KBE @ 8506.0ft (Original Well Elev)
Reference Site:	SWSE S22-T6S-R97W	MD Reference:	KBE @ 8506.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	OXY 22-15D (OXY 22 Pad)	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	DD	Database:	US EDM 2003.21 Multi Users DB
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Offset Design SWSE S22-T6S-R97W - OXY 22-13D (OXY 22 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	-144.40	-24.0	-17.2	29.6					
100.0	100.0	100.0	100.0	0.1	0.1	-144.40	-24.0	-17.2	29.6	29.3	0.30	99.650		
200.0	200.0	200.0	200.0	0.3	0.3	-144.40	-24.0	-17.2	29.6	28.9	0.65	45.785	CC, ES	
300.0	300.0	300.0	300.0	0.5	0.5	-127.83	-24.0	-17.2	30.4	29.4	1.00	30.472		
400.0	399.9	400.4	400.3	0.7	0.7	-131.26	-22.9	-17.9	32.2	30.9	1.35	23.807		
500.0	499.7	500.8	500.7	0.9	0.9	-133.80	-19.4	-19.8	34.5	32.8	1.72	20.039		
600.0	599.3	601.3	601.0	1.1	1.1	-135.51	-13.7	-23.0	37.3	35.2	2.12	17.624		
700.0	698.6	701.8	701.1	1.4	1.3	-136.51	-5.6	-27.4	40.4	37.9	2.54	15.929		
800.0	797.5	802.4	801.0	1.7	1.5	-136.93	4.8	-33.2	43.9	40.9	3.00	14.651		
900.0	896.1	903.1	900.6	2.0	1.8	-136.88	17.5	-40.2	47.7	44.2	3.50	13.626		
1,000.0	994.2	1,003.5	999.5	2.4	2.1	-136.60	32.3	-48.5	51.9	47.9	4.05	12.814		
1,100.0	1,091.7	1,103.3	1,097.8	2.8	2.5	-137.66	47.6	-56.9	57.7	53.1	4.61	12.537	SF	
1,200.0	1,188.6	1,203.0	1,196.0	3.2	2.8	-140.01	62.8	-65.3	65.5	60.4	5.13	12.780		
1,276.7	1,262.5	1,279.3	1,271.1	3.6	3.1	-142.32	74.5	-71.8	73.0	67.5	5.50	13.270		
1,300.0	1,284.9	1,302.4	1,293.9	3.7	3.1	-143.05	78.0	-73.8	75.4	69.8	5.61	13.454		
1,400.0	1,380.9	1,401.8	1,391.7	4.2	3.5	-145.73	93.2	-82.2	86.2	80.1	6.07	14.199		
1,500.0	1,477.0	1,501.1	1,489.5	4.7	3.8	-147.81	108.3	-90.6	97.0	90.5	6.52	14.874		
1,600.0	1,573.0	1,600.5	1,587.3	5.2	4.2	-149.47	123.5	-99.0	108.0	101.0	6.97	15.483		
1,700.0	1,669.1	1,699.8	1,685.2	5.7	4.5	-150.82	138.7	-107.4	119.0	111.6	7.42	16.033		
1,800.0	1,765.1	1,799.2	1,783.0	6.3	4.8	-151.94	153.9	-115.8	130.1	122.2	7.87	16.531		
1,900.0	1,861.2	1,898.5	1,880.8	6.8	5.2	-152.89	169.0	-124.2	141.2	132.9	8.31	16.982		
2,000.0	1,957.3	1,997.9	1,978.7	7.3	5.5	-153.70	184.2	-132.6	152.4	143.6	8.76	17.393		
2,100.0	2,053.3	2,097.2	2,076.5	7.8	5.9	-154.40	199.4	-141.0	163.5	154.3	9.20	17.768		
2,200.0	2,149.4	2,196.6	2,174.3	8.3	6.2	-155.01	214.5	-149.5	174.7	165.1	9.65	18.112		
2,300.0	2,245.4	2,295.9	2,272.1	8.8	6.6	-155.54	229.7	-157.9	186.0	175.9	10.09	18.428		
2,400.0	2,341.5	2,395.3	2,370.0	9.3	6.9	-156.02	244.9	-166.3	197.2	186.7	10.53	18.719		
2,500.0	2,437.5	2,494.7	2,467.8	9.8	7.3	-156.44	260.1	-174.7	208.4	197.5	10.98	18.989		

Cathedral Energy Services

Anticollision Report

Company:	Berry Petroleum Company (NAD 83)	Local Co-ordinate Reference:	Well OXY 22-15D (OXY 22 Pad)
Project:	Garfield County	TVD Reference:	KBE @ 8506.0ft (Original Well Elev)
Reference Site:	SWSE S22-T6S-R97W	MD Reference:	KBE @ 8506.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	OXY 22-15D (OXY 22 Pad)	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	DD	Database:	US EDM 2003.21 Multi Users DB
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Offset Design SWSE S22-T6S-R97W - OXY 22-14D (OXY 22 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	-143.96	-12.0	-8.7	14.9					
100.0	100.0	100.0	100.0	0.1	0.1	-143.96	-12.0	-8.7	14.9	14.6	0.30	50.103		
200.0	200.0	200.0	200.0	0.3	0.3	-143.96	-12.0	-8.7	14.9	14.2	0.65	23.020 CC, ES		
300.0	300.0	300.0	300.0	0.5	0.5	-129.29	-12.0	-8.7	15.7	14.7	1.00	15.723		
400.0	399.9	400.2	400.2	0.7	0.7	-135.76	-10.8	-9.2	17.5	16.1	1.35	12.945		
500.0	499.7	500.5	500.4	0.9	0.9	-140.57	-7.1	-10.7	19.6	17.9	1.72	11.432		
600.0	599.3	600.9	600.6	1.1	1.1	-144.06	-1.1	-13.2	21.9	19.8	2.09	10.493		
700.0	698.6	701.4	700.6	1.4	1.3	-146.54	7.5	-16.7	24.4	21.9	2.48	9.848		
800.0	797.5	801.9	800.4	1.7	1.5	-148.24	18.5	-21.2	27.0	24.1	2.88	9.366		
900.0	896.1	902.4	899.9	2.0	1.8	-149.36	31.9	-26.7	29.7	26.4	3.31	8.978		
1,000.0	994.2	1,003.1	999.1	2.4	2.2	-150.02	47.7	-33.1	32.5	28.7	3.76	8.642		
1,100.0	1,091.7	1,103.8	1,097.9	2.8	2.5	-150.34	66.0	-40.6	35.3	31.1	4.24	8.335		
1,200.0	1,188.6	1,204.2	1,195.9	3.2	2.9	-150.54	86.4	-48.9	38.4	33.6	4.74	8.096 SF		
1,276.7	1,262.5	1,280.9	1,270.5	3.6	3.2	-151.56	102.4	-55.4	42.0	36.9	5.10	8.228		
1,300.0	1,284.9	1,304.1	1,293.2	3.7	3.3	-151.99	107.2	-57.4	43.3	38.1	5.21	8.312		
1,400.0	1,380.9	1,403.9	1,390.5	4.2	3.7	-153.58	128.0	-65.9	48.9	43.2	5.65	8.647		
1,500.0	1,477.0	1,503.8	1,487.7	4.7	4.1	-154.84	148.8	-74.4	54.5	48.4	6.09	8.944		
1,600.0	1,573.0	1,603.6	1,585.0	5.2	4.6	-155.86	169.5	-82.8	60.2	53.6	6.53	9.208		
1,700.0	1,669.1	1,703.4	1,682.3	5.7	5.0	-156.71	190.3	-91.3	65.8	58.9	6.97	9.444		
1,800.0	1,765.1	1,803.3	1,779.6	6.3	5.4	-157.43	211.1	-99.8	71.5	64.1	7.41	9.656		
1,900.0	1,861.2	1,903.1	1,876.9	6.8	5.8	-158.03	231.8	-108.3	77.2	69.4	7.84	9.848		
2,000.0	1,957.3	2,002.9	1,974.1	7.3	6.2	-158.56	252.6	-116.8	82.9	74.6	8.27	10.021		
2,100.0	2,053.3	2,102.8	2,071.4	7.8	6.7	-159.02	273.4	-125.2	88.6	79.9	8.71	10.179		
2,200.0	2,149.4	2,202.6	2,168.7	8.3	7.1	-159.42	294.1	-133.7	94.3	85.2	9.14	10.323		
2,300.0	2,245.4	2,302.4	2,266.0	8.8	7.5	-159.77	314.9	-142.2	100.0	90.5	9.57	10.456		
2,400.0	2,341.5	2,402.3	2,363.3	9.3	7.9	-160.09	335.7	-150.7	105.8	95.8	10.00	10.577		
2,500.0	2,437.5	2,502.1	2,460.6	9.8	8.4	-160.38	356.4	-159.1	111.5	101.1	10.43	10.690		
2,600.0	2,533.6	2,602.0	2,557.8	10.4	8.8	-160.63	377.2	-167.6	117.2	106.3	10.86	10.794		
2,700.0	2,629.6	2,701.8	2,655.1	10.9	9.2	-160.87	398.0	-176.1	122.9	111.6	11.29	10.891		
2,800.0	2,725.7	2,801.6	2,752.4	11.4	9.7	-161.08	418.8	-184.6	128.7	116.9	11.72	10.981		
2,900.0	2,821.7	2,901.5	2,849.7	11.9	10.1	-161.27	439.5	-193.0	134.4	122.2	12.15	11.065		
3,000.0	2,917.8	3,001.3	2,947.0	12.4	10.5	-161.45	460.3	-201.5	140.1	127.5	12.57	11.143		
3,100.0	3,013.8	3,101.1	3,044.2	12.9	10.9	-161.62	481.1	-210.0	145.8	132.8	13.00	11.217		
3,200.0	3,109.9	3,201.0	3,141.5	13.5	11.4	-161.77	501.8	-218.5	151.6	138.1	13.43	11.286		
3,300.0	3,205.9	3,300.8	3,238.8	14.0	11.8	-161.91	522.6	-227.0	157.3	143.5	13.86	11.351		
3,400.0	3,302.0	3,400.6	3,336.1	14.5	12.2	-162.04	543.4	-235.4	163.0	148.8	14.29	11.413		
3,500.0	3,398.0	3,500.5	3,433.4	15.0	12.6	-162.16	564.1	-243.9	168.8	154.1	14.71	11.471		
3,600.0	3,494.1	3,600.3	3,530.7	15.5	13.1	-162.28	584.9	-252.4	174.5	159.4	15.14	11.525		
3,700.0	3,590.2	3,700.1	3,627.9	16.0	13.5	-162.38	605.7	-260.9	180.2	164.7	15.57	11.577		
3,800.0	3,686.2	3,800.0	3,725.2	16.5	13.9	-162.48	626.5	-269.3	186.0	170.0	16.00	11.627		
3,900.0	3,782.3	3,899.8	3,822.5	17.1	14.4	-162.58	647.2	-277.8	191.7	175.3	16.42	11.673		
4,000.0	3,878.3	3,999.6	3,919.8	17.6	14.8	-162.67	668.0	-286.3	197.5	180.6	16.85	11.718		
4,100.0	3,974.4	4,099.5	4,017.1	18.1	15.2	-162.75	688.8	-294.8	203.2	185.9	17.28	11.760		
4,200.0	4,070.4	4,199.3	4,114.3	18.6	15.6	-162.83	709.5	-303.3	208.9	191.2	17.71	11.800		
4,300.0	4,166.5	4,299.1	4,211.6	19.1	16.1	-162.90	730.3	-311.7	214.7	196.5	18.13	11.839		

Cathedral Energy Services

Anticollision Report

Company:	Berry Petroleum Company (NAD 83)	Local Co-ordinate Reference:	Well OXY 22-15D (OXY 22 Pad)
Project:	Garfield County	TVD Reference:	KBE @ 8506.0ft (Original Well Elev)
Reference Site:	SWSE S22-T6S-R97W	MD Reference:	KBE @ 8506.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	OXY 22-15D (OXY 22 Pad)	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	DD	Database:	US EDM 2003.21 Multi Users DB
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Offset Design													SWSE S22-T6S-R97W - OXY 22-16D (OXY 22 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	34.35	12.4	8.5	15.0								
100.0	100.0	100.0	100.0	0.1	0.1	34.35	12.4	8.5	15.0	14.7	0.30	50.558					
200.0	200.0	200.0	200.0	0.3	0.3	34.35	12.4	8.5	15.0	14.4	0.65	23.229	CC				
300.0	300.0	299.8	299.7	0.5	0.5	52.99	13.6	8.1	15.0	14.0	1.00	15.065					
400.0	399.9	399.5	399.4	0.7	0.7	53.19	17.4	6.9	15.1	13.7	1.36	11.081					
500.0	499.7	499.3	499.0	0.9	0.9	53.53	23.6	5.0	15.2	13.4	1.75	8.683					
600.0	599.3	599.0	598.3	1.1	1.1	53.99	32.2	2.2	15.3	13.1	2.17	7.059					
700.0	698.6	698.8	697.4	1.4	1.4	54.58	43.4	-1.3	15.5	12.8	2.63	5.877					
800.0	797.5	798.6	796.1	1.7	1.7	55.28	57.0	-5.6	15.7	12.5	3.15	4.975					
900.0	896.1	898.3	894.4	2.0	2.0	56.08	73.1	-10.6	15.9	12.2	3.73	4.266					
1,000.0	994.2	998.1	992.3	2.4	2.4	56.97	91.6	-16.4	16.2	11.8	4.38	3.697					
1,100.0	1,091.7	1,097.8	1,089.6	2.8	2.8	57.94	112.6	-23.0	16.5	11.4	5.11	3.234					
1,200.0	1,188.6	1,197.6	1,186.3	3.2	3.2	58.97	136.0	-30.4	16.9	11.0	5.93	2.853					
1,276.7	1,262.5	1,274.2	1,260.1	3.6	3.6	59.81	155.5	-36.5	17.2	10.6	6.61	2.606					
1,300.0	1,284.9	1,297.4	1,282.3	3.7	3.7	59.86	161.7	-38.5	17.4	10.5	6.81	2.548	ES				
1,400.0	1,380.9	1,397.1	1,377.6	4.2	4.3	55.91	189.9	-47.3	18.8	11.3	7.51	2.506	SF				
1,500.0	1,477.0	1,496.6	1,471.9	4.7	4.9	47.26	220.3	-56.9	22.1	14.3	7.82	2.823					
1,600.0	1,573.0	1,596.4	1,565.8	5.2	5.4	38.53	252.4	-67.0	27.1	19.2	7.88	3.438					
1,700.0	1,669.1	1,696.2	1,659.7	5.7	6.0	32.57	284.6	-77.1	32.6	24.6	7.99	4.079					
1,800.0	1,765.1	1,796.0	1,753.6	6.3	6.6	28.35	316.8	-87.2	38.3	30.2	8.16	4.700					
1,900.0	1,861.2	1,895.8	1,847.6	6.8	7.3	25.25	348.9	-97.3	44.2	35.9	8.37	5.285					
2,000.0	1,957.3	1,995.6	1,941.5	7.3	7.9	22.88	381.1	-107.4	50.2	41.6	8.61	5.831					
2,100.0	2,053.3	2,095.4	2,035.4	7.8	8.5	21.01	413.3	-117.5	56.3	47.4	8.88	6.336					
2,200.0	2,149.4	2,195.2	2,129.4	8.3	9.1	19.51	445.4	-127.7	62.4	53.2	9.17	6.803					
2,300.0	2,245.4	2,295.0	2,223.3	8.8	9.7	18.28	477.6	-137.8	68.5	59.1	9.47	7.235					
2,400.0	2,341.5	2,394.8	2,317.2	9.3	10.3	17.25	509.8	-147.9	74.7	64.9	9.78	7.635					
2,500.0	2,437.5	2,494.6	2,411.2	9.8	10.9	16.38	541.9	-158.0	80.9	70.8	10.10	8.005					
2,600.0	2,533.6	2,594.4	2,505.1	10.4	11.5	15.63	574.1	-168.1	87.1	76.7	10.43	8.349					
2,700.0	2,629.6	2,694.2	2,599.0	10.9	12.1	14.99	606.3	-178.2	93.3	82.5	10.76	8.669					
2,800.0	2,725.7	2,794.0	2,693.0	11.4	12.8	14.42	638.4	-188.3	99.5	88.4	11.10	8.967					
2,900.0	2,821.7	2,893.8	2,786.9	11.9	13.4	13.92	670.6	-198.4	105.8	94.3	11.44	9.245					
3,000.0	2,917.8	2,993.6	2,880.8	12.4	14.0	13.47	702.8	-208.5	112.0	100.2	11.78	9.505					
3,100.0	3,013.8	3,093.4	2,974.8	12.9	14.6	13.08	734.9	-218.7	118.3	106.1	12.13	9.749					
3,200.0	3,109.9	3,193.2	3,068.7	13.5	15.2	12.72	767.1	-228.8	124.5	112.0	12.48	9.979					
3,300.0	3,205.9	3,293.0	3,162.6	14.0	15.8	12.40	799.3	-238.9	130.8	117.9	12.83	10.194					
3,400.0	3,302.0	3,392.8	3,256.6	14.5	16.4	12.10	831.4	-249.0	137.0	123.8	13.18	10.398					
3,500.0	3,398.0	3,492.6	3,350.5	15.0	17.1	11.83	863.6	-259.1	143.3	129.8	13.53	10.590					
3,600.0	3,494.1	3,592.4	3,444.4	15.5	17.7	11.59	895.8	-269.2	149.6	135.7	13.89	10.771					
3,700.0	3,590.2	3,692.2	3,538.4	16.0	18.3	11.36	927.9	-279.3	155.8	141.6	14.24	10.943					
3,800.0	3,686.2	3,792.0	3,632.3	16.5	18.9	11.15	960.1	-289.4	162.1	147.5	14.60	11.106					
3,900.0	3,782.3	3,891.8	3,726.2	17.1	19.5	10.96	992.3	-299.5	168.4	153.4	14.95	11.260					
4,000.0	3,878.3	3,991.6	3,820.2	17.6	20.1	10.78	1,024.4	-309.7	174.7	159.3	15.31	11.407					
4,100.0	3,974.4	4,091.4	3,914.1	18.1	20.7	10.61	1,056.6	-319.8	180.9	165.3	15.67	11.547					
4,200.0	4,070.4	4,191.2	4,008.0	18.6	21.4	10.46	1,088.8	-329.9	187.2	171.2	16.03	11.680					
4,300.0	4,166.5	4,291.0	4,102.0	19.1	22.0	10.31	1,120.9	-340.0	193.5	177.1	16.39	11.808					
4,400.0	4,262.5	4,390.8	4,195.9	19.6	22.6	10.18	1,153.1	-350.1	199.8	183.0	16.75	11.929					
4,500.0	4,358.6	4,490.6	4,289.8	20.2	23.2	10.05	1,185.3	-360.2	206.1	188.9	17.11	12.045					
4,600.0	4,454.6	4,590.4	4,383.7	20.7	23.8	9.93	1,217.4	-370.3	212.3	194.9	17.47	12.156					

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

Cathedral Energy Services

Anticollision Report

Company:	Berry Petroleum Company (NAD 83)	Local Co-ordinate Reference:	Well OXY 22-15D (OXY 22 Pad)
Project:	Garfield County	TVD Reference:	KBE @ 8506.0ft (Original Well Elev)
Reference Site:	SWSE S22-T6S-R97W	MD Reference:	KBE @ 8506.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	OXY 22-15D (OXY 22 Pad)	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	DD	Database:	US EDM 2003.21 Multi Users DB
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Offset Design SWSE S22-T6S-R97W - OXY 22-1D (OXY 22 Pad) - DD - Plan #1												Offset Site Error:	0.0 ft
Survey Program: 0-MWD												Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis		Distance							
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
0.0	0.0	0.0	0.0	0.0	0.0	-150.31	-78.7	-44.9	90.6				
100.0	100.0	100.0	100.0	0.1	0.1	-150.31	-78.7	-44.9	90.6	90.3	0.30	305.263	
200.0	200.0	200.0	200.0	0.3	0.3	-150.31	-78.7	-44.9	90.6	89.9	0.65	140.256 CC, ES	
300.0	300.0	300.0	300.0	0.5	0.5	-132.34	-78.7	-44.9	91.5	90.5	1.00	91.829	
400.0	399.9	399.9	399.9	0.7	0.7	-134.08	-78.7	-44.9	94.1	92.8	1.35	69.710	
500.0	499.7	499.9	499.9	0.9	0.8	-137.52	-79.1	-43.6	98.7	97.0	1.71	57.638	
600.0	599.3	599.2	599.1	1.1	1.0	-142.90	-80.5	-40.0	105.7	103.6	2.08	50.741	
700.0	698.6	697.6	697.3	1.4	1.2	-149.46	-82.6	-34.0	116.0	113.6	2.46	47.191	
800.0	797.5	794.7	794.0	1.7	1.4	-156.36	-85.6	-25.7	130.7	127.9	2.84	46.076 SF	
900.0	896.1	890.2	888.9	2.0	1.7	-162.93	-89.4	-15.3	150.3	147.1	3.21	46.780	
1,000.0	994.2	984.2	981.9	2.4	1.9	-168.79	-93.9	-3.0	175.1	171.5	3.58	48.862	

Cathedral Energy Services

Anticollision Report

Company:	Berry Petroleum Company (NAD 83)	Local Co-ordinate Reference:	Well OXY 22-15D (OXY 22 Pad)
Project:	Garfield County	TVD Reference:	KBE @ 8506.0ft (Original Well Elev)
Reference Site:	SWSE S22-T6S-R97W	MD Reference:	KBE @ 8506.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	OXY 22-15D (OXY 22 Pad)	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	DD	Database:	US EDM 2003.21 Multi Users DB
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Offset Design SWSE S22-T6S-R97W - OXY 22-2D (OXY 22 Pad) - DD - Plan #1												Offset Site Error:	0.0 ft
Survey Program: 0-MWD												Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis		Distance							
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
0.0	0.0	0.0	0.0	0.0	0.0	-151.93	-66.7	-35.6	75.5				
100.0	100.0	100.0	100.0	0.1	0.1	-151.93	-66.7	-35.6	75.5	75.3	0.30	254.627	
200.0	200.0	200.0	200.0	0.3	0.3	-151.93	-66.7	-35.6	75.5	74.9	0.65	116.991 CC, ES	
300.0	300.0	300.0	300.0	0.5	0.5	-134.07	-66.7	-35.6	76.5	75.5	1.00	76.776	
400.0	399.9	399.9	399.9	0.7	0.7	-136.08	-66.7	-35.6	79.2	77.9	1.35	58.696	
500.0	499.7	500.5	500.5	0.9	0.8	-139.99	-66.7	-34.2	83.6	81.9	1.71	48.829	
600.0	599.3	600.6	600.5	1.1	1.0	-146.06	-66.6	-30.3	89.6	87.6	2.08	43.108	
700.0	698.6	700.0	699.7	1.4	1.2	-153.47	-66.6	-23.8	98.5	96.0	2.45	40.161	
800.0	797.5	798.3	797.6	1.7	1.4	-161.31	-66.5	-14.8	111.1	108.3	2.83	39.262 SF	
900.0	896.1	895.4	894.0	2.0	1.7	-168.79	-66.5	-3.5	128.2	125.0	3.22	39.875	
1,000.0	994.2	991.5	989.3	2.4	1.9	-175.26	-66.4	9.6	150.0	146.4	3.60	41.629	
1,100.0	1,091.7	1,087.2	1,084.0	2.8	2.2	179.85	-66.3	22.8	175.8	171.8	4.00	43.996	

Cathedral Energy Services

Anticollision Report

Company:	Berry Petroleum Company (NAD 83)	Local Co-ordinate Reference:	Well OXY 22-15D (OXY 22 Pad)
Project:	Garfield County	TVD Reference:	KBE @ 8506.0ft (Original Well Elev)
Reference Site:	SWSE S22-T6S-R97W	MD Reference:	KBE @ 8506.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	OXY 22-15D (OXY 22 Pad)	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	DD	Database:	US EDM 2003.21 Multi Users DB
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Offset Design													SWSE S22-T6S-R97W - OXY 22-3D (OXY 22 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	-153.87	-54.6	-26.8	60.9								
100.0	100.0	100.0	100.0	0.1	0.1	-153.87	-54.6	-26.8	60.9	60.6	0.30	205.112					
200.0	200.0	200.0	200.0	0.3	0.3	-153.87	-54.6	-26.8	60.9	60.2	0.65	94.241	CC, ES				
300.0	300.0	300.0	300.0	0.5	0.5	-136.15	-54.6	-26.8	61.8	60.8	1.00	62.061					
400.0	399.9	401.1	401.0	0.7	0.7	-139.44	-54.2	-25.6	63.8	62.4	1.35	47.181					
500.0	499.7	501.8	501.8	0.9	0.9	-145.67	-52.8	-21.8	66.5	64.8	1.72	38.744					
600.0	599.3	602.2	601.9	1.1	1.1	-154.17	-50.5	-15.6	71.0	68.9	2.09	33.946					
700.0	698.6	701.8	701.1	1.4	1.3	-163.87	-47.4	-7.0	78.4	76.0	2.48	31.646					
800.0	797.5	800.6	799.2	1.7	1.5	-173.52	-43.3	3.9	89.9	87.1	2.89	31.134	SF				
900.0	896.1	898.4	896.0	2.0	1.8	178.00	-38.6	16.8	106.0	102.6	3.32	31.917					
1,000.0	994.2	995.5	992.1	2.4	2.1	171.80	-33.8	29.9	126.3	122.5	3.77	33.524					
1,100.0	1,091.7	1,092.1	1,087.7	2.8	2.4	167.50	-29.0	42.9	150.1	145.8	4.23	35.508					
1,200.0	1,188.6	1,188.2	1,182.8	3.2	2.6	164.56	-24.3	55.8	176.9	172.2	4.70	37.645					
1,276.7	1,262.5	1,261.4	1,255.3	3.6	2.9	162.96	-20.6	65.7	199.3	194.2	5.07	39.327					

Cathedral Energy Services

Anticollision Report

Company:	Berry Petroleum Company (NAD 83)	Local Co-ordinate Reference:	Well OXY 22-15D (OXY 22 Pad)
Project:	Garfield County	TVD Reference:	KBE @ 8506.0ft (Original Well Elev)
Reference Site:	SWSE S22-T6S-R97W	MD Reference:	KBE @ 8506.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	OXY 22-15D (OXY 22 Pad)	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	DD	Database:	US EDM 2003.21 Multi Users DB
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Offset Design SWSE S22-T6S-R97W - OXY 22-4D (OXY 22 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	-156.86	-42.3	-18.1	45.9					
100.0	100.0	100.0	100.0	0.1	0.1	-156.86	-42.3	-18.1	45.9	45.7	0.30	154.865		
200.0	200.0	200.0	200.0	0.3	0.3	-156.86	-42.3	-18.1	45.9	45.3	0.65	71.154 CC, ES		
300.0	300.0	300.0	300.0	0.5	0.5	-139.35	-42.3	-18.1	46.9	45.9	1.00	47.143		
400.0	399.9	401.0	401.0	0.7	0.7	-143.20	-41.5	-17.0	48.9	47.6	1.35	36.214		
500.0	499.7	501.8	501.7	0.9	0.9	-150.24	-39.2	-13.7	51.3	49.6	1.71	30.014		
600.0	599.3	602.2	601.9	1.1	1.1	-159.71	-35.3	-8.3	55.2	53.2	2.08	26.591		
700.0	698.6	702.2	701.5	1.4	1.3	-170.35	-30.0	-0.8	61.8	59.3	2.46	25.104		
800.0	797.5	801.6	800.2	1.7	1.5	179.27	-23.2	8.7	71.8	69.0	2.88	24.957 SF		
900.0	896.1	900.2	897.8	2.0	1.8	170.17	-15.0	20.3	85.9	82.5	3.35	25.634		
1,000.0	994.2	998.0	994.2	2.4	2.1	162.79	-5.5	33.6	103.8	100.0	3.87	26.808		
1,100.0	1,091.7	1,095.2	1,089.9	2.8	2.4	157.80	4.2	47.2	125.4	121.0	4.43	28.327		
1,200.0	1,188.6	1,191.9	1,185.2	3.2	2.8	154.65	13.8	60.8	149.9	144.9	5.00	29.976		
1,276.7	1,262.5	1,265.7	1,257.9	3.6	3.0	153.08	21.2	71.1	170.4	164.9	5.45	31.271		
1,300.0	1,284.9	1,288.1	1,279.9	3.7	3.1	152.75	23.4	74.2	176.8	171.2	5.59	31.639		
1,400.0	1,380.9	1,384.1	1,374.5	4.2	3.4	151.55	32.9	87.7	204.5	198.3	6.20	33.005		

Cathedral Energy Services

Anticollision Report

Company:	Berry Petroleum Company (NAD 83)	Local Co-ordinate Reference:	Well OXY 22-15D (OXY 22 Pad)
Project:	Garfield County	TVD Reference:	KBE @ 8506.0ft (Original Well Elev)
Reference Site:	SWSE S22-T6S-R97W	MD Reference:	KBE @ 8506.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	OXY 22-15D (OXY 22 Pad)	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	DD	Database:	US EDM 2003.21 Multi Users DB
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Offset Design SWSE S22-T6S-R97W - OXY 22-5D (OXY 22 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	-162.39	-30.2	-9.6	31.7					
100.0	100.0	100.0	100.0	0.1	0.1	-162.39	-30.2	-9.6	31.7	31.4	0.30	106.900		
200.0	200.0	200.0	200.0	0.3	0.3	-162.39	-30.2	-9.6	31.7	31.1	0.65	49.116		
300.0	300.0	300.7	300.7	0.5	0.5	-146.25	-29.3	-8.7	31.6	30.6	1.00	31.697		
357.3	357.2	358.4	358.3	0.6	0.6	-149.84	-27.8	-7.4	31.5	30.3	1.20	26.264 CC		
400.0	399.9	401.4	401.3	0.7	0.7	-153.56	-26.3	-6.0	31.6	30.3	1.35	23.361 ES		
500.0	499.7	501.8	501.5	0.9	0.9	-165.32	-21.4	-1.5	32.7	31.0	1.72	19.023		
600.0	599.3	601.9	601.1	1.1	1.1	-179.62	-14.7	4.7	36.4	34.2	2.12	17.174		
700.0	698.6	701.6	700.1	1.4	1.4	166.60	-6.0	12.6	43.6	41.0	2.57	16.972 SF		
800.0	797.5	800.7	798.2	1.7	1.7	155.45	4.5	22.2	54.7	51.6	3.08	17.723		
900.0	896.1	899.2	895.3	2.0	2.0	147.17	16.8	33.5	69.4	65.8	3.67	18.914		
1,000.0	994.2	997.1	991.4	2.4	2.4	141.22	30.8	46.3	87.5	83.2	4.31	20.277		
1,100.0	1,091.7	1,094.8	1,087.0	2.8	2.7	137.77	45.4	59.6	108.2	103.2	4.98	21.703		
1,200.0	1,188.6	1,192.1	1,182.4	3.2	3.1	136.15	59.8	72.9	130.9	125.3	5.67	23.075		
1,276.7	1,262.5	1,266.6	1,255.3	3.6	3.4	135.66	70.9	83.0	149.7	143.4	6.21	24.086		
1,300.0	1,284.9	1,289.1	1,277.3	3.7	3.5	135.65	74.2	86.1	155.5	149.1	6.38	24.376		
1,400.0	1,380.9	1,385.9	1,372.1	4.2	3.8	135.62	88.6	99.2	180.6	173.5	7.10	25.450		
1,500.0	1,477.0	1,482.7	1,466.9	4.7	4.2	135.59	103.0	112.4	205.7	197.9	7.82	26.309		

Cathedral Energy Services

Anticollision Report

Company:	Berry Petroleum Company (NAD 83)	Local Co-ordinate Reference:	Well OXY 22-15D (OXY 22 Pad)
Project:	Garfield County	TVD Reference:	KBE @ 8506.0ft (Original Well Elev)
Reference Site:	SWSE S22-T6S-R97W	MD Reference:	KBE @ 8506.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	OXY 22-15D (OXY 22 Pad)	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	DD	Database:	US EDM 2003.21 Multi Users DB
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Offset Design SWSE S22-T6S-R97W - OXY 22-6D (OXY 22 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	-177.34	-18.2	-0.8	18.2					
100.0	100.0	100.0	100.0	0.1	0.1	-177.34	-18.2	-0.8	18.2	18.0	0.30	61.499		
200.0	200.0	200.0	200.0	0.3	0.3	-177.34	-18.2	-0.8	18.2	17.6	0.65	28.256 CC		
300.0	300.0	300.4	300.4	0.5	0.5	-162.55	-17.2	-0.1	18.4	17.4	1.00	18.485 ES		
400.0	399.9	400.7	400.6	0.7	0.7	-173.25	-14.0	2.3	19.4	18.0	1.35	14.333		
500.0	499.7	500.8	500.5	0.9	0.9	171.95	-8.7	6.2	22.3	20.5	1.73	12.885 SF		
600.0	599.3	600.6	599.9	1.1	1.1	157.66	-1.4	11.7	28.1	25.9	2.15	13.071		
700.0	698.6	700.1	698.7	1.4	1.4	146.67	8.0	18.7	37.1	34.4	2.62	14.124		
800.0	797.5	799.2	796.8	1.7	1.7	138.99	19.4	27.2	49.1	45.9	3.16	15.521		
900.0	896.1	897.8	893.9	2.0	2.0	133.70	32.8	37.1	63.9	60.1	3.76	16.980		
1,000.0	994.2	995.7	990.0	2.4	2.4	129.98	48.0	48.5	81.3	76.9	4.43	18.367		
1,100.0	1,091.7	1,093.0	1,084.9	2.8	2.8	127.28	65.1	61.2	101.2	96.1	5.16	19.630		
1,200.0	1,188.6	1,189.9	1,178.9	3.2	3.2	125.32	84.0	75.2	123.5	117.6	5.94	20.793		
1,276.7	1,262.5	1,264.5	1,251.2	3.6	3.5	124.63	98.7	86.2	141.7	135.2	6.56	21.602		
1,300.0	1,284.9	1,287.0	1,273.0	3.7	3.6	124.59	103.2	89.5	147.4	140.6	6.75	21.831		
1,400.0	1,380.9	1,384.0	1,367.0	4.2	4.1	124.45	122.4	103.8	171.7	164.1	7.58	22.663		
1,500.0	1,477.0	1,481.0	1,461.1	4.7	4.5	124.34	141.5	118.1	196.0	187.6	8.41	23.312		

Cathedral Energy Services

Anticollision Report

Company:	Berry Petroleum Company (NAD 83)	Local Co-ordinate Reference:	Well OXY 22-15D (OXY 22 Pad)
Project:	Garfield County	TVD Reference:	KBE @ 8506.0ft (Original Well Elev)
Reference Site:	SWSE S22-T6S-R97W	MD Reference:	KBE @ 8506.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	OXY 22-15D (OXY 22 Pad)	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	DD	Database:	US EDM 2003.21 Multi Users DB
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Offset Design SWSE S22-T6S-R97W - OXY 22-7D (OXY 22 Pad) - DD - Plan #1												Offset Site Error:	0.0 ft
Survey Program: 0-MWD												Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis		Distance							
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
0.0	0.0	0.0	0.0	0.0	0.0	126.41	-5.8	7.9	9.8				
100.0	100.0	100.0	100.0	0.1	0.1	126.41	-5.8	7.9	9.8	9.5	0.30	33.089	
200.0	200.0	200.0	200.0	0.3	0.3	126.41	-5.8	7.9	9.8	9.2	0.65	15.203 CC, ES	
300.0	300.0	300.0	300.0	0.5	0.5	142.05	-4.7	8.5	10.7	9.7	1.00	10.750	
400.0	399.9	400.0	399.9	0.7	0.7	135.69	-1.2	10.4	13.6	12.2	1.36	9.947 SF	
500.0	499.7	499.8	499.5	0.9	0.9	129.53	4.5	13.5	18.5	16.8	1.76	10.521	
600.0	599.3	599.4	598.7	1.1	1.1	124.96	12.5	17.9	25.6	23.4	2.20	11.656	
700.0	698.6	698.8	697.4	1.4	1.4	121.81	22.7	23.5	34.9	32.2	2.69	12.969	
800.0	797.5	797.9	795.4	1.7	1.7	119.65	35.2	30.2	46.2	43.0	3.24	14.275	
900.0	896.1	896.5	892.7	2.0	2.0	118.12	49.8	38.2	59.6	55.8	3.85	15.488	
1,000.0	994.2	994.8	989.0	2.4	2.4	116.99	66.5	47.3	75.1	70.6	4.53	16.576	
1,100.0	1,091.7	1,092.5	1,084.4	2.8	2.8	116.13	85.3	57.5	92.6	87.3	5.28	17.533	
1,200.0	1,188.6	1,189.7	1,178.6	3.2	3.2	115.44	106.1	68.9	112.1	106.0	6.10	18.370	
1,276.7	1,262.5	1,263.9	1,250.2	3.6	3.6	114.99	123.4	78.3	128.4	121.6	6.78	18.938	
1,300.0	1,284.9	1,286.3	1,271.7	3.7	3.7	114.91	128.9	81.3	133.5	126.5	6.99	19.109	
1,400.0	1,380.9	1,382.7	1,364.0	4.2	4.2	114.12	153.6	94.7	156.1	148.2	7.91	19.740	
1,500.0	1,477.0	1,480.1	1,456.9	4.7	4.7	113.32	179.1	108.6	179.0	170.1	8.85	20.232	
1,600.0	1,573.0	1,577.4	1,549.7	5.2	5.2	112.71	204.6	122.5	201.9	192.1	9.79	20.620	

Cathedral Energy Services

Anticollision Report

Company:	Berry Petroleum Company (NAD 83)	Local Co-ordinate Reference:	Well OXY 22-15D (OXY 22 Pad)
Project:	Garfield County	TVD Reference:	KBE @ 8506.0ft (Original Well Elev)
Reference Site:	SWSE S22-T6S-R97W	MD Reference:	KBE @ 8506.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	OXY 22-15D (OXY 22 Pad)	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	DD	Database:	US EDM 2003.21 Multi Users DB
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Offset Design SWSE S22-T6S-R97W - OXY 22-8D (OXY 22 Pad) - DD - Plan #1												Offset Site Error:	0.0 ft
Survey Program: 0-MWD												Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis		Distance							
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
0.0	0.0	0.0	0.0	0.0	0.0	70.21	6.2	17.2	18.3				
100.0	100.0	100.0	100.0	0.1	0.1	70.21	6.2	17.2	18.3	18.0	0.30	61.652	
200.0	200.0	200.0	200.0	0.3	0.3	70.21	6.2	17.2	18.3	17.6	0.65	28.327 CC, ES	
300.0	300.0	299.7	299.7	0.5	0.5	89.72	7.4	17.7	19.1	18.1	1.00	19.163	
400.0	399.9	399.3	399.2	0.7	0.7	92.10	11.0	19.1	21.6	20.3	1.37	15.835	
500.0	499.7	498.9	498.6	0.9	0.9	95.03	17.1	21.4	25.8	24.1	1.76	14.659	
600.0	599.3	598.3	597.5	1.1	1.1	97.80	25.6	24.6	31.8	29.6	2.21	14.439 SF	
700.0	698.6	697.5	696.1	1.4	1.4	100.10	36.4	28.7	39.6	36.9	2.70	14.660	
800.0	797.5	796.5	794.1	1.7	1.7	101.89	49.6	33.8	49.1	45.9	3.26	15.072	
900.0	896.1	895.2	891.4	2.0	2.0	103.25	65.1	39.7	60.4	56.5	3.89	15.546	
1,000.0	994.2	993.6	987.9	2.4	2.4	104.27	82.9	46.5	73.4	68.9	4.58	16.022	
1,100.0	1,091.7	1,091.7	1,083.6	2.8	2.8	105.02	103.0	54.2	88.2	82.8	5.35	16.468	
1,200.0	1,188.6	1,189.4	1,178.3	3.2	3.2	105.57	125.2	62.6	104.6	98.4	6.20	16.875	
1,276.7	1,262.5	1,264.0	1,250.3	3.6	3.6	105.88	143.8	69.7	118.3	111.4	6.90	17.160	
1,300.0	1,284.9	1,286.6	1,272.0	3.7	3.7	106.00	149.6	71.9	122.7	115.6	7.11	17.254	
1,400.0	1,380.9	1,383.5	1,364.6	4.2	4.2	105.82	176.1	82.1	141.9	133.9	8.06	17.598	
1,500.0	1,477.0	1,479.9	1,456.1	4.7	4.8	104.88	204.7	93.0	162.1	153.1	9.05	17.910	
1,600.0	1,573.0	1,576.6	1,547.1	5.2	5.3	103.49	235.2	104.6	183.2	173.2	10.05	18.230	
1,700.0	1,669.1	1,674.2	1,638.8	5.7	5.9	102.28	266.4	116.5	204.6	193.6	11.06	18.501	

Cathedral Energy Services

Anticollision Report

Company:	Berry Petroleum Company (NAD 83)	Local Co-ordinate Reference:	Well OXY 22-15D (OXY 22 Pad)
Project:	Garfield County	TVD Reference:	KBE @ 8506.0ft (Original Well Elev)
Reference Site:	SWSE S22-T6S-R97W	MD Reference:	KBE @ 8506.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	OXY 22-15D (OXY 22 Pad)	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	DD	Database:	US EDM 2003.21 Multi Users DB
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Offset Design SWSE S22-T6S-R97W - OXY 22-9D (OXY 22 Pad) - DD - Plan #1												Offset Site Error:	0.0 ft
Survey Program: 0-MWD												Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis		Distance							
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
0.0	0.0	0.0	0.0	0.0	0.0	-144.23	-72.8	-52.5	89.8				
100.0	100.0	100.0	100.0	0.1	0.1	-144.23	-72.8	-52.5	89.8	89.5	0.30	302.608	
200.0	200.0	200.0	200.0	0.3	0.3	-144.23	-72.8	-52.5	89.8	89.1	0.65	139.036 CC, ES	
300.0	300.0	300.0	300.0	0.5	0.5	-126.33	-72.8	-52.5	90.6	89.6	1.00	90.909	
400.0	399.9	399.9	399.9	0.7	0.7	-128.25	-72.8	-52.5	92.9	91.6	1.35	68.742	
500.0	499.7	497.5	497.5	0.9	0.8	-130.80	-73.5	-53.6	98.2	96.5	1.71	57.351	
600.0	599.3	594.7	594.6	1.1	1.0	-133.33	-75.4	-56.8	107.7	105.6	2.09	51.638	
700.0	698.6	691.2	690.9	1.4	1.2	-135.59	-78.5	-62.1	121.3	118.8	2.47	49.056	
800.0	797.5	788.0	787.3	1.7	1.4	-137.52	-82.7	-69.3	138.8	135.9	2.88	48.261	
900.0	896.1	885.8	884.7	2.0	1.6	-139.50	-87.2	-77.0	158.8	155.5	3.30	48.176 SF	
1,000.0	994.2	983.1	981.6	2.4	1.8	-141.51	-91.7	-84.7	180.9	177.2	3.72	48.567	

Cathedral Energy Services

Anticollision Report

Company:	Berry Petroleum Company (NAD 83)	Local Co-ordinate Reference:	Well OXY 22-15D (OXY 22 Pad)
Project:	Garfield County	TVD Reference:	KBE @ 8506.0ft (Original Well Elev)
Reference Site:	SWSE S22-T6S-R97W	MD Reference:	KBE @ 8506.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	OXY 22-15D (OXY 22 Pad)	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	DD	Database:	US EDM 2003.21 Multi Users DB
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Reference Depths are relative to KBE @ 8506.0ft (Original Well Elev)
Offset Depths are relative to Offset Datum
Central Meridian is -105.500000 °

Coordinates are relative to: OXY 22-15D (OXY 22 Pad)
Coordinate System is US State Plane 1983, Colorado Central Zone
Grid Convergence at Surface is: -1.70°

