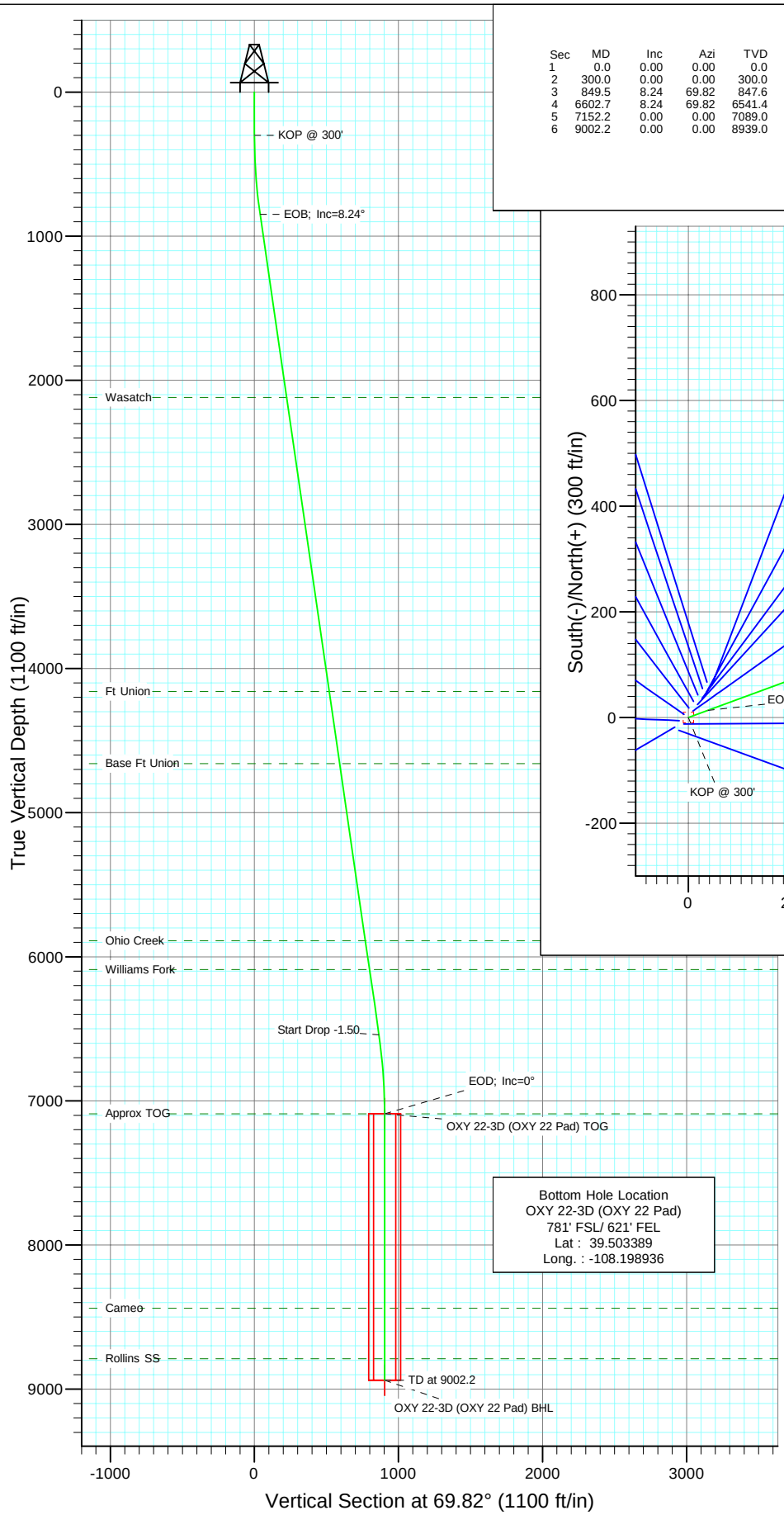
Berry Petroleum Company

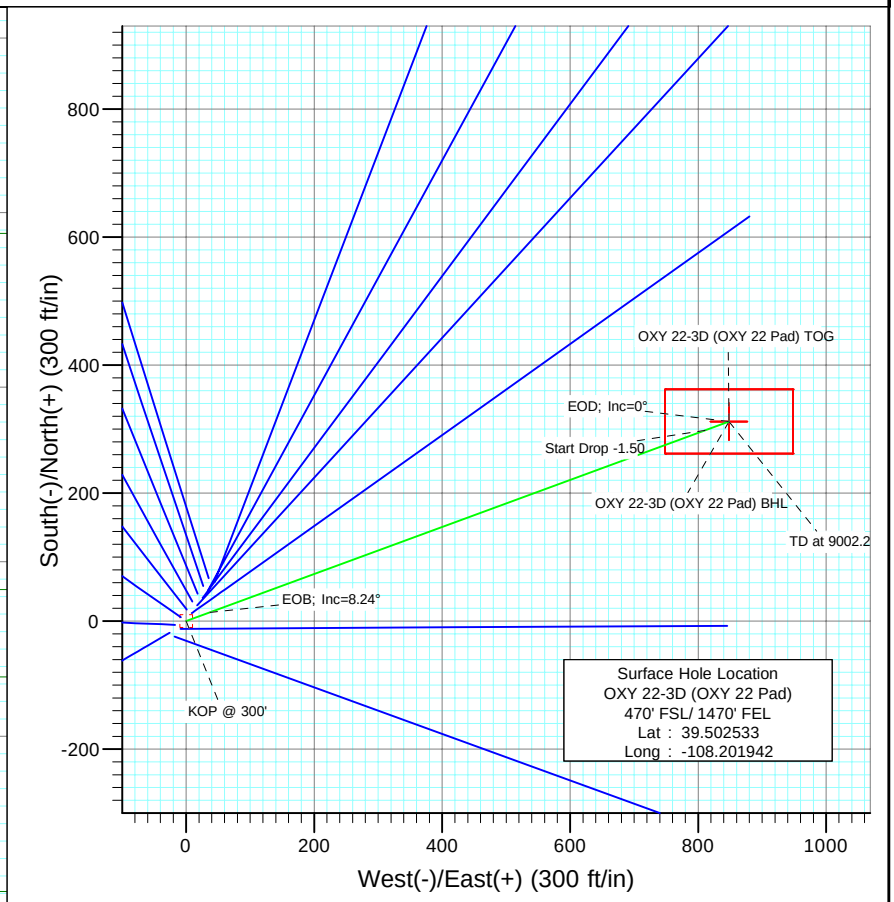
Project: Garfield County
Site: SWSE S22-T6S-R97W
Well: OXY 22-3D (OXY 22 Pad)
Wellbore: DD
Design: Plan #2

CATHEDRAL

SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	DLeg	TFace	VSec	Target
1	0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.0	
2	300.0	0.00	0.00	300.0	0.0	0.0	0.00	0.00	0.0	
3	849.5	8.24	69.82	847.6	13.6	37.0	1.50	69.82	39.5	
4	6602.7	8.24	69.82	6541.4	298.2	811.2	0.00	0.00	864.2	
5	7152.2	0.00	0.00	7089.0	311.8	848.2	1.50	180.00	903.7	OXY 22-3D (OXY 22 Pad) TOG
6	9002.2	0.00	0.00	8939.0	311.8	848.2	0.00	0.00	903.7	OXY 22-3D (OXY 22 Pad) BHL





FORMATION TOP DETAILS

TVDPath	MDPath	Formation
2119.0	2134.2	Wasatch
4159.0	4195.5	Ft Union
4659.0	4700.7	Base Ft Union
5889.0	5943.5	Ohio Creek
6089.0	6145.6	Williams Fork
7089.0	7152.2	Approx TOG
8439.0	8502.2	Cameo
8789.0	8852.2	Rollins SS

Azimuths to True North
Magnetic North: 10.64°

Magnetic Field
Strength: 52406.0snT
Dip Angle: 65.76°
Date: 9/29/2009
Model: IGRF200510

DESIGN DETAILS: Plan #2

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

Target	Azimuth	Origin	N/S	E/W	From TVD
OXY 22-3D (OXY 22 Pad) BHL	69.82	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 22-3D (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 22-3D (OXY 22 Pad)	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	DD		
Design:	Plan #2		

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 22-3D (OXY 22 Pad)				
Well Position	**+N/-S**	0.0 ft	**Northing:**	1,619,266.71 ft	**Latitude:**	39.502533
	+E/-W	0.0 ft	**Easting:**	2,237,698.34 ft	**Longitude:**	-108.201942
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 #2				
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	69.82	

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	
300.0	0.00	0.00	300.0	0.0	0.0	0.00	0.00	0.00	0.00	
849.5	8.24	69.82	847.6	13.6	37.0	1.50	1.50	0.00	69.82	
6,602.7	8.24	69.82	6,541.4	298.2	811.2	0.00	0.00	0.00	0.00	
7,152.2	0.00	0.00	7,089.0	311.8	848.2	1.50	-1.50	0.00	180.00	OXY 22-3D (OXY 22
9,002.2	0.00	0.00	8,939.0	311.8	848.2	0.00	0.00	0.00	0.00	OXY 22-3D (OXY 22

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Project:	Garfield County	**MD Reference:**	KBE @ 8506.0ft (Original Well Elev)
Site:	SWSE S22-T6S-R97W	**North Reference:**	True
Well:	OXY 22-3D (OXY 22 Pad)	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	DD		
Design:	Plan #2		

Planned Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Comments / Formations
0.0	0.00	0.00	0.0	0.0	0.0	0.0	0.00	0.00	
30.0	0.00	0.00	30.0	0.0	0.0	0.0	0.00	0.00	
60.0	0.00	0.00	60.0	0.0	0.0	0.0	0.00	0.00	
90.0	0.00	0.00	90.0	0.0	0.0	0.0	0.00	0.00	
120.0	0.00	0.00	120.0	0.0	0.0	0.0	0.00	0.00	
150.0	0.00	0.00	150.0	0.0	0.0	0.0	0.00	0.00	
180.0	0.00	0.00	180.0	0.0	0.0	0.0	0.00	0.00	
210.0	0.00	0.00	210.0	0.0	0.0	0.0	0.00	0.00	
240.0	0.00	0.00	240.0	0.0	0.0	0.0	0.00	0.00	
270.0	0.00	0.00	270.0	0.0	0.0	0.0	0.00	0.00	
300.0	0.00	0.00	300.0	0.0	0.0	0.0	0.00	0.00	KOP @ 300'
330.0	0.45	69.82	330.0	0.0	0.1	0.1	1.50	1.50	
360.0	0.90	69.82	360.0	0.2	0.4	0.5	1.50	1.50	
390.0	1.35	69.82	390.0	0.4	1.0	1.1	1.50	1.50	
420.0	1.80	69.82	420.0	0.7	1.8	1.9	1.50	1.50	
450.0	2.25	69.82	450.0	1.0	2.8	2.9	1.50	1.50	
480.0	2.70	69.82	479.9	1.5	4.0	4.2	1.50	1.50	
510.0	3.15	69.82	509.9	2.0	5.4	5.8	1.50	1.50	
540.0	3.60	69.82	539.8	2.6	7.1	7.5	1.50	1.50	
570.0	4.05	69.82	569.8	3.3	9.0	9.5	1.50	1.50	
600.0	4.50	69.82	599.7	4.1	11.1	11.8	1.50	1.50	
630.0	4.95	69.82	629.6	4.9	13.4	14.2	1.50	1.50	
660.0	5.40	69.82	659.5	5.8	15.9	17.0	1.50	1.50	
690.0	5.85	69.82	689.3	6.9	18.7	19.9	1.50	1.50	
720.0	6.30	69.82	719.2	8.0	21.7	23.1	1.50	1.50	
750.0	6.75	69.82	749.0	9.1	24.9	26.5	1.50	1.50	
780.0	7.20	69.82	778.7	10.4	28.3	30.1	1.50	1.50	
810.0	7.65	69.82	808.5	11.7	31.9	34.0	1.50	1.50	
840.0	8.10	69.82	838.2	13.1	35.8	38.1	1.50	1.50	
849.5	8.24	69.82	847.6	13.6	37.0	39.5	1.50	1.50	EOB; Inc=8.24°
870.0	8.24	69.82	867.9	14.6	39.8	42.4	0.00	0.00	
900.0	8.24	69.82	897.6	16.1	43.8	46.7	0.00	0.00	
930.0	8.24	69.82	927.3	17.6	47.9	51.0	0.00	0.00	
960.0	8.24	69.82	957.0	19.1	51.9	55.3	0.00	0.00	
990.0	8.24	69.82	986.7	20.6	55.9	59.6	0.00	0.00	
1,020.0	8.24	69.82	1,016.3	22.0	60.0	63.9	0.00	0.00	
1,050.0	8.24	69.82	1,046.0	23.5	64.0	68.2	0.00	0.00	
1,080.0	8.24	69.82	1,075.7	25.0	68.0	72.5	0.00	0.00	
1,110.0	8.24	69.82	1,105.4	26.5	72.1	76.8	0.00	0.00	
1,140.0	8.24	69.82	1,135.1	28.0	76.1	81.1	0.00	0.00	
1,170.0	8.24	69.82	1,164.8	29.5	80.2	85.4	0.00	0.00	
1,200.0	8.24	69.82	1,194.5	31.0	84.2	89.7	0.00	0.00	
1,230.0	8.24	69.82	1,224.2	32.4	88.2	94.0	0.00	0.00	
1,260.0	8.24	69.82	1,253.9	33.9	92.3	98.3	0.00	0.00	
1,290.0	8.24	69.82	1,283.6	35.4	96.3	102.6	0.00	0.00	
1,320.0	8.24	69.82	1,313.2	36.9	100.3	106.9	0.00	0.00	
1,350.0	8.24	69.82	1,342.9	38.4	104.4	111.2	0.00	0.00	
1,380.0	8.24	69.82	1,372.6	39.9	108.4	115.5	0.00	0.00	
1,410.0	8.24	69.82	1,402.3	41.3	112.5	119.8	0.00	0.00	
1,440.0	8.24	69.82	1,432.0	42.8	116.5	124.1	0.00	0.00	
1,470.0	8.24	69.82	1,461.7	44.3	120.5	128.4	0.00	0.00	
1,500.0	8.24	69.82	1,491.4	45.8	124.6	132.7	0.00	0.00	

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Well:	OXY 22-3D (OXY 22 Pad)	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	DD		
Design:	Plan #2		

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	8.24	69.82	1,521.1	47.3	128.6	137.0	0.00	0.00	
1,560.0	8.24	69.82	1,550.8	48.8	132.6	141.3	0.00	0.00	
1,590.0	8.24	69.82	1,580.5	50.2	136.7	145.6	0.00	0.00	
1,620.0	8.24	69.82	1,610.1	51.7	140.7	149.9	0.00	0.00	
1,650.0	8.24	69.82	1,639.8	53.2	144.7	154.2	0.00	0.00	
1,680.0	8.24	69.82	1,669.5	54.7	148.8	158.5	0.00	0.00	
1,710.0	8.24	69.82	1,699.2	56.2	152.8	162.8	0.00	0.00	
1,740.0	8.24	69.82	1,728.9	57.7	156.9	167.1	0.00	0.00	
1,770.0	8.24	69.82	1,758.6	59.1	160.9	171.4	0.00	0.00	
1,800.0	8.24	69.82	1,788.3	60.6	164.9	175.7	0.00	0.00	
1,830.0	8.24	69.82	1,818.0	62.1	169.0	180.0	0.00	0.00	
1,860.0	8.24	69.82	1,847.7	63.6	173.0	184.3	0.00	0.00	
1,890.0	8.24	69.82	1,877.4	65.1	177.0	188.6	0.00	0.00	
1,920.0	8.24	69.82	1,907.0	66.6	181.1	192.9	0.00	0.00	
1,950.0	8.24	69.82	1,936.7	68.1	185.1	197.2	0.00	0.00	
1,980.0	8.24	69.82	1,966.4	69.5	189.2	201.5	0.00	0.00	
2,010.0	8.24	69.82	1,996.1	71.0	193.2	205.8	0.00	0.00	
2,040.0	8.24	69.82	2,025.8	72.5	197.2	210.1	0.00	0.00	
2,070.0	8.24	69.82	2,055.5	74.0	201.3	214.4	0.00	0.00	
2,100.0	8.24	69.82	2,085.2	75.5	205.3	218.7	0.00	0.00	
2,130.0	8.24	69.82	2,114.9	77.0	209.3	223.0	0.00	0.00	
2,134.2	8.24	69.82	2,119.0	77.2	209.9	223.6	0.00	0.00	Wasatch
2,160.0	8.24	69.82	2,144.6	78.4	213.4	227.3	0.00	0.00	
2,190.0	8.24	69.82	2,174.3	79.9	217.4	231.6	0.00	0.00	
2,220.0	8.24	69.82	2,203.9	81.4	221.4	235.9	0.00	0.00	
2,250.0	8.24	69.82	2,233.6	82.9	225.5	240.2	0.00	0.00	
2,280.0	8.24	69.82	2,263.3	84.4	229.5	244.5	0.00	0.00	
2,310.0	8.24	69.82	2,293.0	85.9	233.6	248.8	0.00	0.00	
2,340.0	8.24	69.82	2,322.7	87.3	237.6	253.1	0.00	0.00	
2,370.0	8.24	69.82	2,352.4	88.8	241.6	257.4	0.00	0.00	
2,400.0	8.24	69.82	2,382.1	90.3	245.7	261.7	0.00	0.00	
2,430.0	8.24	69.82	2,411.8	91.8	249.7	266.0	0.00	0.00	
2,460.0	8.24	69.82	2,441.5	93.3	253.7	270.3	0.00	0.00	
2,490.0	8.24	69.82	2,471.2	94.8	257.8	274.6	0.00	0.00	

Targets

Target Name - hit/miss target - Shape	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (ft)	Easting (ft)	Latitude	Longitude
OXY 22-3D (OXY 22 Pa	0.00	0.00	8,939.0	311.8	848.2	1,619,553.16	2,238,555.45	39.503389	-108.198936
- plan misses target center by 6498.4ft at 2490.0ft MD (2471.2 TVD, 94.8 N, 257.8 E)									
- Rectangle (sides W100.0 H200.0 D0.0)									
OXY 22-3D (OXY 22 Pa	0.00	0.00	7,089.0	311.8	848.2	1,619,553.16	2,238,555.45	39.503389	-108.198936
- plan misses target center by 4660.5ft at 2490.0ft MD (2471.2 TVD, 94.8 N, 257.8 E)									
- Point									

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Site:	SWSE S22-T6S-R97W	**North Reference:**	True
Well:	OXY 22-3D (OXY 22 Pad)	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	DD		
Design:	Plan #2		

Planned Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Comments / Formations
2,500.0	8.24	69.82	2,481.1	95.3	259.1	276.1	0.00	0.00	
2,600.0	8.24	69.82	2,580.0	100.2	272.6	290.4	0.00	0.00	
2,700.0	8.24	69.82	2,679.0	105.1	286.0	304.7	0.00	0.00	
2,800.0	8.24	69.82	2,778.0	110.1	299.5	319.1	0.00	0.00	
2,900.0	8.24	69.82	2,876.9	115.0	312.9	333.4	0.00	0.00	
3,000.0	8.24	69.82	2,975.9	120.0	326.4	347.8	0.00	0.00	
3,100.0	8.24	69.82	3,074.9	124.9	339.9	362.1	0.00	0.00	
3,200.0	8.24	69.82	3,173.8	129.9	353.3	376.4	0.00	0.00	
3,300.0	8.24	69.82	3,272.8	134.8	366.8	390.8	0.00	0.00	
3,400.0	8.24	69.82	3,371.8	139.8	380.2	405.1	0.00	0.00	
3,500.0	8.24	69.82	3,470.7	144.7	393.7	419.4	0.00	0.00	
3,600.0	8.24	69.82	3,569.7	149.7	407.1	433.8	0.00	0.00	
3,700.0	8.24	69.82	3,668.7	154.6	420.6	448.1	0.00	0.00	
3,800.0	8.24	69.82	3,767.6	159.6	434.0	462.4	0.00	0.00	
3,900.0	8.24	69.82	3,866.6	164.5	447.5	476.8	0.00	0.00	
4,000.0	8.24	69.82	3,965.6	169.5	461.0	491.1	0.00	0.00	
4,100.0	8.24	69.82	4,064.5	174.4	474.4	505.5	0.00	0.00	
4,195.5	8.24	69.82	4,159.0	179.1	487.3	519.1	0.00	0.00	Ft Union
4,200.0	8.24	69.82	4,163.5	179.3	487.9	519.8	0.00	0.00	
4,300.0	8.24	69.82	4,262.5	184.3	501.3	534.1	0.00	0.00	
4,400.0	8.24	69.82	4,361.4	189.2	514.8	548.5	0.00	0.00	
4,500.0	8.24	69.82	4,460.4	194.2	528.2	562.8	0.00	0.00	
4,600.0	8.24	69.82	4,559.4	199.1	541.7	577.1	0.00	0.00	
4,700.0	8.24	69.82	4,658.3	204.1	555.1	591.5	0.00	0.00	
4,700.7	8.24	69.82	4,659.0	204.1	555.2	591.6	0.00	0.00	Base Ft Union
4,800.0	8.24	69.82	4,757.3	209.0	568.6	605.8	0.00	0.00	
4,900.0	8.24	69.82	4,856.3	214.0	582.1	620.1	0.00	0.00	
5,000.0	8.24	69.82	4,955.2	218.9	595.5	634.5	0.00	0.00	
5,100.0	8.24	69.82	5,054.2	223.9	609.0	648.8	0.00	0.00	
5,200.0	8.24	69.82	5,153.2	228.8	622.4	663.2	0.00	0.00	
5,300.0	8.24	69.82	5,252.1	233.8	635.9	677.5	0.00	0.00	
5,400.0	8.24	69.82	5,351.1	238.7	649.3	691.8	0.00	0.00	
5,500.0	8.24	69.82	5,450.1	243.7	662.8	706.2	0.00	0.00	
5,600.0	8.24	69.82	5,549.0	248.6	676.3	720.5	0.00	0.00	
5,700.0	8.24	69.82	5,648.0	253.5	689.7	734.8	0.00	0.00	
5,800.0	8.24	69.82	5,747.0	258.5	703.2	749.2	0.00	0.00	
5,900.0	8.24	69.82	5,845.9	263.4	716.6	763.5	0.00	0.00	
5,943.5	8.24	69.82	5,889.0	265.6	722.5	769.7	0.00	0.00	Ohio Creek
6,000.0	8.24	69.82	5,944.9	268.4	730.1	777.8	0.00	0.00	
6,100.0	8.24	69.82	6,043.9	273.3	743.5	792.2	0.00	0.00	
6,145.6	8.24	69.82	6,089.0	275.6	749.7	798.7	0.00	0.00	Williams Fork
6,200.0	8.24	69.82	6,142.8	278.3	757.0	806.5	0.00	0.00	
6,300.0	8.24	69.82	6,241.8	283.2	770.4	820.9	0.00	0.00	
6,400.0	8.24	69.82	6,340.8	288.2	783.9	835.2	0.00	0.00	
6,500.0	8.24	69.82	6,439.7	293.1	797.4	849.5	0.00	0.00	
6,600.0	8.24	69.82	6,538.7	298.1	810.8	863.9	0.00	0.00	
6,602.7	8.24	69.82	6,541.4	298.2	811.2	864.2	0.00	0.00	Start Drop -1.50
6,700.0	6.78	69.82	6,637.8	302.6	823.1	877.0	1.50	-1.50	
6,800.0	5.28	69.82	6,737.3	306.2	833.0	887.5	1.50	-1.50	
6,900.0	3.78	69.82	6,837.0	308.9	840.4	895.4	1.50	-1.50	
7,000.0	2.28	69.82	6,936.8	310.8	845.4	900.7	1.50	-1.50	
7,100.0	0.78	69.82	7,036.8	311.7	847.9	903.3	1.50	-1.50	

Database:	EDM 2003.21 US Multi User Db	**Local Co-ordinate Reference:**	Well OXY 22-3D (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 22-3D (OXY 22 Pad)	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	DD		
Design:	Plan #2		

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
7,152.2	0.00	0.00	7,089.0	311.8	848.2	903.7	1.50	-1.50	EOD; Inc=0° - Approx TOG - OXY 22-3D (OXY
7,200.0	0.00	0.00	7,136.8	311.8	848.2	903.7	0.00	0.00	
7,300.0	0.00	0.00	7,236.8	311.8	848.2	903.7	0.00	0.00	
7,400.0	0.00	0.00	7,336.8	311.8	848.2	903.7	0.00	0.00	
7,500.0	0.00	0.00	7,436.8	311.8	848.2	903.7	0.00	0.00	
7,600.0	0.00	0.00	7,536.8	311.8	848.2	903.7	0.00	0.00	
7,700.0	0.00	0.00	7,636.8	311.8	848.2	903.7	0.00	0.00	
7,800.0	0.00	0.00	7,736.8	311.8	848.2	903.7	0.00	0.00	
7,900.0	0.00	0.00	7,836.8	311.8	848.2	903.7	0.00	0.00	
8,000.0	0.00	0.00	7,936.8	311.8	848.2	903.7	0.00	0.00	
8,100.0	0.00	0.00	8,036.8	311.8	848.2	903.7	0.00	0.00	
8,200.0	0.00	0.00	8,136.8	311.8	848.2	903.7	0.00	0.00	
8,300.0	0.00	0.00	8,236.8	311.8	848.2	903.7	0.00	0.00	
8,400.0	0.00	0.00	8,336.8	311.8	848.2	903.7	0.00	0.00	
8,500.0	0.00	0.00	8,436.8	311.8	848.2	903.7	0.00	0.00	
8,502.2	0.00	0.00	8,439.0	311.8	848.2	903.7	0.00	0.00	Cameo
8,600.0	0.00	0.00	8,536.8	311.8	848.2	903.7	0.00	0.00	
8,700.0	0.00	0.00	8,636.8	311.8	848.2	903.7	0.00	0.00	
8,800.0	0.00	0.00	8,736.8	311.8	848.2	903.7	0.00	0.00	
8,852.2	0.00	0.00	8,789.0	311.8	848.2	903.7	0.00	0.00	Rollins SS
8,900.0	0.00	0.00	8,836.8	311.8	848.2	903.7	0.00	0.00	
9,000.0	0.00	0.00	8,936.8	311.8	848.2	903.7	0.00	0.00	
9,002.2	0.00	0.00	8,939.0	311.8	848.2	903.7	0.00	0.00	TD at 9002.2 - OXY 22-3D (OXY 22 Pad) BHL

Targets

Target Name - hit/miss target - Shape	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (ft)	Easting (ft)	Latitude	Longitude
OXY 22-3D (OXY 22 Pa - plan hits target center - Rectangle (sides W100.0 H200.0 D0.0)	0.00	0.00	8,939.0	311.8	848.2	1,619,553.16	2,238,555.45	39.503389	-108.198936
OXY 22-3D (OXY 22 Pa - plan hits target center - Point	0.00	0.00	7,089.0	311.8	848.2	1,619,553.16	2,238,555.45	39.503389	-108.198936

Formations

Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)
2,134.2	2,119.0	Wasatch		0.00	
4,195.5	4,159.0	Ft Union		0.00	
4,700.7	4,659.0	Base Ft Union		0.00	
5,943.5	5,889.0	Ohio Creek		0.00	
6,145.6	6,089.0	Williams Fork		0.00	
7,152.2	7,089.0	Approx TOG		0.00	
8,502.2	8,439.0	Cameo		0.00	
8,852.2	8,789.0	Rollins SS		0.00	

Database:	EDM 2003.21 US Multi User Db	**Local Co-ordinate Reference:**	Well OXY 22-3D (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 22-3D (OXY 22 Pad)	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	DD		
Design:	Plan #2		

Plan Annotations

Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates +N/-S (ft)	Local Coordinates +E/-W (ft)	Comment
300.0	300.0	0.0	0.0	KOP @ 300'
849.5	847.6	13.6	37.0	EOB; Inc=8.24°
6,602.7	6,541.4	298.2	811.2	Start Drop -1.50
7,152.2	7,089.0	311.8	848.2	EOD; Inc=0°
9,002.2	8,939.0	311.8	848.2	TD at 9002.2

Company:	Berry Petroleum Company (NAD 83)	**Local Co-ordinate Reference:**	Well OXY 22-3D (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 22-3D (OXY 22 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 #2	**Offset TVD Reference:**	Offset Datum

Reference Plan #2

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

Survey Tool Program **Date** 10/7/2009

From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description
0.0	9,002.2	Plan #2 (DD)	MWD	Geolink MWD

Summary

Site Name Offset Well - Wellbore - Design	Reference Measured Depth (ft)	Offset Measured Depth (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Separation Factor	Warning
SWSE S22-T6S-R97W						
OXY 22-10D (OXY 22 Pad) - DD - Plan #1	300.0	300.0	18.2	17.2	18.267	CC, ES
OXY 22-10D (OXY 22 Pad) - DD - Plan #1	400.0	400.0	19.5	18.1	14.499	SF
OXY 22-11D (OXY 22 Pad) - DD - Plan #1	300.0	300.0	10.5	9.5	10.543	CC, ES
OXY 22-11D (OXY 22 Pad) - DD - Plan #1	400.0	399.7	12.6	11.2	9.350	SF
OXY 22-12D (OXY 22 Pad) - DD - Plan #1	300.0	300.0	18.2	17.2	18.326	CC, ES
OXY 22-12D (OXY 22 Pad) - DD - Plan #1	500.0	498.9	21.8	20.1	12.777	SF
OXY 22-13D (OXY 22 Pad) - DD - Plan #1	300.0	300.0	32.1	31.1	32.232	CC
OXY 22-13D (OXY 22 Pad) - DD - Plan #1	400.0	399.4	32.2	30.9	23.967	ES
OXY 22-13D (OXY 22 Pad) - DD - Plan #1	600.0	597.2	37.4	35.3	18.024	SF
OXY 22-14D (OXY 22 Pad) - DD - Plan #1	300.0	300.0	46.3	45.3	46.525	CC
OXY 22-14D (OXY 22 Pad) - DD - Plan #1	400.0	399.1	46.3	45.0	34.485	ES
OXY 22-14D (OXY 22 Pad) - DD - Plan #1	700.0	694.4	55.3	52.8	22.412	SF
OXY 22-15D (OXY 22 Pad) - DD - Plan #1	200.0	200.0	60.9	60.2	94.241	CC, ES
OXY 22-15D (OXY 22 Pad) - DD - Plan #1	800.0	787.3	89.0	86.1	30.885	SF
OXY 22-16D (OXY 22 Pad) - DD - Plan #1	200.0	200.0	75.7	75.1	117.279	CC, ES
OXY 22-16D (OXY 22 Pad) - DD - Plan #1	900.0	881.1	113.7	110.4	34.262	SF
OXY 22-1D (OXY 22 Pad) - DD - Plan #1	300.0	300.0	30.1	29.1	30.227	CC, ES
OXY 22-1D (OXY 22 Pad) - DD - Plan #1	9,002.2	8,996.1	651.3	607.8	14.963	SF
OXY 22-2D (OXY 22 Pad) - DD - Plan #1	300.0	300.0	14.9	13.9	14.947	CC, ES
OXY 22-2D (OXY 22 Pad) - DD - Plan #1	9,000.0	8,991.3	319.1	275.8	7.364	SF
OXY 22-4D (OXY 22 Pad) - DD - Plan #1	300.0	300.0	15.2	14.2	15.241	CC
OXY 22-4D (OXY 22 Pad) - DD - Plan #1	400.0	399.6	15.3	14.0	11.399	ES
OXY 22-4D (OXY 22 Pad) - DD - Plan #1	900.0	897.5	23.6	20.2	6.859	SF
OXY 22-5D (OXY 22 Pad) - DD - Plan #1	200.0	200.0	29.9	29.2	46.245	CC, ES
OXY 22-5D (OXY 22 Pad) - DD - Plan #1	9,002.2	9,061.9	641.7	598.8	14.951	SF
OXY 22-6D (OXY 22 Pad) - DD - Plan #1	200.0	200.0	44.7	44.1	69.244	CC, ES
OXY 22-6D (OXY 22 Pad) - DD - Plan #1	1,000.0	986.6	83.3	79.5	21.900	SF
OXY 22-7D (OXY 22 Pad) - DD - Plan #1	200.0	200.0	59.9	59.2	92.742	CC, ES
OXY 22-7D (OXY 22 Pad) - DD - Plan #1	1,100.0	1,079.0	114.5	110.2	26.782	SF
OXY 22-8D (OXY 22 Pad) - DD - Plan #1	200.0	200.0	75.1	74.4	116.272	CC, ES
OXY 22-8D (OXY 22 Pad) - DD - Plan #1	1,100.0	1,074.5	131.4	127.2	31.115	SF
OXY 22-9D (OXY 22 Pad) - DD - Plan #1	300.0	300.0	31.5	30.5	31.644	CC, ES
OXY 22-9D (OXY 22 Pad) - DD - Plan #1	500.0	498.9	37.9	36.2	22.392	SF

Company:	Berry Petroleum Company (NAD 83)	**Local Co-ordinate Reference:**	Well OXY 22-3D (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 22-3D (OXY 22 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 #2	**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 Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
0.0	0.0	0.0	0.0	0.0	0.0	-108.71	-5.8	-17.2	18.2				
100.0	100.0	100.0	100.0	0.1	0.1	-108.71	-5.8	-17.2	18.2	17.9	0.30	61.247	
200.0	200.0	200.0	200.0	0.3	0.3	-108.71	-5.8	-17.2	18.2	17.5	0.65	28.141	
300.0	300.0	300.0	300.0	0.5	0.5	-108.71	-5.8	-17.2	18.2	17.2	0.99	18.267	CC, ES
400.0	400.0	400.0	400.0	0.7	0.7	-178.62	-5.8	-17.2	19.5	18.1	1.34	14.499	SF
500.0	499.9	499.3	499.3	0.9	0.8	-177.75	-5.8	-18.5	24.6	22.9	1.69	14.563	
600.0	599.7	598.1	598.0	1.1	1.0	-175.96	-5.6	-22.3	34.8	32.8	2.04	17.097	
700.0	699.3	695.9	695.6	1.3	1.2	-174.35	-5.4	-28.7	50.0	47.7	2.38	21.030	
800.0	798.6	794.1	793.5	1.5	1.4	-173.44	-5.1	-36.1	69.0	66.2	2.72	25.332	
900.0	897.6	891.8	891.0	1.8	1.6	-173.10	-4.8	-43.6	90.1	87.1	3.07	29.385	
1,000.0	996.6	989.5	988.3	2.1	1.8	-172.92	-4.5	-51.0	111.6	108.2	3.41	32.679	
1,100.0	1,095.5	1,087.2	1,085.7	2.4	2.0	-172.80	-4.2	-58.5	133.1	129.3	3.76	35.362	
1,200.0	1,194.5	1,184.8	1,183.1	2.7	2.2	-172.72	-3.9	-65.9	154.5	150.4	4.11	37.588	
1,300.0	1,293.5	1,282.5	1,280.5	3.0	2.4	-172.65	-3.6	-73.4	176.0	171.5	4.46	39.465	
1,400.0	1,392.4	1,380.2	1,377.9	3.3	2.7	-172.60	-3.3	-80.8	197.5	192.7	4.81	41.070	
1,500.0	1,491.4	1,477.8	1,475.3	3.6	2.9	-172.56	-3.0	-88.3	219.0	213.8	5.16	42.456	
1,600.0	1,590.4	1,575.5	1,572.6	3.9	3.1	-172.53	-2.6	-95.7	240.4	234.9	5.51	43.666	
1,700.0	1,689.3	1,673.2	1,670.0	4.2	3.3	-172.50	-2.3	-103.2	261.9	256.0	5.85	44.732	
1,800.0	1,788.3	1,770.8	1,767.4	4.5	3.5	-172.47	-2.0	-110.6	283.4	277.2	6.20	45.677	
1,900.0	1,887.3	1,868.5	1,864.8	4.8	3.7	-172.45	-1.7	-118.1	304.8	298.3	6.55	46.522	
2,000.0	1,986.2	1,966.2	1,962.2	5.1	3.9	-172.44	-1.4	-125.5	326.3	319.4	6.90	47.280	
2,100.0	2,085.2	2,063.8	2,059.6	5.4	4.1	-172.42	-1.1	-133.0	347.8	340.5	7.25	47.966	
2,200.0	2,184.2	2,161.5	2,156.9	5.7	4.4	-172.41	-0.8	-140.4	369.3	361.7	7.60	48.588	
2,300.0	2,283.1	2,259.2	2,254.3	6.0	4.6	-172.39	-0.5	-147.9	390.7	382.8	7.95	49.155	
2,400.0	2,382.1	2,356.8	2,351.7	6.3	4.8	-172.38	-0.2	-155.3	412.2	403.9	8.30	49.675	
2,500.0	2,481.1	2,454.5	2,449.1	6.6	5.0	-172.37	0.1	-162.8	433.7	425.0	8.65	50.152	
2,600.0	2,580.0	2,552.2	2,546.5	6.9	5.2	-172.36	0.4	-170.2	455.1	446.1	9.00	50.593	
2,700.0	2,679.0	2,649.8	2,643.9	7.2	5.4	-172.36	0.7	-177.7	476.6	467.3	9.35	51.000	
2,800.0	2,778.0	2,747.5	2,741.2	7.5	5.6	-172.35	1.0	-185.1	498.1	488.4	9.69	51.378	
2,900.0	2,876.9	2,845.2	2,838.6	7.8	5.9	-172.34	1.3	-192.6	519.6	509.5	10.04	51.730	
3,000.0	2,975.9	2,942.8	2,936.0	8.1	6.1	-172.33	1.6	-200.0	541.0	530.6	10.39	52.057	
3,100.0	3,074.9	3,040.5	3,033.4	8.4	6.3	-172.33	1.9	-207.4	562.5	551.8	10.74	52.364	
3,200.0	3,173.8	3,138.2	3,130.8	8.7	6.5	-172.32	2.2	-214.9	584.0	572.9	11.09	52.651	
3,300.0	3,272.8	3,235.9	3,228.1	9.0	6.7	-172.32	2.5	-222.3	605.4	594.0	11.44	52.921	
3,400.0	3,371.8	3,333.5	3,325.5	9.4	6.9	-172.31	2.8	-229.8	626.9	615.1	11.79	53.175	
3,500.0	3,470.7	3,431.2	3,422.9	9.7	7.1	-172.31	3.1	-237.2	648.4	636.3	12.14	53.414	
3,600.0	3,569.7	3,528.9	3,520.3	10.0	7.3	-172.31	3.4	-244.7	669.9	657.4	12.49	53.639	
3,700.0	3,668.7	3,626.5	3,617.7	10.3	7.6	-172.30	3.7	-252.1	691.3	678.5	12.84	53.852	
3,800.0	3,767.6	3,724.2	3,715.1	10.6	7.8	-172.30	4.0	-259.6	712.8	699.6	13.19	54.054	
3,900.0	3,866.6	3,821.9	3,812.4	10.9	8.0	-172.29	4.3	-267.0	734.3	720.7	13.54	54.246	
4,000.0	3,965.6	3,919.5	3,909.8	11.2	8.2	-172.29	4.6	-274.5	755.7	741.9	13.89	54.428	
4,100.0	4,064.5	4,017.2	4,007.2	11.5	8.4	-172.29	4.9	-281.9	777.2	763.0	14.23	54.601	
4,200.0	4,163.5	4,114.9	4,104.6	11.8	8.6	-172.29	5.2	-289.4	798.7	784.1	14.58	54.765	
4,300.0	4,262.5	4,212.5	4,202.0	12.1	8.8	-172.28	5.5	-296.8	820.2	805.2	14.93	54.922	
4,400.0	4,361.4	4,310.2	4,299.4	12.4	9.1	-172.28	5.8	-304.3	841.6	826.4	15.28	55.072	
4,500.0	4,460.4	4,407.9	4,396.7	12.7	9.3	-172.28	6.1	-311.7	863.1	847.5	15.63	55.215	
4,600.0	4,559.4	4,505.5	4,494.1	13.0	9.5	-172.28	6.4	-319.2	884.6	868.6	15.98	55.352	
4,700.0	4,658.3	4,603.2	4,591.5	13.3	9.7	-172.27	6.7	-326.6	906.1	889.7	16.33	55.483	
4,800.0	4,757.3	4,700.9	4,688.9	13.6	9.9	-172.27	7.0	-334.1	927.5	910.8	16.68	55.608	
4,900.0	4,856.3	4,798.5	4,786.3	13.9	10.1	-172.27	7.3	-341.5	949.0	932.0	17.03	55.729	
5,000.0	4,955.2	4,896.2	4,883.7	14.3	10.3	-172.27	7.6	-349.0	970.5	953.1	17.38	55.844	

Company:	Berry Petroleum Company (NAD 83)	**Local Co-ordinate Reference:**	Well OXY 22-3D (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 22-3D (OXY 22 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 #2	**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 Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
5,100.0	5,054.2	4,993.9	4,981.0	14.6	10.6	-172.27	7.9	-356.4	991.9	974.2	17.73	55.955	
5,200.0	5,153.2	5,091.5	5,078.4	14.9	10.8	-172.26	8.2	-363.9	1,013.4	995.3	18.08	56.061	
5,300.0	5,252.1	5,189.2	5,175.8	15.2	11.0	-172.26	8.5	-371.3	1,034.9	1,016.5	18.43	56.164	
5,400.0	5,351.1	5,286.9	5,273.2	15.5	11.2	-172.26	8.8	-378.7	1,056.4	1,037.6	18.78	56.263	
5,500.0	5,450.1	5,384.5	5,370.6	15.8	11.4	-172.26	9.1	-386.2	1,077.8	1,058.7	19.12	56.358	
5,600.0	5,549.0	5,482.2	5,468.0	16.1	11.6	-172.26	9.4	-393.6	1,099.3	1,079.8	19.47	56.450	

Company:	Berry Petroleum Company (NAD 83)	**Local Co-ordinate Reference:**	Well OXY 22-3D (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 22-3D (OXY 22 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 #2	**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 Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
0.0	0.0	0.0	0.0	0.0	0.0	-53.82	6.2	-8.5	10.5				
100.0	100.0	100.0	100.0	0.1	0.1	-53.82	6.2	-8.5	10.5	10.2	0.30	35.349	
200.0	200.0	200.0	200.0	0.3	0.3	-53.82	6.2	-8.5	10.5	9.8	0.65	16.241	
300.0	300.0	300.0	300.0	0.5	0.5	-53.82	6.2	-8.5	10.5	9.5	0.99	10.543	CC, ES
400.0	400.0	399.7	399.7	0.7	0.7	-128.70	6.9	-9.5	12.6	11.2	1.34	9.350	SF
500.0	499.9	499.0	498.9	0.9	0.9	-137.03	9.2	-12.7	19.1	17.4	1.70	11.277	
600.0	599.7	597.7	597.4	1.1	1.1	-142.72	12.8	-18.0	30.4	28.4	2.05	14.817	
700.0	699.3	696.1	695.5	1.3	1.3	-146.15	17.7	-25.0	46.0	43.6	2.41	19.045	
800.0	798.6	794.4	793.4	1.5	1.5	-148.95	22.7	-32.2	64.1	61.3	2.78	23.023	
900.0	897.6	892.3	890.9	1.8	1.7	-151.29	27.7	-39.3	84.2	81.1	3.16	26.678	
1,000.0	996.6	990.2	988.3	2.1	1.9	-152.86	32.7	-46.5	104.8	101.2	3.54	29.629	
1,100.0	1,095.5	1,088.0	1,085.8	2.4	2.1	-153.91	37.7	-53.7	125.3	121.4	3.92	32.012	
1,200.0	1,194.5	1,185.9	1,183.2	2.7	2.4	-154.67	42.7	-60.8	145.9	141.6	4.30	33.972	
1,300.0	1,293.5	1,283.7	1,280.7	3.0	2.6	-155.24	47.7	-68.0	166.5	161.9	4.68	35.611	
1,400.0	1,392.4	1,381.5	1,378.1	3.3	2.8	-155.68	52.7	-75.1	187.2	182.1	5.06	37.002	
1,500.0	1,491.4	1,479.4	1,475.6	3.6	3.0	-156.04	57.7	-82.3	207.8	202.4	5.44	38.195	
1,600.0	1,590.4	1,577.2	1,573.0	3.9	3.3	-156.33	62.7	-89.5	228.5	222.6	5.82	39.230	
1,700.0	1,689.3	1,675.1	1,670.5	4.2	3.5	-156.57	67.7	-96.6	249.1	242.9	6.21	40.137	
1,800.0	1,788.3	1,772.9	1,767.9	4.5	3.7	-156.78	72.7	-103.8	269.8	263.2	6.59	40.937	
1,900.0	1,887.3	1,870.7	1,865.4	4.8	3.9	-156.95	77.7	-110.9	290.4	283.4	6.97	41.648	
2,000.0	1,986.2	1,968.6	1,962.8	5.1	4.2	-157.11	82.7	-118.1	311.1	303.7	7.36	42.285	
2,100.0	2,085.2	2,066.4	2,060.3	5.4	4.4	-157.24	87.7	-125.3	331.7	324.0	7.74	42.857	
2,200.0	2,184.2	2,164.3	2,157.7	5.7	4.6	-157.36	92.7	-132.4	352.4	344.3	8.12	43.376	
2,300.0	2,283.1	2,262.1	2,255.2	6.0	4.9	-157.47	97.7	-139.6	373.1	364.5	8.51	43.847	
2,400.0	2,382.1	2,359.9	2,352.6	6.3	5.1	-157.56	102.7	-146.8	393.7	384.8	8.89	44.276	
2,500.0	2,481.1	2,457.8	2,450.1	6.6	5.3	-157.64	107.7	-153.9	414.4	405.1	9.28	44.670	
2,600.0	2,580.0	2,555.6	2,547.5	6.9	5.5	-157.72	112.7	-161.1	435.0	425.4	9.66	45.033	
2,700.0	2,679.0	2,653.5	2,645.0	7.2	5.8	-157.79	117.7	-168.2	455.7	445.7	10.05	45.367	
2,800.0	2,778.0	2,751.3	2,742.4	7.5	6.0	-157.85	122.7	-175.4	476.4	466.0	10.43	45.677	
2,900.0	2,876.9	2,849.1	2,839.9	7.8	6.2	-157.91	127.7	-182.6	497.0	486.2	10.81	45.964	
3,000.0	2,975.9	2,947.0	2,937.3	8.1	6.5	-157.97	132.7	-189.7	517.7	506.5	11.20	46.232	
3,100.0	3,074.9	3,044.8	3,034.8	8.4	6.7	-158.02	137.7	-196.9	538.4	526.8	11.58	46.482	
3,200.0	3,173.8	3,142.6	3,132.2	8.7	6.9	-158.06	142.7	-204.0	559.1	547.1	11.97	46.715	
3,300.0	3,272.8	3,240.5	3,229.7	9.0	7.1	-158.11	147.7	-211.2	579.7	567.4	12.35	46.934	
3,400.0	3,371.8	3,338.3	3,327.1	9.4	7.4	-158.15	152.7	-218.4	600.4	587.7	12.74	47.139	
3,500.0	3,470.7	3,436.2	3,424.6	9.7	7.6	-158.18	157.7	-225.5	621.1	607.9	13.12	47.333	
3,600.0	3,569.7	3,534.0	3,522.0	10.0	7.8	-158.22	162.7	-232.7	641.7	628.2	13.51	47.515	
3,700.0	3,668.7	3,631.8	3,619.5	10.3	8.1	-158.25	167.7	-239.8	662.4	648.5	13.89	47.687	
3,800.0	3,767.6	3,729.7	3,716.9	10.6	8.3	-158.28	172.7	-247.0	683.1	668.8	14.28	47.850	
3,900.0	3,866.6	3,827.5	3,814.4	10.9	8.5	-158.31	177.7	-254.2	703.7	689.1	14.66	48.004	
4,000.0	3,965.6	3,925.4	3,911.8	11.2	8.7	-158.34	182.7	-261.3	724.4	709.4	15.04	48.150	
4,100.0	4,064.5	4,023.2	4,009.3	11.5	9.0	-158.36	187.7	-268.5	745.1	729.7	15.43	48.289	
4,200.0	4,163.5	4,121.0	4,106.7	11.8	9.2	-158.39	192.7	-275.7	765.8	749.9	15.81	48.421	
4,300.0	4,262.5	4,218.9	4,204.2	12.1	9.4	-158.41	197.7	-282.8	786.4	770.2	16.20	48.547	
4,400.0	4,361.4	4,316.7	4,301.6	12.4	9.7	-158.43	202.7	-290.0	807.1	790.5	16.58	48.667	
4,500.0	4,460.4	4,414.6	4,399.1	12.7	9.9	-158.45	207.7	-297.1	827.8	810.8	16.97	48.782	
4,600.0	4,559.4	4,512.4	4,496.5	13.0	10.1	-158.47	212.7	-304.3	848.4	831.1	17.35	48.891	
4,700.0	4,658.3	4,610.2	4,593.9	13.3	10.3	-158.49	217.7	-311.5	869.1	851.4	17.74	48.995	
4,800.0	4,757.3	4,708.1	4,691.4	13.6	10.6	-158.51	222.7	-318.6	889.8	871.7	18.12	49.096	
4,900.0	4,856.3	4,805.9	4,788.8	13.9	10.8	-158.52	227.7	-325.8	910.4	891.9	18.51	49.192	
5,000.0	4,955.2	4,903.8	4,886.3	14.3	11.0	-158.54	232.7	-332.9	931.1	912.2	18.89	49.283	
5,100.0	5,054.2	5,001.6	4,983.7	14.6	11.3	-158.56	237.7	-340.1	951.8	932.5	19.28	49.372	

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

Company:	Berry Petroleum Company (NAD 83)	**Local Co-ordinate Reference:**	Well OXY 22-3D (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 22-3D (OXY 22 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 #2	**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 Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
5,200.0	5,153.2	5,099.4	5,081.2	14.9	11.5	-158.57	242.7	-347.3	972.5	952.8	19.66	49.457	
5,300.0	5,252.1	5,197.3	5,178.6	15.2	11.7	-158.59	247.7	-354.4	993.1	973.1	20.05	49.538	
5,400.0	5,351.1	5,295.1	5,276.1	15.5	12.0	-158.60	252.7	-361.6	1,013.8	993.4	20.43	49.617	
5,500.0	5,450.1	5,393.0	5,373.5	15.8	12.2	-158.61	257.7	-368.8	1,034.5	1,013.7	20.82	49.692	
5,600.0	5,549.0	5,490.8	5,471.0	16.1	12.4	-158.63	262.7	-375.9	1,055.1	1,033.9	21.20	49.765	
5,700.0	5,648.0	5,588.6	5,568.4	16.4	12.6	-158.64	267.7	-383.1	1,075.8	1,054.2	21.59	49.835	
5,800.0	5,747.0	5,686.5	5,665.9	16.7	12.9	-158.65	272.7	-390.2	1,096.5	1,074.5	21.97	49.903	

Company:	Berry Petroleum Company (NAD 83)	**Local Co-ordinate Reference:**	Well OXY 22-3D (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 22-3D (OXY 22 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 #2	**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 Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
0.0	0.0	0.0	0.0	0.0	0.0	2.66	18.2	0.8	18.2				
100.0	100.0	100.0	100.0	0.1	0.1	2.66	18.2	0.8	18.2	17.9	0.30	61.447	
200.0	200.0	200.0	200.0	0.3	0.3	2.66	18.2	0.8	18.2	17.6	0.65	28.232	
300.0	300.0	300.0	300.0	0.5	0.5	2.66	18.2	0.8	18.2	17.2	0.99	18.326	CC, ES
400.0	400.0	399.6	399.6	0.7	0.7	-73.38	19.2	0.0	18.8	17.5	1.35	13.996	
500.0	499.9	498.9	498.8	0.9	0.9	-89.15	22.3	-2.3	21.8	20.1	1.70	12.777	SF
600.0	599.7	597.7	597.4	1.1	1.1	-106.07	27.4	-6.3	29.1	27.1	2.07	14.063	
700.0	699.3	695.7	695.0	1.3	1.3	-118.27	34.4	-11.7	41.7	39.3	2.45	17.023	
800.0	798.6	792.9	791.6	1.5	1.5	-125.89	43.3	-18.6	59.2	56.4	2.85	20.806	
900.0	897.6	890.6	888.5	1.8	1.8	-131.07	52.9	-26.2	79.6	76.3	3.25	24.455	
1,000.0	996.6	988.3	985.4	2.1	2.0	-134.33	62.6	-33.7	100.6	96.9	3.67	27.401	
1,100.0	1,095.5	1,085.9	1,082.2	2.4	2.3	-136.46	72.2	-41.2	121.8	117.7	4.09	29.764	
1,200.0	1,194.5	1,183.6	1,179.1	2.7	2.5	-137.96	81.9	-48.7	143.1	138.6	4.52	31.689	
1,300.0	1,293.5	1,281.2	1,276.0	3.0	2.8	-139.07	91.5	-56.2	164.5	159.6	4.94	33.282	
1,400.0	1,392.4	1,378.8	1,372.9	3.3	3.1	-139.93	101.2	-63.7	186.0	180.6	5.37	34.618	
1,500.0	1,491.4	1,476.5	1,469.7	3.6	3.3	-140.60	110.8	-71.2	207.4	201.6	5.80	35.754	
1,600.0	1,590.4	1,574.1	1,566.6	3.9	3.6	-141.15	120.5	-78.7	228.9	222.7	6.23	36.731	
1,700.0	1,689.3	1,671.8	1,663.5	4.2	3.9	-141.61	130.1	-86.2	250.4	243.8	6.66	37.579	
1,800.0	1,788.3	1,769.4	1,760.4	4.5	4.1	-141.99	139.8	-93.7	271.9	264.9	7.10	38.322	
1,900.0	1,887.3	1,867.0	1,857.2	4.8	4.4	-142.32	149.4	-101.3	293.5	286.0	7.53	38.977	
2,000.0	1,986.2	1,964.7	1,954.1	5.1	4.7	-142.61	159.1	-108.8	315.0	307.1	7.96	39.560	
2,100.0	2,085.2	2,062.3	2,051.0	5.4	5.0	-142.85	168.7	-116.3	336.6	328.2	8.40	40.082	
2,200.0	2,184.2	2,160.0	2,147.8	5.7	5.2	-143.07	178.4	-123.8	358.1	349.3	8.83	40.551	
2,300.0	2,283.1	2,257.6	2,244.7	6.0	5.5	-143.26	188.0	-131.3	379.7	370.4	9.27	40.976	
2,400.0	2,382.1	2,355.3	2,341.6	6.3	5.8	-143.43	197.7	-138.8	401.2	391.5	9.70	41.361	
2,500.0	2,481.1	2,452.9	2,438.5	6.6	6.0	-143.59	207.3	-146.3	422.8	412.7	10.14	41.713	
2,600.0	2,580.0	2,550.5	2,535.3	6.9	6.3	-143.73	217.0	-153.8	444.4	433.8	10.57	42.036	
2,700.0	2,679.0	2,648.2	2,632.2	7.2	6.6	-143.85	226.6	-161.3	465.9	454.9	11.01	42.332	
2,800.0	2,778.0	2,745.8	2,729.1	7.5	6.9	-143.97	236.3	-168.8	487.5	476.0	11.44	42.606	
2,900.0	2,876.9	2,843.5	2,826.0	7.8	7.1	-144.07	245.9	-176.4	509.1	497.2	11.88	42.859	
3,000.0	2,975.9	2,941.1	2,922.8	8.1	7.4	-144.17	255.5	-183.9	530.6	518.3	12.31	43.094	
3,100.0	3,074.9	3,038.7	3,019.7	8.4	7.7	-144.26	265.2	-191.4	552.2	539.4	12.75	43.312	
3,200.0	3,173.8	3,136.4	3,116.6	8.7	8.0	-144.34	274.8	-198.9	573.8	560.6	13.19	43.516	
3,300.0	3,272.8	3,234.0	3,213.5	9.0	8.2	-144.42	284.5	-206.4	595.3	581.7	13.62	43.707	
3,400.0	3,371.8	3,331.7	3,310.3	9.4	8.5	-144.49	294.1	-213.9	616.9	602.9	14.06	43.886	
3,500.0	3,470.7	3,429.3	3,407.2	9.7	8.8	-144.56	303.8	-221.4	638.5	624.0	14.49	44.053	
3,600.0	3,569.7	3,527.0	3,504.1	10.0	9.0	-144.62	313.4	-228.9	660.1	645.1	14.93	44.211	
3,700.0	3,668.7	3,624.6	3,600.9	10.3	9.3	-144.68	323.1	-236.4	681.7	666.3	15.37	44.360	
3,800.0	3,767.6	3,722.2	3,697.8	10.6	9.6	-144.73	332.7	-243.9	703.2	687.4	15.80	44.500	
3,900.0	3,866.6	3,819.9	3,794.7	10.9	9.9	-144.78	342.4	-251.5	724.8	708.6	16.24	44.633	
4,000.0	3,965.6	3,917.5	3,891.6	11.2	10.1	-144.83	352.0	-259.0	746.4	729.7	16.68	44.758	
4,100.0	4,064.5	4,015.2	3,988.4	11.5	10.4	-144.88	361.7	-266.5	768.0	750.9	17.11	44.877	
4,200.0	4,163.5	4,112.8	4,085.3	11.8	10.7	-144.92	371.3	-274.0	789.6	772.0	17.55	44.991	
4,300.0	4,262.5	4,210.5	4,182.2	12.1	11.0	-144.96	381.0	-281.5	811.1	793.1	17.99	45.098	
4,400.0	4,361.4	4,308.1	4,279.1	12.4	11.2	-145.00	390.6	-289.0	832.7	814.3	18.42	45.201	
4,500.0	4,460.4	4,405.7	4,375.9	12.7	11.5	-145.04	400.3	-296.5	854.3	835.4	18.86	45.298	
4,600.0	4,559.4	4,503.4	4,472.8	13.0	11.8	-145.07	409.9	-304.0	875.9	856.6	19.30	45.391	
4,700.0	4,658.3	4,601.0	4,569.7	13.3	12.1	-145.11	419.6	-311.5	897.5	877.7	19.73	45.480	
4,800.0	4,757.3	4,698.7	4,666.6	13.6	12.3	-145.14	429.2	-319.0	919.0	898.9	20.17	45.565	
4,900.0	4,856.3	4,796.3	4,763.4	13.9	12.6	-145.17	438.9	-326.6	940.6	920.0	20.61	45.647	
5,000.0	4,955.2	4,893.9	4,860.3	14.3	12.9	-145.20	448.5	-334.1	962.2	941.2	21.04	45.725	
5,100.0	5,054.2	4,991.6	4,957.2	14.6	13.1	-145.22	458.2	-341.6	983.8	962.3	21.48	45.800	

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

Company:	Berry Petroleum Company (NAD 83)	**Local Co-ordinate Reference:**	Well OXY 22-3D (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 22-3D (OXY 22 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 #2	**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 Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
5,200.0	5,153.2	5,089.2	5,054.0	14.9	13.4	-145.25	467.8	-349.1	1,005.4	983.5	21.92	45.871	
5,300.0	5,252.1	5,186.9	5,150.9	15.2	13.7	-145.28	477.5	-356.6	1,027.0	1,004.6	22.35	45.940	
5,400.0	5,351.1	5,284.5	5,247.8	15.5	14.0	-145.30	487.1	-364.1	1,048.5	1,025.8	22.79	46.007	
5,500.0	5,450.1	5,382.2	5,344.7	15.8	14.2	-145.32	496.8	-371.6	1,070.1	1,046.9	23.23	46.070	
5,600.0	5,549.0	5,479.8	5,441.5	16.1	14.5	-145.35	506.4	-379.1	1,091.7	1,068.0	23.67	46.132	

Company:	Berry Petroleum Company (NAD 83)	**Local Co-ordinate Reference:**	Well OXY 22-3D (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 22-3D (OXY 22 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 #2	**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 Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
0.0	0.0	0.0	0.0	0.0	0.0	17.41	30.6	9.6	32.1				
100.0	100.0	100.0	100.0	0.1	0.1	17.41	30.6	9.6	32.1	31.8	0.30	108.070	
200.0	200.0	200.0	200.0	0.3	0.3	17.41	30.6	9.6	32.1	31.4	0.65	49.654	
300.0	300.0	300.0	300.0	0.5	0.5	17.41	30.6	9.6	32.1	31.1	0.99	32.232	CC
400.0	400.0	399.4	399.4	0.7	0.7	-55.90	31.7	9.0	32.2	30.9	1.34	23.967	ES
500.0	499.9	498.5	498.4	0.9	0.9	-65.98	35.1	7.1	33.4	31.7	1.70	19.619	
600.0	599.7	597.2	596.9	1.1	1.1	-80.42	40.7	4.0	37.4	35.3	2.08	18.024	SF
700.0	699.3	695.2	694.5	1.3	1.3	-94.98	48.5	-0.3	46.1	43.6	2.47	18.671	
800.0	798.6	792.3	791.0	1.5	1.5	-106.52	58.3	-5.8	60.0	57.1	2.88	20.844	
900.0	897.6	888.3	886.0	1.8	1.8	-114.57	70.1	-12.3	78.8	75.5	3.30	23.844	
1,000.0	996.6	983.8	980.2	2.1	2.1	-119.22	84.0	-20.0	101.0	97.2	3.74	26.981	
1,100.0	1,095.5	1,080.9	1,075.7	2.4	2.4	-122.08	98.8	-28.2	124.4	120.2	4.20	29.656	
1,200.0	1,194.5	1,177.9	1,171.3	2.7	2.7	-124.03	113.6	-36.4	148.0	143.4	4.66	31.804	
1,300.0	1,293.5	1,275.0	1,266.9	3.0	3.0	-125.44	128.4	-44.6	171.8	166.7	5.12	33.551	
1,400.0	1,392.4	1,372.0	1,362.4	3.3	3.4	-126.51	143.3	-52.9	195.6	190.0	5.59	34.995	
1,500.0	1,491.4	1,469.1	1,458.0	3.6	3.7	-127.35	158.1	-61.1	219.5	213.4	6.06	36.204	
1,600.0	1,590.4	1,566.2	1,553.6	3.9	4.0	-128.02	172.9	-69.3	243.4	236.9	6.54	37.229	
1,700.0	1,689.3	1,663.2	1,649.2	4.2	4.4	-128.57	187.7	-77.5	267.4	260.3	7.02	38.109	
1,800.0	1,788.3	1,760.3	1,744.7	4.5	4.7	-129.03	202.6	-85.7	291.3	283.8	7.49	38.870	
1,900.0	1,887.3	1,857.4	1,840.3	4.8	5.0	-129.43	217.4	-93.9	315.3	307.3	7.97	39.536	
2,000.0	1,986.2	1,954.4	1,935.9	5.1	5.4	-129.76	232.2	-102.1	339.3	330.8	8.46	40.122	
2,100.0	2,085.2	2,051.5	2,031.4	5.4	5.7	-130.05	247.0	-110.4	363.3	354.3	8.94	40.642	
2,200.0	2,184.2	2,148.6	2,127.0	5.7	6.1	-130.31	261.8	-118.6	387.3	377.8	9.42	41.106	
2,300.0	2,283.1	2,245.6	2,222.6	6.0	6.4	-130.54	276.7	-126.8	411.3	401.4	9.90	41.523	
2,400.0	2,382.1	2,342.7	2,318.2	6.3	6.7	-130.74	291.5	-135.0	435.3	424.9	10.39	41.900	
2,500.0	2,481.1	2,439.7	2,413.7	6.6	7.1	-130.92	306.3	-143.2	459.3	448.4	10.87	42.241	
2,600.0	2,580.0	2,536.8	2,509.3	6.9	7.4	-131.08	321.1	-151.4	483.3	472.0	11.36	42.552	
2,700.0	2,679.0	2,633.9	2,604.9	7.2	7.8	-131.22	336.0	-159.7	507.4	495.5	11.84	42.837	
2,800.0	2,778.0	2,730.9	2,700.5	7.5	8.1	-131.36	350.8	-167.9	531.4	519.1	12.33	43.098	
2,900.0	2,876.9	2,828.0	2,796.0	7.8	8.4	-131.48	365.6	-176.1	555.4	542.6	12.82	43.339	
3,000.0	2,975.9	2,925.1	2,891.6	8.1	8.8	-131.59	380.4	-184.3	579.4	566.1	13.30	43.561	
3,100.0	3,074.9	3,022.1	2,987.2	8.4	9.1	-131.69	395.3	-192.5	603.5	589.7	13.79	43.768	
3,200.0	3,173.8	3,119.2	3,082.7	8.7	9.5	-131.79	410.1	-200.7	627.5	613.2	14.27	43.959	
3,300.0	3,272.8	3,216.2	3,178.3	9.0	9.8	-131.88	424.9	-209.0	651.6	636.8	14.76	44.138	
3,400.0	3,371.8	3,313.3	3,273.9	9.4	10.1	-131.96	439.7	-217.2	675.6	660.3	15.25	44.305	
3,500.0	3,470.7	3,410.4	3,369.5	9.7	10.5	-132.04	454.5	-225.4	699.6	683.9	15.74	44.461	
3,600.0	3,569.7	3,507.4	3,465.0	10.0	10.8	-132.11	469.4	-233.6	723.7	707.5	16.22	44.607	
3,700.0	3,668.7	3,604.5	3,560.6	10.3	11.2	-132.17	484.2	-241.8	747.7	731.0	16.71	44.745	
3,800.0	3,767.6	3,701.6	3,656.2	10.6	11.5	-132.24	499.0	-250.0	771.8	754.6	17.20	44.875	
3,900.0	3,866.6	3,798.6	3,751.7	10.9	11.8	-132.29	513.8	-258.2	795.8	778.1	17.69	44.997	
4,000.0	3,965.6	3,895.7	3,847.3	11.2	12.2	-132.35	528.7	-266.5	819.9	801.7	18.17	45.112	
4,100.0	4,064.5	3,992.8	3,942.9	11.5	12.5	-132.40	543.5	-274.7	843.9	825.2	18.66	45.222	
4,200.0	4,163.5	4,089.8	4,038.5	11.8	12.9	-132.45	558.3	-282.9	867.9	848.8	19.15	45.325	
4,300.0	4,262.5	4,186.9	4,134.0	12.1	13.2	-132.50	573.1	-291.1	892.0	872.4	19.64	45.423	
4,400.0	4,361.4	4,283.9	4,229.6	12.4	13.5	-132.54	588.0	-299.3	916.0	895.9	20.13	45.517	
4,500.0	4,460.4	4,381.0	4,325.2	12.7	13.9	-132.58	602.8	-307.5	940.1	919.5	20.61	45.606	
4,600.0	4,559.4	4,478.1	4,420.7	13.0	14.2	-132.62	617.6	-315.8	964.1	943.0	21.10	45.690	
4,700.0	4,658.3	4,575.1	4,516.3	13.3	14.6	-132.66	632.4	-324.0	988.2	966.6	21.59	45.771	
4,800.0	4,757.3	4,672.2	4,611.9	13.6	14.9	-132.70	647.3	-332.2	1,012.2	990.2	22.08	45.848	
4,900.0	4,856.3	4,769.3	4,707.5	13.9	15.2	-132.73	662.1	-340.4	1,036.3	1,013.7	22.57	45.922	
5,000.0	4,955.2	4,866.3	4,803.0	14.3	15.6	-132.76	676.9	-348.6	1,060.3	1,037.3	23.05	45.992	
5,100.0	5,054.2	4,963.4	4,898.6	14.6	15.9	-132.79	691.7	-356.8	1,084.4	1,060.8	23.54	46.059	

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

Company:	Berry Petroleum Company (NAD 83)	**Local Co-ordinate Reference:**	Well OXY 22-3D (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 22-3D (OXY 22 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 #2	**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 Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
5,200.0	5,153.2	5,060.4	4,994.2	14.9	16.3	-132.82	706.5	-365.1	1,108.4	1,084.4	24.03	46.124	

Company:	Berry Petroleum Company (NAD 83)	**Local Co-ordinate Reference:**	Well OXY 22-3D (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 22-3D (OXY 22 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 #2	**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 Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
0.0	0.0	0.0	0.0	0.0	0.0	22.97	42.6	18.1	46.3				
100.0	100.0	100.0	100.0	0.1	0.1	22.97	42.6	18.1	46.3	46.0	0.30	155.995	
200.0	200.0	200.0	200.0	0.3	0.3	22.97	42.6	18.1	46.3	45.6	0.65	71.673	
300.0	300.0	300.0	300.0	0.5	0.5	22.97	42.6	18.1	46.3	45.3	0.99	46.525	CC
310.1	310.1	310.0	310.0	0.5	0.5	-46.87	42.6	18.1	46.3	45.3	1.03	44.928	
400.0	400.0	399.1	399.1	0.7	0.7	-49.15	43.8	17.6	46.3	45.0	1.34	34.485	ES
500.0	499.9	498.0	497.9	0.9	0.9	-55.93	47.4	16.1	47.0	45.3	1.70	27.614	
600.0	599.7	596.5	596.2	1.1	1.1	-66.50	53.3	13.7	49.4	47.3	2.07	23.830	
700.0	699.3	694.4	693.7	1.3	1.3	-78.98	61.5	10.4	55.3	52.8	2.47	22.412	SF
800.0	798.6	791.5	790.1	1.5	1.5	-90.89	71.8	6.1	65.9	63.0	2.89	22.821	
900.0	897.6	887.6	885.3	1.8	1.8	-100.56	84.4	1.0	81.5	78.2	3.33	24.503	
1,000.0	996.6	982.9	979.3	2.1	2.1	-106.89	99.0	-4.9	101.2	97.4	3.78	26.802	
1,100.0	1,095.5	1,077.3	1,072.0	2.4	2.4	-110.75	115.6	-11.7	124.0	119.8	4.24	29.261	
1,200.0	1,194.5	1,171.0	1,163.4	2.7	2.8	-113.06	134.1	-19.3	149.4	144.7	4.71	31.715	
1,300.0	1,293.5	1,267.3	1,257.3	3.0	3.2	-114.62	154.2	-27.5	175.9	170.7	5.20	33.833	
1,400.0	1,392.4	1,363.6	1,351.2	3.3	3.6	-115.76	174.2	-35.7	202.6	196.9	5.70	35.562	
1,500.0	1,491.4	1,459.9	1,445.0	3.6	4.0	-116.65	194.3	-43.8	229.2	223.0	6.20	36.990	
1,600.0	1,590.4	1,556.3	1,538.9	3.9	4.4	-117.34	214.3	-52.0	256.0	249.3	6.70	38.185	
1,700.0	1,689.3	1,652.6	1,632.7	4.2	4.8	-117.91	234.3	-60.2	282.7	275.5	7.21	39.198	
1,800.0	1,788.3	1,748.9	1,726.6	4.5	5.2	-118.38	254.4	-68.4	309.5	301.8	7.72	40.066	
1,900.0	1,887.3	1,845.2	1,820.5	4.8	5.6	-118.77	274.4	-76.6	336.3	328.0	8.24	40.817	
2,000.0	1,986.2	1,941.5	1,914.3	5.1	6.0	-119.10	294.5	-84.7	363.1	354.3	8.75	41.472	
2,100.0	2,085.2	2,037.9	2,008.2	5.4	6.4	-119.39	314.5	-92.9	389.9	380.6	9.27	42.049	
2,200.0	2,184.2	2,134.2	2,102.0	5.7	6.8	-119.65	334.5	-101.1	416.7	406.9	9.79	42.560	
2,300.0	2,283.1	2,230.5	2,195.9	6.0	7.2	-119.87	354.6	-109.3	443.5	433.2	10.31	43.016	
2,400.0	2,382.1	2,326.8	2,289.7	6.3	7.6	-120.06	374.6	-117.4	470.3	459.5	10.83	43.425	
2,500.0	2,481.1	2,423.2	2,383.6	6.6	8.0	-120.24	394.7	-125.6	497.2	485.8	11.35	43.794	
2,600.0	2,580.0	2,519.5	2,477.5	6.9	8.4	-120.39	414.7	-133.8	524.0	512.1	11.87	44.128	
2,700.0	2,679.0	2,615.8	2,571.3	7.2	8.9	-120.54	434.7	-142.0	550.8	538.4	12.40	44.432	
2,800.0	2,778.0	2,712.1	2,665.2	7.5	9.3	-120.67	454.8	-150.2	577.7	564.8	12.92	44.710	
2,900.0	2,876.9	2,808.4	2,759.0	7.8	9.7	-120.78	474.8	-158.3	604.5	591.1	13.44	44.965	
3,000.0	2,975.9	2,904.8	2,852.9	8.1	10.1	-120.89	494.9	-166.5	631.4	617.4	13.97	45.200	
3,100.0	3,074.9	3,001.1	2,946.8	8.4	10.5	-120.99	514.9	-174.7	658.2	643.7	14.49	45.417	
3,200.0	3,173.8	3,097.4	3,040.6	8.7	10.9	-121.08	534.9	-182.9	685.1	670.0	15.02	45.618	
3,300.0	3,272.8	3,193.7	3,134.5	9.0	11.3	-121.16	555.0	-191.1	711.9	696.4	15.54	45.804	
3,400.0	3,371.8	3,290.1	3,228.3	9.4	11.7	-121.24	575.0	-199.2	738.8	722.7	16.07	45.978	
3,500.0	3,470.7	3,386.4	3,322.2	9.7	12.2	-121.31	595.0	-207.4	765.6	749.0	16.59	46.140	
3,600.0	3,569.7	3,482.7	3,416.1	10.0	12.6	-121.38	615.1	-215.6	792.5	775.4	17.12	46.291	
3,700.0	3,668.7	3,579.0	3,509.9	10.3	13.0	-121.44	635.1	-223.8	819.3	801.7	17.65	46.433	
3,800.0	3,767.6	3,675.4	3,603.8	10.6	13.4	-121.50	655.2	-232.0	846.2	828.0	18.17	46.567	
3,900.0	3,866.6	3,771.7	3,697.6	10.9	13.8	-121.56	675.2	-240.1	873.0	854.3	18.70	46.692	
4,000.0	3,965.6	3,868.0	3,791.5	11.2	14.2	-121.61	695.2	-248.3	899.9	880.7	19.22	46.811	
4,100.0	4,064.5	3,964.3	3,885.4	11.5	14.6	-121.66	715.3	-256.5	926.8	907.0	19.75	46.922	
4,200.0	4,163.5	4,060.6	3,979.2	11.8	15.1	-121.71	735.3	-264.7	953.6	933.3	20.28	47.028	
4,300.0	4,262.5	4,157.0	4,073.1	12.1	15.5	-121.75	755.4	-272.9	980.5	959.7	20.80	47.128	
4,400.0	4,361.4	4,253.3	4,166.9	12.4	15.9	-121.79	775.4	-281.0	1,007.3	986.0	21.33	47.223	
4,500.0	4,460.4	4,349.6	4,260.8	12.7	16.3	-121.83	795.4	-289.2	1,034.2	1,012.3	21.86	47.313	
4,600.0	4,559.4	4,445.9	4,354.7	13.0	16.7	-121.87	815.5	-297.4	1,061.1	1,038.7	22.39	47.399	
4,700.0	4,658.3	4,542.3	4,448.5	13.3	17.1	-121.90	835.5	-305.6	1,087.9	1,065.0	22.91	47.481	

Company:	Berry Petroleum Company (NAD 83)	**Local Co-ordinate Reference:**	Well OXY 22-3D (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 22-3D (OXY 22 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 #2	**Offset TVD Reference:**	Offset Datum

Offset Design SWSE S22-T6S-R97W - OXY 22-15D (OXY 22 Pad) - DD - Plan #1

Offset Site Error: 0.0 ft

Survey Program: 0-MWD

Offset Well Error: 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
0.0	0.0	0.0	0.0	0.0	0.0	26.13	54.6	26.8	60.9				
100.0	100.0	100.0	100.0	0.1	0.1	26.13	54.6	26.8	60.9	60.6	0.30	205.112	
200.0	200.0	200.0	200.0	0.3	0.3	26.13	54.6	26.8	60.9	60.2	0.65	94.241	CC, ES
300.0	300.0	298.9	298.8	0.5	0.5	25.30	55.8	26.4	61.8	60.8	0.99	62.204	
400.0	400.0	397.6	397.5	0.7	0.7	-47.70	59.5	25.2	63.8	62.4	1.35	47.355	
500.0	499.9	496.0	495.7	0.9	0.9	-53.71	65.5	23.2	66.4	64.7	1.71	38.900	
600.0	599.7	593.8	593.2	1.1	1.1	-61.93	73.9	20.3	70.7	68.6	2.08	34.023	
700.0	699.3	691.0	689.7	1.3	1.4	-71.33	84.5	16.8	77.9	75.5	2.47	31.584	
800.0	798.6	787.3	785.0	1.5	1.6	-80.69	97.4	12.5	89.0	86.1	2.88	30.885	SF
900.0	897.6	882.6	879.0	1.8	1.9	-89.05	112.3	7.4	104.5	101.2	3.32	31.465	
1,000.0	996.6	977.1	971.7	2.1	2.3	-95.24	129.3	1.7	124.2	120.4	3.78	32.888	
1,100.0	1,095.5	1,070.6	1,063.1	2.4	2.7	-99.52	148.3	-4.6	147.3	143.0	4.24	34.701	
1,200.0	1,194.5	1,163.1	1,152.9	2.7	3.1	-102.43	169.1	-11.6	173.2	168.5	4.72	36.669	
1,300.0	1,293.5	1,254.4	1,241.1	3.0	3.5	-104.38	191.7	-19.2	201.7	196.5	5.21	38.694	
1,400.0	1,392.4	1,348.5	1,331.4	3.3	4.0	-105.77	216.5	-27.5	231.9	226.2	5.72	40.565	
1,500.0	1,491.4	1,443.6	1,422.8	3.6	4.5	-106.85	241.6	-36.0	262.3	256.1	6.23	42.095	
1,600.0	1,590.4	1,538.8	1,514.3	3.9	4.9	-107.71	266.7	-44.4	292.7	286.0	6.75	43.365	
1,700.0	1,689.3	1,634.0	1,605.7	4.2	5.4	-108.40	291.8	-52.8	323.2	315.9	7.27	44.431	
1,800.0	1,788.3	1,729.2	1,697.1	4.5	5.9	-108.98	316.9	-61.3	353.7	345.9	7.80	45.338	
1,900.0	1,887.3	1,824.3	1,788.5	4.8	6.4	-109.46	341.9	-69.7	384.3	375.9	8.33	46.117	
2,000.0	1,986.2	1,919.5	1,879.9	5.1	6.9	-109.87	367.0	-78.1	414.8	406.0	8.87	46.792	
2,100.0	2,085.2	2,014.7	1,971.3	5.4	7.4	-110.23	392.1	-86.5	445.4	436.0	9.40	47.382	
2,200.0	2,184.2	2,109.8	2,062.8	5.7	7.8	-110.54	417.2	-95.0	476.0	466.1	9.94	47.902	
2,300.0	2,283.1	2,205.0	2,154.2	6.0	8.3	-110.81	442.3	-103.4	506.6	496.2	10.48	48.363	
2,400.0	2,382.1	2,300.2	2,245.6	6.3	8.8	-111.05	467.4	-111.8	537.3	526.2	11.02	48.775	
2,500.0	2,481.1	2,395.4	2,337.0	6.6	9.3	-111.27	492.5	-120.3	567.9	556.3	11.56	49.144	
2,600.0	2,580.0	2,490.5	2,428.4	6.9	9.8	-111.46	517.6	-128.7	598.5	586.4	12.10	49.478	
2,700.0	2,679.0	2,585.7	2,519.8	7.2	10.3	-111.64	542.7	-137.1	629.2	616.5	12.64	49.780	
2,800.0	2,778.0	2,680.9	2,611.3	7.5	10.8	-111.79	567.8	-145.5	659.8	646.6	13.18	50.055	
2,900.0	2,876.9	2,776.1	2,702.7	7.8	11.3	-111.94	592.9	-154.0	690.5	676.7	13.72	50.307	
3,000.0	2,975.9	2,871.2	2,794.1	8.1	11.8	-112.07	618.0	-162.4	721.1	706.8	14.27	50.538	
3,100.0	3,074.9	2,966.4	2,885.5	8.4	12.2	-112.19	643.1	-170.8	751.8	737.0	14.81	50.750	
3,200.0	3,173.8	3,061.6	2,976.9	8.7	12.7	-112.30	668.2	-179.3	782.4	767.1	15.36	50.947	
3,300.0	3,272.8	3,156.8	3,068.4	9.0	13.2	-112.41	693.3	-187.7	813.1	797.2	15.90	51.129	
3,400.0	3,371.8	3,251.9	3,159.8	9.4	13.7	-112.50	718.4	-196.1	843.7	827.3	16.45	51.297	
3,500.0	3,470.7	3,347.1	3,251.2	9.7	14.2	-112.59	743.5	-204.5	874.4	857.4	16.99	51.455	
3,600.0	3,569.7	3,442.3	3,342.6	10.0	14.7	-112.68	768.6	-213.0	905.1	887.5	17.54	51.602	
3,700.0	3,668.7	3,537.5	3,434.0	10.3	15.2	-112.75	793.7	-221.4	935.8	917.7	18.09	51.739	
3,800.0	3,767.6	3,632.6	3,525.4	10.6	15.7	-112.83	818.8	-229.8	966.4	947.8	18.63	51.868	
3,900.0	3,866.6	3,727.8	3,616.9	10.9	16.2	-112.89	843.9	-238.3	997.1	977.9	19.18	51.988	
4,000.0	3,965.6	3,823.0	3,708.3	11.2	16.7	-112.96	869.0	-246.7	1,027.8	1,008.0	19.73	52.102	
4,100.0	4,064.5	3,918.1	3,799.7	11.5	17.2	-113.02	894.1	-255.1	1,058.4	1,038.2	20.27	52.209	
4,200.0	4,163.5	4,013.3	3,891.1	11.8	17.7	-113.08	919.2	-263.5	1,089.1	1,068.3	20.82	52.311	

Company:	Berry Petroleum Company (NAD 83)	**Local Co-ordinate Reference:**	Well OXY 22-3D (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 22-3D (OXY 22 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 #2	**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 Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
0.0	0.0	0.0	0.0	0.0	0.0	27.76	67.0	35.3	75.7				
100.0	100.0	100.0	100.0	0.1	0.1	27.76	67.0	35.3	75.7	75.4	0.30	255.253	
200.0	200.0	200.0	200.0	0.3	0.3	27.76	67.0	35.3	75.7	75.1	0.65	117.279	CC, ES
300.0	300.0	298.6	298.6	0.5	0.5	27.08	68.2	34.9	76.7	75.7	0.99	77.207	
400.0	400.0	397.1	397.0	0.7	0.7	-45.30	71.9	33.7	78.5	77.2	1.35	58.364	
500.0	499.9	495.2	494.9	0.9	0.9	-50.22	77.9	31.9	80.9	79.2	1.71	47.398	
600.0	599.7	592.9	592.2	1.1	1.1	-57.10	86.3	29.2	84.5	82.5	2.08	40.656	
700.0	699.3	689.8	688.5	1.3	1.4	-65.31	96.9	25.9	90.6	88.1	2.47	36.687	
800.0	798.6	785.9	783.6	1.5	1.6	-73.98	109.8	21.8	100.1	97.2	2.88	34.703	
900.0	897.6	881.1	877.5	1.8	1.9	-82.23	124.8	17.1	113.7	110.4	3.32	34.262	SF
1,000.0	996.6	975.3	970.0	2.1	2.3	-88.78	141.8	11.8	131.8	128.0	3.77	34.977	
1,100.0	1,095.5	1,068.7	1,061.2	2.4	2.7	-93.60	160.9	5.8	153.6	149.3	4.23	36.319	
1,200.0	1,194.5	1,161.1	1,151.0	2.7	3.1	-97.08	181.8	-0.8	178.5	173.8	4.70	37.976	
1,300.0	1,293.5	1,252.3	1,239.1	3.0	3.5	-99.54	204.4	-7.9	206.2	201.0	5.18	39.783	
1,400.0	1,392.4	1,342.4	1,325.4	3.3	4.0	-101.28	228.8	-15.6	236.3	230.7	5.67	41.657	
1,500.0	1,491.4	1,431.2	1,410.0	3.6	4.5	-102.48	254.7	-23.7	268.8	262.6	6.17	43.558	
1,600.0	1,590.4	1,518.8	1,492.8	3.9	5.0	-103.31	282.1	-32.3	303.4	296.7	6.67	45.471	
1,700.0	1,689.3	1,612.2	1,580.7	4.2	5.5	-103.95	312.2	-41.8	339.0	331.8	7.19	47.132	
1,800.0	1,788.3	1,705.6	1,668.6	4.5	6.1	-104.47	342.3	-51.2	374.7	367.0	7.72	48.543	
1,900.0	1,887.3	1,799.0	1,756.5	4.8	6.7	-104.90	372.4	-60.7	410.4	402.1	8.25	49.753	
2,000.0	1,986.2	1,892.4	1,844.3	5.1	7.2	-105.26	402.5	-70.2	446.0	437.3	8.78	50.799	
2,100.0	2,085.2	1,985.7	1,932.2	5.4	7.8	-105.57	432.6	-79.6	481.8	472.4	9.32	51.712	
2,200.0	2,184.2	2,079.1	2,020.1	5.7	8.4	-105.84	462.7	-89.1	517.5	507.6	9.85	52.515	
2,300.0	2,283.1	2,172.5	2,108.0	6.0	8.9	-106.07	492.8	-98.5	553.2	542.8	10.39	53.226	
2,400.0	2,382.1	2,265.9	2,195.9	6.3	9.5	-106.27	522.8	-108.0	588.9	578.0	10.93	53.859	
2,500.0	2,481.1	2,359.3	2,283.8	6.6	10.1	-106.45	552.9	-117.5	624.7	613.2	11.48	54.427	
2,600.0	2,580.0	2,452.6	2,371.7	6.9	10.7	-106.61	583.0	-126.9	660.4	648.4	12.02	54.938	
2,700.0	2,679.0	2,546.0	2,459.6	7.2	11.2	-106.76	613.1	-136.4	696.2	683.6	12.57	55.401	
2,800.0	2,778.0	2,639.4	2,547.4	7.5	11.8	-106.89	643.2	-145.9	731.9	718.8	13.11	55.822	
2,900.0	2,876.9	2,732.8	2,635.3	7.8	12.4	-107.01	673.3	-155.3	767.7	754.0	13.66	56.206	
3,000.0	2,975.9	2,826.1	2,723.2	8.1	12.9	-107.11	703.4	-164.8	803.4	789.2	14.21	56.558	
3,100.0	3,074.9	2,919.5	2,811.1	8.4	13.5	-107.21	733.5	-174.2	839.2	824.4	14.75	56.882	
3,200.0	3,173.8	3,012.9	2,899.0	8.7	14.1	-107.30	763.6	-183.7	874.9	859.6	15.30	57.180	
3,300.0	3,272.8	3,106.3	2,986.9	9.0	14.7	-107.39	793.7	-193.2	910.7	894.9	15.85	57.457	
3,400.0	3,371.8	3,199.7	3,074.8	9.4	15.2	-107.46	823.8	-202.6	946.5	930.1	16.40	57.713	
3,500.0	3,470.7	3,293.0	3,162.7	9.7	15.8	-107.53	853.9	-212.1	982.2	965.3	16.95	57.951	
3,600.0	3,569.7	3,386.4	3,250.6	10.0	16.4	-107.60	884.0	-221.5	1,018.0	1,000.5	17.50	58.174	
3,700.0	3,668.7	3,479.8	3,338.4	10.3	17.0	-107.66	914.1	-231.0	1,053.8	1,035.7	18.05	58.381	
3,800.0	3,767.6	3,573.2	3,426.3	10.6	17.5	-107.72	944.2	-240.5	1,089.5	1,070.9	18.60	58.576	

Company:	Berry Petroleum Company (NAD 83)	**Local Co-ordinate Reference:**	Well OXY 22-3D (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 22-3D (OXY 22 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 #2	**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 Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
0.0	0.0	0.0	0.0	0.0	0.0	-143.09	-24.0	-18.1	30.1				
100.0	100.0	100.0	100.0	0.1	0.1	-143.09	-24.0	-18.1	30.1	29.8	0.30	101.349	
200.0	200.0	200.0	200.0	0.3	0.3	-143.09	-24.0	-18.1	30.1	29.4	0.65	46.566	
300.0	300.0	300.0	300.0	0.5	0.5	-143.09	-24.0	-18.1	30.1	29.1	0.99	30.227	CC, ES
400.0	400.0	400.0	400.0	0.7	0.7	148.39	-24.0	-18.1	31.2	29.8	1.34	23.196	
500.0	499.9	500.2	500.2	0.9	0.8	149.74	-24.5	-16.8	34.1	32.4	1.70	20.115	
600.0	599.7	600.4	600.3	1.1	1.0	149.09	-25.8	-13.1	38.5	36.4	2.06	18.683	
700.0	699.3	700.6	700.3	1.3	1.2	147.10	-28.1	-7.0	44.2	41.8	2.44	18.105	
800.0	798.6	800.6	799.9	1.5	1.4	144.38	-31.2	1.7	51.5	48.6	2.86	17.987	
900.0	897.6	900.6	899.1	1.8	1.7	141.23	-35.2	12.7	60.1	56.7	3.33	18.035	
1,000.0	996.6	1,000.3	997.8	2.1	2.0	137.02	-40.1	26.1	68.7	64.8	3.85	17.820	
1,100.0	1,095.5	1,099.8	1,096.2	2.4	2.2	133.27	-45.2	40.0	77.5	73.1	4.40	17.606	
1,200.0	1,194.5	1,199.3	1,194.6	2.7	2.5	130.29	-50.3	54.0	86.7	81.7	4.97	17.440	
1,300.0	1,293.5	1,298.8	1,293.0	3.0	2.8	127.89	-55.4	68.0	96.0	90.4	5.54	17.313	
1,400.0	1,392.4	1,398.2	1,391.3	3.3	3.1	125.91	-60.4	81.9	105.4	99.3	6.12	17.215	
1,500.0	1,491.4	1,497.7	1,489.7	3.6	3.4	124.26	-65.5	95.9	115.0	108.3	6.71	17.140	
1,600.0	1,590.4	1,597.2	1,588.1	3.9	3.7	122.87	-70.6	109.8	124.6	117.3	7.29	17.081	
1,700.0	1,689.3	1,696.7	1,686.5	4.2	4.0	121.67	-75.7	123.8	134.3	126.4	7.88	17.035	
1,800.0	1,788.3	1,796.2	1,784.8	4.5	4.4	120.64	-80.8	137.7	144.0	135.6	8.47	16.998	
1,900.0	1,887.3	1,895.7	1,883.2	4.8	4.7	119.73	-85.9	151.7	153.8	144.8	9.06	16.969	
2,000.0	1,986.2	1,995.2	1,981.6	5.1	5.0	118.94	-90.9	165.7	163.6	154.0	9.66	16.946	
2,100.0	2,085.2	2,094.7	2,080.0	5.4	5.3	118.23	-96.0	179.6	173.5	163.2	10.25	16.927	
2,200.0	2,184.2	2,194.2	2,178.4	5.7	5.6	117.60	-101.1	193.6	183.3	172.5	10.84	16.912	
2,300.0	2,283.1	2,293.7	2,276.7	6.0	5.9	117.04	-106.2	207.5	193.2	181.8	11.43	16.899	
2,400.0	2,382.1	2,393.2	2,375.1	6.3	6.2	116.53	-111.3	221.5	203.1	191.1	12.03	16.889	
2,500.0	2,481.1	2,492.7	2,473.5	6.6	6.5	116.07	-116.3	235.5	213.1	200.4	12.62	16.881	
2,600.0	2,580.0	2,592.2	2,571.9	6.9	6.8	115.64	-121.4	249.4	223.0	209.8	13.21	16.874	
2,700.0	2,679.0	2,691.7	2,670.2	7.2	7.1	115.26	-126.5	263.4	232.9	219.1	13.81	16.869	
2,800.0	2,778.0	2,791.1	2,768.6	7.5	7.5	114.91	-131.6	277.3	242.9	228.5	14.40	16.864	
2,900.0	2,876.9	2,890.6	2,867.0	7.8	7.8	114.58	-136.7	291.3	252.8	237.8	15.00	16.861	
3,000.0	2,975.9	2,990.1	2,965.4	8.1	8.1	114.28	-141.8	305.2	262.8	247.2	15.59	16.858	
3,100.0	3,074.9	3,089.6	3,063.8	8.4	8.4	114.00	-146.8	319.2	272.8	256.6	16.18	16.856	
3,200.0	3,173.8	3,189.1	3,162.1	8.7	8.7	113.74	-151.9	333.2	282.8	266.0	16.78	16.854	
3,300.0	3,272.8	3,288.6	3,260.5	9.0	9.0	113.50	-157.0	347.1	292.7	275.4	17.37	16.852	
3,400.0	3,371.8	3,388.1	3,358.9	9.4	9.3	113.27	-162.1	361.1	302.7	284.8	17.97	16.851	
3,500.0	3,470.7	3,487.6	3,457.3	9.7	9.6	113.06	-167.2	375.0	312.7	294.2	18.56	16.851	
3,600.0	3,569.7	3,587.1	3,555.6	10.0	10.0	112.86	-172.2	389.0	322.7	303.6	19.15	16.850	
3,700.0	3,668.7	3,686.6	3,654.0	10.3	10.3	112.68	-177.3	403.0	332.7	313.0	19.75	16.850	
3,800.0	3,767.6	3,786.1	3,752.4	10.6	10.6	112.50	-182.4	416.9	342.7	322.4	20.34	16.849	
3,900.0	3,866.6	3,885.6	3,850.8	10.9	10.9	112.33	-187.5	430.9	352.8	331.8	20.94	16.849	
4,000.0	3,965.6	3,985.1	3,949.1	11.2	11.2	112.18	-192.6	444.8	362.8	341.2	21.53	16.850	
4,100.0	4,064.5	4,084.6	4,047.5	11.5	11.5	112.03	-197.7	458.8	372.8	350.7	22.12	16.850	
4,200.0	4,163.5	4,184.0	4,145.9	11.8	11.8	111.89	-202.7	472.7	382.8	360.1	22.72	16.850	
4,300.0	4,262.5	4,283.5	4,244.3	12.1	12.1	111.76	-207.8	486.7	392.8	369.5	23.31	16.851	
4,400.0	4,361.4	4,383.0	4,342.7	12.4	12.5	111.63	-212.9	500.7	402.8	378.9	23.91	16.851	
4,500.0	4,460.4	4,482.5	4,441.0	12.7	12.8	111.51	-218.0	514.6	412.9	388.4	24.50	16.851	
4,600.0	4,559.4	4,582.0	4,539.4	13.0	13.1	111.40	-223.1	528.6	422.9	397.8	25.09	16.852	
4,700.0	4,658.3	4,681.5	4,637.8	13.3	13.4	111.29	-228.2	542.5	432.9	407.2	25.69	16.853	
4,800.0	4,757.3	4,781.0	4,736.2	13.6	13.7	111.18	-233.2	556.5	442.9	416.6	26.28	16.853	
4,900.0	4,856.3	4,880.5	4,834.5	13.9	14.0	111.08	-238.3	570.5	453.0	426.1	26.88	16.854	
5,000.0	4,955.2	4,980.0	4,932.9	14.3	14.3	110.99	-243.4	584.4	463.0	435.5	27.47	16.855	
5,100.0	5,054.2	5,079.5	5,031.3	14.6	14.7	110.90	-248.5	598.4	473.0	445.0	28.06	16.855	

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

Company:	Berry Petroleum Company (NAD 83)	**Local Co-ordinate Reference:**	Well OXY 22-3D (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 22-3D (OXY 22 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 #2	**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 Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
5,200.0	5,153.2	5,179.0	5,129.7	14.9	15.0	110.81	-253.6	612.3	483.1	454.4	28.66	16.856	
5,300.0	5,252.1	5,278.5	5,228.1	15.2	15.3	110.72	-258.6	626.3	493.1	463.8	29.25	16.857	
5,400.0	5,351.1	5,378.0	5,326.4	15.5	15.6	110.64	-263.7	640.3	503.1	473.3	29.85	16.857	
5,500.0	5,450.1	5,477.5	5,424.8	15.8	15.9	110.57	-268.8	654.2	513.2	482.7	30.44	16.858	
5,600.0	5,549.0	5,576.9	5,523.2	16.1	16.2	110.49	-273.9	668.2	523.2	492.2	31.03	16.859	
5,700.0	5,648.0	5,676.4	5,621.6	16.4	16.5	110.42	-279.0	682.1	533.2	501.6	31.63	16.860	
5,800.0	5,747.0	5,775.9	5,719.9	16.7	16.8	110.35	-284.1	696.1	543.3	511.0	32.22	16.860	
5,900.0	5,845.9	5,875.4	5,818.3	17.0	17.2	110.28	-289.1	710.0	553.3	520.5	32.82	16.861	
6,000.0	5,944.9	5,974.9	5,916.7	17.3	17.5	110.22	-294.2	724.0	563.3	529.9	33.41	16.862	
6,100.0	6,043.9	6,074.4	6,015.1	17.6	17.8	110.16	-299.3	738.0	573.4	539.4	34.00	16.862	
6,200.0	6,142.8	6,173.9	6,113.5	17.9	18.1	110.10	-304.4	751.9	583.4	548.8	34.60	16.863	
6,300.0	6,241.8	6,273.4	6,211.8	18.2	18.4	110.04	-309.5	765.9	593.5	558.3	35.19	16.864	
6,400.0	6,340.8	6,372.9	6,310.2	18.5	18.7	109.98	-314.5	779.8	603.5	567.7	35.79	16.865	
6,500.0	6,439.7	6,472.4	6,408.6	18.9	19.0	109.93	-319.6	793.8	613.5	577.2	36.38	16.865	
6,600.0	6,538.7	6,571.9	6,507.0	19.2	19.4	109.88	-324.7	807.8	623.6	586.6	36.97	16.866	
6,700.0	6,637.8	6,677.3	6,611.4	19.4	19.6	109.96	-329.6	821.2	632.8	595.2	37.53	16.860	
6,800.0	6,737.3	6,783.0	6,716.5	19.7	19.9	110.03	-333.6	832.0	640.1	602.1	38.01	16.839	
6,900.0	6,837.0	6,889.0	6,822.1	19.9	20.1	110.09	-336.5	840.1	645.6	607.2	38.42	16.802	
7,000.0	6,936.8	6,995.1	6,928.0	20.0	20.3	110.13	-338.4	845.4	649.3	610.5	38.76	16.751	
7,100.0	7,036.8	7,101.2	7,034.2	20.1	20.4	110.17	-339.4	848.0	651.1	612.0	39.03	16.683	
7,200.0	7,136.8	7,203.8	7,136.8	20.3	20.5	180.00	-339.4	848.2	651.3	612.0	39.25	16.592	
7,300.0	7,236.8	7,303.8	7,236.8	20.4	20.6	180.00	-339.4	848.2	651.3	611.8	39.47	16.498	
7,400.0	7,336.8	7,403.8	7,336.8	20.5	20.7	180.00	-339.4	848.2	651.3	611.6	39.70	16.404	
7,500.0	7,436.8	7,503.8	7,436.8	20.6	20.8	180.00	-339.4	848.2	651.3	611.3	39.93	16.311	
7,600.0	7,536.8	7,603.8	7,536.8	20.7	21.0	180.00	-339.4	848.2	651.3	611.1	40.16	16.218	
7,700.0	7,636.8	7,703.8	7,636.8	20.8	21.1	180.00	-339.4	848.2	651.3	610.9	40.39	16.125	
7,800.0	7,736.8	7,803.8	7,736.8	20.9	21.2	180.00	-339.4	848.2	651.3	610.6	40.62	16.033	
7,900.0	7,836.8	7,903.8	7,836.8	21.0	21.3	180.00	-339.4	848.2	651.3	610.4	40.86	15.941	
8,000.0	7,936.8	8,003.8	7,936.8	21.1	21.4	180.00	-339.4	848.2	651.3	610.2	41.09	15.849	
8,100.0	8,036.8	8,103.8	8,036.8	21.3	21.5	180.00	-339.4	848.2	651.3	609.9	41.33	15.758	
8,200.0	8,136.8	8,203.8	8,136.8	21.4	21.6	180.00	-339.4	848.2	651.3	609.7	41.57	15.667	
8,300.0	8,236.8	8,303.8	8,236.8	21.5	21.8	180.00	-339.4	848.2	651.3	609.5	41.81	15.577	
8,400.0	8,336.8	8,403.8	8,336.8	21.6	21.9	180.00	-339.4	848.2	651.3	609.2	42.05	15.487	
8,500.0	8,436.8	8,503.8	8,436.8	21.7	22.0	180.00	-339.4	848.2	651.3	609.0	42.30	15.398	
8,600.0	8,536.8	8,603.8	8,536.8	21.9	22.1	180.00	-339.4	848.2	651.3	608.7	42.54	15.309	
8,700.0	8,636.8	8,703.8	8,636.8	22.0	22.2	180.00	-339.4	848.2	651.3	608.5	42.79	15.221	
8,800.0	8,736.8	8,803.8	8,736.8	22.1	22.3	180.00	-339.4	848.2	651.3	608.2	43.04	15.133	
8,900.0	8,836.8	8,903.8	8,836.8	22.2	22.5	180.00	-339.4	848.2	651.3	608.0	43.28	15.046	
8,963.9	8,900.6	8,967.7	8,900.6	22.3	22.5	180.00	-339.4	848.2	651.3	607.8	43.44	14.991	
9,000.0	8,936.8	8,996.1	8,929.0	22.3	22.6	180.00	-339.4	848.2	651.3	607.8	43.53	14.964	
9,002.2	8,939.0	8,996.1	8,929.0	22.3	22.6	180.00	-339.4	848.2	651.3	607.8	43.53	14.963	SF

Company:	Berry Petroleum Company (NAD 83)	**Local Co-ordinate Reference:**	Well OXY 22-3D (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 22-3D (OXY 22 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 #2	**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 Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
0.0	0.0	0.0	0.0	0.0	0.0	-143.97	-12.0	-8.7	14.9				
100.0	100.0	100.0	100.0	0.1	0.1	-143.97	-12.0	-8.7	14.9	14.6	0.30	50.115	
200.0	200.0	200.0	200.0	0.3	0.3	-143.97	-12.0	-8.7	14.9	14.2	0.65	23.026	
300.0	300.0	300.0	300.0	0.5	0.5	-143.97	-12.0	-8.7	14.9	13.9	0.99	14.947	CC, ES
400.0	400.0	400.0	400.0	0.7	0.7	148.82	-12.0	-8.7	16.0	14.6	1.34	11.885	
500.0	499.9	500.2	500.2	0.9	0.8	151.94	-12.0	-7.4	18.5	16.8	1.70	10.932	
600.0	599.7	600.6	600.5	1.1	1.0	152.34	-12.0	-3.5	21.7	19.6	2.05	10.554	
700.0	699.3	700.9	700.6	1.3	1.2	150.98	-12.0	3.1	25.4	22.9	2.43	10.451	
800.0	798.6	801.3	800.5	1.5	1.4	148.61	-11.9	12.3	29.6	26.8	2.83	10.481	
900.0	897.6	901.6	900.2	1.8	1.7	145.42	-11.8	24.1	34.3	31.0	3.27	10.477	
1,000.0	996.6	1,001.7	999.3	2.1	2.0	140.95	-11.8	37.8	38.3	34.5	3.77	10.156	
1,100.0	1,095.5	1,101.5	1,098.2	2.4	2.2	137.25	-11.7	51.5	42.4	38.1	4.29	9.880	
1,200.0	1,194.5	1,201.4	1,197.1	2.7	2.5	134.21	-11.6	65.3	46.7	41.8	4.83	9.654	
1,300.0	1,293.5	1,301.3	1,296.1	3.0	2.8	131.69	-11.5	79.0	51.0	45.7	5.39	9.469	
1,400.0	1,392.4	1,401.2	1,395.0	3.3	3.1	129.57	-11.5	92.7	55.5	49.5	5.96	9.318	
1,500.0	1,491.4	1,501.1	1,493.9	3.6	3.4	127.77	-11.4	106.4	60.0	53.5	6.53	9.192	
1,600.0	1,590.4	1,600.9	1,592.9	3.9	3.7	126.22	-11.3	120.2	64.6	57.5	7.11	9.088	
1,700.0	1,689.3	1,700.8	1,691.8	4.2	3.9	124.88	-11.2	133.9	69.2	61.5	7.69	9.000	
1,800.0	1,788.3	1,800.7	1,790.7	4.5	4.2	123.70	-11.2	147.6	73.9	65.6	8.28	8.926	
1,900.0	1,887.3	1,900.6	1,889.7	4.8	4.5	122.67	-11.1	161.3	78.6	69.7	8.86	8.862	
2,000.0	1,986.2	2,000.5	1,988.6	5.1	4.8	121.75	-11.0	175.1	83.3	73.8	9.45	8.808	
2,100.0	2,085.2	2,100.3	2,087.5	5.4	5.1	120.93	-10.9	188.8	88.0	77.9	10.04	8.760	
2,200.0	2,184.2	2,200.2	2,186.5	5.7	5.4	120.19	-10.8	202.5	92.7	82.1	10.64	8.718	
2,300.0	2,283.1	2,300.1	2,285.4	6.0	5.7	119.53	-10.8	216.2	97.5	86.2	11.23	8.682	
2,400.0	2,382.1	2,400.0	2,384.3	6.3	6.0	118.93	-10.7	230.0	102.2	90.4	11.82	8.650	
2,500.0	2,481.1	2,499.9	2,483.3	6.6	6.3	118.38	-10.6	243.7	107.0	94.6	12.41	8.621	
2,600.0	2,580.0	2,599.8	2,582.2	6.9	6.6	117.87	-10.5	257.4	111.8	98.8	13.01	8.595	
2,700.0	2,679.0	2,699.6	2,681.1	7.2	6.9	117.41	-10.5	271.1	116.6	103.0	13.60	8.572	
2,800.0	2,778.0	2,799.5	2,780.1	7.5	7.2	116.99	-10.4	284.9	121.4	107.2	14.20	8.551	
2,900.0	2,876.9	2,899.4	2,879.0	7.8	7.5	116.60	-10.3	298.6	126.2	111.4	14.79	8.532	
3,000.0	2,975.9	2,999.3	2,977.9	8.1	7.8	116.23	-10.2	312.3	131.0	115.6	15.38	8.515	
3,100.0	3,074.9	3,099.2	3,076.9	8.4	8.1	115.90	-10.2	326.0	135.8	119.8	15.98	8.499	
3,200.0	3,173.8	3,199.0	3,175.8	8.7	8.4	115.58	-10.1	339.8	140.6	124.1	16.57	8.485	
3,300.0	3,272.8	3,298.9	3,274.7	9.0	8.7	115.29	-10.0	353.5	145.5	128.3	17.17	8.472	
3,400.0	3,371.8	3,398.8	3,373.7	9.4	9.0	115.01	-9.9	367.2	150.3	132.5	17.76	8.459	
3,500.0	3,470.7	3,498.7	3,472.6	9.7	9.3	114.76	-9.9	381.0	155.1	136.7	18.36	8.448	
3,600.0	3,569.7	3,598.6	3,571.5	10.0	9.6	114.51	-9.8	394.7	159.9	141.0	18.96	8.438	
3,700.0	3,668.7	3,698.4	3,670.5	10.3	9.8	114.29	-9.7	408.4	164.8	145.2	19.55	8.428	
3,800.0	3,767.6	3,798.3	3,769.4	10.6	10.1	114.07	-9.6	422.1	169.6	149.5	20.15	8.419	
3,900.0	3,866.6	3,898.2	3,868.3	10.9	10.4	113.87	-9.5	435.9	174.5	153.7	20.74	8.411	
4,000.0	3,965.6	3,998.1	3,967.3	11.2	10.7	113.68	-9.5	449.6	179.3	158.0	21.34	8.403	
4,100.0	4,064.5	4,098.0	4,066.2	11.5	11.0	113.49	-9.4	463.3	184.1	162.2	21.93	8.396	
4,200.0	4,163.5	4,197.8	4,165.1	11.8	11.3	113.32	-9.3	477.0	189.0	166.5	22.53	8.389	
4,300.0	4,262.5	4,297.7	4,264.1	12.1	11.6	113.16	-9.2	490.8	193.8	170.7	23.12	8.382	
4,400.0	4,361.4	4,397.6	4,363.0	12.4	11.9	113.00	-9.2	504.5	198.7	175.0	23.72	8.376	
4,500.0	4,460.4	4,497.5	4,461.9	12.7	12.2	112.85	-9.1	518.2	203.5	179.2	24.32	8.370	
4,600.0	4,559.4	4,597.4	4,560.9	13.0	12.5	112.71	-9.0	531.9	208.4	183.5	24.91	8.365	
4,700.0	4,658.3	4,697.3	4,659.8	13.3	12.8	112.58	-8.9	545.7	213.2	187.7	25.51	8.360	
4,800.0	4,757.3	4,797.1	4,758.7	13.6	13.1	112.45	-8.9	559.4	218.1	192.0	26.10	8.355	
4,900.0	4,856.3	4,897.0	4,857.7	13.9	13.4	112.32	-8.8	573.1	222.9	196.2	26.70	8.350	
5,000.0	4,955.2	4,996.9	4,956.6	14.3	13.7	112.21	-8.7	586.8	227.8	200.5	27.29	8.346	
5,100.0	5,054.2	5,096.8	5,055.5	14.6	14.0	112.09	-8.6	600.6	232.6	204.8	27.89	8.342	

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

Company:	Berry Petroleum Company (NAD 83)	**Local Co-ordinate Reference:**	Well OXY 22-3D (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 22-3D (OXY 22 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 #2	**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 Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
5,200.0	5,153.2	5,196.7	5,154.5	14.9	14.3	111.98	-8.6	614.3	237.5	209.0	28.48	8.338	
5,300.0	5,252.1	5,296.5	5,253.4	15.2	14.6	111.88	-8.5	628.0	242.4	213.3	29.08	8.334	
5,400.0	5,351.1	5,396.4	5,352.3	15.5	14.9	111.78	-8.4	641.7	247.2	217.5	29.68	8.331	
5,500.0	5,450.1	5,496.3	5,451.3	15.8	15.2	111.68	-8.3	655.5	252.1	221.8	30.27	8.327	
5,600.0	5,549.0	5,596.2	5,550.2	16.1	15.5	111.59	-8.2	669.2	256.9	226.1	30.87	8.324	
5,700.0	5,648.0	5,696.1	5,649.1	16.4	15.8	111.50	-8.2	682.9	261.8	230.3	31.46	8.321	
5,800.0	5,747.0	5,795.9	5,748.1	16.7	16.1	111.41	-8.1	696.6	266.7	234.6	32.06	8.318	
5,900.0	5,845.9	5,895.8	5,847.0	17.0	16.4	111.33	-8.0	710.4	271.5	238.9	32.66	8.315	
6,000.0	5,944.9	5,995.7	5,945.9	17.3	16.7	111.25	-7.9	724.1	276.4	243.1	33.25	8.312	
6,100.0	6,043.9	6,095.6	6,044.9	17.6	17.0	111.17	-7.9	737.8	281.3	247.4	33.85	8.310	
6,200.0	6,142.8	6,195.5	6,143.8	17.9	17.3	111.10	-7.8	751.5	286.1	251.7	34.44	8.307	
6,300.0	6,241.8	6,295.3	6,242.7	18.2	17.6	111.03	-7.7	765.3	291.0	255.9	35.04	8.305	
6,400.0	6,340.8	6,395.2	6,341.7	18.5	17.9	110.96	-7.6	779.0	295.8	260.2	35.63	8.302	
6,500.0	6,439.7	6,495.1	6,440.6	18.9	18.2	110.89	-7.6	792.7	300.7	264.5	36.23	8.300	
6,600.0	6,538.7	6,595.0	6,539.5	19.2	18.5	110.82	-7.5	806.4	305.6	268.8	36.83	8.298	
6,700.0	6,637.8	6,694.8	6,638.5	19.4	18.7	110.76	-7.4	819.3	310.0	272.6	37.37	8.296	
6,800.0	6,737.3	6,794.6	6,737.7	19.7	19.0	110.71	-7.3	829.7	313.6	275.7	37.84	8.287	
6,900.0	6,837.0	6,894.4	6,837.3	19.9	19.2	110.69	-7.3	837.4	316.3	278.0	38.23	8.272	
7,000.0	6,936.8	6,994.3	6,937.0	20.0	19.3	110.67	-7.3	842.6	318.1	279.5	38.56	8.249	
7,100.0	7,036.8	7,094.1	7,036.8	20.1	19.5	110.68	-7.3	845.1	319.0	280.2	38.81	8.218	
7,200.0	7,136.8	7,194.1	7,136.8	20.3	19.6	-179.50	-7.3	845.4	319.1	280.1	39.03	8.174	
7,300.0	7,236.8	7,294.1	7,236.8	20.4	19.7	-179.50	-7.3	845.4	319.1	279.8	39.26	8.128	
7,400.0	7,336.8	7,394.1	7,336.8	20.5	19.8	-179.50	-7.3	845.4	319.1	279.6	39.49	8.081	
7,500.0	7,436.8	7,494.1	7,436.8	20.6	19.9	-179.50	-7.3	845.4	319.1	279.4	39.72	8.034	
7,600.0	7,536.8	7,594.1	7,536.8	20.7	20.0	-179.50	-7.3	845.4	319.1	279.1	39.95	7.988	
7,700.0	7,636.8	7,694.1	7,636.8	20.8	20.1	-179.50	-7.3	845.4	319.1	278.9	40.18	7.942	
7,800.0	7,736.8	7,794.1	7,736.8	20.9	20.3	-179.50	-7.3	845.4	319.1	278.7	40.41	7.896	
7,900.0	7,836.8	7,894.1	7,836.8	21.0	20.4	-179.50	-7.3	845.4	319.1	278.4	40.65	7.850	
8,000.0	7,936.8	7,994.1	7,936.8	21.1	20.5	-179.50	-7.3	845.4	319.1	278.2	40.88	7.805	
8,100.0	8,036.8	8,094.1	8,036.8	21.3	20.6	-179.50	-7.3	845.4	319.1	278.0	41.12	7.759	
8,200.0	8,136.8	8,194.1	8,136.8	21.4	20.7	-179.50	-7.3	845.4	319.1	277.7	41.36	7.714	
8,300.0	8,236.8	8,294.1	8,236.8	21.5	20.9	-179.50	-7.3	845.4	319.1	277.5	41.61	7.669	
8,400.0	8,336.8	8,394.1	8,336.8	21.6	21.0	-179.50	-7.3	845.4	319.1	277.2	41.85	7.625	
8,500.0	8,436.8	8,494.1	8,436.8	21.7	21.1	-179.50	-7.3	845.4	319.1	277.0	42.09	7.581	
8,600.0	8,536.8	8,594.1	8,536.8	21.9	21.2	-179.50	-7.3	845.4	319.1	276.7	42.34	7.536	
8,700.0	8,636.8	8,694.1	8,636.8	22.0	21.3	-179.50	-7.3	845.4	319.1	276.5	42.59	7.493	
8,800.0	8,736.8	8,794.1	8,736.8	22.1	21.5	-179.50	-7.3	845.4	319.1	276.3	42.84	7.449	
8,900.0	8,836.8	8,894.1	8,836.8	22.2	21.6	-179.50	-7.3	845.4	319.1	276.0	43.09	7.406	
8,965.7	8,902.5	8,959.8	8,902.5	22.3	21.7	-179.50	-7.3	845.4	319.1	275.8	43.25	7.377	
9,000.0	8,936.8	8,991.3	8,934.0	22.3	21.7	-179.50	-7.3	845.4	319.1	275.8	43.34	7.364	SF
9,002.2	8,939.0	8,991.3	8,934.0	22.3	21.7	-179.50	-7.3	845.4	319.1	275.8	43.34	7.364	

Company:	Berry Petroleum Company (NAD 83)	**Local Co-ordinate Reference:**	Well OXY 22-3D (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 22-3D (OXY 22 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 #2	**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 Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
0.0	0.0	0.0	0.0	0.0	0.0	35.23	12.4	8.7	15.2				
100.0	100.0	100.0	100.0	0.1	0.1	35.23	12.4	8.7	15.2	14.9	0.30	51.101	
200.0	200.0	200.0	200.0	0.3	0.3	35.23	12.4	8.7	15.2	14.5	0.65	23.479	
300.0	300.0	300.0	300.0	0.5	0.5	35.23	12.4	8.7	15.2	14.2	0.99	15.241	CC
400.0	400.0	399.6	399.6	0.7	0.7	-35.74	13.1	9.8	15.3	14.0	1.34	11.399	ES
500.0	499.9	499.2	499.2	0.9	0.9	-39.07	15.4	13.0	15.8	14.1	1.70	9.322	
600.0	599.7	598.8	598.5	1.1	1.1	-44.13	19.2	18.3	16.8	14.7	2.07	8.120	
700.0	699.3	698.4	697.7	1.3	1.3	-50.27	24.4	25.7	18.3	15.8	2.47	7.417	
800.0	798.6	798.0	796.6	1.5	1.5	-56.71	31.2	35.2	20.5	17.6	2.92	7.011	
900.0	897.6	897.5	895.1	1.8	1.8	-62.13	39.4	46.8	23.6	20.2	3.44	6.859	SF
1,000.0	996.6	997.1	993.3	2.1	2.1	-63.06	49.0	60.3	28.3	24.4	3.97	7.136	
1,100.0	1,095.5	1,097.0	1,091.7	2.4	2.4	-63.08	59.0	74.3	33.4	28.9	4.50	7.415	
1,200.0	1,194.5	1,196.9	1,190.1	2.7	2.8	-63.10	68.9	88.3	38.5	33.4	5.05	7.623	
1,300.0	1,293.5	1,296.7	1,288.5	3.0	3.1	-63.11	78.9	102.2	43.5	37.9	5.59	7.783	
1,400.0	1,392.4	1,396.6	1,386.8	3.3	3.4	-63.11	88.8	116.2	48.6	42.4	6.14	7.909	
1,500.0	1,491.4	1,496.5	1,485.2	3.6	3.8	-63.12	98.8	130.2	53.6	46.9	6.70	8.010	
1,600.0	1,590.4	1,596.4	1,583.6	3.9	4.1	-63.13	108.7	144.2	58.7	51.4	7.25	8.093	
1,700.0	1,689.3	1,696.2	1,682.0	4.2	4.5	-63.13	118.7	158.2	63.8	56.0	7.81	8.163	
1,800.0	1,788.3	1,796.1	1,780.4	4.5	4.8	-63.13	128.6	172.2	68.8	60.5	8.37	8.221	
1,900.0	1,887.3	1,896.0	1,878.8	4.8	5.2	-63.14	138.6	186.1	73.9	65.0	8.93	8.271	
2,000.0	1,986.2	1,995.8	1,977.2	5.1	5.5	-63.14	148.5	200.1	78.9	69.4	9.49	8.314	
2,100.0	2,085.2	2,095.7	2,075.5	5.4	5.8	-63.14	158.5	214.1	84.0	73.9	10.06	8.352	
2,200.0	2,184.2	2,195.6	2,173.9	5.7	6.2	-63.14	168.4	228.1	89.1	78.4	10.62	8.385	
2,300.0	2,283.1	2,295.5	2,272.3	6.0	6.5	-63.15	178.3	242.1	94.1	82.9	11.19	8.415	
2,400.0	2,382.1	2,395.3	2,370.7	6.3	6.9	-63.15	188.3	256.1	99.2	87.4	11.75	8.441	
2,500.0	2,481.1	2,495.2	2,469.1	6.6	7.2	-63.15	198.2	270.0	104.2	91.9	12.32	8.464	
2,600.0	2,580.0	2,595.1	2,567.5	6.9	7.6	-63.15	208.2	284.0	109.3	96.4	12.88	8.486	
2,700.0	2,679.0	2,694.9	2,665.9	7.2	7.9	-63.15	218.1	298.0	114.4	100.9	13.45	8.505	
2,800.0	2,778.0	2,794.8	2,764.3	7.5	8.3	-63.15	228.1	312.0	119.4	105.4	14.01	8.522	
2,900.0	2,876.9	2,894.7	2,862.6	7.8	8.6	-63.15	238.0	326.0	124.5	109.9	14.58	8.538	
3,000.0	2,975.9	2,994.6	2,961.0	8.1	9.0	-63.16	248.0	340.0	129.5	114.4	15.15	8.553	
3,100.0	3,074.9	3,094.4	3,059.4	8.4	9.3	-63.16	257.9	353.9	134.6	118.9	15.71	8.566	
3,200.0	3,173.8	3,194.3	3,157.8	8.7	9.7	-63.16	267.9	367.9	139.7	123.4	16.28	8.578	
3,300.0	3,272.8	3,294.2	3,256.2	9.0	10.0	-63.16	277.8	381.9	144.7	127.9	16.85	8.590	
3,400.0	3,371.8	3,394.1	3,354.6	9.4	10.4	-63.16	287.7	395.9	149.8	132.4	17.42	8.601	
3,500.0	3,470.7	3,493.9	3,453.0	9.7	10.7	-63.16	297.7	409.9	154.9	136.9	17.98	8.610	
3,600.0	3,569.7	3,593.8	3,551.3	10.0	11.1	-63.16	307.6	423.9	159.9	141.4	18.55	8.620	
3,700.0	3,668.7	3,693.7	3,649.7	10.3	11.4	-63.16	317.6	437.8	165.0	145.9	19.12	8.628	
3,800.0	3,767.6	3,793.5	3,748.1	10.6	11.7	-63.16	327.5	451.8	170.0	150.3	19.69	8.636	
3,900.0	3,866.6	3,893.4	3,846.5	10.9	12.1	-63.16	337.5	465.8	175.1	154.8	20.26	8.644	
4,000.0	3,965.6	3,993.3	3,944.9	11.2	12.4	-63.16	347.4	479.8	180.2	159.3	20.82	8.651	
4,100.0	4,064.5	4,093.2	4,043.3	11.5	12.8	-63.16	357.4	493.8	185.2	163.8	21.39	8.658	
4,200.0	4,163.5	4,193.0	4,141.7	11.8	13.1	-63.16	367.3	507.8	190.3	168.3	21.96	8.664	
4,300.0	4,262.5	4,292.9	4,240.1	12.1	13.5	-63.16	377.3	521.7	195.3	172.8	22.53	8.670	
4,400.0	4,361.4	4,392.8	4,338.4	12.4	13.8	-63.17	387.2	535.7	200.4	177.3	23.10	8.676	
4,500.0	4,460.4	4,492.6	4,436.8	12.7	14.2	-63.17	397.2	549.7	205.5	181.8	23.67	8.681	
4,600.0	4,559.4	4,592.5	4,535.2	13.0	14.5	-63.17	407.1	563.7	210.5	186.3	24.23	8.687	
4,700.0	4,658.3	4,692.4	4,633.6	13.3	14.9	-63.17	417.0	577.7	215.6	190.8	24.80	8.691	
4,800.0	4,757.3	4,792.3	4,732.0	13.6	15.2	-63.17	427.0	591.7	220.6	195.3	25.37	8.696	
4,900.0	4,856.3	4,892.1	4,830.4	13.9	15.6	-63.17	436.9	605.6	225.7	199.8	25.94	8.701	
5,000.0	4,955.2	4,992.0	4,928.8	14.3	15.9	-63.17	446.9	619.6	230.8	204.2	26.51	8.705	
5,100.0	5,054.2	5,091.9	5,027.1	14.6	16.3	-63.17	456.8	633.6	235.8	208.7	27.08	8.709	

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

Company:	Berry Petroleum Company (NAD 83)	**Local Co-ordinate Reference:**	Well OXY 22-3D (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 22-3D (OXY 22 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 #2	**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 Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
5,200.0	5,153.2	5,191.7	5,125.5	14.9	16.6	-63.17	466.8	647.6	240.9	213.2	27.65	8.713	
5,300.0	5,252.1	5,291.6	5,223.9	15.2	17.0	-63.17	476.7	661.6	245.9	217.7	28.22	8.716	
5,400.0	5,351.1	5,391.5	5,322.3	15.5	17.3	-63.17	486.7	675.6	251.0	222.2	28.78	8.720	
5,500.0	5,450.1	5,491.4	5,420.7	15.8	17.7	-63.17	496.6	689.5	256.1	226.7	29.35	8.723	
5,600.0	5,549.0	5,591.2	5,519.1	16.1	18.0	-63.17	506.6	703.5	261.1	231.2	29.92	8.727	
5,700.0	5,648.0	5,691.1	5,617.5	16.4	18.4	-63.17	516.5	717.5	266.2	235.7	30.49	8.730	
5,800.0	5,747.0	5,791.0	5,715.9	16.7	18.7	-63.17	526.5	731.5	271.2	240.2	31.06	8.733	
5,900.0	5,845.9	5,890.8	5,814.2	17.0	19.1	-63.17	536.4	745.5	276.3	244.7	31.63	8.736	
6,000.0	5,944.9	5,990.7	5,912.6	17.3	19.4	-63.17	546.3	759.4	281.4	249.2	32.20	8.738	
6,100.0	6,043.9	6,090.6	6,011.0	17.6	19.8	-63.17	556.3	773.4	286.4	253.7	32.77	8.741	
6,200.0	6,142.8	6,190.5	6,109.4	17.9	20.1	-63.17	566.2	787.4	291.5	258.1	33.34	8.744	
6,300.0	6,241.8	6,290.3	6,207.8	18.2	20.5	-63.17	576.2	801.4	296.5	262.6	33.91	8.746	
6,400.0	6,340.8	6,390.2	6,306.2	18.5	20.8	-63.17	586.1	815.4	301.6	267.1	34.48	8.748	
6,500.0	6,439.7	6,490.1	6,404.6	18.9	21.2	-63.17	596.1	829.4	306.7	271.6	35.04	8.751	
6,600.0	6,538.7	6,593.8	6,506.8	19.2	21.5	-63.26	606.0	843.4	311.3	275.7	35.63	8.737	
6,700.0	6,637.8	6,699.5	6,611.5	19.4	21.8	-63.55	614.6	855.4	314.8	278.6	36.21	8.694	
6,800.0	6,737.3	6,805.2	6,716.5	19.7	22.1	-63.78	621.5	865.1	317.6	280.9	36.70	8.653	
6,900.0	6,837.0	6,911.0	6,822.0	19.9	22.3	-63.94	626.7	872.5	319.7	282.6	37.12	8.613	
7,000.0	6,936.8	7,016.8	6,927.6	20.0	22.4	-64.05	630.2	877.4	321.2	283.7	37.47	8.573	
7,100.0	7,036.8	7,122.7	7,033.4	20.1	22.6	-64.09	632.1	880.0	322.0	284.3	37.74	8.532	
7,200.0	7,136.8	7,226.1	7,136.8	20.3	22.7	5.73	632.3	880.4	322.1	284.2	37.97	8.485	
7,300.0	7,236.8	7,326.1	7,236.8	20.4	22.8	5.73	632.3	880.4	322.1	283.9	38.20	8.433	
7,400.0	7,336.8	7,426.1	7,336.8	20.5	22.9	5.73	632.3	880.4	322.1	283.7	38.43	8.382	
7,500.0	7,436.8	7,526.1	7,436.8	20.6	23.0	5.73	632.3	880.4	322.1	283.5	38.67	8.331	
7,600.0	7,536.8	7,626.1	7,536.8	20.7	23.1	5.73	632.3	880.4	322.1	283.2	38.91	8.280	
7,700.0	7,636.8	7,726.1	7,636.8	20.8	23.2	5.73	632.3	880.4	322.1	283.0	39.14	8.230	
7,800.0	7,736.8	7,826.1	7,736.8	20.9	23.3	5.73	632.3	880.4	322.1	282.8	39.38	8.179	
7,900.0	7,836.8	7,926.1	7,836.8	21.0	23.4	5.73	632.3	880.4	322.1	282.5	39.63	8.129	
8,000.0	7,936.8	8,026.1	7,936.8	21.1	23.5	5.73	632.3	880.4	322.1	282.3	39.87	8.080	
8,100.0	8,036.8	8,126.1	8,036.8	21.3	23.6	5.73	632.3	880.4	322.1	282.0	40.12	8.030	
8,200.0	8,136.8	8,226.1	8,136.8	21.4	23.7	5.73	632.3	880.4	322.1	281.8	40.36	7.981	
8,300.0	8,236.8	8,326.1	8,236.8	21.5	23.8	5.73	632.3	880.4	322.1	281.5	40.61	7.932	
8,400.0	8,336.8	8,426.1	8,336.8	21.6	23.9	5.73	632.3	880.4	322.1	281.3	40.86	7.884	
8,500.0	8,436.8	8,526.1	8,436.8	21.7	24.0	5.73	632.3	880.4	322.1	281.0	41.11	7.836	
8,600.0	8,536.8	8,626.1	8,536.8	21.9	24.1	5.73	632.3	880.4	322.1	280.8	41.36	7.788	
8,700.0	8,636.8	8,726.1	8,636.8	22.0	24.2	5.73	632.3	880.4	322.1	280.5	41.62	7.740	
8,800.0	8,736.8	8,826.1	8,736.8	22.1	24.3	5.73	632.3	880.4	322.1	280.3	41.87	7.693	
8,900.0	8,836.8	8,926.1	8,836.8	22.2	24.4	5.73	632.3	880.4	322.1	280.0	42.13	7.646	
9,000.0	8,936.8	9,026.1	8,936.8	22.3	24.5	5.73	632.3	880.4	322.1	279.8	42.39	7.600	
9,002.2	8,939.0	9,028.3	8,939.0	22.3	24.5	5.73	632.3	880.4	322.1	279.7	42.39	7.599	

Company:	Berry Petroleum Company (NAD 83)	**Local Co-ordinate Reference:**	Well OXY 22-3D (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 22-3D (OXY 22 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 #2	**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 Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
0.0	0.0	0.0	0.0	0.0	0.0	35.20	24.4	17.2	29.9				
100.0	100.0	100.0	100.0	0.1	0.1	35.20	24.4	17.2	29.9	29.6	0.30	100.651	
200.0	200.0	200.0	200.0	0.3	0.3	35.20	24.4	17.2	29.9	29.2	0.65	46.245	CC, ES
300.0	300.0	299.2	299.2	0.5	0.5	35.50	25.4	18.1	31.2	30.2	1.00	31.296	
400.0	400.0	398.3	398.2	0.7	0.7	-34.74	28.2	20.7	33.9	32.6	1.34	25.295	
500.0	499.9	497.4	497.1	0.9	0.9	-36.85	32.9	25.0	37.2	35.5	1.69	21.953	
600.0	599.7	596.3	595.6	1.1	1.1	-40.17	39.6	31.1	41.0	38.9	2.06	19.931	
700.0	699.3	695.0	693.7	1.3	1.4	-44.25	48.0	38.8	45.5	43.0	2.44	18.630	
800.0	798.6	793.7	791.3	1.5	1.7	-48.71	58.4	48.3	50.8	47.9	2.87	17.731	
900.0	897.6	892.1	888.3	1.8	2.0	-53.01	70.5	59.4	57.4	54.0	3.34	17.160	
1,000.0	996.6	990.5	984.9	2.1	2.3	-55.61	84.5	72.2	66.2	62.4	3.85	17.214	
1,100.0	1,095.5	1,090.0	1,082.3	2.4	2.7	-57.27	99.3	85.8	76.0	71.6	4.37	17.391	
1,200.0	1,194.5	1,189.5	1,179.8	2.7	3.1	-58.55	114.1	99.3	85.8	80.9	4.90	17.494	
1,300.0	1,293.5	1,289.0	1,277.2	3.0	3.5	-59.56	128.9	112.9	95.6	90.1	5.45	17.553	
1,400.0	1,392.4	1,388.5	1,374.7	3.3	3.9	-60.39	143.6	126.4	105.4	99.4	6.00	17.584	
1,500.0	1,491.4	1,488.0	1,472.2	3.6	4.2	-61.07	158.4	139.9	115.3	108.8	6.55	17.599	
1,600.0	1,590.4	1,587.5	1,569.6	3.9	4.6	-61.65	173.2	153.5	125.2	118.1	7.11	17.603	
1,700.0	1,689.3	1,687.0	1,667.1	4.2	5.0	-62.14	188.0	167.0	135.1	127.4	7.68	17.600	
1,800.0	1,788.3	1,786.5	1,764.5	4.5	5.4	-62.57	202.8	180.6	145.0	136.7	8.24	17.593	
1,900.0	1,887.3	1,886.0	1,862.0	4.8	5.8	-62.94	217.6	194.1	154.9	146.1	8.81	17.583	
2,000.0	1,986.2	1,985.5	1,959.5	5.1	6.2	-63.27	232.4	207.6	164.8	155.4	9.38	17.572	
2,100.0	2,085.2	2,085.0	2,056.9	5.4	6.6	-63.56	247.2	221.2	174.7	164.8	9.95	17.561	
2,200.0	2,184.2	2,184.5	2,154.4	5.7	7.0	-63.81	262.0	234.7	184.7	174.1	10.52	17.548	
2,300.0	2,283.1	2,284.0	2,251.9	6.0	7.3	-64.05	276.7	248.3	194.6	183.5	11.10	17.536	
2,400.0	2,382.1	2,383.5	2,349.3	6.3	7.7	-64.25	291.5	261.8	204.5	192.8	11.67	17.524	
2,500.0	2,481.1	2,483.0	2,446.8	6.6	8.1	-64.44	306.3	275.3	214.4	202.2	12.25	17.512	
2,600.0	2,580.0	2,582.5	2,544.2	6.9	8.5	-64.62	321.1	288.9	224.4	211.6	12.82	17.500	
2,700.0	2,679.0	2,682.0	2,641.7	7.2	8.9	-64.78	335.9	302.4	234.3	220.9	13.40	17.489	
2,800.0	2,778.0	2,781.5	2,739.2	7.5	9.3	-64.92	350.7	316.0	244.3	230.3	13.97	17.478	
2,900.0	2,876.9	2,881.0	2,836.6	7.8	9.7	-65.06	365.5	329.5	254.2	239.6	14.55	17.468	
3,000.0	2,975.9	2,980.5	2,934.1	8.1	10.1	-65.18	380.3	343.0	264.1	249.0	15.13	17.458	
3,100.0	3,074.9	3,080.0	3,031.5	8.4	10.5	-65.29	395.1	356.6	274.1	258.4	15.71	17.448	
3,200.0	3,173.8	3,179.5	3,129.0	8.7	10.9	-65.40	409.8	370.1	284.0	267.7	16.29	17.439	
3,300.0	3,272.8	3,279.0	3,226.5	9.0	11.3	-65.50	424.6	383.7	294.0	277.1	16.87	17.430	
3,400.0	3,371.8	3,378.5	3,323.9	9.4	11.7	-65.59	439.4	397.2	303.9	286.5	17.44	17.422	
3,500.0	3,470.7	3,478.1	3,421.4	9.7	12.1	-65.68	454.2	410.7	313.9	295.8	18.02	17.414	
3,600.0	3,569.7	3,577.6	3,518.9	10.0	12.4	-65.76	469.0	424.3	323.8	305.2	18.60	17.406	
3,700.0	3,668.7	3,677.1	3,616.3	10.3	12.8	-65.84	483.8	437.8	333.8	314.6	19.18	17.399	
3,800.0	3,767.6	3,776.6	3,713.8	10.6	13.2	-65.91	498.6	451.4	343.7	323.9	19.76	17.392	
3,900.0	3,866.6	3,876.1	3,811.2	10.9	13.6	-65.98	513.4	464.9	353.7	333.3	20.34	17.385	
4,000.0	3,965.6	3,975.6	3,908.7	11.2	14.0	-66.05	528.2	478.4	363.6	342.7	20.92	17.379	
4,100.0	4,064.5	4,075.1	4,006.2	11.5	14.4	-66.11	542.9	492.0	373.5	352.0	21.50	17.372	
4,200.0	4,163.5	4,174.6	4,103.6	11.8	14.8	-66.17	557.7	505.5	383.5	361.4	22.08	17.366	
4,300.0	4,262.5	4,274.1	4,201.1	12.1	15.2	-66.22	572.5	519.1	393.4	370.8	22.66	17.361	
4,400.0	4,361.4	4,373.6	4,298.6	12.4	15.6	-66.27	587.3	532.6	403.4	380.2	23.24	17.355	
4,500.0	4,460.4	4,473.1	4,396.0	12.7	16.0	-66.32	602.1	546.1	413.3	389.5	23.82	17.350	
4,600.0	4,559.4	4,572.6	4,493.5	13.0	16.4	-66.37	616.9	559.7	423.3	398.9	24.40	17.345	
4,700.0	4,658.3	4,672.1	4,590.9	13.3	16.8	-66.42	631.7	573.2	433.3	408.3	24.99	17.340	
4,800.0	4,757.3	4,771.6	4,688.4	13.6	17.2	-66.46	646.5	586.8	443.2	417.6	25.57	17.335	
4,900.0	4,856.3	4,871.1	4,785.9	13.9	17.6	-66.50	661.3	600.3	453.2	427.0	26.15	17.331	
5,000.0	4,955.2	4,970.6	4,883.3	14.3	17.9	-66.54	676.0	613.9	463.1	436.4	26.73	17.326	
5,100.0	5,054.2	5,070.1	4,980.8	14.6	18.3	-66.58	690.8	627.4	473.1	445.7	27.31	17.322	

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

Company:	Berry Petroleum Company (NAD 83)	**Local Co-ordinate Reference:**	Well OXY 22-3D (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 22-3D (OXY 22 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 #2	**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 Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
5,200.0	5,153.2	5,169.6	5,078.2	14.9	18.7	-66.62	705.6	640.9	483.0	455.1	27.89	17.318	
5,300.0	5,252.1	5,269.1	5,175.7	15.2	19.1	-66.65	720.4	654.5	493.0	464.5	28.47	17.314	
5,400.0	5,351.1	5,368.6	5,273.2	15.5	19.5	-66.69	735.2	668.0	502.9	473.9	29.05	17.310	
5,500.0	5,450.1	5,468.1	5,370.6	15.8	19.9	-66.72	750.0	681.6	512.9	483.2	29.63	17.306	
5,600.0	5,549.0	5,567.6	5,468.1	16.1	20.3	-66.75	764.8	695.1	522.8	492.6	30.22	17.303	
5,700.0	5,648.0	5,667.1	5,565.6	16.4	20.7	-66.78	779.6	708.6	532.8	502.0	30.80	17.299	
5,800.0	5,747.0	5,766.6	5,663.0	16.7	21.1	-66.81	794.4	722.2	542.7	511.4	31.38	17.296	
5,900.0	5,845.9	5,866.1	5,760.5	17.0	21.5	-66.83	809.1	735.7	552.7	520.7	31.96	17.293	
6,000.0	5,944.9	5,965.6	5,857.9	17.3	21.9	-66.86	823.9	749.3	562.6	530.1	32.54	17.290	
6,100.0	6,043.9	6,065.1	5,955.4	17.6	22.3	-66.89	838.7	762.8	572.6	539.5	33.12	17.287	
6,200.0	6,142.8	6,164.6	6,052.9	17.9	22.7	-66.91	853.5	776.3	582.5	548.8	33.70	17.284	
6,300.0	6,241.8	6,264.1	6,150.3	18.2	23.1	-66.94	868.3	789.9	592.5	558.2	34.29	17.281	
6,400.0	6,340.8	6,363.6	6,247.8	18.5	23.5	-66.96	883.1	803.4	602.5	567.6	34.87	17.278	
6,500.0	6,439.7	6,465.4	6,347.5	18.9	23.9	-66.99	898.2	817.2	612.4	576.9	35.46	17.272	
6,600.0	6,538.7	6,579.1	6,459.3	19.2	24.2	-67.14	913.4	831.2	620.8	584.7	36.09	17.204	
6,700.0	6,637.8	6,693.1	6,571.9	19.4	24.6	-67.47	926.3	843.0	627.5	590.8	36.70	17.100	
6,800.0	6,737.3	6,807.2	6,685.2	19.7	24.9	-67.73	936.7	852.5	632.9	595.7	37.22	17.003	
6,900.0	6,837.0	6,921.6	6,799.0	19.9	25.1	-67.91	944.5	859.7	637.0	599.4	37.67	16.912	
7,000.0	6,936.8	7,036.0	6,913.2	20.0	25.3	-68.03	949.9	864.6	639.9	601.8	38.03	16.826	
7,100.0	7,036.8	7,150.6	7,027.7	20.1	25.4	-68.08	952.8	867.2	641.4	603.1	38.31	16.742	
7,200.0	7,136.8	7,259.6	7,136.8	20.3	25.5	1.74	953.2	867.7	641.7	603.2	38.55	16.648	
7,300.0	7,236.8	7,359.6	7,236.8	20.4	25.6	1.74	953.2	867.7	641.7	602.9	38.78	16.550	
7,400.0	7,336.8	7,459.6	7,336.8	20.5	25.7	1.74	953.2	867.7	641.7	602.7	39.01	16.452	
7,500.0	7,436.8	7,559.6	7,436.8	20.6	25.8	1.74	953.2	867.7	641.7	602.5	39.24	16.354	
7,600.0	7,536.8	7,659.6	7,536.8	20.7	25.9	1.74	953.2	867.7	641.7	602.3	39.47	16.257	
7,700.0	7,636.8	7,759.6	7,636.8	20.8	26.0	1.74	953.2	867.7	641.7	602.0	39.71	16.161	
7,800.0	7,736.8	7,859.6	7,736.8	20.9	26.1	1.74	953.2	867.7	641.7	601.8	39.95	16.064	
7,900.0	7,836.8	7,959.6	7,836.8	21.0	26.2	1.74	953.2	867.7	641.7	601.5	40.19	15.969	
8,000.0	7,936.8	8,059.6	7,936.8	21.1	26.2	1.74	953.2	867.7	641.7	601.3	40.43	15.874	
8,100.0	8,036.8	8,159.6	8,036.8	21.3	26.3	1.74	953.2	867.7	641.7	601.1	40.67	15.779	
8,200.0	8,136.8	8,259.6	8,136.8	21.4	26.4	1.74	953.2	867.7	641.7	600.8	40.91	15.685	
8,300.0	8,236.8	8,359.6	8,236.8	21.5	26.5	1.74	953.2	867.7	641.7	600.6	41.16	15.592	
8,400.0	8,336.8	8,459.6	8,336.8	21.6	26.6	1.74	953.2	867.7	641.7	600.3	41.41	15.499	
8,500.0	8,436.8	8,559.6	8,436.8	21.7	26.7	1.74	953.2	867.7	641.7	600.1	41.65	15.406	
8,600.0	8,536.8	8,659.6	8,536.8	21.9	26.8	1.74	953.2	867.7	641.7	599.8	41.90	15.314	
8,700.0	8,636.8	8,759.6	8,636.8	22.0	26.9	1.74	953.2	867.7	641.7	599.6	42.15	15.223	
8,800.0	8,736.8	8,859.6	8,736.8	22.1	27.0	1.74	953.2	867.7	641.7	599.3	42.41	15.132	
8,900.0	8,836.8	8,959.6	8,836.8	22.2	27.1	1.74	953.2	867.7	641.7	599.1	42.66	15.042	
9,000.0	8,936.8	9,059.6	8,936.8	22.3	27.2	1.74	953.2	867.7	641.7	598.8	42.92	14.953	
9,002.2	8,939.0	9,061.9	8,939.0	22.3	27.2	1.74	953.2	867.7	641.7	598.8	42.92	14.951	SF

Company:	Berry Petroleum Company (NAD 83)	**Local Co-ordinate Reference:**	Well OXY 22-3D (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 22-3D (OXY 22 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 #2	**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 Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
0.0	0.0	0.0	0.0	0.0	0.0	35.49	36.4	26.0	44.7				
100.0	100.0	100.0	100.0	0.1	0.1	35.49	36.4	26.0	44.7	44.4	0.30	150.708	
200.0	200.0	200.0	200.0	0.3	0.3	35.49	36.4	26.0	44.7	44.1	0.65	69.244	CC, ES
300.0	300.0	298.8	298.8	0.5	0.5	35.52	37.4	26.7	46.0	45.0	0.99	46.258	
400.0	400.0	397.6	397.5	0.7	0.7	-35.04	40.5	29.0	48.8	47.5	1.34	36.423	
500.0	499.9	496.2	495.9	0.9	0.9	-37.22	45.6	32.8	52.1	50.4	1.69	30.819	
600.0	599.7	594.7	594.0	1.1	1.1	-40.53	52.8	38.1	56.0	54.0	2.05	27.327	
700.0	699.3	693.0	691.6	1.3	1.4	-44.62	61.9	44.9	60.7	58.3	2.43	25.009	
800.0	798.6	791.1	788.7	1.5	1.6	-49.16	73.0	53.2	66.5	63.6	2.84	23.372	
900.0	897.6	889.0	885.3	1.8	2.0	-53.69	86.1	63.0	73.6	70.3	3.31	22.256	
1,000.0	996.6	986.6	981.0	2.1	2.3	-56.89	101.2	74.1	83.3	79.5	3.80	21.900	SF
1,100.0	1,095.5	1,083.7	1,075.9	2.4	2.7	-58.74	118.1	86.7	95.5	91.2	4.32	22.109	
1,200.0	1,194.5	1,181.1	1,170.4	2.7	3.2	-59.61	136.8	100.7	109.9	105.0	4.84	22.700	
1,300.0	1,293.5	1,280.0	1,266.2	3.0	3.6	-60.15	156.4	115.3	124.8	119.4	5.37	23.236	
1,400.0	1,392.4	1,378.8	1,362.0	3.3	4.0	-60.58	176.0	129.8	139.8	133.9	5.91	23.651	
1,500.0	1,491.4	1,477.7	1,457.8	3.6	4.5	-60.93	195.5	144.4	154.7	148.3	6.45	23.980	
1,600.0	1,590.4	1,576.6	1,553.6	3.9	4.9	-61.21	215.1	158.9	169.7	162.7	7.00	24.244	
1,700.0	1,689.3	1,675.4	1,649.4	4.2	5.4	-61.45	234.6	173.5	184.7	177.1	7.55	24.461	
1,800.0	1,788.3	1,774.3	1,745.3	4.5	5.9	-61.65	254.2	188.0	199.6	191.5	8.10	24.642	
1,900.0	1,887.3	1,873.2	1,841.1	4.8	6.3	-61.82	273.8	202.6	214.6	206.0	8.66	24.793	
2,000.0	1,986.2	1,972.0	1,936.9	5.1	6.8	-61.97	293.3	217.2	229.6	220.4	9.21	24.923	
2,100.0	2,085.2	2,070.9	2,032.7	5.4	7.2	-62.11	312.9	231.7	244.6	234.8	9.77	25.034	
2,200.0	2,184.2	2,169.8	2,128.5	5.7	7.7	-62.22	332.4	246.3	259.6	249.2	10.33	25.131	
2,300.0	2,283.1	2,268.7	2,224.3	6.0	8.1	-62.33	352.0	260.8	274.5	263.6	10.89	25.215	
2,400.0	2,382.1	2,367.5	2,320.2	6.3	8.6	-62.42	371.6	275.4	289.5	278.1	11.45	25.290	
2,500.0	2,481.1	2,466.4	2,416.0	6.6	9.1	-62.51	391.1	289.9	304.5	292.5	12.01	25.356	
2,600.0	2,580.0	2,565.3	2,511.8	6.9	9.5	-62.58	410.7	304.5	319.5	306.9	12.57	25.415	
2,700.0	2,679.0	2,664.1	2,607.6	7.2	10.0	-62.65	430.2	319.0	334.5	321.3	13.13	25.468	
2,800.0	2,778.0	2,763.0	2,703.4	7.5	10.5	-62.72	449.8	333.6	349.5	335.8	13.70	25.516	
2,900.0	2,876.9	2,861.9	2,799.2	7.8	10.9	-62.78	469.4	348.2	364.4	350.2	14.26	25.559	
3,000.0	2,975.9	2,960.7	2,895.1	8.1	11.4	-62.83	488.9	362.7	379.4	364.6	14.82	25.599	
3,100.0	3,074.9	3,059.6	2,990.9	8.4	11.8	-62.88	508.5	377.3	394.4	379.0	15.39	25.635	
3,200.0	3,173.8	3,158.5	3,086.7	8.7	12.3	-62.93	528.0	391.8	409.4	393.4	15.95	25.668	
3,300.0	3,272.8	3,257.4	3,182.5	9.0	12.8	-62.97	547.6	406.4	424.4	407.9	16.51	25.698	
3,400.0	3,371.8	3,356.2	3,278.3	9.4	13.2	-63.01	567.2	420.9	439.4	422.3	17.08	25.726	
3,500.0	3,470.7	3,455.1	3,374.1	9.7	13.7	-63.05	586.7	435.5	454.4	436.7	17.64	25.752	
3,600.0	3,569.7	3,554.0	3,470.0	10.0	14.1	-63.08	606.3	450.0	469.3	451.1	18.21	25.776	
3,700.0	3,668.7	3,652.8	3,565.8	10.3	14.6	-63.11	625.8	464.6	484.3	465.6	18.77	25.799	
3,800.0	3,767.6	3,751.7	3,661.6	10.6	15.1	-63.15	645.4	479.2	499.3	480.0	19.34	25.819	
3,900.0	3,866.6	3,850.6	3,757.4	10.9	15.5	-63.17	665.0	493.7	514.3	494.4	19.90	25.839	
4,000.0	3,965.6	3,949.5	3,853.2	11.2	16.0	-63.20	684.5	508.3	529.3	508.8	20.47	25.857	
4,100.0	4,064.5	4,048.3	3,949.0	11.5	16.5	-63.23	704.1	522.8	544.3	523.2	21.04	25.874	
4,200.0	4,163.5	4,147.2	4,044.9	11.8	16.9	-63.25	723.6	537.4	559.3	537.7	21.60	25.890	
4,300.0	4,262.5	4,246.1	4,140.7	12.1	17.4	-63.28	743.2	551.9	574.2	552.1	22.17	25.906	
4,400.0	4,361.4	4,344.9	4,236.5	12.4	17.8	-63.30	762.8	566.5	589.2	566.5	22.73	25.920	
4,500.0	4,460.4	4,443.8	4,332.3	12.7	18.3	-63.32	782.3	581.1	604.2	580.9	23.30	25.933	
4,600.0	4,559.4	4,542.7	4,428.1	13.0	18.8	-63.34	801.9	595.6	619.2	595.3	23.87	25.946	
4,700.0	4,658.3	4,641.5	4,524.0	13.3	19.2	-63.36	821.4	610.2	634.2	609.8	24.43	25.958	
4,800.0	4,757.3	4,740.4	4,619.8	13.6	19.7	-63.38	841.0	624.7	649.2	624.2	25.00	25.970	
4,900.0	4,856.3	4,839.3	4,715.6	13.9	20.2	-63.39	860.6	639.3	664.2	638.6	25.56	25.981	
5,000.0	4,955.2	4,938.2	4,811.4	14.3	20.6	-63.41	880.1	653.8	679.2	653.0	26.13	25.991	
5,100.0	5,054.2	5,037.0	4,907.2	14.6	21.1	-63.43	899.7	668.4	694.2	667.5	26.70	26.001	

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

Company:	Berry Petroleum Company (NAD 83)	**Local Co-ordinate Reference:**	Well OXY 22-3D (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 22-3D (OXY 22 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 #2	**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 Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
5,200.0	5,153.2	5,135.9	5,003.0	14.9	21.6	-63.44	919.2	682.9	709.1	681.9	27.26	26.010	
5,300.0	5,252.1	5,234.8	5,098.9	15.2	22.0	-63.45	938.8	697.5	724.1	696.3	27.83	26.019	
5,400.0	5,351.1	5,333.6	5,194.7	15.5	22.5	-63.47	958.4	712.1	739.1	710.7	28.40	26.028	
5,500.0	5,450.1	5,432.5	5,290.5	15.8	22.9	-63.48	977.9	726.6	754.1	725.1	28.96	26.036	
5,600.0	5,549.0	5,531.4	5,386.3	16.1	23.4	-63.50	997.5	741.2	769.1	739.6	29.53	26.044	
5,700.0	5,648.0	5,630.2	5,482.1	16.4	23.9	-63.51	1,017.0	755.7	784.1	754.0	30.10	26.051	
5,800.0	5,747.0	5,729.1	5,577.9	16.7	24.3	-63.52	1,036.6	770.3	799.1	768.4	30.66	26.059	
5,900.0	5,845.9	5,828.0	5,673.8	17.0	24.8	-63.53	1,056.2	784.8	814.1	782.8	31.23	26.066	
6,000.0	5,944.9	5,926.9	5,769.6	17.3	25.3	-63.54	1,075.7	799.4	829.0	797.2	31.80	26.072	
6,100.0	6,043.9	6,025.7	5,865.4	17.6	25.7	-63.55	1,095.3	813.9	844.0	811.7	32.37	26.079	
6,200.0	6,142.8	6,124.6	5,961.2	17.9	26.2	-63.56	1,114.8	828.5	859.0	826.1	32.93	26.085	
6,300.0	6,241.8	6,223.5	6,057.0	18.2	26.6	-63.57	1,134.4	843.1	874.0	840.5	33.50	26.091	
6,400.0	6,340.8	6,322.3	6,152.8	18.5	27.1	-63.58	1,153.9	857.6	889.0	854.9	34.07	26.096	
6,500.0	6,439.7	6,443.9	6,271.1	18.9	27.6	-63.65	1,176.7	874.6	902.9	868.2	34.70	26.021	
6,600.0	6,538.7	6,568.7	6,393.2	19.2	28.1	-63.84	1,196.9	889.6	914.0	878.6	35.36	25.849	
6,700.0	6,637.8	6,694.0	6,516.7	19.4	28.5	-64.20	1,214.0	902.3	922.9	886.9	36.00	25.632	
6,800.0	6,737.3	6,819.7	6,641.2	19.7	28.8	-64.47	1,227.9	912.6	930.1	893.5	36.56	25.438	
6,900.0	6,837.0	6,945.8	6,766.6	19.9	29.1	-64.68	1,238.5	920.5	935.6	898.6	37.04	25.262	
7,000.0	6,936.8	7,072.1	6,892.6	20.0	29.3	-64.81	1,245.8	925.9	939.5	902.1	37.43	25.103	
7,100.0	7,036.8	7,198.6	7,018.9	20.1	29.5	-64.87	1,249.7	928.9	941.7	903.9	37.73	24.956	
7,200.0	7,136.8	7,316.4	7,136.8	20.3	29.6	4.95	1,250.5	929.4	942.2	904.2	37.98	24.808	
7,300.0	7,236.8	7,416.4	7,236.8	20.4	29.6	4.95	1,250.5	929.4	942.2	903.9	38.21	24.656	
7,400.0	7,336.8	7,516.4	7,336.8	20.5	29.7	4.95	1,250.5	929.4	942.2	903.7	38.45	24.506	
7,500.0	7,436.8	7,616.4	7,436.8	20.6	29.8	4.95	1,250.5	929.4	942.2	903.5	38.68	24.356	
7,600.0	7,536.8	7,716.4	7,536.8	20.7	29.9	4.95	1,250.5	929.4	942.2	903.2	38.92	24.206	
7,700.0	7,636.8	7,816.4	7,636.8	20.8	29.9	4.95	1,250.5	929.4	942.2	903.0	39.16	24.058	
7,800.0	7,736.8	7,916.4	7,736.8	20.9	30.0	4.95	1,250.5	929.4	942.2	902.8	39.40	23.910	
7,900.0	7,836.8	8,016.4	7,836.8	21.0	30.1	4.95	1,250.5	929.4	942.2	902.5	39.65	23.764	
8,000.0	7,936.8	8,116.4	7,936.8	21.1	30.2	4.95	1,250.5	929.4	942.2	902.3	39.89	23.618	
8,100.0	8,036.8	8,216.4	8,036.8	21.3	30.3	4.95	1,250.5	929.4	942.2	902.0	40.14	23.473	
8,200.0	8,136.8	8,316.4	8,136.8	21.4	30.4	4.95	1,250.5	929.4	942.2	901.8	40.39	23.329	
8,300.0	8,236.8	8,416.4	8,236.8	21.5	30.4	4.95	1,250.5	929.4	942.2	901.5	40.64	23.185	
8,400.0	8,336.8	8,516.4	8,336.8	21.6	30.5	4.95	1,250.5	929.4	942.2	901.3	40.89	23.043	
8,500.0	8,436.8	8,616.4	8,436.8	21.7	30.6	4.95	1,250.5	929.4	942.2	901.0	41.14	22.902	
8,600.0	8,536.8	8,716.4	8,536.8	21.9	30.7	4.95	1,250.5	929.4	942.2	900.8	41.39	22.761	
8,700.0	8,636.8	8,816.4	8,636.8	22.0	30.8	4.95	1,250.5	929.4	942.2	900.5	41.65	22.622	
8,800.0	8,736.8	8,916.4	8,736.8	22.1	30.9	4.95	1,250.5	929.4	942.2	900.3	41.90	22.484	
8,900.0	8,836.8	9,016.4	8,836.8	22.2	31.0	4.95	1,250.5	929.4	942.2	900.0	42.16	22.346	
9,000.0	8,936.8	9,116.4	8,936.8	22.3	31.0	4.95	1,250.5	929.4	942.2	899.7	42.42	22.210	
9,002.2	8,939.0	9,118.6	8,939.0	22.3	31.0	4.95	1,250.5	929.4	942.2	899.7	42.43	22.207	

Company:	Berry Petroleum Company (NAD 83)	**Local Co-ordinate Reference:**	Well OXY 22-3D (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 22-3D (OXY 22 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 #2	**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 Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
0.0	0.0	0.0	0.0	0.0	0.0	35.42	48.8	34.7	59.9				
100.0	100.0	100.0	100.0	0.1	0.1	35.42	48.8	34.7	59.9	59.6	0.30	201.851	
200.0	200.0	200.0	200.0	0.3	0.3	35.42	48.8	34.7	59.9	59.2	0.65	92.742	CC, ES
300.0	300.0	298.4	298.4	0.5	0.5	35.27	49.9	35.3	61.2	60.2	0.99	61.554	
400.0	400.0	396.8	396.7	0.7	0.7	-35.57	53.3	37.1	63.9	62.6	1.34	47.755	
500.0	499.9	495.0	494.7	0.9	0.9	-37.99	58.8	40.2	67.2	65.5	1.69	39.811	
600.0	599.7	593.1	592.4	1.1	1.1	-41.53	66.6	44.4	71.2	69.2	2.05	34.806	
700.0	699.3	690.9	689.5	1.3	1.4	-45.90	76.5	49.8	76.1	73.7	2.42	31.464	
800.0	798.6	788.5	786.1	1.5	1.6	-50.79	88.5	56.3	82.4	79.5	2.83	29.121	
900.0	897.6	885.7	882.0	1.8	2.0	-55.75	102.7	64.1	90.3	87.0	3.28	27.522	
1,000.0	996.6	982.6	977.1	2.1	2.3	-59.61	119.0	72.9	101.0	97.3	3.77	26.826	
1,100.0	1,095.5	1,079.0	1,071.3	2.4	2.7	-62.25	137.2	82.9	114.5	110.2	4.28	26.782	SF
1,200.0	1,194.5	1,174.8	1,164.3	2.7	3.1	-63.91	157.5	93.9	130.4	125.6	4.80	27.181	
1,300.0	1,293.5	1,270.0	1,256.0	3.0	3.6	-64.81	179.6	105.9	148.7	143.4	5.33	27.898	
1,400.0	1,392.4	1,364.6	1,346.6	3.3	4.1	-65.17	203.5	119.0	169.2	163.3	5.86	28.863	
1,500.0	1,491.4	1,462.3	1,439.9	3.6	4.6	-65.33	229.1	132.9	190.6	184.2	6.40	29.762	
1,600.0	1,590.4	1,559.9	1,533.1	3.9	5.1	-65.46	254.7	146.8	212.0	205.1	6.95	30.503	
1,700.0	1,689.3	1,657.6	1,626.3	4.2	5.7	-65.56	280.3	160.7	233.4	225.9	7.50	31.123	
1,800.0	1,788.3	1,755.3	1,719.6	4.5	6.2	-65.65	305.8	174.7	254.8	246.8	8.05	31.647	
1,900.0	1,887.3	1,853.0	1,812.8	4.8	6.7	-65.72	331.4	188.6	276.3	267.6	8.61	32.097	
2,000.0	1,986.2	1,950.6	1,906.0	5.1	7.3	-65.79	357.0	202.5	297.7	288.5	9.16	32.485	
2,100.0	2,085.2	2,048.3	1,999.3	5.4	7.8	-65.84	382.6	216.5	319.1	309.4	9.72	32.824	
2,200.0	2,184.2	2,146.0	2,092.5	5.7	8.3	-65.89	408.2	230.4	340.5	330.2	10.28	33.123	
2,300.0	2,283.1	2,243.7	2,185.7	6.0	8.9	-65.93	433.7	244.3	361.9	351.1	10.84	33.388	
2,400.0	2,382.1	2,341.4	2,279.0	6.3	9.4	-65.97	459.3	258.3	383.4	371.9	11.40	33.624	
2,500.0	2,481.1	2,439.0	2,372.2	6.6	9.9	-66.00	484.9	272.2	404.8	392.8	11.96	33.835	
2,600.0	2,580.0	2,536.7	2,465.4	6.9	10.5	-66.03	510.5	286.1	426.2	413.7	12.53	34.026	
2,700.0	2,679.0	2,634.4	2,558.7	7.2	11.0	-66.06	536.1	300.0	447.6	434.5	13.09	34.200	
2,800.0	2,778.0	2,732.1	2,651.9	7.5	11.6	-66.09	561.6	314.0	469.0	455.4	13.65	34.357	
2,900.0	2,876.9	2,829.8	2,745.1	7.8	12.1	-66.11	587.2	327.9	490.4	476.2	14.22	34.501	
3,000.0	2,975.9	2,927.4	2,838.4	8.1	12.6	-66.13	612.8	341.8	511.9	497.1	14.78	34.634	
3,100.0	3,074.9	3,025.1	2,931.6	8.4	13.2	-66.15	638.4	355.8	533.3	517.9	15.34	34.755	
3,200.0	3,173.8	3,122.8	3,024.8	8.7	13.7	-66.17	664.0	369.7	554.7	538.8	15.91	34.868	
3,300.0	3,272.8	3,220.5	3,118.1	9.0	14.2	-66.18	689.5	383.6	576.1	559.7	16.47	34.972	
3,400.0	3,371.8	3,318.2	3,211.3	9.4	14.8	-66.20	715.1	397.6	597.5	580.5	17.04	35.069	
3,500.0	3,470.7	3,415.8	3,304.5	9.7	15.3	-66.21	740.7	411.5	619.0	601.4	17.61	35.159	
3,600.0	3,569.7	3,513.5	3,397.8	10.0	15.9	-66.22	766.3	425.4	640.4	622.2	18.17	35.243	
3,700.0	3,668.7	3,611.2	3,491.0	10.3	16.4	-66.24	791.9	439.4	661.8	643.1	18.74	35.321	
3,800.0	3,767.6	3,708.9	3,584.3	10.6	16.9	-66.25	817.4	453.3	683.2	663.9	19.30	35.395	
3,900.0	3,866.6	3,806.5	3,677.5	10.9	17.5	-66.26	843.0	467.2	704.7	684.8	19.87	35.464	
4,000.0	3,965.6	3,904.2	3,770.7	11.2	18.0	-66.27	868.6	481.1	726.1	705.6	20.44	35.530	
4,100.0	4,064.5	4,001.9	3,864.0	11.5	18.6	-66.28	894.2	495.1	747.5	726.5	21.00	35.591	
4,200.0	4,163.5	4,099.6	3,957.2	11.8	19.1	-66.29	919.8	509.0	768.9	747.3	21.57	35.649	
4,300.0	4,262.5	4,197.3	4,050.4	12.1	19.6	-66.30	945.3	522.9	790.3	768.2	22.14	35.704	
4,400.0	4,361.4	4,294.9	4,143.7	12.4	20.2	-66.30	970.9	536.9	811.8	789.1	22.70	35.756	
4,500.0	4,460.4	4,392.6	4,236.9	12.7	20.7	-66.31	996.5	550.8	833.2	809.9	23.27	35.805	
4,600.0	4,559.4	4,490.3	4,330.1	13.0	21.3	-66.32	1,022.1	564.7	854.6	830.8	23.84	35.852	
4,700.0	4,658.3	4,588.0	4,423.4	13.3	21.8	-66.33	1,047.7	578.7	876.0	851.6	24.40	35.897	
4,800.0	4,757.3	4,685.7	4,516.6	13.6	22.3	-66.33	1,073.2	592.6	897.4	872.5	24.97	35.939	
4,900.0	4,856.3	4,783.3	4,609.8	13.9	22.9	-66.34	1,098.8	606.5	918.9	893.3	25.54	35.980	
5,000.0	4,955.2	4,881.0	4,703.1	14.3	23.4	-66.34	1,124.4	620.4	940.3	914.2	26.11	36.018	
5,100.0	5,054.2	4,978.7	4,796.3	14.6	24.0	-66.35	1,150.0	634.4	961.7	935.0	26.67	36.055	

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

Company:	Berry Petroleum Company (NAD 83)	**Local Co-ordinate Reference:**	Well OXY 22-3D (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 22-3D (OXY 22 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 #2	**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 Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
5,200.0	5,153.2	5,076.4	4,889.5	14.9	24.5	-66.36	1,175.6	648.3	983.1	955.9	27.24	36.090	
5,300.0	5,252.1	5,174.0	4,982.8	15.2	25.0	-66.36	1,201.2	662.2	1,004.5	976.7	27.81	36.124	
5,400.0	5,351.1	5,271.7	5,076.0	15.5	25.6	-66.37	1,226.7	676.2	1,026.0	997.6	28.38	36.156	
5,500.0	5,450.1	5,369.4	5,169.2	15.8	26.1	-66.37	1,252.3	690.1	1,047.4	1,018.4	28.94	36.187	
5,600.0	5,549.0	5,467.1	5,262.5	16.1	26.7	-66.38	1,277.9	704.0	1,068.8	1,039.3	29.51	36.217	
5,700.0	5,648.0	5,564.8	5,355.7	16.4	27.2	-66.38	1,303.5	718.0	1,090.2	1,060.1	30.08	36.246	
5,800.0	5,747.0	5,662.4	5,448.9	16.7	27.7	-66.38	1,329.1	731.9	1,111.6	1,081.0	30.65	36.273	

Company:	Berry Petroleum Company (NAD 83)	**Local Co-ordinate Reference:**	Well OXY 22-3D (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 22-3D (OXY 22 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 #2	**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 Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
0.0	0.0	0.0	0.0	0.0	0.0	35.89	60.8	44.0	75.1				
100.0	100.0	100.0	100.0	0.1	0.1	35.89	60.8	44.0	75.1	74.8	0.30	253.062	
200.0	200.0	200.0	200.0	0.3	0.3	35.89	60.8	44.0	75.1	74.4	0.65	116.272	CC, ES
300.0	300.0	298.1	298.1	0.5	0.5	35.65	62.0	44.5	76.3	75.3	0.99	76.870	
400.0	400.0	396.1	396.0	0.7	0.7	-35.37	65.5	45.8	79.0	77.6	1.34	59.017	
500.0	499.9	494.0	493.7	0.9	0.9	-37.92	71.4	48.1	82.1	80.4	1.69	48.644	
600.0	599.7	591.6	591.0	1.1	1.1	-41.61	79.6	51.2	85.9	83.9	2.04	42.038	
700.0	699.3	689.0	687.7	1.3	1.3	-46.20	90.0	55.2	90.9	88.4	2.42	37.600	
800.0	798.6	786.0	783.7	1.5	1.6	-51.36	102.7	60.0	97.2	94.4	2.82	34.504	
900.0	897.6	882.7	879.0	1.8	1.9	-56.69	117.7	65.7	105.5	102.3	3.26	32.403	
1,000.0	996.6	978.9	973.5	2.1	2.3	-61.12	134.8	72.2	117.0	113.3	3.73	31.379	
1,100.0	1,095.5	1,074.5	1,066.9	2.4	2.7	-64.44	154.0	79.6	131.4	127.2	4.22	31.115	SF
1,200.0	1,194.5	1,169.6	1,159.2	2.7	3.1	-66.79	175.2	87.7	148.5	143.8	4.74	31.358	
1,300.0	1,293.5	1,263.9	1,250.2	3.0	3.6	-68.37	198.4	96.5	168.1	162.9	5.26	31.953	
1,400.0	1,392.4	1,357.3	1,339.7	3.3	4.1	-69.36	223.4	106.1	190.1	184.3	5.79	32.803	
1,500.0	1,491.4	1,449.8	1,427.6	3.6	4.6	-69.90	250.1	116.3	214.2	207.9	6.33	33.845	
1,600.0	1,590.4	1,541.7	1,514.3	3.9	5.1	-70.13	278.7	127.2	240.6	233.7	6.87	35.044	
1,700.0	1,689.3	1,637.9	1,604.7	4.2	5.7	-70.24	309.5	138.9	267.8	260.4	7.41	36.122	
1,800.0	1,788.3	1,734.1	1,695.1	4.5	6.3	-70.33	340.2	150.6	295.0	287.1	7.97	37.037	
1,900.0	1,887.3	1,830.3	1,785.5	4.8	6.9	-70.41	370.9	162.4	322.3	313.7	8.52	37.822	
2,000.0	1,986.2	1,926.5	1,875.9	5.1	7.5	-70.47	401.7	174.1	349.5	340.4	9.08	38.502	
2,100.0	2,085.2	2,022.8	1,966.3	5.4	8.1	-70.53	432.4	185.8	376.7	367.1	9.64	39.095	
2,200.0	2,184.2	2,119.0	2,056.8	5.7	8.7	-70.57	463.2	197.6	403.9	393.8	10.20	39.618	
2,300.0	2,283.1	2,215.2	2,147.2	6.0	9.3	-70.61	493.9	209.3	431.2	420.4	10.76	40.081	
2,400.0	2,382.1	2,311.4	2,237.6	6.3	9.9	-70.65	524.7	221.0	458.4	447.1	11.32	40.494	
2,500.0	2,481.1	2,407.7	2,328.0	6.6	10.5	-70.68	555.4	232.8	485.6	473.8	11.88	40.865	
2,600.0	2,580.0	2,503.9	2,418.4	6.9	11.1	-70.71	586.1	244.5	512.9	500.4	12.45	41.200	
2,700.0	2,679.0	2,600.1	2,508.9	7.2	11.7	-70.74	616.9	256.2	540.1	527.1	13.01	41.504	
2,800.0	2,778.0	2,696.3	2,599.3	7.5	12.2	-70.76	647.6	268.0	567.3	553.7	13.58	41.780	
2,900.0	2,876.9	2,792.5	2,689.7	7.8	12.8	-70.78	678.4	279.7	594.6	580.4	14.14	42.033	
3,000.0	2,975.9	2,888.8	2,780.1	8.1	13.4	-70.80	709.1	291.4	621.8	607.1	14.71	42.265	
3,100.0	3,074.9	2,985.0	2,870.5	8.4	14.0	-70.82	739.9	303.2	649.0	633.7	15.28	42.479	
3,200.0	3,173.8	3,081.2	2,961.0	8.7	14.6	-70.83	770.6	314.9	676.2	660.4	15.85	42.676	
3,300.0	3,272.8	3,177.4	3,051.4	9.0	15.2	-70.85	801.3	326.6	703.5	687.1	16.41	42.859	
3,400.0	3,371.8	3,273.6	3,141.8	9.4	15.8	-70.86	832.1	338.4	730.7	713.7	16.98	43.029	
3,500.0	3,470.7	3,369.9	3,232.2	9.7	16.4	-70.88	862.8	350.1	757.9	740.4	17.55	43.187	
3,600.0	3,569.7	3,466.1	3,322.6	10.0	17.0	-70.89	893.6	361.8	785.2	767.0	18.12	43.335	
3,700.0	3,668.7	3,562.3	3,413.1	10.3	17.6	-70.90	924.3	373.6	812.4	793.7	18.69	43.473	
3,800.0	3,767.6	3,658.5	3,503.5	10.6	18.2	-70.91	955.1	385.3	839.6	820.4	19.26	43.602	
3,900.0	3,866.6	3,754.8	3,593.9	10.9	18.9	-70.92	985.8	397.0	866.9	847.0	19.83	43.724	
4,000.0	3,965.6	3,851.0	3,684.3	11.2	19.5	-70.93	1,016.5	408.8	894.1	873.7	20.39	43.838	
4,100.0	4,064.5	3,947.2	3,774.7	11.5	20.1	-70.94	1,047.3	420.5	921.3	900.4	20.96	43.947	
4,200.0	4,163.5	4,043.4	3,865.2	11.8	20.7	-70.95	1,078.0	432.2	948.5	927.0	21.53	44.049	
4,300.0	4,262.5	4,139.6	3,955.6	12.1	21.3	-70.95	1,108.8	444.0	975.8	953.7	22.10	44.145	
4,400.0	4,361.4	4,235.9	4,046.0	12.4	21.9	-70.96	1,139.5	455.7	1,003.0	980.3	22.67	44.236	
4,500.0	4,460.4	4,332.1	4,136.4	12.7	22.5	-70.97	1,170.3	467.4	1,030.2	1,007.0	23.24	44.323	
4,600.0	4,559.4	4,428.3	4,226.8	13.0	23.1	-70.97	1,201.0	479.2	1,057.5	1,033.7	23.81	44.405	
4,700.0	4,658.3	4,524.5	4,317.3	13.3	23.7	-70.98	1,231.8	490.9	1,084.7	1,060.3	24.38	44.484	

Company:	Berry Petroleum Company (NAD 83)	**Local Co-ordinate Reference:**	Well OXY 22-3D (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 22-3D (OXY 22 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 #2	**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 Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
0.0	0.0	0.0	0.0	0.0	0.0	-125.35	-18.2	-25.7	31.5				
100.0	100.0	100.0	100.0	0.1	0.1	-125.35	-18.2	-25.7	31.5	31.2	0.30	106.101	
200.0	200.0	200.0	200.0	0.3	0.3	-125.35	-18.2	-25.7	31.5	30.8	0.65	48.749	
300.0	300.0	300.0	300.0	0.5	0.5	-125.35	-18.2	-25.7	31.5	30.5	0.99	31.644	CC, ES
400.0	400.0	400.0	400.0	0.7	0.7	165.43	-18.2	-25.7	32.7	31.4	1.34	24.370	
500.0	499.9	498.9	498.9	0.9	0.8	167.05	-18.9	-26.8	37.9	36.2	1.69	22.392	SF
600.0	599.7	597.3	597.2	1.1	1.0	168.96	-20.8	-30.1	48.1	46.1	2.04	23.641	
700.0	699.3	694.7	694.4	1.3	1.2	170.57	-24.0	-35.5	63.5	61.1	2.38	26.723	
800.0	798.6	791.6	790.9	1.5	1.4	171.74	-28.2	-42.8	83.8	81.0	2.72	30.847	
900.0	897.6	888.9	887.8	1.8	1.6	172.63	-32.7	-50.5	106.6	103.6	3.06	34.897	
1,000.0	996.6	986.2	984.7	2.1	1.8	173.23	-37.2	-58.2	129.9	126.5	3.40	38.199	
1,100.0	1,095.5	1,083.4	1,081.5	2.4	2.1	173.65	-41.7	-65.8	153.1	149.3	3.74	40.898	
1,200.0	1,194.5	1,180.7	1,178.4	2.7	2.3	173.96	-46.2	-73.5	176.3	172.2	4.09	43.145	
1,300.0	1,293.5	1,278.0	1,275.2	3.0	2.5	174.20	-50.7	-81.2	199.5	195.1	4.43	45.044	
1,400.0	1,392.4	1,375.2	1,372.1	3.3	2.7	174.39	-55.2	-88.9	222.8	218.0	4.77	46.671	
1,500.0	1,491.4	1,472.5	1,469.0	3.6	3.0	174.54	-59.7	-96.5	246.0	240.9	5.12	48.080	
1,600.0	1,590.4	1,569.7	1,565.8	3.9	3.2	174.67	-64.2	-104.2	269.3	263.8	5.46	49.311	
1,700.0	1,689.3	1,667.0	1,662.7	4.2	3.4	174.78	-68.7	-111.9	292.5	286.7	5.80	50.397	
1,800.0	1,788.3	1,764.3	1,759.5	4.5	3.6	174.87	-73.2	-119.6	315.7	309.6	6.15	51.362	
1,900.0	1,887.3	1,861.5	1,856.4	4.8	3.9	174.95	-77.7	-127.3	339.0	332.5	6.49	52.225	
2,000.0	1,986.2	1,958.8	1,953.2	5.1	4.1	175.01	-82.2	-134.9	362.2	355.4	6.83	53.001	
2,100.0	2,085.2	2,056.0	2,050.1	5.4	4.3	175.07	-86.7	-142.6	385.5	378.3	7.18	53.703	
2,200.0	2,184.2	2,153.3	2,146.9	5.7	4.5	175.13	-91.2	-150.3	408.7	401.2	7.52	54.341	
2,300.0	2,283.1	2,250.6	2,243.8	6.0	4.8	175.18	-95.7	-158.0	432.0	424.1	7.86	54.923	
2,400.0	2,382.1	2,347.8	2,340.6	6.3	5.0	175.22	-100.2	-165.7	455.2	447.0	8.21	55.456	
2,500.0	2,481.1	2,445.1	2,437.5	6.6	5.2	175.26	-104.7	-173.3	478.4	469.9	8.55	55.947	
2,600.0	2,580.0	2,542.3	2,534.3	6.9	5.5	175.29	-109.2	-181.0	501.7	492.8	8.90	56.400	
2,700.0	2,679.0	2,639.6	2,631.2	7.2	5.7	175.32	-113.7	-188.7	524.9	515.7	9.24	56.819	
2,800.0	2,778.0	2,736.9	2,728.0	7.5	5.9	175.35	-118.2	-196.4	548.2	538.6	9.58	57.208	
2,900.0	2,876.9	2,834.1	2,824.9	7.8	6.2	175.38	-122.7	-204.1	571.4	561.5	9.93	57.570	
3,000.0	2,975.9	2,931.4	2,921.7	8.1	6.4	175.40	-127.2	-211.7	594.7	584.4	10.27	57.908	
3,100.0	3,074.9	3,028.6	3,018.6	8.4	6.6	175.43	-131.7	-219.4	617.9	607.3	10.61	58.224	
3,200.0	3,173.8	3,125.9	3,115.4	8.7	6.8	175.45	-136.2	-227.1	641.2	630.2	10.96	58.521	
3,300.0	3,272.8	3,223.2	3,212.3	9.0	7.1	175.47	-140.7	-234.8	664.4	653.1	11.30	58.799	
3,400.0	3,371.8	3,320.4	3,309.2	9.4	7.3	175.49	-145.2	-242.4	687.6	676.0	11.64	59.061	
3,500.0	3,470.7	3,417.7	3,406.0	9.7	7.5	175.50	-149.7	-250.1	710.9	698.9	11.99	59.307	
3,600.0	3,569.7	3,514.9	3,502.9	10.0	7.8	175.52	-154.2	-257.8	734.1	721.8	12.33	59.541	
3,700.0	3,668.7	3,612.2	3,599.7	10.3	8.0	175.53	-158.7	-265.5	757.4	744.7	12.67	59.761	
3,800.0	3,767.6	3,709.5	3,696.6	10.6	8.2	175.55	-163.2	-273.2	780.6	767.6	13.02	59.970	
3,900.0	3,866.6	3,806.7	3,793.4	10.9	8.4	175.56	-167.7	-280.8	803.9	790.5	13.36	60.168	
4,000.0	3,965.6	3,904.0	3,890.3	11.2	8.7	175.57	-172.2	-288.5	827.1	813.4	13.70	60.356	
4,100.0	4,064.5	4,001.3	3,987.1	11.5	8.9	175.59	-176.7	-296.2	850.4	836.3	14.05	60.535	
4,200.0	4,163.5	4,098.5	4,084.0	11.8	9.1	175.60	-181.2	-303.9	873.6	859.2	14.39	60.705	
4,300.0	4,262.5	4,195.8	4,180.8	12.1	9.4	175.61	-185.7	-311.6	896.8	882.1	14.73	60.868	
4,400.0	4,361.4	4,293.0	4,277.7	12.4	9.6	175.62	-190.2	-319.2	920.1	905.0	15.08	61.023	
4,500.0	4,460.4	4,390.3	4,374.5	12.7	9.8	175.63	-194.7	-326.9	943.3	927.9	15.42	61.171	
4,600.0	4,559.4	4,487.6	4,471.4	13.0	10.1	175.64	-199.2	-334.6	966.6	950.8	15.76	61.313	
4,700.0	4,658.3	4,584.8	4,568.2	13.3	10.3	175.65	-203.7	-342.3	989.8	973.7	16.11	61.449	
4,800.0	4,757.3	4,682.1	4,665.1	13.6	10.5	175.65	-208.2	-350.0	1,013.1	996.6	16.45	61.579	
4,900.0	4,856.3	4,779.3	4,761.9	13.9	10.7	175.66	-212.7	-357.6	1,036.3	1,019.5	16.80	61.703	
5,000.0	4,955.2	4,876.6	4,858.8	14.3	11.0	175.67	-217.2	-365.3	1,059.6	1,042.4	17.14	61.823	
5,100.0	5,054.2	4,973.9	4,955.6	14.6	11.2	175.68	-221.7	-373.0	1,082.8	1,065.3	17.48	61.938	

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

Company:	Berry Petroleum Company (NAD 83)	**Local Co-ordinate Reference:**	Well OXY 22-3D (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 22-3D (OXY 22 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 #2	**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 Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
5,200.0	5,153.2	5,071.1	5,052.5	14.9	11.4	175.68	-226.2	-380.7	1,106.1	1,088.2	17.83	62.049	

Company:	Berry Petroleum Company (NAD 83)	**Local Co-ordinate Reference:**	Well OXY 22-3D (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 22-3D (OXY 22 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 #2	**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 22-3D (OXY 22 Pad)
Coordinate System is US State Plane 1983, Colorado Central Zone
Grid Convergence at Surface is: -1.70°