

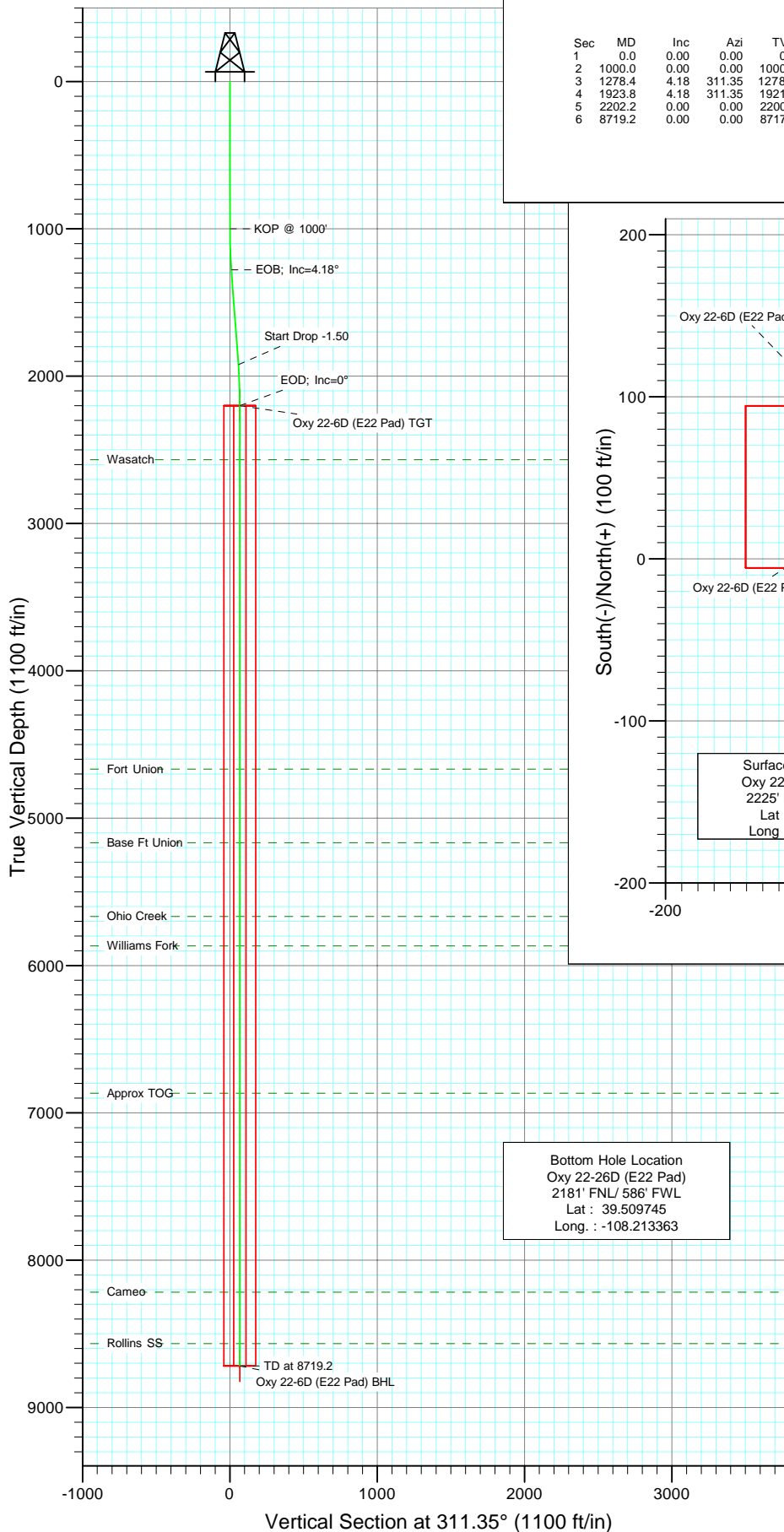


Berry Petroleum Company

Project: Garfield County
Site: SWNW S22-T6S-R97W (E22 Pad)
Well: Oxy 22-26D (E22 Pad)
Wellbore: DD
Design: Plan #1

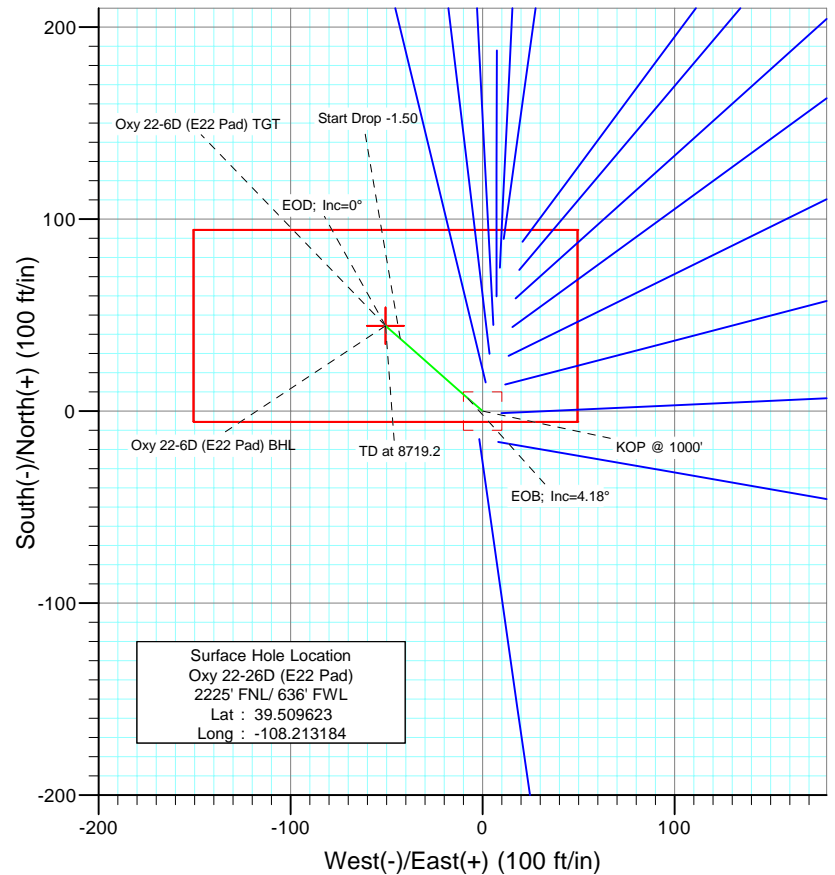


CATHEDRAL



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	1000.0	0.00	0.00	1000.0	0.0	0.0	0.00	0.00	0.0	
3	1278.4	4.18	311.35	1278.1	6.7	-7.6	1.50	311.35	10.1	
4	1923.8	4.18	311.35	1921.9	37.7	-42.9	0.00	0.00	57.1	
5	2202.2	0.00	0.00	2200.0	44.4	-50.5	1.50	180.00	67.3	Oxy 22-6D (E22 Pad) TGT
6	8719.2	0.00	0.00	8717.0	44.4	-50.5	0.00	0.00	67.3	Oxy 22-6D (E22 Pad) BHL



FORMATION TOP DETAILS

TVDPath	MDPath	Formation
2567.0	2569.2	Wasatch
4667.0	4669.2	Fort Union
5167.0	5169.2	Base Ft Union
5667.0	5669.2	Ohio Creek
5867.0	5869.2	Williams Fork
6867.0	6869.2	Approx TOG
8217.0	8219.2	Cameo
8567.0	8569.2	Rollins SS



Azimuths to True North
Magnetic North: 10.64°

Magnetic Field
Strength: 52405.7snT
Dip Angle: 65.77°
Date: 10/13/2009
Model: IGRF200510

DESIGN DETAILS: Plan #1

95XXX; BH
KBE @ 8374.0ft (Original Well Elev)

Target	Azimuth	Origin	N/S	E/W	From TVD
Oxy 22-6D (E22 Pad) BHL	311.35	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 22-26D (E22 Pad)
Company:	Berry Petroleum Company (NAD 83)	TVD Reference:	KBE @ 8374.0ft (Original Well Elev)
Project:	Garfield County	MD Reference:	KBE @ 8374.0ft (Original Well Elev)
Site:	SWNW S22-T6S-R97W (E22 Pad)	North Reference:	True
Well:	Oxy 22-26D (E22 Pad)	Survey Calculation Method:	Minimum Curvature
Wellbore:	DD		
Design:	Plan #1		

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

Site	SWNW S22-T6S-R97W (E22 Pad)			
Site Position:		Northing:	1,621,926.30 ft	Latitude: 39.509579
From:	Lat/Long	Easting:	2,234,612.36 ft	Longitude: -108.213155
Position Uncertainty:	0.0 ft	Slot Radius:	in	Grid Convergence: -1.71 °

Well	Oxy 22-26D (E22 Pad)			
Well Position	+N/-S	0.0 ft	Northing:	1,621,942.56 ft
	+E/-W	0.0 ft	Easting:	2,234,604.66 ft
Position Uncertainty	0.0 ft		Wellhead Elevation:	ft
			Ground Level:	8,359.0 ft

Wellbore	DD				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF200510	10/13/2009	10.64	65.77	52,406

Design	Plan #1			
Audit Notes:				
Version:	Phase:	PLAN	Tie On Depth:	0.0
Vertical Section:	Depth From (TVD) (ft)	+N/-S (ft)	+E/-W (ft)	Direction (°)
	0.0	0.0	0.0	311.35

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	
1,000.0	0.00	0.00	1,000.0	0.0	0.0	0.00	0.00	0.00	0.00	
1,278.4	4.18	311.35	1,278.1	6.7	-7.6	1.50	1.50	0.00	311.35	
1,923.8	4.18	311.35	1,921.9	37.7	-42.9	0.00	0.00	0.00	0.00	
2,202.2	0.00	0.00	2,200.0	44.4	-50.5	1.50	-1.50	0.00	180.00	Oxy 22-6D (E22 Pad)
8,719.2	0.00	0.00	8,717.0	44.4	-50.5	0.00	0.00	0.00	0.00	Oxy 22-6D (E22 Pad)

Directional Plus

Planning Report

Database:	EDM 2003.21 US Multi User Db	Local Co-ordinate Reference:	Well Oxy 22-26D (E22 Pad)
Company:	Berry Petroleum Company (NAD 83)	TVD Reference:	KBE @ 8374.0ft (Original Well Elev)
Project:	Garfield County	MD Reference:	KBE @ 8374.0ft (Original Well Elev)
Site:	SWNW S22-T6S-R97W (E22 Pad)	North Reference:	True
Well:	Oxy 22-26D (E22 Pad)	Survey Calculation Method:	Minimum Curvature
Wellbore:	DD		
Design:	Plan #1		

Planned Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Comments / Formations
0.0	0.00	0.00	0.0	0.0	0.0	0.0	0.00	0.00	
30.0	0.00	0.00	30.0	0.0	0.0	0.0	0.00	0.00	
60.0	0.00	0.00	60.0	0.0	0.0	0.0	0.00	0.00	
90.0	0.00	0.00	90.0	0.0	0.0	0.0	0.00	0.00	
120.0	0.00	0.00	120.0	0.0	0.0	0.0	0.00	0.00	
150.0	0.00	0.00	150.0	0.0	0.0	0.0	0.00	0.00	
180.0	0.00	0.00	180.0	0.0	0.0	0.0	0.00	0.00	
210.0	0.00	0.00	210.0	0.0	0.0	0.0	0.00	0.00	
240.0	0.00	0.00	240.0	0.0	0.0	0.0	0.00	0.00	
270.0	0.00	0.00	270.0	0.0	0.0	0.0	0.00	0.00	
300.0	0.00	0.00	300.0	0.0	0.0	0.0	0.00	0.00	
330.0	0.00	0.00	330.0	0.0	0.0	0.0	0.00	0.00	
360.0	0.00	0.00	360.0	0.0	0.0	0.0	0.00	0.00	
390.0	0.00	0.00	390.0	0.0	0.0	0.0	0.00	0.00	
420.0	0.00	0.00	420.0	0.0	0.0	0.0	0.00	0.00	
450.0	0.00	0.00	450.0	0.0	0.0	0.0	0.00	0.00	
480.0	0.00	0.00	480.0	0.0	0.0	0.0	0.00	0.00	
510.0	0.00	0.00	510.0	0.0	0.0	0.0	0.00	0.00	
540.0	0.00	0.00	540.0	0.0	0.0	0.0	0.00	0.00	
570.0	0.00	0.00	570.0	0.0	0.0	0.0	0.00	0.00	
600.0	0.00	0.00	600.0	0.0	0.0	0.0	0.00	0.00	
630.0	0.00	0.00	630.0	0.0	0.0	0.0	0.00	0.00	
660.0	0.00	0.00	660.0	0.0	0.0	0.0	0.00	0.00	
690.0	0.00	0.00	690.0	0.0	0.0	0.0	0.00	0.00	
720.0	0.00	0.00	720.0	0.0	0.0	0.0	0.00	0.00	
750.0	0.00	0.00	750.0	0.0	0.0	0.0	0.00	0.00	
780.0	0.00	0.00	780.0	0.0	0.0	0.0	0.00	0.00	
810.0	0.00	0.00	810.0	0.0	0.0	0.0	0.00	0.00	
840.0	0.00	0.00	840.0	0.0	0.0	0.0	0.00	0.00	
870.0	0.00	0.00	870.0	0.0	0.0	0.0	0.00	0.00	
900.0	0.00	0.00	900.0	0.0	0.0	0.0	0.00	0.00	
930.0	0.00	0.00	930.0	0.0	0.0	0.0	0.00	0.00	
960.0	0.00	0.00	960.0	0.0	0.0	0.0	0.00	0.00	
990.0	0.00	0.00	990.0	0.0	0.0	0.0	0.00	0.00	
1,000.0	0.00	0.00	1,000.0	0.0	0.0	0.0	0.00	0.00	KOP @ 1000'
1,020.0	0.30	311.35	1,020.0	0.0	0.0	0.1	1.50	1.50	
1,050.0	0.75	311.35	1,050.0	0.2	-0.2	0.3	1.50	1.50	
1,080.0	1.20	311.35	1,080.0	0.6	-0.6	0.8	1.50	1.50	
1,110.0	1.65	311.35	1,110.0	1.0	-1.2	1.6	1.50	1.50	
1,140.0	2.10	311.35	1,140.0	1.7	-1.9	2.6	1.50	1.50	
1,170.0	2.55	311.35	1,169.9	2.5	-2.8	3.8	1.50	1.50	
1,200.0	3.00	311.35	1,199.9	3.5	-3.9	5.2	1.50	1.50	
1,230.0	3.45	311.35	1,229.9	4.6	-5.2	6.9	1.50	1.50	
1,260.0	3.90	311.35	1,259.8	5.8	-6.6	8.8	1.50	1.50	
1,278.4	4.18	311.35	1,278.1	6.7	-7.6	10.1	1.50	1.50	EOB; Inc=4.18°
1,290.0	4.18	311.35	1,289.7	7.3	-8.2	11.0	0.00	0.00	
1,320.0	4.18	311.35	1,319.6	8.7	-9.9	13.2	0.00	0.00	
1,350.0	4.18	311.35	1,349.6	10.1	-11.5	15.4	0.00	0.00	
1,380.0	4.18	311.35	1,379.5	11.6	-13.2	17.5	0.00	0.00	
1,410.0	4.18	311.35	1,409.4	13.0	-14.8	19.7	0.00	0.00	
1,440.0	4.18	311.35	1,439.3	14.5	-16.4	21.9	0.00	0.00	
1,470.0	4.18	311.35	1,469.2	15.9	-18.1	24.1	0.00	0.00	

Directional Plus

Planning Report

Database:	EDM 2003.21 US Multi User Db	Local Co-ordinate Reference:	Well Oxy 22-26D (E22 Pad)
Company:	Berry Petroleum Company (NAD 83)	TVD Reference:	KBE @ 8374.0ft (Original Well Elev)
Project:	Garfield County	MD Reference:	KBE @ 8374.0ft (Original Well Elev)
Site:	SWNW S22-T6S-R97W (E22 Pad)	North Reference:	True
Well:	Oxy 22-26D (E22 Pad)	Survey Calculation Method:	Minimum Curvature
Wellbore:	DD		
Design:	Plan #1		

Planned Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Comments / Formations
1,500.0	4.18	311.35	1,499.2	17.4	-19.7	26.3	0.00	0.00	
1,530.0	4.18	311.35	1,529.1	18.8	-21.4	28.5	0.00	0.00	
1,560.0	4.18	311.35	1,559.0	20.2	-23.0	30.6	0.00	0.00	
1,590.0	4.18	311.35	1,588.9	21.7	-24.6	32.8	0.00	0.00	
1,620.0	4.18	311.35	1,618.8	23.1	-26.3	35.0	0.00	0.00	
1,650.0	4.18	311.35	1,648.8	24.6	-27.9	37.2	0.00	0.00	
1,680.0	4.18	311.35	1,678.7	26.0	-29.6	39.4	0.00	0.00	
1,710.0	4.18	311.35	1,708.6	27.5	-31.2	41.6	0.00	0.00	
1,740.0	4.18	311.35	1,738.5	28.9	-32.8	43.8	0.00	0.00	
1,770.0	4.18	311.35	1,768.4	30.3	-34.5	45.9	0.00	0.00	
1,800.0	4.18	311.35	1,798.4	31.8	-36.1	48.1	0.00	0.00	
1,830.0	4.18	311.35	1,828.3	33.2	-37.8	50.3	0.00	0.00	
1,860.0	4.18	311.35	1,858.2	34.7	-39.4	52.5	0.00	0.00	
1,890.0	4.18	311.35	1,888.1	36.1	-41.0	54.7	0.00	0.00	
1,920.0	4.18	311.35	1,918.1	37.6	-42.7	56.9	0.00	0.00	
1,923.8	4.18	311.35	1,921.9	37.7	-42.9	57.1	0.00	0.00	Start Drop -1.50
1,950.0	3.78	311.35	1,948.0	38.9	-44.3	59.0	1.50	-1.50	
1,980.0	3.33	311.35	1,977.9	40.2	-45.7	60.8	1.50	-1.50	
2,010.0	2.88	311.35	2,007.9	41.3	-46.9	62.4	1.50	-1.50	
2,040.0	2.43	311.35	2,037.8	42.2	-47.9	63.8	1.50	-1.50	
2,070.0	1.98	311.35	2,067.8	42.9	-48.8	65.0	1.50	-1.50	
2,100.0	1.53	311.35	2,097.8	43.5	-49.5	65.9	1.50	-1.50	
2,130.0	1.08	311.35	2,127.8	44.0	-50.0	66.6	1.50	-1.50	
2,160.0	0.63	311.35	2,157.8	44.3	-50.3	67.0	1.50	-1.50	
2,190.0	0.18	311.35	2,187.8	44.4	-50.5	67.3	1.50	-1.50	
2,202.2	0.00	0.00	2,200.0	44.4	-50.5	67.3	1.50	-1.50	EOD; Inc=0° - Oxy 22-6D (E22 Pad) TGT
2,220.0	0.00	0.00	2,217.8	44.4	-50.5	67.3	0.00	0.00	
2,250.0	0.00	0.00	2,247.8	44.4	-50.5	67.3	0.00	0.00	
2,280.0	0.00	0.00	2,277.8	44.4	-50.5	67.3	0.00	0.00	
2,310.0	0.00	0.00	2,307.8	44.4	-50.5	67.3	0.00	0.00	
2,340.0	0.00	0.00	2,337.8	44.4	-50.5	67.3	0.00	0.00	
2,370.0	0.00	0.00	2,367.8	44.4	-50.5	67.3	0.00	0.00	
2,400.0	0.00	0.00	2,397.8	44.4	-50.5	67.3	0.00	0.00	
2,430.0	0.00	0.00	2,427.8	44.4	-50.5	67.3	0.00	0.00	
2,460.0	0.00	0.00	2,457.8	44.4	-50.5	67.3	0.00	0.00	
2,490.0	0.00	0.00	2,487.8	44.4	-50.5	67.3	0.00	0.00	

Targets									
Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (ft)	Easting (ft)	Latitude	Longitude
Oxy 22-6D (E22 Pad) Tc - hit/miss target - Shape - Point	0.00	0.00	2,200.0	44.4	-50.5	1,621,988.49	2,234,555.50	39.509745	-108.213363
Oxy 22-6D (E22 Pad) Bl - plan misses target center by 6229.2ft at 2490.0ft MD (2487.8 TVD, 44.4 N, -50.5 E) - Rectangle (sides W100.0 H200.0 D0.0)	0.00	0.00	8,717.0	44.4	-50.5	1,621,988.49	2,234,555.50	39.509745	-108.213363

Directional Plus

Planning Report

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Site:	SWNW S22-T6S-R97W (E22 Pad)	North Reference:	True
Well:	Oxy 22-26D (E22 Pad)	Survey Calculation Method:	Minimum Curvature
Wellbore:	DD		
Design:	Plan #1		

Planned Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Comments / Formations
2,500.0	0.00	0.00	2,497.8	44.4	-50.5	67.3	0.00	0.00	
2,569.2	0.00	0.00	2,567.0	44.4	-50.5	67.3	0.00	0.00	Wasatch
2,600.0	0.00	0.00	2,597.8	44.4	-50.5	67.3	0.00	0.00	
2,700.0	0.00	0.00	2,697.8	44.4	-50.5	67.3	0.00	0.00	
2,800.0	0.00	0.00	2,797.8	44.4	-50.5	67.3	0.00	0.00	
2,900.0	0.00	0.00	2,897.8	44.4	-50.5	67.3	0.00	0.00	
3,000.0	0.00	0.00	2,997.8	44.4	-50.5	67.3	0.00	0.00	
3,100.0	0.00	0.00	3,097.8	44.4	-50.5	67.3	0.00	0.00	
3,200.0	0.00	0.00	3,197.8	44.4	-50.5	67.3	0.00	0.00	
3,300.0	0.00	0.00	3,297.8	44.4	-50.5	67.3	0.00	0.00	
3,400.0	0.00	0.00	3,397.8	44.4	-50.5	67.3	0.00	0.00	
3,500.0	0.00	0.00	3,497.8	44.4	-50.5	67.3	0.00	0.00	
3,600.0	0.00	0.00	3,597.8	44.4	-50.5	67.3	0.00	0.00	
3,700.0	0.00	0.00	3,697.8	44.4	-50.5	67.3	0.00	0.00	
3,800.0	0.00	0.00	3,797.8	44.4	-50.5	67.3	0.00	0.00	
3,900.0	0.00	0.00	3,897.8	44.4	-50.5	67.3	0.00	0.00	
4,000.0	0.00	0.00	3,997.8	44.4	-50.5	67.3	0.00	0.00	
4,100.0	0.00	0.00	4,097.8	44.4	-50.5	67.3	0.00	0.00	
4,200.0	0.00	0.00	4,197.8	44.4	-50.5	67.3	0.00	0.00	
4,300.0	0.00	0.00	4,297.8	44.4	-50.5	67.3	0.00	0.00	
4,400.0	0.00	0.00	4,397.8	44.4	-50.5	67.3	0.00	0.00	
4,500.0	0.00	0.00	4,497.8	44.4	-50.5	67.3	0.00	0.00	
4,600.0	0.00	0.00	4,597.8	44.4	-50.5	67.3	0.00	0.00	
4,669.2	0.00	0.00	4,667.0	44.4	-50.5	67.3	0.00	0.00	Fort Union
4,700.0	0.00	0.00	4,697.8	44.4	-50.5	67.3	0.00	0.00	
4,800.0	0.00	0.00	4,797.8	44.4	-50.5	67.3	0.00	0.00	
4,900.0	0.00	0.00	4,897.8	44.4	-50.5	67.3	0.00	0.00	
5,000.0	0.00	0.00	4,997.8	44.4	-50.5	67.3	0.00	0.00	
5,100.0	0.00	0.00	5,097.8	44.4	-50.5	67.3	0.00	0.00	
5,169.2	0.00	0.00	5,167.0	44.4	-50.5	67.3	0.00	0.00	Base Ft Union
5,200.0	0.00	0.00	5,197.8	44.4	-50.5	67.3	0.00	0.00	
5,300.0	0.00	0.00	5,297.8	44.4	-50.5	67.3	0.00	0.00	
5,400.0	0.00	0.00	5,397.8	44.4	-50.5	67.3	0.00	0.00	
5,500.0	0.00	0.00	5,497.8	44.4	-50.5	67.3	0.00	0.00	
5,600.0	0.00	0.00	5,597.8	44.4	-50.5	67.3	0.00	0.00	
5,669.2	0.00	0.00	5,667.0	44.4	-50.5	67.3	0.00	0.00	Ohio Creek
5,700.0	0.00	0.00	5,697.8	44.4	-50.5	67.3	0.00	0.00	
5,800.0	0.00	0.00	5,797.8	44.4	-50.5	67.3	0.00	0.00	
5,869.2	0.00	0.00	5,867.0	44.4	-50.5	67.3	0.00	0.00	Williams Fork
5,900.0	0.00	0.00	5,897.8	44.4	-50.5	67.3	0.00	0.00	
6,000.0	0.00	0.00	5,997.8	44.4	-50.5	67.3	0.00	0.00	
6,100.0	0.00	0.00	6,097.8	44.4	-50.5	67.3	0.00	0.00	
6,200.0	0.00	0.00	6,197.8	44.4	-50.5	67.3	0.00	0.00	
6,300.0	0.00	0.00	6,297.8	44.4	-50.5	67.3	0.00	0.00	
6,400.0	0.00	0.00	6,397.8	44.4	-50.5	67.3	0.00	0.00	
6,500.0	0.00	0.00	6,497.8	44.4	-50.5	67.3	0.00	0.00	
6,600.0	0.00	0.00	6,597.8	44.4	-50.5	67.3	0.00	0.00	
6,700.0	0.00	0.00	6,697.8	44.4	-50.5	67.3	0.00	0.00	
6,800.0	0.00	0.00	6,797.8	44.4	-50.5	67.3	0.00	0.00	
6,869.2	0.00	0.00	6,867.0	44.4	-50.5	67.3	0.00	0.00	Approx TOG
6,900.0	0.00	0.00	6,897.8	44.4	-50.5	67.3	0.00	0.00	
7,000.0	0.00	0.00	6,997.8	44.4	-50.5	67.3	0.00	0.00	

Directional Plus

Planning Report

Database:	EDM 2003.21 US Multi User Db	Local Co-ordinate Reference:	Well Oxy 22-26D (E22 Pad)
Company:	Berry Petroleum Company (NAD 83)	TVD Reference:	KBE @ 8374.0ft (Original Well Elev)
Project:	Garfield County	MD Reference:	KBE @ 8374.0ft (Original Well Elev)
Site:	SWNW S22-T6S-R97W (E22 Pad)	North Reference:	True
Well:	Oxy 22-26D (E22 Pad)	Survey Calculation Method:	Minimum Curvature
Wellbore:	DD		
Design:	Plan #1		

Planned Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Comments / Formations
7,100.0	0.00	0.00	7,097.8	44.4	-50.5	67.3	0.00	0.00	
7,200.0	0.00	0.00	7,197.8	44.4	-50.5	67.3	0.00	0.00	
7,300.0	0.00	0.00	7,297.8	44.4	-50.5	67.3	0.00	0.00	
7,400.0	0.00	0.00	7,397.8	44.4	-50.5	67.3	0.00	0.00	
7,500.0	0.00	0.00	7,497.8	44.4	-50.5	67.3	0.00	0.00	
7,600.0	0.00	0.00	7,597.8	44.4	-50.5	67.3	0.00	0.00	
7,700.0	0.00	0.00	7,697.8	44.4	-50.5	67.3	0.00	0.00	
7,800.0	0.00	0.00	7,797.8	44.4	-50.5	67.3	0.00	0.00	
7,900.0	0.00	0.00	7,897.8	44.4	-50.5	67.3	0.00	0.00	
8,000.0	0.00	0.00	7,997.8	44.4	-50.5	67.3	0.00	0.00	
8,100.0	0.00	0.00	8,097.8	44.4	-50.5	67.3	0.00	0.00	
8,200.0	0.00	0.00	8,197.8	44.4	-50.5	67.3	0.00	0.00	
8,219.2	0.00	0.00	8,217.0	44.4	-50.5	67.3	0.00	0.00	Cameo
8,300.0	0.00	0.00	8,297.8	44.4	-50.5	67.3	0.00	0.00	
8,400.0	0.00	0.00	8,397.8	44.4	-50.5	67.3	0.00	0.00	
8,500.0	0.00	0.00	8,497.8	44.4	-50.5	67.3	0.00	0.00	
8,569.2	0.00	0.00	8,567.0	44.4	-50.5	67.3	0.00	0.00	Rollins SS
8,600.0	0.00	0.00	8,597.8	44.4	-50.5	67.3	0.00	0.00	
8,700.0	0.00	0.00	8,697.8	44.4	-50.5	67.3	0.00	0.00	
8,719.2	0.00	0.00	8,717.0	44.4	-50.5	67.3	0.00	0.00	TD at 8719.2 - Oxy 22-6D (E22 Pad) BHL

Targets									
Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (ft)	Easting (ft)	Latitude	Longitude
Oxy 22-6D (E22 Pad) T(0.00	0.00	2,200.0	44.4	-50.5	1,621,988.49	2,234,555.50	39.509745	-108.213363
- plan misses target center by 297.8ft at 2500.0ft MD (2497.8 TVD, 44.4 N, -50.5 E)									
- Point									
Oxy 22-6D (E22 Pad) Bl	0.00	0.00	8,717.0	44.4	-50.5	1,621,988.49	2,234,555.50	39.509745	-108.213363
- plan hits target center									
- Rectangle (sides W100.0 H200.0 D0.0)									

Formations						
Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)	
2,569.2	2,567.0	Wasatch		0.00		
4,669.2	4,667.0	Fort Union		0.00		
5,169.2	5,167.0	Base Ft Union		0.00		
5,669.2	5,667.0	Ohio Creek		0.00		
5,869.2	5,867.0	Williams Fork		0.00		
6,869.2	6,867.0	Approx TOG		0.00		
8,219.2	8,217.0	Cameo		0.00		
8,569.2	8,567.0	Rollins SS		0.00		

Directional Plus

Planning Report

Database:	EDM 2003.21 US Multi User Db	Local Co-ordinate Reference:	Well Oxy 22-26D (E22 Pad)
Company:	Berry Petroleum Company (NAD 83)	TVD Reference:	KBE @ 8374.0ft (Original Well Elev)
Project:	Garfield County	MD Reference:	KBE @ 8374.0ft (Original Well Elev)
Site:	SWNW S22-T6S-R97W (E22 Pad)	North Reference:	True
Well:	Oxy 22-26D (E22 Pad)	Survey Calculation Method:	Minimum Curvature
Wellbore:	DD		
Design:	Plan #1		

Plan Annotations

Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment
		+N/-S (ft)	+E/-W (ft)	
1,000.0	1,000.0	0.0	0.0	KOP @ 1000'
1,278.4	1,278.1	6.7	-7.6	EOB; Inc=4.18°
1,923.8	1,921.9	37.7	-42.9	Start Drop -1.50
2,202.2	2,200.0	44.4	-50.5	EOD; Inc=0°
8,719.2	8,717.0	44.4	-50.5	TD at 8719.2

Directional Plus

Anticollision Report

Company:	Berry Petroleum Company (NAD 83)	Local Co-ordinate Reference:	Well Oxy 22-26D (E22 Pad)
Project:	Garfield County	TVD Reference:	KBE @ 8374.0ft (Original Well Elev)
Reference Site:	SWNW S22-T6S-R97W (E22 Pad)	MD Reference:	KBE @ 8374.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Oxy 22-26D (E22 Pad)	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	DD	Database:	EDM 2003.21 US Multi User Db
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

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

Survey Tool Program		Date	10/15/2009		
From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description	
0.0	8,719.2	Plan #1 (DD)	MWD	Geolink MWD	

Summary						
Site Name	Reference Measured Depth (ft)	Offset Measured Depth (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Separation Factor	Warning
Offset Well - Wellbore - Design						
SWNW S22-T6S-R97W (E22 Pad)						
Oxy 22-17D (E22 Pad) - DD - Plan #1	400.0	400.0	18.0	16.6	13.387	CC, ES
Oxy 22-17D (E22 Pad) - DD - Plan #1	600.0	599.3	21.5	19.5	10.504	SF
Oxy 22-18D (E22 Pad) - DD - Plan #1	400.0	400.0	9.9	8.6	7.393	CC, ES
Oxy 22-18D (E22 Pad) - DD - Plan #1	500.0	499.7	11.2	9.5	6.630	SF
Oxy 22-19D (E22 Pad) - DD - Plan #1	400.0	400.0	18.2	16.9	13.558	CC, ES
Oxy 22-19D (E22 Pad) - DD - Plan #1	600.0	599.0	22.7	20.7	11.116	SF
Oxy 22-20D (E22 Pad) - DD - Plan #1	300.0	300.0	31.8	30.8	31.968	CC, ES
Oxy 22-20D (E22 Pad) - DD - Plan #1	600.0	597.5	41.6	39.5	20.365	SF
Oxy 22-21D (E22 Pad) - DD - Plan #1	400.0	400.0	46.4	45.0	34.513	CC, ES
Oxy 22-21D (E22 Pad) - DD - Plan #1	800.0	794.6	64.5	61.8	23.515	SF
Oxy 22-22D (E22 Pad) - DD - Plan #1	300.0	300.0	61.1	60.1	61.433	CC, ES
Oxy 22-22D (E22 Pad) - DD - Plan #1	800.0	790.6	90.1	87.3	32.652	SF
Oxy 22-23D (E22 Pad) - DD - Plan #1	300.0	300.0	76.0	75.0	76.432	CC, ES
Oxy 22-23D (E22 Pad) - DD - Plan #1	900.0	884.8	119.2	116.1	37.953	SF
Oxy 22-24D (E22 Pad) - DD - Plan #1	200.0	200.0	90.6	89.9	140.275	CC, ES
Oxy 22-24D (E22 Pad) - DD - Plan #1	1,000.0	972.2	168.2	164.6	46.449	SF
Oxy 22-25D (E22 Pad) - DD - Plan #1	600.0	600.0	14.7	12.6	7.183	CC, ES
Oxy 22-25D (E22 Pad) - DD - Plan #1	700.0	699.6	15.9	13.5	6.663	SF
Oxy 22-27D (E22 Pad) - DD - Plan #1	600.0	600.0	15.0	13.0	7.360	CC, ES
Oxy 22-27D (E22 Pad) - DD - Plan #1	700.0	699.6	16.3	13.9	6.800	SF
Oxy 22-28D (E22 Pad) - DD - Plan #1	500.0	500.0	30.1	28.4	17.775	CC, ES
Oxy 22-28D (E22 Pad) - DD - Plan #1	700.0	698.3	35.2	32.8	14.686	SF
Oxy 22-29D (E22 Pad) - DD - Plan #1	400.0	400.0	45.2	43.8	33.600	CC, ES
Oxy 22-29D (E22 Pad) - DD - Plan #1	700.0	696.0	56.6	54.2	23.549	SF
Oxy 22-30D (E22 Pad) - DD - Plan #1	400.0	400.0	60.2	58.8	44.783	CC, ES
Oxy 22-30D (E22 Pad) - DD - Plan #1	800.0	792.5	80.6	77.9	29.074	SF
Oxy 22-31D (E22 Pad) - DD - Plan #1	300.0	300.0	75.2	74.2	75.604	CC, ES
Oxy 22-31D (E22 Pad) - DD - Plan #1	900.0	883.9	121.1	117.9	37.599	SF
Oxy 22-32D (E22 Pad) - DD - Plan #1	200.0	200.0	90.3	89.6	139.796	CC, ES
Oxy 22-32D (E22 Pad) - DD - Plan #1	1,000.0	970.9	171.3	167.5	45.777	SF

Directional Plus

Anticollision Report

Company:	Berry Petroleum Company (NAD 83)	Local Co-ordinate Reference:	Well Oxy 22-26D (E22 Pad)
Project:	Garfield County	TVD Reference:	KBE @ 8374.0ft (Original Well Elev)
Reference Site:	SWNW S22-T6S-R97W (E22 Pad)	MD Reference:	KBE @ 8374.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Oxy 22-26D (E22 Pad)	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	DD	Database:	EDM 2003.21 US Multi User Db
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Offset Design												SWNW S22-T6S-R97W (E22 Pad) - Oxy 22-17D (E22 Pad) - DD - Plan #1		Offset Site Error:		0.0 ft
Survey Program:												0-MWD		Offset Well Error:		0.0 ft
Reference		Offset		Semi Major Axis			Distance							Warning		
Measured Depth	Vertical Depth	Measured Depth	Vertical Depth	Reference	Offset	Highside Toolface	Offset Wellbore Centre		Between Centres	Between Ellipses	Total Uncertainty	Separation				
(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(°)	+N/-S (ft)	+E/-W (ft)	(ft)	(ft)	Axis	Factor				
0.0	0.0	0.0	0.0	0.0	0.0	152.95	-16.0	8.2	18.0							
100.0	100.0	100.0	100.0	0.1	0.1	152.95	-16.0	8.2	18.0	17.7	0.30	60.634				
200.0	200.0	200.0	200.0	0.3	0.3	152.95	-16.0	8.2	18.0	17.3	0.65	27.859				
300.0	300.0	300.0	300.0	0.5	0.5	152.95	-16.0	8.2	18.0	17.0	0.99	18.084				
400.0	400.0	400.0	400.0	0.7	0.7	152.95	-16.0	8.2	18.0	16.6	1.34	13.387	CC, ES			
500.0	500.0	499.7	499.7	0.8	0.8	149.78	-16.2	9.5	18.8	17.1	1.69	11.102				
600.0	600.0	599.3	599.2	1.0	1.0	141.81	-16.9	13.3	21.5	19.5	2.05	10.504	SF			
700.0	700.0	698.5	698.2	1.2	1.2	132.49	-18.0	19.7	26.7	24.3	2.42	11.053				
800.0	800.0	797.4	796.7	1.4	1.4	124.43	-19.6	28.5	34.8	31.9	2.80	12.397				
900.0	900.0	895.8	894.4	1.5	1.7	118.38	-21.5	39.8	45.6	42.4	3.20	14.240				
1,000.0	1,000.0	993.5	991.1	1.7	2.0	114.07	-23.9	53.5	59.3	55.7	3.62	16.362				
1,100.0	1,100.0	1,090.2	1,086.4	1.9	2.3	159.90	-26.7	69.5	76.8	73.0	3.78	20.305				
1,200.0	1,199.9	1,185.5	1,179.9	2.1	2.6	158.39	-29.8	87.5	99.3	95.2	4.12	24.090				
1,300.0	1,299.7	1,279.0	1,271.2	2.3	3.0	157.67	-33.3	107.4	126.4	122.0	4.46	28.363				
1,400.0	1,399.4	1,372.4	1,361.9	2.4	3.4	157.27	-37.1	129.3	156.5	151.7	4.80	32.591				
1,500.0	1,499.2	1,467.6	1,454.3	2.6	3.8	156.96	-41.0	152.1	186.9	181.8	5.15	36.313				

Directional Plus

Anticollision Report

Company:	Berry Petroleum Company (NAD 83)	Local Co-ordinate Reference:	Well Oxy 22-26D (E22 Pad)
Project:	Garfield County	TVD Reference:	KBE @ 8374.0ft (Original Well Elev)
Reference Site:	SWNW S22-T6S-R97W (E22 Pad)	MD Reference:	KBE @ 8374.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Oxy 22-26D (E22 Pad)	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	DD	Database:	EDM 2003.21 US Multi User Db
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Offset Design SWNW S22-T6S-R97W (E22 Pad) - Oxy 22-18D (E22 Pad) - DD - Plan #1													Offset Site Error:	0.0 ft
Survey Program: 0-MWD													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Distance		Total Uncertainty Axis	Separation Factor	Warning			
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)		Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)						
0.0	0.0	0.0	0.0	0.0	0.0	96.31	-1.1	9.9	9.9					
100.0	100.0	100.0	100.0	0.1	0.1	96.31	-1.1	9.9	9.9	9.6	0.30	33.486		
200.0	200.0	200.0	200.0	0.3	0.3	96.31	-1.1	9.9	9.9	9.3	0.65	15.385		
300.0	300.0	300.0	300.0	0.5	0.5	96.31	-1.1	9.9	9.9	8.9	0.99	9.987		
400.0	400.0	400.0	400.0	0.7	0.7	96.31	-1.1	9.9	9.9	8.6	1.34	7.393 CC, ES		
500.0	500.0	499.7	499.7	0.8	0.8	95.28	-1.0	11.2	11.2	9.5	1.69	6.630 SF		
600.0	600.0	599.3	599.2	1.0	1.0	93.25	-0.9	15.1	15.1	13.1	2.05	7.383		
700.0	700.0	698.6	698.3	1.2	1.2	91.49	-0.6	21.5	21.6	19.2	2.41	8.970		
800.0	800.0	797.5	796.8	1.4	1.4	90.28	-0.2	30.5	30.7	27.9	2.78	11.033		
900.0	900.0	895.9	894.5	1.5	1.7	89.49	0.4	42.0	42.3	39.2	3.17	13.361		
1,000.0	1,000.0	993.6	991.2	1.7	2.0	88.97	1.0	55.9	56.6	53.0	3.58	15.817		
1,100.0	1,100.0	1,090.4	1,086.7	1.9	2.3	137.77	1.7	72.0	74.2	70.5	3.77	19.697		
1,200.0	1,199.9	1,185.8	1,180.3	2.1	2.6	138.74	2.6	90.3	96.3	92.2	4.11	23.439		
1,300.0	1,299.7	1,279.5	1,271.8	2.3	3.0	139.98	3.5	110.6	122.7	118.2	4.45	27.580		
1,400.0	1,399.4	1,373.0	1,362.5	2.4	3.4	141.04	4.5	132.9	151.9	147.1	4.79	31.688		
1,500.0	1,499.2	1,468.4	1,455.1	2.6	3.8	141.76	5.6	156.1	181.7	176.5	5.15	35.312		

Directional Plus

Anticollision Report

Company:	Berry Petroleum Company (NAD 83)	Local Co-ordinate Reference:	Well Oxy 22-26D (E22 Pad)
Project:	Garfield County	TVD Reference:	KBE @ 8374.0ft (Original Well Elev)
Reference Site:	SWNW S22-T6S-R97W (E22 Pad)	MD Reference:	KBE @ 8374.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Oxy 22-26D (E22 Pad)	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	DD	Database:	EDM 2003.21 US Multi User Db
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Offset Design SWNW S22-T6S-R97W (E22 Pad) - Oxy 22-19D (E22 Pad) - DD - Plan #1													Offset Site Error:	0.0 ft
Survey Program: 0-MWD													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Distance		Total Uncertainty Axis	Separation Factor	Warning			
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)		Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)						
0.0	0.0	0.0	0.0	0.0	0.0	40.57	13.8	11.9	18.2					
100.0	100.0	100.0	100.0	0.1	0.1	40.57	13.8	11.9	18.2	17.9	0.30	61.411		
200.0	200.0	200.0	200.0	0.3	0.3	40.57	13.8	11.9	18.2	17.6	0.65	28.216		
300.0	300.0	300.0	300.0	0.5	0.5	40.57	13.8	11.9	18.2	17.2	0.99	18.316		
400.0	400.0	400.0	400.0	0.7	0.7	40.57	13.8	11.9	18.2	16.9	1.34	13.558 CC, ES		
500.0	500.0	499.6	499.6	0.8	0.8	42.77	14.2	13.1	19.3	17.6	1.69	11.407		
600.0	600.0	599.0	598.9	1.0	1.0	48.08	15.1	16.9	22.7	20.7	2.04	11.116 SF		
700.0	700.0	698.2	697.9	1.2	1.2	54.04	16.8	23.1	28.6	26.2	2.39	11.956		
800.0	800.0	797.0	796.3	1.4	1.4	59.12	19.0	31.8	37.2	34.5	2.76	13.512		
900.0	900.0	895.3	893.9	1.5	1.7	62.95	21.9	42.9	48.5	45.4	3.13	15.499		
1,000.0	1,000.0	992.9	990.5	1.7	2.0	65.73	25.4	56.3	62.5	59.0	3.53	17.721		
1,100.0	1,100.0	1,089.5	1,085.8	1.9	2.3	117.00	29.4	71.9	79.6	75.8	3.77	21.086		
1,200.0	1,199.9	1,184.9	1,179.4	2.1	2.6	119.98	34.0	89.6	100.5	96.4	4.11	24.449		
1,300.0	1,299.7	1,278.8	1,271.1	2.3	3.0	122.87	39.1	109.3	125.5	121.0	4.45	28.186		
1,400.0	1,399.4	1,371.3	1,360.9	2.4	3.4	125.19	44.7	130.7	153.4	148.7	4.80	32.000		
1,500.0	1,499.2	1,464.7	1,451.1	2.6	3.8	126.79	50.8	154.2	183.6	178.4	5.14	35.681		

Directional Plus

Anticollision Report

Company:	Berry Petroleum Company (NAD 83)	Local Co-ordinate Reference:	Well Oxy 22-26D (E22 Pad)
Project:	Garfield County	TVD Reference:	KBE @ 8374.0ft (Original Well Elev)
Reference Site:	SWNW S22-T6S-R97W (E22 Pad)	MD Reference:	KBE @ 8374.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Oxy 22-26D (E22 Pad)	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	DD	Database:	EDM 2003.21 US Multi User Db
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Offset Design													Offset Site Error:	0.0 ft
Survey Program: 0-MWD													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis		Distance		Total		Separation		Warning		
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Uncertainty Axis	Factor		
0.0	0.0	0.0	0.0	0.0	0.0	25.20	28.8	13.5	31.8					
100.0	100.0	100.0	100.0	0.1	0.1	25.20	28.8	13.5	31.8	31.5	0.30	107.186		
200.0	200.0	200.0	200.0	0.3	0.3	25.20	28.8	13.5	31.8	31.2	0.65	49.248		
300.0	300.0	300.0	300.0	0.5	0.5	25.20	28.8	13.5	31.8	30.8	0.99	31.968 CC, ES		
400.0	400.0	399.3	399.3	0.7	0.7	26.61	29.3	14.7	32.8	31.5	1.34	24.448		
500.0	500.0	498.5	498.4	0.8	0.9	30.33	31.1	18.2	36.0	34.3	1.69	21.295		
600.0	600.0	597.5	597.2	1.0	1.1	35.22	33.9	23.9	41.6	39.5	2.04	20.365 SF		
700.0	700.0	696.0	695.3	1.2	1.3	40.17	37.8	31.9	49.7	47.3	2.40	20.731		
800.0	800.0	794.0	792.6	1.4	1.5	44.52	42.9	42.2	60.6	57.8	2.77	21.876		
900.0	900.0	891.3	889.0	1.5	1.8	48.08	49.0	54.5	74.1	70.9	3.16	23.473		
1,000.0	1,000.0	987.9	984.2	1.7	2.1	50.89	56.1	69.0	90.3	86.7	3.57	25.313		
1,100.0	1,100.0	1,083.5	1,078.1	1.9	2.5	102.11	64.2	85.4	109.3	105.5	3.78	28.919		
1,200.0	1,199.9	1,177.8	1,170.1	2.1	2.8	105.02	73.1	103.6	131.6	127.5	4.11	31.978		
1,300.0	1,299.7	1,270.6	1,260.2	2.3	3.2	107.97	83.0	123.6	157.3	152.8	4.45	35.345		
1,400.0	1,399.4	1,362.4	1,348.8	2.4	3.7	110.55	93.6	145.2	185.9	181.2	4.79	38.827		

Directional Plus

Anticollision Report

Company:	Berry Petroleum Company (NAD 83)	Local Co-ordinate Reference:	Well Oxy 22-26D (E22 Pad)
Project:	Garfield County	TVD Reference:	KBE @ 8374.0ft (Original Well Elev)
Reference Site:	SWNW S22-T6S-R97W (E22 Pad)	MD Reference:	KBE @ 8374.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Oxy 22-26D (E22 Pad)	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	DD	Database:	EDM 2003.21 US Multi User Db
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Offset Design SWNW S22-T6S-R97W (E22 Pad) - Oxy 22-21D (E22 Pad) - DD - Plan #1													Offset Site Error:	0.0 ft
Survey Program: 0-MWD													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance						Warning	
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor		
0.0	0.0	0.0	0.0	0.0	0.0	19.55	43.7	15.5	46.4					
100.0	100.0	100.0	100.0	0.1	0.1	19.55	43.7	15.5	46.4	46.1	0.30	156.323		
200.0	200.0	200.0	200.0	0.3	0.3	19.55	43.7	15.5	46.4	45.7	0.65	71.824		
300.0	300.0	300.0	300.0	0.5	0.5	19.55	43.7	15.5	46.4	45.4	0.99	46.623		
400.0	400.0	400.0	400.0	0.7	0.7	19.55	43.7	15.5	46.4	45.0	1.34	34.513 CC, ES		
500.0	500.0	499.0	499.0	0.8	0.8	20.42	44.5	16.6	47.5	45.8	1.69	28.060		
600.0	600.0	597.8	597.8	1.0	1.0	22.82	46.7	19.7	50.7	48.7	2.04	24.884		
700.0	700.0	696.4	696.1	1.2	1.2	26.18	50.5	24.8	56.4	54.0	2.39	23.601		
800.0	800.0	794.6	793.9	1.4	1.4	29.87	55.7	32.0	64.5	61.8	2.74	23.515 SF		
900.0	900.0	892.3	890.9	1.5	1.7	33.41	62.4	41.1	75.2	72.1	3.11	24.211		
1,000.0	1,000.0	989.3	987.0	1.7	1.9	36.55	70.4	52.2	88.6	85.1	3.49	25.411		
1,100.0	1,100.0	1,085.5	1,081.9	1.9	2.2	88.33	79.8	65.1	104.6	100.8	3.79	27.606		
1,200.0	1,199.9	1,180.7	1,175.3	2.1	2.6	91.92	90.5	79.8	123.3	119.1	4.13	29.862		
1,300.0	1,299.7	1,274.6	1,267.0	2.3	2.9	95.62	102.4	96.1	145.0	140.6	4.47	32.462		
1,400.0	1,399.4	1,367.2	1,356.9	2.4	3.3	98.83	115.4	114.0	169.8	165.0	4.81	35.303		
1,500.0	1,499.2	1,458.7	1,445.2	2.6	3.8	101.23	129.5	133.4	197.3	192.2	5.16	38.263		

Directional Plus

Anticollision Report

Company:	Berry Petroleum Company (NAD 83)	Local Co-ordinate Reference:	Well Oxy 22-26D (E22 Pad)
Project:	Garfield County	TVD Reference:	KBE @ 8374.0ft (Original Well Elev)
Reference Site:	SWNW S22-T6S-R97W (E22 Pad)	MD Reference:	KBE @ 8374.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Oxy 22-26D (E22 Pad)	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	DD	Database:	EDM 2003.21 US Multi User Db
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Offset Design SWNW S22-T6S-R97W (E22 Pad) - Oxy 22-22D (E22 Pad) - DD - Plan #1												Offset Site Error:	0.0 ft
Survey Program: 0-MWD												Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis		Distance							
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
0.0	0.0	0.0	0.0	0.0	0.0	16.36	58.6	17.2	61.1				
100.0	100.0	100.0	100.0	0.1	0.1	16.36	58.6	17.2	61.1	60.8	0.30	205.983	
200.0	200.0	200.0	200.0	0.3	0.3	16.36	58.6	17.2	61.1	60.5	0.65	94.641	
300.0	300.0	300.0	300.0	0.5	0.5	16.36	58.6	17.2	61.1	60.1	0.99	61.433	CC, ES
400.0	400.0	398.6	398.6	0.7	0.7	16.97	59.5	18.2	62.2	60.9	1.34	46.374	
500.0	500.0	497.1	497.1	0.8	0.9	18.70	62.0	21.0	65.6	63.9	1.69	38.814	
600.0	600.0	595.4	595.1	1.0	1.0	21.20	66.3	25.7	71.3	69.2	2.04	34.945	
700.0	700.0	693.2	692.5	1.2	1.3	24.08	72.2	32.3	79.4	77.0	2.39	33.164	
800.0	800.0	790.6	789.2	1.4	1.5	27.01	79.7	40.6	90.1	87.3	2.76	32.652	SF
900.0	900.0	887.3	885.0	1.5	1.8	29.75	88.8	50.7	103.3	100.2	3.14	32.936	
1,000.0	1,000.0	983.2	979.6	1.7	2.1	32.19	99.4	62.5	119.2	115.6	3.53	33.713	
1,100.0	1,100.0	1,078.3	1,072.9	1.9	2.4	83.19	111.4	76.0	137.4	133.6	3.79	36.303	
1,200.0	1,199.9	1,172.2	1,164.6	2.1	2.8	85.97	124.9	91.0	158.1	154.0	4.12	38.338	
1,300.0	1,299.7	1,264.9	1,254.6	2.3	3.2	88.95	139.7	107.4	181.5	177.0	4.46	40.676	

Directional Plus

Anticollision Report

Company:	Berry Petroleum Company (NAD 83)	Local Co-ordinate Reference:	Well Oxy 22-26D (E22 Pad)
Project:	Garfield County	TVD Reference:	KBE @ 8374.0ft (Original Well Elev)
Reference Site:	SWNW S22-T6S-R97W (E22 Pad)	MD Reference:	KBE @ 8374.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Oxy 22-26D (E22 Pad)	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	DD	Database:	EDM 2003.21 US Multi User Db
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Offset Design												SWNW S22-T6S-R97W (E22 Pad) - Oxy 22-23D (E22 Pad) - DD - Plan #1		Offset Site Error:		0.0 ft	
Survey Program:												0-MWD		Offset Well Error:		0.0 ft	
Reference		Offset		Semi Major Axis			Distance							Warning			
Measured Depth	Vertical Depth	Measured Depth	Vertical Depth	Reference	Offset	Highside Toolface	Offset Wellbore Centre		Between Centres	Between Ellipses	Total Uncertainty Axis	Separation Factor					
(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(°)	+N/-S (ft)	+E/-W (ft)	(ft)	(ft)							
0.0	0.0	0.0	0.0	0.0	0.0	14.61	73.6	19.2	76.0								
100.0	100.0	100.0	100.0	0.1	0.1	14.61	73.6	19.2	76.0	75.7	0.30	256.271					
200.0	200.0	200.0	200.0	0.3	0.3	14.61	73.6	19.2	76.0	75.4	0.65	117.746					
300.0	300.0	300.0	300.0	0.5	0.5	14.61	73.6	19.2	76.0	75.0	0.99	76.432	CC, ES				
400.0	400.0	398.2	398.2	0.7	0.7	15.02	74.5	20.0	77.2	75.9	1.34	57.566					
500.0	500.0	496.3	496.2	0.8	0.9	16.16	77.4	22.4	80.7	79.0	1.69	47.799					
600.0	600.0	594.1	593.8	1.0	1.0	17.86	82.2	26.5	86.6	84.6	2.04	42.478					
700.0	700.0	691.6	690.9	1.2	1.3	19.87	88.9	32.1	95.0	92.6	2.40	39.649					
800.0	800.0	788.5	787.2	1.4	1.5	21.98	97.4	39.3	105.8	103.1	2.76	38.326					
900.0	900.0	884.8	882.5	1.5	1.8	24.03	107.7	48.0	119.2	116.1	3.14	37.953	SF				
1,000.0	1,000.0	980.4	976.8	1.7	2.1	25.92	119.7	58.2	135.1	131.6	3.54	38.186					
1,100.0	1,100.0	1,075.1	1,069.8	1.9	2.4	76.44	133.4	69.8	153.3	149.5	3.77	40.612					
1,200.0	1,199.9	1,168.8	1,161.3	2.1	2.8	78.79	148.7	82.7	173.5	169.4	4.11	42.165					
1,300.0	1,299.7	1,261.3	1,251.2	2.3	3.2	81.42	165.5	96.8	196.0	191.5	4.45	44.002					

Directional Plus

Anticollision Report

Company:	Berry Petroleum Company (NAD 83)	Local Co-ordinate Reference:	Well Oxy 22-26D (E22 Pad)
Project:	Garfield County	TVD Reference:	KBE @ 8374.0ft (Original Well Elev)
Reference Site:	SWNW S22-T6S-R97W (E22 Pad)	MD Reference:	KBE @ 8374.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Oxy 22-26D (E22 Pad)	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	DD	Database:	EDM 2003.21 US Multi User Db
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Offset Design SWNW S22-T6S-R97W (E22 Pad) - Oxy 22-24D (E22 Pad) - DD - Plan #1												Offset Site Error:	0.0 ft
Survey Program: 0-MWD												Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis		Distance							
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
0.0	0.0	0.0	0.0	0.0	0.0	13.33	88.1	20.9	90.6				
100.0	100.0	100.0	100.0	0.1	0.1	13.33	88.1	20.9	90.6	90.3	0.30	305.304	
200.0	200.0	200.0	200.0	0.3	0.3	13.33	88.1	20.9	90.6	89.9	0.65	140.275 CC, ES	
300.0	300.0	297.8	297.8	0.5	0.5	13.63	89.2	21.6	91.8	90.8	0.99	92.552	
400.0	400.0	395.6	395.5	0.7	0.7	14.51	92.2	23.9	95.3	94.0	1.34	71.186	
500.0	500.0	493.0	492.7	0.8	0.9	15.84	97.2	27.6	101.3	99.6	1.69	59.916	
600.0	600.0	590.1	589.4	1.0	1.1	17.45	104.1	32.7	109.7	107.6	2.05	53.547	
700.0	700.0	686.7	685.4	1.2	1.3	19.18	113.0	39.3	120.6	118.1	2.42	49.888	
800.0	800.0	782.6	780.4	1.4	1.6	20.91	123.8	47.3	133.9	131.1	2.80	47.849	
900.0	900.0	877.9	874.3	1.5	1.9	22.55	136.3	56.6	149.8	146.6	3.20	46.823	
1,000.0	1,000.0	972.2	967.0	1.7	2.3	24.05	150.6	67.2	168.2	164.6	3.62	46.449 SF	
1,100.0	1,100.0	1,065.7	1,058.3	1.9	2.7	74.10	166.6	79.1	188.7	185.0	3.76	50.139	

Directional Plus

Anticollision Report

Company:	Berry Petroleum Company (NAD 83)	Local Co-ordinate Reference:	Well Oxy 22-26D (E22 Pad)
Project:	Garfield County	TVD Reference:	KBE @ 8374.0ft (Original Well Elev)
Reference Site:	SWNW S22-T6S-R97W (E22 Pad)	MD Reference:	KBE @ 8374.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Oxy 22-26D (E22 Pad)	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	DD	Database:	EDM 2003.21 US Multi User Db
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Offset Design		SWNW S22-T6S-R97W (E22 Pad) - Oxy 22-25D (E22 Pad) - DD - Plan #1										Offset Site Error:		0.0 ft
Survey Program:		0-MWD										Offset Well Error:		0.0 ft
Reference		Offset		Semi Major Axis			Distance						Warning	
Measured Depth	Vertical Depth	Measured Depth	Vertical Depth	Reference	Offset	Highside Toolface	Offset Wellbore Centre		Between Centres	Between Ellipses	Total Uncertainty Axis	Separation Factor		
(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(°)	+N/-S (ft)	+E/-W (ft)	(ft)	(ft)				
0.0	0.0	0.0	0.0	0.0	0.0	-173.37	-14.6	-1.7	14.7					
100.0	100.0	100.0	100.0	0.1	0.1	-173.37	-14.6	-1.7	14.7	14.4	0.30	49.435		
200.0	200.0	200.0	200.0	0.3	0.3	-173.37	-14.6	-1.7	14.7	14.0	0.65	22.713		
300.0	300.0	300.0	300.0	0.5	0.5	-173.37	-14.6	-1.7	14.7	13.7	0.99	14.744		
400.0	400.0	400.0	400.0	0.7	0.7	-173.37	-14.6	-1.7	14.7	13.3	1.34	10.914		
500.0	500.0	500.0	500.0	0.8	0.8	-173.37	-14.6	-1.7	14.7	13.0	1.69	8.664		
600.0	600.0	600.0	600.0	1.0	1.0	-173.37	-14.6	-1.7	14.7	12.6	2.04	7.183 CC, ES		
700.0	700.0	699.6	699.6	1.2	1.2	-174.56	-15.9	-1.5	15.9	13.5	2.39	6.663 SF		
800.0	800.0	799.1	799.0	1.4	1.4	-177.20	-19.7	-1.0	19.8	17.0	2.74	7.200		
900.0	900.0	898.5	898.2	1.5	1.6	-179.85	-26.0	-0.1	26.1	23.0	3.10	8.403		
1,000.0	1,000.0	998.2	997.7	1.7	1.8	178.40	-33.0	0.9	33.1	29.6	3.46	9.543		
1,100.0	1,100.0	1,097.9	1,097.1	1.9	2.0	-135.32	-39.9	1.9	41.0	37.2	3.78	10.831		
1,200.0	1,199.9	1,197.4	1,196.3	2.1	2.2	-138.89	-46.8	2.9	50.9	46.8	4.13	12.322		
1,300.0	1,299.7	1,296.6	1,295.3	2.3	2.4	-142.74	-53.8	3.9	63.0	58.5	4.48	14.057		
1,400.0	1,399.4	1,395.7	1,394.1	2.4	2.6	-145.74	-60.7	4.9	75.9	71.0	4.83	15.706		
1,500.0	1,499.2	1,494.7	1,493.0	2.6	2.8	-147.87	-67.6	5.8	88.9	83.7	5.18	17.156		
1,600.0	1,598.9	1,593.8	1,591.8	2.8	3.0	-149.46	-74.5	6.8	102.1	96.5	5.54	18.434		
1,700.0	1,698.6	1,692.9	1,690.7	3.0	3.2	-150.68	-81.4	7.8	115.3	109.4	5.89	19.566		
1,800.0	1,798.4	1,792.0	1,789.5	3.2	3.4	-151.65	-88.3	8.8	128.5	122.3	6.25	20.576		
1,900.0	1,898.1	1,891.1	1,888.4	3.4	3.6	-152.44	-95.2	9.8	141.8	135.2	6.60	21.481		
2,000.0	1,997.9	1,990.3	1,987.3	3.6	3.8	-153.03	-102.2	10.7	154.5	147.5	6.96	22.187		
2,100.0	2,097.8	2,089.8	2,086.5	3.8	4.0	-153.15	-109.1	11.7	164.8	157.5	7.32	22.527		
2,200.0	2,197.8	2,189.4	2,185.9	4.0	4.2	-152.85	-116.0	12.7	172.9	165.2	7.67	22.548		
2,300.0	2,297.8	2,289.2	2,285.4	4.2	4.4	159.02	-123.0	13.7	179.8	171.7	8.02	22.424		
2,400.0	2,397.8	2,388.9	2,385.0	4.3	4.6	159.50	-130.0	14.7	186.6	178.3	8.36	22.313		
2,500.0	2,497.8	2,488.7	2,484.5	4.5	4.9	159.95	-136.9	15.7	193.5	184.8	8.71	22.212		

Directional Plus

Anticollision Report

Company:	Berry Petroleum Company (NAD 83)	Local Co-ordinate Reference:	Well Oxy 22-26D (E22 Pad)
Project:	Garfield County	TVD Reference:	KBE @ 8374.0ft (Original Well Elev)
Reference Site:	SWNW S22-T6S-R97W (E22 Pad)	MD Reference:	KBE @ 8374.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Oxy 22-26D (E22 Pad)	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	DD	Database:	EDM 2003.21 US Multi User Db
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Offset Design SWNW S22-T6S-R97W (E22 Pad) - Oxy 22-27D (E22 Pad) - DD - Plan #1												Offset Site Error:	0.0 ft
Survey Program: 0-MWD												Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis		Distance						Warning	
Measured Depth	Vertical Depth	Measured Depth	Vertical Depth	Reference	Offset	Highside Toolface	Offset Wellbore Centre	Between Centres	Between Ellipses	Total Uncertainty Axis	Separation Factor		
(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(°)	+N/-S (ft)	+E/-W (ft)	(ft)	(ft)			
0.0	0.0	0.0	0.0	0.0	0.0	6.47	14.9	1.7	15.0				
100.0	100.0	100.0	100.0	0.1	0.1	6.47	14.9	1.7	15.0	14.7	0.30	50.655	
200.0	200.0	200.0	200.0	0.3	0.3	6.47	14.9	1.7	15.0	14.4	0.65	23.274	
300.0	300.0	300.0	300.0	0.5	0.5	6.47	14.9	1.7	15.0	14.0	0.99	15.108	
400.0	400.0	400.0	400.0	0.7	0.7	6.47	14.9	1.7	15.0	13.7	1.34	11.184	
500.0	500.0	500.0	500.0	0.8	0.8	6.47	14.9	1.7	15.0	13.3	1.69	8.878	
600.0	600.0	600.0	600.0	1.0	1.0	6.47	14.9	1.7	15.0	13.0	2.04	7.360 CC, ES	
700.0	700.0	699.6	699.6	1.2	1.2	4.90	16.2	1.4	16.3	13.9	2.39	6.800 SF	
800.0	800.0	799.1	799.0	1.4	1.4	1.36	20.0	0.5	20.0	17.3	2.74	7.291	
900.0	900.0	898.5	898.2	1.5	1.6	-2.24	26.2	-1.0	26.3	23.2	3.10	8.461	
1,000.0	1,000.0	998.2	997.7	1.7	1.8	-4.65	33.1	-2.7	33.2	29.8	3.47	9.593	
1,100.0	1,100.0	1,098.0	1,097.2	1.9	2.0	43.66	39.9	-4.4	39.3	35.5	3.79	10.386	
1,200.0	1,199.9	1,197.9	1,196.9	2.1	2.2	45.78	46.8	-6.0	43.5	39.4	4.14	10.520	
1,300.0	1,299.7	1,297.8	1,296.5	2.3	2.4	49.89	53.7	-7.7	46.1	41.6	4.50	10.252	
1,400.0	1,399.4	1,397.7	1,396.2	2.4	2.6	54.32	60.6	-9.4	48.4	43.6	4.87	9.948	
1,500.0	1,499.2	1,497.6	1,495.8	2.6	2.8	58.33	67.5	-11.0	51.0	45.8	5.25	9.723	
1,600.0	1,598.9	1,597.6	1,595.5	2.8	3.0	61.94	74.4	-12.7	53.8	48.2	5.63	9.555	
1,700.0	1,698.6	1,697.5	1,695.1	3.0	3.2	65.18	81.3	-14.4	56.8	50.8	6.03	9.429	
1,800.0	1,798.4	1,797.4	1,794.8	3.2	3.4	68.09	88.2	-16.0	60.0	53.6	6.43	9.336	
1,900.0	1,898.1	1,897.3	1,894.5	3.4	3.6	70.70	95.1	-17.7	63.3	56.5	6.83	9.267	
2,000.0	1,997.9	1,997.2	1,994.1	3.6	3.8	72.47	102.0	-19.4	66.9	59.7	7.22	9.265	
2,100.0	2,097.8	2,097.1	2,093.8	3.8	4.0	72.11	108.9	-21.0	71.4	63.8	7.59	9.405	
2,200.0	2,197.8	2,196.9	2,193.3	4.0	4.2	69.96	115.8	-22.7	76.7	68.8	7.92	9.677	
2,300.0	2,297.8	2,296.6	2,292.8	4.2	4.5	18.49	122.6	-24.3	82.6	74.4	8.25	10.012	
2,400.0	2,397.8	2,396.4	2,392.3	4.3	4.7	16.06	129.5	-26.0	88.7	80.1	8.58	10.338	
2,500.0	2,497.8	2,496.1	2,491.8	4.5	4.9	13.94	136.4	-27.7	94.9	86.0	8.91	10.655	
2,600.0	2,597.8	2,595.9	2,591.3	4.7	5.1	12.08	143.3	-29.3	101.3	92.1	9.24	10.958	
2,700.0	2,697.8	2,695.6	2,690.8	4.8	5.3	10.45	150.2	-31.0	107.7	98.2	9.58	11.249	
2,800.0	2,797.8	2,795.4	2,790.3	5.0	5.5	9.00	157.1	-32.7	114.3	104.4	9.91	11.526	
2,900.0	2,897.8	2,895.1	2,889.8	5.2	5.7	7.71	163.9	-34.3	120.9	110.6	10.25	11.790	
3,000.0	2,997.8	2,994.9	2,989.3	5.3	5.9	6.55	170.8	-36.0	127.5	116.9	10.59	12.041	
3,100.0	3,097.8	3,094.6	3,088.8	5.5	6.1	5.50	177.7	-37.7	134.2	123.3	10.93	12.279	
3,200.0	3,197.8	3,194.4	3,188.3	5.7	6.4	4.56	184.6	-39.3	140.9	129.6	11.27	12.506	
3,300.0	3,297.8	3,294.1	3,287.8	5.9	6.6	3.70	191.5	-41.0	147.7	136.1	11.61	12.722	
3,400.0	3,397.8	3,393.9	3,387.3	6.0	6.8	2.92	198.4	-42.7	154.5	142.5	11.95	12.927	
3,500.0	3,497.8	3,493.6	3,486.8	6.2	7.0	2.20	205.2	-44.3	161.3	149.0	12.29	13.123	
3,600.0	3,597.8	3,593.4	3,586.3	6.4	7.2	1.55	212.1	-46.0	168.1	155.5	12.63	13.309	
3,700.0	3,697.8	3,693.1	3,685.8	6.5	7.4	0.94	219.0	-47.6	175.0	162.0	12.98	13.486	
3,800.0	3,797.8	3,792.9	3,785.3	6.7	7.6	0.38	225.9	-49.3	181.9	168.6	13.32	13.655	
3,900.0	3,897.8	3,892.6	3,884.8	6.9	7.8	-0.14	232.8	-51.0	188.8	175.1	13.66	13.817	
4,000.0	3,997.8	3,992.4	3,984.3	7.1	8.1	-0.63	239.7	-52.6	195.7	181.7	14.01	13.971	

Directional Plus

Anticollision Report

Company:	Berry Petroleum Company (NAD 83)	Local Co-ordinate Reference:	Well Oxy 22-26D (E22 Pad)
Project:	Garfield County	TVD Reference:	KBE @ 8374.0ft (Original Well Elev)
Reference Site:	SWNW S22-T6S-R97W (E22 Pad)	MD Reference:	KBE @ 8374.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Oxy 22-26D (E22 Pad)	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	DD	Database:	EDM 2003.21 US Multi User Db
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Offset Design													Offset Site Error:	0.0 ft
Survey Program: 0-MWD													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance				Total	Separation	Warning	
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Uncertainty Axis	Factor		
0.0	0.0	0.0	0.0	0.0	0.0	7.00	29.9	3.7	30.1					
100.0	100.0	100.0	100.0	0.1	0.1	7.00	29.9	3.7	30.1	29.8	0.30	101.421		
200.0	200.0	200.0	200.0	0.3	0.3	7.00	29.9	3.7	30.1	29.4	0.65	46.599		
300.0	300.0	300.0	300.0	0.5	0.5	7.00	29.9	3.7	30.1	29.1	0.99	30.248		
400.0	400.0	400.0	400.0	0.7	0.7	7.00	29.9	3.7	30.1	28.7	1.34	22.392		
500.0	500.0	500.0	500.0	0.8	0.8	7.00	29.9	3.7	30.1	28.4	1.69	17.775 CC, ES		
600.0	600.0	599.2	599.2	1.0	1.0	6.44	31.1	3.5	31.4	29.3	2.04	15.359		
700.0	700.0	698.3	698.2	1.2	1.2	5.00	35.0	3.1	35.2	32.8	2.39	14.686 SF		
800.0	800.0	797.1	796.8	1.4	1.4	3.19	41.3	2.3	41.5	38.8	2.75	15.075		
900.0	900.0	895.5	894.8	1.5	1.6	1.43	50.2	1.3	50.5	47.3	3.13	16.140		
1,000.0	1,000.0	994.5	993.2	1.7	1.8	-0.03	61.0	0.0	61.4	57.9	3.51	17.506		
1,100.0	1,100.0	1,094.0	1,092.0	1.9	2.1	48.25	72.1	-1.3	71.7	67.9	3.78	18.960		
1,200.0	1,199.9	1,193.6	1,191.0	2.1	2.3	49.35	83.1	-2.7	80.2	76.1	4.13	19.405		
1,300.0	1,299.7	1,293.3	1,290.1	2.3	2.5	51.55	94.2	-4.0	87.1	82.6	4.49	19.396		
1,400.0	1,399.4	1,393.0	1,389.2	2.4	2.8	53.88	105.3	-5.3	93.7	88.9	4.86	19.281		
1,500.0	1,499.2	1,492.7	1,488.3	2.6	3.0	55.90	116.3	-6.6	100.4	95.2	5.24	19.184		
1,600.0	1,598.9	1,592.4	1,587.4	2.8	3.3	57.66	127.4	-7.9	107.3	101.7	5.62	19.099		
1,700.0	1,698.6	1,692.1	1,686.5	3.0	3.5	59.21	138.5	-9.2	114.2	108.2	6.00	19.024		
1,800.0	1,798.4	1,791.9	1,785.6	3.2	3.8	60.58	149.6	-10.5	121.2	114.8	6.39	18.955		
1,900.0	1,898.1	1,891.6	1,884.6	3.4	4.1	61.81	160.6	-11.9	128.3	121.5	6.79	18.893		
2,000.0	1,997.9	1,991.3	1,983.7	3.6	4.3	62.69	171.7	-13.2	135.7	128.5	7.18	18.910		
2,100.0	2,097.8	2,090.9	2,082.7	3.8	4.6	62.63	182.8	-14.5	144.3	136.8	7.54	19.146		
2,200.0	2,197.8	2,190.4	2,181.6	4.0	4.8	61.73	193.8	-15.8	154.2	146.3	7.88	19.576		
2,300.0	2,297.8	2,289.8	2,280.3	4.2	5.1	11.76	204.8	-17.1	164.8	156.6	8.21	20.071		
2,400.0	2,397.8	2,389.1	2,379.1	4.3	5.3	10.60	215.9	-18.4	175.4	166.9	8.54	20.533		
2,500.0	2,497.8	2,488.5	2,477.8	4.5	5.6	9.58	226.9	-19.7	186.1	177.2	8.88	20.965		
2,600.0	2,597.8	2,587.9	2,576.6	4.7	5.9	8.66	237.9	-21.0	196.9	187.7	9.21	21.368		

Directional Plus

Anticollision Report

Company:	Berry Petroleum Company (NAD 83)	Local Co-ordinate Reference:	Well Oxy 22-26D (E22 Pad)
Project:	Garfield County	TVD Reference:	KBE @ 8374.0ft (Original Well Elev)
Reference Site:	SWNW S22-T6S-R97W (E22 Pad)	MD Reference:	KBE @ 8374.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Oxy 22-26D (E22 Pad)	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	DD	Database:	EDM 2003.21 US Multi User Db
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Offset Design SWNW S22-T6S-R97W (E22 Pad) - Oxy 22-29D (E22 Pad) - DD - Plan #1													Offset Site Error:	0.0 ft
Survey Program: 0-MWD													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance					Separation Factor	Warning	
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Total Uncertainty Axis			
0.0	0.0	0.0	0.0	0.0	0.0	7.18	44.8	5.6	45.2					
100.0	100.0	100.0	100.0	0.1	0.1	7.18	44.8	5.6	45.2	44.9	0.30	152.190		
200.0	200.0	200.0	200.0	0.3	0.3	7.18	44.8	5.6	45.2	44.5	0.65	69.925		
300.0	300.0	300.0	300.0	0.5	0.5	7.18	44.8	5.6	45.2	44.2	0.99	45.390		
400.0	400.0	400.0	400.0	0.7	0.7	7.18	44.8	5.6	45.2	43.8	1.34	33.600 CC, ES		
500.0	500.0	498.8	498.8	0.8	0.8	6.90	46.1	5.6	46.4	44.7	1.69	27.444		
600.0	600.0	597.5	597.4	1.0	1.0	6.15	49.9	5.4	50.3	48.2	2.04	24.585		
700.0	700.0	696.0	695.7	1.2	1.2	5.13	56.2	5.1	56.6	54.2	2.41	23.549 SF		
800.0	800.0	794.0	793.3	1.4	1.4	4.04	65.1	4.6	65.6	62.8	2.78	23.601		
900.0	900.0	891.5	890.2	1.5	1.7	3.01	76.3	4.0	77.1	73.9	3.17	24.330		
1,000.0	1,000.0	988.4	986.1	1.7	1.9	2.10	90.0	3.3	91.1	87.5	3.57	25.483		
1,100.0	1,100.0	1,085.6	1,082.0	1.9	2.2	50.35	105.9	2.5	106.7	102.9	3.77	28.326		
1,200.0	1,199.9	1,184.6	1,179.5	2.1	2.5	50.95	122.7	1.6	121.1	117.0	4.12	29.408		
1,300.0	1,299.7	1,283.7	1,277.2	2.3	2.9	52.30	139.4	0.7	134.0	129.5	4.48	29.922		
1,400.0	1,399.4	1,382.8	1,374.9	2.4	3.2	53.77	156.2	-0.1	146.4	141.6	4.84	30.231		
1,500.0	1,499.2	1,482.0	1,472.6	2.6	3.5	55.01	173.0	-1.0	159.0	153.8	5.22	30.479		
1,600.0	1,598.9	1,581.1	1,570.3	2.8	3.8	56.06	189.8	-1.9	171.6	166.0	5.59	30.677		
1,700.0	1,698.6	1,680.3	1,668.1	3.0	4.2	56.97	206.5	-2.7	184.3	178.3	5.98	30.835		
1,800.0	1,798.4	1,779.5	1,765.8	3.2	4.5	57.77	223.3	-3.6	197.0	190.6	6.36	30.962		

Directional Plus

Anticollision Report

Company:	Berry Petroleum Company (NAD 83)	Local Co-ordinate Reference:	Well Oxy 22-26D (E22 Pad)
Project:	Garfield County	TVD Reference:	KBE @ 8374.0ft (Original Well Elev)
Reference Site:	SWNW S22-T6S-R97W (E22 Pad)	MD Reference:	KBE @ 8374.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Oxy 22-26D (E22 Pad)	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	DD	Database:	EDM 2003.21 US Multi User Db
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Offset Design SWNW S22-T6S-R97W (E22 Pad) - Oxy 22-30D (E22 Pad) - DD - Plan #1												Offset Site Error:	0.0 ft
Survey Program: 0-MWD												Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis		Distance							
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
0.0	0.0	0.0	0.0	0.0	0.0	7.00	59.7	7.3	60.2				
100.0	100.0	100.0	100.0	0.1	0.1	7.00	59.7	7.3	60.2	59.9	0.30	202.842	
200.0	200.0	200.0	200.0	0.3	0.3	7.00	59.7	7.3	60.2	59.5	0.65	93.198	
300.0	300.0	300.0	300.0	0.5	0.5	7.00	59.7	7.3	60.2	59.2	0.99	60.497	
400.0	400.0	400.0	400.0	0.7	0.7	7.00	59.7	7.3	60.2	58.8	1.34	44.783 CC, ES	
500.0	500.0	498.4	498.4	0.8	0.8	6.86	61.0	7.3	61.5	59.8	1.69	36.346	
600.0	600.0	596.7	596.7	1.0	1.0	6.46	64.8	7.3	65.3	63.3	2.04	31.974	
700.0	700.0	694.8	694.5	1.2	1.2	5.90	71.1	7.3	71.7	69.3	2.40	29.849	
800.0	800.0	792.5	791.8	1.4	1.4	5.26	79.9	7.3	80.6	77.9	2.77	29.074 SF	
900.0	900.0	889.6	888.3	1.5	1.7	4.62	91.1	7.4	92.1	89.0	3.16	29.146	
1,000.0	1,000.0	986.1	983.8	1.7	1.9	4.03	104.6	7.4	106.1	102.6	3.57	29.763	
1,100.0	1,100.0	1,082.0	1,078.4	1.9	2.2	52.44	120.5	7.4	121.8	118.1	3.76	32.415	
1,200.0	1,199.9	1,177.4	1,172.0	2.1	2.6	52.98	138.6	7.4	138.4	134.3	4.10	33.733	
1,300.0	1,299.7	1,272.3	1,264.8	2.3	2.9	54.06	158.9	7.4	156.0	151.5	4.46	35.015	
1,400.0	1,399.4	1,370.4	1,360.2	2.4	3.3	55.26	181.1	7.4	174.4	169.6	4.82	36.187	
1,500.0	1,499.2	1,468.6	1,455.9	2.6	3.7	56.23	203.3	7.4	192.9	187.7	5.19	37.163	

Directional Plus

Anticollision Report

Company:	Berry Petroleum Company (NAD 83)	Local Co-ordinate Reference:	Well Oxy 22-26D (E22 Pad)
Project:	Garfield County	TVD Reference:	KBE @ 8374.0ft (Original Well Elev)
Reference Site:	SWNW S22-T6S-R97W (E22 Pad)	MD Reference:	KBE @ 8374.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Oxy 22-26D (E22 Pad)	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	DD	Database:	EDM 2003.21 US Multi User Db
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Offset Design SWNW S22-T6S-R97W (E22 Pad) - Oxy 22-31D (E22 Pad) - DD - Plan #1													Offset Site Error:	0.0 ft
Survey Program: 0-MWD													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance				Total Uncertainty Axis	Separation Factor	Warning	
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)				
0.0	0.0	0.0	0.0	0.0	0.0	6.89	74.7	9.0	75.2					
100.0	100.0	100.0	100.0	0.1	0.1	6.89	74.7	9.0	75.2	74.9	0.30	253.495		
200.0	200.0	200.0	200.0	0.3	0.3	6.89	74.7	9.0	75.2	74.6	0.65	116.471		
300.0	300.0	300.0	300.0	0.5	0.5	6.89	74.7	9.0	75.2	74.2	0.99	75.604	CC, ES	
400.0	400.0	398.1	398.0	0.7	0.7	6.83	75.9	9.1	76.5	75.2	1.34	57.022		
500.0	500.0	496.0	495.9	0.8	0.9	6.64	79.7	9.3	80.3	78.6	1.69	47.459		
600.0	600.0	593.6	593.4	1.0	1.0	6.35	85.9	9.6	86.7	84.7	2.05	42.249		
700.0	700.0	690.9	690.2	1.2	1.3	6.03	94.6	10.0	95.7	93.2	2.43	39.441		
800.0	800.0	787.7	786.4	1.4	1.5	5.68	105.7	10.5	107.1	104.3	2.81	38.069		
900.0	900.0	883.9	881.6	1.5	1.8	5.35	119.2	11.2	121.1	117.9	3.22	37.599	SF	
1,000.0	1,000.0	979.3	975.7	1.7	2.1	5.05	134.8	11.9	137.5	133.9	3.65	37.711		
1,100.0	1,100.0	1,074.0	1,068.7	1.9	2.4	53.59	152.7	12.8	155.7	151.9	3.74	41.588		
1,200.0	1,199.9	1,168.1	1,160.6	2.1	2.8	54.09	172.8	13.7	174.7	170.6	4.09	42.761		
1,300.0	1,299.7	1,261.5	1,251.3	2.3	3.2	55.03	194.9	14.8	194.7	190.3	4.43	43.920		

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Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	DD	Database:	EDM 2003.21 US Multi User Db
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Offset Design		SWNW S22-T6S-R97W (E22 Pad) - Oxy 22-32D (E22 Pad) - DD - Plan #1											Offset Site Error:		0.0 ft
Survey Program:		0-MWD											Offset Well Error:		0.0 ft
Reference		Offset		Semi Major Axis			Distance							Warning	
Measured Depth	Vertical Depth	Measured Depth	Vertical Depth	Reference	Offset	Highside Toolface	Offset Wellbore Centre		Between Centres	Between Ellipses	Total Uncertainty Axis	Separation Factor			
Depth (ft)	Depth (ft)	Depth (ft)	Depth (ft)	(ft)	(ft)	(°)	+N/-S (ft)	+E/-W (ft)	(ft)	(ft)					
0.0	0.0	0.0	0.0	0.0	0.0	7.00	89.6	11.0	90.3						
100.0	100.0	100.0	100.0	0.1	0.1	7.00	89.6	11.0	90.3	90.0	0.30	304.263			
200.0	200.0	200.0	200.0	0.3	0.3	7.00	89.6	11.0	90.3	89.6	0.65	139.796 CC, ES			
300.0	300.0	297.7	297.7	0.5	0.5	7.01	90.8	11.2	91.6	90.6	0.99	92.303			
400.0	400.0	395.2	395.1	0.7	0.7	7.05	94.5	11.7	95.4	94.0	1.34	71.031			
500.0	500.0	492.5	492.2	0.8	0.9	7.10	100.7	12.5	101.8	100.1	1.70	59.767			
600.0	600.0	589.4	588.7	1.0	1.1	7.16	109.2	13.7	110.7	108.6	2.08	53.338			
700.0	700.0	685.8	684.5	1.2	1.3	7.22	120.2	15.2	122.1	119.7	2.46	49.578			
800.0	800.0	781.6	779.4	1.4	1.6	7.29	133.4	17.1	136.0	133.2	2.87	47.416			
900.0	900.0	876.7	873.1	1.5	1.9	7.35	148.8	19.2	152.4	149.1	3.29	46.265			
1,000.0	1,000.0	970.9	965.7	1.7	2.3	7.40	166.4	21.6	171.3	167.5	3.74	45.777 SF			
1,100.0	1,100.0	1,064.3	1,057.0	1.9	2.6	56.16	186.1	24.3	191.8	188.1	3.72	51.497			

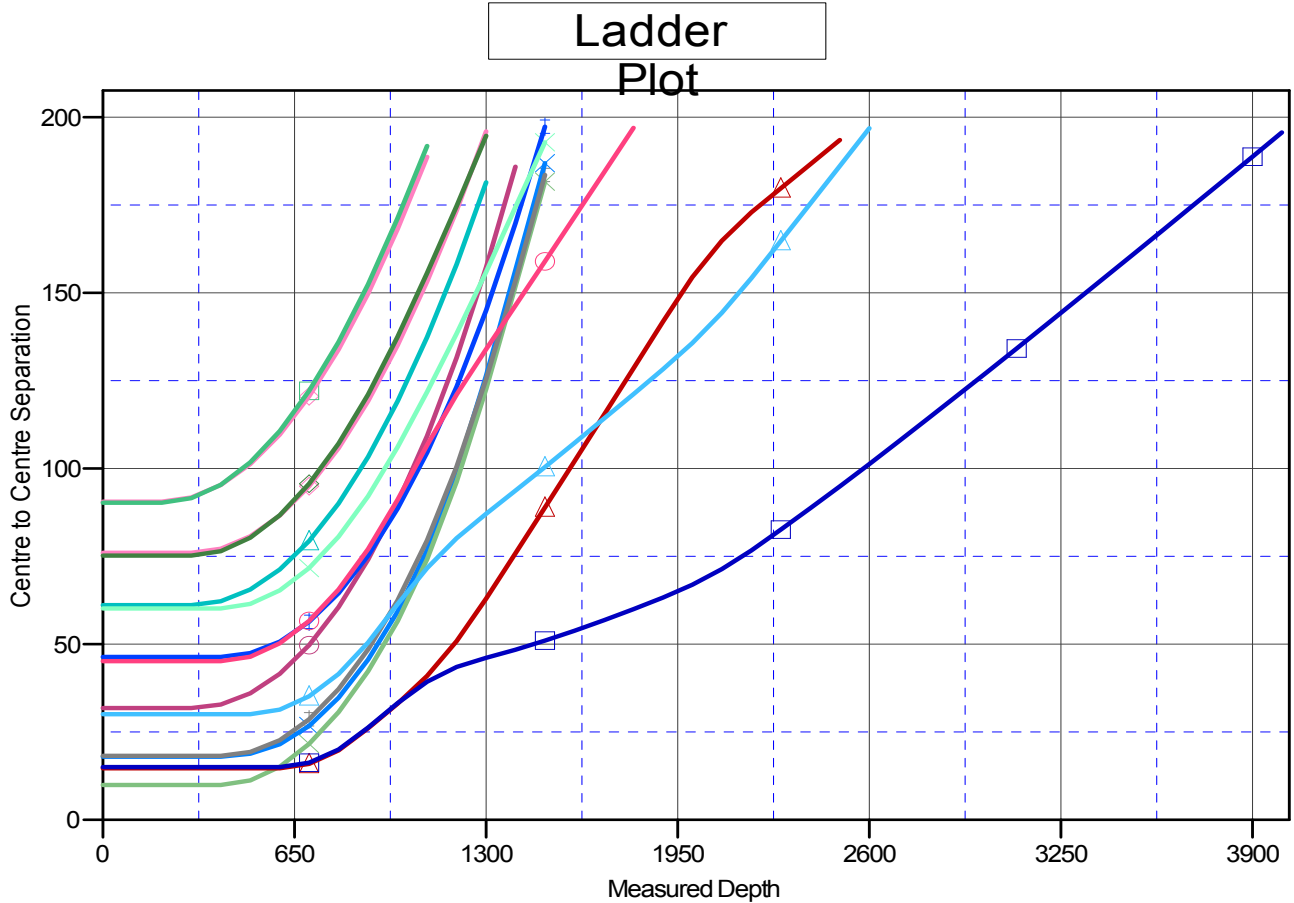
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Reference Wellbore	DD	Database:	EDM 2003.21 US Multi User Db
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Reference Depths are relative to KBE @ 8374.0ft (Original Well Elev)
Offset Depths are relative to Offset Datum
Central Meridian is -105.500000 °

Coordinates are relative to: Oxy 22-26D (E22 Pad)
Coordinate System is US State Plane 1983, Colorado Central Zone
Grid Convergence at Surface is: -1.71°



LEGEND

✕ Oxy 22-17D (E22 Pad), DD, Plan #1 V0	✕ Oxy 22-22D (E22 Pad), DD, Plan #1 V0	✕ Oxy 22-28D (E22 Pad), DD, Plan #1 V0
✕ Oxy 22-18D (E22 Pad), DD, Plan #1 V0	✕ Oxy 22-23D (E22 Pad), DD, Plan #1 V0	✕ Oxy 22-29D (E22 Pad), DD, Plan #1 V0
✕ Oxy 22-19D (E22 Pad), DD, Plan #1 V0	✕ Oxy 22-24D (E22 Pad), DD, Plan #1 V0	✕ Oxy 22-30D (E22 Pad), DD, Plan #1 V0
✕ Oxy 22-20D (E22 Pad), DD, Plan #1 V0	✕ Oxy 22-25D (E22 Pad), DD, Plan #1 V0	✕ Oxy 22-31D (E22 Pad), DD, Plan #1 V0
✕ Oxy 22-21D (E22 Pad), DD, Plan #1 V0	✕ Oxy 22-27D (E22 Pad), DD, Plan #1 V0	✕ Oxy 22-32D (E22 Pad), DD, Plan #1 V0