



# **US ROCKIES REGION PLANNING**

**COLORADO NORTHERN ZONE - 83**

**LARIMER\_MIRACLE 40-12 PAD**

**P\_MIRACLE 24-12**

**P\_MIRACLE 24-12**

**Plan: PLAN #1 3-22-10 RHS**

## **Standard Planning Report**

**23 March, 2010**





Project: COLORADO NORTHERN ZONE - 83  
 Site: LARIMER\_MIRACLE 40-12 PAD  
 Well: P\_MIRACLE 24-12  
 Wellbore: P\_MIRACLE 24-12  
 Section: SECTION 12 T5N R68W  
 SHL: 2480 FSL 335 FEL  
 Design: PLAN #1 3-22-10 RHS  
 Latitude: 40° 24' 49.622 N  
 Longitude: 104° 56' 44.329 W  
 GL: 4948.00  
 KB: WELL @ 4963.00ft (Original Well Elev)



**Weatherford®**



Azimuths to True North  
 Magnetic North: 9.13°  
 Magnetic Field  
 Strength: 53247.9nT  
 Dip Angle: 67.07°  
 Date: 3/22/2010  
 Model: IGRF2010

FORMATION TOP DETAILS		
TVDPath	MDPath	Formation
3459.00	3526.74	PARKMAN
4049.00	4134.53	SUSSEX
4498.00	4598.10	SHANNON
6859.00	6985.16	NIO A
7181.00	7307.16	CODELL
7648.00	7774.16	JSAND

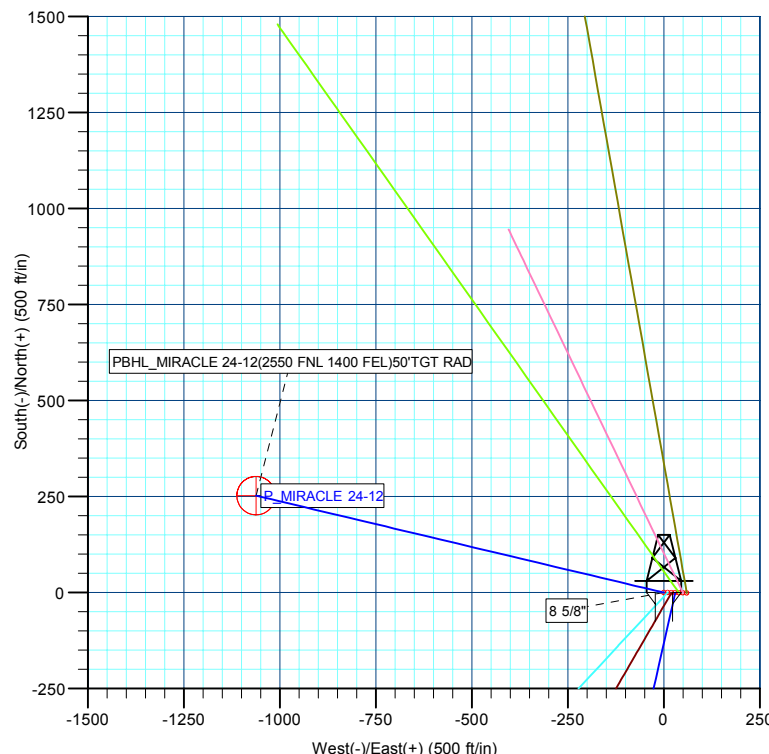
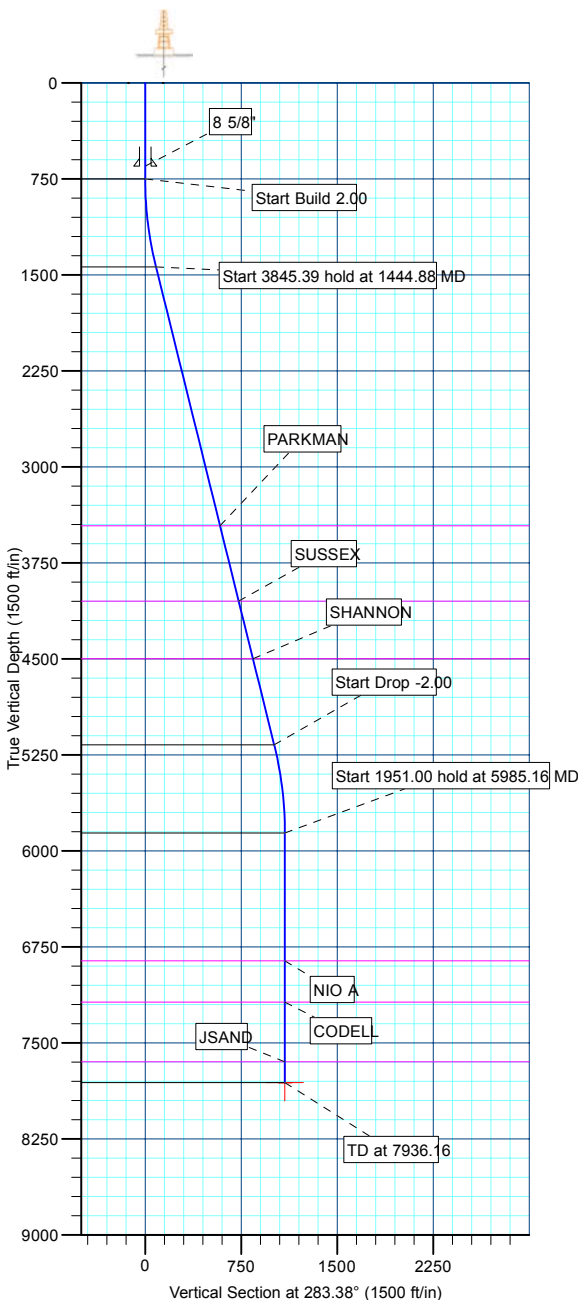
CASING DETAILS			
TVD	MD	Name	Size
650.00	650.00	8 5/8"	8.62

SECTION DETAILS									
MD	Inc	Azi	TVD	+N/-S	+E/-W	DLeg	TFace	VSec	Annotation
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
750.00	0.00	0.00	750.00	0.00	0.00	0.00	0.00	0.00	Start Build 2.00
1444.88	13.90	283.38	1438.09	19.40	-81.59	2.00	283.38	83.86	Start 3845.39 hold at 1444.88 MD
5290.27	13.90	283.38	5170.91	233.09	-980.15	0.00	0.00	1007.48	Start Drop -2.00
5985.16	0.00	0.00	5859.00	252.49	-1061.74	2.00	180.00	1091.35	Start 1951.00 hold at 5985.16 MD
7936.16	0.00	0.00	7810.00	252.49	-1061.74	0.00	0.00	1091.35	TD at 7936.16

WELLBORE TARGET DETAILS (MAP CO-ORDINATES AND LAT/LONG)						
Name	TVD	+N/-S	+E/-W	Latitude	Longitude	Shape
PBHL	7810.00	252.49	-1061.74	40° 24' 52.117 N	104° 56' 58.056 W	Circle (Radius: 50.00)

WELL DETAILS: P_MIRACLE 24-12						
+N/-S	+E/-W	Northing	Ground Level: Easting	4948.00 Latitude	Longitude	Slot
0.00	0.00	1394064.35	3154360.65	40° 24' 49.622 N	104° 56' 44.329 W	

LEGEND	
—	P_MIRACLE 1-12, P_MIRACLE 1-12, PLAN #1 3-22-10 RHS V0
—	P_MIRACLE 16-12, P_MIRACLE 16-12, PLAN #1 3-22-10 RHS V0
—	P_MIRACLE 17-12, P_MIRACLE 17-12, PLAN #1 3-22-10 RHS V0
—	P_MIRACLE 20-12, P_MIRACLE 20-12, PLAN #1 3-22-10 RHS V0
—	P_MIRACLE 8-12, P_MIRACLE 8-12, PLAN #1 3-22-10 RHS V0
—	P_MIRACLE 9-12, P_MIRACLE 9-12, PLAN #1 3-22-10 RHS V0
—	PLAN #1 3-22-10 RHS



Plan: PLAN #1 3-22-10 RHS (P_MIRACLE 24-12/P_MIRACLE 24-12)	
Created By: Robert H. Scott	Date: 8:20, March 23 2010

<b>Database:</b>	EDM 2003.21 Single User Db	<b>Local Co-ordinate Reference:</b>	Well P_MIRACLE 24-12
<b>Company:</b>	US ROCKIES REGION PLANNING	<b>TVD Reference:</b>	WELL @ 4963.00ft (Original Well Elev)
<b>Project:</b>	COLORADO NORTHERN ZONE - 83	<b>MD Reference:</b>	WELL @ 4963.00ft (Original Well Elev)
<b>Site:</b>	LARIMER_MIRACLE 40-12 PAD	<b>North Reference:</b>	True
<b>Well:</b>	P_MIRACLE 24-12	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	P_MIRACLE 24-12		
<b>Design:</b>	PLAN #1 3-22-10 RHS		

<b>Project</b>	COLORADO NORTHERN ZONE - 83, KERR MCGEE OIL & GAS ONSHORE LP		
<b>Map System:</b>	US State Plane 1983	<b>System Datum:</b>	Mean Sea Level
<b>Geo Datum:</b>	North American Datum 1983		
<b>Map Zone:</b>	Colorado Northern Zone		

Site						LARIMER_MIRACLE 40-12 PAD, SECTION 12 T5N R68W											
Site Position:						Northing:			1,394,063.65 ft			Latitude:			40° 24' 49.612 N		
From:			Lat/Long			Easting:			3,154,420.53 ft			Longitude:			104° 56' 43.555 W		
Position Uncertainty:			0.00 ft			Slot Radius:			in			Grid Convergence:			0.36 °		

Well	P_MIRACLE 24-12					
Well Position	+N/-S	1.08 ft	Northing:	1,394,064.35 ft	Latitude:	40° 24' 49.622 N
	+E/-W	-59.87 ft	Easting:	3,154,360.65 ft	Longitude:	104° 56' 44.329 W
Position Uncertainty		0.00 ft	Wellhead Elevation:	ft	Ground Level:	4,948.00 ft

<b>Wellbore</b>	P_MIRACLE 24-12				
<b>Magnetics</b>	<b>Model Name</b>	<b>Sample Date</b>	<b>Declination (°)</b>	<b>Dip Angle (°)</b>	<b>Field Strength (nT)</b>
	IGRF2010	3/22/2010	9.13	67.07	53,248

<b>Design</b>	PLAN #1 3-22-10 RHS			
<b>Audit Notes:</b>				
<b>Version:</b>	<b>Phase:</b>	PLAN	<b>Tie On Depth:</b>	0.00
<b>Vertical Section:</b>	<b>Depth From (TVD) (ft)</b>	<b>+N/-S (ft)</b>	<b>+E/-W (ft)</b>	<b>Direction (°)</b>
	0.00	0.00	0.00	283.38

<b>Plan Sections</b>										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	TFO (°)	Target
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
750.00	0.00	0.00	750.00	0.00	0.00	0.00	0.00	0.00	0.00	
1,444.88	13.90	283.38	1,438.09	19.40	-81.59	2.00	2.00	0.00	283.38	
5,290.27	13.90	283.38	5,170.91	233.09	-980.15	0.00	0.00	0.00	0.00	
5,985.16	0.00	0.00	5,859.00	252.49	-1,061.74	2.00	-2.00	0.00	180.00	
7,936.16	0.00	0.00	7,810.00	252.49	-1,061.74	0.00	0.00	0.00	0.00	PBHL_MIRACLE 24-

<b>Database:</b>	EDM 2003.21 Single User Db	<b>Local Co-ordinate Reference:</b>	Well P_MIRACLE 24-12
<b>Company:</b>	US ROCKIES REGION PLANNING	<b>TVD Reference:</b>	WELL @ 4963.00ft (Original Well Elev)
<b>Project:</b>	COLORADO NORTHERN ZONE - 83	<b>MD Reference:</b>	WELL @ 4963.00ft (Original Well Elev)
<b>Site:</b>	LARIMER_MIRACLE 40-12 PAD	<b>North Reference:</b>	True
<b>Well:</b>	P_MIRACLE 24-12	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	P_MIRACLE 24-12		
<b>Design:</b>	PLAN #1 3-22-10 RHS		

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)	Turn Rate (°/100ft)
<b>Start Build 2.00</b>									
750.00	0.00	0.00	750.00	0.00	0.00	0.00	0.00	0.00	0.00
800.00	1.00	283.38	800.00	0.10	-0.42	0.44	2.00	2.00	0.00
900.00	3.00	283.38	899.93	0.91	-3.82	3.93	2.00	2.00	0.00
1,000.00	5.00	283.38	999.68	2.52	-10.61	10.90	2.00	2.00	0.00
1,100.00	7.00	283.38	1,099.13	4.94	-20.77	21.35	2.00	2.00	0.00
1,200.00	9.00	283.38	1,198.15	8.16	-34.31	35.27	2.00	2.00	0.00
1,300.00	11.00	283.38	1,296.63	12.18	-51.21	52.63	2.00	2.00	0.00
1,400.00	13.00	283.38	1,394.44	16.99	-71.43	73.42	2.00	2.00	0.00
<b>Start 3845.39 hold at 1444.88 MD</b>									
1,444.88	13.90	283.38	1,438.09	19.40	-81.59	83.86	2.00	2.00	0.00
1,500.00	13.90	283.38	1,491.59	22.47	-94.47	97.10	0.00	0.00	0.00
1,600.00	13.90	283.38	1,588.67	28.02	-117.83	121.12	0.00	0.00	0.00
1,700.00	13.90	283.38	1,685.74	33.58	-141.20	145.14	0.00	0.00	0.00
1,800.00	13.90	283.38	1,782.81	39.14	-164.57	169.16	0.00	0.00	0.00
1,900.00	13.90	283.38	1,879.88	44.69	-187.94	193.18	0.00	0.00	0.00
2,000.00	13.90	283.38	1,976.96	50.25	-211.30	217.20	0.00	0.00	0.00
2,100.00	13.90	283.38	2,074.03	55.81	-234.67	241.21	0.00	0.00	0.00
2,200.00	13.90	283.38	2,171.10	61.36	-258.04	265.23	0.00	0.00	0.00
2,300.00	13.90	283.38	2,268.17	66.92	-281.40	289.25	0.00	0.00	0.00
2,400.00	13.90	283.38	2,365.25	72.48	-304.77	313.27	0.00	0.00	0.00
2,500.00	13.90	283.38	2,462.32	78.04	-328.14	337.29	0.00	0.00	0.00
2,600.00	13.90	283.38	2,559.39	83.59	-351.51	361.31	0.00	0.00	0.00
2,700.00	13.90	283.38	2,656.46	89.15	-374.87	385.33	0.00	0.00	0.00
2,800.00	13.90	283.38	2,753.54	94.71	-398.24	409.35	0.00	0.00	0.00
2,900.00	13.90	283.38	2,850.61	100.26	-421.61	433.37	0.00	0.00	0.00
3,000.00	13.90	283.38	2,947.68	105.82	-444.97	457.38	0.00	0.00	0.00
3,100.00	13.90	283.38	3,044.75	111.38	-468.34	481.40	0.00	0.00	0.00
3,200.00	13.90	283.38	3,141.83	116.93	-491.71	505.42	0.00	0.00	0.00
3,300.00	13.90	283.38	3,238.90	122.49	-515.08	529.44	0.00	0.00	0.00
3,400.00	13.90	283.38	3,335.97	128.05	-538.44	553.46	0.00	0.00	0.00
3,500.00	13.90	283.38	3,433.05	133.61	-561.81	577.48	0.00	0.00	0.00
<b>PARKMAN</b>									
3,526.74	13.90	283.38	3,459.00	135.09	-568.06	583.90	0.00	0.00	0.00
3,600.00	13.90	283.38	3,530.12	139.16	-585.18	601.50	0.00	0.00	0.00
3,700.00	13.90	283.38	3,627.19	144.72	-608.55	625.52	0.00	0.00	0.00
3,800.00	13.90	283.38	3,724.26	150.28	-631.91	649.54	0.00	0.00	0.00
3,900.00	13.90	283.38	3,821.34	155.83	-655.28	673.55	0.00	0.00	0.00
4,000.00	13.90	283.38	3,918.41	161.39	-678.65	697.57	0.00	0.00	0.00
4,100.00	13.90	283.38	4,015.48	166.95	-702.01	721.59	0.00	0.00	0.00
<b>SUSSEX</b>									
4,134.53	13.90	283.38	4,049.00	168.87	-710.08	729.89	0.00	0.00	0.00
4,200.00	13.90	283.38	4,112.55	172.50	-725.38	745.61	0.00	0.00	0.00
4,300.00	13.90	283.38	4,209.63	178.06	-748.75	769.63	0.00	0.00	0.00
4,400.00	13.90	283.38	4,306.70	183.62	-772.12	793.65	0.00	0.00	0.00
4,500.00	13.90	283.38	4,403.77	189.18	-795.48	817.67	0.00	0.00	0.00
<b>SHANNON</b>									
4,598.10	13.90	283.38	4,499.00	194.63	-818.41	841.23	0.00	0.00	0.00
4,600.00	13.90	283.38	4,500.84	194.73	-818.85	841.69	0.00	0.00	0.00
4,700.00	13.90	283.38	4,597.92	200.29	-842.22	865.71	0.00	0.00	0.00
4,800.00	13.90	283.38	4,694.99	205.85	-865.58	889.72	0.00	0.00	0.00
4,900.00	13.90	283.38	4,792.06	211.40	-888.95	913.74	0.00	0.00	0.00
5,000.00	13.90	283.38	4,889.13	216.96	-912.32	937.76	0.00	0.00	0.00

<b>Database:</b>	EDM 2003.21 Single User Db	<b>Local Co-ordinate Reference:</b>	Well P_MIRACLE 24-12
<b>Company:</b>	US ROCKIES REGION PLANNING	<b>TVD Reference:</b>	WELL @ 4963.00ft (Original Well Elev)
<b>Project:</b>	COLORADO NORTHERN ZONE - 83	<b>MD Reference:</b>	WELL @ 4963.00ft (Original Well Elev)
<b>Site:</b>	LARIMER_MIRACLE 40-12 PAD	<b>North Reference:</b>	True
<b>Well:</b>	P_MIRACLE 24-12	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	P_MIRACLE 24-12		
<b>Design:</b>	PLAN #1 3-22-10 RHS		

#### 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)	Turn Rate (°/100ft)
5,100.00	13.90	283.38	4,986.21	222.52	-935.69	961.78	0.00	0.00	0.00
5,200.00	13.90	283.38	5,083.28	228.07	-959.05	985.80	0.00	0.00	0.00
<b>Start Drop -2.00</b>									
5,290.27	13.90	283.38	5,170.91	233.09	-980.15	1,007.48	0.00	0.00	0.00
5,300.00	13.70	283.38	5,180.36	233.63	-982.40	1,009.80	2.00	-2.00	0.00
5,400.00	11.70	283.38	5,277.90	238.72	-1,003.80	1,031.79	2.00	-2.00	0.00
5,500.00	9.70	283.38	5,376.16	243.01	-1,021.86	1,050.36	2.00	-2.00	0.00
5,600.00	7.70	283.38	5,475.00	246.51	-1,036.58	1,065.49	2.00	-2.00	0.00
5,700.00	5.70	283.38	5,574.31	249.21	-1,047.94	1,077.17	2.00	-2.00	0.00
5,800.00	3.70	283.38	5,673.97	251.11	-1,055.92	1,085.36	2.00	-2.00	0.00
5,900.00	1.70	283.38	5,773.86	252.20	-1,060.50	1,090.08	2.00	-2.00	0.00
<b>Start 1951.00 hold at 5985.16 MD</b>									
5,985.16	0.00	0.00	5,859.00	252.49	-1,061.74	1,091.35	2.00	-2.00	89.98
6,000.00	0.00	0.00	5,873.84	252.49	-1,061.74	1,091.35	0.00	0.00	0.00
6,100.00	0.00	0.00	5,973.84	252.49	-1,061.74	1,091.35	0.00	0.00	0.00
6,200.00	0.00	0.00	6,073.84	252.49	-1,061.74	1,091.35	0.00	0.00	0.00
6,300.00	0.00	0.00	6,173.84	252.49	-1,061.74	1,091.35	0.00	0.00	0.00
6,400.00	0.00	0.00	6,273.84	252.49	-1,061.74	1,091.35	0.00	0.00	0.00
6,500.00	0.00	0.00	6,373.84	252.49	-1,061.74	1,091.35	0.00	0.00	0.00
6,600.00	0.00	0.00	6,473.84	252.49	-1,061.74	1,091.35	0.00	0.00	0.00
6,700.00	0.00	0.00	6,573.84	252.49	-1,061.74	1,091.35	0.00	0.00	0.00
6,800.00	0.00	0.00	6,673.84	252.49	-1,061.74	1,091.35	0.00	0.00	0.00
6,900.00	0.00	0.00	6,773.84	252.49	-1,061.74	1,091.35	0.00	0.00	0.00
<b>NIO A</b>									
6,985.16	0.00	0.00	6,859.00	252.49	-1,061.74	1,091.35	0.00	0.00	0.00
7,000.00	0.00	0.00	6,873.84	252.49	-1,061.74	1,091.35	0.00	0.00	0.00
7,100.00	0.00	0.00	6,973.84	252.49	-1,061.74	1,091.35	0.00	0.00	0.00
7,200.00	0.00	0.00	7,073.84	252.49	-1,061.74	1,091.35	0.00	0.00	0.00
7,300.00	0.00	0.00	7,173.84	252.49	-1,061.74	1,091.35	0.00	0.00	0.00
<b>CODELL</b>									
7,307.16	0.00	0.00	7,181.00	252.49	-1,061.74	1,091.35	0.00	0.00	0.00
7,400.00	0.00	0.00	7,273.84	252.49	-1,061.74	1,091.35	0.00	0.00	0.00
7,500.00	0.00	0.00	7,373.84	252.49	-1,061.74	1,091.35	0.00	0.00	0.00
7,600.00	0.00	0.00	7,473.84	252.49	-1,061.74	1,091.35	0.00	0.00	0.00
7,700.00	0.00	0.00	7,573.84	252.49	-1,061.74	1,091.35	0.00	0.00	0.00
<b>JSAND</b>									
7,774.16	0.00	0.00	7,648.00	252.49	-1,061.74	1,091.35	0.00	0.00	0.00
7,800.00	0.00	0.00	7,673.84	252.49	-1,061.74	1,091.35	0.00	0.00	0.00
7,900.00	0.00	0.00	7,773.84	252.49	-1,061.74	1,091.35	0.00	0.00	0.00
<b>PBHL_MIRACLE 24-12(2550 FNL 1400 FEL)50'TGT RAD</b>									
7,936.16	0.00	0.00	7,810.00	252.49	-1,061.74	1,091.35	0.00	0.00	0.00

#### Design 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
PBHL_MIRACLE 24-1 - plan hits target center - Circle (radius 50.00)	0.00	0.00	7,810.00	252.49	-1,061.74	1,394,310.20	3,153,297.36	40° 24' 52.117 N	104° 56' 58.056 W

<b>Database:</b>	EDM 2003.21 Single User Db	<b>Local Co-ordinate Reference:</b>	Well P_MIRACLE 24-12
<b>Company:</b>	US ROCKIES REGION PLANNING	<b>TVD Reference:</b>	WELL @ 4963.00ft (Original Well Elev)
<b>Project:</b>	COLORADO NORTHERN ZONE - 83	<b>MD Reference:</b>	WELL @ 4963.00ft (Original Well Elev)
<b>Site:</b>	LARIMER_MIRACLE 40-12 PAD	<b>North Reference:</b>	True
<b>Well:</b>	P_MIRACLE 24-12	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	P_MIRACLE 24-12		
<b>Design:</b>	PLAN #1 3-22-10 RHS		

Casing Points					
Measured Depth (ft)	Vertical Depth (ft)	Name	Casing Diameter (in)	Hole Diameter (in)	
650.00	650.00	8 5/8"	8.62	11.00	

Formations						
Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)	
3,526.74	3,459.00	PARKMAN				
4,134.53	4,049.00	SUSSEX				
4,598.10	4,499.00	SHANNON				
6,985.16	6,859.00	NIO A				
7,307.16	7,181.00	CODELL				
7,774.16	7,648.00	JSAND				

Plan Annotations					
Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates			
		+N/-S (ft)	+E/-W (ft)	Comment	
750.00	750.00	0.00	0.00	Start Build 2.00	
1,444.88	1,438.09	19.40	-81.59	Start 3845.39 hold at 1444.88 MD	
5,290.27	5,170.91	233.09	-980.15	Start Drop -2.00	
5,985.16	5,859.00	252.49	-1,061.74	Start 1951.00 hold at 5985.16 MD	
7,936.16	7,810.00	252.49	-1,061.74	TD at 7936.16	



# **US ROCKIES REGION PLANNING**

**COLORADO NORTHERN ZONE - 83  
LARIMER\_MIRACLE 40-12 PAD  
P\_MIRACLE 24-12**

**P\_MIRACLE 24-12  
PLAN #1 3-22-10 RHS**

## **Anticollision Report**

**23 March, 2010**



<b>Company:</b>	US ROCKIES REGION PLANNING	<b>Local Co-ordinate Reference:</b>	Well P_MIRACLE 24-12
<b>Project:</b>	COLORADO NORTHERN ZONE - 83	<b>TVD Reference:</b>	WELL @ 4963.00ft (Original Well Elev)
<b>Reference Site:</b>	LARIMER_MIRACLE 40-12 PAD	<b>MD Reference:</b>	WELL @ 4963.00ft (Original Well Elev)
<b>Site Error:</b>	0.00ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	P_MIRACLE 24-12	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.00ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	P_MIRACLE 24-12	<b>Database:</b>	EDM 2003.21 Single User Db
<b>Reference Design:</b>	PLAN #1 3-22-10 RHS	<b>Offset TVD Reference:</b>	Offset Datum

<b>Reference</b>	PLAN #1 3-22-10 RHS		
<b>Filter type:</b>	NO GLOBAL FILTER: Using user defined selection & filtering criteria		
<b>Interpolation Method:</b>	Stations	<b>Error Model:</b>	ISCWSA
<b>Depth Range:</b>	0.00 to 20,000.00ft	<b>Scan Method:</b>	Closest Approach 3D
<b>Results Limited by:</b>	Maximum center-center distance of 10,000.00ft	<b>Error Surface:</b>	Elliptical Conic
<b>Warning Levels Evaluated at:</b>	2.00 Sigma		

<b>Survey Tool Program</b>	<b>Date</b> 3/22/2010			
<b>From (ft)</b>	<b>To (ft)</b>	<b>Survey (Wellbore)</b>	<b>Tool Name</b>	<b>Description</b>
0.00	7,936.16	PLAN #1 3-22-10 RHS (P_MIRACLE 24-1	MWD	MWD - Standard

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						
LARIMER_MIRACLE 40-12 PAD						
P_MIRACLE 1-12 - P_MIRACLE 1-12 - PLAN #1 3-22-10	556.23	556.57	58.77	56.52	26.164	CC
P_MIRACLE 1-12 - P_MIRACLE 1-12 - PLAN #1 3-22-10	600.00	600.10	58.92	56.47	24.101	ES
P_MIRACLE 1-12 - P_MIRACLE 1-12 - PLAN #1 3-22-10	800.00	796.99	67.18	63.72	19.395	SF
P_MIRACLE 16-12 - P_MIRACLE 16-12 - PLAN #1 3-22-10	750.00	750.00	29.80	26.68	9.572	CC, ES
P_MIRACLE 16-12 - P_MIRACLE 16-12 - PLAN #1 3-22-10	900.00	900.12	33.15	29.45	8.971	SF
P_MIRACLE 17-12 - P_MIRACLE 17-12 - PLAN #1 3-22-10	750.00	750.00	39.83	36.71	12.793	CC
P_MIRACLE 17-12 - P_MIRACLE 17-12 - PLAN #1 3-22-10	800.00	800.41	39.99	36.66	12.005	ES
P_MIRACLE 17-12 - P_MIRACLE 17-12 - PLAN #1 3-22-10	1,000.00	1,001.83	44.46	40.27	10.623	SF
P_MIRACLE 20-12 - P_MIRACLE 20-12 - PLAN #1 3-22-10	750.00	750.00	10.02	6.91	3.220	CC
P_MIRACLE 20-12 - P_MIRACLE 20-12 - PLAN #1 3-22-10	800.00	800.12	10.16	6.84	3.061	ES, SF
P_MIRACLE 8-12 - P_MIRACLE 8-12 - PLAN #1 3-22-10	750.00	750.00	49.85	46.74	16.013	CC, ES
P_MIRACLE 8-12 - P_MIRACLE 8-12 - PLAN #1 3-22-10	1,000.00	1,001.59	56.10	51.91	13.393	SF
P_MIRACLE 9-12 - P_MIRACLE 9-12 - PLAN #1 3-22-10	750.00	750.00	20.05	16.94	6.441	CC, ES
P_MIRACLE 9-12 - P_MIRACLE 9-12 - PLAN #1 3-22-10	900.00	900.36	22.39	18.69	6.053	SF

Offset Design		LARIMER_MIRACLE 40-12 PAD - P_MIRACLE 1-12 - P_MIRACLE 1-12 - PLAN #1 3-22-10 RHS										Offset Site Error:		0.00 ft
Survey Program:		0-MWD										Offset Well Error:		0.00 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	Minimum Separation	Separation Factor			
(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(°)	+N/-S (ft)	+E/-W (ft)	(ft)	(ft)	(ft)			
0.00	0.00	0.00	0.00	0.00	0.00	91.03	-1.08	59.87	59.88					
100.00	100.00	100.00	100.00	0.10	0.10	91.03	-1.08	59.87	59.88	59.69	0.19	313.410		
200.00	200.00	200.00	200.00	0.32	0.32	91.03	-1.08	59.87	59.88	59.24	0.64	93.473		
300.00	300.00	300.00	300.00	0.55	0.55	91.03	-1.08	59.87	59.88	58.79	1.09	54.928		
400.00	400.00	400.36	400.34	0.77	0.77	89.37	0.65	59.56	59.57	58.03	1.54	38.670		
500.00	500.00	500.48	500.31	0.99	1.00	84.33	5.82	58.65	58.94	56.95	1.99	29.601		
556.23	556.23	556.57	556.23	1.12	1.14	79.98	10.23	57.87	58.77	56.52	2.25	26.164 CC		
600.00	600.00	600.10	599.56	1.22	1.24	75.87	14.38	57.13	58.92	56.47	2.44	24.101 ES		
700.00	700.00	699.01	697.72	1.44	1.52	64.51	26.24	55.04	61.02	58.10	2.91	20.951		
750.00	750.00	748.12	746.29	1.56	1.67	58.19	33.36	53.78	63.40	60.24	3.16	20.051		
800.00	800.00	796.99	794.50	1.66	1.82	128.62	41.27	52.38	67.18	63.72	3.46	19.395 SF		
900.00	899.93	894.01	889.77	1.87	2.17	118.46	59.35	49.19	79.55	75.59	3.96	20.104		
1,000.00	999.68	989.91	983.26	2.09	2.57	111.54	80.33	45.48	97.31	92.85	4.46	21.801		
1,100.00	1,099.13	1,084.52	1,074.75	2.34	3.01	107.16	104.04	41.29	119.45	114.44	5.00	23.878		

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



<b>Company:</b>	US ROCKIES REGION PLANNING	<b>Local Co-ordinate Reference:</b>	Well P_MIRACLE 24-12
<b>Project:</b>	COLORADO NORTHERN ZONE - 83	<b>TVD Reference:</b>	WELL @ 4963.00ft (Original Well Elev)
<b>Reference Site:</b>	LARIMER_MIRACLE 40-12 PAD	<b>MD Reference:</b>	WELL @ 4963.00ft (Original Well Elev)
<b>Site Error:</b>	0.00ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	P_MIRACLE 24-12	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.00ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	P_MIRACLE 24-12	<b>Database:</b>	EDM 2003.21 Single User Db
<b>Reference Design:</b>	PLAN #1 3-22-10 RHS	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design LARIMER_MIRACLE 40-12 PAD - P_MIRACLE 1-12 - P_MIRACLE 1-12 - PLAN #1 3-22-10 RHS												Offset Site Error:	0.00 ft
Survey Program: 0-MWD												Offset Well Error:	0.00 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)	Minimum Separation (ft)	Separation Factor	Warning
1,200.00	1,198.15	1,177.68	1,164.02	2.61	3.50	104.49	130.28	36.65	145.31	139.72	5.59	26.005	
1,300.00	1,296.63	1,269.26	1,250.88	2.91	4.03	102.89	158.85	31.61	174.54	168.31	6.23	28.014	
1,400.00	1,394.44	1,359.14	1,335.17	3.27	4.60	101.95	189.53	26.19	206.91	199.97	6.94	29.818	
1,444.88	1,438.09	1,400.00	1,373.17	3.45	4.87	101.67	204.34	23.57	222.43	215.15	7.28	30.545	
1,500.00	1,491.59	1,447.24	1,416.82	3.68	5.21	101.69	222.12	20.43	242.19	234.46	7.73	31.342	
1,600.00	1,588.67	1,534.22	1,496.40	4.12	5.85	101.46	256.69	14.32	279.77	271.21	8.56	32.686	
1,700.00	1,685.74	1,626.49	1,580.34	4.57	6.56	101.13	294.42	7.65	318.28	308.83	9.45	33.689	
1,800.00	1,782.81	1,718.76	1,664.28	5.04	7.28	100.87	332.14	0.99	356.80	346.45	10.35	34.461	
1,900.00	1,879.88	1,811.03	1,748.22	5.51	8.01	100.66	369.87	-5.68	395.33	384.06	11.27	35.066	
2,000.00	1,976.96	1,903.30	1,832.17	5.99	8.74	100.49	407.59	-12.35	433.86	421.66	12.20	35.548	
2,100.00	2,074.03	1,995.57	1,916.11	6.48	9.48	100.34	445.31	-19.01	472.40	459.25	13.14	35.939	
2,200.00	2,171.10	2,087.85	2,000.05	6.97	10.21	100.22	483.04	-25.68	510.94	496.85	14.09	36.261	
2,300.00	2,268.17	2,180.12	2,084.00	7.47	10.95	100.11	520.76	-32.34	549.47	534.43	15.04	36.529	
2,400.00	2,365.25	2,272.39	2,167.94	7.96	11.69	100.02	558.48	-39.01	588.01	572.02	16.00	36.756	
2,500.00	2,462.32	2,364.66	2,251.88	8.46	12.43	99.94	596.21	-45.68	626.55	609.60	16.96	36.949	
2,600.00	2,559.39	2,456.93	2,335.83	8.97	13.17	99.87	633.93	-52.34	665.10	647.18	17.92	37.114	
2,700.00	2,656.46	2,549.20	2,419.77	9.47	13.92	99.81	671.66	-59.01	703.64	684.75	18.89	37.258	
2,800.00	2,753.54	2,641.47	2,503.71	9.97	14.66	99.75	709.38	-65.67	742.18	722.33	19.85	37.384	
2,900.00	2,850.61	2,733.74	2,587.66	10.48	15.41	99.70	747.10	-72.34	780.73	759.90	20.82	37.495	
3,000.00	2,947.68	2,826.02	2,671.60	10.99	16.15	99.66	784.83	-79.01	819.27	797.48	21.79	37.593	
3,100.00	3,044.75	2,918.29	2,755.54	11.50	16.90	99.61	822.55	-85.67	857.81	835.05	22.77	37.680	
3,200.00	3,141.83	3,010.56	2,839.49	12.01	17.64	99.58	860.27	-92.34	896.36	872.62	23.74	37.758	
3,300.00	3,238.90	3,102.83	2,923.43	12.51	18.39	99.54	898.00	-99.00	934.91	910.19	24.71	37.829	
3,400.00	3,335.97	3,195.10	3,007.37	13.03	19.14	99.51	935.72	-105.67	973.45	947.76	25.69	37.892	
3,500.00	3,433.05	3,287.37	3,091.32	13.54	19.89	99.48	973.45	-112.34	1,012.00	985.33	26.67	37.950	
3,600.00	3,530.12	3,379.64	3,175.26	14.05	20.63	99.45	1,011.17	-119.00	1,050.54	1,022.90	27.64	38.002	
3,700.00	3,627.19	3,471.92	3,259.20	14.56	21.38	99.43	1,048.89	-125.67	1,089.09	1,060.47	28.62	38.050	
3,800.00	3,724.26	3,564.19	3,343.15	15.07	22.13	99.40	1,086.62	-132.33	1,127.64	1,098.03	29.60	38.094	
3,900.00	3,821.34	3,656.46	3,427.09	15.58	22.88	99.38	1,124.34	-139.00	1,166.18	1,135.60	30.58	38.135	
4,000.00	3,918.41	3,748.73	3,511.03	16.10	23.63	99.36	1,162.07	-145.67	1,204.73	1,173.17	31.56	38.172	
4,100.00	4,015.48	3,841.00	3,594.98	16.61	24.37	99.34	1,199.79	-152.33	1,243.28	1,210.73	32.54	38.207	
4,200.00	4,112.55	3,933.27	3,678.92	17.12	25.12	99.32	1,237.51	-159.00	1,281.82	1,248.30	33.52	38.239	
4,300.00	4,209.63	4,025.54	3,762.86	17.64	25.87	99.30	1,275.24	-165.66	1,320.37	1,285.87	34.50	38.268	
4,400.00	4,306.70	4,117.81	3,846.81	18.15	26.62	99.29	1,312.96	-172.33	1,358.92	1,323.43	35.48	38.296	
4,500.00	4,403.77	4,210.09	3,930.75	18.66	27.37	99.27	1,350.68	-179.00	1,397.46	1,361.00	36.47	38.322	
4,600.00	4,500.84	4,302.36	4,014.69	19.18	28.12	99.26	1,388.41	-185.66	1,436.01	1,398.56	37.45	38.346	
4,700.00	4,597.92	4,394.63	4,098.64	19.69	28.87	99.24	1,426.13	-192.33	1,474.56	1,436.13	38.43	38.369	
4,800.00	4,694.99	4,486.90	4,182.58	20.21	29.62	99.23	1,463.86	-198.99	1,513.11	1,473.69	39.41	38.391	
4,900.00	4,792.06	4,579.17	4,266.52	20.72	30.37	99.22	1,501.58	-205.66	1,551.65	1,511.26	40.40	38.411	
5,000.00	4,889.13	4,671.44	4,350.47	21.24	31.12	99.20	1,539.30	-212.33	1,590.20	1,548.82	41.38	38.430	
5,100.00	4,986.21	4,763.71	4,434.41	21.75	31.87	99.19	1,577.03	-218.99	1,628.75	1,586.39	42.36	38.447	
5,200.00	5,083.28	4,855.98	4,518.35	22.27	32.62	99.18	1,614.75	-225.66	1,667.30	1,623.95	43.35	38.464	
5,290.27	5,170.91	4,939.28	4,594.13	22.73	33.29	99.17	1,648.80	-231.68	1,702.10	1,657.86	44.23	38.479	
5,300.00	5,180.36	4,948.26	4,602.30	22.78	33.37	99.25	1,652.47	-232.32	1,705.84	1,661.49	44.35	38.464	
5,400.00	5,277.90	5,040.63	4,686.33	23.14	34.12	99.98	1,690.24	-239.00	1,744.07	1,698.64	45.43	38.390	
5,500.00	5,376.16	5,133.07	4,770.43	23.46	34.87	100.59	1,728.03	-245.68	1,781.76	1,735.31	46.45	38.361	
5,600.00	5,475.00	5,225.49	4,854.51	23.74	35.62	101.07	1,765.82	-252.35	1,818.88	1,771.48	47.40	38.376	
5,700.00	5,574.31	5,317.76	4,938.45	23.97	36.37	101.43	1,803.54	-259.02	1,855.44	1,807.16	48.27	38.436	
5,800.00	5,673.97	5,409.78	5,022.16	24.17	37.12	101.69	1,841.16	-265.67	1,891.46	1,842.38	49.08	38.539	
5,900.00	5,773.86	5,501.42	5,105.54	24.31	37.86	101.86	1,878.63	-272.29	1,926.97	1,877.16	49.81	38.685	
5,985.16	5,859.00	5,676.04	5,266.38	24.41	38.99	24.67	1,945.51	-284.11	1,955.05	1,904.52	50.53	38.691	
6,000.00	5,873.84	5,708.63	5,296.84	24.43	39.17	24.47	1,956.92	-286.12	1,959.49	1,908.88	50.61	38.719	

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

<b>Company:</b>	US ROCKIES REGION PLANNING	<b>Local Co-ordinate Reference:</b>	Well P_MIRACLE 24-12
<b>Project:</b>	COLORADO NORTHERN ZONE - 83	<b>TVD Reference:</b>	WELL @ 4963.00ft (Original Well Elev)
<b>Reference Site:</b>	LARIMER_MIRACLE 40-12 PAD	<b>MD Reference:</b>	WELL @ 4963.00ft (Original Well Elev)
<b>Site Error:</b>	0.00ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	P_MIRACLE 24-12	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.00ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	P_MIRACLE 24-12	<b>Database:</b>	EDM 2003.21 Single User Db
<b>Reference Design:</b>	PLAN #1 3-22-10 RHS	<b>Offset TVD Reference:</b>	Offset Datum

<b>Offset Design</b> LARIMER_MIRACLE 40-12 PAD - P_MIRACLE 1-12 - P_MIRACLE 1-12 - PLAN #1 3-22-10 RHS												<b>Offset Site Error:</b>	0.00 ft
Survey Program: 0-MWD												<b>Offset Well Error:</b>	0.00 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)	Minimum Separation (ft)	Separation Factor	Warning
6,100.00	5,973.84	5,935.18	5,511.96	24.54	40.28	23.28	2,026.70	-298.45	1,985.89	1,934.77	51.12	38.846	
6,200.00	6,073.84	6,172.45	5,742.51	24.66	41.21	22.39	2,081.60	-308.15	2,005.82	1,954.21	51.61	38.865	
6,300.00	6,173.84	6,417.76	5,984.88	24.77	41.89	21.82	2,118.42	-314.66	2,018.79	1,966.73	52.06	38.782	
6,400.00	6,273.84	6,667.79	6,234.28	24.89	42.28	21.57	2,134.79	-317.55	2,024.46	1,972.01	52.44	38.604	
6,500.00	6,373.84	6,807.36	6,373.84	25.01	42.38	21.56	2,135.54	-317.68	2,024.71	1,972.02	52.70	38.423	
6,600.00	6,473.84	6,907.36	6,473.84	25.14	42.45	21.56	2,135.54	-317.68	2,024.71	1,971.79	52.92	38.258	
6,700.00	6,573.84	7,007.36	6,573.84	25.26	42.52	21.56	2,135.54	-317.68	2,024.71	1,971.56	53.15	38.093	
6,800.00	6,673.84	7,107.36	6,673.84	25.39	42.59	21.56	2,135.54	-317.68	2,024.71	1,971.33	53.38	37.927	
6,900.00	6,773.84	7,207.36	6,773.84	25.51	42.66	21.56	2,135.54	-317.68	2,024.71	1,971.09	53.62	37.761	
7,000.00	6,873.84	7,307.36	6,873.84	25.64	42.73	21.56	2,135.54	-317.68	2,024.71	1,970.85	53.86	37.594	
7,100.00	6,973.84	7,407.36	6,973.84	25.77	42.80	21.56	2,135.54	-317.68	2,024.71	1,970.61	54.10	37.427	
7,200.00	7,073.84	7,507.36	7,073.84	25.90	42.87	21.56	2,135.54	-317.68	2,024.71	1,970.37	54.34	37.259	
7,300.00	7,173.84	7,607.36	7,173.84	26.03	42.94	21.56	2,135.54	-317.68	2,024.71	1,970.13	54.59	37.092	
7,400.00	7,273.84	7,707.36	7,273.84	26.16	43.02	21.56	2,135.54	-317.68	2,024.71	1,969.88	54.84	36.924	
7,500.00	7,373.84	7,807.36	7,373.84	26.30	43.10	21.56	2,135.54	-317.68	2,024.71	1,969.63	55.09	36.755	
7,600.00	7,473.84	7,907.36	7,473.84	26.43	43.17	21.56	2,135.54	-317.68	2,024.71	1,969.37	55.34	36.587	
7,700.00	7,573.84	8,007.36	7,573.84	26.57	43.25	21.56	2,135.54	-317.68	2,024.71	1,969.12	55.60	36.419	
7,800.00	7,673.84	8,107.36	7,673.84	26.71	43.33	21.56	2,135.54	-317.68	2,024.71	1,968.86	55.85	36.250	
7,900.00	7,773.84	8,207.36	7,773.84	26.85	43.41	21.56	2,135.54	-317.68	2,024.71	1,968.60	56.11	36.082	
7,936.16	7,810.00	8,243.52	7,810.00	26.90	43.44	21.56	2,135.54	-317.68	2,024.71	1,968.50	56.21	36.021	

<b>Company:</b>	US ROCKIES REGION PLANNING	<b>Local Co-ordinate Reference:</b>	Well P_MIRACLE 24-12
<b>Project:</b>	COLORADO NORTHERN ZONE - 83	<b>TVD Reference:</b>	WELL @ 4963.00ft (Original Well Elev)
<b>Reference Site:</b>	LARIMER_MIRACLE 40-12 PAD	<b>MD Reference:</b>	WELL @ 4963.00ft (Original Well Elev)
<b>Site Error:</b>	0.00ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	P_MIRACLE 24-12	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.00ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	P_MIRACLE 24-12	<b>Database:</b>	EDM 2003.21 Single User Db
<b>Reference Design:</b>	PLAN #1 3-22-10 RHS	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design												Offset Site Error:	0.00 ft
Survey Program: 0-MWD												Offset Well Error:	0.00 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)	Minimum Separation (ft)	Separation Factor	
0.00	0.00	0.00	0.00	0.00	0.00	90.70	-0.36	29.79	29.80				
100.00	100.00	100.00	100.00	0.10	0.10	90.70	-0.36	29.79	29.80	29.61	0.19	155.962	
200.00	200.00	200.00	200.00	0.32	0.32	90.70	-0.36	29.79	29.80	29.16	0.64	46.515	
300.00	300.00	300.00	300.00	0.55	0.55	90.70	-0.36	29.79	29.80	28.71	1.09	27.334	
400.00	400.00	400.00	400.00	0.77	0.77	90.70	-0.36	29.79	29.80	28.26	1.54	19.353	
500.00	500.00	500.00	500.00	0.99	0.99	90.70	-0.36	29.79	29.80	27.81	1.99	14.979	
600.00	600.00	600.00	600.00	1.22	1.22	90.70	-0.36	29.79	29.80	27.36	2.44	12.218	
700.00	700.00	700.00	700.00	1.44	1.44	90.70	-0.36	29.79	29.80	26.91	2.89	10.317	
750.00	750.00	750.00	750.00	1.56	1.56	90.70	-0.36	29.79	29.80	26.68	3.11	9.572 CC, ES	
800.00	800.00	800.10	800.10	1.66	1.65	168.32	-0.79	29.70	30.14	26.82	3.32	9.084	
900.00	899.93	900.12	900.05	1.87	1.83	175.48	-4.20	28.93	33.15	29.45	3.69	8.971 SF	
1,000.00	999.68	999.58	999.26	2.09	2.02	-173.81	-10.96	27.40	40.33	36.25	4.09	9.866	
1,100.00	1,099.13	1,098.13	1,097.28	2.34	2.23	-163.76	-20.97	25.15	52.76	48.26	4.51	11.710	
1,200.00	1,198.15	1,195.43	1,193.64	2.61	2.48	-156.11	-34.08	22.19	70.69	65.74	4.96	14.263	
1,300.00	1,296.63	1,291.16	1,287.95	2.91	2.76	-150.69	-50.08	18.58	93.92	88.48	5.45	17.245	
1,400.00	1,394.44	1,385.03	1,379.84	3.27	3.08	-146.87	-68.74	14.38	122.17	116.19	5.98	20.414	
1,444.88	1,438.09	1,426.48	1,420.22	3.45	3.23	-145.52	-77.92	12.31	136.41	130.16	6.25	21.840	
1,500.00	1,491.59	1,476.89	1,469.12	3.68	3.44	-144.20	-89.84	9.62	154.76	148.17	6.60	23.464	
1,600.00	1,588.67	1,567.16	1,556.12	4.12	3.84	-141.90	-113.29	4.33	189.61	182.34	7.27	26.089	
1,700.00	1,685.74	1,655.77	1,640.75	4.57	4.29	-139.73	-138.89	-1.44	226.50	218.52	7.98	28.387	
1,800.00	1,782.81	1,742.61	1,722.87	5.04	4.78	-137.71	-166.44	-7.65	265.48	256.76	8.72	30.437	
1,900.00	1,879.88	1,827.57	1,802.34	5.51	5.30	-135.83	-195.74	-14.26	306.57	297.08	9.49	32.303	
2,000.00	1,976.96	1,910.57	1,879.08	5.99	5.86	-134.08	-226.57	-21.21	349.78	339.50	10.28	34.034	
2,100.00	2,074.03	1,994.12	1,955.44	6.48	6.46	-132.42	-259.66	-28.67	394.99	383.90	11.09	35.613	
2,200.00	2,171.10	2,082.47	2,035.95	6.97	7.12	-130.96	-295.15	-36.68	440.87	428.93	11.94	36.930	
2,300.00	2,268.17	2,170.81	2,116.46	7.47	7.79	-129.78	-330.63	-44.68	486.94	474.15	12.79	38.074	
2,400.00	2,365.25	2,259.16	2,196.96	7.96	8.47	-128.80	-366.12	-52.68	533.14	519.50	13.64	39.076	
2,500.00	2,462.32	2,347.50	2,277.47	8.46	9.16	-127.97	-401.61	-60.68	579.45	564.95	14.50	39.959	
2,600.00	2,559.39	2,435.85	2,357.97	8.97	9.85	-127.27	-437.10	-68.68	625.84	610.48	15.36	40.743	
2,700.00	2,656.46	2,524.19	2,438.48	9.47	10.54	-126.66	-472.59	-76.69	672.30	656.07	16.22	41.442	
2,800.00	2,753.54	2,612.54	2,518.99	9.97	11.24	-126.13	-508.08	-84.69	718.80	701.72	17.09	42.070	
2,900.00	2,850.61	2,700.88	2,599.49	10.48	11.93	-125.67	-543.57	-92.69	765.35	747.40	17.95	42.637	
3,000.00	2,947.68	2,789.23	2,680.00	10.99	12.64	-125.25	-579.05	-100.69	811.93	793.12	18.82	43.152	
3,100.00	3,044.75	2,877.57	2,760.51	11.50	13.34	-124.89	-614.54	-108.70	858.55	838.86	19.68	43.621	
3,200.00	3,141.83	2,965.91	2,841.01	12.01	14.05	-124.56	-650.03	-116.70	905.18	884.64	20.55	44.051	
3,300.00	3,238.90	3,054.26	2,921.52	12.51	14.75	-124.26	-685.52	-124.70	951.84	930.43	21.42	44.446	
3,400.00	3,335.97	3,142.60	3,002.03	13.03	15.46	-123.99	-721.01	-132.70	998.52	976.24	22.28	44.810	
3,500.00	3,433.05	3,230.95	3,082.53	13.54	16.17	-123.74	-756.50	-140.70	1,045.21	1,022.06	23.15	45.148	
3,600.00	3,530.12	3,319.29	3,163.04	14.05	16.88	-123.52	-791.98	-148.71	1,091.92	1,067.90	24.02	45.462	
3,700.00	3,627.19	3,407.64	3,243.55	14.56	17.59	-123.31	-827.47	-156.71	1,138.64	1,113.75	24.89	45.755	
3,800.00	3,724.26	3,495.98	3,324.05	15.07	18.30	-123.12	-862.96	-164.71	1,185.37	1,159.61	25.75	46.029	
3,900.00	3,821.34	3,584.33	3,404.56	15.58	19.01	-122.95	-898.45	-172.71	1,232.11	1,205.49	26.62	46.285	
4,000.00	3,918.41	3,672.67	3,485.07	16.10	19.72	-122.79	-933.94	-180.72	1,278.85	1,251.37	27.49	46.526	
4,100.00	4,015.48	3,761.02	3,565.57	16.61	20.43	-122.63	-969.43	-188.72	1,325.61	1,297.25	28.35	46.754	
4,200.00	4,112.55	3,849.36	3,646.08	17.12	21.15	-122.49	-1,004.91	-196.72	1,372.37	1,343.14	29.23	46.956	
4,300.00	4,209.63	3,937.70	3,726.59	17.64	21.86	-122.36	-1,040.40	-204.72	1,419.14	1,389.03	30.11	47.139	
4,400.00	4,306.70	4,026.05	3,807.09	18.15	22.58	-122.24	-1,075.89	-212.72	1,465.91	1,434.92	30.98	47.310	
4,500.00	4,403.77	4,114.39	3,887.60	18.66	23.29	-122.12	-1,111.38	-220.73	1,512.69	1,480.82	31.86	47.472	
4,600.00	4,500.84	4,202.74	3,968.10	19.18	24.00	-122.01	-1,146.87	-228.73	1,559.47	1,526.73	32.74	47.625	
4,700.00	4,597.92	4,291.08	4,048.61	19.69	24.72	-121.91	-1,182.36	-236.73	1,606.26	1,572.63	33.63	47.769	
4,800.00	4,694.99	4,379.43	4,129.12	20.21	25.43	-121.81	-1,217.84	-244.73	1,653.05	1,618.54	34.51	47.906	
4,900.00	4,792.06	4,467.77	4,209.62	20.72	26.15	-121.72	-1,253.33	-252.74	1,699.84	1,664.45	35.39	48.035	

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

<b>Company:</b>	US ROCKIES REGION PLANNING	<b>Local Co-ordinate Reference:</b>	Well P_MIRACLE 24-12
<b>Project:</b>	COLORADO NORTHERN ZONE - 83	<b>TVD Reference:</b>	WELL @ 4963.00ft (Original Well Elev)
<b>Reference Site:</b>	LARIMER_MIRACLE 40-12 PAD	<b>MD Reference:</b>	WELL @ 4963.00ft (Original Well Elev)
<b>Site Error:</b>	0.00ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	P_MIRACLE 24-12	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.00ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	P_MIRACLE 24-12	<b>Database:</b>	EDM 2003.21 Single User Db
<b>Reference Design:</b>	PLAN #1 3-22-10 RHS	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design												Offset Site Error:	0.00 ft
Survey Program: 0-MWD												Offset Well Error:	0.00 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)	Minimum Separation (ft)	Separation Factor	
5,000.00	4,889.13	4,556.12	4,290.13	21.24	26.86	-121.64	-1,288.82	-260.74	1,746.64	1,710.37	36.27	48.158	
5,100.00	4,986.21	4,644.46	4,370.64	21.75	27.58	-121.55	-1,324.31	-268.74	1,793.44	1,756.29	37.15	48.275	
5,200.00	5,083.28	4,732.80	4,451.14	22.27	28.29	-121.48	-1,359.80	-276.74	1,840.24	1,802.21	38.03	48.386	
5,290.27	5,170.91	4,812.56	4,523.82	22.73	28.94	-121.41	-1,391.83	-283.97	1,882.49	1,843.66	38.83	48.482	
5,300.00	5,180.36	4,821.15	4,531.65	22.78	29.01	-121.49	-1,395.29	-284.74	1,887.04	1,848.10	38.94	48.466	
5,400.00	5,277.90	4,909.94	4,612.56	23.14	29.73	-122.24	-1,430.95	-292.79	1,932.88	1,892.93	39.94	48.390	
5,500.00	5,376.16	4,999.39	4,694.08	23.46	30.46	-122.85	-1,466.89	-300.89	1,977.07	1,936.16	40.90	48.336	
5,600.00	5,475.00	5,089.39	4,776.09	23.74	31.18	-123.34	-1,503.04	-309.04	2,019.59	1,977.78	41.81	48.308	
5,700.00	5,574.31	5,179.83	4,858.51	23.97	31.92	-123.71	-1,539.37	-317.23	2,060.42	2,017.77	42.65	48.307	
5,800.00	5,673.97	5,308.25	4,975.79	24.17	32.87	-123.78	-1,590.38	-328.74	2,099.37	2,055.81	43.55	48.202	
5,900.00	5,773.86	5,559.07	5,210.51	24.31	34.14	-123.25	-1,676.43	-348.14	2,131.77	2,087.19	44.58	47.815	
5,985.16	5,859.00	5,785.03	5,427.84	24.41	35.08	160.61	-1,736.54	-361.69	2,152.26	2,106.92	45.34	47.468	
6,000.00	5,873.84	5,825.40	5,467.15	24.43	35.23	160.74	-1,745.51	-363.72	2,155.15	2,109.71	45.44	47.425	
6,100.00	5,973.84	6,103.46	5,740.89	24.54	36.04	161.42	-1,792.51	-374.31	2,169.99	2,123.90	46.09	47.082	
6,200.00	6,073.84	6,388.48	6,024.98	24.66	36.51	161.72	-1,813.60	-379.07	2,176.50	2,129.89	46.61	46.701	
6,300.00	6,173.84	6,537.36	6,173.84	24.77	36.63	161.73	-1,814.56	-379.28	2,176.79	2,129.90	46.89	46.421	
6,400.00	6,273.84	6,637.36	6,273.84	24.89	36.69	161.73	-1,814.56	-379.28	2,176.79	2,129.67	47.12	46.195	
6,500.00	6,373.84	6,737.36	6,373.84	25.01	36.76	161.73	-1,814.56	-379.28	2,176.79	2,129.44	47.35	45.968	
6,600.00	6,473.84	6,837.36	6,473.84	25.14	36.82	161.73	-1,814.56	-379.28	2,176.79	2,129.20	47.59	45.741	
6,700.00	6,573.84	6,937.36	6,573.84	25.26	36.89	161.73	-1,814.56	-379.28	2,176.79	2,128.97	47.83	45.513	
6,800.00	6,673.84	7,037.36	6,673.84	25.39	36.96	161.73	-1,814.56	-379.28	2,176.79	2,128.72	48.07	45.284	
6,900.00	6,773.84	7,137.36	6,773.84	25.51	37.03	161.73	-1,814.56	-379.28	2,176.79	2,128.48	48.31	45.055	
7,000.00	6,873.84	7,237.36	6,873.84	25.64	37.10	161.73	-1,814.56	-379.28	2,176.79	2,128.23	48.56	44.825	
7,100.00	6,973.84	7,337.36	6,973.84	25.77	37.17	161.73	-1,814.56	-379.28	2,176.79	2,127.98	48.81	44.596	
7,200.00	7,073.84	7,437.36	7,073.84	25.90	37.25	161.73	-1,814.56	-379.28	2,176.79	2,127.73	49.06	44.366	
7,300.00	7,173.84	7,537.36	7,173.84	26.03	37.32	161.73	-1,814.56	-379.28	2,176.79	2,127.47	49.32	44.136	
7,400.00	7,273.84	7,637.36	7,273.84	26.16	37.40	161.73	-1,814.56	-379.28	2,176.79	2,127.21	49.58	43.905	
7,500.00	7,373.84	7,737.36	7,373.84	26.30	37.48	161.73	-1,814.56	-379.28	2,176.79	2,126.95	49.84	43.675	
7,600.00	7,473.84	7,837.36	7,473.84	26.43	37.56	161.73	-1,814.56	-379.28	2,176.79	2,126.69	50.10	43.445	
7,700.00	7,573.84	7,937.36	7,573.84	26.57	37.64	161.73	-1,814.56	-379.28	2,176.79	2,126.42	50.37	43.215	
7,800.00	7,673.84	8,037.36	7,673.84	26.71	37.72	161.73	-1,814.56	-379.28	2,176.79	2,126.15	50.64	42.986	
7,900.00	7,773.84	8,137.36	7,773.84	26.85	37.80	161.73	-1,814.56	-379.28	2,176.79	2,125.88	50.91	42.757	
7,936.16	7,810.00	8,173.51	7,810.00	26.90	37.83	161.73	-1,814.56	-379.28	2,176.79	2,125.78	51.01	42.674	

<b>Company:</b>	US ROCKIES REGION PLANNING	<b>Local Co-ordinate Reference:</b>	Well P_MIRACLE 24-12
<b>Project:</b>	COLORADO NORTHERN ZONE - 83	<b>TVD Reference:</b>	WELL @ 4963.00ft (Original Well Elev)
<b>Reference Site:</b>	LARIMER_MIRACLE 40-12 PAD	<b>MD Reference:</b>	WELL @ 4963.00ft (Original Well Elev)
<b>Site Error:</b>	0.00ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	P_MIRACLE 24-12	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.00ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	P_MIRACLE 24-12	<b>Database:</b>	EDM 2003.21 Single User Db
<b>Reference Design:</b>	PLAN #1 3-22-10 RHS	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design												Offset Site Error:	0.00 ft
Survey Program: 0-MWD												Offset Well Error:	0.00 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)	Minimum Separation (ft)	Separation Factor	
0.00	0.00	0.00	0.00	0.00	0.00	91.05	-0.73	39.82	39.83				
100.00	100.00	100.00	100.00	0.10	0.10	91.05	-0.73	39.82	39.83	39.63	0.19	208.455	
200.00	200.00	200.00	200.00	0.32	0.32	91.05	-0.73	39.82	39.83	39.19	0.64	62.171	
300.00	300.00	300.00	300.00	0.55	0.55	91.05	-0.73	39.82	39.83	38.74	1.09	36.533	
400.00	400.00	400.00	400.00	0.77	0.77	91.05	-0.73	39.82	39.83	38.29	1.54	25.867	
500.00	500.00	500.00	500.00	0.99	0.99	91.05	-0.73	39.82	39.83	37.84	1.99	20.021	
600.00	600.00	600.00	600.00	1.22	1.22	91.05	-0.73	39.82	39.83	37.39	2.44	16.331	
700.00	700.00	700.00	700.00	1.44	1.44	91.05	-0.73	39.82	39.83	36.94	2.89	13.789	
750.00	750.00	750.00	750.00	1.56	1.56	91.05	-0.73	39.82	39.83	36.71	3.11	12.793 CC	
800.00	800.00	800.41	800.41	1.66	1.67	167.29	-0.37	39.56	39.99	36.66	3.33	12.005 ES	
900.00	899.93	901.19	901.12	1.87	1.89	164.38	2.53	37.52	41.39	37.63	3.75	11.022	
1,000.00	999.68	1,001.83	1,001.51	2.09	2.12	159.14	8.31	33.44	44.46	40.27	4.19	10.623 SF	
1,100.00	1,099.13	1,102.24	1,101.35	2.34	2.37	152.59	16.94	27.34	49.64	45.00	4.64	10.707	
1,200.00	1,198.15	1,202.32	1,200.44	2.61	2.64	145.82	28.38	19.26	57.31	52.18	5.13	11.173	
1,300.00	1,296.63	1,302.00	1,298.59	2.91	2.94	139.61	42.57	9.23	67.68	61.99	5.69	11.896	
1,400.00	1,394.44	1,401.18	1,395.59	3.27	3.29	134.30	59.46	-2.70	80.81	74.47	6.34	12.752	
1,444.88	1,438.09	1,445.52	1,438.70	3.45	3.46	132.23	67.89	-8.65	87.59	80.92	6.67	13.140	
1,500.00	1,491.59	1,499.82	1,491.29	3.68	3.68	129.83	78.96	-16.47	96.31	89.21	7.10	13.574	
1,600.00	1,588.67	1,597.90	1,585.58	4.12	4.14	125.11	101.01	-32.05	112.68	104.72	7.96	14.152	
1,700.00	1,685.74	1,695.24	1,678.18	4.57	4.65	120.16	125.49	-49.34	130.17	121.25	8.91	14.602	
1,800.00	1,782.81	1,791.61	1,768.81	5.04	5.21	115.18	152.24	-68.23	149.23	139.30	9.93	15.026	
1,900.00	1,879.88	1,886.81	1,857.21	5.51	5.84	110.34	181.10	-88.62	170.25	159.26	10.99	15.494	
2,000.00	1,976.96	1,980.66	1,943.16	5.99	6.52	105.74	211.88	-110.36	193.53	181.47	12.06	16.046	
2,100.00	2,074.03	2,075.76	2,029.39	6.48	7.25	101.58	244.63	-133.49	218.82	205.68	13.14	16.654	
2,200.00	2,171.10	2,171.37	2,116.06	6.97	8.00	98.24	277.59	-156.78	245.03	230.82	14.20	17.252	
2,300.00	2,268.17	2,266.97	2,202.73	7.47	8.77	95.54	310.56	-180.07	271.87	256.62	15.25	17.824	
2,400.00	2,365.25	2,362.58	2,289.39	7.96	9.54	93.33	343.53	-203.35	299.18	282.88	16.29	18.363	
2,500.00	2,462.32	2,458.18	2,376.06	8.46	10.33	91.48	376.49	-226.64	326.83	309.51	17.32	18.865	
2,600.00	2,559.39	2,553.79	2,462.73	8.97	11.11	89.92	409.46	-249.93	354.76	336.40	18.35	19.331	
2,700.00	2,656.46	2,649.39	2,549.40	9.47	11.90	88.59	442.43	-273.21	382.89	363.51	19.38	19.761	
2,800.00	2,753.54	2,745.00	2,636.07	9.97	12.70	87.44	475.39	-296.50	411.19	390.79	20.40	20.158	
2,900.00	2,850.61	2,840.61	2,722.73	10.48	13.50	86.43	508.36	-319.79	439.62	418.20	21.42	20.526	
3,000.00	2,947.68	2,936.21	2,809.40	10.99	14.30	85.55	541.33	-343.07	468.16	445.72	22.44	20.866	
3,100.00	3,044.75	3,031.82	2,896.07	11.50	15.10	84.77	574.30	-366.36	496.79	473.34	23.45	21.181	
3,200.00	3,141.83	3,127.42	2,982.74	12.01	15.91	84.08	607.26	-389.65	525.50	501.03	24.47	21.474	
3,300.00	3,238.90	3,223.03	3,069.41	12.51	16.71	83.45	640.23	-412.93	554.27	528.78	25.49	21.746	
3,400.00	3,335.97	3,318.63	3,156.07	13.03	17.52	82.89	673.20	-436.22	583.09	556.59	26.50	21.999	
3,500.00	3,433.05	3,414.24	3,242.74	13.54	18.33	82.38	706.16	-459.51	611.97	584.44	27.52	22.236	
3,600.00	3,530.12	3,509.85	3,329.41	14.05	19.14	81.92	739.13	-482.79	640.88	612.34	28.54	22.457	
3,700.00	3,627.19	3,605.45	3,416.08	14.56	19.95	81.49	772.10	-506.08	669.83	640.27	29.55	22.664	
3,800.00	3,724.26	3,701.06	3,502.75	15.07	20.76	81.10	805.06	-529.37	698.81	668.24	30.57	22.859	
3,900.00	3,821.34	3,796.66	3,589.41	15.58	21.57	80.75	838.03	-552.65	727.81	696.23	31.59	23.041	
4,000.00	3,918.41	3,892.27	3,676.08	16.10	22.38	80.42	871.00	-575.94	756.84	724.24	32.60	23.213	
4,100.00	4,015.48	3,987.87	3,762.75	16.61	23.20	80.11	903.96	-599.23	785.89	752.27	33.62	23.376	
4,200.00	4,112.55	4,083.48	3,849.42	17.12	24.01	79.83	936.93	-622.52	814.97	780.33	34.64	23.529	
4,300.00	4,209.63	4,179.08	3,936.09	17.64	24.83	79.56	969.90	-645.80	844.05	808.40	35.65	23.674	
4,400.00	4,306.70	4,274.69	4,022.75	18.15	25.64	79.31	1,002.86	-669.09	873.16	836.49	36.67	23.811	
4,500.00	4,403.77	4,370.30	4,109.42	18.66	26.45	79.08	1,035.83	-692.38	902.27	864.59	37.69	23.941	
4,600.00	4,500.84	4,465.90	4,196.09	19.18	27.27	78.87	1,068.80	-715.66	931.40	892.70	38.71	24.064	
4,700.00	4,597.92	4,561.51	4,282.76	19.69	28.08	78.66	1,101.77	-738.95	960.55	920.82	39.72	24.182	
4,800.00	4,694.99	4,657.11	4,369.43	20.21	28.90	78.47	1,134.73	-762.24	989.70	948.96	40.74	24.293	
4,900.00	4,792.06	4,752.72	4,456.09	20.72	29.72	78.29	1,167.70	-785.52	1,018.86	977.10	41.76	24.400	

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

<b>Company:</b>	US ROCKIES REGION PLANNING	<b>Local Co-ordinate Reference:</b>	Well P_MIRACLE 24-12
<b>Project:</b>	COLORADO NORTHERN ZONE - 83	<b>TVD Reference:</b>	WELL @ 4963.00ft (Original Well Elev)
<b>Reference Site:</b>	LARIMER_MIRACLE 40-12 PAD	<b>MD Reference:</b>	WELL @ 4963.00ft (Original Well Elev)
<b>Site Error:</b>	0.00ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	P_MIRACLE 24-12	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.00ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	P_MIRACLE 24-12	<b>Database:</b>	EDM 2003.21 Single User Db
<b>Reference Design:</b>	PLAN #1 3-22-10 RHS	<b>Offset TVD Reference:</b>	Offset Datum

<b>Offset Design</b> LARIMER_MIRACLE 40-12 PAD - P_MIRACLE 17-12 - P_MIRACLE 17-12 - PLAN #1 3-22-10 RHS												<b>Offset Site Error:</b>	0.00 ft
Survey Program: 0-MWD												<b>Offset Well Error:</b>	0.00 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)	Minimum Separation (ft)	Separation Factor	Warning
5,000.00	4,889.13	4,848.32	4,542.76	21.24	30.53	78.12	1,200.67	-808.81	1,048.03	1,005.25	42.77	24.501	
5,100.00	4,986.21	4,943.93	4,629.43	21.75	31.35	77.96	1,233.63	-832.10	1,077.21	1,033.41	43.79	24.598	
5,200.00	5,083.28	5,046.52	4,722.47	22.27	32.20	77.80	1,268.94	-857.04	1,106.34	1,061.51	44.83	24.677	
5,290.27	5,170.91	5,171.98	4,837.73	22.73	33.04	77.73	1,309.40	-885.61	1,130.66	1,084.80	45.85	24.658	
5,300.00	5,180.36	5,185.64	4,850.40	22.78	33.12	77.78	1,313.55	-888.55	1,133.10	1,087.13	45.97	24.649	
5,400.00	5,277.90	5,327.42	4,983.36	23.14	33.93	78.26	1,353.75	-916.94	1,156.55	1,109.53	47.02	24.597	
5,500.00	5,376.16	5,471.50	5,120.78	23.46	34.64	78.64	1,389.04	-941.87	1,176.86	1,128.90	47.95	24.541	
5,600.00	5,475.00	5,617.60	5,262.19	23.74	35.27	78.93	1,419.02	-963.05	1,193.93	1,145.16	48.76	24.484	
5,700.00	5,574.31	5,765.44	5,406.99	23.97	35.79	79.14	1,443.32	-980.21	1,207.67	1,158.23	49.44	24.428	
5,800.00	5,673.97	5,914.68	5,554.52	24.17	36.20	79.25	1,461.63	-993.15	1,218.02	1,168.04	49.98	24.371	
5,900.00	5,773.86	6,064.97	5,704.05	24.31	36.51	79.29	1,473.70	-1,001.67	1,224.91	1,174.54	50.37	24.317	
5,985.16	5,859.00	6,193.48	5,832.40	24.41	36.69	2.63	1,478.94	-1,005.37	1,228.02	1,177.42	50.60	24.267	
6,000.00	5,873.84	6,215.91	5,854.82	24.43	36.71	2.62	1,479.37	-1,005.67	1,228.30	1,177.66	50.64	24.257	
6,100.00	5,973.84	6,334.94	5,973.84	24.54	36.80	2.60	1,479.82	-1,005.99	1,228.59	1,177.72	50.86	24.155	
6,200.00	6,073.84	6,434.94	6,073.84	24.66	36.88	2.60	1,479.82	-1,005.99	1,228.59	1,177.50	51.09	24.050	
6,300.00	6,173.84	6,534.94	6,173.84	24.77	36.95	2.60	1,479.82	-1,005.99	1,228.59	1,177.28	51.31	23.944	
6,400.00	6,273.84	6,634.94	6,273.84	24.89	37.03	2.60	1,479.82	-1,005.99	1,228.59	1,177.05	51.54	23.838	
6,500.00	6,373.84	6,734.94	6,373.84	25.01	37.11	2.60	1,479.82	-1,005.99	1,228.59	1,176.82	51.77	23.731	
6,600.00	6,473.84	6,834.94	6,473.84	25.14	37.19	2.60	1,479.82	-1,005.99	1,228.59	1,176.58	52.01	23.624	
6,700.00	6,573.84	6,934.94	6,573.84	25.26	37.27	2.60	1,479.82	-1,005.99	1,228.59	1,176.35	52.24	23.517	
6,800.00	6,673.84	7,034.94	6,673.84	25.39	37.35	2.60	1,479.82	-1,005.99	1,228.59	1,176.11	52.48	23.410	
6,900.00	6,773.84	7,134.94	6,773.84	25.51	37.44	2.60	1,479.82	-1,005.99	1,228.59	1,175.86	52.72	23.302	
7,000.00	6,873.84	7,234.94	6,873.84	25.64	37.52	2.60	1,479.82	-1,005.99	1,228.59	1,175.62	52.97	23.194	
7,100.00	6,973.84	7,334.94	6,973.84	25.77	37.61	2.60	1,479.82	-1,005.99	1,228.59	1,175.37	53.22	23.086	
7,200.00	7,073.84	7,434.94	7,073.84	25.90	37.69	2.60	1,479.82	-1,005.99	1,228.59	1,175.12	53.47	22.978	
7,300.00	7,173.84	7,534.94	7,173.84	26.03	37.78	2.60	1,479.82	-1,005.99	1,228.59	1,174.87	53.72	22.870	
7,400.00	7,273.84	7,634.94	7,273.84	26.16	37.87	2.60	1,479.82	-1,005.99	1,228.59	1,174.61	53.98	22.761	
7,500.00	7,373.84	7,734.94	7,373.84	26.30	37.96	2.60	1,479.82	-1,005.99	1,228.59	1,174.35	54.23	22.653	
7,600.00	7,473.84	7,834.94	7,473.84	26.43	38.06	2.60	1,479.82	-1,005.99	1,228.59	1,174.09	54.50	22.545	
7,700.00	7,573.84	7,934.94	7,573.84	26.57	38.15	2.60	1,479.82	-1,005.99	1,228.59	1,173.83	54.76	22.436	
7,800.00	7,673.84	8,034.94	7,673.84	26.71	38.24	2.60	1,479.82	-1,005.99	1,228.59	1,173.56	55.02	22.328	
7,900.00	7,773.84	8,134.94	7,773.84	26.85	38.34	2.60	1,479.82	-1,005.99	1,228.59	1,173.30	55.29	22.220	
7,936.16	7,810.00	8,171.09	7,810.00	26.90	38.37	2.60	1,479.82	-1,005.99	1,228.59	1,173.20	55.39	22.181	



<b>Company:</b>	US ROCKIES REGION PLANNING	<b>Local Co-ordinate Reference:</b>	Well P_MIRACLE 24-12
<b>Project:</b>	COLORADO NORTHERN ZONE - 83	<b>TVD Reference:</b>	WELL @ 4963.00ft (Original Well Elev)
<b>Reference Site:</b>	LARIMER_MIRACLE 40-12 PAD	<b>MD Reference:</b>	WELL @ 4963.00ft (Original Well Elev)
<b>Site Error:</b>	0.00ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	P_MIRACLE 24-12	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.00ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	P_MIRACLE 24-12	<b>Database:</b>	EDM 2003.21 Single User Db
<b>Reference Design:</b>	PLAN #1 3-22-10 RHS	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design LARIMER_MIRACLE 40-12 PAD - P_MIRACLE 20-12 - P_MIRACLE 20-12 - PLAN #1 3-22-10 RHS												Offset Site Error:	0.00 ft
Survey Program: 0-MWD												Offset Well Error:	0.00 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 Tooface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	
0.00	0.00	0.00	0.00	0.00	0.00	90.00	0.00	10.02	10.02				
100.00	100.00	100.00	100.00	0.10	0.10	90.00	0.00	10.02	10.02	9.83	0.19	52.469	
200.00	200.00	200.00	200.00	0.32	0.32	90.00	0.00	10.02	10.02	9.38	0.64	15.649	
300.00	300.00	300.00	300.00	0.55	0.55	90.00	0.00	10.02	10.02	8.93	1.09	9.196	
400.00	400.00	400.00	400.00	0.77	0.77	90.00	0.00	10.02	10.02	8.48	1.54	6.511	
500.00	500.00	500.00	500.00	0.99	0.99	90.00	0.00	10.02	10.02	8.04	1.99	5.039	
600.00	600.00	600.00	600.00	1.22	1.22	90.00	0.00	10.02	10.02	7.59	2.44	4.111	
700.00	700.00	700.00	700.00	1.44	1.44	90.00	0.00	10.02	10.02	7.14	2.89	3.471	
750.00	750.00	750.00	750.00	1.56	1.56	90.00	0.00	10.02	10.02	6.91	3.11	3.220 CC	
800.00	800.00	800.12	800.11	1.66	1.66	169.00	-0.32	9.73	10.16	6.84	3.32	3.061 ES, SF	
900.00	899.93	900.25	900.18	1.87	1.84	-174.60	-2.89	7.34	11.79	8.09	3.70	3.184	
1,000.00	999.68	1,000.11	999.79	2.09	2.04	-154.77	-7.99	2.60	16.88	12.77	4.11	4.105	
1,100.00	1,099.13	1,099.51	1,098.65	2.34	2.26	-141.53	-15.60	-4.47	26.23	21.67	4.56	5.754	
1,200.00	1,198.15	1,198.27	1,196.45	2.61	2.52	-134.00	-25.64	-13.80	39.58	34.52	5.05	7.830	
1,300.00	1,296.63	1,296.23	1,292.93	2.91	2.81	-129.58	-38.04	-25.31	56.62	51.01	5.61	10.090	
1,400.00	1,394.44	1,393.22	1,387.83	3.27	3.15	-126.78	-52.68	-38.92	77.17	70.93	6.24	12.366	
1,444.88	1,438.09	1,436.41	1,429.86	3.45	3.32	-125.84	-59.96	-45.67	87.50	80.95	6.55	13.353	
1,500.00	1,491.59	1,489.16	1,480.99	3.68	3.54	-124.84	-69.48	-54.52	100.81	93.85	6.96	14.486	
1,600.00	1,588.67	1,584.19	1,572.45	4.12	3.98	-122.54	-88.36	-72.05	126.11	118.35	7.75	16.267	
1,700.00	1,685.74	1,678.14	1,661.99	4.57	4.48	-119.95	-109.20	-91.41	153.06	144.46	8.60	17.801	
1,800.00	1,782.81	1,770.85	1,749.38	5.04	5.03	-117.28	-131.86	-112.46	181.86	172.37	9.49	19.171	
1,900.00	1,879.88	1,864.99	1,837.37	5.51	5.63	-114.79	-156.37	-135.24	212.16	201.75	10.41	20.375	
2,000.00	1,976.96	1,959.90	1,926.06	5.99	6.26	-112.88	-181.16	-158.26	242.81	231.45	11.36	21.379	
2,100.00	2,074.03	2,054.82	2,014.74	6.48	6.91	-111.40	-205.94	-181.28	273.64	261.33	12.31	22.230	
2,200.00	2,171.10	2,149.74	2,103.42	6.97	7.56	-110.22	-230.73	-204.30	304.61	291.34	13.27	22.956	
2,300.00	2,268.17	2,244.65	2,192.10	7.47	8.22	-109.26	-255.51	-227.33	335.67	321.43	14.23	23.582	
2,400.00	2,365.25	2,339.57	2,280.79	7.96	8.88	-108.46	-280.29	-250.35	366.80	351.60	15.20	24.126	
2,500.00	2,462.32	2,434.48	2,369.47	8.46	9.55	-107.78	-305.08	-273.37	397.99	381.81	16.18	24.602	
2,600.00	2,559.39	2,529.40	2,458.15	8.97	10.23	-107.20	-329.86	-296.39	429.22	412.07	17.15	25.021	
2,700.00	2,656.46	2,624.31	2,546.84	9.47	10.90	-106.70	-354.64	-319.42	460.49	442.35	18.13	25.394	
2,800.00	2,753.54	2,719.23	2,635.52	9.97	11.58	-106.27	-379.43	-342.44	491.78	472.66	19.12	25.726	
2,900.00	2,850.61	2,814.14	2,724.20	10.48	12.26	-105.88	-404.21	-365.46	523.09	502.99	20.10	26.024	
3,000.00	2,947.68	2,909.06	2,812.89	10.99	12.94	-105.54	-429.00	-388.48	554.43	533.34	21.09	26.293	
3,100.00	3,044.75	3,003.97	2,901.57	11.50	13.63	-105.24	-453.78	-411.51	585.78	563.70	22.07	26.536	
3,200.00	3,141.83	3,098.89	2,990.25	12.01	14.31	-104.97	-478.56	-434.53	617.14	594.08	23.06	26.758	
3,300.00	3,238.90	3,193.80	3,078.93	12.51	15.00	-104.72	-503.35	-457.55	648.52	624.46	24.05	26.961	
3,400.00	3,335.97	3,288.72	3,167.62	13.03	15.68	-104.50	-528.13	-480.57	679.90	654.85	25.05	27.146	
3,500.00	3,433.05	3,383.64	3,256.30	13.54	16.37	-104.29	-552.91	-503.60	711.29	685.25	26.04	27.317	
3,600.00	3,530.12	3,478.55	3,344.98	14.05	17.06	-104.10	-577.70	-526.62	742.69	715.66	27.03	27.475	
3,700.00	3,627.19	3,573.47	3,433.67	14.56	17.75	-103.93	-602.48	-549.64	774.10	746.07	28.03	27.621	
3,800.00	3,724.26	3,668.38	3,522.35	15.07	18.44	-103.77	-627.27	-572.66	805.51	776.49	29.02	27.757	
3,900.00	3,821.34	3,763.30	3,611.03	15.58	19.13	-103.63	-652.05	-595.69	836.93	806.92	30.02	27.883	
4,000.00	3,918.41	3,858.21	3,699.71	16.10	19.82	-103.49	-676.83	-618.71	868.35	837.34	31.01	28.001	
4,100.00	4,015.48	3,953.13	3,788.40	16.61	20.51	-103.37	-701.62	-641.73	899.78	867.77	32.01	28.111	
4,200.00	4,112.55	4,048.04	3,877.08	17.12	21.20	-103.25	-726.40	-664.75	931.21	898.21	33.01	28.214	
4,300.00	4,209.63	4,142.96	3,965.76	17.64	21.89	-103.14	-751.18	-687.77	962.64	928.64	34.00	28.311	
4,400.00	4,306.70	4,237.87	4,054.45	18.15	22.58	-103.03	-775.97	-710.80	994.08	959.08	35.00	28.402	
4,500.00	4,403.77	4,332.79	4,143.13	18.66	23.27	-102.94	-800.75	-733.82	1,025.52	989.52	36.00	28.488	
4,600.00	4,500.84	4,427.70	4,231.81	19.18	23.96	-102.85	-825.54	-756.84	1,056.96	1,019.97	37.00	28.569	
4,700.00	4,597.92	4,522.62	4,320.50	19.69	24.66	-102.76	-850.32	-779.86	1,088.41	1,050.41	38.00	28.645	
4,800.00	4,694.99	4,617.54	4,409.18	20.21	25.35	-102.68	-875.10	-802.89	1,119.85	1,080.86	39.00	28.718	
4,900.00	4,792.06	4,712.45	4,497.86	20.72	26.04	-102.60	-899.89	-825.91	1,151.30	1,111.31	39.99	28.786	

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

<b>Company:</b>	US ROCKIES REGION PLANNING	<b>Local Co-ordinate Reference:</b>	Well P_MIRACLE 24-12
<b>Project:</b>	COLORADO NORTHERN ZONE - 83	<b>TVD Reference:</b>	WELL @ 4963.00ft (Original Well Elev)
<b>Reference Site:</b>	LARIMER_MIRACLE 40-12 PAD	<b>MD Reference:</b>	WELL @ 4963.00ft (Original Well Elev)
<b>Site Error:</b>	0.00ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	P_MIRACLE 24-12	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.00ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	P_MIRACLE 24-12	<b>Database:</b>	EDM 2003.21 Single User Db
<b>Reference Design:</b>	PLAN #1 3-22-10 RHS	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design												Offset Site Error:	0.00 ft
Survey Program: 0-MWD												Offset Well Error:	0.00 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)	Minimum Separation (ft)	Separation Factor	
5,000.00	4,889.13	4,807.37	4,586.54	21.24	26.73	-102.53	-924.67	-848.93	1,182.75	1,141.76	40.99	28.852	
5,100.00	4,986.21	4,902.28	4,675.23	21.75	27.43	-102.46	-949.45	-871.95	1,214.20	1,172.21	41.99	28.914	
5,200.00	5,083.28	4,997.20	4,763.91	22.27	28.12	-102.40	-974.24	-894.98	1,245.66	1,202.66	42.99	28.973	
5,290.27	5,170.91	5,082.88	4,843.97	22.73	28.75	-102.34	-996.61	-915.76	1,274.05	1,230.15	43.90	29.024	
5,300.00	5,180.36	5,092.11	4,852.59	22.78	28.81	-102.40	-999.02	-918.00	1,277.11	1,233.10	44.00	29.022	
5,400.00	5,277.90	5,219.89	4,972.57	23.14	29.60	-102.86	-1,031.20	-947.89	1,307.30	1,262.21	45.09	28.993	
5,500.00	5,376.16	5,364.51	5,110.54	23.46	30.27	-103.21	-1,062.96	-977.39	1,333.45	1,287.40	46.05	28.958	
5,600.00	5,475.00	5,512.23	5,253.52	23.74	30.86	-103.47	-1,090.09	-1,002.59	1,355.25	1,308.35	46.90	28.898	
5,700.00	5,574.31	5,662.58	5,400.82	23.97	31.36	-103.65	-1,112.12	-1,023.06	1,372.57	1,324.95	47.62	28.822	
5,800.00	5,673.97	5,815.02	5,551.56	24.17	31.76	-103.76	-1,128.64	-1,038.41	1,385.28	1,337.07	48.22	28.730	
5,900.00	5,773.86	5,968.96	5,704.78	24.31	32.06	-103.79	-1,139.35	-1,048.35	1,393.32	1,344.64	48.67	28.625	
5,985.16	5,859.00	6,100.76	5,836.44	24.41	32.23	179.62	-1,143.71	-1,052.40	1,396.42	1,347.46	48.96	28.522	
6,000.00	5,873.84	6,123.77	5,859.44	24.43	32.25	179.63	-1,144.02	-1,052.69	1,396.61	1,347.62	49.00	28.504	
6,100.00	5,973.84	6,238.17	5,973.84	24.54	32.35	179.64	-1,144.23	-1,052.88	1,396.75	1,347.52	49.23	28.372	
6,200.00	6,073.84	6,338.17	6,073.84	24.66	32.43	179.64	-1,144.23	-1,052.88	1,396.75	1,347.30	49.45	28.246	
6,300.00	6,173.84	6,438.17	6,173.84	24.77	32.50	179.64	-1,144.23	-1,052.88	1,396.75	1,347.08	49.67	28.120	
6,400.00	6,273.84	6,538.17	6,273.84	24.89	32.58	179.64	-1,144.23	-1,052.88	1,396.75	1,346.85	49.90	27.993	
6,500.00	6,373.84	6,638.17	6,373.84	25.01	32.66	179.64	-1,144.23	-1,052.88	1,396.75	1,346.62	50.12	27.865	
6,600.00	6,473.84	6,738.17	6,473.84	25.14	32.74	179.64	-1,144.23	-1,052.88	1,396.75	1,346.39	50.36	27.738	
6,700.00	6,573.84	6,838.17	6,573.84	25.26	32.83	179.64	-1,144.23	-1,052.88	1,396.75	1,346.16	50.59	27.609	
6,800.00	6,673.84	6,938.17	6,673.84	25.39	32.91	179.64	-1,144.23	-1,052.88	1,396.75	1,345.92	50.83	27.481	
6,900.00	6,773.84	7,038.17	6,773.84	25.51	33.00	179.64	-1,144.23	-1,052.88	1,396.75	1,345.68	51.07	27.352	
7,000.00	6,873.84	7,138.17	6,873.84	25.64	33.08	179.64	-1,144.23	-1,052.88	1,396.75	1,345.44	51.31	27.222	
7,100.00	6,973.84	7,238.17	6,973.84	25.77	33.17	179.64	-1,144.23	-1,052.88	1,396.75	1,345.19	51.55	27.093	
7,200.00	7,073.84	7,338.17	7,073.84	25.90	33.26	179.64	-1,144.23	-1,052.88	1,396.75	1,344.95	51.80	26.963	
7,300.00	7,173.84	7,438.17	7,173.84	26.03	33.35	179.64	-1,144.23	-1,052.88	1,396.75	1,344.70	52.05	26.833	
7,400.00	7,273.84	7,538.17	7,273.84	26.16	33.44	179.64	-1,144.23	-1,052.88	1,396.75	1,344.44	52.31	26.703	
7,500.00	7,373.84	7,638.17	7,373.84	26.30	33.54	179.64	-1,144.23	-1,052.88	1,396.75	1,344.19	52.56	26.573	
7,600.00	7,473.84	7,738.17	7,473.84	26.43	33.63	179.64	-1,144.23	-1,052.88	1,396.75	1,343.93	52.82	26.443	
7,700.00	7,573.84	7,838.17	7,573.84	26.57	33.73	179.64	-1,144.23	-1,052.88	1,396.75	1,343.67	53.08	26.313	
7,800.00	7,673.84	7,938.17	7,673.84	26.71	33.82	179.64	-1,144.23	-1,052.88	1,396.75	1,343.40	53.35	26.183	
7,900.00	7,773.84	8,038.17	7,773.84	26.85	33.92	179.64	-1,144.23	-1,052.88	1,396.75	1,343.14	53.61	26.053	
7,919.50	7,793.34	8,057.67	7,793.34	26.88	33.94	179.64	-1,144.23	-1,052.88	1,396.75	1,343.08	53.66	26.027	
7,936.16	7,810.00	8,064.33	7,800.00	26.90	33.95	179.64	-1,144.23	-1,052.88	1,396.78	1,343.09	53.70	26.012	



<b>Company:</b>	US ROCKIES REGION PLANNING	<b>Local Co-ordinate Reference:</b>	Well P_MIRACLE 24-12
<b>Project:</b>	COLORADO NORTHERN ZONE - 83	<b>TVD Reference:</b>	WELL @ 4963.00ft (Original Well Elev)
<b>Reference Site:</b>	LARIMER_MIRACLE 40-12 PAD	<b>MD Reference:</b>	WELL @ 4963.00ft (Original Well Elev)
<b>Site Error:</b>	0.00ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	P_MIRACLE 24-12	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.00ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	P_MIRACLE 24-12	<b>Database:</b>	EDM 2003.21 Single User Db
<b>Reference Design:</b>	PLAN #1 3-22-10 RHS	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design												Offset Site Error:	0.00 ft
Survey Program: 0-MWD												Offset Well Error:	0.00 ft
Reference													
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)	Minimum Separation (ft)	Separation Factor	Warning
0.00	0.00	0.00	0.00	0.00	0.00	90.84	-0.73	49.84	49.85				
100.00	100.00	100.00	100.00	0.10	0.10	90.84	-0.73	49.84	49.85	49.66	0.19	260.918	
200.00	200.00	200.00	200.00	0.32	0.32	90.84	-0.73	49.84	49.85	49.21	0.64	77.818	
300.00	300.00	300.00	300.00	0.55	0.55	90.84	-0.73	49.84	49.85	48.76	1.09	45.728	
400.00	400.00	400.00	400.00	0.77	0.77	90.84	-0.73	49.84	49.85	48.31	1.54	32.377	
500.00	500.00	500.00	500.00	0.99	0.99	90.84	-0.73	49.84	49.85	47.86	1.99	25.060	
600.00	600.00	600.00	600.00	1.22	1.22	90.84	-0.73	49.84	49.85	47.41	2.44	20.441	
700.00	700.00	700.00	700.00	1.44	1.44	90.84	-0.73	49.84	49.85	46.96	2.89	17.259	
750.00	750.00	750.00	750.00	1.56	1.56	90.84	-0.73	49.84	49.85	46.74	3.11	16.013 CC, ES	
800.00	800.00	800.39	800.39	1.66	1.67	167.12	-0.33	49.65	50.08	46.75	3.33	15.031	
900.00	899.93	901.09	901.02	1.87	1.89	164.47	2.86	48.12	51.99	48.23	3.76	13.837	
1,000.00	999.68	1,001.59	1,001.27	2.09	2.12	159.74	9.22	45.07	56.10	51.91	4.19	13.393 SF	
1,100.00	1,099.13	1,101.75	1,100.87	2.34	2.37	153.87	18.71	40.51	62.84	58.20	4.64	13.546	
1,200.00	1,198.15	1,201.44	1,199.57	2.61	2.63	147.83	31.27	34.49	72.60	67.47	5.13	14.158	
1,300.00	1,296.63	1,300.52	1,297.14	2.91	2.93	142.27	46.81	27.03	85.57	79.89	5.68	15.076	
1,400.00	1,394.44	1,398.88	1,393.34	3.27	3.28	137.49	65.24	18.19	101.80	95.49	6.30	16.151	
1,444.88	1,438.09	1,442.87	1,436.19	3.45	3.44	135.73	74.25	13.87	110.11	103.50	6.61	16.657	
1,500.00	1,491.59	1,496.86	1,488.77	3.68	3.65	134.15	85.31	8.56	120.72	113.71	7.01	17.215	
1,600.00	1,588.67	1,594.83	1,584.17	4.12	4.05	131.91	105.39	-1.07	140.15	132.37	7.77	18.026	
1,700.00	1,685.74	1,692.80	1,679.57	4.57	4.46	130.22	125.47	-10.70	159.73	151.16	8.57	18.645	
1,800.00	1,782.81	1,790.77	1,774.98	5.04	4.88	128.89	145.55	-20.33	179.42	170.03	9.38	19.123	
1,900.00	1,879.88	1,888.73	1,870.38	5.51	5.31	127.83	165.63	-29.97	199.18	188.96	10.21	19.500	
2,000.00	1,976.96	1,986.70	1,965.78	5.99	5.75	126.96	185.71	-39.60	218.99	207.93	11.06	19.802	
2,100.00	2,074.03	2,084.67	2,061.18	6.48	6.19	126.23	205.79	-49.23	238.85	226.93	11.91	20.047	
2,200.00	2,171.10	2,182.64	2,156.59	6.97	6.64	125.62	225.87	-58.86	258.74	245.96	12.78	20.248	
2,300.00	2,268.17	2,280.61	2,251.99	7.47	7.09	125.09	245.95	-68.50	278.65	265.00	13.65	20.416	
2,400.00	2,365.25	2,378.57	2,347.39	7.96	7.54	124.63	266.03	-78.13	298.58	284.05	14.52	20.557	
2,500.00	2,462.32	2,476.54	2,442.79	8.46	8.00	124.23	286.11	-87.76	318.53	303.12	15.40	20.677	
2,600.00	2,559.39	2,574.51	2,538.20	8.97	8.45	123.88	306.19	-97.39	338.49	322.20	16.29	20.781	
2,700.00	2,656.46	2,672.48	2,633.60	9.47	8.91	123.57	326.27	-107.03	358.46	341.28	17.18	20.870	
2,800.00	2,753.54	2,770.44	2,729.00	9.97	9.37	123.29	346.35	-116.66	378.44	360.37	18.07	20.948	
2,900.00	2,850.61	2,868.41	2,824.41	10.48	9.83	123.04	366.43	-126.29	398.43	379.47	18.96	21.017	
3,000.00	2,947.68	2,966.38	2,919.81	10.99	10.30	122.81	386.51	-135.92	418.42	398.57	19.85	21.077	
3,100.00	3,044.75	3,064.35	3,015.21	11.50	10.76	122.60	406.59	-145.56	438.42	417.67	20.75	21.131	
3,200.00	3,141.83	3,162.31	3,110.61	12.01	11.22	122.41	426.67	-155.19	458.43	436.78	21.65	21.179	
3,300.00	3,238.90	3,260.28	3,206.02	12.51	11.69	122.24	446.75	-164.82	478.44	455.89	22.54	21.223	
3,400.00	3,335.97	3,358.25	3,301.42	13.03	12.15	122.08	466.83	-174.45	498.45	475.01	23.44	21.262	
3,500.00	3,433.05	3,456.22	3,396.82	13.54	12.62	121.93	486.91	-184.09	518.47	494.13	24.34	21.297	
3,600.00	3,530.12	3,554.19	3,492.22	14.05	13.08	121.80	506.99	-193.72	538.49	513.24	25.25	21.329	
3,700.00	3,627.19	3,652.15	3,587.63	14.56	13.55	121.67	527.07	-203.35	558.51	532.36	26.15	21.359	
3,800.00	3,724.26	3,750.12	3,683.03	15.07	14.01	121.55	547.15	-212.99	578.54	551.49	27.05	21.386	
3,900.00	3,821.34	3,848.09	3,778.43	15.58	14.48	121.44	567.23	-222.62	598.57	570.61	27.96	21.410	
4,000.00	3,918.41	3,946.06	3,873.84	16.10	14.95	121.34	587.31	-232.25	618.60	589.74	28.86	21.433	
4,100.00	4,015.48	4,044.02	3,969.24	16.61	15.42	121.24	607.39	-241.88	638.63	608.86	29.77	21.454	
4,200.00	4,112.55	4,141.99	4,064.64	17.12	15.88	121.15	627.47	-251.52	658.66	627.99	30.67	21.474	
4,300.00	4,209.63	4,239.96	4,160.04	17.64	16.35	121.07	647.55	-261.15	678.70	647.12	31.58	21.492	
4,400.00	4,306.70	4,337.93	4,255.45	18.15	16.82	120.99	667.63	-270.78	698.73	666.25	32.49	21.509	
4,500.00	4,403.77	4,435.89	4,350.85	18.66	17.29	120.91	687.71	-280.41	718.77	685.38	33.39	21.525	
4,600.00	4,500.84	4,533.86	4,446.25	19.18	17.76	120.84	707.79	-290.05	738.81	704.51	34.30	21.540	
4,700.00	4,597.92	4,631.83	4,541.65	19.69	18.23	120.77	727.87	-299.68	758.85	723.64	35.21	21.554	
4,800.00	4,694.99	4,729.80	4,637.06	20.21	18.69	120.71	747.95	-309.31	778.89	742.77	36.12	21.567	
4,900.00	4,792.06	4,827.76	4,732.46	20.72	19.16	120.65	768.03	-318.94	798.93	761.91	37.02	21.579	

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

<b>Company:</b>	US ROCKIES REGION PLANNING	<b>Local Co-ordinate Reference:</b>	Well P_MIRACLE 24-12
<b>Project:</b>	COLORADO NORTHERN ZONE - 83	<b>TVD Reference:</b>	WELL @ 4963.00ft (Original Well Elev)
<b>Reference Site:</b>	LARIMER_MIRACLE 40-12 PAD	<b>MD Reference:</b>	WELL @ 4963.00ft (Original Well Elev)
<b>Site Error:</b>	0.00ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	P_MIRACLE 24-12	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.00ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	P_MIRACLE 24-12	<b>Database:</b>	EDM 2003.21 Single User Db
<b>Reference Design:</b>	PLAN #1 3-22-10 RHS	<b>Offset TVD Reference:</b>	Offset Datum

<b>Offset Design</b> LARIMER_MIRACLE 40-12 PAD - P_MIRACLE 8-12 - P_MIRACLE 8-12 - PLAN #1 3-22-10 RHS												<b>Offset Site Error:</b>	0.00 ft
Survey Program: 0-MWD												<b>Offset Well Error:</b>	0.00 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)	Minimum Separation (ft)	Separation Factor	Warning
5,000.00	4,889.13	4,925.73	4,827.86	21.24	19.63	120.59	788.11	-328.58	818.97	781.04	37.93	21.590	
5,100.00	4,986.21	5,023.70	4,923.27	21.75	20.10	120.53	808.19	-338.21	839.02	800.17	38.84	21.601	
5,200.00	5,083.28	5,121.67	5,018.67	22.27	20.57	120.48	828.27	-347.84	859.06	819.31	39.75	21.611	
5,290.27	5,170.91	5,210.11	5,104.79	22.73	21.00	120.43	846.39	-356.54	877.15	836.58	40.57	21.620	
5,300.00	5,180.36	5,219.64	5,114.07	22.78	21.04	120.46	848.35	-357.47	879.10	838.44	40.66	21.621	
5,400.00	5,277.90	5,317.78	5,209.64	23.14	21.51	120.63	868.46	-367.12	898.10	856.60	41.51	21.638	
5,500.00	5,376.16	5,422.57	5,311.83	23.46	21.96	120.59	889.40	-377.17	915.20	872.90	42.30	21.638	
5,600.00	5,475.00	5,533.68	5,420.95	23.74	22.32	120.51	908.23	-386.20	929.40	886.45	42.96	21.635	
5,700.00	5,574.31	5,645.63	5,531.63	23.97	22.64	120.43	923.34	-393.45	940.55	897.02	43.53	21.607	
5,800.00	5,673.97	5,758.24	5,643.54	24.17	22.91	120.34	934.59	-398.85	948.58	904.58	44.01	21.556	
5,900.00	5,773.86	5,871.33	5,756.33	24.31	23.12	120.24	941.89	-402.35	953.49	909.11	44.39	21.482	
5,985.16	5,859.00	5,967.87	5,852.81	24.41	23.26	43.54	944.94	-403.81	955.19	910.56	44.63	21.402	
6,000.00	5,873.84	5,984.71	5,869.65	24.43	23.28	43.52	945.18	-403.93	955.27	910.60	44.67	21.384	
6,100.00	5,973.84	6,088.91	5,973.84	24.54	23.40	43.51	945.37	-404.02	955.34	910.42	44.92	21.270	
6,200.00	6,073.84	6,188.91	6,073.84	24.66	23.52	43.51	945.37	-404.02	955.34	910.17	45.17	21.152	
6,300.00	6,173.84	6,288.91	6,173.84	24.77	23.64	43.51	945.37	-404.02	955.34	909.92	45.42	21.033	
6,400.00	6,273.84	6,388.91	6,273.84	24.89	23.76	43.51	945.37	-404.02	955.34	909.66	45.68	20.914	
6,500.00	6,373.84	6,488.91	6,373.84	25.01	23.89	43.51	945.37	-404.02	955.34	909.40	45.94	20.795	
6,600.00	6,473.84	6,588.91	6,473.84	25.14	24.02	43.51	945.37	-404.02	955.34	909.13	46.20	20.677	
6,700.00	6,573.84	6,688.91	6,573.84	25.26	24.14	43.51	945.37	-404.02	955.34	908.87	46.47	20.558	
6,800.00	6,673.84	6,788.91	6,673.84	25.39	24.27	43.51	945.37	-404.02	955.34	908.60	46.74	20.440	
6,900.00	6,773.84	6,888.91	6,773.84	25.51	24.40	43.51	945.37	-404.02	955.34	908.33	47.01	20.321	
7,000.00	6,873.84	6,988.91	6,873.84	25.64	24.54	43.51	945.37	-404.02	955.34	908.05	47.29	20.203	
7,100.00	6,973.84	7,088.91	6,973.84	25.77	24.67	43.51	945.37	-404.02	955.34	907.77	47.56	20.085	
7,200.00	7,073.84	7,188.91	7,073.84	25.90	24.80	43.51	945.37	-404.02	955.34	907.49	47.84	19.968	
7,300.00	7,173.84	7,288.91	7,173.84	26.03	24.94	43.51	945.37	-404.02	955.34	907.21	48.13	19.851	
7,400.00	7,273.84	7,388.91	7,273.84	26.16	25.08	43.51	945.37	-404.02	955.34	906.93	48.41	19.734	
7,500.00	7,373.84	7,488.91	7,373.84	26.30	25.22	43.51	945.37	-404.02	955.34	906.64	48.70	19.617	
7,600.00	7,473.84	7,588.91	7,473.84	26.43	25.36	43.51	945.37	-404.02	955.34	906.35	48.99	19.501	
7,700.00	7,573.84	7,688.91	7,573.84	26.57	25.50	43.51	945.37	-404.02	955.34	906.06	49.28	19.385	
7,800.00	7,673.84	7,788.91	7,673.84	26.71	25.64	43.51	945.37	-404.02	955.34	905.76	49.58	19.270	
7,900.00	7,773.84	7,888.91	7,773.84	26.85	25.78	43.51	945.37	-404.02	955.34	905.46	49.87	19.155	
7,922.17	7,796.01	7,911.08	7,796.01	26.88	25.82	43.51	945.37	-404.02	955.34	905.40	49.94	19.130	
7,936.16	7,810.00	7,920.06	7,805.00	26.90	25.83	43.51	945.37	-404.02	955.35	905.38	49.97	19.117	

<b>Company:</b>	US ROCKIES REGION PLANNING	<b>Local Co-ordinate Reference:</b>	Well P_MIRACLE 24-12
<b>Project:</b>	COLORADO NORTHERN ZONE - 83	<b>TVD Reference:</b>	WELL @ 4963.00ft (Original Well Elev)
<b>Reference Site:</b>	LARIMER_MIRACLE 40-12 PAD	<b>MD Reference:</b>	WELL @ 4963.00ft (Original Well Elev)
<b>Site Error:</b>	0.00ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	P_MIRACLE 24-12	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.00ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	P_MIRACLE 24-12	<b>Database:</b>	EDM 2003.21 Single User Db
<b>Reference Design:</b>	PLAN #1 3-22-10 RHS	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design												Offset Site Error:	0.00 ft
Survey Program: 0-MWD												Offset Well Error:	0.00 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)	Minimum Separation (ft)	Separation Factor	
0.00	0.00	0.00	0.00	0.00	0.00	91.04	-0.36	20.05	20.05				
100.00	100.00	100.00	100.00	0.10	0.10	91.04	-0.36	20.05	20.05	19.86	0.19	104.956	
200.00	200.00	200.00	200.00	0.32	0.32	91.04	-0.36	20.05	20.05	19.41	0.64	31.303	
300.00	300.00	300.00	300.00	0.55	0.55	91.04	-0.36	20.05	20.05	18.96	1.09	18.394	
400.00	400.00	400.00	400.00	0.77	0.77	91.04	-0.36	20.05	20.05	18.51	1.54	13.024	
500.00	500.00	500.00	500.00	0.99	0.99	91.04	-0.36	20.05	20.05	18.06	1.99	10.081	
600.00	600.00	600.00	600.00	1.22	1.22	91.04	-0.36	20.05	20.05	17.61	2.44	8.222	
700.00	700.00	700.00	700.00	1.44	1.44	91.04	-0.36	20.05	20.05	17.16	2.89	6.943	
750.00	750.00	750.00	750.00	1.56	1.56	91.04	-0.36	20.05	20.05	16.94	3.11	6.441 CC, ES	
800.00	800.00	800.16	800.16	1.66	1.66	169.01	-0.74	19.83	20.27	16.95	3.32	6.109	
900.00	899.93	900.36	900.29	1.87	1.84	178.71	-3.78	18.07	22.39	18.69	3.70	6.053 SF	
1,000.00	999.68	1,000.16	999.85	2.09	2.03	-167.36	-9.76	14.61	28.05	23.95	4.10	6.844	
1,100.00	1,099.13	1,099.52	1,098.88	2.34	2.24	-158.57	-16.73	10.58	38.11	33.59	4.52	8.432	
1,200.00	1,198.15	1,198.54	1,197.58	2.61	2.46	-155.16	-23.66	6.56	51.81	46.85	4.96	10.446	
1,300.00	1,296.63	1,297.10	1,295.81	2.91	2.70	-154.43	-30.57	2.57	68.70	63.29	5.41	12.691	
1,400.00	1,394.44	1,395.07	1,393.46	3.27	2.93	-154.90	-37.44	-1.41	88.69	82.82	5.88	15.088	
1,444.88	1,438.09	1,438.82	1,437.07	3.45	3.04	-155.30	-40.50	-3.18	98.68	92.59	6.09	16.201	
1,500.00	1,491.59	1,492.46	1,490.53	3.68	3.17	-155.87	-44.26	-5.35	111.33	104.96	6.37	17.469	
1,600.00	1,588.67	1,589.77	1,587.52	4.12	3.42	-156.63	-51.08	-9.30	134.30	127.41	6.89	19.480	
1,700.00	1,685.74	1,687.08	1,684.51	4.57	3.67	-157.17	-57.90	-13.25	157.30	149.87	7.43	21.184	
1,800.00	1,782.81	1,784.39	1,781.51	5.04	3.92	-157.57	-64.72	-17.19	180.30	172.33	7.96	22.642	
1,900.00	1,879.88	1,881.71	1,878.50	5.51	4.17	-157.88	-71.54	-21.14	203.30	194.80	8.51	23.901	
2,000.00	1,976.96	1,979.02	1,975.49	5.99	4.42	-158.13	-78.35	-25.09	226.31	217.26	9.05	24.997	
2,100.00	2,074.03	2,076.33	2,072.48	6.48	4.68	-158.33	-85.17	-29.03	249.33	239.72	9.61	25.956	
2,200.00	2,171.10	2,173.64	2,169.48	6.97	4.94	-158.50	-91.99	-32.98	272.35	262.18	10.16	26.799	
2,300.00	2,268.17	2,270.95	2,266.47	7.47	5.20	-158.64	-98.81	-36.92	295.37	284.64	10.72	27.548	
2,400.00	2,365.25	2,368.27	2,363.46	7.96	5.46	-158.76	-105.63	-40.87	318.39	307.10	11.28	28.216	
2,500.00	2,462.32	2,465.58	2,460.45	8.46	5.72	-158.87	-112.45	-44.82	341.41	329.56	11.85	28.815	
2,600.00	2,559.39	2,562.89	2,557.45	8.97	5.98	-158.96	-119.27	-48.76	364.43	352.02	12.41	29.356	
2,700.00	2,656.46	2,660.20	2,654.44	9.47	6.24	-159.04	-126.09	-52.71	387.45	374.47	12.98	29.846	
2,800.00	2,753.54	2,757.51	2,751.43	9.97	6.50	-159.11	-132.91	-56.66	410.48	396.93	13.55	30.292	
2,900.00	2,850.61	2,854.83	2,848.43	10.48	6.77	-159.18	-139.73	-60.60	433.50	419.38	14.12	30.700	
3,000.00	2,947.68	2,952.14	2,945.42	10.99	7.03	-159.24	-146.54	-64.55	456.53	441.84	14.69	31.073	
3,100.00	3,044.75	3,049.45	3,042.41	11.50	7.29	-159.29	-153.36	-68.50	479.55	464.29	15.26	31.417	
3,200.00	3,141.83	3,146.76	3,139.40	12.01	7.56	-159.33	-160.18	-72.44	502.58	486.74	15.84	31.734	
3,300.00	3,238.90	3,244.08	3,236.40	12.51	7.82	-159.38	-167.00	-76.39	525.60	509.19	16.41	32.028	
3,400.00	3,335.97	3,341.39	3,333.39	13.03	8.09	-159.42	-173.82	-80.33	548.63	531.65	16.99	32.300	
3,500.00	3,433.05	3,438.70	3,430.38	13.54	8.35	-159.45	-180.64	-84.28	571.66	554.10	17.56	32.553	
3,600.00	3,530.12	3,536.01	3,527.37	14.05	8.62	-159.49	-187.46	-88.23	594.68	576.55	18.14	32.790	
3,700.00	3,627.19	3,633.32	3,624.37	14.56	8.88	-159.52	-194.28	-92.17	617.71	599.00	18.71	33.011	
3,800.00	3,724.26	3,730.64	3,721.36	15.07	9.15	-159.55	-201.10	-96.12	640.74	621.45	19.29	33.218	
3,900.00	3,821.34	3,827.95	3,818.35	15.58	9.41	-159.57	-207.91	-100.07	663.77	643.90	19.87	33.412	
4,000.00	3,918.41	3,925.26	3,915.34	16.10	9.68	-159.60	-214.73	-104.01	686.79	666.35	20.44	33.595	
4,100.00	4,015.48	4,022.57	4,012.34	16.61	9.95	-159.62	-221.55	-107.96	709.82	688.80	21.02	33.767	
4,200.00	4,112.55	4,119.88	4,109.33	17.12	10.21	-159.64	-228.37	-111.90	732.85	711.25	21.60	33.929	
4,300.00	4,209.63	4,217.20	4,206.32	17.64	10.48	-159.67	-235.19	-115.85	755.88	733.70	22.18	34.083	
4,400.00	4,306.70	4,314.51	4,303.32	18.15	10.75	-159.68	-242.01	-119.80	778.90	756.15	22.76	34.228	
4,500.00	4,403.77	4,411.82	4,400.31	18.66	11.01	-159.70	-248.83	-123.74	801.93	778.60	23.34	34.365	
4,600.00	4,500.84	4,509.13	4,497.30	19.18	11.28	-159.72	-255.65	-127.69	824.96	801.04	23.91	34.496	
4,700.00	4,597.92	4,606.45	4,594.29	19.69	11.55	-159.74	-262.47	-131.64	847.99	823.49	24.49	34.620	
4,800.00	4,694.99	4,703.76	4,691.29	20.21	11.81	-159.75	-269.29	-135.58	871.02	845.94	25.07	34.738	
4,900.00	4,792.06	4,801.07	4,788.28	20.72	12.08	-159.77	-276.10	-139.53	894.04	868.39	25.65	34.851	

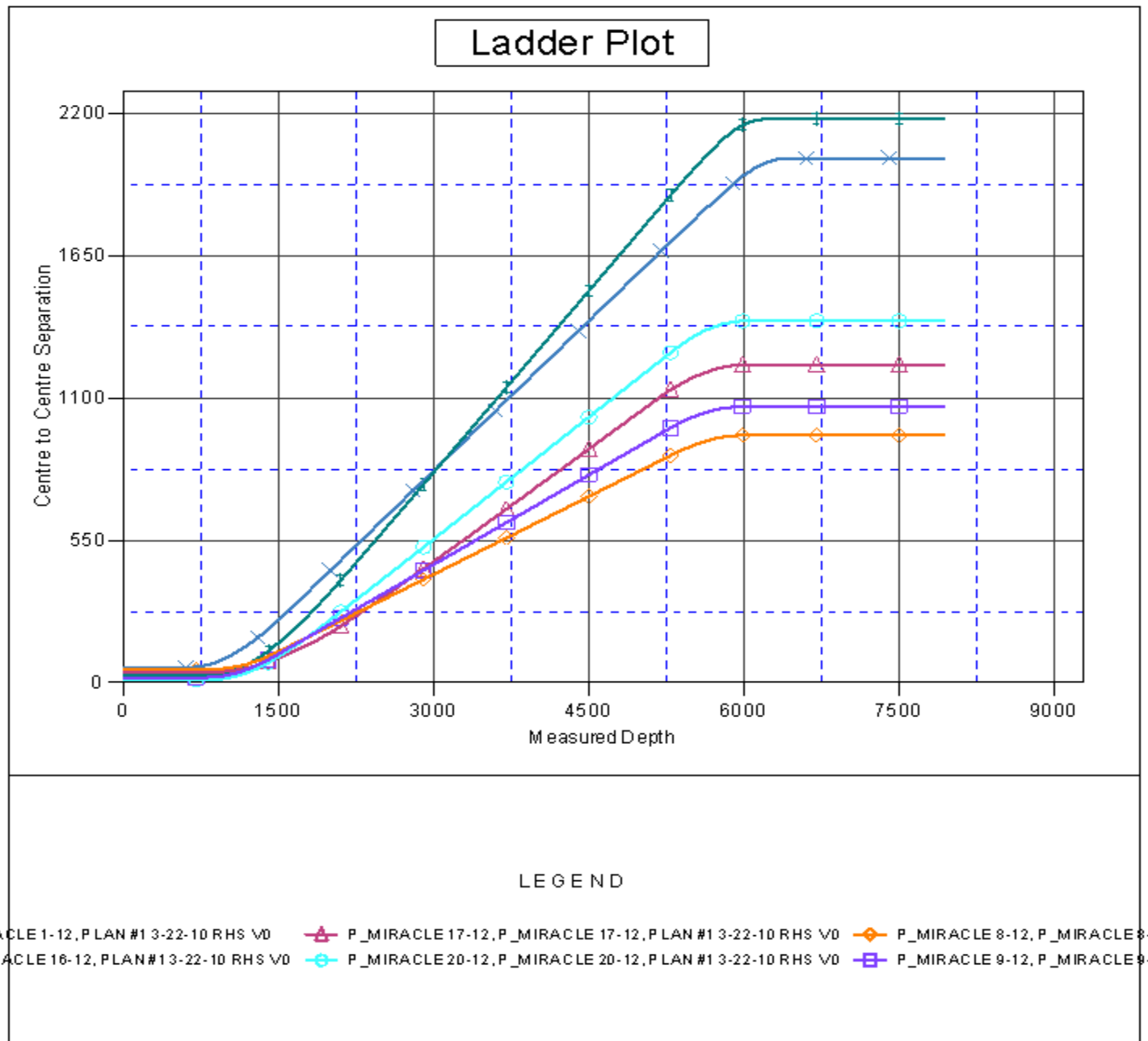
CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

<b>Company:</b>	US ROCKIES REGION PLANNING	<b>Local Co-ordinate Reference:</b>	Well P_MIRACLE 24-12
<b>Project:</b>	COLORADO NORTHERN ZONE - 83	<b>TVD Reference:</b>	WELL @ 4963.00ft (Original Well Elev)
<b>Reference Site:</b>	LARIMER_MIRACLE 40-12 PAD	<b>MD Reference:</b>	WELL @ 4963.00ft (Original Well Elev)
<b>Site Error:</b>	0.00ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	P_MIRACLE 24-12	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.00ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	P_MIRACLE 24-12	<b>Database:</b>	EDM 2003.21 Single User Db
<b>Reference Design:</b>	PLAN #1 3-22-10 RHS	<b>Offset TVD Reference:</b>	Offset Datum

<b>Offset Design</b> LARIMER_MIRACLE 40-12 PAD - P_MIRACLE 9-12 - P_MIRACLE 9-12 - PLAN #1 3-22-10 RHS												<b>Offset Site Error:</b>	0.00 ft
Survey Program: 0-MWD												<b>Offset Well Error:</b>	0.00 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)	Minimum Separation (ft)	Separation Factor	Warning
5,000.00	4,889.13	4,898.38	4,885.27	21.24	12.35	-159.78	-282.92	-143.47	917.07	890.84	26.23	34.958	
5,100.00	4,986.21	4,995.69	4,982.26	21.75	12.61	-159.79	-289.74	-147.42	940.10	913.29	26.81	35.061	
5,200.00	5,083.28	5,093.01	5,079.26	22.27	12.88	-159.81	-296.56	-151.37	963.13	935.73	27.39	35.159	
5,290.27	5,170.91	5,180.85	5,166.82	22.73	13.12	-159.82	-302.72	-154.93	983.92	956.00	27.92	35.244	
5,300.00	5,180.36	5,190.32	5,176.25	22.78	13.15	-159.83	-303.38	-155.31	986.14	958.16	27.98	35.246	
5,400.00	5,277.90	5,288.06	5,273.67	23.14	13.42	-159.95	-310.23	-159.28	1,007.26	978.70	28.56	35.268	
5,500.00	5,376.16	5,386.42	5,371.71	23.46	13.69	-159.98	-317.12	-163.27	1,025.16	996.05	29.12	35.210	
5,600.00	5,475.00	5,485.30	5,470.26	23.74	13.96	-159.92	-324.05	-167.28	1,039.84	1,010.19	29.64	35.079	
5,700.00	5,574.31	5,584.55	5,569.19	23.97	14.23	-159.78	-331.01	-171.30	1,051.27	1,021.13	30.14	34.881	
5,800.00	5,673.97	5,684.07	5,668.38	24.17	14.51	-159.55	-337.98	-175.34	1,059.47	1,028.87	30.60	34.618	
5,900.00	5,773.86	5,786.15	5,770.23	24.31	14.71	-159.31	-343.85	-178.73	1,064.33	1,033.38	30.96	34.381	
5,985.16	5,859.00	5,873.57	5,857.60	24.41	14.86	124.19	-346.38	-180.20	1,065.72	1,034.53	31.19	34.168	
6,000.00	5,873.84	5,888.82	5,872.84	24.43	14.88	124.20	-346.59	-180.32	1,065.74	1,034.50	31.24	34.114	
6,100.00	5,973.84	5,989.82	5,973.84	24.54	15.06	124.22	-346.80	-180.44	1,065.75	1,034.18	31.58	33.751	
6,200.00	6,073.84	6,089.82	6,073.84	24.66	15.21	124.22	-346.80	-180.44	1,065.75	1,033.86	31.90	33.411	
6,300.00	6,173.84	6,189.82	6,173.84	24.77	15.37	124.22	-346.80	-180.44	1,065.75	1,033.53	32.22	33.077	
6,400.00	6,273.84	6,289.82	6,273.84	24.89	15.53	124.22	-346.80	-180.44	1,065.75	1,033.21	32.55	32.746	
6,500.00	6,373.84	6,389.82	6,373.84	25.01	15.69	124.22	-346.80	-180.44	1,065.75	1,032.88	32.87	32.419	
6,600.00	6,473.84	6,489.82	6,473.84	25.14	15.85	124.22	-346.80	-180.44	1,065.75	1,032.55	33.21	32.095	
6,700.00	6,573.84	6,589.82	6,573.84	25.26	16.02	124.22	-346.80	-180.44	1,065.75	1,032.21	33.54	31.776	
6,800.00	6,673.84	6,689.82	6,673.84	25.39	16.18	124.22	-346.80	-180.44	1,065.75	1,031.88	33.88	31.460	
6,900.00	6,773.84	6,789.82	6,773.84	25.51	16.35	124.22	-346.80	-180.44	1,065.75	1,031.54	34.22	31.148	
7,000.00	6,873.84	6,889.82	6,873.84	25.64	16.52	124.22	-346.80	-180.44	1,065.75	1,031.20	34.56	30.840	
7,100.00	6,973.84	6,989.82	6,973.84	25.77	16.69	124.22	-346.80	-180.44	1,065.75	1,030.85	34.90	30.536	
7,200.00	7,073.84	7,089.82	7,073.84	25.90	16.86	124.22	-346.80	-180.44	1,065.75	1,030.51	35.25	30.235	
7,300.00	7,173.84	7,189.82	7,173.84	26.03	17.03	124.22	-346.80	-180.44	1,065.75	1,030.16	35.60	29.939	
7,400.00	7,273.84	7,289.82	7,273.84	26.16	17.20	124.22	-346.80	-180.44	1,065.75	1,029.81	35.95	29.647	
7,500.00	7,373.84	7,389.82	7,373.84	26.30	17.38	124.22	-346.80	-180.44	1,065.75	1,029.45	36.30	29.358	
7,600.00	7,473.84	7,489.82	7,473.84	26.43	17.55	124.22	-346.80	-180.44	1,065.75	1,029.10	36.66	29.073	
7,700.00	7,573.84	7,589.82	7,573.84	26.57	17.73	124.22	-346.80	-180.44	1,065.75	1,028.74	37.02	28.792	
7,800.00	7,673.84	7,689.82	7,673.84	26.71	17.91	124.22	-346.80	-180.44	1,065.75	1,028.38	37.37	28.515	
7,900.00	7,773.84	7,789.82	7,773.84	26.85	18.09	124.22	-346.80	-180.44	1,065.75	1,028.02	37.74	28.242	
7,936.16	7,810.00	7,825.98	7,810.00	26.90	18.15	124.22	-346.80	-180.44	1,065.75	1,027.89	37.87	28.144	

<b>Company:</b>	US ROCKIES REGION PLANNING	<b>Local Co-ordinate Reference:</b>	Well P_MIRACLE 24-12
<b>Project:</b>	COLORADO NORTHERN ZONE - 83	<b>TVD Reference:</b>	WELL @ 4963.00ft (Original Well Elev)
<b>Reference Site:</b>	LARIMER_MIRACLE 40-12 PAD	<b>MD Reference:</b>	WELL @ 4963.00ft (Original Well Elev)
<b>Site Error:</b>	0.00ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	P_MIRACLE 24-12	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.00ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	P_MIRACLE 24-12	<b>Database:</b>	EDM 2003.21 Single User Db
<b>Reference Design:</b>	PLAN #1 3-22-10 RHS	<b>Offset TVD Reference:</b>	Offset Datum

Reference Depths are relative to WELL @ 4963.00ft (Original Well Elev) Coordinates are relative to: P\_MIRACLE 24-12  
Offset Depths are relative to Offset Datum  
Central Meridian is 105° 30' 0.000 W °  
Coordinate System is US State Plane 1983, Colorado Northern Zone  
Grid Convergence at Surface is: 0.36°



<b>Company:</b>	US ROCKIES REGION PLANNING	<b>Local Co-ordinate Reference:</b>	Well P_MIRACLE 24-12
<b>Project:</b>	COLORADO NORTHERN ZONE - 83	<b>TVD Reference:</b>	WELL @ 4963.00ft (Original Well Elev)
<b>Reference Site:</b>	LARIMER_MIRACLE 40-12 PAD	<b>MD Reference:</b>	WELL @ 4963.00ft (Original Well Elev)
<b>Site Error:</b>	0.00ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	P_MIRACLE 24-12	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.00ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	P_MIRACLE 24-12	<b>Database:</b>	EDM 2003.21 Single User Db
<b>Reference Design:</b>	PLAN #1 3-22-10 RHS	<b>Offset TVD Reference:</b>	Offset Datum

Reference Depths are relative to WELL @ 4963.00ft (Original Well Elev) Coordinates are relative to: P\_MIRACLE 24-12  
Offset Depths are relative to Offset Datum Coordinate System is US State Plane 1983, Colorado Northern Zone  
Central Meridian is 105° 30' 0.000 W ° Grid Convergence at Surface is: 0.36°

