



# **US ROCKIES REGION PLANNING**

**COLORADO NORTHERN ZONE - 83**

**LARIMER\_MIRACLE 25-12 PAD**

**P\_MIRACLE 10-12**

**P\_MIRACLE 10-12**

**Plan: PLAN #1 3-23-10 RHS**

## **Standard Planning Report**

**24 March, 2010**

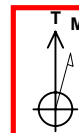




Project: COLORADO NORTHERN ZONE - 83  
 Site: LARIMER MIRACLE 25-12 PAD  
 Well: P\_MIRACLE 10-12  
 Wellbore: P\_MIRACLE 10-12  
 Section: SECTION 12 T5N R68W  
 SHL: 2484 FSL 2611 FEL  
 Design: PLAN #1 3-23-10 RHS  
 Latitude: 40° 24' 50.065 N  
 Longitude: 104° 57' 13.748 W  
 GL: 4963.00  
 KB: WELL @ 4978.00ft (Original Well Elev)



**Weatherford®**



Azimuths to True North  
 Magnetic North: 9.13°  
 Magnetic Field  
 Strength: 53246.6nT  
 Dip Angle: 67.07°  
 Date: 3/23/2010  
 Model: IGRF2010

FORMATION TOP DETAILS		
TVDPath	MDPath	Formation
3485.00	3516.30	PARKMAN
4115.00	4154.41	SUSSEX
4565.00	4610.20	SHANNON
6905.00	6963.54	NIO A
7195.00	7253.54	CODELL
7655.00	7713.54	JSAND

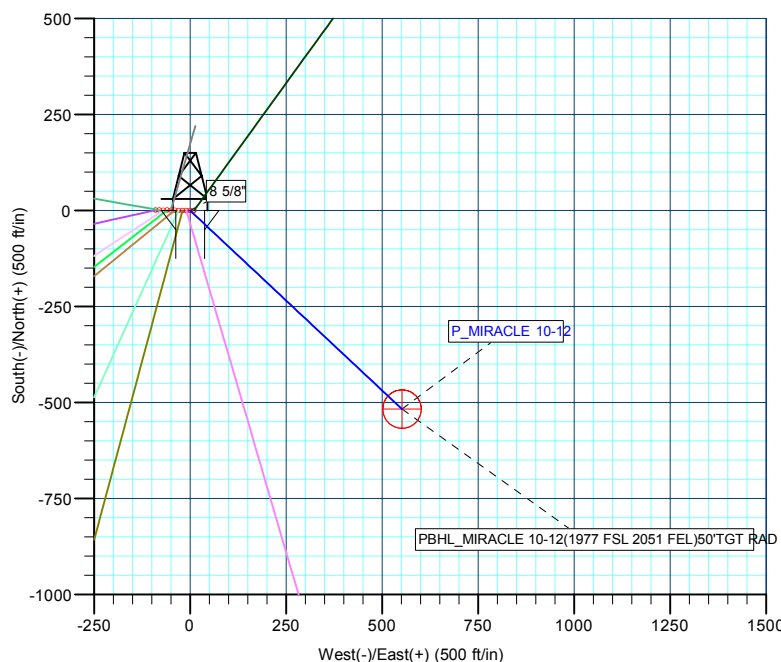
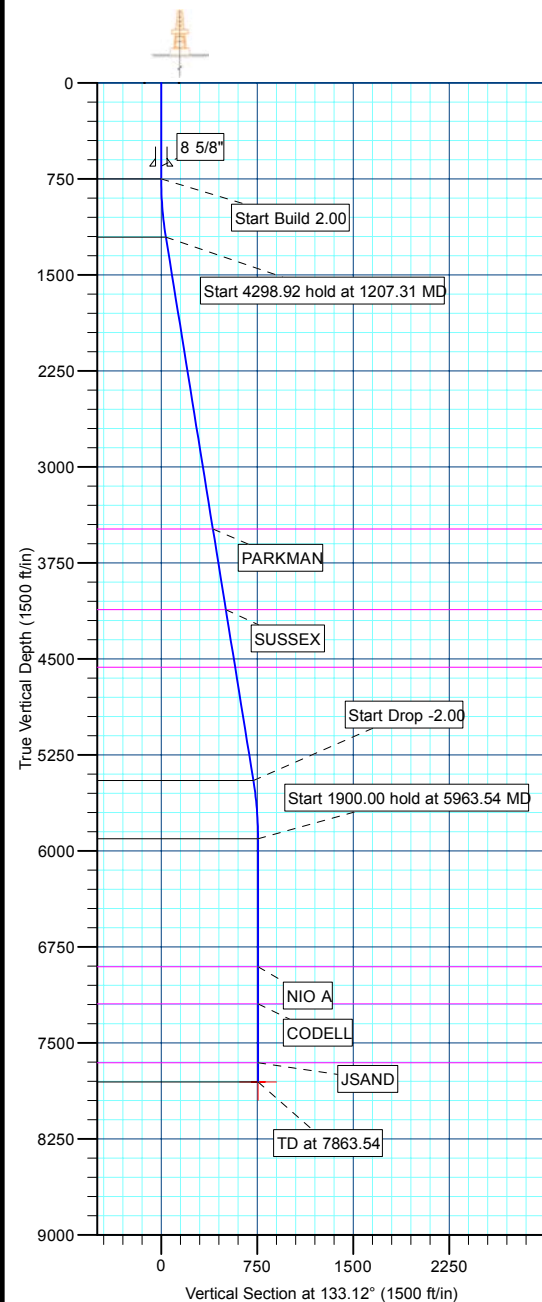
CASING DETAILS			
TVD	MD	Name	Size
650.00	650.00	8 5/8"	8.62

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
1207.31	9.15	133.12	1205.37	-24.90	26.58	2.00	133.12	36.42	Start 4298.92 hold at 1207.31 MD
5506.23	9.15	133.12	5449.63	-492.01	525.32	0.00	0.00	719.75	Start Drop -2.00
5963.54	0.00	0.00	5905.00	-516.91	551.91	2.00	180.00	756.17	Start 1900.00 hold at 5963.54 MD
7863.54	0.00	0.00	7805.00	-516.91	551.91	0.00	0.00	756.17	TD at 7863.54

WELLBORE TARGET DETAILS (MAP CO-ORDINATES AND LAT/LONG)							
Name	TVD	+N/-S	+E/-W	Latitude	Longitude	Shape	
PBHL	7805.00	-516.91	551.91	40° 24' 44.957 N	104° 57' 6.613 W	Circle (Radius: 50.00)	

WELL DETAILS: P_MIRACLE 10-12						
+N/-S	+E/-W	Northing	Ground Level: Easting	4963.00 Latitude	Longitude	Slot
0.00	0.00	1394095.03	3152084.90	40° 24' 50.065 N	104° 57' 13.748 W	

LEGEND	
P_MIRACLE 11-12, P_MIRACLE 11-12, PLAN #1 3-23-10 RHS V0	
P_MIRACLE 12-12, P_MIRACLE 12-12, PLAN #1 3-23-10 RHS V0	
P_MIRACLE 13-12, P_MIRACLE 13-12, PLAN #1 3-23-10 RHS V0	
P_MIRACLE 14-12, P_MIRACLE 14-12, PLAN #1 3-23-10 RHS V0	
P_MIRACLE 15-12, P_MIRACLE 15-12, PLAN #1 3-23-10 RHS V0	
P_MIRACLE 19-12, P_MIRACLE 19-12, PLAN #1 3-23-10 RHS V0	
P_MIRACLE 22-12, P_MIRACLE 22-12, PLAN #1 3-23-10 RHS V0	
P_MIRACLE 23-12, P_MIRACLE 23-12, PLAN #1 3-23-10 RHS V0	
P_MIRACLE 25-12, P_MIRACLE 25-12, PLAN #1 3-23-10 RHS V0	
P_MIRACLE 7-12, P_MIRACLE 7-12, PLAN #1 3-23-10 RHS V0	
PLAN #1 3-23-10 RHS	



Plan: PLAN #1 3-23-10 RHS (P_MIRACLE 10-12/P_MIRACLE 10-12)	
Created By: Robert H. Scott	Date: 9:09, March 24 2010

<b>Database:</b>	EDM 2003.21 Single User Db	<b>Local Co-ordinate Reference:</b>	Well P_MIRACLE 10-12
<b>Company:</b>	US ROCKIES REGION PLANNING	<b>TVD Reference:</b>	WELL @ 4978.00ft (Original Well Elev)
<b>Project:</b>	COLORADO NORTHERN ZONE - 83	<b>MD Reference:</b>	WELL @ 4978.00ft (Original Well Elev)
<b>Site:</b>	LARIMER_MIRACLE 25-12 PAD	<b>North Reference:</b>	True
<b>Well:</b>	P_MIRACLE 10-12	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	P_MIRACLE 10-12		
<b>Design:</b>	PLAN #1 3-23-10 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 25-12 PAD, SECTION 12 T5N R68W											
Site Position:			Northing:			1,394,095.11 ft			Latitude:			40° 24' 50.065 N					
From:			Lat/Long			Easting:			3,152,094.92 ft			Longitude:			104° 57' 13.619 W		
Position Uncertainty:			0.00 ft			Slot Radius:			in			Grid Convergence:			0.35 °		

Well	P_MIRACLE 10-12					
Well Position	+N/-S	-0.02 ft	Northing:	1,394,095.03 ft	Latitude:	40° 24' 50.065 N
	+E/-W	-10.02 ft	Easting:	3,152,084.90 ft	Longitude:	104° 57' 13.748 W
Position Uncertainty		0.00 ft	Wellhead Elevation:	ft	Ground Level:	4,963.00 ft

<b>Wellbore</b>	P_MIRACLE 10-12				
<b>Magnetics</b>	<b>Model Name</b>	<b>Sample Date</b>	<b>Declination (°)</b>	<b>Dip Angle (°)</b>	<b>Field Strength (nT)</b>
	IGRF2010	3/23/2010	9.13	67.07	53,247

<b>Design</b>	PLAN #1 3-23-10 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	133.12

<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	
1,207.31	9.15	133.12	1,205.37	-24.90	26.58	2.00	2.00	0.00	133.12	
5,506.23	9.15	133.12	5,449.63	-492.01	525.32	0.00	0.00	0.00	0.00	
5,963.54	0.00	0.00	5,905.00	-516.91	551.91	2.00	-2.00	0.00	180.00	
7,863.54	0.00	0.00	7,805.00	-516.91	551.91	0.00	0.00	0.00	0.00	PBHL_MIRACLE 10

<b>Database:</b>	EDM 2003.21 Single User Db	<b>Local Co-ordinate Reference:</b>	Well P_MIRACLE 10-12
<b>Company:</b>	US ROCKIES REGION PLANNING	<b>TVD Reference:</b>	WELL @ 4978.00ft (Original Well Elev)
<b>Project:</b>	COLORADO NORTHERN ZONE - 83	<b>MD Reference:</b>	WELL @ 4978.00ft (Original Well Elev)
<b>Site:</b>	LARIMER_MIRACLE 25-12 PAD	<b>North Reference:</b>	True
<b>Well:</b>	P_MIRACLE 10-12	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	P_MIRACLE 10-12		
<b>Design:</b>	PLAN #1 3-23-10 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	133.12	800.00	-0.30	0.32	0.44	2.00	2.00	0.00
900.00	3.00	133.12	899.93	-2.68	2.87	3.93	2.00	2.00	0.00
1,000.00	5.00	133.12	999.68	-7.45	7.96	10.90	2.00	2.00	0.00
1,100.00	7.00	133.12	1,099.13	-14.60	15.59	21.35	2.00	2.00	0.00
1,200.00	9.00	133.12	1,198.15	-24.11	25.74	35.27	2.00	2.00	0.00
<b>Start 4298.92 hold at 1207.31 MD</b>									
1,207.31	9.15	133.12	1,205.37	-24.90	26.58	36.42	2.00	2.00	0.00
1,300.00	9.15	133.12	1,296.88	-34.97	37.34	51.16	0.00	0.00	0.00
1,400.00	9.15	133.12	1,395.61	-45.84	48.94	67.05	0.00	0.00	0.00
1,500.00	9.15	133.12	1,494.34	-56.70	60.54	82.95	0.00	0.00	0.00
1,600.00	9.15	133.12	1,593.07	-67.57	72.14	98.84	0.00	0.00	0.00
1,700.00	9.15	133.12	1,691.80	-78.43	83.74	114.74	0.00	0.00	0.00
1,800.00	9.15	133.12	1,790.52	-89.30	95.34	130.63	0.00	0.00	0.00
1,900.00	9.15	133.12	1,889.25	-100.17	106.95	146.53	0.00	0.00	0.00
2,000.00	9.15	133.12	1,987.98	-111.03	118.55	162.42	0.00	0.00	0.00
2,100.00	9.15	133.12	2,086.71	-121.90	130.15	178.32	0.00	0.00	0.00
2,200.00	9.15	133.12	2,185.44	-132.76	141.75	194.21	0.00	0.00	0.00
2,300.00	9.15	133.12	2,284.17	-143.63	153.35	210.11	0.00	0.00	0.00
2,400.00	9.15	133.12	2,382.90	-154.50	164.95	226.01	0.00	0.00	0.00
2,500.00	9.15	133.12	2,481.63	-165.36	176.56	241.90	0.00	0.00	0.00
2,600.00	9.15	133.12	2,580.35	-176.23	188.16	257.80	0.00	0.00	0.00
2,700.00	9.15	133.12	2,679.08	-187.09	199.76	273.69	0.00	0.00	0.00
2,800.00	9.15	133.12	2,777.81	-197.96	211.36	289.59	0.00	0.00	0.00
2,900.00	9.15	133.12	2,876.54	-208.82	222.96	305.48	0.00	0.00	0.00
3,000.00	9.15	133.12	2,975.27	-219.69	234.56	321.38	0.00	0.00	0.00
3,100.00	9.15	133.12	3,074.00	-230.56	246.16	337.27	0.00	0.00	0.00
3,200.00	9.15	133.12	3,172.73	-241.42	257.77	353.17	0.00	0.00	0.00
3,300.00	9.15	133.12	3,271.45	-252.29	269.37	369.06	0.00	0.00	0.00
3,400.00	9.15	133.12	3,370.18	-263.15	280.97	384.96	0.00	0.00	0.00
3,500.00	9.15	133.12	3,468.91	-274.02	292.57	400.85	0.00	0.00	0.00
<b>PARKMAN</b>									
3,516.30	9.15	133.12	3,485.00	-275.79	294.46	403.45	0.00	0.00	0.00
3,600.00	9.15	133.12	3,567.64	-284.89	304.17	416.75	0.00	0.00	0.00
3,700.00	9.15	133.12	3,666.37	-295.75	315.77	432.65	0.00	0.00	0.00
3,800.00	9.15	133.12	3,765.10	-306.62	327.38	448.54	0.00	0.00	0.00
3,900.00	9.15	133.12	3,863.83	-317.48	338.98	464.44	0.00	0.00	0.00
4,000.00	9.15	133.12	3,962.55	-328.35	350.58	480.33	0.00	0.00	0.00
4,100.00	9.15	133.12	4,061.28	-339.22	362.18	496.23	0.00	0.00	0.00
<b>SUSSEX</b>									
4,154.41	9.15	133.12	4,115.00	-345.13	368.49	504.88	0.00	0.00	0.00
4,200.00	9.15	133.12	4,160.01	-350.08	373.78	512.12	0.00	0.00	0.00
4,300.00	9.15	133.12	4,258.74	-360.95	385.38	528.02	0.00	0.00	0.00
4,400.00	9.15	133.12	4,357.47	-371.81	396.98	543.91	0.00	0.00	0.00
4,500.00	9.15	133.12	4,456.20	-382.68	408.59	559.81	0.00	0.00	0.00
4,600.00	9.15	133.12	4,554.93	-393.55	420.19	575.70	0.00	0.00	0.00
<b>SHANNON</b>									
4,610.20	9.15	133.12	4,565.00	-394.65	421.37	577.33	0.00	0.00	0.00
4,700.00	9.15	133.12	4,653.65	-404.41	431.79	591.60	0.00	0.00	0.00
4,800.00	9.15	133.12	4,752.38	-415.28	443.39	607.49	0.00	0.00	0.00
4,900.00	9.15	133.12	4,851.11	-426.14	454.99	623.39	0.00	0.00	0.00
5,000.00	9.15	133.12	4,949.84	-437.01	466.59	639.29	0.00	0.00	0.00

<b>Database:</b>	EDM 2003.21 Single User Db	<b>Local Co-ordinate Reference:</b>	Well P_MIRACLE 10-12
<b>Company:</b>	US ROCKIES REGION PLANNING	<b>TVD Reference:</b>	WELL @ 4978.00ft (Original Well Elev)
<b>Project:</b>	COLORADO NORTHERN ZONE - 83	<b>MD Reference:</b>	WELL @ 4978.00ft (Original Well Elev)
<b>Site:</b>	LARIMER_MIRACLE 25-12 PAD	<b>North Reference:</b>	True
<b>Well:</b>	P_MIRACLE 10-12	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	P_MIRACLE 10-12		
<b>Design:</b>	PLAN #1 3-23-10 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	9.15	133.12	5,048.57	-447.87	478.19	655.18	0.00	0.00	0.00
5,200.00	9.15	133.12	5,147.30	-458.74	489.80	671.08	0.00	0.00	0.00
5,300.00	9.15	133.12	5,246.03	-469.61	501.40	686.97	0.00	0.00	0.00
5,400.00	9.15	133.12	5,344.75	-480.47	513.00	702.87	0.00	0.00	0.00
5,500.00	9.15	133.12	5,443.48	-491.34	524.60	718.76	0.00	0.00	0.00
<b>Start Drop -2.00</b>									
5,506.23	9.15	133.12	5,449.63	-492.01	525.32	719.75	0.00	0.00	0.00
5,600.00	7.27	133.12	5,542.44	-501.17	535.09	733.14	2.00	-2.00	0.00
5,700.00	5.27	133.12	5,641.84	-508.63	543.07	744.06	2.00	-2.00	0.00
5,800.00	3.27	133.12	5,741.55	-513.72	548.50	751.51	2.00	-2.00	0.00
5,900.00	1.27	133.12	5,841.47	-516.43	551.39	755.47	2.00	-2.00	0.00
<b>Start 1900.00 hold at 5963.54 MD</b>									
5,963.54	0.00	0.00	5,905.00	-516.91	551.91	756.17	2.00	-2.00	-209.53
6,000.00	0.00	0.00	5,941.46	-516.91	551.91	756.17	0.00	0.00	0.00
6,100.00	0.00	0.00	6,041.46	-516.91	551.91	756.17	0.00	0.00	0.00
6,200.00	0.00	0.00	6,141.46	-516.91	551.91	756.17	0.00	0.00	0.00
6,300.00	0.00	0.00	6,241.46	-516.91	551.91	756.17	0.00	0.00	0.00
6,400.00	0.00	0.00	6,341.46	-516.91	551.91	756.17	0.00	0.00	0.00
6,500.00	0.00	0.00	6,441.46	-516.91	551.91	756.17	0.00	0.00	0.00
6,600.00	0.00	0.00	6,541.46	-516.91	551.91	756.17	0.00	0.00	0.00
6,700.00	0.00	0.00	6,641.46	-516.91	551.91	756.17	0.00	0.00	0.00
6,800.00	0.00	0.00	6,741.46	-516.91	551.91	756.17	0.00	0.00	0.00
6,900.00	0.00	0.00	6,841.46	-516.91	551.91	756.17	0.00	0.00	0.00
<b>NIO A</b>									
6,963.54	0.00	0.00	6,905.00	-516.91	551.91	756.17	0.00	0.00	0.00
7,000.00	0.00	0.00	6,941.46	-516.91	551.91	756.17	0.00	0.00	0.00
7,100.00	0.00	0.00	7,041.46	-516.91	551.91	756.17	0.00	0.00	0.00
7,200.00	0.00	0.00	7,141.46	-516.91	551.91	756.17	0.00	0.00	0.00
<b>CODELL</b>									
7,253.54	0.00	0.00	7,195.00	-516.91	551.91	756.17	0.00	0.00	0.00
7,300.00	0.00	0.00	7,241.46	-516.91	551.91	756.17	0.00	0.00	0.00
7,400.00	0.00	0.00	7,341.46	-516.91	551.91	756.17	0.00	0.00	0.00
7,500.00	0.00	0.00	7,441.46	-516.91	551.91	756.17	0.00	0.00	0.00
7,600.00	0.00	0.00	7,541.46	-516.91	551.91	756.17	0.00	0.00	0.00
7,700.00	0.00	0.00	7,641.46	-516.91	551.91	756.17	0.00	0.00	0.00
<b>JSAND</b>									
7,713.54	0.00	0.00	7,655.00	-516.91	551.91	756.17	0.00	0.00	0.00
7,800.00	0.00	0.00	7,741.46	-516.91	551.91	756.17	0.00	0.00	0.00
<b>PBHL_MIRACLE 10-12(1977 FSL 2051 FEL)50'TGT RAD</b>									
7,863.54	0.00	0.00	7,805.00	-516.91	551.91	756.17	0.00	0.00	0.00

#### Design Targets

Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (ft)	Easting (ft)	Latitude	Longitude
- hit/miss target									
- Shape									
PBHL_MIRACLE 10-1	0.00	0.00	7,805.00	-516.91	551.91	1,393,581.53	3,152,639.98	40° 24' 44.957 N	104° 57' 6.613 W
- plan hits target center									
- Circle (radius 50.00)									

<b>Database:</b>	EDM 2003.21 Single User Db	<b>Local Co-ordinate Reference:</b>	Well P_MIRACLE 10-12
<b>Company:</b>	US ROCKIES REGION PLANNING	<b>TVD Reference:</b>	WELL @ 4978.00ft (Original Well Elev)
<b>Project:</b>	COLORADO NORTHERN ZONE - 83	<b>MD Reference:</b>	WELL @ 4978.00ft (Original Well Elev)
<b>Site:</b>	LARIMER_MIRACLE 25-12 PAD	<b>North Reference:</b>	True
<b>Well:</b>	P_MIRACLE 10-12	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	P_MIRACLE 10-12		
<b>Design:</b>	PLAN #1 3-23-10 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 (°)	
3,516.30	3,485.00	PARKMAN				
4,154.41	4,115.00	SUSSEX				
4,610.20	4,565.00	SHANNON				
6,963.54	6,905.00	NIO A				
7,253.54	7,195.00	CODELL				
7,713.54	7,655.00	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	
1,207.31	1,205.37	-24.90	26.58	Start 4298.92 hold at 1207.31 MD	
5,506.23	5,449.63	-492.01	525.32	Start Drop -2.00	
5,963.54	5,905.00	-516.91	551.91	Start 1900.00 hold at 5963.54 MD	
7,863.54	7,805.00	-516.91	551.91	TD at 7863.54	



# **US ROCKIES REGION PLANNING**

**COLORADO NORTHERN ZONE - 83  
LARIMER\_MIRACLE 25-12 PAD  
P\_MIRACLE 10-12**

**P\_MIRACLE 10-12  
PLAN #1 3-23-10 RHS**

## **Anticollision Report**

**24 March, 2010**



<b>Company:</b>	US ROCKIES REGION PLANNING	<b>Local Co-ordinate Reference:</b>	Well P_MIRACLE 10-12
<b>Project:</b>	COLORADO NORTHERN ZONE - 83	<b>TVD Reference:</b>	WELL @ 4978.00ft (Original Well Elev)
<b>Reference Site:</b>	LARIMER_MIRACLE 25-12 PAD	<b>MD Reference:</b>	WELL @ 4978.00ft (Original Well Elev)
<b>Site Error:</b>	0.00ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	P_MIRACLE 10-12	<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 10-12	<b>Database:</b>	EDM 2003.21 Single User Db
<b>Reference Design:</b>	PLAN #1 3-23-10 RHS	<b>Offset TVD Reference:</b>	Offset Datum

<b>Reference</b>	PLAN #1 3-23-10 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> 3/23/2010			
<b>From (ft)</b>	<b>To (ft)</b>	<b>Survey (Wellbore)</b>	<b>Tool Name</b>	<b>Description</b>
0.00	7,863.54	PLAN #1 3-23-10 RHS (P_MIRACLE 10-1	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 25-12 PAD						
P_MIRACLE 11-12 - P_MIRACLE 11-12 - PLAN #1 3-23	750.00	750.00	69.62	66.50	22.363	CC, ES
P_MIRACLE 11-12 - P_MIRACLE 11-12 - PLAN #1 3-23	900.00	896.79	75.70	72.03	20.599	SF
P_MIRACLE 12-12 - P_MIRACLE 12-12 - PLAN #1 3-23	300.00	300.00	89.67	88.58	82.256	CC, ES
P_MIRACLE 12-12 - P_MIRACLE 12-12 - PLAN #1 3-23	750.00	733.35	123.12	120.00	39.435	SF
P_MIRACLE 13-12 - P_MIRACLE 13-12 - PLAN #1 3-23	233.52	233.52	39.83	39.03	50.331	CC, ES
P_MIRACLE 13-12 - P_MIRACLE 13-12 - PLAN #1 3-23	600.00	594.65	57.54	55.11	23.682	SF
P_MIRACLE 14-12 - P_MIRACLE 14-12 - PLAN #1 3-23	300.00	300.00	29.80	28.71	27.334	CC, ES
P_MIRACLE 14-12 - P_MIRACLE 14-12 - PLAN #1 3-23	600.00	597.68	38.78	36.39	16.212	SF
P_MIRACLE 15-12 - P_MIRACLE 15-12 - PLAN #1 3-23	432.95	433.00	9.25	7.60	5.599	CC, ES
P_MIRACLE 15-12 - P_MIRACLE 15-12 - PLAN #1 3-23	500.00	499.89	10.04	8.10	5.184	SF
P_MIRACLE 19-12 - P_MIRACLE 19-12 - PLAN #1 3-23	750.00	750.00	59.88	56.76	19.235	CC, ES
P_MIRACLE 19-12 - P_MIRACLE 19-12 - PLAN #1 3-23	900.00	897.37	65.80	62.12	17.908	SF
P_MIRACLE 22-12 - P_MIRACLE 22-12 - PLAN #1 3-23	750.00	750.00	79.65	76.53	25.585	CC, ES
P_MIRACLE 22-12 - P_MIRACLE 22-12 - PLAN #1 3-23	900.00	895.64	86.37	82.68	23.374	SF
P_MIRACLE 23-12 - P_MIRACLE 23-12 - PLAN #1 3-23	750.00	750.00	19.77	16.66	6.352	CC, ES
P_MIRACLE 23-12 - P_MIRACLE 23-12 - PLAN #1 3-23	800.00	799.91	20.20	16.89	6.102	SF
P_MIRACLE 25-12 - P_MIRACLE 25-12 - PLAN #1 3-23	750.00	750.00	49.85	46.74	16.013	CC, ES
P_MIRACLE 25-12 - P_MIRACLE 25-12 - PLAN #1 3-23	1,000.00	999.84	57.80	53.66	13.968	SF
P_MIRACLE 7-12 - P_MIRACLE 7-12 - PLAN #1 3-23-1C	810.29	810.15	9.98	6.61	2.966	CC, ES, SF

LARIMER_MIRACLE 25-12 PAD - P_MIRACLE 11-12 - P_MIRACLE 11-12 - PLAN #1 3-23-10 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	Vertical Depth	Measured Depth	Vertical Depth	Reference	Offset	Highside Toolface	Offset Wellbore Centre		Between Centres	Between Ellipses	Minimum Separation	Separation Factor	Warning
(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	-89.39	0.74	-69.61	69.62				
100.00	100.00	100.00	100.00	0.10	0.10	-89.39	0.74	-69.61	69.62	69.43	0.19	364.391	
200.00	200.00	200.00	200.00	0.32	0.32	-89.39	0.74	-69.61	69.62	68.98	0.64	108.678	
300.00	300.00	300.00	300.00	0.55	0.55	-89.39	0.74	-69.61	69.62	68.53	1.09	63.862	
400.00	400.00	400.00	400.00	0.77	0.77	-89.39	0.74	-69.61	69.62	68.08	1.54	45.216	
500.00	500.00	500.00	500.00	0.99	0.99	-89.39	0.74	-69.61	69.62	67.63	1.99	34.998	
600.00	600.00	600.00	600.00	1.22	1.22	-89.39	0.74	-69.61	69.62	67.18	2.44	28.547	
700.00	700.00	700.00	700.00	1.44	1.44	-89.39	0.74	-69.61	69.62	66.73	2.89	24.104	
750.00	750.00	750.00	750.00	1.56	1.56	-89.39	0.74	-69.61	69.62	66.50	3.11	22.363	CC, ES

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 10-12
<b>Project:</b>	COLORADO NORTHERN ZONE - 83	<b>TVD Reference:</b>	WELL @ 4978.00ft (Original Well Elev)
<b>Reference Site:</b>	LARIMER_MIRACLE 25-12 PAD	<b>MD Reference:</b>	WELL @ 4978.00ft (Original Well Elev)
<b>Site Error:</b>	0.00ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	P_MIRACLE 10-12	<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 10-12	<b>Database:</b>	EDM 2003.21 Single User Db
<b>Reference Design:</b>	PLAN #1 3-23-10 RHS	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design LARIMER_MIRACLE 25-12 PAD - P_MIRACLE 11-12 - P_MIRACLE 11-12 - PLAN #1 3-23-10 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 Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	
800.00	800.00	799.00	799.00	1.66	1.66	137.52	0.51	-69.96	70.29	66.98	3.31	21.224	
900.00	899.93	896.79	896.73	1.84	1.84	137.78	-1.33	-72.76	75.70	72.03	3.68	20.599 SF	
1,000.00	999.68	993.94	993.64	2.04	2.04	138.19	-4.96	-78.29	86.50	82.44	4.06	21.329	
1,100.00	1,099.13	1,090.03	1,089.23	2.27	2.26	138.61	-10.32	-86.47	102.62	98.16	4.46	23.022	
1,207.31	1,205.37	1,191.53	1,189.78	2.55	2.52	138.98	-17.89	-98.01	125.76	120.84	4.92	25.558	
1,300.00	1,296.88	1,277.81	1,274.83	2.82	2.78	139.15	-25.86	-110.15	149.41	144.04	5.37	27.848	
1,400.00	1,395.61	1,372.84	1,368.10	3.13	3.09	138.85	-35.82	-125.34	176.72	170.85	5.88	30.070	
1,500.00	1,494.34	1,469.00	1,462.47	3.46	3.44	138.60	-45.98	-140.82	204.15	197.73	6.41	31.826	
1,600.00	1,593.07	1,565.16	1,556.83	3.80	3.80	138.41	-56.13	-156.30	231.58	224.61	6.97	33.236	
1,700.00	1,691.80	1,661.32	1,651.19	4.14	4.17	138.27	-66.28	-171.77	259.01	251.47	7.53	34.382	
1,800.00	1,790.52	1,757.49	1,745.56	4.49	4.55	138.15	-76.44	-187.25	286.44	278.33	8.11	35.326	
1,900.00	1,889.25	1,853.65	1,839.92	4.85	4.94	138.05	-86.59	-202.73	313.87	305.18	8.69	36.113	
2,000.00	1,987.98	1,949.81	1,934.29	5.21	5.33	137.96	-96.75	-218.20	341.31	332.03	9.28	36.778	
2,100.00	2,086.71	2,045.97	2,028.65	5.57	5.73	137.89	-106.90	-233.68	368.74	358.87	9.87	37.345	
2,200.00	2,185.44	2,142.14	2,123.01	5.93	6.13	137.83	-117.05	-249.16	396.17	385.70	10.47	37.833	
2,300.00	2,284.17	2,238.30	2,217.38	6.30	6.53	137.78	-127.21	-264.64	423.61	412.54	11.07	38.258	
2,400.00	2,382.90	2,334.46	2,311.74	6.67	6.93	137.73	-137.36	-280.11	451.05	439.37	11.68	38.631	
2,500.00	2,481.63	2,430.62	2,406.11	7.04	7.34	137.69	-147.51	-295.59	478.48	466.20	12.28	38.960	
2,600.00	2,580.35	2,526.78	2,500.47	7.41	7.75	137.65	-157.67	-311.07	505.92	493.03	12.89	39.254	
2,700.00	2,679.08	2,622.95	2,594.83	7.78	8.16	137.62	-167.82	-326.55	533.35	519.86	13.50	39.517	
2,800.00	2,777.81	2,719.11	2,689.20	8.16	8.57	137.59	-177.98	-342.02	560.79	546.68	14.11	39.754	
2,900.00	2,876.54	2,815.27	2,783.56	8.53	8.98	137.56	-188.13	-357.50	588.22	573.51	14.72	39.969	
3,000.00	2,975.27	2,911.43	2,877.93	8.91	9.39	137.54	-198.28	-372.98	615.66	600.33	15.33	40.165	
3,100.00	3,074.00	3,007.60	2,972.29	9.28	9.80	137.52	-208.44	-388.45	643.10	627.16	15.94	40.345	
3,200.00	3,172.73	3,103.76	3,066.65	9.66	10.22	137.49	-218.59	-403.93	670.53	653.98	16.55	40.510	
3,300.00	3,271.45	3,199.92	3,161.02	10.04	10.63	137.48	-228.74	-419.41	697.97	680.81	17.16	40.663	
3,400.00	3,370.18	3,296.08	3,255.38	10.41	11.04	137.46	-238.90	-434.89	725.41	707.63	17.78	40.805	
3,500.00	3,468.91	3,392.25	3,349.74	10.79	11.46	137.44	-249.05	-450.36	752.84	734.45	18.39	40.937	
3,600.00	3,567.64	3,488.41	3,444.11	11.17	11.88	137.43	-259.20	-465.84	780.28	761.28	19.00	41.061	
3,700.00	3,666.37	3,584.57	3,538.47	11.55	12.29	137.41	-269.36	-481.32	807.72	788.10	19.62	41.177	
3,800.00	3,765.10	3,680.73	3,632.84	11.92	12.71	137.40	-279.51	-496.79	835.15	814.92	20.24	41.270	
3,900.00	3,863.83	3,776.89	3,727.20	12.30	13.12	137.39	-289.67	-512.27	862.59	841.73	20.86	41.354	
4,000.00	3,962.55	3,873.06	3,821.56	12.68	13.54	137.38	-299.82	-527.75	890.03	868.55	21.48	41.433	
4,100.00	4,061.28	3,969.22	3,915.93	13.06	13.96	137.36	-309.97	-543.23	917.46	895.36	22.10	41.507	
4,200.00	4,160.01	4,065.38	4,010.29	13.44	14.38	137.35	-320.13	-558.70	944.90	922.17	22.73	41.576	
4,300.00	4,258.74	4,161.54	4,104.66	13.82	14.79	137.34	-330.28	-574.18	972.34	948.99	23.35	41.640	
4,400.00	4,357.47	4,257.71	4,199.02	14.20	15.21	137.34	-340.43	-589.66	999.78	975.80	23.98	41.701	
4,500.00	4,456.20	4,353.87	4,293.38	14.58	15.63	137.33	-350.59	-605.13	1,027.21	1,002.61	24.60	41.758	
4,600.00	4,554.93	4,450.03	4,387.75	14.96	16.05	137.32	-360.74	-620.61	1,054.65	1,029.43	25.22	41.811	
4,700.00	4,653.65	4,546.19	4,482.11	15.34	16.47	137.31	-370.90	-636.09	1,082.09	1,056.24	25.85	41.862	
4,800.00	4,752.38	4,642.35	4,576.48	15.72	16.88	137.30	-381.05	-651.57	1,109.52	1,083.05	26.47	41.910	
4,900.00	4,851.11	4,738.52	4,670.84	16.10	17.30	137.30	-391.20	-667.04	1,136.96	1,109.86	27.10	41.955	
5,000.00	4,949.84	4,834.68	4,765.20	16.48	17.72	137.29	-401.36	-682.52	1,164.40	1,136.67	27.73	41.998	
5,100.00	5,048.57	4,930.84	4,859.57	16.86	18.14	137.28	-411.51	-698.00	1,191.84	1,163.48	28.35	42.039	
5,200.00	5,147.30	5,027.00	4,953.93	17.24	18.56	137.28	-421.66	-713.47	1,219.27	1,190.30	28.98	42.078	
5,300.00	5,246.03	5,123.17	5,048.30	17.62	18.98	137.27	-431.82	-728.95	1,246.71	1,217.11	29.60	42.114	
5,400.00	5,344.75	5,219.33	5,142.66	18.00	19.40	137.27	-441.97	-744.43	1,274.15	1,243.92	30.23	42.149	
5,506.23	5,449.63	5,321.48	5,242.90	18.41	19.84	137.26	-452.76	-760.87	1,303.29	1,272.40	30.89	42.185	
5,600.00	5,542.44	5,411.95	5,331.67	18.70	20.24	137.25	-462.31	-775.43	1,327.93	1,296.40	31.53	42.113	
5,700.00	5,641.84	5,563.78	5,481.28	18.92	20.73	137.20	-476.47	-797.02	1,350.06	1,317.85	32.20	41.924	
5,800.00	5,741.55	5,726.19	5,642.57	19.11	21.10	137.80	-486.80	-812.77	1,365.13	1,332.36	32.77	41.660	
5,900.00	5,841.47	5,890.95	5,807.02	19.27	21.38	137.86	-492.14	-820.91	1,372.95	1,339.71	33.24	41.303	

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 10-12
<b>Project:</b>	COLORADO NORTHERN ZONE - 83	<b>TVD Reference:</b>	WELL @ 4978.00ft (Original Well Elev)
<b>Reference Site:</b>	LARIMER_MIRACLE 25-12 PAD	<b>MD Reference:</b>	WELL @ 4978.00ft (Original Well Elev)
<b>Site Error:</b>	0.00ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	P_MIRACLE 10-12	<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 10-12	<b>Database:</b>	EDM 2003.21 Single User Db
<b>Reference Design:</b>	PLAN #1 3-23-10 RHS	<b>Offset TVD Reference:</b>	Offset Datum

<b>Offset Design</b> LARIMER_MIRACLE 25-12 PAD - P_MIRACLE 11-12 - P_MIRACLE 11-12 - PLAN #1 3-23-10 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
5,963.54	5,905.00	5,988.94	5,905.00	19.36	21.51	-89.00	-492.87	-822.01	1,374.13	1,340.62	33.50	41.015	
6,000.00	5,941.46	6,025.41	5,941.46	19.41	21.55	-89.00	-492.87	-822.01	1,374.13	1,340.52	33.61	40.882	
6,100.00	6,041.46	6,125.41	6,041.46	19.53	21.67	-89.00	-492.87	-822.01	1,374.13	1,340.23	33.90	40.537	
6,200.00	6,141.46	6,225.41	6,141.46	19.66	21.79	-89.00	-492.87	-822.01	1,374.13	1,339.94	34.19	40.194	
6,300.00	6,241.46	6,325.41	6,241.46	19.79	21.91	-89.00	-492.87	-822.01	1,374.13	1,339.65	34.48	39.852	
6,400.00	6,341.46	6,425.41	6,341.46	19.93	22.03	-89.00	-492.87	-822.01	1,374.13	1,339.35	34.78	39.512	
6,500.00	6,441.46	6,525.41	6,441.46	20.06	22.15	-89.00	-492.87	-822.01	1,374.13	1,339.05	35.08	39.175	
6,600.00	6,541.46	6,625.41	6,541.46	20.20	22.28	-89.00	-492.87	-822.01	1,374.13	1,338.75	35.38	38.840	
6,700.00	6,641.46	6,725.41	6,641.46	20.33	22.41	-89.00	-492.87	-822.01	1,374.13	1,338.44	35.69	38.507	
6,800.00	6,741.46	6,825.41	6,741.46	20.47	22.53	-89.00	-492.87	-822.01	1,374.13	1,338.13	35.99	38.176	
6,900.00	6,841.46	6,925.41	6,841.46	20.61	22.66	-89.00	-492.87	-822.01	1,374.13	1,337.82	36.31	37.848	
7,000.00	6,941.46	7,025.41	6,941.46	20.75	22.80	-89.00	-492.87	-822.01	1,374.13	1,337.51	36.62	37.523	
7,100.00	7,041.46	7,125.41	7,041.46	20.90	22.93	-89.00	-492.87	-822.01	1,374.13	1,337.19	36.94	37.200	
7,200.00	7,141.46	7,225.41	7,141.46	21.04	23.06	-89.00	-492.87	-822.01	1,374.13	1,336.87	37.26	36.881	
7,300.00	7,241.46	7,325.41	7,241.46	21.19	23.20	-89.00	-492.87	-822.01	1,374.13	1,336.55	37.58	36.564	
7,400.00	7,341.46	7,425.41	7,341.46	21.33	23.33	-89.00	-492.87	-822.01	1,374.13	1,336.22	37.91	36.250	
7,500.00	7,441.46	7,525.41	7,441.46	21.48	23.47	-89.00	-492.87	-822.01	1,374.13	1,335.89	38.23	35.939	
7,600.00	7,541.46	7,625.41	7,541.46	21.63	23.61	-89.00	-492.87	-822.01	1,374.13	1,335.56	38.57	35.631	
7,700.00	7,641.46	7,725.41	7,641.46	21.78	23.75	-89.00	-492.87	-822.01	1,374.13	1,335.23	38.90	35.326	
7,800.00	7,741.46	7,825.41	7,741.46	21.94	23.90	-89.00	-492.87	-822.01	1,374.13	1,334.89	39.23	35.025	
7,837.92	7,779.39	7,863.33	7,779.39	22.00	23.95	-89.00	-492.87	-822.01	1,374.13	1,334.77	39.36	34.911	
7,863.54	7,805.00	7,877.94	7,794.00	22.03	23.97	-89.00	-492.87	-822.01	1,374.17	1,334.74	39.43	34.852	

<b>Company:</b>	US ROCKIES REGION PLANNING	<b>Local Co-ordinate Reference:</b>	Well P_MIRACLE 10-12
<b>Project:</b>	COLORADO NORTHERN ZONE - 83	<b>TVD Reference:</b>	WELL @ 4978.00ft (Original Well Elev)
<b>Reference Site:</b>	LARIMER_MIRACLE 25-12 PAD	<b>MD Reference:</b>	WELL @ 4978.00ft (Original Well Elev)
<b>Site Error:</b>	0.00ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	P_MIRACLE 10-12	<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 10-12	<b>Database:</b>	EDM 2003.21 Single User Db
<b>Reference Design:</b>	PLAN #1 3-23-10 RHS	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design LARIMER_MIRACLE 25-12 PAD - P_MIRACLE 12-12 - P_MIRACLE 12-12 - PLAN #1 3-23-10 RHS													Offset Site Error: 0.00 ft
Survey Program: 0-MWMD													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
0.00	0.00	0.00	0.00	0.00	0.00	-89.30	1.10	-89.66	89.67				
100.00	100.00	100.00	100.00	0.10	0.10	-89.30	1.10	-89.66	89.67	89.48	0.19	469.344	
200.00	200.00	200.00	200.00	0.32	0.32	-89.30	1.10	-89.66	89.67	89.03	0.64	139.980	
300.00	300.00	300.00	300.00	0.55	0.55	-89.30	1.10	-89.66	89.67	88.58	1.09	82.256 CC, ES	
400.00	400.00	397.01	396.99	0.77	0.75	-89.53	0.74	-91.27	91.32	89.80	1.52	60.124	
500.00	500.00	493.79	493.64	0.99	0.96	-90.19	-0.31	-96.06	96.27	94.32	1.95	49.405	
600.00	600.00	590.13	589.63	1.22	1.19	-91.14	-2.07	-104.00	104.53	102.13	2.40	43.577	
700.00	700.00	685.82	684.65	1.44	1.45	-92.24	-4.49	-114.99	116.10	113.23	2.87	40.408	
750.00	750.00	733.35	731.70	1.56	1.60	-92.80	-5.95	-121.61	123.12	120.00	3.12	39.435 SF	
800.00	800.00	780.61	778.36	1.66	1.76	133.53	-7.57	-128.94	131.26	128.01	3.24	40.486	
900.00	899.93	873.94	870.11	1.84	2.10	133.10	-11.25	-145.62	151.69	148.05	3.64	41.629	
1,000.00	999.68	965.35	959.38	2.04	2.48	133.26	-15.47	-164.77	177.55	173.49	4.06	43.746	
1,100.00	1,099.13	1,054.40	1,045.71	2.27	2.91	133.74	-20.18	-186.10	208.72	204.23	4.49	46.501	
1,207.31	1,205.37	1,146.93	1,134.65	2.55	3.40	134.37	-25.68	-211.03	247.91	242.94	4.97	49.858	
1,300.00	1,296.88	1,224.52	1,208.55	2.82	3.86	135.30	-30.76	-234.08	285.46	280.02	5.43	52.537	
1,400.00	1,395.61	1,306.20	1,285.64	3.13	4.39	135.96	-36.58	-260.45	328.48	322.54	5.95	55.241	
1,500.00	1,494.34	1,385.73	1,359.93	3.46	4.95	136.37	-42.70	-288.18	373.99	367.52	6.47	57.775	
1,600.00	1,593.07	1,463.09	1,431.40	3.80	5.54	136.62	-49.07	-317.07	421.86	414.85	7.01	60.182	
1,700.00	1,691.80	1,542.52	1,504.00	4.14	6.18	136.75	-56.01	-348.54	471.85	464.28	7.56	62.376	
1,800.00	1,790.52	1,628.87	1,582.74	4.49	6.90	136.86	-63.65	-383.14	522.29	514.13	8.15	64.062	
1,900.00	1,889.25	1,715.21	1,661.48	4.85	7.62	136.95	-71.28	-417.74	572.73	563.98	8.75	65.467	
2,000.00	1,987.98	1,801.55	1,740.22	5.21	8.35	137.02	-78.91	-452.35	623.17	613.82	9.35	66.652	
2,100.00	2,086.71	1,887.90	1,818.95	5.57	9.08	137.09	-86.54	-486.95	673.61	663.66	9.96	67.660	
2,200.00	2,185.44	1,974.24	1,897.69	5.93	9.82	137.14	-94.18	-521.55	724.05	713.49	10.57	68.529	
2,300.00	2,284.17	2,060.58	1,976.43	6.30	10.56	137.19	-101.81	-556.15	774.50	763.32	11.18	69.286	
2,400.00	2,382.90	2,146.93	2,055.17	6.67	11.30	137.23	-109.44	-590.75	824.94	813.15	11.79	69.951	
2,500.00	2,481.63	2,233.27	2,133.91	7.04	12.04	137.26	-117.08	-625.35	875.38	862.97	12.41	70.539	
2,600.00	2,580.35	2,319.62	2,212.64	7.41	12.79	137.30	-124.71	-659.96	925.83	912.80	13.03	71.064	
2,700.00	2,679.08	2,405.96	2,291.38	7.78	13.53	137.33	-132.34	-694.56	976.27	962.63	13.65	71.535	
2,800.00	2,777.81	2,492.30	2,370.12	8.16	14.28	137.35	-139.98	-729.16	1,026.72	1,012.45	14.27	71.961	
2,900.00	2,876.54	2,578.65	2,448.86	8.53	15.02	137.38	-147.61	-763.36	1,077.16	1,062.27	14.89	72.349	
3,000.00	2,975.27	2,664.99	2,527.60	8.91	15.77	137.40	-155.24	-798.36	1,127.61	1,112.10	15.51	72.704	
3,100.00	3,074.00	2,751.33	2,606.33	9.28	16.52	137.42	-162.88	-832.96	1,178.05	1,161.92	16.13	73.030	
3,200.00	3,172.73	2,837.68	2,685.07	9.66	17.27	137.44	-170.51	-867.56	1,228.50	1,211.74	16.75	73.331	
3,300.00	3,271.45	2,924.02	2,763.81	10.04	18.01	137.45	-178.14	-902.17	1,278.94	1,261.57	17.37	73.611	
3,400.00	3,370.18	3,010.36	2,842.55	10.41	18.76	137.47	-185.78	-936.77	1,329.39	1,311.39	18.00	73.871	
3,500.00	3,468.91	3,096.71	2,921.29	10.79	19.51	137.48	-193.41	-971.37	1,379.83	1,361.21	18.62	74.115	
3,600.00	3,567.64	3,183.05	3,000.02	11.17	20.26	137.49	-201.04	-1,005.97	1,430.28	1,411.04	19.24	74.344	
3,700.00	3,666.37	3,269.39	3,078.76	11.55	21.01	137.51	-208.68	-1,040.57	1,480.72	1,460.86	19.86	74.560	
3,800.00	3,765.10	3,355.74	3,157.50	11.92	21.76	137.52	-216.31	-1,075.17	1,531.17	1,510.69	20.48	74.764	
3,900.00	3,863.83	3,442.08	3,236.24	12.30	22.51	137.53	-223.94	-1,109.77	1,581.61	1,560.51	21.10	74.957	
4,000.00	3,962.55	3,528.43	3,314.98	12.68	23.26	137.54	-231.58	-1,144.38	1,632.06	1,610.33	21.73	75.112	
4,100.00	4,061.28	3,614.77	3,393.71	13.06	24.01	137.55	-239.21	-1,178.98	1,682.50	1,660.14	22.36	75.244	
4,200.00	4,160.01	3,701.11	3,472.45	13.44	24.76	137.56	-246.84	-1,213.58	1,732.95	1,709.95	22.99	75.367	
4,300.00	4,258.74	3,787.46	3,551.19	13.82	25.51	137.57	-254.47	-1,248.18	1,783.39	1,759.77	23.63	75.483	
4,400.00	4,357.47	3,873.80	3,629.93	14.20	26.26	137.58	-262.11	-1,282.78	1,833.84	1,809.58	24.26	75.592	
4,500.00	4,456.20	3,960.14	3,708.67	14.58	27.01	137.58	-269.74	-1,317.38	1,884.28	1,859.39	24.89	75.694	
4,600.00	4,554.93	4,046.49	3,787.40	14.96	27.76	137.59	-277.37	-1,351.99	1,934.73	1,909.20	25.53	75.790	
4,700.00	4,653.65	4,132.83	3,866.14	15.34	28.52	137.60	-285.01	-1,386.59	1,985.18	1,959.01	26.16	75.881	
4,800.00	4,752.38	4,219.17	3,944.88	15.72	29.27	137.60	-292.64	-1,421.19	2,035.62	2,008.82	26.80	75.967	
4,900.00	4,851.11	4,305.52	4,023.62	16.10	30.02	137.61	-300.27	-1,455.79	2,086.07	2,058.64	27.43	76.048	
5,000.00	4,949.84	4,391.86	4,102.36	16.48	30.77	137.62	-307.91	-1,490.39	2,136.51	2,108.45	28.07	76.125	

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 10-12
<b>Project:</b>	COLORADO NORTHERN ZONE - 83	<b>TVD Reference:</b>	WELL @ 4978.00ft (Original Well Elev)
<b>Reference Site:</b>	LARIMER_MIRACLE 25-12 PAD	<b>MD Reference:</b>	WELL @ 4978.00ft (Original Well Elev)
<b>Site Error:</b>	0.00ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	P_MIRACLE 10-12	<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 10-12	<b>Database:</b>	EDM 2003.21 Single User Db
<b>Reference Design:</b>	PLAN #1 3-23-10 RHS	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design LARIMER_MIRACLE 25-12 PAD - P_MIRACLE 12-12 - P_MIRACLE 12-12 - PLAN #1 3-23-10 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
5,100.00	5,048.57	4,478.20	4,181.10	16.86	31.52	137.62	-315.54	-1,524.99	2,186.96	2,158.26	28.70	76.198	
5,200.00	5,147.30	4,564.55	4,259.83	17.24	32.27	137.63	-323.17	-1,559.59	2,237.40	2,208.07	29.34	76.267	
5,300.00	5,246.03	4,650.89	4,338.57	17.62	33.02	137.63	-330.81	-1,594.20	2,287.85	2,257.88	29.97	76.333	
5,400.00	5,344.75	4,737.23	4,417.31	18.00	33.78	137.64	-338.44	-1,628.80	2,338.29	2,307.69	30.61	76.396	
5,506.23	5,449.63	4,828.95	4,500.95	18.41	34.57	137.64	-346.55	-1,665.55	2,391.88	2,360.60	31.28	76.460	
5,600.00	5,542.44	4,910.48	4,575.30	18.70	35.28	138.33	-353.76	-1,698.22	2,438.20	2,406.06	32.13	75.876	
5,700.00	5,641.84	4,998.59	4,655.64	18.92	36.05	138.95	-361.54	-1,733.53	2,485.38	2,452.42	32.96	75.397	
5,800.00	5,741.55	5,087.79	4,736.99	19.11	36.83	139.47	-369.43	-1,769.28	2,530.23	2,496.48	33.75	74.969	
5,900.00	5,841.47	5,177.99	4,819.24	19.27	37.61	139.89	-377.40	-1,805.43	2,572.72	2,538.23	34.49	74.597	
5,963.54	5,905.00	5,235.76	4,871.92	19.36	38.12	-86.77	-382.51	-1,828.58	2,598.46	2,563.53	34.94	74.372	
6,000.00	5,941.46	5,269.01	4,902.25	19.41	38.41	-86.86	-385.45	-1,841.90	2,612.96	2,577.85	35.11	74.419	
6,100.00	6,041.46	5,360.20	4,985.41	19.53	39.20	-87.09	-393.51	-1,878.45	2,652.76	2,617.18	35.57	74.573	
6,200.00	6,141.46	5,451.40	5,068.56	19.66	39.99	-87.32	-401.57	-1,914.99	2,692.58	2,656.55	36.03	74.722	
6,300.00	6,241.46	5,542.59	5,151.72	19.79	40.79	-87.55	-409.64	-1,951.54	2,732.45	2,695.95	36.50	74.868	
6,400.00	6,341.46	5,643.61	5,214.83	19.93	45.28	-88.93	-465.50	-2,204.78	2,760.08	2,721.06	39.02	70.743	
6,500.00	6,441.46	6,870.30	6,441.46	20.06	45.46	-88.95	-466.19	-2,207.90	2,760.27	2,720.83	39.44	69.987	
6,600.00	6,541.46	6,970.30	6,541.46	20.20	45.53	-88.95	-466.19	-2,207.90	2,760.27	2,720.56	39.71	69.512	
6,700.00	6,641.46	7,070.30	6,641.46	20.33	45.59	-88.95	-466.19	-2,207.90	2,760.27	2,720.29	39.98	69.037	
6,800.00	6,741.46	7,170.30	6,741.46	20.47	45.66	-88.95	-466.19	-2,207.90	2,760.27	2,720.01	40.26	68.564	
6,900.00	6,841.46	7,270.30	6,841.46	20.61	45.73	-88.95	-466.19	-2,207.90	2,760.27	2,719.74	40.54	68.092	
7,000.00	6,941.46	7,370.30	6,941.46	20.75	45.80	-88.95	-466.19	-2,207.90	2,760.27	2,719.45	40.82	67.621	
7,100.00	7,041.46	7,470.30	7,041.46	20.90	45.87	-88.95	-466.19	-2,207.90	2,760.27	2,719.17	41.10	67.152	
7,200.00	7,141.46	7,570.30	7,141.46	21.04	45.94	-88.95	-466.19	-2,207.90	2,760.27	2,718.88	41.39	66.685	
7,300.00	7,241.46	7,670.30	7,241.46	21.19	46.01	-88.95	-466.19	-2,207.90	2,760.27	2,718.59	41.68	66.220	
7,400.00	7,341.46	7,770.30	7,341.46	21.33	46.09	-88.95	-466.19	-2,207.90	2,760.27	2,718.30	41.98	65.757	
7,500.00	7,441.46	7,870.30	7,441.46	21.48	46.16	-88.95	-466.19	-2,207.90	2,760.27	2,718.00	42.27	65.296	
7,600.00	7,541.46	7,970.30	7,541.46	21.63	46.24	-88.95	-466.19	-2,207.90	2,760.27	2,717.70	42.57	64.838	
7,700.00	7,641.46	8,070.30	7,641.46	21.78	46.31	-88.95	-466.19	-2,207.90	2,760.27	2,717.40	42.87	64.382	
7,800.00	7,741.46	8,170.30	7,741.46	21.94	46.39	-88.95	-466.19	-2,207.90	2,760.27	2,717.10	43.18	63.929	
7,835.23	7,776.69	8,205.53	7,776.69	21.99	46.42	-88.95	-466.19	-2,207.90	2,760.27	2,716.99	43.29	63.770	
7,863.54	7,805.00	8,217.83	7,789.00	22.03	46.43	-88.95	-466.19	-2,207.90	2,760.32	2,716.97	43.35	63.676	

<b>Company:</b>	US ROCKIES REGION PLANNING	<b>Local Co-ordinate Reference:</b>	Well P_MIRACLE 10-12
<b>Project:</b>	COLORADO NORTHERN ZONE - 83	<b>TVD Reference:</b>	WELL @ 4978.00ft (Original Well Elev)
<b>Reference Site:</b>	LARIMER_MIRACLE 25-12 PAD	<b>MD Reference:</b>	WELL @ 4978.00ft (Original Well Elev)
<b>Site Error:</b>	0.00ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	P_MIRACLE 10-12	<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 10-12	<b>Database:</b>	EDM 2003.21 Single User Db
<b>Reference Design:</b>	PLAN #1 3-23-10 RHS	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design LARIMER_MIRACLE 25-12 PAD - P_MIRACLE 13-12 - P_MIRACLE 13-12 - PLAN #1 3-23-10 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
0.00	0.00	0.00	0.00	0.00	0.00	-88.94	0.74	-39.82	39.83				
100.00	100.00	100.00	100.00	0.10	0.10	-88.94	0.74	-39.82	39.83	39.63	0.19	208.456	
200.00	200.00	200.00	200.00	0.32	0.32	-88.94	0.74	-39.82	39.83	39.19	0.64	62.171	
233.52	233.52	233.52	233.52	0.40	0.40	-88.94	0.74	-39.82	39.83	39.03	0.79	50.331 CC, ES	
300.00	300.00	299.47	299.47	0.55	0.53	-89.33	0.47	-40.15	40.16	39.08	1.08	37.245	
400.00	400.00	398.29	398.23	0.77	0.73	-92.26	-1.69	-42.79	42.86	41.36	1.50	28.552	
500.00	500.00	496.76	496.46	0.99	0.96	-97.09	-5.98	-48.05	48.55	46.60	1.95	24.884	
600.00	600.00	594.65	593.82	1.22	1.22	-102.47	-12.36	-55.86	57.54	55.11	2.43	23.682 SF	
700.00	700.00	691.74	689.99	1.44	1.51	-107.42	-20.76	-66.15	70.05	67.11	2.94	23.831	
750.00	750.00	739.92	737.54	1.56	1.68	-109.59	-25.69	-72.19	77.63	74.42	3.21	24.193	
800.00	800.00	787.81	784.65	1.66	1.85	115.44	-31.09	-78.81	86.28	83.00	3.28	26.303	
900.00	899.93	882.51	877.39	1.84	2.24	113.47	-43.24	-93.69	107.13	103.43	3.70	28.943	
1,000.00	999.68	975.52	967.79	2.04	2.67	112.95	-57.05	-110.61	132.42	128.27	4.15	31.938	
1,100.00	1,099.13	1,066.54	1,055.53	2.27	3.15	113.19	-72.35	-129.36	162.00	157.38	4.62	35.029	
1,207.31	1,205.37	1,161.69	1,146.38	2.55	3.70	113.81	-90.23	-151.25	198.43	193.24	5.18	38.275	
1,300.00	1,296.88	1,241.84	1,222.14	2.82	4.21	114.80	-106.76	-171.50	233.14	227.42	5.72	40.760	
1,400.00	1,395.61	1,326.41	1,301.26	3.13	4.79	115.39	-125.65	-194.64	273.13	266.82	6.32	43.224	
1,500.00	1,494.34	1,408.95	1,377.59	3.46	5.40	115.66	-145.50	-218.96	315.65	308.71	6.93	45.518	
1,600.00	1,593.07	1,489.38	1,451.08	3.80	6.05	115.73	-166.17	-244.28	360.57	353.00	7.56	47.673	
1,700.00	1,691.80	1,567.66	1,521.69	4.14	6.72	115.66	-187.54	-270.46	407.79	399.59	8.20	49.721	
1,800.00	1,790.52	1,643.77	1,589.44	4.49	7.41	115.50	-209.47	-297.33	457.24	448.40	8.84	51.704	
1,900.00	1,889.25	1,717.70	1,654.33	4.85	8.11	115.29	-231.86	-324.75	508.82	499.33	9.48	53.645	
2,000.00	1,987.98	1,796.41	1,722.57	5.21	8.89	115.03	-256.66	-355.14	562.16	552.01	10.16	55.351	
2,100.00	2,086.71	1,880.82	1,795.65	5.57	9.74	114.79	-283.38	-387.87	615.74	604.88	10.86	56.710	
2,200.00	2,185.44	1,965.23	1,868.72	5.93	10.59	114.59	-310.10	-420.60	669.32	657.76	11.56	57.886	
2,300.00	2,284.17	2,049.64	1,941.80	6.30	11.45	114.42	-336.82	-453.33	722.91	710.64	12.27	58.912	
2,400.00	2,382.90	2,134.06	2,014.88	6.67	12.31	114.28	-363.54	-486.06	776.50	763.52	12.98	59.813	
2,500.00	2,481.63	2,218.47	2,087.95	7.04	13.17	114.15	-390.26	-518.79	830.10	816.40	13.70	60.612	
2,600.00	2,580.35	2,302.88	2,161.03	7.41	14.04	114.04	-416.98	-551.52	883.69	869.28	14.41	61.325	
2,700.00	2,679.08	2,387.29	2,234.10	7.78	14.90	113.94	-443.70	-584.25	937.29	922.17	15.13	61.964	
2,800.00	2,777.81	2,471.70	2,307.18	8.16	15.77	113.85	-470.41	-616.98	990.90	975.05	15.84	62.542	
2,900.00	2,876.54	2,556.11	2,380.26	8.53	16.64	113.77	-497.13	-649.71	1,044.50	1,027.94	16.56	63.067	
3,000.00	2,975.27	2,640.52	2,453.33	8.91	17.50	113.70	-523.85	-682.44	1,098.10	1,080.82	17.28	63.546	
3,100.00	3,074.00	2,724.94	2,526.41	9.28	18.37	113.63	-550.57	-715.17	1,151.71	1,133.71	18.00	63.986	
3,200.00	3,172.73	2,809.35	2,599.49	9.66	19.24	113.57	-577.29	-747.90	1,205.31	1,186.60	18.72	64.391	
3,300.00	3,271.45	2,893.76	2,672.56	10.04	20.11	113.52	-604.01	-780.63	1,258.92	1,239.48	19.44	64.766	
3,400.00	3,370.18	2,978.17	2,745.64	10.41	20.98	113.47	-630.73	-813.36	1,312.53	1,292.37	20.16	65.113	
3,500.00	3,468.91	3,062.58	2,818.71	10.79	21.85	113.42	-657.45	-846.10	1,366.14	1,345.26	20.88	65.438	
3,600.00	3,567.64	3,146.99	2,891.79	11.17	22.72	113.38	-684.16	-878.83	1,419.75	1,398.15	21.60	65.741	
3,700.00	3,666.37	3,231.41	2,964.87	11.55	23.59	113.34	-710.88	-911.56	1,473.36	1,451.04	22.32	66.025	
3,800.00	3,765.10	3,315.82	3,037.94	11.92	24.47	113.30	-737.60	-944.29	1,526.97	1,503.93	23.03	66.292	
3,900.00	3,863.83	3,400.23	3,111.02	12.30	25.34	113.27	-764.32	-977.02	1,580.58	1,556.82	23.75	66.545	
4,000.00	3,962.55	3,484.64	3,184.09	12.68	26.21	113.24	-791.04	-1,009.75	1,634.19	1,609.72	24.47	66.783	
4,100.00	4,061.28	3,569.05	3,257.17	13.06	27.08	113.21	-817.76	-1,042.48	1,687.80	1,662.61	25.19	67.009	
4,200.00	4,160.01	3,653.46	3,330.25	13.44	27.96	113.18	-844.48	-1,075.21	1,741.41	1,715.51	25.90	67.224	
4,300.00	4,258.74	3,737.87	3,403.32	13.82	28.83	113.15	-871.20	-1,107.94	1,795.02	1,768.40	26.62	67.429	
4,400.00	4,357.47	3,822.29	3,476.40	14.20	29.70	113.13	-897.92	-1,140.67	1,848.63	1,821.30	27.34	67.624	
4,500.00	4,456.20	3,906.70	3,549.47	14.58	30.57	113.10	-924.63	-1,173.40	1,902.25	1,874.19	28.05	67.810	
4,600.00	4,554.93	3,991.11	3,622.55	14.96	31.45	113.08	-951.35	-1,206.13	1,955.86	1,927.09	28.77	67.989	
4,700.00	4,653.65	4,075.52	3,695.63	15.34	32.32	113.06	-978.07	-1,238.86	2,009.47	1,979.99	29.48	68.160	
4,800.00	4,752.38	4,159.93	3,768.70	15.72	33.20	113.04	-1,004.79	-1,271.59	2,063.08	2,032.89	30.20	68.325	
4,900.00	4,851.11	4,244.34	3,841.78	16.10	34.07	113.02	-1,031.51	-1,304.32	2,116.70	2,085.79	30.91	68.484	

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 10-12
<b>Project:</b>	COLORADO NORTHERN ZONE - 83	<b>TVD Reference:</b>	WELL @ 4978.00ft (Original Well Elev)
<b>Reference Site:</b>	LARIMER_MIRACLE 25-12 PAD	<b>MD Reference:</b>	WELL @ 4978.00ft (Original Well Elev)
<b>Site Error:</b>	0.00ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	P_MIRACLE 10-12	<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 10-12	<b>Database:</b>	EDM 2003.21 Single User Db
<b>Reference Design:</b>	PLAN #1 3-23-10 RHS	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design LARIMER_MIRACLE 25-12 PAD - P_MIRACLE 13-12 - P_MIRACLE 13-12 - PLAN #1 3-23-10 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
5,000.00	4,949.84	4,328.75	3,914.85	16.48	34.94	113.00	-1,058.23	-1,337.05	2,170.31	2,138.69	31.62	68.637	
5,100.00	5,048.57	4,413.17	3,987.93	16.86	35.82	112.99	-1,084.95	-1,369.78	2,223.92	2,191.59	32.33	68.784	
5,200.00	5,147.30	4,497.58	4,061.01	17.24	36.69	112.97	-1,111.67	-1,402.52	2,277.54	2,244.50	33.04	68.927	
5,300.00	5,246.03	4,581.99	4,134.08	17.62	37.56	112.95	-1,138.38	-1,435.25	2,331.15	2,297.40	33.75	69.065	
5,400.00	5,344.75	4,666.40	4,207.16	18.00	38.44	112.94	-1,165.10	-1,467.98	2,384.77	2,350.30	34.46	69.199	
5,506.23	5,449.63	4,756.07	4,284.79	18.41	39.37	112.92	-1,193.49	-1,502.75	2,441.72	2,406.49	35.23	69.304	
5,600.00	5,542.44	4,835.52	4,353.57	18.70	40.19	113.95	-1,218.63	-1,533.55	2,491.48	2,455.21	36.27	68.695	
5,700.00	5,641.84	4,920.84	4,427.43	18.92	41.07	114.92	-1,245.64	-1,566.64	2,543.38	2,506.09	37.30	68.196	
5,800.00	5,741.55	5,006.67	4,501.74	19.11	41.96	115.78	-1,272.81	-1,599.92	2,594.04	2,555.78	38.27	67.790	
5,900.00	5,841.47	5,092.91	4,576.39	19.27	42.85	116.52	-1,300.11	-1,633.35	2,643.42	2,604.25	39.17	67.480	
5,963.54	5,905.00	5,147.86	4,623.96	19.36	43.42	-109.94	-1,317.50	-1,654.66	2,674.12	2,634.39	39.73	67.308	
6,000.00	5,941.46	5,179.43	4,651.29	19.41	43.75	-110.07	-1,327.49	-1,666.90	2,691.60	2,651.71	39.89	67.476	
6,100.00	6,041.46	5,266.00	4,726.24	19.53	44.65	-110.41	-1,354.89	-1,700.47	2,739.57	2,699.25	40.32	67.948	
6,200.00	6,141.46	5,352.57	4,801.19	19.66	45.54	-110.74	-1,382.30	-1,734.04	2,787.61	2,746.86	40.75	68.411	
6,300.00	6,241.46	5,439.14	4,876.13	19.79	46.44	-111.05	-1,409.70	-1,767.61	2,835.73	2,794.55	41.18	68.865	
6,400.00	6,341.46	5,525.71	4,951.08	19.93	47.34	-111.36	-1,437.10	-1,801.18	2,883.91	2,842.30	41.61	69.309	
6,500.00	6,441.46	5,612.28	5,026.02	20.06	48.24	-111.65	-1,464.50	-1,834.74	2,932.15	2,890.11	42.04	69.745	
6,600.00	6,541.46	5,698.86	5,100.97	20.20	49.13	-111.94	-1,491.91	-1,868.31	2,980.45	2,937.98	42.47	70.172	
6,700.00	6,641.46	5,785.43	5,175.91	20.33	50.03	-112.22	-1,519.31	-1,901.88	3,028.81	2,985.91	42.91	70.591	
6,800.00	6,741.46	5,872.00	5,250.85	20.47	50.92	-112.50	-1,546.70	-1,933.25	3,070.16	3,027.06	43.34	71.009	
6,900.00	6,841.46	5,958.57	5,325.79	20.61	51.81	-112.78	-1,574.09	-1,965.18	3,111.51	3,067.51	43.77	71.427	
7,000.00	6,941.46	6,045.14	5,400.73	20.75	52.70	-113.06	-1,601.48	-1,994.66	3,152.86	3,108.86	44.20	71.845	
7,100.00	7,041.46	6,131.71	5,475.67	20.90	53.59	-113.34	-1,628.87	-2,024.14	3,194.21	3,149.31	44.63	72.263	
7,200.00	7,141.46	6,218.28	5,550.61	21.04	54.48	-113.62	-1,656.26	-2,053.62	3,235.56	3,189.76	45.06	72.681	
7,300.00	7,241.46	6,304.85	5,625.55	21.19	55.37	-113.90	-1,683.65	-2,083.10	3,276.91	3,229.21	45.49	73.099	
7,400.00	7,341.46	6,391.42	5,700.49	21.33	56.26	-114.18	-1,711.04	-2,112.58	3,318.26	3,269.66	45.92	73.517	
7,500.00	7,441.46	6,478.00	5,775.43	21.48	57.15	-114.46	-1,738.43	-2,142.06	3,359.61	3,309.11	46.35	73.935	
7,600.00	7,541.46	6,564.57	5,850.37	21.63	58.04	-114.74	-1,765.82	-2,171.54	3,400.96	3,348.56	46.78	74.353	
7,700.00	7,641.46	6,651.14	5,925.31	21.78	58.93	-115.02	-1,793.21	-2,201.02	3,442.31	3,388.01	47.21	74.771	
7,800.00	7,741.46	6,737.71	6,000.25	21.94	59.82	-115.30	-1,820.60	-2,230.50	3,483.66	3,427.46	47.64	75.189	
7,822.18	7,763.64	6,750.00	6,012.54	21.97	59.85	-115.33	-1,824.00	-2,234.90	3,490.00	3,433.80	47.70	75.234	
7,863.54	7,805.00	6,793.13	6,045.67	22.03	60.00	-115.40	-1,834.00	-2,244.90	3,500.00	3,443.80	47.80	75.300	



<b>Company:</b>	US ROCKIES REGION PLANNING	<b>Local Co-ordinate Reference:</b>	Well P_MIRACLE 10-12
<b>Project:</b>	COLORADO NORTHERN ZONE - 83	<b>TVD Reference:</b>	WELL @ 4978.00ft (Original Well Elev)
<b>Reference Site:</b>	LARIMER_MIRACLE 25-12 PAD	<b>MD Reference:</b>	WELL @ 4978.00ft (Original Well Elev)
<b>Site Error:</b>	0.00ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	P_MIRACLE 10-12	<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 10-12	<b>Database:</b>	EDM 2003.21 Single User Db
<b>Reference Design:</b>	PLAN #1 3-23-10 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	-89.29	0.37	-29.79	29.80				
100.00	100.00	100.00	100.00	0.10	0.10	-89.29	0.37	-29.79	29.80	29.61	0.19	155.962	
200.00	200.00	200.00	200.00	0.32	0.32	-89.29	0.37	-29.79	29.80	29.16	0.64	46.515	
300.00	300.00	300.00	300.00	0.55	0.55	-89.29	0.37	-29.79	29.80	28.71	1.09	27.334 CC, ES	
400.00	400.00	399.54	399.52	0.77	0.74	-92.27	-1.21	-30.51	30.53	29.02	1.51	20.163	
500.00	500.00	498.85	498.69	0.99	0.94	-100.28	-5.92	-32.64	33.19	31.26	1.94	17.136	
600.00	600.00	597.68	597.14	1.22	1.17	-110.77	-13.71	-36.16	38.78	36.39	2.39	16.212 SF	
700.00	700.00	695.80	694.54	1.44	1.44	-120.84	-24.51	-41.04	48.11	45.23	2.88	16.693	
750.00	750.00	744.53	742.75	1.56	1.59	-125.18	-31.00	-43.97	54.29	51.14	3.14	17.265	
800.00	800.00	793.02	790.59	1.66	1.75	-98.17	-38.19	-47.23	61.52	58.26	3.27	18.839	
900.00	899.93	889.25	885.11	1.84	2.11	94.20	-54.66	-54.67	78.94	75.25	3.69	21.397	
1,000.00	999.68	984.31	977.82	2.04	2.51	92.80	-73.75	-63.30	99.76	95.61	4.14	24.071	
1,100.00	1,099.13	1,078.01	1,068.48	2.27	2.97	92.74	-95.31	-73.05	123.73	119.09	4.64	26.659	
1,207.31	1,205.37	1,176.86	1,163.23	2.55	3.50	93.38	-120.96	-84.64	152.89	147.65	5.24	29.185	
1,300.00	1,296.88	1,260.75	1,242.84	2.82	4.00	94.30	-145.06	-95.54	180.82	175.01	5.81	31.109	
1,400.00	1,395.61	1,349.68	1,326.35	3.13	4.58	94.69	-172.91	-108.13	213.58	207.12	6.46	33.076	
1,500.00	1,494.34	1,436.85	1,407.24	3.46	5.20	94.69	-202.49	-121.50	248.96	241.84	7.12	34.963	
1,600.00	1,593.07	1,524.21	1,487.33	3.80	5.85	94.46	-234.28	-135.88	286.78	278.98	7.80	36.753	
1,700.00	1,691.80	1,616.49	1,571.64	4.14	6.57	94.21	-268.47	-151.33	325.29	316.77	8.52	38.179	
1,800.00	1,790.52	1,708.78	1,655.96	4.49	7.29	94.01	-302.66	-166.79	363.79	354.54	9.25	39.341	
1,900.00	1,889.25	1,801.06	1,740.27	4.85	8.02	93.86	-336.85	-182.24	402.30	392.32	9.98	40.302	
2,000.00	1,987.98	1,893.34	1,824.58	5.21	8.75	93.73	-371.04	-197.70	440.81	430.09	10.72	41.108	
2,100.00	2,086.71	1,985.62	1,908.89	5.57	9.49	93.62	-405.22	-213.15	479.32	467.85	11.47	41.793	
2,200.00	2,185.44	2,077.91	1,993.20	5.93	10.22	93.52	-439.41	-228.61	517.84	505.62	12.22	42.382	
2,300.00	2,284.17	2,170.19	2,077.51	6.30	10.96	93.44	-473.60	-244.06	556.35	543.38	12.97	42.894	
2,400.00	2,382.90	2,262.47	2,161.83	6.67	11.70	93.37	-507.79	-259.52	594.87	581.14	13.72	43.342	
2,500.00	2,481.63	2,354.76	2,246.14	7.04	12.44	93.31	-541.98	-274.98	633.38	618.90	14.48	43.739	
2,600.00	2,580.35	2,447.04	2,330.45	7.41	13.18	93.26	-576.16	-290.43	671.90	656.66	15.24	44.092	
2,700.00	2,679.08	2,539.32	2,414.76	7.78	13.92	93.21	-610.35	-305.89	710.41	694.42	16.00	44.409	
2,800.00	2,777.81	2,631.61	2,499.07	8.16	14.66	93.16	-644.54	-321.34	748.93	732.18	16.76	44.695	
2,900.00	2,876.54	2,723.89	2,583.38	8.53	15.41	93.13	-678.73	-336.80	787.45	769.93	17.52	44.954	
3,000.00	2,975.27	2,816.17	2,667.70	8.91	16.15	93.09	-712.91	-352.25	825.97	807.69	18.28	45.191	
3,100.00	3,074.00	2,908.45	2,752.01	9.28	16.89	93.06	-747.10	-367.71	864.49	845.45	19.04	45.408	
3,200.00	3,172.73	3,000.74	2,836.32	9.66	17.64	93.03	-781.29	-383.16	903.00	883.21	19.80	45.609	
3,300.00	3,271.45	3,093.02	2,920.63	10.04	18.38	93.00	-815.48	-398.62	941.52	920.96	20.56	45.794	
3,400.00	3,370.18	3,185.30	3,004.94	10.41	19.13	92.98	-849.67	-414.07	980.04	958.72	21.32	45.966	
3,500.00	3,468.91	3,277.59	3,089.26	10.79	19.87	92.95	-883.85	-429.53	1,018.56	996.48	22.08	46.127	
3,600.00	3,567.64	3,369.87	3,173.57	11.17	20.62	92.93	-918.04	-444.99	1,057.08	1,034.24	22.84	46.277	
3,700.00	3,666.37	3,462.15	3,257.88	11.55	21.36	92.91	-952.23	-460.44	1,095.60	1,072.00	23.60	46.419	
3,800.00	3,765.10	3,554.44	3,342.19	11.92	22.11	92.89	-986.42	-475.90	1,134.12	1,109.75	24.37	46.535	
3,900.00	3,863.83	3,646.72	3,426.50	12.30	22.85	92.87	-1,020.61	-491.35	1,172.64	1,147.50	25.14	46.639	
4,000.00	3,962.55	3,739.00	3,510.81	12.68	23.60	92.86	-1,054.79	-506.81	1,211.16	1,185.24	25.91	46.737	
4,100.00	4,061.28	3,831.28	3,595.13	13.06	24.34	92.84	-1,088.98	-522.26	1,249.68	1,222.99	26.69	46.829	
4,200.00	4,160.01	3,923.57	3,679.44	13.44	25.09	92.83	-1,123.17	-537.72	1,288.20	1,260.74	27.46	46.914	
4,300.00	4,258.74	4,015.85	3,763.75	13.82	25.84	92.82	-1,157.36	-553.17	1,326.72	1,298.49	28.23	46.995	
4,400.00	4,357.47	4,108.13	3,848.06	14.20	26.58	92.80	-1,191.55	-568.63	1,365.24	1,336.23	29.00	47.071	
4,500.00	4,456.20	4,200.42	3,932.37	14.58	27.33	92.79	-1,225.73	-584.09	1,403.76	1,373.98	29.78	47.142	
4,600.00	4,554.93	4,292.70	4,016.68	14.96	28.08	92.78	-1,259.92	-599.54	1,442.28	1,411.72	30.55	47.210	
4,700.00	4,653.65	4,384.98	4,101.00	15.34	28.82	92.77	-1,294.11	-615.00	1,480.80	1,449.47	31.32	47.273	
4,800.00	4,752.38	4,477.27	4,185.31	15.72	29.57	92.76	-1,328.30	-630.45	1,519.32	1,487.22	32.10	47.334	
4,900.00	4,851.11	4,569.55	4,269.62	16.10	30.32	92.75	-1,362.49	-645.91	1,557.84	1,524.96	32.87	47.391	
5,000.00	4,949.84	4,661.83	4,353.93	16.48	31.06	92.74	-1,396.67	-661.36	1,596.36	1,562.71	33.65	47.445	

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 10-12
<b>Project:</b>	COLORADO NORTHERN ZONE - 83	<b>TVD Reference:</b>	WELL @ 4978.00ft (Original Well Elev)
<b>Reference Site:</b>	LARIMER_MIRACLE 25-12 PAD	<b>MD Reference:</b>	WELL @ 4978.00ft (Original Well Elev)
<b>Site Error:</b>	0.00ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	P_MIRACLE 10-12	<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 10-12	<b>Database:</b>	EDM 2003.21 Single User Db
<b>Reference Design:</b>	PLAN #1 3-23-10 RHS	<b>Offset TVD Reference:</b>	Offset Datum

<b>Offset Design</b> LARIMER_MIRACLE 25-12 PAD - P_MIRACLE 14-12 - P_MIRACLE 14-12 - PLAN #1 3-23-10 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
5,100.00	5,048.57	4,754.11	4,438.24	16.86	31.81	92.73	-1,430.86	-676.82	1,634.88	1,600.45	34.42	47.497	
5,200.00	5,147.30	4,846.40	4,522.55	17.24	32.56	92.72	-1,465.05	-692.27	1,673.40	1,638.20	35.20	47.546	
5,300.00	5,246.03	4,938.68	4,606.87	17.62	33.30	92.71	-1,499.24	-707.73	1,711.92	1,675.95	35.97	47.593	
5,400.00	5,344.75	5,030.96	4,691.18	18.00	34.05	92.71	-1,533.43	-723.19	1,750.44	1,713.69	36.74	47.637	
5,506.23	5,449.63	5,128.99	4,780.74	18.41	34.84	92.70	-1,569.74	-739.60	1,791.35	1,753.79	37.57	47.683	
5,600.00	5,542.44	5,276.77	4,916.50	18.70	35.80	93.37	-1,622.89	-763.63	1,826.68	1,788.06	38.62	47.296	
5,700.00	5,641.84	5,508.71	5,134.98	18.92	36.94	93.85	-1,693.70	-795.64	1,858.34	1,818.60	39.74	46.762	
5,800.00	5,741.55	5,751.52	5,369.62	19.11	37.89	94.13	-1,750.32	-821.24	1,882.47	1,841.78	40.69	46.263	
5,900.00	5,841.47	6,002.73	5,617.02	19.27	38.62	94.24	-1,789.63	-839.01	1,898.59	1,857.15	41.44	45.815	
5,963.54	5,905.00	6,165.31	5,778.76	19.36	38.92	-132.65	-1,804.48	-845.73	1,904.51	1,862.71	41.80	45.562	
6,000.00	5,941.46	6,259.26	5,872.56	19.41	39.05	-132.71	-1,809.25	-847.88	1,906.38	1,864.42	41.96	45.437	
6,100.00	6,041.46	6,428.19	6,041.46	19.53	39.19	-132.74	-1,811.26	-848.79	1,907.16	1,864.89	42.27	45.118	
6,200.00	6,141.46	6,528.19	6,141.46	19.66	39.24	-132.74	-1,811.26	-848.79	1,907.16	1,864.67	42.50	44.876	
6,300.00	6,241.46	6,628.19	6,241.46	19.79	39.30	-132.74	-1,811.26	-848.79	1,907.16	1,864.43	42.73	44.633	
6,400.00	6,341.46	6,728.19	6,341.46	19.93	39.36	-132.74	-1,811.26	-848.79	1,907.16	1,864.20	42.96	44.389	
6,500.00	6,441.46	6,828.19	6,441.46	20.06	39.43	-132.74	-1,811.26	-848.79	1,907.16	1,863.96	43.20	44.144	
6,600.00	6,541.46	6,928.19	6,541.46	20.20	39.49	-132.74	-1,811.26	-848.79	1,907.16	1,863.72	43.44	43.899	
6,700.00	6,641.46	7,028.19	6,641.46	20.33	39.55	-132.74	-1,811.26	-848.79	1,907.16	1,863.47	43.69	43.653	
6,800.00	6,741.46	7,128.19	6,741.46	20.47	39.62	-132.74	-1,811.26	-848.79	1,907.16	1,863.23	43.94	43.406	
6,900.00	6,841.46	7,228.19	6,841.46	20.61	39.68	-132.74	-1,811.26	-848.79	1,907.16	1,862.97	44.19	43.160	
7,000.00	6,941.46	7,328.19	6,941.46	20.75	39.75	-132.74	-1,811.26	-848.79	1,907.16	1,862.72	44.44	42.913	
7,100.00	7,041.46	7,428.19	7,041.46	20.90	39.82	-132.74	-1,811.26	-848.79	1,907.16	1,862.46	44.70	42.665	
7,200.00	7,141.46	7,528.19	7,141.46	21.04	39.89	-132.74	-1,811.26	-848.79	1,907.16	1,862.20	44.96	42.418	
7,300.00	7,241.46	7,628.19	7,241.46	21.19	39.96	-132.74	-1,811.26	-848.79	1,907.16	1,861.94	45.22	42.171	
7,400.00	7,341.46	7,728.19	7,341.46	21.33	40.03	-132.74	-1,811.26	-848.79	1,907.16	1,861.67	45.49	41.925	
7,500.00	7,441.46	7,828.19	7,441.46	21.48	40.11	-132.74	-1,811.26	-848.79	1,907.16	1,861.40	45.76	41.678	
7,600.00	7,541.46	7,928.19	7,541.46	21.63	40.18	-132.74	-1,811.26	-848.79	1,907.16	1,861.13	46.03	41.432	
7,700.00	7,641.46	8,028.19	7,641.46	21.78	40.26	-132.74	-1,811.26	-848.79	1,907.16	1,860.86	46.31	41.186	
7,800.00	7,741.46	8,128.19	7,741.46	21.94	40.33	-132.74	-1,811.26	-848.79	1,907.16	1,860.58	46.58	40.941	
7,832.63	7,774.09	8,160.82	7,774.09	21.99	40.36	-132.74	-1,811.26	-848.79	1,907.16	1,860.49	46.67	40.861	
7,863.54	7,805.00	8,171.73	7,785.00	22.03	40.37	-132.74	-1,811.26	-848.79	1,907.27	1,860.53	46.74	40.810	



<b>Company:</b>	US ROCKIES REGION PLANNING	<b>Local Co-ordinate Reference:</b>	Well P_MIRACLE 10-12
<b>Project:</b>	COLORADO NORTHERN ZONE - 83	<b>TVD Reference:</b>	WELL @ 4978.00ft (Original Well Elev)
<b>Reference Site:</b>	LARIMER_MIRACLE 25-12 PAD	<b>MD Reference:</b>	WELL @ 4978.00ft (Original Well Elev)
<b>Site Error:</b>	0.00ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	P_MIRACLE 10-12	<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 10-12	<b>Database:</b>	EDM 2003.21 Single User Db
<b>Reference Design:</b>	PLAN #1 3-23-10 RHS	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design												Offset Site Error:	0.00 ft
Survey Program: 0-MWMD												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	-87.84	0.37	-9.75	9.75				
100.00	100.00	100.00	100.00	0.10	0.10	-87.84	0.37	-9.75	9.75	9.56	0.19	51.048	
200.00	200.00	200.00	200.00	0.32	0.32	-87.84	0.37	-9.75	9.75	9.11	0.64	15.225	
300.00	300.00	300.00	300.00	0.55	0.55	-87.84	0.37	-9.75	9.75	8.66	1.09	8.947	
400.00	400.00	400.07	400.05	0.77	0.75	-98.05	-1.31	-9.26	9.35	7.83	1.51	6.173	
432.95	432.95	433.00	432.95	0.84	0.81	-106.29	-2.59	-8.88	9.25	7.60	1.65	5.599 CC, ES	
500.00	500.00	499.89	499.73	0.99	0.94	-129.06	-6.32	-7.79	10.04	8.10	1.94	5.184 SF	
600.00	600.00	599.23	598.69	1.22	1.17	-159.83	-14.62	-5.37	15.63	13.23	2.40	6.522	
700.00	700.00	697.85	696.58	1.44	1.44	-175.58	-26.11	-2.02	26.41	23.53	2.88	9.160	
750.00	750.00	746.83	745.02	1.56	1.60	180.00	-33.01	0.00	33.39	30.25	3.14	10.630	
800.00	800.00	795.60	793.13	1.66	1.76	44.04	-40.68	2.24	41.01	37.76	3.24	12.644	
900.00	899.93	892.68	888.47	1.84	2.12	41.86	-58.27	7.38	56.94	53.28	3.66	15.557	
1,000.00	999.68	989.13	982.51	2.04	2.54	41.84	-78.81	13.37	73.60	69.50	4.10	17.940	
1,100.00	1,099.13	1,084.91	1,075.13	2.27	3.00	42.77	-102.21	20.20	90.95	86.38	4.58	19.874	
1,207.31	1,205.37	1,186.92	1,172.82	2.55	3.56	44.27	-130.37	28.42	110.40	105.27	5.13	21.513	
1,300.00	1,296.88	1,274.18	1,255.51	2.82	4.10	45.55	-157.10	36.23	128.95	123.30	5.66	22.800	
1,400.00	1,395.61	1,367.11	1,342.60	3.13	4.72	46.24	-188.22	45.31	151.97	145.73	6.24	24.341	
1,500.00	1,494.34	1,458.62	1,427.29	3.46	5.38	46.45	-221.49	55.03	177.99	171.14	6.84	26.003	
1,600.00	1,593.07	1,553.62	1,514.42	3.80	6.10	46.45	-257.82	65.63	205.97	198.49	7.48	27.552	
1,700.00	1,691.80	1,649.61	1,602.45	4.14	6.85	46.45	-294.57	76.36	233.99	225.87	8.12	28.811	
1,800.00	1,790.52	1,745.60	1,690.47	4.49	7.60	46.45	-331.33	87.09	262.02	253.25	8.78	29.854	
1,900.00	1,889.25	1,841.59	1,778.50	4.85	8.35	46.45	-368.08	97.82	290.05	280.61	9.44	30.728	
2,000.00	1,987.98	1,937.58	1,866.52	5.21	9.11	46.44	-404.84	108.55	318.08	307.97	10.11	31.469	
2,100.00	2,086.71	2,033.58	1,954.55	5.57	9.87	46.44	-441.59	119.29	346.11	335.32	10.78	32.104	
2,200.00	2,185.44	2,129.57	2,042.57	5.93	10.64	46.44	-478.35	130.02	374.13	362.68	11.46	32.654	
2,300.00	2,284.17	2,225.56	2,130.60	6.30	11.40	46.44	-515.10	140.75	402.16	390.02	12.14	33.133	
2,400.00	2,382.90	2,321.55	2,218.62	6.67	12.16	46.44	-551.85	151.48	430.19	417.37	12.82	33.554	
2,500.00	2,481.63	2,417.54	2,306.65	7.04	12.93	46.44	-588.61	162.21	458.22	444.71	13.51	33.926	
2,600.00	2,580.35	2,513.53	2,394.67	7.41	13.70	46.44	-625.36	172.94	486.24	472.05	14.19	34.258	
2,700.00	2,679.08	2,609.53	2,482.70	7.78	14.47	46.44	-662.12	183.67	514.27	499.39	14.88	34.555	
2,800.00	2,777.81	2,705.52	2,570.72	8.16	15.23	46.43	-698.87	194.40	542.30	526.73	15.57	34.823	
2,900.00	2,876.54	2,801.51	2,658.75	8.53	16.00	46.43	-735.63	205.13	570.33	554.06	16.27	35.065	
3,000.00	2,975.27	2,897.50	2,746.77	8.91	16.77	46.43	-772.38	215.86	598.36	581.40	16.96	35.284	
3,100.00	3,074.00	2,993.49	2,834.80	9.28	17.54	46.43	-809.14	226.59	626.38	608.73	17.65	35.485	
3,200.00	3,172.73	3,089.49	2,922.82	9.66	18.31	46.43	-845.89	237.32	654.41	636.06	18.35	35.669	
3,300.00	3,271.45	3,185.48	3,010.85	10.04	19.08	46.43	-882.65	248.05	682.44	663.40	19.04	35.837	
3,400.00	3,370.18	3,281.47	3,098.87	10.41	19.85	46.43	-919.40	258.78	710.47	690.73	19.74	35.993	
3,500.00	3,468.91	3,377.46	3,186.90	10.79	20.63	46.43	-956.16	269.51	738.50	718.06	20.44	36.137	
3,600.00	3,567.64	3,473.45	3,274.92	11.17	21.40	46.43	-992.91	280.25	766.52	745.39	21.13	36.270	
3,700.00	3,666.37	3,569.45	3,362.95	11.55	22.17	46.43	-1,029.67	290.98	794.55	772.72	21.83	36.394	
3,800.00	3,765.10	3,665.44	3,450.97	11.92	22.94	46.43	-1,066.42	301.71	822.58	800.05	22.53	36.510	
3,900.00	3,863.83	3,761.43	3,539.00	12.30	23.71	46.43	-1,103.18	312.44	850.61	827.38	23.23	36.617	
4,000.00	3,962.55	3,857.42	3,627.02	12.68	24.48	46.43	-1,139.93	323.17	878.63	854.71	23.93	36.718	
4,100.00	4,061.28	3,953.41	3,715.05	13.06	25.25	46.43	-1,176.69	333.90	906.66	882.03	24.63	36.813	
4,200.00	4,160.01	4,049.40	3,803.07	13.44	26.03	46.43	-1,213.44	344.63	934.69	909.36	25.33	36.902	
4,300.00	4,258.74	4,145.40	3,891.09	13.82	26.80	46.43	-1,250.20	355.36	962.72	936.69	26.03	36.986	
4,400.00	4,357.47	4,241.39	3,979.12	14.20	27.57	46.43	-1,286.95	366.09	990.77	964.02	26.73	37.065	
4,500.00	4,456.20	4,337.38	4,067.14	14.58	28.34	46.43	-1,323.70	376.82	1,018.77	991.34	27.43	37.140	
4,600.00	4,554.93	4,433.37	4,155.17	14.96	29.12	46.43	-1,360.46	387.55	1,046.80	1,018.67	28.13	37.210	
4,700.00	4,653.65	4,529.36	4,243.19	15.34	29.89	46.43	-1,397.21	398.28	1,074.83	1,046.00	28.83	37.277	
4,800.00	4,752.38	4,625.36	4,331.22	15.72	30.66	46.43	-1,433.97	409.01	1,102.86	1,073.32	29.54	37.340	
4,900.00	4,851.11	4,721.35	4,419.24	16.10	31.43	46.43	-1,470.72	419.74	1,130.88	1,100.65	30.24	37.401	

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 10-12
<b>Project:</b>	COLORADO NORTHERN ZONE - 83	<b>TVD Reference:</b>	WELL @ 4978.00ft (Original Well Elev)
<b>Reference Site:</b>	LARIMER_MIRACLE 25-12 PAD	<b>MD Reference:</b>	WELL @ 4978.00ft (Original Well Elev)
<b>Site Error:</b>	0.00ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	P_MIRACLE 10-12	<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 10-12	<b>Database:</b>	EDM 2003.21 Single User Db
<b>Reference Design:</b>	PLAN #1 3-23-10 RHS	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design LARIMER_MIRACLE 25-12 PAD - P_MIRACLE 15-12 - P_MIRACLE 15-12 - PLAN #1 3-23-10 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
5,000.00	4,949.84	4,817.34	4,507.27	16.48	32.21	46.43	-1,507.48	430.47	1,158.91	1,127.97	30.94	37.458	
5,100.00	5,048.57	4,913.33	4,595.29	16.86	32.98	46.43	-1,544.23	441.21	1,186.94	1,155.30	31.64	37.513	
5,200.00	5,147.30	5,009.32	4,683.32	17.24	33.75	46.43	-1,580.99	451.94	1,214.97	1,182.62	32.34	37.565	
5,300.00	5,246.03	5,127.82	4,792.18	17.62	34.60	46.43	-1,625.91	465.05	1,242.71	1,209.60	33.11	37.530	
5,400.00	5,344.75	5,295.14	4,948.63	18.00	35.48	46.54	-1,682.81	481.66	1,266.30	1,232.29	34.01	37.233	
5,506.23	5,449.63	5,477.19	5,122.45	18.41	36.31	46.80	-1,734.64	496.80	1,285.30	1,250.33	34.97	36.755	
5,600.00	5,542.44	5,640.43	5,280.95	18.70	36.92	47.24	-1,772.03	507.71	1,297.77	1,262.08	35.70	36.356	
5,700.00	5,641.84	5,816.31	5,453.91	18.92	37.46	47.60	-1,802.54	516.62	1,307.75	1,271.44	36.31	36.013	
5,800.00	5,741.55	5,993.51	5,629.81	19.11	37.85	47.85	-1,822.92	522.57	1,314.21	1,277.42	36.80	35.716	
5,900.00	5,841.47	6,171.48	5,807.44	19.27	38.08	47.99	-1,832.84	525.47	1,317.11	1,279.97	37.14	35.467	
5,963.54	5,905.00	6,269.04	5,905.00	19.36	38.16	-178.86	-1,833.85	525.76	1,317.20	1,279.92	37.28	35.335	
6,000.00	5,941.46	6,305.51	5,941.46	19.41	38.19	-178.86	-1,833.85	525.76	1,317.20	1,279.82	37.38	35.242	
6,100.00	6,041.46	6,405.51	6,041.46	19.53	38.25	-178.86	-1,833.85	525.76	1,317.20	1,279.56	37.64	34.998	
6,200.00	6,141.46	6,505.51	6,141.46	19.66	38.31	-178.86	-1,833.85	525.76	1,317.20	1,279.30	37.90	34.754	
6,300.00	6,241.46	6,605.51	6,241.46	19.79	38.37	-178.86	-1,833.85	525.76	1,317.20	1,279.03	38.17	34.511	
6,400.00	6,341.46	6,705.51	6,341.46	19.93	38.43	-178.86	-1,833.85	525.76	1,317.20	1,278.76	38.44	34.267	
6,500.00	6,441.46	6,805.51	6,441.46	20.06	38.49	-178.86	-1,833.85	525.76	1,317.20	1,278.49	38.71	34.025	
6,600.00	6,541.46	6,905.51	6,541.46	20.20	38.56	-178.86	-1,833.85	525.76	1,317.20	1,278.21	38.99	33.782	
6,700.00	6,641.46	7,005.51	6,641.46	20.33	38.62	-178.86	-1,833.85	525.76	1,317.20	1,277.93	39.27	33.541	
6,800.00	6,741.46	7,105.51	6,741.46	20.47	38.69	-178.86	-1,833.85	525.76	1,317.20	1,277.64	39.55	33.301	
6,900.00	6,841.46	7,205.51	6,841.46	20.61	38.76	-178.86	-1,833.85	525.76	1,317.20	1,277.36	39.84	33.061	
7,000.00	6,941.46	7,305.51	6,941.46	20.75	38.83	-178.86	-1,833.85	525.76	1,317.20	1,277.07	40.13	32.822	
7,100.00	7,041.46	7,405.51	7,041.46	20.90	38.90	-178.86	-1,833.85	525.76	1,317.20	1,276.78	40.42	32.585	
7,200.00	7,141.46	7,505.51	7,141.46	21.04	38.97	-178.86	-1,833.85	525.76	1,317.20	1,276.48	40.72	32.348	
7,300.00	7,241.46	7,605.51	7,241.46	21.19	39.04	-178.86	-1,833.85	525.76	1,317.20	1,276.18	41.02	32.113	
7,400.00	7,341.46	7,705.51	7,341.46	21.33	39.12	-178.86	-1,833.85	525.76	1,317.20	1,275.88	41.32	31.880	
7,500.00	7,441.46	7,805.51	7,441.46	21.48	39.19	-178.86	-1,833.85	525.76	1,317.20	1,275.58	41.62	31.647	
7,600.00	7,541.46	7,905.51	7,541.46	21.63	39.27	-178.86	-1,833.85	525.76	1,317.20	1,275.27	41.93	31.416	
7,700.00	7,641.46	8,005.51	7,641.46	21.78	39.35	-178.86	-1,833.85	525.76	1,317.20	1,274.96	42.24	31.187	
7,800.00	7,741.46	8,105.51	7,741.46	21.94	39.43	-178.86	-1,833.85	525.76	1,317.20	1,274.65	42.55	30.959	
7,832.63	7,774.09	8,138.14	7,774.09	21.99	39.45	-178.86	-1,833.85	525.76	1,317.20	1,274.55	42.65	30.885	
7,863.54	7,805.00	8,149.04	7,785.00	22.03	39.46	-178.86	-1,833.85	525.76	1,317.35	1,274.63	42.72	30.839	

<b>Company:</b>	US ROCKIES REGION PLANNING	<b>Local Co-ordinate Reference:</b>	Well P_MIRACLE 10-12
<b>Project:</b>	COLORADO NORTHERN ZONE - 83	<b>TVD Reference:</b>	WELL @ 4978.00ft (Original Well Elev)
<b>Reference Site:</b>	LARIMER_MIRACLE 25-12 PAD	<b>MD Reference:</b>	WELL @ 4978.00ft (Original Well Elev)
<b>Site Error:</b>	0.00ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	P_MIRACLE 10-12	<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 10-12	<b>Database:</b>	EDM 2003.21 Single User Db
<b>Reference Design:</b>	PLAN #1 3-23-10 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	-88.95	1.10	-59.87	59.88				
100.00	100.00	100.00	100.00	0.10	0.10	-88.95	1.10	-59.87	59.88	59.69	0.19	313.411	
200.00	200.00	200.00	200.00	0.32	0.32	-88.95	1.10	-59.87	59.88	59.24	0.64	93.474	
300.00	300.00	300.00	300.00	0.55	0.55	-88.95	1.10	-59.87	59.88	58.79	1.09	54.928	
400.00	400.00	400.00	400.00	0.77	0.77	-88.95	1.10	-59.87	59.88	58.34	1.54	38.891	
500.00	500.00	500.00	500.00	0.99	0.99	-88.95	1.10	-59.87	59.88	57.89	1.99	30.102	
600.00	600.00	600.00	600.00	1.22	1.22	-88.95	1.10	-59.87	59.88	57.44	2.44	24.553	
700.00	700.00	700.00	700.00	1.44	1.44	-88.95	1.10	-59.87	59.88	56.99	2.89	20.732	
750.00	750.00	750.00	750.00	1.56	1.56	-88.95	1.10	-59.87	59.88	56.76	3.11	19.235 CC, ES	
800.00	800.00	799.19	799.19	1.66	1.66	137.94	0.84	-60.20	60.54	57.22	3.31	18.278	
900.00	899.93	897.37	897.30	1.84	1.84	138.03	-1.22	-62.86	65.80	62.12	3.67	17.908 SF	
1,000.00	999.68	994.94	994.64	2.04	2.04	138.15	-5.32	-68.13	76.29	72.23	4.05	18.816	
1,100.00	1,099.13	1,091.52	1,090.71	2.27	2.25	138.25	-11.37	-75.93	91.96	87.50	4.46	20.624	
1,207.31	1,205.37	1,193.62	1,191.85	2.55	2.52	138.30	-19.92	-86.94	114.44	109.51	4.93	23.227	
1,300.00	1,296.88	1,280.50	1,277.47	2.82	2.78	138.18	-28.94	-98.55	137.40	132.02	5.38	25.545	
1,400.00	1,395.61	1,372.97	1,368.07	3.13	3.10	137.42	-40.28	-113.16	164.51	158.62	5.90	27.893	
1,500.00	1,494.34	1,464.00	1,456.63	3.46	3.46	136.31	-53.18	-129.78	194.05	187.61	6.45	30.095	
1,600.00	1,593.07	1,553.42	1,542.93	3.80	3.86	135.04	-67.54	-148.27	226.04	219.02	7.03	32.176	
1,700.00	1,691.80	1,641.11	1,626.81	4.14	4.31	133.72	-83.21	-168.46	260.48	252.86	7.62	34.164	
1,800.00	1,790.52	1,726.97	1,708.14	4.49	4.80	132.39	-100.08	-190.18	297.36	289.12	8.24	36.081	
1,900.00	1,889.25	1,810.90	1,786.82	4.85	5.32	131.12	-118.00	-213.26	336.67	327.79	8.87	37.946	
2,000.00	1,987.98	1,892.82	1,862.75	5.21	5.88	129.90	-136.85	-237.54	378.35	368.83	9.52	39.763	
2,100.00	2,086.71	1,973.00	1,936.18	5.57	6.48	128.74	-156.58	-262.95	422.36	412.19	10.17	41.546	
2,200.00	2,185.44	2,061.87	2,017.12	5.93	7.18	127.61	-179.10	-291.95	467.52	456.66	10.86	43.034	
2,300.00	2,284.17	2,150.74	2,098.05	6.30	7.88	126.68	-201.62	-320.96	512.81	501.24	11.56	44.349	
2,400.00	2,382.90	2,239.62	2,178.99	6.67	8.60	125.90	-224.14	-349.96	558.18	545.92	12.26	45.512	
2,500.00	2,481.63	2,328.49	2,259.92	7.04	9.32	125.24	-246.66	-378.96	603.63	590.66	12.97	46.548	
2,600.00	2,580.35	2,417.37	2,340.85	7.41	10.05	124.67	-269.19	-407.97	649.13	635.46	13.67	47.476	
2,700.00	2,679.08	2,506.24	2,421.79	7.78	10.78	124.17	-291.71	-436.97	694.67	680.29	14.38	48.312	
2,800.00	2,777.81	2,595.12	2,502.72	8.16	11.52	123.74	-314.23	-465.98	740.26	725.17	15.09	49.068	
2,900.00	2,876.54	2,683.99	2,583.65	8.53	12.26	123.35	-336.75	-494.98	785.87	770.07	15.79	49.755	
3,000.00	2,975.27	2,772.87	2,664.59	8.91	13.00	123.01	-359.27	-523.99	831.50	815.00	16.50	50.383	
3,100.00	3,074.00	2,861.74	2,745.52	9.28	13.74	122.70	-381.79	-552.99	877.16	859.95	17.21	50.959	
3,200.00	3,172.73	2,950.62	2,826.46	9.66	14.49	122.42	-404.31	-581.99	922.84	904.92	17.92	51.490	
3,300.00	3,271.45	3,039.49	2,907.39	10.04	15.24	122.17	-426.83	-611.00	968.53	949.90	18.63	51.981	
3,400.00	3,370.18	3,128.36	2,988.32	10.41	15.99	121.94	-449.35	-640.00	1,014.24	994.89	19.34	52.437	
3,500.00	3,468.91	3,217.24	3,069.26	10.79	16.74	121.74	-471.87	-669.01	1,059.95	1,039.90	20.05	52.861	
3,600.00	3,567.64	3,306.11	3,150.19	11.17	17.49	121.54	-494.39	-698.01	1,105.68	1,084.92	20.76	53.257	
3,700.00	3,666.37	3,394.99	3,231.12	11.55	18.24	121.37	-516.91	-727.01	1,151.42	1,129.94	21.47	53.627	
3,800.00	3,765.10	3,483.86	3,312.06	11.92	18.99	121.21	-539.43	-756.02	1,197.16	1,174.98	22.18	53.975	
3,900.00	3,863.83	3,572.74	3,392.99	12.30	19.74	121.05	-561.95	-785.02	1,242.91	1,220.02	22.89	54.303	
4,000.00	3,962.55	3,661.61	3,473.93	12.68	20.50	120.91	-584.47	-814.03	1,288.67	1,265.07	23.60	54.612	
4,100.00	4,061.28	3,750.49	3,554.86	13.06	21.25	120.78	-606.99	-843.03	1,334.43	1,310.13	24.31	54.904	
4,200.00	4,160.01	3,839.36	3,635.79	13.44	22.00	120.66	-629.52	-872.04	1,380.20	1,355.19	25.01	55.180	
4,300.00	4,258.74	3,928.24	3,716.73	13.82	22.76	120.55	-652.04	-901.04	1,425.97	1,400.25	25.72	55.443	
4,400.00	4,357.47	4,017.11	3,797.66	14.20	23.51	120.44	-674.56	-930.04	1,471.75	1,445.32	26.43	55.693	
4,500.00	4,456.20	4,105.98	3,878.59	14.58	24.27	120.34	-697.08	-959.05	1,517.53	1,490.40	27.13	55.931	
4,600.00	4,554.93	4,194.86	3,959.53	14.96	25.02	120.25	-719.60	-988.05	1,563.31	1,535.48	27.84	56.158	
4,700.00	4,653.65	4,283.73	4,040.46	15.34	25.78	120.16	-742.12	-1,017.06	1,609.10	1,580.56	28.54	56.375	
4,800.00	4,752.38	4,372.61	4,121.40	15.72	26.54	120.07	-764.64	-1,046.06	1,654.89	1,625.64	29.25	56.583	
4,900.00	4,851.11	4,461.48	4,202.33	16.10	27.29	119.99	-787.16	-1,075.07	1,700.68	1,670.73	29.95	56.783	
5,000.00	4,949.84	4,550.36	4,283.26	16.48	28.05	119.92	-809.68	-1,104.07	1,746.48	1,715.83	30.65	56.975	

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 10-12
<b>Project:</b>	COLORADO NORTHERN ZONE - 83	<b>TVD Reference:</b>	WELL @ 4978.00ft (Original Well Elev)
<b>Reference Site:</b>	LARIMER_MIRACLE 25-12 PAD	<b>MD Reference:</b>	WELL @ 4978.00ft (Original Well Elev)
<b>Site Error:</b>	0.00ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	P_MIRACLE 10-12	<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 10-12	<b>Database:</b>	EDM 2003.21 Single User Db
<b>Reference Design:</b>	PLAN #1 3-23-10 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	
5,100.00	5,048.57	4,639.23	4,364.20	16.86	28.81	119.85	-832.20	-1,133.07	1,792.28	1,760.92	31.36	57.159	
5,200.00	5,147.30	4,728.11	4,445.13	17.24	29.56	119.78	-854.72	-1,162.08	1,838.08	1,806.01	32.06	57.324	
5,300.00	5,246.03	4,816.98	4,526.06	17.62	30.32	119.71	-877.24	-1,191.08	1,883.88	1,851.09	32.78	57.462	
5,400.00	5,344.75	4,905.86	4,607.00	18.00	31.08	119.65	-899.76	-1,220.09	1,929.68	1,896.18	33.50	57.594	
5,506.23	5,449.63	5,000.26	4,692.97	18.41	31.88	119.59	-923.69	-1,250.90	1,978.34	1,944.07	34.27	57.728	
5,600.00	5,542.44	5,083.91	4,769.14	18.70	32.60	120.31	-944.88	-1,278.19	2,020.62	1,985.45	35.16	57.465	
5,700.00	5,641.84	5,173.72	4,850.93	18.92	33.36	120.96	-967.64	-1,307.50	2,064.18	2,028.16	36.02	57.310	
5,800.00	5,741.55	5,341.66	5,004.77	19.11	34.60	121.25	-1,008.93	-1,360.68	2,105.48	2,068.44	37.04	56.849	
5,900.00	5,841.47	5,644.25	5,290.56	19.27	36.17	121.04	-1,069.64	-1,438.87	2,137.91	2,099.72	38.19	55.977	
5,963.54	5,905.00	5,847.64	5,487.82	19.36	36.99	-106.03	-1,099.90	-1,477.85	2,152.63	2,113.80	38.83	55.441	
6,000.00	5,941.46	5,967.41	5,605.46	19.41	37.37	-106.25	-1,113.68	-1,495.59	2,159.00	2,119.90	39.10	55.216	
6,100.00	6,041.46	6,303.49	5,939.34	19.53	38.08	-106.61	-1,136.13	-1,524.50	2,169.18	2,129.43	39.75	54.574	
6,200.00	6,141.46	6,505.67	6,141.46	19.66	38.26	-106.64	-1,138.37	-1,527.39	2,170.18	2,130.05	40.12	54.089	
6,300.00	6,241.46	6,605.67	6,241.46	19.79	38.33	-106.64	-1,138.37	-1,527.39	2,170.18	2,129.81	40.37	53.757	
6,400.00	6,341.46	6,705.67	6,341.46	19.93	38.40	-106.64	-1,138.37	-1,527.39	2,170.18	2,129.56	40.62	53.425	
6,500.00	6,441.46	6,805.67	6,441.46	20.06	38.47	-106.64	-1,138.37	-1,527.39	2,170.18	2,129.30	40.88	53.093	
6,600.00	6,541.46	6,905.67	6,541.46	20.20	38.54	-106.64	-1,138.37	-1,527.39	2,170.18	2,129.04	41.13	52.760	
6,700.00	6,641.46	7,005.67	6,641.46	20.33	38.62	-106.64	-1,138.37	-1,527.39	2,170.18	2,128.78	41.39	52.427	
6,800.00	6,741.46	7,105.67	6,741.46	20.47	38.69	-106.64	-1,138.37	-1,527.39	2,170.18	2,128.52	41.66	52.095	
6,900.00	6,841.46	7,205.67	6,841.46	20.61	38.77	-106.64	-1,138.37	-1,527.39	2,170.18	2,128.25	41.93	51.763	
7,000.00	6,941.46	7,305.67	6,941.46	20.75	38.84	-106.64	-1,138.37	-1,527.39	2,170.18	2,127.98	42.20	51.431	
7,100.00	7,041.46	7,405.67	7,041.46	20.90	38.92	-106.64	-1,138.37	-1,527.39	2,170.18	2,127.71	42.47	51.100	
7,200.00	7,141.46	7,505.67	7,141.46	21.04	39.00	-106.64	-1,138.37	-1,527.39	2,170.18	2,127.43	42.75	50.769	
7,300.00	7,241.46	7,605.67	7,241.46	21.19	39.08	-106.64	-1,138.37	-1,527.39	2,170.18	2,127.15	43.03	50.440	
7,400.00	7,341.46	7,705.67	7,341.46	21.33	39.16	-106.64	-1,138.37	-1,527.39	2,170.18	2,126.87	43.31	50.111	
7,500.00	7,441.46	7,805.67	7,441.46	21.48	39.24	-106.64	-1,138.37	-1,527.39	2,170.18	2,126.59	43.59	49.784	
7,600.00	7,541.46	7,905.67	7,541.46	21.63	39.33	-106.64	-1,138.37	-1,527.39	2,170.18	2,126.30	43.88	49.457	
7,700.00	7,641.46	8,005.67	7,641.46	21.78	39.41	-106.64	-1,138.37	-1,527.39	2,170.18	2,126.01	44.17	49.132	
7,800.00	7,741.46	8,105.67	7,741.46	21.94	39.50	-106.64	-1,138.37	-1,527.39	2,170.18	2,125.71	44.46	48.808	
7,831.90	7,773.37	8,137.57	7,773.37	21.99	39.53	-106.64	-1,138.37	-1,527.39	2,170.18	2,125.62	44.56	48.705	
7,863.54	7,805.00	8,148.20	7,784.00	22.03	39.53	-106.64	-1,138.37	-1,527.39	2,170.28	2,125.66	44.62	48.637	

<b>Company:</b>	US ROCKIES REGION PLANNING	<b>Local Co-ordinate Reference:</b>	Well P_MIRACLE 10-12
<b>Project:</b>	COLORADO NORTHERN ZONE - 83	<b>TVD Reference:</b>	WELL @ 4978.00ft (Original Well Elev)
<b>Reference Site:</b>	LARIMER_MIRACLE 25-12 PAD	<b>MD Reference:</b>	WELL @ 4978.00ft (Original Well Elev)
<b>Site Error:</b>	0.00ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	P_MIRACLE 10-12	<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 10-12	<b>Database:</b>	EDM 2003.21 Single User Db
<b>Reference Design:</b>	PLAN #1 3-23-10 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	-89.21	1.10	-79.64	79.65				
100.00	100.00	100.00	100.00	0.10	0.10	-89.21	1.10	-79.64	79.65	79.45	0.19	416.879	
200.00	200.00	200.00	200.00	0.32	0.32	-89.21	1.10	-79.64	79.65	79.00	0.64	124.333	
300.00	300.00	300.00	300.00	0.55	0.55	-89.21	1.10	-79.64	79.65	78.56	1.09	73.061	
400.00	400.00	400.00	400.00	0.77	0.77	-89.21	1.10	-79.64	79.65	78.11	1.54	51.730	
500.00	500.00	500.00	500.00	0.99	0.99	-89.21	1.10	-79.64	79.65	77.66	1.99	40.039	
600.00	600.00	600.00	600.00	1.22	1.22	-89.21	1.10	-79.64	79.65	77.21	2.44	32.659	
700.00	700.00	700.00	700.00	1.44	1.44	-89.21	1.10	-79.64	79.65	76.76	2.89	27.576	
750.00	750.00	750.00	750.00	1.56	1.56	-89.21	1.10	-79.64	79.65	76.53	3.11	25.585 CC, ES	
800.00	800.00	798.65	798.65	1.66	1.66	137.91	1.17	-80.04	80.39	77.07	3.32	24.239	
900.00	899.93	895.64	895.58	1.84	1.86	139.67	1.74	-83.28	86.37	82.68	3.70	23.374 SF	
1,000.00	999.68	991.69	991.40	2.04	2.07	142.54	2.85	-89.67	98.52	94.44	4.08	24.129	
1,100.00	1,099.13	1,086.20	1,085.43	2.27	2.30	145.67	4.49	-99.05	117.02	112.54	4.48	26.130	
1,207.31	1,205.37	1,185.28	1,183.61	2.55	2.56	148.69	6.79	-112.15	143.96	139.05	4.91	29.332	
1,300.00	1,296.88	1,268.89	1,266.06	2.82	2.81	150.90	9.18	-125.80	171.79	166.49	5.30	32.394	
1,400.00	1,395.61	1,357.34	1,352.80	3.13	3.12	152.50	12.16	-142.82	204.85	199.12	5.74	35.702	
1,500.00	1,494.34	1,443.87	1,437.10	3.46	3.45	153.57	15.51	-162.01	240.87	234.69	6.18	38.976	
1,600.00	1,593.07	1,528.38	1,518.84	3.80	3.82	154.27	19.22	-183.16	279.68	273.05	6.63	42.198	
1,700.00	1,691.80	1,610.80	1,597.91	4.14	4.22	154.73	23.23	-206.07	321.16	314.08	7.08	45.356	
1,800.00	1,790.52	1,691.08	1,674.25	4.49	4.66	155.02	27.51	-230.53	365.18	357.65	7.54	48.441	
1,900.00	1,889.25	1,771.38	1,749.90	4.85	5.14	155.20	32.15	-257.04	411.60	403.60	8.01	51.413	
2,000.00	1,987.98	1,859.54	1,832.71	5.21	5.71	155.33	37.37	-286.85	458.78	450.28	8.50	53.959	
2,100.00	2,086.71	1,947.71	1,915.52	5.57	6.28	155.45	42.58	-316.66	505.96	496.96	9.01	56.186	
2,200.00	2,185.44	2,035.88	1,998.33	5.93	6.87	155.54	47.80	-346.47	553.15	543.63	9.51	58.141	
2,300.00	2,284.17	2,124.04	2,081.14	6.30	7.46	155.62	53.02	-376.28	600.33	590.30	10.03	59.867	
2,400.00	2,382.90	2,212.21	2,163.95	6.67	8.07	155.68	58.24	-406.08	647.52	636.97	10.55	61.399	
2,500.00	2,481.63	2,300.37	2,246.75	7.04	8.67	155.74	63.45	-435.89	694.70	683.63	11.07	62.766	
2,600.00	2,580.35	2,388.54	2,329.56	7.41	9.28	155.79	68.67	-465.70	741.89	730.29	11.59	63.990	
2,700.00	2,679.08	2,476.70	2,412.37	7.78	9.90	155.84	73.89	-495.51	789.07	776.95	12.12	65.094	
2,800.00	2,777.81	2,564.87	2,495.18	8.16	10.52	155.87	79.11	-525.31	836.26	823.61	12.65	66.092	
2,900.00	2,876.54	2,653.04	2,577.99	8.53	11.14	155.91	84.32	-555.12	883.45	870.26	13.19	66.999	
3,000.00	2,975.27	2,741.20	2,660.80	8.91	11.76	155.94	89.54	-584.93	930.64	916.91	13.72	67.827	
3,100.00	3,074.00	2,829.37	2,743.61	9.28	12.38	155.97	94.76	-614.74	977.82	963.57	14.26	68.584	
3,200.00	3,172.73	2,917.53	2,826.42	9.66	13.01	156.00	99.98	-644.55	1,025.01	1,010.21	14.80	69.279	
3,300.00	3,271.45	3,005.70	2,909.23	10.04	13.63	156.02	105.19	-674.35	1,072.20	1,056.86	15.33	69.919	
3,400.00	3,370.18	3,093.86	2,992.04	10.41	14.26	156.04	110.41	-704.16	1,119.39	1,103.51	15.88	70.510	
3,500.00	3,468.91	3,182.03	3,074.85	10.79	14.89	156.06	115.63	-733.97	1,166.57	1,150.16	16.42	71.057	
3,600.00	3,567.64	3,270.19	3,157.66	11.17	15.52	156.08	120.85	-763.78	1,213.76	1,196.80	16.96	71.566	
3,700.00	3,666.37	3,358.36	3,240.47	11.55	16.15	156.10	126.06	-793.59	1,260.95	1,243.45	17.50	72.039	
3,800.00	3,765.10	3,446.53	3,323.28	11.92	16.78	156.11	131.28	-823.39	1,308.14	1,290.09	18.05	72.480	
3,900.00	3,863.83	3,534.69	3,406.09	12.30	17.41	156.13	136.50	-853.20	1,355.33	1,336.73	18.59	72.893	
4,000.00	3,962.55	3,622.86	3,488.90	12.68	18.04	156.14	141.72	-883.01	1,402.51	1,383.37	19.14	73.279	
4,100.00	4,061.28	3,711.02	3,571.71	13.06	18.67	156.15	146.93	-912.82	1,449.70	1,430.02	19.69	73.642	
4,200.00	4,160.01	3,799.19	3,654.52	13.44	19.31	156.16	152.15	-942.62	1,496.89	1,476.66	20.23	73.983	
4,300.00	4,258.74	3,887.35	3,737.33	13.82	19.94	156.18	157.37	-972.43	1,544.08	1,523.30	20.78	74.304	
4,400.00	4,357.47	3,975.52	3,820.14	14.20	20.57	156.19	162.59	-1,002.24	1,591.27	1,569.94	21.33	74.607	
4,500.00	4,456.20	4,063.69	3,902.95	14.58	21.21	156.20	167.80	-1,032.05	1,638.46	1,616.58	21.88	74.893	
4,600.00	4,554.93	4,151.85	3,985.76	14.96	21.84	156.21	173.02	-1,061.86	1,685.64	1,663.22	22.43	75.164	
4,700.00	4,653.65	4,240.02	4,068.57	15.34	22.47	156.21	178.24	-1,091.66	1,732.83	1,709.86	22.98	75.421	
4,800.00	4,752.38	4,328.18	4,151.38	15.72	23.11	156.22	183.46	-1,121.47	1,780.02	1,756.50	23.53	75.665	
4,900.00	4,851.11	4,416.35	4,234.19	16.10	23.74	156.23	188.67	-1,151.28	1,827.21	1,803.14	24.08	75.896	
5,000.00	4,949.84	4,504.51	4,317.00	16.48	24.38	156.24	193.89	-1,181.09	1,874.40	1,849.77	24.63	76.116	

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 10-12
<b>Project:</b>	COLORADO NORTHERN ZONE - 83	<b>TVD Reference:</b>	WELL @ 4978.00ft (Original Well Elev)
<b>Reference Site:</b>	LARIMER_MIRACLE 25-12 PAD	<b>MD Reference:</b>	WELL @ 4978.00ft (Original Well Elev)
<b>Site Error:</b>	0.00ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	P_MIRACLE 10-12	<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 10-12	<b>Database:</b>	EDM 2003.21 Single User Db
<b>Reference Design:</b>	PLAN #1 3-23-10 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	
5,100.00	5,048.57	4,592.68	4,399.81	16.86	25.01	156.25	199.11	-1,210.89	1,921.59	1,896.41	25.18	76.326	
5,200.00	5,147.30	4,680.85	4,482.62	17.24	25.65	156.25	204.33	-1,240.70	1,968.78	1,943.05	25.73	76.526	
5,300.00	5,246.03	4,769.01	4,565.43	17.62	26.28	156.26	209.54	-1,270.51	2,015.97	1,989.69	26.28	76.716	
5,400.00	5,344.75	4,857.18	4,648.24	18.00	26.92	156.27	214.76	-1,300.32	2,063.15	2,036.32	26.83	76.899	
5,506.23	5,449.63	4,950.83	4,736.20	18.41	27.59	156.27	220.30	-1,331.98	2,113.28	2,085.87	27.42	77.083	
5,600.00	5,542.44	5,034.16	4,814.47	18.70	28.19	156.65	225.23	-1,360.15	2,156.29	2,128.19	28.10	76.737	
5,700.00	5,641.84	5,124.38	4,899.21	18.92	28.84	156.97	230.57	-1,390.66	2,199.36	2,170.59	28.77	76.447	
5,800.00	5,741.55	5,200.08	5,000.35	19.11	30.48	157.04	246.82	-1,483.49	2,236.14	2,206.19	29.95	74.673	
5,900.00	5,841.47	5,288.92	5,092.35	19.27	31.80	157.03	259.59	-1,556.42	2,256.78	2,225.64	31.14	72.469	
5,963.54	5,905.00	6,152.03	5,905.00	19.36	32.19	-69.84	262.00	-1,570.19	2,260.53	2,228.77	31.76	71.183	
6,000.00	5,941.46	6,188.50	5,941.46	19.41	32.22	-69.84	262.00	-1,570.19	2,260.53	2,228.65	31.87	70.925	
6,100.00	6,041.46	6,288.50	6,041.46	19.53	32.31	-69.84	262.00	-1,570.19	2,260.53	2,228.34	32.18	70.237	
6,200.00	6,141.46	6,388.50	6,141.46	19.66	32.40	-69.84	262.00	-1,570.19	2,260.53	2,228.03	32.50	69.555	
6,300.00	6,241.46	6,488.50	6,241.46	19.79	32.49	-69.84	262.00	-1,570.19	2,260.53	2,227.71	32.82	68.879	
6,400.00	6,341.46	6,588.50	6,341.46	19.93	32.58	-69.84	262.00	-1,570.19	2,260.53	2,227.38	33.14	68.210	
6,500.00	6,441.46	6,688.50	6,441.46	20.06	32.67	-69.84	262.00	-1,570.19	2,260.53	2,227.06	33.47	67.548	
6,600.00	6,541.46	6,788.50	6,541.46	20.20	32.77	-69.84	262.00	-1,570.19	2,260.53	2,226.73	33.79	66.893	
6,700.00	6,641.46	6,888.50	6,641.46	20.33	32.86	-69.84	262.00	-1,570.19	2,260.53	2,226.40	34.12	66.245	
6,800.00	6,741.46	6,988.50	6,741.46	20.47	32.96	-69.84	262.00	-1,570.19	2,260.53	2,226.07	34.46	65.605	
6,900.00	6,841.46	7,088.50	6,841.46	20.61	33.06	-69.84	262.00	-1,570.19	2,260.53	2,225.73	34.79	64.972	
7,000.00	6,941.46	7,188.50	6,941.46	20.75	33.16	-69.84	262.00	-1,570.19	2,260.53	2,225.39	35.13	64.346	
7,100.00	7,041.46	7,288.50	7,041.46	20.90	33.26	-69.84	262.00	-1,570.19	2,260.53	2,225.05	35.47	63.728	
7,200.00	7,141.46	7,388.50	7,141.46	21.04	33.37	-69.84	262.00	-1,570.19	2,260.53	2,224.71	35.81	63.117	
7,300.00	7,241.46	7,488.50	7,241.46	21.19	33.47	-69.84	262.00	-1,570.19	2,260.53	2,224.37	36.16	62.514	
7,400.00	7,341.46	7,588.50	7,341.46	21.33	33.57	-69.84	262.00	-1,570.19	2,260.53	2,224.02	36.51	61.919	
7,500.00	7,441.46	7,688.50	7,441.46	21.48	33.68	-69.84	262.00	-1,570.19	2,260.53	2,223.67	36.86	61.331	
7,600.00	7,541.46	7,788.50	7,541.46	21.63	33.79	-69.84	262.00	-1,570.19	2,260.53	2,223.32	37.21	60.750	
7,700.00	7,641.46	7,888.50	7,641.46	21.78	33.90	-69.84	262.00	-1,570.19	2,260.53	2,222.96	37.56	60.178	
7,800.00	7,741.46	7,988.50	7,741.46	21.94	34.01	-69.84	262.00	-1,570.19	2,260.53	2,222.60	37.92	59.612	
7,863.54	7,805.00	8,052.03	7,805.00	22.03	34.08	-69.84	262.00	-1,570.19	2,260.53	2,222.38	38.15	59.257	



<b>Company:</b>	US ROCKIES REGION PLANNING	<b>Local Co-ordinate Reference:</b>	Well P_MIRACLE 10-12
<b>Project:</b>	COLORADO NORTHERN ZONE - 83	<b>TVD Reference:</b>	WELL @ 4978.00ft (Original Well Elev)
<b>Reference Site:</b>	LARIMER_MIRACLE 25-12 PAD	<b>MD Reference:</b>	WELL @ 4978.00ft (Original Well Elev)
<b>Site Error:</b>	0.00ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	P_MIRACLE 10-12	<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 10-12	<b>Database:</b>	EDM 2003.21 Single User Db
<b>Reference Design:</b>	PLAN #1 3-23-10 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	-88.92	0.37	-19.77	19.77				
100.00	100.00	100.00	100.00	0.10	0.10	-88.92	0.37	-19.77	19.77	19.58	0.19	103.500	
200.00	200.00	200.00	200.00	0.32	0.32	-88.92	0.37	-19.77	19.77	19.13	0.64	30.868	
300.00	300.00	300.00	300.00	0.55	0.55	-88.92	0.37	-19.77	19.77	18.68	1.09	18.139	
400.00	400.00	400.00	400.00	0.77	0.77	-88.92	0.37	-19.77	19.77	18.23	1.54	12.843	
500.00	500.00	500.00	500.00	0.99	0.99	-88.92	0.37	-19.77	19.77	17.78	1.99	9.941	
600.00	600.00	600.00	600.00	1.22	1.22	-88.92	0.37	-19.77	19.77	17.34	2.44	8.108	
700.00	700.00	700.00	700.00	1.44	1.44	-88.92	0.37	-19.77	19.77	16.89	2.89	6.846	
750.00	750.00	750.00	750.00	1.56	1.56	-88.92	0.37	-19.77	19.77	16.66	3.11	6.352 CC, ES	
800.00	800.00	799.91	799.91	1.66	1.65	137.58	-0.05	-19.88	20.20	16.89	3.31	6.102 SF	
900.00	899.93	899.64	899.58	1.84	1.83	135.07	-3.40	-20.78	23.66	19.99	3.67	6.453	
1,000.00	999.68	999.09	998.77	2.04	2.02	131.74	-10.08	-22.57	30.66	26.61	4.05	7.570	
1,100.00	1,099.13	1,098.05	1,097.20	2.27	2.23	128.84	-20.02	-25.24	41.23	36.76	4.47	9.221	
1,207.31	1,205.37	1,203.52	1,201.63	2.55	2.50	126.51	-34.23	-29.05	56.53	51.55	4.98	11.345	
1,300.00	1,296.88	1,293.97	1,290.70	2.82	2.77	124.34	-49.36	-33.10	72.16	66.67	5.49	13.146	
1,400.00	1,395.61	1,390.81	1,385.48	3.13	3.10	121.05	-68.56	-38.25	90.67	84.58	6.09	14.894	
1,500.00	1,494.34	1,486.69	1,478.59	3.46	3.48	117.46	-90.61	-44.16	111.18	104.45	6.73	16.514	
1,600.00	1,593.07	1,582.79	1,571.24	3.80	3.91	113.98	-115.31	-50.79	133.67	126.26	7.41	18.033	
1,700.00	1,691.80	1,679.88	1,664.73	4.14	4.37	111.37	-140.60	-57.57	156.74	148.62	8.11	19.318	
1,800.00	1,790.52	1,776.98	1,758.22	4.49	4.86	109.44	-165.89	-64.35	180.03	171.21	8.82	20.401	
1,900.00	1,889.25	1,874.07	1,851.72	4.85	5.35	107.94	-191.18	-71.13	203.48	193.94	9.54	21.320	
2,000.00	1,987.98	1,971.16	1,945.21	5.21	5.85	106.75	-216.48	-77.91	227.03	216.76	10.27	22.107	
2,100.00	2,086.71	2,068.25	2,038.70	5.57	6.36	105.79	-241.77	-84.69	250.66	239.66	11.00	22.786	
2,200.00	2,185.44	2,165.34	2,132.20	5.93	6.88	104.99	-267.06	-91.47	274.34	262.60	11.74	23.377	
2,300.00	2,284.17	2,262.43	2,225.69	6.30	7.40	104.32	-292.35	-98.25	298.06	285.59	12.47	23.896	
2,400.00	2,382.90	2,359.52	2,319.18	6.67	7.92	103.75	-317.64	-105.03	321.82	308.61	13.21	24.354	
2,500.00	2,481.63	2,456.61	2,412.67	7.04	8.45	103.26	-342.93	-111.81	345.60	331.65	13.96	24.762	
2,600.00	2,580.35	2,553.70	2,506.17	7.41	8.98	102.83	-368.22	-118.59	369.41	354.71	14.70	25.127	
2,700.00	2,679.08	2,650.79	2,599.66	7.78	9.51	102.45	-393.52	-125.37	393.23	377.78	15.45	25.456	
2,800.00	2,777.81	2,747.88	2,693.15	8.16	10.04	102.12	-418.81	-132.16	417.07	400.87	16.19	25.753	
2,900.00	2,876.54	2,844.97	2,786.65	8.53	10.57	101.82	-444.10	-138.94	440.91	423.97	16.94	26.024	
3,000.00	2,975.27	2,942.06	2,880.14	8.91	11.11	101.55	-469.39	-145.72	464.77	447.08	17.69	26.271	
3,100.00	3,074.00	3,039.15	2,973.63	9.28	11.65	101.31	-494.68	-152.50	488.64	470.20	18.44	26.497	
3,200.00	3,172.73	3,136.24	3,067.13	9.66	12.18	101.09	-519.97	-159.28	512.51	493.32	19.19	26.706	
3,300.00	3,271.45	3,233.33	3,160.62	10.04	12.72	100.89	-545.26	-166.06	536.39	516.45	19.94	26.899	
3,400.00	3,370.18	3,330.43	3,254.11	10.41	13.26	100.71	-570.56	-172.84	560.28	539.59	20.69	27.078	
3,500.00	3,468.91	3,427.52	3,347.60	10.79	13.80	100.54	-595.85	-179.62	584.17	562.73	21.44	27.244	
3,600.00	3,567.64	3,524.61	3,441.10	11.17	14.34	100.39	-621.14	-186.40	608.06	585.87	22.19	27.400	
3,700.00	3,666.37	3,621.70	3,534.59	11.55	14.88	100.24	-646.43	-193.18	631.96	609.02	22.94	27.545	
3,800.00	3,765.10	3,718.79	3,628.08	11.92	15.42	100.11	-671.72	-199.96	655.86	632.17	23.69	27.681	
3,900.00	3,863.83	3,815.88	3,721.58	12.30	15.96	99.99	-697.01	-206.74	679.77	655.32	24.45	27.801	
4,000.00	3,962.55	3,912.97	3,815.07	12.68	16.50	99.87	-722.30	-213.53	703.68	678.47	25.21	27.912	
4,100.00	4,061.28	4,010.06	3,908.56	13.06	17.04	99.77	-747.60	-220.31	727.59	701.62	25.97	28.016	
4,200.00	4,160.01	4,107.15	4,002.06	13.44	17.58	99.67	-772.89	-227.09	751.50	724.77	26.73	28.114	
4,300.00	4,258.74	4,204.24	4,095.55	13.82	18.12	99.57	-798.18	-233.87	775.42	747.93	27.49	28.206	
4,400.00	4,357.47	4,301.33	4,189.04	14.20	18.67	99.48	-823.47	-240.65	799.33	771.08	28.25	28.293	
4,500.00	4,456.20	4,398.42	4,282.54	14.58	19.21	99.40	-848.76	-247.43	823.25	794.24	29.01	28.376	
4,600.00	4,554.93	4,495.51	4,376.03	14.96	19.75	99.32	-874.05	-254.21	847.17	817.40	29.77	28.454	
4,700.00	4,653.65	4,592.60	4,469.52	15.34	20.29	99.25	-899.34	-260.99	871.09	840.56	30.54	28.528	
4,800.00	4,752.38	4,689.69	4,563.01	15.72	20.84	99.18	-924.63	-267.77	895.02	863.72	31.30	28.598	
4,900.00	4,851.11	4,786.78	4,656.51	16.10	21.38	99.11	-949.93	-274.55	918.94	886.88	32.06	28.664	
5,000.00	4,949.84	4,883.87	4,750.00	16.48	21.92	99.05	-975.22	-281.33	942.87	910.05	32.82	28.728	

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 10-12
<b>Project:</b>	COLORADO NORTHERN ZONE - 83	<b>TVD Reference:</b>	WELL @ 4978.00ft (Original Well Elev)
<b>Reference Site:</b>	LARIMER_MIRACLE 25-12 PAD	<b>MD Reference:</b>	WELL @ 4978.00ft (Original Well Elev)
<b>Site Error:</b>	0.00ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	P_MIRACLE 10-12	<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 10-12	<b>Database:</b>	EDM 2003.21 Single User Db
<b>Reference Design:</b>	PLAN #1 3-23-10 RHS	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design LARIMER_MIRACLE 25-12 PAD - P_MIRACLE 23-12 - P_MIRACLE 23-12 - PLAN #1 3-23-10 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
5,100.00	5,048.57	4,980.97	4,843.49	16.86	22.47	98.99	-1,000.51	-288.11	966.79	933.21	33.58	28.788	
5,200.00	5,147.30	5,078.06	4,936.99	17.24	23.01	98.93	-1,025.80	-294.89	990.72	956.37	34.35	28.846	
5,300.00	5,246.03	5,175.15	5,030.48	17.62	23.55	98.87	-1,051.09	-301.68	1,014.65	979.54	35.11	28.901	
5,400.00	5,344.75	5,272.90	5,124.61	18.00	24.10	98.82	-1,076.55	-308.50	1,038.58	1,002.70	35.87	28.952	
5,506.23	5,449.63	5,418.66	5,265.94	18.41	24.65	98.88	-1,110.95	-317.72	1,061.86	1,025.14	36.72	28.920	
5,600.00	5,542.44	5,549.33	5,394.03	18.70	25.06	99.36	-1,135.85	-324.40	1,078.69	1,041.25	37.44	28.809	
5,700.00	5,641.84	5,690.42	5,533.49	18.92	25.43	99.74	-1,156.36	-329.90	1,092.41	1,054.34	38.07	28.693	
5,800.00	5,741.55	5,832.83	5,675.16	19.11	25.72	100.00	-1,170.32	-333.64	1,101.69	1,063.09	38.59	28.547	
5,900.00	5,841.47	5,976.06	5,818.18	19.27	25.93	100.15	-1,177.49	-335.56	1,106.45	1,067.44	39.01	28.366	
5,963.54	5,905.00	6,062.89	5,905.00	19.36	26.03	-126.69	-1,178.48	-335.83	1,107.14	1,067.91	39.22	28.226	
6,000.00	5,941.46	6,099.35	5,941.46	19.41	26.07	-126.69	-1,178.48	-335.83	1,107.14	1,067.82	39.32	28.158	
6,100.00	6,041.46	6,199.35	6,041.46	19.53	26.16	-126.69	-1,178.48	-335.83	1,107.14	1,067.58	39.56	27.986	
6,200.00	6,141.46	6,299.35	6,141.46	19.66	26.24	-126.69	-1,178.48	-335.83	1,107.14	1,067.33	39.80	27.814	
6,300.00	6,241.46	6,399.35	6,241.46	19.79	26.33	-126.69	-1,178.48	-335.83	1,107.14	1,067.08	40.05	27.642	
6,400.00	6,341.46	6,499.35	6,341.46	19.93	26.43	-126.69	-1,178.48	-335.83	1,107.14	1,066.83	40.31	27.469	
6,500.00	6,441.46	6,599.35	6,441.46	20.06	26.52	-126.69	-1,178.48	-335.83	1,107.14	1,066.58	40.56	27.296	
6,600.00	6,541.46	6,699.35	6,541.46	20.20	26.61	-126.69	-1,178.48	-335.83	1,107.14	1,066.32	40.82	27.123	
6,700.00	6,641.46	6,799.35	6,641.46	20.33	26.71	-126.69	-1,178.48	-335.83	1,107.14	1,066.06	41.08	26.950	
6,800.00	6,741.46	6,899.35	6,741.46	20.47	26.81	-126.69	-1,178.48	-335.83	1,107.14	1,065.79	41.35	26.777	
6,900.00	6,841.46	6,999.35	6,841.46	20.61	26.91	-126.69	-1,178.48	-335.83	1,107.14	1,065.52	41.62	26.604	
7,000.00	6,941.46	7,099.35	6,941.46	20.75	27.01	-126.69	-1,178.48	-335.83	1,107.14	1,065.25	41.89	26.432	
7,100.00	7,041.46	7,199.35	7,041.46	20.90	27.11	-126.69	-1,178.48	-335.83	1,107.14	1,064.98	42.16	26.260	
7,200.00	7,141.46	7,299.35	7,141.46	21.04	27.22	-126.69	-1,178.48	-335.83	1,107.14	1,064.70	42.44	26.088	
7,300.00	7,241.46	7,399.35	7,241.46	21.19	27.32	-126.69	-1,178.48	-335.83	1,107.14	1,064.42	42.72	25.917	
7,400.00	7,341.46	7,499.35	7,341.46	21.33	27.43	-126.69	-1,178.48	-335.83	1,107.14	1,064.13	43.00	25.746	
7,500.00	7,441.46	7,599.35	7,441.46	21.48	27.54	-126.69	-1,178.48	-335.83	1,107.14	1,063.85	43.29	25.576	
7,600.00	7,541.46	7,699.35	7,541.46	21.63	27.65	-126.69	-1,178.48	-335.83	1,107.14	1,063.56	43.58	25.406	
7,700.00	7,641.46	7,799.35	7,641.46	21.78	27.76	-126.69	-1,178.48	-335.83	1,107.14	1,063.27	43.87	25.237	
7,800.00	7,741.46	7,899.35	7,741.46	21.94	27.87	-126.69	-1,178.48	-335.83	1,107.14	1,062.97	44.16	25.069	
7,838.40	7,779.87	7,937.75	7,779.87	22.00	27.91	-126.69	-1,178.48	-335.83	1,107.14	1,062.86	44.28	25.005	
7,863.54	7,805.00	7,952.89	7,795.00	22.03	27.93	-126.69	-1,178.48	-335.83	1,107.18	1,062.85	44.34	24.972	



<b>Company:</b>	US ROCKIES REGION PLANNING	<b>Local Co-ordinate Reference:</b>	Well P_MIRACLE 10-12
<b>Project:</b>	COLORADO NORTHERN ZONE - 83	<b>TVD Reference:</b>	WELL @ 4978.00ft (Original Well Elev)
<b>Reference Site:</b>	LARIMER_MIRACLE 25-12 PAD	<b>MD Reference:</b>	WELL @ 4978.00ft (Original Well Elev)
<b>Site Error:</b>	0.00ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	P_MIRACLE 10-12	<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 10-12	<b>Database:</b>	EDM 2003.21 Single User Db
<b>Reference Design:</b>	PLAN #1 3-23-10 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 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	-89.16	0.73	-49.84	49.85				
100.00	100.00	100.00	100.00	0.10	0.10	-89.16	0.73	-49.84	49.85	49.66	0.19	260.917	
200.00	200.00	200.00	200.00	0.32	0.32	-89.16	0.73	-49.84	49.85	49.21	0.64	77.818	
300.00	300.00	300.00	300.00	0.55	0.55	-89.16	0.73	-49.84	49.85	48.76	1.09	45.728	
400.00	400.00	400.00	400.00	0.77	0.77	-89.16	0.73	-49.84	49.85	48.31	1.54	32.377	
500.00	500.00	500.00	500.00	0.99	0.99	-89.16	0.73	-49.84	49.85	47.86	1.99	25.060	
600.00	600.00	600.00	600.00	1.22	1.22	-89.16	0.73	-49.84	49.85	47.41	2.44	20.441	
700.00	700.00	700.00	700.00	1.44	1.44	-89.16	0.73	-49.84	49.85	46.96	2.89	17.259	
750.00	750.00	750.00	750.00	1.56	1.56	-89.16	0.73	-49.84	49.85	46.74	3.11	16.013 CC, ES	
800.00	800.00	800.22	800.22	1.66	1.67	138.54	1.16	-49.72	50.06	46.74	3.33	15.055	
900.00	899.93	900.34	900.27	1.84	1.89	144.72	4.45	-48.77	52.13	48.40	3.73	13.981	
1,000.00	999.68	999.84	999.67	2.04	2.12	153.11	8.80	-47.51	57.80	53.66	4.14	13.968 SF	
1,100.00	1,099.13	1,098.97	1,098.70	2.27	2.34	160.87	13.12	-46.26	67.78	63.23	4.55	14.894	
1,207.31	1,205.37	1,204.79	1,204.41	2.55	2.59	167.50	17.74	-44.93	83.26	78.27	4.99	16.676	
1,300.00	1,296.88	1,295.90	1,295.43	2.82	2.80	171.70	21.72	-43.78	98.97	93.57	5.40	18.331	
1,400.00	1,395.61	1,394.20	1,393.63	3.13	3.02	174.94	26.01	-42.54	116.33	110.49	5.84	19.910	
1,500.00	1,494.34	1,492.50	1,491.82	3.46	3.25	177.34	30.30	-41.30	133.96	127.67	6.29	21.290	
1,600.00	1,593.07	1,590.80	1,590.02	3.80	3.48	179.18	34.59	-40.06	151.77	145.02	6.75	22.497	
1,700.00	1,691.80	1,689.10	1,688.22	4.14	3.71	-179.37	38.88	-38.82	169.69	162.49	7.20	23.557	
1,800.00	1,790.52	1,787.40	1,786.42	4.49	3.94	-178.19	43.17	-37.58	187.70	180.04	7.66	24.492	
1,900.00	1,889.25	1,885.70	1,884.61	4.85	4.17	-177.23	47.46	-36.34	205.78	197.65	8.13	25.321	
2,000.00	1,987.98	1,984.00	1,982.81	5.21	4.40	-176.41	51.75	-35.10	223.90	215.31	8.59	26.059	
2,100.00	2,086.71	2,082.29	2,081.01	5.57	4.63	-175.72	56.04	-33.86	242.06	233.00	9.06	26.719	
2,200.00	2,185.44	2,180.59	2,179.21	5.93	4.87	-175.13	60.33	-32.62	260.25	250.72	9.53	27.314	
2,300.00	2,284.17	2,278.89	2,277.40	6.30	5.10	-174.61	64.61	-31.38	278.46	268.46	10.00	27.851	
2,400.00	2,382.90	2,377.19	2,375.60	6.67	5.33	-174.16	68.90	-30.14	296.69	286.22	10.47	28.338	
2,500.00	2,481.63	2,475.49	2,473.80	7.04	5.56	-173.76	73.19	-28.90	314.93	303.99	10.94	28.782	
2,600.00	2,580.35	2,573.79	2,571.99	7.41	5.79	-173.40	77.48	-27.66	333.19	321.78	11.42	29.188	
2,700.00	2,679.08	2,672.09	2,670.19	7.78	6.02	-173.08	81.77	-26.42	351.46	339.57	11.89	29.561	
2,800.00	2,777.81	2,770.39	2,768.39	8.16	6.26	-172.79	86.06	-25.18	369.74	357.38	12.36	29.904	
2,900.00	2,876.54	2,868.68	2,866.59	8.53	6.49	-172.53	90.35	-23.94	388.03	375.19	12.84	30.220	
3,000.00	2,975.27	2,966.98	2,964.78	8.91	6.72	-172.30	94.64	-22.70	406.33	393.01	13.32	30.514	
3,100.00	3,074.00	3,065.28	3,062.98	9.28	6.95	-172.08	98.93	-21.46	424.63	410.84	13.79	30.786	
3,200.00	3,172.73	3,163.58	3,161.18	9.66	7.19	-171.88	103.22	-20.22	442.94	428.67	14.27	31.040	
3,300.00	3,271.45	3,261.88	3,259.38	10.04	7.42	-171.70	107.51	-18.99	461.25	446.50	14.75	31.276	
3,400.00	3,370.18	3,360.18	3,357.57	10.41	7.65	-171.53	111.80	-17.75	479.56	464.34	15.23	31.497	
3,500.00	3,468.91	3,458.48	3,455.77	10.79	7.88	-171.37	116.09	-16.51	497.88	482.18	15.70	31.705	
3,600.00	3,567.64	3,556.78	3,553.97	11.17	8.12	-171.22	120.38	-15.27	516.21	500.03	16.18	31.899	
3,700.00	3,666.37	3,655.07	3,652.17	11.55	8.35	-171.09	124.67	-14.03	534.53	517.87	16.66	32.082	
3,800.00	3,765.10	3,753.37	3,750.36	11.92	8.58	-170.96	128.96	-12.79	552.86	535.72	17.14	32.255	
3,900.00	3,863.83	3,851.67	3,848.56	12.30	8.82	-170.84	133.25	-11.55	571.19	553.57	17.62	32.418	
4,000.00	3,962.55	3,949.97	3,946.76	12.68	9.05	-170.73	137.54	-10.31	589.53	571.43	18.10	32.572	
4,100.00	4,061.28	4,048.27	4,044.95	13.06	9.28	-170.63	141.83	-9.07	607.86	589.28	18.58	32.717	
4,200.00	4,160.01	4,146.57	4,143.15	13.44	9.51	-170.53	146.12	-7.83	626.20	607.14	19.06	32.856	
4,300.00	4,258.74	4,244.87	4,241.35	13.82	9.75	-170.44	150.41	-6.59	644.54	625.00	19.54	32.987	
4,400.00	4,357.47	4,343.17	4,339.55	14.20	9.98	-170.35	154.70	-5.35	662.88	642.86	20.02	33.111	
4,500.00	4,456.20	4,441.46	4,437.74	14.58	10.21	-170.27	158.99	-4.11	681.22	660.72	20.50	33.230	
4,600.00	4,554.93	4,539.76	4,535.94	14.96	10.45	-170.19	163.28	-2.87	699.57	678.59	20.98	33.343	
4,700.00	4,653.65	4,638.06	4,634.14	15.34	10.68	-170.11	167.57	-1.63	717.91	696.45	21.46	33.451	
4,800.00	4,752.38	4,736.36	4,732.34	15.72	10.91	-170.04	171.86	-0.39	736.26	714.31	21.94	33.554	
4,900.00	4,851.11	4,834.66	4,830.53	16.10	11.15	-169.97	176.15	0.85	754.60	732.18	22.42	33.653	
5,000.00	4,949.84	4,932.96	4,928.73	16.48	11.38	-169.91	180.44	2.09	772.95	750.05	22.90	33.747	

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 10-12
<b>Project:</b>	COLORADO NORTHERN ZONE - 83	<b>TVD Reference:</b>	WELL @ 4978.00ft (Original Well Elev)
<b>Reference Site:</b>	LARIMER_MIRACLE 25-12 PAD	<b>MD Reference:</b>	WELL @ 4978.00ft (Original Well Elev)
<b>Site Error:</b>	0.00ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	P_MIRACLE 10-12	<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 10-12	<b>Database:</b>	EDM 2003.21 Single User Db
<b>Reference Design:</b>	PLAN #1 3-23-10 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						
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
5,100.00	5,048.57	5,031.26	5,026.93	16.86	11.61	-169.85	184.73	3.33	791.30	767.91	23.39	33.837	
5,200.00	5,147.30	5,129.56	5,125.12	17.24	11.84	-169.79	189.02	4.57	809.65	785.78	23.87	33.923	
5,300.00	5,246.03	5,227.86	5,223.32	17.62	12.08	-169.73	193.31	5.81	828.00	803.65	24.35	34.006	
5,400.00	5,344.75	5,326.15	5,321.52	18.00	12.31	-169.68	197.60	7.05	846.35	821.52	24.83	34.086	
5,506.23	5,449.63	5,430.57	5,425.83	18.41	12.56	-169.63	202.16	8.37	865.84	840.50	25.34	34.167	
5,600.00	5,542.44	5,523.01	5,518.17	18.70	12.78	-169.62	206.19	9.53	881.57	855.73	25.83	34.125	
5,700.00	5,641.84	5,622.08	5,617.14	18.92	13.01	-169.56	210.52	10.78	895.05	868.74	26.31	34.025	
5,800.00	5,741.55	5,721.54	5,716.50	19.11	13.25	-169.46	214.86	12.04	905.12	878.38	26.74	33.847	
5,900.00	5,841.47	5,830.29	5,825.15	19.27	13.48	-169.30	219.24	13.30	911.60	884.47	27.14	33.590	
5,963.54	5,905.00	5,909.18	5,904.03	19.36	13.62	-36.13	220.42	13.64	912.90	885.53	27.37	33.359	
6,000.00	5,941.46	5,946.62	5,941.46	19.41	13.69	-36.13	220.42	13.64	912.90	885.40	27.50	33.193	
6,100.00	6,041.46	6,046.62	6,041.46	19.53	13.89	-36.13	220.42	13.64	912.90	885.02	27.88	32.744	
6,200.00	6,141.46	6,146.62	6,141.46	19.66	14.10	-36.13	220.42	13.64	912.90	884.63	28.27	32.289	
6,300.00	6,241.46	6,246.62	6,241.46	19.79	14.32	-36.13	220.42	13.64	912.90	884.23	28.67	31.845	
6,400.00	6,341.46	6,346.62	6,341.46	19.93	14.53	-36.13	220.42	13.64	912.90	883.84	29.06	31.412	
6,500.00	6,441.46	6,446.62	6,441.46	20.06	14.74	-36.13	220.42	13.64	912.90	883.44	29.46	30.988	
6,600.00	6,541.46	6,546.62	6,541.46	20.20	14.96	-36.13	220.42	13.64	912.90	883.04	29.86	30.575	
6,700.00	6,641.46	6,646.62	6,641.46	20.33	15.17	-36.13	220.42	13.64	912.90	882.64	30.26	30.170	
6,800.00	6,741.46	6,746.62	6,741.46	20.47	15.39	-36.13	220.42	13.64	912.90	882.24	30.66	29.775	
6,900.00	6,841.46	6,846.62	6,841.46	20.61	15.60	-36.13	220.42	13.64	912.90	881.84	31.06	29.390	
7,000.00	6,941.46	6,946.62	6,941.46	20.75	15.82	-36.13	220.42	13.64	912.90	881.44	31.47	29.012	
7,100.00	7,041.46	7,046.62	7,041.46	20.90	16.03	-36.13	220.42	13.64	912.90	881.03	31.87	28.644	
7,200.00	7,141.46	7,146.62	7,141.46	21.04	16.25	-36.13	220.42	13.64	912.90	880.62	32.28	28.283	
7,300.00	7,241.46	7,246.62	7,241.46	21.19	16.47	-36.13	220.42	13.64	912.90	880.22	32.68	27.931	
7,400.00	7,341.46	7,346.62	7,341.46	21.33	16.68	-36.13	220.42	13.64	912.90	879.81	33.09	27.586	
7,500.00	7,441.46	7,446.62	7,441.46	21.48	16.90	-36.13	220.42	13.64	912.90	879.40	33.50	27.249	
7,600.00	7,541.46	7,546.62	7,541.46	21.63	17.12	-36.13	220.42	13.64	912.90	878.99	33.91	26.919	
7,700.00	7,641.46	7,646.62	7,641.46	21.78	17.33	-36.13	220.42	13.64	912.90	878.58	34.32	26.597	
7,800.00	7,741.46	7,746.62	7,741.46	21.94	17.55	-36.13	220.42	13.64	912.90	878.17	34.74	26.281	
7,863.54	7,805.00	7,810.15	7,805.00	22.03	17.69	-36.13	220.42	13.64	912.90	877.90	35.00	26.084	

<b>Company:</b>	US ROCKIES REGION PLANNING	<b>Local Co-ordinate Reference:</b>	Well P_MIRACLE 10-12
<b>Project:</b>	COLORADO NORTHERN ZONE - 83	<b>TVD Reference:</b>	WELL @ 4978.00ft (Original Well Elev)
<b>Reference Site:</b>	LARIMER_MIRACLE 25-12 PAD	<b>MD Reference:</b>	WELL @ 4978.00ft (Original Well Elev)
<b>Site Error:</b>	0.00ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	P_MIRACLE 10-12	<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 10-12	<b>Database:</b>	EDM 2003.21 Single User Db
<b>Reference Design:</b>	PLAN #1 3-23-10 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	89.88	0.02	10.02	10.02				
100.00	100.00	100.00	100.00	0.10	0.10	89.88	0.02	10.02	10.02	9.83	0.19	52.469	
200.00	200.00	200.00	200.00	0.32	0.32	89.88	0.02	10.02	10.02	9.38	0.64	15.649	
300.00	300.00	300.00	300.00	0.55	0.55	89.88	0.02	10.02	10.02	8.93	1.09	9.196	
400.00	400.00	400.00	400.00	0.77	0.77	89.88	0.02	10.02	10.02	8.48	1.54	6.511	
500.00	500.00	500.00	500.00	0.99	0.99	89.88	0.02	10.02	10.02	8.04	1.99	5.039	
600.00	600.00	600.00	600.00	1.22	1.22	89.88	0.02	10.02	10.02	7.59	2.44	4.111	
700.00	700.00	700.00	700.00	1.44	1.44	89.88	0.02	10.02	10.02	7.14	2.89	3.471	
750.00	750.00	750.00	750.00	1.56	1.56	89.88	0.02	10.02	10.02	6.91	3.11	3.220	
800.00	800.00	799.89	799.89	1.66	1.67	-46.97	0.37	10.28	9.98	6.66	3.32	3.004	
810.29	810.29	810.15	810.15	1.68	1.69	-48.67	0.53	10.39	9.98	6.61	3.36	2.966 CC, ES, SF	
900.00	899.93	899.46	899.39	1.84	1.89	-74.84	3.18	12.31	11.13	7.40	3.73	2.986	
1,000.00	999.68	998.43	998.12	2.04	2.11	-105.30	8.74	16.33	18.30	14.15	4.15	4.411	
1,100.00	1,099.13	1,096.39	1,095.55	2.27	2.35	-120.28	16.97	22.28	32.47	27.88	4.58	7.082	
1,207.31	1,205.37	1,200.00	1,198.15	2.55	2.62	-127.39	28.60	30.70	54.14	49.06	5.07	10.669	
1,300.00	1,296.88	1,288.12	1,284.96	2.82	2.89	-129.98	40.85	39.56	76.78	71.25	5.53	13.875	
1,400.00	1,395.61	1,382.95	1,377.86	3.13	3.20	-130.55	56.27	50.72	103.66	97.60	6.06	17.112	
1,500.00	1,494.34	1,479.12	1,471.94	3.46	3.55	-130.73	72.43	62.41	131.07	124.46	6.61	19.837	
1,600.00	1,593.07	1,575.29	1,566.02	3.80	3.92	-130.84	88.58	74.09	158.48	151.31	7.17	22.097	
1,700.00	1,691.80	1,671.46	1,660.10	4.14	4.29	-130.93	104.73	85.78	185.89	178.14	7.75	23.988	
1,800.00	1,790.52	1,767.63	1,754.18	4.49	4.68	-130.99	120.88	97.46	213.31	204.97	8.34	25.588	
1,900.00	1,889.25	1,863.80	1,848.26	4.85	5.07	-131.03	137.03	109.14	240.72	231.79	8.93	26.954	
2,000.00	1,987.98	1,959.97	1,942.34	5.21	5.47	-131.07	153.18	120.83	268.13	258.60	9.53	28.131	
2,100.00	2,086.71	2,056.14	2,036.42	5.57	5.87	-131.10	169.33	132.51	295.55	285.41	10.14	29.154	
2,200.00	2,185.44	2,152.30	2,130.50	5.93	6.28	-131.13	185.48	144.20	322.96	312.21	10.75	30.049	
2,300.00	2,284.17	2,248.47	2,224.58	6.30	6.69	-131.15	201.63	155.88	350.37	339.01	11.36	30.837	
2,400.00	2,382.90	2,344.64	2,318.66	6.67	7.10	-131.17	217.78	167.57	377.79	365.81	11.98	31.537	
2,500.00	2,481.63	2,440.81	2,412.74	7.04	7.51	-131.18	233.93	179.25	405.20	392.60	12.60	32.162	
2,600.00	2,580.35	2,536.98	2,506.82	7.41	7.92	-131.20	250.08	190.94	432.61	419.39	13.22	32.723	
2,700.00	2,679.08	2,633.15	2,600.90	7.78	8.34	-131.21	266.23	202.62	460.03	446.18	13.84	33.228	
2,800.00	2,777.81	2,729.32	2,694.98	8.16	8.76	-131.22	282.39	214.30	487.44	472.97	14.47	33.686	
2,900.00	2,876.54	2,825.49	2,789.07	8.53	9.18	-131.23	298.54	225.99	514.85	499.76	15.10	34.103	
3,000.00	2,975.27	2,921.66	2,883.15	8.91	9.60	-131.24	314.69	237.67	542.27	526.54	15.73	34.484	
3,100.00	3,074.00	3,017.83	2,977.23	9.28	10.02	-131.25	330.84	249.36	569.68	553.33	16.35	34.832	
3,200.00	3,172.73	3,114.00	3,071.31	9.66	10.44	-131.25	346.99	261.04	597.10	580.11	16.99	35.153	
3,300.00	3,271.45	3,210.16	3,165.39	10.04	10.86	-131.26	363.14	272.73	624.51	606.89	17.62	35.449	
3,400.00	3,370.18	3,306.33	3,259.47	10.41	11.28	-131.27	379.29	284.41	651.92	633.67	18.25	35.724	
3,500.00	3,468.91	3,402.50	3,353.55	10.79	11.70	-131.27	395.44	296.10	679.34	660.45	18.88	35.978	
3,600.00	3,567.64	3,498.67	3,447.63	11.17	12.13	-131.28	411.59	307.78	706.75	687.23	19.52	36.214	
3,700.00	3,666.37	3,594.84	3,541.71	11.55	12.55	-131.28	427.74	319.46	734.16	714.01	20.15	36.435	
3,800.00	3,765.10	3,691.01	3,635.79	11.92	12.97	-131.29	443.89	331.15	761.58	740.79	20.78	36.641	
3,900.00	3,863.83	3,787.18	3,729.87	12.30	13.40	-131.29	460.04	342.83	788.99	767.57	21.42	36.834	
4,000.00	3,962.55	3,883.35	3,823.95	12.68	13.82	-131.29	476.19	354.52	816.41	794.35	22.06	37.015	
4,100.00	4,061.28	3,979.52	3,918.03	13.06	14.25	-131.30	492.34	366.20	843.82	821.13	22.69	37.185	
4,200.00	4,160.01	4,075.69	4,012.11	13.44	14.67	-131.30	508.50	377.89	871.23	847.90	23.33	37.346	
4,300.00	4,258.74	4,171.85	4,106.19	13.82	15.10	-131.30	524.65	389.57	898.65	874.68	23.97	37.497	
4,400.00	4,357.47	4,268.02	4,200.27	14.20	15.52	-131.31	540.80	401.26	926.06	901.46	24.60	37.640	
4,500.00	4,456.20	4,364.19	4,294.35	14.58	15.95	-131.31	556.95	412.94	953.47	928.23	25.24	37.775	
4,600.00	4,554.93	4,460.36	4,388.43	14.96	16.37	-131.31	573.10	424.62	980.89	955.01	25.88	37.904	
4,700.00	4,653.65	4,556.53	4,482.51	15.34	16.80	-131.31	589.25	436.31	1,008.30	981.78	26.52	38.025	
4,800.00	4,752.38	4,652.70	4,576.59	15.72	17.23	-131.32	605.40	447.99	1,035.71	1,008.56	27.15	38.141	
4,900.00	4,851.11	4,748.87	4,670.67	16.10	17.65	-131.32	621.55	459.68	1,063.13	1,035.33	27.79	38.251	

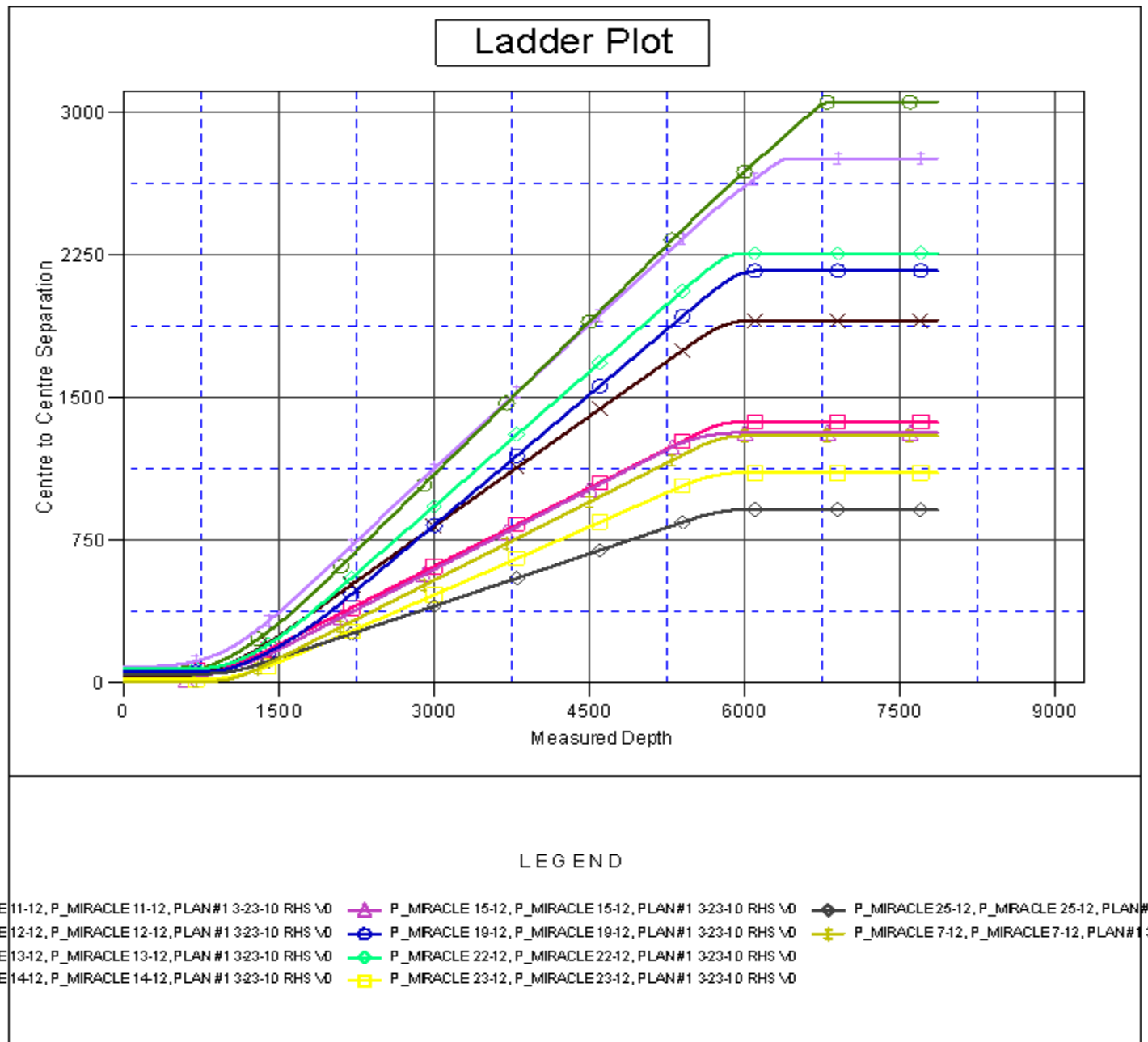
CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

<b>Company:</b>	US ROCKIES REGION PLANNING	<b>Local Co-ordinate Reference:</b>	Well P_MIRACLE 10-12
<b>Project:</b>	COLORADO NORTHERN ZONE - 83	<b>TVD Reference:</b>	WELL @ 4978.00ft (Original Well Elev)
<b>Reference Site:</b>	LARIMER_MIRACLE 25-12 PAD	<b>MD Reference:</b>	WELL @ 4978.00ft (Original Well Elev)
<b>Site Error:</b>	0.00ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	P_MIRACLE 10-12	<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 10-12	<b>Database:</b>	EDM 2003.21 Single User Db
<b>Reference Design:</b>	PLAN #1 3-23-10 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	4,949.84	4,845.04	4,764.75	16.48	18.08	-131.32	637.70	471.36	1,090.54	1,062.11	28.43	38.356	
5,100.00	5,048.57	4,941.21	4,858.83	16.86	18.51	-131.32	653.85	483.05	1,117.96	1,088.88	29.07	38.456	
5,200.00	5,147.30	5,037.38	4,952.91	17.24	18.93	-131.32	670.00	494.73	1,145.37	1,115.66	29.71	38.551	
5,300.00	5,246.03	5,133.55	5,046.99	17.62	19.36	-131.33	686.15	506.42	1,172.78	1,142.43	30.35	38.643	
5,400.00	5,344.75	5,229.71	5,141.07	18.00	19.79	-131.33	702.30	518.10	1,200.20	1,169.21	30.99	38.730	
5,506.23	5,449.63	5,331.87	5,241.01	18.41	20.24	-131.33	719.46	530.51	1,229.32	1,197.65	31.67	38.818	
5,600.00	5,542.44	5,427.07	5,334.15	18.70	20.65	-131.66	735.42	542.06	1,254.03	1,221.70	32.33	38.792	
5,700.00	5,641.84	5,580.03	5,484.69	18.92	21.17	-131.85	757.30	557.89	1,275.74	1,242.72	33.01	38.642	
5,800.00	5,741.55	5,736.32	5,639.77	19.11	21.56	-131.97	772.90	569.17	1,290.81	1,257.22	33.59	38.429	
5,900.00	5,841.47	5,894.79	5,797.84	19.27	21.86	-132.02	781.69	575.53	1,299.08	1,265.01	34.07	38.128	
5,963.54	5,905.00	5,996.03	5,899.05	19.36	22.00	1.10	783.60	576.91	1,300.76	1,266.43	34.33	37.889	
6,000.00	5,941.46	6,038.44	5,941.46	19.41	22.05	1.10	783.63	576.94	1,300.79	1,266.34	34.45	37.763	
6,100.00	6,041.46	6,138.44	6,041.46	19.53	22.17	1.10	783.63	576.94	1,300.79	1,266.04	34.75	37.436	
6,200.00	6,141.46	6,238.44	6,141.46	19.66	22.30	1.10	783.63	576.94	1,300.79	1,265.73	35.06	37.101	
6,300.00	6,241.46	6,338.44	6,241.46	19.79	22.43	1.10	783.63	576.94	1,300.79	1,265.41	35.38	36.769	
6,400.00	6,341.46	6,438.44	6,341.46	19.93	22.56	1.10	783.63	576.94	1,300.79	1,265.09	35.70	36.439	
6,500.00	6,441.46	6,538.44	6,441.46	20.06	22.69	1.10	783.63	576.94	1,300.79	1,264.77	36.02	36.113	
6,600.00	6,541.46	6,638.44	6,541.46	20.20	22.83	1.10	783.63	576.94	1,300.79	1,264.44	36.34	35.790	
6,700.00	6,641.46	6,738.44	6,641.46	20.33	22.96	1.10	783.63	576.94	1,300.79	1,264.12	36.67	35.470	
6,800.00	6,741.46	6,838.44	6,741.46	20.47	23.10	1.10	783.63	576.94	1,300.79	1,263.78	37.00	35.154	
6,900.00	6,841.46	6,938.44	6,841.46	20.61	23.24	1.10	783.63	576.94	1,300.79	1,263.45	37.34	34.840	
7,000.00	6,941.46	7,038.44	6,941.46	20.75	23.38	1.10	783.63	576.94	1,300.79	1,263.12	37.67	34.530	
7,100.00	7,041.46	7,138.44	7,041.46	20.90	23.52	1.10	783.63	576.94	1,300.79	1,262.78	38.01	34.223	
7,200.00	7,141.46	7,238.44	7,141.46	21.04	23.66	1.10	783.63	576.94	1,300.79	1,262.44	38.35	33.920	
7,300.00	7,241.46	7,338.44	7,241.46	21.19	23.80	1.10	783.63	576.94	1,300.79	1,262.10	38.69	33.620	
7,400.00	7,341.46	7,438.44	7,341.46	21.33	23.95	1.10	783.63	576.94	1,300.79	1,261.75	39.04	33.324	
7,500.00	7,441.46	7,538.44	7,441.46	21.48	24.10	1.10	783.63	576.94	1,300.79	1,261.41	39.38	33.030	
7,600.00	7,541.46	7,638.44	7,541.46	21.63	24.24	1.10	783.63	576.94	1,300.79	1,261.06	39.73	32.741	
7,700.00	7,641.46	7,738.44	7,641.46	21.78	24.39	1.10	783.63	576.94	1,300.79	1,260.71	40.08	32.454	
7,800.00	7,741.46	7,838.44	7,741.46	21.94	24.54	1.10	783.63	576.94	1,300.79	1,260.35	40.43	32.171	
7,863.54	7,805.00	7,901.98	7,805.00	22.03	24.64	1.10	783.63	576.94	1,300.79	1,260.13	40.66	31.994	

<b>Company:</b>	US ROCKIES REGION PLANNING	<b>Local Co-ordinate Reference:</b>	Well P_MIRACLE 10-12
<b>Project:</b>	COLORADO NORTHERN ZONE - 83	<b>TVD Reference:</b>	WELL @ 4978.00ft (Original Well Elev)
<b>Reference Site:</b>	LARIMER_MIRACLE 25-12 PAD	<b>MD Reference:</b>	WELL @ 4978.00ft (Original Well Elev)
<b>Site Error:</b>	0.00ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	P_MIRACLE 10-12	<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 10-12	<b>Database:</b>	EDM 2003.21 Single User Db
<b>Reference Design:</b>	PLAN #1 3-23-10 RHS	<b>Offset TVD Reference:</b>	Offset Datum

Reference Depths are relative to WELL @ 4978.00ft (Original Well Elev) Coordinates are relative to: P\_MIRACLE 10-12  
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: 0.35°



<b>Company:</b>	US ROCKIES REGION PLANNING	<b>Local Co-ordinate Reference:</b>	Well P_MIRACLE 10-12
<b>Project:</b>	COLORADO NORTHERN ZONE - 83	<b>TVD Reference:</b>	WELL @ 4978.00ft (Original Well Elev)
<b>Reference Site:</b>	LARIMER_MIRACLE 25-12 PAD	<b>MD Reference:</b>	WELL @ 4978.00ft (Original Well Elev)
<b>Site Error:</b>	0.00ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	P_MIRACLE 10-12	<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 10-12	<b>Database:</b>	EDM 2003.21 Single User Db
<b>Reference Design:</b>	PLAN #1 3-23-10 RHS	<b>Offset TVD Reference:</b>	Offset Datum

Reference Depths are relative to WELL @ 4978.00ft (Original Well Elev) Coordinates are relative to: P\_MIRACLE 10-12  
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: 0.35°

