



US ROCKIES REGION PLANNING

COLORADO NORTHERN ZONE - 83

LARIMER_MIRACLE 40-12 PAD

P_MIRACLE 9-12

P_MIRACLE 9-12

Plan: PLAN #1 3-22-10 RHS

Standard Planning Report

23 March, 2010

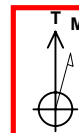




Project: COLORADO NORTHERN ZONE - 83
Site: LARIMER_MIRACLE 40-12 PAD
Well: P_MIRACLE 9-12
Wellbore: P_MIRACLE 9-12
Section: SECTION 12 T5N R68W
SHL: 2480 FSL 315 FEL
Design: PLAN #1 3-22-10 RHS
Latitude: 40° 24' 49.619 N
Longitude: 104° 56' 44.070 W
GL: 4948.00
KB: WELL @ 4963.00ft (Original Well Elev)



Weatherford®



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

FORMATION TOP DETAILS

TVDPath	MDPath	Formation
3490.00	3498.51	PARKMAN
4120.00	4130.59	SUSSEX
4570.00	4582.07	SHANNON
6910.00	6925.98	NIO A
7200.00	7215.98	CODELL
7660.00	7675.98	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
982.19	4.64	210.06	981.94	-8.14	-4.71	2.00	210.06	9.40	Start 4711.59 hold at 982.19 MD
5693.78	4.64	210.06	5678.06	-338.30	-195.78	0.00	0.00	390.86	Start Drop -2.00
5925.98	0.00	0.00	5910.00	-346.43	-200.49	2.00	180.00	400.27	Start 1900.00 hold at 5925.98 MD
7825.98	0.00	0.00	7810.00	-346.43	-200.49	0.00	0.00	400.27	TD at 7825.98

WELLBORE TARGET DETAILS (MAP CO-ORDINATES AND LAT/LONG)

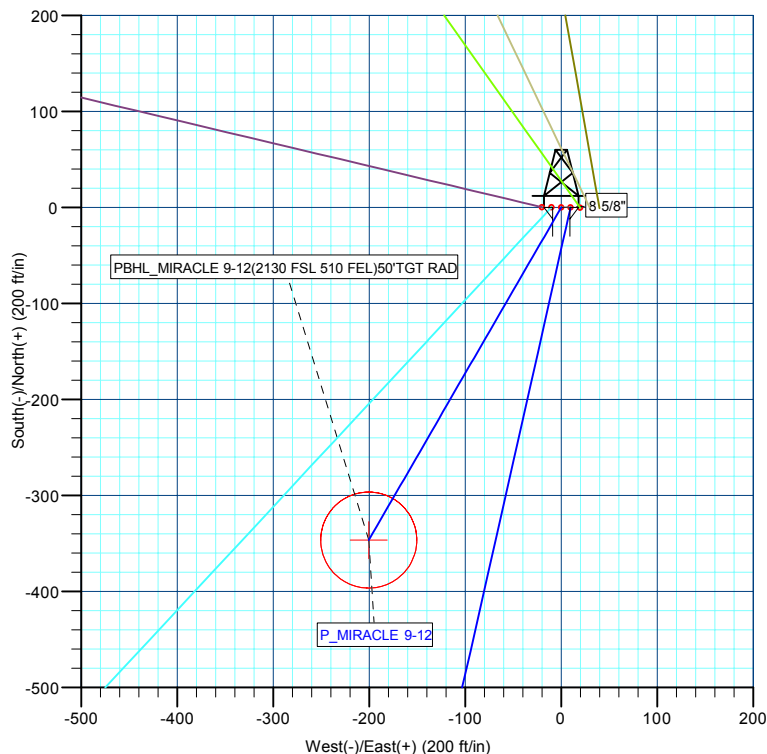
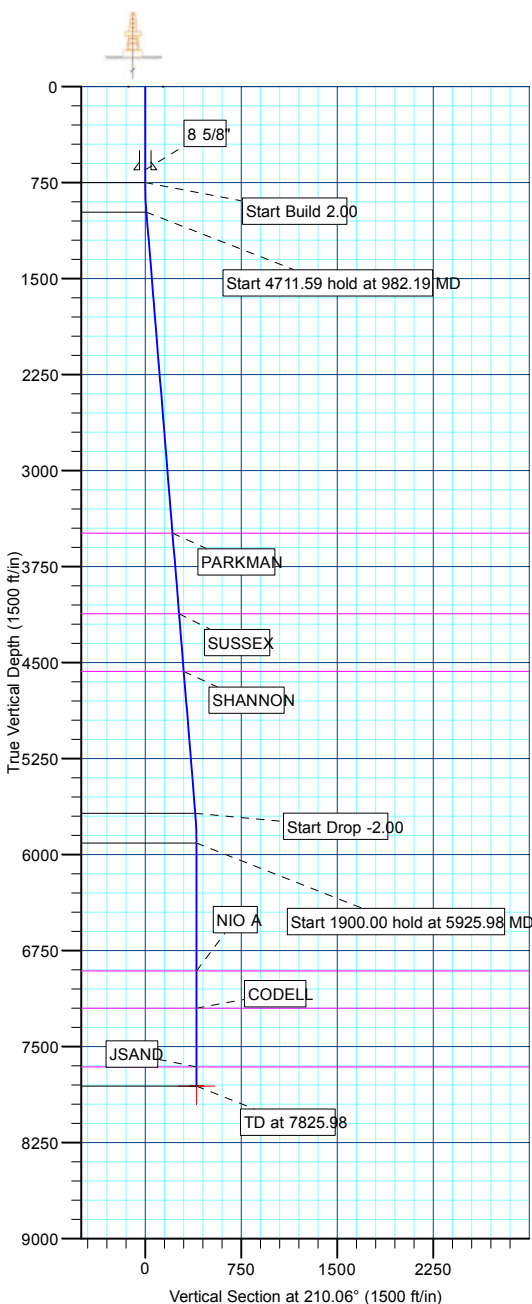
Name	TVD	+N/-S	+E/-W	Latitude	Longitude	Shape
PBHL	7810.00	-346.43	-200.49	40° 24' 46.195 N	104° 56' 46.662 W	Circle (Radius: 50.00)

WELL DETAILS: P_MIRACLE 9-12

+N/-S	+E/-W	Northing	Ground Level: Easting	4948.00 Latitude	Longitude	Slot
0.00	0.00	1394064.11	3154380.71	40° 24' 49.619 N	104° 56' 44.070 W	

LEGEND

- P_MIRACLE 1-12, P_MIRACLE 1-12, PLAN #1 3-22-10 RHS V0
- P_MIRACLE 16-12, P_MIRACLE 16-12, PLAN #1 3-22-10 RHS V0
- P_MIRACLE 17-12, P_MIRACLE 17-12, PLAN #1 3-22-10 RHS V0
- P_MIRACLE 20-12, P_MIRACLE 20-12, PLAN #1 3-22-10 RHS V0
- P_MIRACLE 24-12, P_MIRACLE 24-12, PLAN #1 3-22-10 RHS V0
- P_MIRACLE 8-12, P_MIRACLE 8-12, PLAN #1 3-22-10 RHS V0
- PLAN #1 3-22-10 RHS



Plan: PLAN #1 3-22-10 RHS (P_MIRACLE 9-12/P_MIRACLE 9-12)

Created By: Robert H. Scott Date: 8:26, March 23 2010

Database:	EDM 2003.21 Single User Db	Local Co-ordinate Reference:	Well P_MIRACLE 9-12
Company:	US ROCKIES REGION PLANNING	TVD Reference:	WELL @ 4963.00ft (Original Well Elev)
Project:	COLORADO NORTHERN ZONE - 83	MD Reference:	WELL @ 4963.00ft (Original Well Elev)
Site:	LARIMER_MIRACLE 40-12 PAD	North Reference:	True
Well:	P_MIRACLE 9-12	Survey Calculation Method:	Minimum Curvature
Wellbore:	P_MIRACLE 9-12		
Design:	PLAN #1 3-22-10 RHS		

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

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

Well	P_MIRACLE 9-12					
Well Position	+N/-S	0.72 ft	Northing:	1,394,064.11 ft	Latitude:	40° 24' 49.619 N
	+E/-W	-39.82 ft	Easting:	3,154,380.71 ft	Longitude:	104° 56' 44.070 W
Position Uncertainty		0.00 ft	Wellhead Elevation:	ft	Ground Level:	4,948.00 ft

Wellbore	P_MIRACLE 9-12				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	3/22/2010	9.13	67.07	53,248

Design	PLAN #1 3-22-10 RHS			
Audit Notes:				
Version:	Phase:	PLAN	Tie On Depth:	0.00
Vertical Section:	Depth From (TVD) (ft)	+N/-S (ft)	+E/-W (ft)	Direction (°)
	0.00	0.00	0.00	210.06

Plan Sections										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	TFO (°)	Target
0.00	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	
982.19	4.64	210.06	981.94	-8.14	-4.71	2.00	2.00	0.00	210.06	
5,693.78	4.64	210.06	5,678.06	-338.30	-195.78	0.00	0.00	0.00	0.00	
5,925.98	0.00	0.00	5,910.00	-346.43	-200.49	2.00	-2.00	0.00	180.00	
7,825.98	0.00	0.00	7,810.00	-346.43	-200.49	0.00	0.00	0.00	0.00	PBHL_MIRACLE 9-

Database:	EDM 2003.21 Single User Db	Local Co-ordinate Reference:	Well P_MIRACLE 9-12
Company:	US ROCKIES REGION PLANNING	TVD Reference:	WELL @ 4963.00ft (Original Well Elev)
Project:	COLORADO NORTHERN ZONE - 83	MD Reference:	WELL @ 4963.00ft (Original Well Elev)
Site:	LARIMER_MIRACLE 40-12 PAD	North Reference:	True
Well:	P_MIRACLE 9-12	Survey Calculation Method:	Minimum Curvature
Wellbore:	P_MIRACLE 9-12		
Design:	PLAN #1 3-22-10 RHS		

Planned Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
Start Build 2.00									
750.00	0.00	0.00	750.00	0.00	0.00	0.00	0.00	0.00	0.00
800.00	1.00	210.06	800.00	-0.38	-0.22	0.44	2.00	2.00	0.00
900.00	3.00	210.06	899.93	-3.40	-1.97	3.93	2.00	2.00	0.00
Start 4711.59 hold at 982.19 MD									
982.19	4.64	210.06	981.94	-8.14	-4.71	9.40	2.00	2.00	0.00
1,000.00	4.64	210.06	999.69	-9.39	-5.43	10.85	0.00	0.00	0.00
1,100.00	4.64	210.06	1,099.36	-16.39	-9.49	18.94	0.00	0.00	0.00
1,200.00	4.64	210.06	1,199.03	-23.40	-13.54	27.04	0.00	0.00	0.00
1,300.00	4.64	210.06	1,298.70	-30.41	-17.60	35.13	0.00	0.00	0.00
1,400.00	4.64	210.06	1,398.37	-37.42	-21.65	43.23	0.00	0.00	0.00
1,500.00	4.64	210.06	1,498.05	-44.42	-25.71	51.33	0.00	0.00	0.00
1,600.00	4.64	210.06	1,597.72	-51.43	-29.76	59.42	0.00	0.00	0.00
1,700.00	4.64	210.06	1,697.39	-58.44	-33.82	67.52	0.00	0.00	0.00
1,800.00	4.64	210.06	1,797.06	-65.45	-37.88	75.62	0.00	0.00	0.00
1,900.00	4.64	210.06	1,896.73	-72.45	-41.93	83.71	0.00	0.00	0.00
2,000.00	4.64	210.06	1,996.40	-79.46	-45.99	91.81	0.00	0.00	0.00
2,100.00	4.64	210.06	2,096.08	-86.47	-50.04	99.90	0.00	0.00	0.00
2,200.00	4.64	210.06	2,195.75	-93.48	-54.10	108.00	0.00	0.00	0.00
2,300.00	4.64	210.06	2,295.42	-100.48	-58.15	116.10	0.00	0.00	0.00
2,400.00	4.64	210.06	2,395.09	-107.49	-62.21	124.19	0.00	0.00	0.00
2,500.00	4.64	210.06	2,494.76	-114.50	-66.26	132.29	0.00	0.00	0.00
2,600.00	4.64	210.06	2,594.43	-121.50	-70.32	140.38	0.00	0.00	0.00
2,700.00	4.64	210.06	2,694.11	-128.51	-74.37	148.48	0.00	0.00	0.00
2,800.00	4.64	210.06	2,793.78	-135.52	-78.43	156.58	0.00	0.00	0.00
2,900.00	4.64	210.06	2,893.45	-142.53	-82.48	164.67	0.00	0.00	0.00
3,000.00	4.64	210.06	2,993.12	-149.53	-86.54	172.77	0.00	0.00	0.00
3,100.00	4.64	210.06	3,092.79	-156.54	-90.59	180.87	0.00	0.00	0.00
3,200.00	4.64	210.06	3,192.47	-163.55	-94.65	188.96	0.00	0.00	0.00
3,300.00	4.64	210.06	3,292.14	-170.56	-98.70	197.06	0.00	0.00	0.00
3,400.00	4.64	210.06	3,391.81	-177.56	-102.76	205.15	0.00	0.00	0.00
PARKMAN									
3,498.51	4.64	210.06	3,490.00	-184.47	-106.75	213.13	0.00	0.00	0.00
3,500.00	4.64	210.06	3,491.48	-184.57	-106.82	213.25	0.00	0.00	0.00
3,600.00	4.64	210.06	3,591.15	-191.58	-110.87	221.35	0.00	0.00	0.00
3,700.00	4.64	210.06	3,690.82	-198.58	-114.93	229.44	0.00	0.00	0.00
3,800.00	4.64	210.06	3,790.50	-205.59	-118.98	237.54	0.00	0.00	0.00
3,900.00	4.64	210.06	3,890.17	-212.60	-123.04	245.63	0.00	0.00	0.00
4,000.00	4.64	210.06	3,989.84	-219.61	-127.09	253.73	0.00	0.00	0.00
4,100.00	4.64	210.06	4,089.51	-226.61	-131.15	261.83	0.00	0.00	0.00
SUSSEX									
4,130.59	4.64	210.06	4,120.00	-228.76	-132.39	264.30	0.00	0.00	0.00
4,200.00	4.64	210.06	4,189.18	-233.62	-135.20	269.92	0.00	0.00	0.00
4,300.00	4.64	210.06	4,288.85	-240.63	-139.26	278.02	0.00	0.00	0.00
4,400.00	4.64	210.06	4,388.53	-247.64	-143.31	286.12	0.00	0.00	0.00
4,500.00	4.64	210.06	4,488.20	-254.64	-147.37	294.21	0.00	0.00	0.00
SHANNON									
4,582.07	4.64	210.06	4,570.00	-260.39	-150.70	300.86	0.00	0.00	0.00
4,600.00	4.64	210.06	4,587.87	-261.65	-151.42	302.31	0.00	0.00	0.00
4,700.00	4.64	210.06	4,687.54	-268.66	-155.48	310.40	0.00	0.00	0.00
4,800.00	4.64	210.06	4,787.21	-275.67	-159.53	318.50	0.00	0.00	0.00
4,900.00	4.64	210.06	4,886.88	-282.67	-163.59	326.60	0.00	0.00	0.00
5,000.00	4.64	210.06	4,986.56	-289.68	-167.64	334.69	0.00	0.00	0.00

Database:	EDM 2003.21 Single User Db	Local Co-ordinate Reference:	Well P_MIRACLE 9-12
Company:	US ROCKIES REGION PLANNING	TVD Reference:	WELL @ 4963.00ft (Original Well Elev)
Project:	COLORADO NORTHERN ZONE - 83	MD Reference:	WELL @ 4963.00ft (Original Well Elev)
Site:	LARIMER_MIRACLE 40-12 PAD	North Reference:	True
Well:	P_MIRACLE 9-12	Survey Calculation Method:	Minimum Curvature
Wellbore:	P_MIRACLE 9-12		
Design:	PLAN #1 3-22-10 RHS		

Planned Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
5,100.00	4.64	210.06	5,086.23	-296.69	-171.70	342.79	0.00	0.00	0.00
5,200.00	4.64	210.06	5,185.90	-303.69	-175.75	350.88	0.00	0.00	0.00
5,300.00	4.64	210.06	5,285.57	-310.70	-179.81	358.98	0.00	0.00	0.00
5,400.00	4.64	210.06	5,385.24	-317.71	-183.87	367.08	0.00	0.00	0.00
5,500.00	4.64	210.06	5,484.91	-324.72	-187.92	375.17	0.00	0.00	0.00
5,600.00	4.64	210.06	5,584.59	-331.72	-191.98	383.27	0.00	0.00	0.00
Start Drop -2.00									
5,693.78	4.64	210.06	5,678.06	-338.30	-195.78	390.86	0.00	0.00	0.00
5,700.00	4.52	210.06	5,684.26	-338.73	-196.03	391.36	2.00	-2.00	0.00
5,800.00	2.52	210.06	5,784.07	-344.04	-199.10	397.50	2.00	-2.00	0.00
5,900.00	0.52	210.06	5,884.02	-346.33	-200.43	400.15	2.00	-2.00	0.00
Start 1900.00 hold at 5925.98 MD									
5,925.98	0.00	0.00	5,910.00	-346.43	-200.49	400.27	2.00	-2.00	0.00
6,000.00	0.00	0.00	5,984.02	-346.43	-200.49	400.27	0.00	0.00	0.00
6,100.00	0.00	0.00	6,084.02	-346.43	-200.49	400.27	0.00	0.00	0.00
6,200.00	0.00	0.00	6,184.02	-346.43	-200.49	400.27	0.00	0.00	0.00
6,300.00	0.00	0.00	6,284.02	-346.43	-200.49	400.27	0.00	0.00	0.00
6,400.00	0.00	0.00	6,384.02	-346.43	-200.49	400.27	0.00	0.00	0.00
6,500.00	0.00	0.00	6,484.02	-346.43	-200.49	400.27	0.00	0.00	0.00
6,600.00	0.00	0.00	6,584.02	-346.43	-200.49	400.27	0.00	0.00	0.00
6,700.00	0.00	0.00	6,684.02	-346.43	-200.49	400.27	0.00	0.00	0.00
6,800.00	0.00	0.00	6,784.02	-346.43	-200.49	400.27	0.00	0.00	0.00
6,900.00	0.00	0.00	6,884.02	-346.43	-200.49	400.27	0.00	0.00	0.00
NIO A									
6,925.98	0.00	0.00	6,910.00	-346.43	-200.49	400.27	0.00	0.00	0.00
7,000.00	0.00	0.00	6,984.02	-346.43	-200.49	400.27	0.00	0.00	0.00
7,100.00	0.00	0.00	7,084.02	-346.43	-200.49	400.27	0.00	0.00	0.00
7,200.00	0.00	0.00	7,184.02	-346.43	-200.49	400.27	0.00	0.00	0.00
CODELL									
7,215.98	0.00	0.00	7,200.00	-346.43	-200.49	400.27	0.00	0.00	0.00
7,300.00	0.00	0.00	7,284.02	-346.43	-200.49	400.27	0.00	0.00	0.00
7,400.00	0.00	0.00	7,384.02	-346.43	-200.49	400.27	0.00	0.00	0.00
7,500.00	0.00	0.00	7,484.02	-346.43	-200.49	400.27	0.00	0.00	0.00
7,600.00	0.00	0.00	7,584.02	-346.43	-200.49	400.27	0.00	0.00	0.00
JSAND									
7,675.98	0.00	0.00	7,660.00	-346.43	-200.49	400.27	0.00	0.00	0.00
7,700.00	0.00	0.00	7,684.02	-346.43	-200.49	400.27	0.00	0.00	0.00
7,800.00	0.00	0.00	7,784.02	-346.43	-200.49	400.27	0.00	0.00	0.00
PBHL_MIRACLE 9-12(2130 FSL 510 FEL)50'TGT RAD									
7,825.98	0.00	0.00	7,810.00	-346.43	-200.49	400.27	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 9-12	0.00	0.00	7,810.00	-346.43	-200.49	1,393,716.43	3,154,182.39	40° 24' 46.195 N	104° 56' 46.662 W
- plan hits target center									
- Circle (radius 50.00)									

Database:	EDM 2003.21 Single User Db	Local Co-ordinate Reference:	Well P_MIRACLE 9-12
Company:	US ROCKIES REGION PLANNING	TVD Reference:	WELL @ 4963.00ft (Original Well Elev)
Project:	COLORADO NORTHERN ZONE - 83	MD Reference:	WELL @ 4963.00ft (Original Well Elev)
Site:	LARIMER_MIRACLE 40-12 PAD	North Reference:	True
Well:	P_MIRACLE 9-12	Survey Calculation Method:	Minimum Curvature
Wellbore:	P_MIRACLE 9-12		
Design:	PLAN #1 3-22-10 RHS		

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

Formations						
Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)	
3,498.51	3,490.00	PARKMAN				
4,130.59	4,120.00	SUSSEX				
4,582.07	4,570.00	SHANNON				
6,925.98	6,910.00	NIO A				
7,215.98	7,200.00	CODELL				
7,675.98	7,660.00	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	
982.19	981.94	-8.14	-4.71	Start 4711.59 hold at 982.19 MD	
5,693.78	5,678.06	-338.30	-195.78	Start Drop -2.00	
5,925.98	5,910.00	-346.43	-200.49	Start 1900.00 hold at 5925.98 MD	
7,825.98	7,810.00	-346.43	-200.49	TD at 7825.98	



US ROCKIES REGION PLANNING

**COLORADO NORTHERN ZONE - 83
LARIMER_MIRACLE 40-12 PAD
P_MIRACLE 9-12**

**P_MIRACLE 9-12
PLAN #1 3-22-10 RHS**

Anticollision Report

23 March, 2010



Company:	US ROCKIES REGION PLANNING	Local Co-ordinate Reference:	Well P_MIRACLE 9-12
Project:	COLORADO NORTHERN ZONE - 83	TVD Reference:	WELL @ 4963.00ft (Original Well Elev)
Reference Site:	LARIMER_MIRACLE 40-12 PAD	MD Reference:	WELL @ 4963.00ft (Original Well Elev)
Site Error:	0.00ft	North Reference:	True
Reference Well:	P_MIRACLE 9-12	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00ft	Output errors are at	2.00 sigma
Reference Wellbore	P_MIRACLE 9-12	Database:	EDM 2003.21 Single User Db
Reference Design:	PLAN #1 3-22-10 RHS	Offset TVD Reference:	Offset Datum

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

Survey Tool Program	Date 3/22/2010			
From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description
0.00	7,825.98	PLAN #1 3-22-10 RHS (P_MIRACLE 9-12	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
LARIMER_MIRACLE 40-12 PAD						
P_MIRACLE 1-12 - P_MIRACLE 1-12 - PLAN #1 3-22-1C	509.01	509.19	39.09	37.05	19.205	CC, ES
P_MIRACLE 1-12 - P_MIRACLE 1-12 - PLAN #1 3-22-1C	700.00	698.48	44.01	41.10	15.091	SF
P_MIRACLE 16-12 - P_MIRACLE 16-12 - PLAN #1 3-22	750.00	750.00	9.75	6.63	3.131	CC
P_MIRACLE 16-12 - P_MIRACLE 16-12 - PLAN #1 3-22	800.00	800.04	9.87	6.56	2.982	ES
P_MIRACLE 16-12 - P_MIRACLE 16-12 - PLAN #1 3-22	900.00	900.10	10.86	7.19	2.964	SF
P_MIRACLE 17-12 - P_MIRACLE 17-12 - PLAN #1 3-22	815.88	816.13	19.73	16.35	5.827	CC, ES
P_MIRACLE 17-12 - P_MIRACLE 17-12 - PLAN #1 3-22	900.00	900.32	20.44	16.73	5.497	SF
P_MIRACLE 20-12 - P_MIRACLE 20-12 - PLAN #1 3-22	750.00	750.00	10.03	6.92	3.222	CC
P_MIRACLE 20-12 - P_MIRACLE 20-12 - PLAN #1 3-22	800.00	799.89	10.11	6.80	3.054	ES
P_MIRACLE 20-12 - P_MIRACLE 20-12 - PLAN #1 3-22	900.00	899.65	10.76	7.09	2.932	SF
P_MIRACLE 24-12 - P_MIRACLE 24-12 - PLAN #1 3-22	750.00	750.00	20.05	16.94	6.441	CC, ES
P_MIRACLE 24-12 - P_MIRACLE 24-12 - PLAN #1 3-22	900.00	898.84	22.36	18.66	6.044	SF
P_MIRACLE 8-12 - P_MIRACLE 8-12 - PLAN #1 3-22-1C	750.00	750.00	29.80	26.68	9.572	CC
P_MIRACLE 8-12 - P_MIRACLE 8-12 - PLAN #1 3-22-1C	800.00	800.22	29.83	26.50	8.974	ES
P_MIRACLE 8-12 - P_MIRACLE 8-12 - PLAN #1 3-22-1C	900.00	900.37	30.77	27.05	8.267	SF

Offset Design LARIMER_MIRACLE 40-12 PAD - P_MIRACLE 1-12 - P_MIRACLE 1-12 - PLAN #1 3-22-10 RHS											
Survey Program: 0-MWD											
Reference											
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)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Minimum Separation (ft)
0.00	0.00	0.00	0.00	0.00	0.00	91.03	-0.72	39.82	39.83		
100.00	100.00	100.00	100.00	0.10	0.10	91.03	-0.72	39.82	39.83	39.63	0.19
200.00	200.00	200.00	200.00	0.32	0.32	91.03	-0.72	39.82	39.83	39.18	0.64
300.00	300.00	300.00	300.00	0.55	0.55	91.03	-0.72	39.82	39.83	38.74	1.09
400.00	400.00	400.23	400.21	0.77	0.77	88.54	1.01	39.51	39.53	37.99	1.54
500.00	500.00	500.21	500.04	0.99	1.00	80.92	6.17	38.60	39.09	37.10	1.99
509.01	509.01	509.19	509.01	1.01	1.02	79.98	6.80	38.49	39.09	37.05	2.04
600.00	600.00	599.70	599.16	1.22	1.24	68.37	14.71	37.09	39.91	37.46	2.45
700.00	700.00	698.48	697.20	1.44	1.51	52.84	26.53	35.00	44.01	41.10	2.92
750.00	750.00	747.53	745.71	1.56	1.67	45.10	33.64	33.75	47.84	44.70	3.15
800.00	800.00	796.25	793.77	1.66	1.82	-172.16	41.50	32.36	53.42	50.00	3.42
900.00	899.93	892.32	888.10	1.83	2.16	176.31	59.37	29.20	71.07	67.23	3.83
982.19	981.94	969.58	963.50	1.99	2.48	169.96	75.99	26.26	91.53	87.35	4.18
											21.913

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

Company:	US ROCKIES REGION PLANNING	Local Co-ordinate Reference:	Well P_MIRACLE 9-12
Project:	COLORADO NORTHERN ZONE - 83	TVD Reference:	WELL @ 4963.00ft (Original Well Elev)
Reference Site:	LARIMER_MIRACLE 40-12 PAD	MD Reference:	WELL @ 4963.00ft (Original Well Elev)
Site Error:	0.00ft	North Reference:	True
Reference Well:	P_MIRACLE 9-12	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00ft	Output errors are at	2.00 sigma
Reference Wellbore	P_MIRACLE 9-12	Database:	EDM 2003.21 Single User Db
Reference Design:	PLAN #1 3-22-10 RHS	Offset TVD Reference:	Offset Datum

Offset Design LARIMER_MIRACLE 40-12 PAD - P_MIRACLE 1-12 - P_MIRACLE 1-12 - PLAN #1 3-22-10 RHS												Offset Site Error:	0.00 ft
Survey Program: 0-MWD												Offset Well Error:	0.00 ft
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Semi Major Axis Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning
1,000.00	999.69	986.10	979.56	2.03	2.55	168.89	79.80	25.59	96.55	92.30	4.25	22.703	
1,100.00	1,099.36	1,077.76	1,068.24	2.24	2.98	164.19	102.61	21.56	126.87	122.17	4.69	27.040	
1,200.00	1,199.03	1,167.43	1,154.24	2.47	3.44	160.93	127.62	17.14	160.49	155.35	5.14	31.222	
1,300.00	1,298.70	1,255.01	1,237.42	2.70	3.94	158.52	154.59	12.38	197.18	191.58	5.60	35.236	
1,400.00	1,398.37	1,340.41	1,317.69	2.94	4.48	156.68	183.29	7.30	236.77	230.71	6.06	39.091	
1,500.00	1,498.05	1,423.57	1,394.99	3.19	5.04	155.22	213.49	1.97	279.12	272.59	6.52	42.800	
1,600.00	1,597.72	1,504.43	1,469.26	3.44	5.62	154.04	244.96	-3.59	324.09	317.10	6.99	46.380	
1,700.00	1,697.39	1,590.11	1,547.25	3.70	6.28	153.00	279.91	-9.77	370.95	363.47	7.48	49.606	
1,800.00	1,797.06	1,678.22	1,627.40	3.96	6.97	152.16	315.93	-16.13	417.98	410.00	7.98	52.369	
1,900.00	1,896.73	1,766.32	1,707.55	4.22	7.66	151.50	351.95	-22.50	465.07	456.58	8.49	54.783	
2,000.00	1,996.40	1,854.43	1,787.70	4.48	8.35	150.95	387.97	-28.86	512.19	503.19	9.00	56.905	
2,100.00	2,096.08	1,942.53	1,867.85	4.74	9.05	150.50	423.99	-35.23	559.35	549.83	9.52	58.781	
2,200.00	2,195.75	2,030.63	1,948.01	5.01	9.76	150.12	460.01	-41.59	606.53	596.50	10.03	60.450	
2,300.00	2,295.42	2,118.74	2,028.16	5.27	10.46	149.79	496.03	-47.96	653.73	643.17	10.55	61.943	
2,400.00	2,395.09	2,206.84	2,108.31	5.54	11.16	149.51	532.05	-54.32	700.94	689.87	11.08	63.286	
2,500.00	2,494.76	2,294.95	2,188.46	5.81	11.87	149.26	568.07	-60.69	748.16	736.57	11.60	64.498	
2,600.00	2,594.43	2,383.05	2,268.61	6.08	12.58	149.04	604.09	-67.05	795.40	783.27	12.13	65.597	
2,700.00	2,694.11	2,471.15	2,348.77	6.35	13.29	148.85	640.11	-73.42	842.64	829.99	12.65	66.599	
2,800.00	2,793.78	2,559.26	2,428.92	6.62	14.00	148.68	676.13	-79.78	889.89	876.71	13.18	67.515	
2,900.00	2,893.45	2,647.36	2,509.07	6.89	14.71	148.52	712.15	-86.15	937.14	923.43	13.71	68.355	
3,000.00	2,993.12	2,735.47	2,589.22	7.16	15.42	148.38	748.17	-92.51	984.40	970.16	14.24	69.129	
3,100.00	3,092.79	2,823.57	2,669.37	7.43	16.13	148.25	784.19	-98.88	1,031.66	1,016.89	14.77	69.844	
3,200.00	3,192.47	2,911.67	2,749.53	7.70	16.84	148.14	820.21	-105.24	1,078.93	1,063.63	15.30	70.506	
3,300.00	3,292.14	2,999.78	2,829.68	7.97	17.56	148.03	856.23	-111.61	1,126.20	1,110.36	15.84	71.121	
3,400.00	3,391.81	3,087.88	2,909.83	8.25	18.27	147.93	892.25	-117.97	1,173.47	1,157.10	16.37	71.693	
3,500.00	3,491.48	3,175.98	2,989.98	8.52	18.98	147.84	928.27	-124.34	1,220.75	1,203.85	16.90	72.226	
3,600.00	3,591.15	3,264.09	3,070.13	8.79	19.70	147.76	964.29	-130.70	1,268.02	1,250.59	17.44	72.725	
3,700.00	3,690.82	3,352.19	3,150.29	9.06	20.41	147.68	1,000.31	-137.07	1,315.30	1,297.33	17.97	73.193	
3,800.00	3,790.50	3,440.30	3,230.44	9.34	21.13	147.61	1,036.33	-143.43	1,362.58	1,344.08	18.51	73.632	
3,900.00	3,890.17	3,528.40	3,310.59	9.61	21.84	147.54	1,072.35	-149.80	1,409.87	1,390.83	19.04	74.045	
4,000.00	3,989.84	3,616.50	3,390.74	9.88	22.55	147.48	1,108.37	-156.16	1,457.15	1,437.57	19.58	74.434	
4,100.00	4,089.51	3,704.61	3,470.89	10.16	23.27	147.42	1,144.39	-162.53	1,504.44	1,484.32	20.11	74.801	
4,200.00	4,189.18	3,792.71	3,551.05	10.43	23.98	147.36	1,180.41	-168.89	1,551.72	1,531.07	20.65	75.148	
4,300.00	4,288.85	3,880.82	3,631.20	10.71	24.70	147.31	1,216.43	-175.26	1,599.01	1,577.82	21.19	75.477	
4,400.00	4,388.53	3,968.92	3,711.35	10.98	25.41	147.26	1,252.45	-181.62	1,646.30	1,624.58	21.72	75.788	
4,500.00	4,488.20	4,057.02	3,791.50	11.25	26.13	147.21	1,288.47	-187.99	1,693.59	1,671.33	22.26	76.084	
4,600.00	4,587.87	4,145.13	3,871.65	11.53	26.84	147.17	1,324.49	-194.35	1,740.88	1,718.08	22.80	76.365	
4,700.00	4,687.54	4,233.23	3,951.81	11.80	27.56	147.13	1,360.51	-200.72	1,788.17	1,764.83	23.33	76.633	
4,800.00	4,787.21	4,321.34	4,031.96	12.08	28.27	147.09	1,396.53	-207.08	1,835.46	1,811.59	23.87	76.888	
4,900.00	4,886.88	4,409.44	4,112.11	12.35	28.99	147.05	1,432.55	-213.45	1,882.75	1,858.34	24.41	77.131	
5,000.00	4,986.56	4,497.54	4,192.26	12.63	29.70	147.01	1,468.57	-219.81	1,930.04	1,905.10	24.95	77.363	
5,100.00	5,086.23	4,585.65	4,272.41	12.90	30.42	146.98	1,504.59	-226.18	1,977.34	1,951.85	25.49	77.585	
5,200.00	5,185.90	4,673.75	4,352.57	13.18	31.14	146.95	1,540.61	-232.54	2,024.63	1,998.61	26.02	77.797	
5,300.00	5,285.57	4,761.85	4,432.72	13.45	31.85	146.92	1,576.63	-238.91	2,071.93	2,045.36	26.56	78.000	
5,400.00	5,385.24	4,849.96	4,512.87	13.72	32.57	146.89	1,612.65	-245.27	2,119.22	2,092.12	27.10	78.195	
5,500.00	5,484.91	4,938.06	4,593.02	14.00	33.28	146.86	1,648.67	-251.64	2,166.52	2,138.87	27.64	78.382	
5,600.00	5,584.59	5,026.17	4,673.17	14.27	34.00	146.83	1,684.69	-258.00	2,213.81	2,185.63	28.18	78.561	
5,693.78	5,678.06	5,108.79	4,748.34	14.53	34.67	146.81	1,718.47	-263.97	2,258.17	2,229.48	28.68	78.723	
5,700.00	5,684.26	5,114.27	4,753.33	14.55	34.72	146.84	1,720.71	-264.37	2,261.10	2,232.37	28.73	78.692	
5,800.00	5,784.07	5,203.12	4,834.16	14.73	35.44	147.35	1,757.04	-270.79	2,306.94	2,277.46	29.48	78.256	
5,900.00	5,884.02	5,293.22	4,916.12	14.90	36.17	147.76	1,793.87	-277.29	2,350.15	2,319.96	30.20	77.828	
5,925.98	5,910.00	5,316.81	4,937.59	14.95	36.36	-2.09	1,803.52	-279.00	2,360.94	2,330.56	30.38	77.708	

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

Company:	US ROCKIES REGION PLANNING	Local Co-ordinate Reference:	Well P_MIRACLE 9-12
Project:	COLORADO NORTHERN ZONE - 83	TVD Reference:	WELL @ 4963.00ft (Original Well Elev)
Reference Site:	LARIMER_MIRACLE 40-12 PAD	MD Reference:	WELL @ 4963.00ft (Original Well Elev)
Site Error:	0.00ft	North Reference:	True
Reference Well:	P_MIRACLE 9-12	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00ft	Output errors are at	2.00 sigma
Reference Wellbore	P_MIRACLE 9-12	Database:	EDM 2003.21 Single User Db
Reference Design:	PLAN #1 3-22-10 RHS	Offset TVD Reference:	Offset Datum

Offset Design LARIMER_MIRACLE 40-12 PAD - P_MIRACLE 1-12 - P_MIRACLE 1-12 - PLAN #1 3-22-10 RHS												Offset Site Error:	0.00 ft
Survey Program: 0-MWD												Offset Well Error:	0.00 ft
Reference		Offset		Semi Major Axis			Distance						
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning
6,000.00	5,984.02	5,384.15	4,998.85	15.07	36.91	-2.19	1,831.05	-283.86	2,391.43	2,360.69	30.75	77.779	
6,100.00	6,084.02	5,475.13	5,081.61	15.23	37.65	-2.33	1,868.24	-290.44	2,432.63	2,401.41	31.22	77.909	
6,200.00	6,184.02	5,918.20	5,495.65	15.39	40.21	-2.83	2,022.42	-317.68	2,469.63	2,436.99	32.64	75.654	
6,300.00	6,284.02	6,618.14	6,184.65	15.55	42.22	-3.16	2,133.61	-337.33	2,485.81	2,451.63	34.18	72.724	
6,400.00	6,384.02	6,817.54	6,384.02	15.71	42.39	-3.16	2,135.90	-337.73	2,486.13	2,451.51	34.62	71.819	
6,500.00	6,484.02	6,917.54	6,484.02	15.87	42.46	-3.16	2,135.90	-337.73	2,486.13	2,451.19	34.94	71.158	
6,600.00	6,584.02	7,017.54	6,584.02	16.03	42.52	-3.16	2,135.90	-337.73	2,486.13	2,450.86	35.26	70.503	
6,700.00	6,684.02	7,117.54	6,684.02	16.20	42.59	-3.16	2,135.90	-337.73	2,486.13	2,450.54	35.59	69.855	
6,800.00	6,784.02	7,217.54	6,784.02	16.37	42.66	-3.16	2,135.90	-337.73	2,486.13	2,450.21	35.92	69.214	
6,900.00	6,884.02	7,317.54	6,884.02	16.53	42.73	-3.16	2,135.90	-337.73	2,486.13	2,449.87	36.25	68.580	
7,000.00	6,984.02	7,417.54	6,984.02	16.70	42.81	-3.16	2,135.90	-337.73	2,486.13	2,449.54	36.59	67.953	
7,100.00	7,084.02	7,517.54	7,084.02	16.87	42.88	-3.16	2,135.90	-337.73	2,486.13	2,449.20	36.92	67.333	
7,200.00	7,184.02	7,617.54	7,184.02	17.05	42.95	-3.16	2,135.90	-337.73	2,486.13	2,448.86	37.26	66.720	
7,300.00	7,284.02	7,717.54	7,284.02	17.22	43.03	-3.16	2,135.90	-337.73	2,486.13	2,448.52	37.60	66.114	
7,400.00	7,384.02	7,817.54	7,384.02	17.39	43.10	-3.16	2,135.90	-337.73	2,486.13	2,448.18	37.95	65.515	
7,500.00	7,484.02	7,917.54	7,484.02	17.57	43.18	-3.16	2,135.90	-337.73	2,486.13	2,447.83	38.29	64.924	
7,600.00	7,584.02	8,017.54	7,584.02	17.75	43.26	-3.16	2,135.90	-337.73	2,486.13	2,447.49	38.64	64.340	
7,700.00	7,684.02	8,117.54	7,684.02	17.92	43.34	-3.16	2,135.90	-337.73	2,486.13	2,447.14	38.99	63.762	
7,800.00	7,784.02	8,217.54	7,784.02	18.10	43.42	-3.16	2,135.90	-337.73	2,486.13	2,446.78	39.34	63.192	
7,825.98	7,810.00	8,243.52	7,810.00	18.15	43.44	-3.16	2,135.90	-337.73	2,486.13	2,446.69	39.43	63.045	

Company:	US ROCKIES REGION PLANNING	Local Co-ordinate Reference:	Well P_MIRACLE 9-12
Project:	COLORADO NORTHERN ZONE - 83	TVD Reference:	WELL @ 4963.00ft (Original Well Elev)
Reference Site:	LARIMER_MIRACLE 40-12 PAD	MD Reference:	WELL @ 4963.00ft (Original Well Elev)
Site Error:	0.00ft	North Reference:	True
Reference Well:	P_MIRACLE 9-12	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00ft	Output errors are at	2.00 sigma
Reference Wellbore	P_MIRACLE 9-12	Database:	EDM 2003.21 Single User Db
Reference Design:	PLAN #1 3-22-10 RHS	Offset TVD Reference:	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
0.00	0.00	0.00	0.00	0.00	0.00	90.00	0.00	9.75	9.75				
100.00	100.00	100.00	100.00	0.10	0.10	90.00	0.00	9.75	9.75	9.55	0.19	51.012	
200.00	200.00	200.00	200.00	0.32	0.32	90.00	0.00	9.75	9.75	9.11	0.64	15.214	
300.00	300.00	300.00	300.00	0.55	0.55	90.00	0.00	9.75	9.75	8.66	1.09	8.940	
400.00	400.00	400.00	400.00	0.77	0.77	90.00	0.00	9.75	9.75	8.21	1.54	6.330	
500.00	500.00	500.00	500.00	0.99	0.99	90.00	0.00	9.75	9.75	7.76	1.99	4.899	
600.00	600.00	600.00	600.00	1.22	1.22	90.00	0.00	9.75	9.75	7.31	2.44	3.996	
700.00	700.00	700.00	700.00	1.44	1.44	90.00	0.00	9.75	9.75	6.86	2.89	3.374	
750.00	750.00	750.00	750.00	1.56	1.56	90.00	0.00	9.75	9.75	6.63	3.11	3.131 CC	
800.00	800.00	800.04	800.03	1.66	1.65	-119.78	-0.43	9.65	9.87	6.56	3.31	2.982 ES	
900.00	899.93	900.10	900.03	1.83	1.83	-117.74	-3.84	8.88	10.86	7.19	3.66	2.964 SF	
982.19	981.94	982.33	982.08	1.99	1.99	-115.21	-9.19	7.67	12.43	8.45	3.98	3.126	
1,000.00	999.69	1,000.14	999.83	2.03	2.02	-114.41	-10.65	7.35	12.84	8.79	4.05	3.173	
1,100.00	1,099.36	1,100.09	1,099.22	2.24	2.24	-102.97	-20.84	5.05	15.20	10.72	4.48	3.395	
1,200.00	1,199.03	1,199.72	1,197.88	2.47	2.49	-84.60	-34.36	2.00	19.05	14.11	4.95	3.853	
1,300.00	1,298.70	1,298.81	1,295.46	2.70	2.78	-66.96	-51.12	-1.78	26.26	20.85	5.41	4.854	
1,400.00	1,398.37	1,397.11	1,391.63	2.94	3.12	-54.09	-70.99	-6.26	37.55	31.69	5.86	6.410	
1,500.00	1,498.05	1,494.42	1,486.07	3.19	3.51	-45.53	-93.82	-11.41	52.80	46.50	6.30	8.379	
1,600.00	1,597.72	1,590.52	1,578.52	3.44	3.95	-39.81	-119.42	-17.18	71.76	65.01	6.75	10.630	
1,700.00	1,697.39	1,685.23	1,668.71	3.70	4.45	-35.86	-147.60	-23.54	94.22	87.01	7.21	13.070	
1,800.00	1,797.06	1,778.37	1,756.43	3.96	4.99	-33.02	-178.13	-30.42	120.02	112.34	7.68	15.637	
1,900.00	1,896.73	1,869.80	1,841.50	4.22	5.58	-30.91	-210.79	-37.78	149.01	140.86	8.15	18.286	
2,000.00	1,996.40	1,959.37	1,923.77	4.48	6.20	-29.29	-245.34	-45.58	181.09	172.46	8.63	20.991	
2,100.00	2,096.08	2,052.98	2,009.07	4.74	6.90	-28.00	-282.93	-54.05	214.91	205.78	9.13	23.541	
2,200.00	2,195.75	2,146.99	2,094.74	5.01	7.61	-27.06	-320.70	-62.57	248.81	239.17	9.64	25.810	
2,300.00	2,295.42	2,241.00	2,180.41	5.27	8.33	-26.35	-358.46	-71.08	282.75	272.59	10.16	27.836	
2,400.00	2,395.09	2,335.01	2,266.08	5.54	9.06	-25.79	-396.23	-79.60	316.73	306.04	10.68	29.651	
2,500.00	2,494.76	2,429.02	2,351.75	5.81	9.79	-25.33	-433.99	-88.11	350.72	339.51	11.21	31.286	
2,600.00	2,594.43	2,523.03	2,437.42	6.08	10.53	-24.96	-471.76	-96.63	384.74	372.99	11.74	32.764	
2,700.00	2,694.11	2,617.04	2,523.09	6.35	11.27	-24.65	-509.52	-105.15	418.76	406.48	12.28	34.105	
2,800.00	2,793.78	2,711.05	2,608.76	6.62	12.02	-24.38	-547.29	-113.66	452.80	439.98	12.82	35.327	
2,900.00	2,893.45	2,805.06	2,694.43	6.89	12.76	-24.15	-585.05	-122.18	486.84	473.48	13.36	36.443	
3,000.00	2,993.12	2,899.07	2,780.10	7.16	13.51	-23.95	-622.82	-130.69	520.89	506.98	13.90	37.467	
3,100.00	3,092.79	2,993.08	2,865.77	7.43	14.26	-23.78	-660.58	-139.21	554.94	540.49	14.45	38.409	
3,200.00	3,192.47	3,087.10	2,951.44	7.70	15.01	-23.63	-698.35	-147.72	589.00	574.00	15.00	39.278	
3,300.00	3,292.14	3,181.11	3,037.11	7.97	15.77	-23.49	-736.11	-156.24	623.06	607.51	15.54	40.083	
3,400.00	3,391.81	3,275.12	3,122.78	8.25	16.52	-23.37	-773.87	-164.75	657.12	641.02	16.09	40.829	
3,500.00	3,491.48	3,369.13	3,208.45	8.52	17.28	-23.26	-811.64	-173.27	691.18	674.54	16.65	41.523	
3,600.00	3,591.15	3,463.14	3,294.12	8.79	18.03	-23.15	-849.40	-181.78	725.25	708.05	17.20	42.170	
3,700.00	3,690.82	3,557.15	3,379.79	9.06	18.79	-23.06	-887.17	-190.30	759.32	741.57	17.75	42.775	
3,800.00	3,790.50	3,651.16	3,465.46	9.34	19.55	-22.98	-924.93	-198.82	793.39	775.09	18.31	43.341	
3,900.00	3,890.17	3,745.17	3,551.13	9.61	20.31	-22.90	-962.70	-207.33	827.46	808.60	18.86	43.872	
4,000.00	3,989.84	3,839.18	3,636.80	9.88	21.07	-22.83	-1,000.46	-215.85	861.54	842.12	19.42	44.371	
4,100.00	4,089.51	3,933.19	3,722.48	10.16	21.82	-22.77	-1,038.23	-224.36	895.61	875.64	19.97	44.841	
4,200.00	4,189.18	4,027.20	3,808.15	10.43	22.58	-22.71	-1,075.99	-232.88	929.69	909.16	20.53	45.284	
4,300.00	4,288.85	4,121.22	3,893.82	10.71	23.34	-22.65	-1,113.76	-241.39	963.76	942.68	21.09	45.703	
4,400.00	4,388.53	4,215.23	3,979.49	10.98	24.10	-22.60	-1,151.52	-249.91	997.84	976.19	21.65	46.099	
4,500.00	4,488.20	4,309.24	4,065.16	11.25	24.86	-22.55	-1,189.29	-258.42	1,031.92	1,009.71	22.20	46.474	
4,600.00	4,587.87	4,403.25	4,150.83	11.53	25.63	-22.50	-1,227.05	-266.94	1,066.00	1,043.23	22.76	46.830	
4,700.00	4,687.54	4,497.26	4,236.50	11.80	26.39	-22.46	-1,264.81	-275.46	1,100.07	1,076.75	23.32	47.168	
4,800.00	4,787.21	4,591.27	4,322.17	12.08	27.15	-22.42	-1,302.58	-283.97	1,134.15	1,110.27	23.88	47.489	
4,900.00	4,886.88	4,685.28	4,407.84	12.35	27.91	-22.38	-1,340.34	-292.49	1,168.23	1,143.79	24.44	47.795	

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

Company:	US ROCKIES REGION PLANNING	Local Co-ordinate Reference:	Well P_MIRACLE 9-12
Project:	COLORADO NORTHERN ZONE - 83	TVD Reference:	WELL @ 4963.00ft (Original Well Elev)
Reference Site:	LARIMER_MIRACLE 40-12 PAD	MD Reference:	WELL @ 4963.00ft (Original Well Elev)
Site Error:	0.00ft	North Reference:	True
Reference Well:	P_MIRACLE 9-12	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00ft	Output errors are at	2.00 sigma
Reference Wellbore	P_MIRACLE 9-12	Database:	EDM 2003.21 Single User Db
Reference Design:	PLAN #1 3-22-10 RHS	Offset TVD Reference:	Offset Datum

Offset Design LARIMER_MIRACLE 40-12 PAD - P_MIRACLE 16-12 - P_MIRACLE 16-12 - PLAN #1 3-22-10 RHS												Offset Site Error:	0.00 ft
Survey Program: 0-MWD												Offset Well Error:	0.00 ft
Reference	Offset	Semi Major Axis		Distance									
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning
5,000.00	4,986.56	4,779.29	4,493.51	12.63	28.67	-22.35	-1,378.11	-301.00	1,202.31	1,177.31	25.00	48.087	
5,100.00	5,086.23	4,873.30	4,579.18	12.90	29.43	-22.31	-1,415.87	-309.52	1,236.39	1,210.83	25.56	48.365	
5,200.00	5,185.90	4,967.31	4,664.85	13.18	30.20	-22.28	-1,453.64	-318.03	1,270.48	1,244.35	26.12	48.631	
5,300.00	5,285.57	5,061.32	4,750.52	13.45	30.96	-22.25	-1,491.40	-326.55	1,304.56	1,277.87	26.69	48.886	
5,400.00	5,385.24	5,155.34	4,836.19	13.72	31.72	-22.22	-1,529.17	-335.06	1,338.64	1,311.39	27.25	49.129	
5,500.00	5,484.91	5,250.90	4,923.27	14.00	32.49	-22.19	-1,567.55	-343.72	1,372.72	1,344.91	27.81	49.354	
5,600.00	5,584.59	5,434.74	5,093.20	14.27	33.53	-22.17	-1,635.92	-359.14	1,403.69	1,375.06	28.62	49.039	
5,693.78	5,678.06	5,613.61	5,262.51	14.53	34.38	-22.18	-1,692.11	-371.81	1,427.05	1,397.69	29.36	48.600	
5,700.00	5,684.26	5,625.66	5,274.04	14.55	34.44	-22.20	-1,695.52	-372.57	1,428.40	1,399.00	29.40	48.583	
5,800.00	5,784.07	5,821.73	5,463.57	14.73	35.21	-22.36	-1,744.36	-383.59	1,448.32	1,418.38	29.94	48.372	
5,900.00	5,884.02	6,021.65	5,659.88	14.90	35.84	-22.43	-1,781.01	-391.85	1,464.65	1,434.27	30.38	48.209	
5,925.98	5,910.00	6,074.13	5,711.81	14.95	35.97	-172.38	-1,788.42	-393.52	1,468.28	1,437.80	30.48	48.168	
6,000.00	5,984.02	6,224.91	5,861.67	15.07	36.28	-172.32	-1,804.50	-397.15	1,476.35	1,445.45	30.90	47.776	
6,100.00	6,084.02	6,430.57	6,067.06	15.23	36.55	-172.29	-1,814.01	-399.29	1,481.07	1,449.67	31.40	47.167	
6,200.00	6,184.02	6,547.54	6,184.02	15.39	36.63	-172.28	-1,814.19	-399.33	1,481.16	1,449.42	31.74	46.661	
6,300.00	6,284.02	6,647.54	6,284.02	15.55	36.70	-172.28	-1,814.19	-399.33	1,481.16	1,449.10	32.06	46.201	
6,400.00	6,384.02	6,747.54	6,384.02	15.71	36.76	-172.28	-1,814.19	-399.33	1,481.16	1,448.79	32.38	45.745	
6,500.00	6,484.02	6,847.54	6,484.02	15.87	36.83	-172.28	-1,814.19	-399.33	1,481.16	1,448.46	32.70	45.295	
6,600.00	6,584.02	6,947.54	6,584.02	16.03	36.90	-172.28	-1,814.19	-399.33	1,481.16	1,448.14	33.03	44.849	
6,700.00	6,684.02	7,047.54	6,684.02	16.20	36.97	-172.28	-1,814.19	-399.33	1,481.16	1,447.81	33.35	44.409	
6,800.00	6,784.02	7,147.54	6,784.02	16.37	37.04	-172.28	-1,814.19	-399.33	1,481.16	1,447.48	33.68	43.973	
6,900.00	6,884.02	7,247.54	6,884.02	16.53	37.11	-172.28	-1,814.19	-399.33	1,481.16	1,447.15	34.02	43.542	
7,000.00	6,984.02	7,347.54	6,984.02	16.70	37.18	-172.28	-1,814.19	-399.33	1,481.16	1,446.81	34.35	43.117	
7,100.00	7,084.02	7,447.54	7,084.02	16.87	37.26	-172.28	-1,814.19	-399.33	1,481.16	1,446.47	34.69	42.697	
7,200.00	7,184.02	7,547.54	7,184.02	17.05	37.33	-172.28	-1,814.19	-399.33	1,481.16	1,446.13	35.03	42.282	
7,300.00	7,284.02	7,647.54	7,284.02	17.22	37.41	-172.28	-1,814.19	-399.33	1,481.16	1,445.79	35.37	41.872	
7,400.00	7,384.02	7,747.54	7,384.02	17.39	37.49	-172.28	-1,814.19	-399.33	1,481.16	1,445.45	35.72	41.468	
7,500.00	7,484.02	7,847.54	7,484.02	17.57	37.57	-172.28	-1,814.19	-399.33	1,481.16	1,445.10	36.07	41.069	
7,600.00	7,584.02	7,947.54	7,584.02	17.75	37.65	-172.28	-1,814.19	-399.33	1,481.16	1,444.75	36.41	40.675	
7,700.00	7,684.02	8,047.54	7,684.02	17.92	37.73	-172.28	-1,814.19	-399.33	1,481.16	1,444.40	36.77	40.286	
7,800.00	7,784.02	8,147.54	7,784.02	18.10	37.81	-172.28	-1,814.19	-399.33	1,481.16	1,444.04	37.12	39.902	
7,825.98	7,810.00	8,173.51	7,810.00	18.15	37.83	-172.28	-1,814.19	-399.33	1,481.16	1,443.95	37.21	39.804	

Company:	US ROCKIES REGION PLANNING	Local Co-ordinate Reference:	Well P_MIRACLE 9-12
Project:	COLORADO NORTHERN ZONE - 83	TVD Reference:	WELL @ 4963.00ft (Original Well Elev)
Reference Site:	LARIMER_MIRACLE 40-12 PAD	MD Reference:	WELL @ 4963.00ft (Original Well Elev)
Site Error:	0.00ft	North Reference:	True
Reference Well:	P_MIRACLE 9-12	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00ft	Output errors are at	2.00 sigma
Reference Wellbore	P_MIRACLE 9-12	Database:	EDM 2003.21 Single User Db
Reference Design:	PLAN #1 3-22-10 RHS	Offset TVD Reference:	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
0.00	0.00	0.00	0.00	0.00	0.00	91.06	-0.36	19.77	19.77				
100.00	100.00	100.00	100.00	0.10	0.10	91.06	-0.36	19.77	19.77	19.58	0.19	103.499	
200.00	200.00	200.00	200.00	0.32	0.32	91.06	-0.36	19.77	19.77	19.13	0.64	30.868	
300.00	300.00	300.00	300.00	0.55	0.55	91.06	-0.36	19.77	19.77	18.68	1.09	18.139	
400.00	400.00	400.00	400.00	0.77	0.77	91.06	-0.36	19.77	19.77	18.23	1.54	12.843	
500.00	500.00	500.00	500.00	0.99	0.99	91.06	-0.36	19.77	19.77	17.78	1.99	9.941	
600.00	600.00	600.00	600.00	1.22	1.22	91.06	-0.36	19.77	19.77	17.33	2.44	8.108	
700.00	700.00	700.00	700.00	1.44	1.44	91.06	-0.36	19.77	19.77	16.89	2.89	6.846	
750.00	750.00	750.00	750.00	1.56	1.56	91.06	-0.36	19.77	19.77	16.66	3.11	6.352	
800.00	800.00	800.19	800.19	1.66	1.67	-121.14	-0.01	19.52	19.74	16.42	3.32	5.940	
815.88	815.88	816.13	816.12	1.68	1.70	-122.72	0.26	19.33	19.73	16.35	3.39	5.827 CC, ES	
900.00	899.93	900.32	900.25	1.83	1.89	-137.87	2.86	17.50	20.44	16.73	3.72	5.497 SF	
982.19	981.94	982.06	981.81	1.99	2.08	-159.01	7.31	14.35	24.54	20.48	4.05	6.053	
1,000.00	999.69	999.68	999.36	2.03	2.12	-163.40	8.52	13.50	26.06	21.93	4.13	6.314	
1,100.00	1,099.36	1,098.10	1,097.24	2.24	2.36	177.07	16.89	7.58	37.47	32.91	4.56	8.217	
1,200.00	1,199.03	1,195.47	1,193.68	2.47	2.62	164.38	27.87	-0.17	53.25	48.25	5.01	10.632	
1,300.00	1,298.70	1,291.59	1,288.37	2.70	2.91	155.90	41.33	-9.68	72.91	67.44	5.47	13.326	
1,400.00	1,398.37	1,386.26	1,381.05	2.94	3.23	149.93	57.11	-20.83	96.11	90.16	5.94	16.170	
1,500.00	1,498.05	1,479.33	1,471.48	3.19	3.60	145.54	75.06	-33.50	122.65	116.22	6.42	19.092	
1,600.00	1,597.72	1,570.64	1,559.46	3.44	4.01	142.17	94.98	-47.58	152.38	145.47	6.91	22.049	
1,700.00	1,697.39	1,660.06	1,644.83	3.70	4.46	139.52	116.71	-62.93	185.17	177.77	7.40	25.014	
1,800.00	1,797.06	1,747.47	1,727.44	3.96	4.95	137.38	140.04	-79.41	220.90	213.01	7.90	27.971	
1,900.00	1,896.73	1,832.80	1,807.20	4.22	5.48	135.61	164.79	-96.89	259.47	251.07	8.39	30.908	
2,000.00	1,996.40	1,915.96	1,884.03	4.48	6.04	134.13	190.77	-115.24	300.75	291.86	8.89	33.820	
2,100.00	2,096.08	1,998.59	1,959.43	4.74	6.65	132.85	218.38	-134.74	344.64	335.25	9.40	36.680	
2,200.00	2,195.75	2,085.63	2,038.34	5.01	7.32	131.73	248.39	-155.95	389.90	379.98	9.92	39.298	
2,300.00	2,295.42	2,174.56	2,118.95	5.27	8.03	130.82	279.06	-177.61	435.27	424.81	10.46	41.624	
2,400.00	2,395.09	2,263.49	2,199.57	5.54	8.74	130.08	309.72	-199.26	480.71	469.71	11.00	43.714	
2,500.00	2,494.76	2,352.41	2,280.18	5.81	9.46	129.47	340.39	-220.92	526.20	514.66	11.54	45.600	
2,600.00	2,594.43	2,441.34	2,360.79	6.08	10.19	128.95	371.05	-242.58	571.73	559.64	12.09	47.309	
2,700.00	2,694.11	2,530.26	2,441.40	6.35	10.92	128.51	401.71	-264.24	617.29	604.66	12.63	48.861	
2,800.00	2,793.78	2,619.19	2,522.02	6.62	11.65	128.14	432.38	-285.90	662.88	649.69	13.18	50.277	
2,900.00	2,893.45	2,708.11	2,602.63	6.89	12.39	127.81	463.04	-307.56	708.48	694.75	13.74	51.573	
3,000.00	2,993.12	2,797.04	2,683.24	7.16	13.13	127.52	493.70	-329.22	754.11	739.81	14.29	52.762	
3,100.00	3,092.79	2,885.96	2,763.85	7.43	13.88	127.26	524.37	-350.88	799.74	784.89	14.85	53.856	
3,200.00	3,192.47	2,974.89	2,844.46	7.70	14.62	127.03	555.03	-372.54	845.39	829.98	15.41	54.867	
3,300.00	3,292.14	3,063.81	2,925.08	7.97	15.37	126.83	585.69	-394.20	891.05	875.08	15.97	55.803	
3,400.00	3,391.81	3,152.74	3,005.69	8.25	16.12	126.64	616.36	-415.86	936.71	920.18	16.53	56.672	
3,500.00	3,491.48	3,241.67	3,086.30	8.52	16.87	126.47	647.02	-437.52	982.38	965.29	17.09	57.480	
3,600.00	3,591.15	3,330.59	3,166.91	8.79	17.62	126.32	677.68	-459.18	1,028.06	1,010.41	17.65	58.234	
3,700.00	3,690.82	3,419.52	3,247.53	9.06	18.37	126.18	708.35	-480.84	1,073.75	1,055.53	18.22	58.939	
3,800.00	3,790.50	3,508.44	3,328.14	9.34	19.13	126.05	739.01	-502.50	1,119.44	1,100.65	18.78	59.599	
3,900.00	3,890.17	3,597.37	3,408.75	9.61	19.88	125.93	769.67	-524.16	1,165.13	1,145.78	19.35	60.218	
4,000.00	3,989.84	3,686.29	3,489.36	9.88	20.64	125.82	800.34	-545.82	1,210.82	1,190.91	19.91	60.800	
4,100.00	4,089.51	3,775.22	3,569.98	10.16	21.39	125.72	831.00	-567.48	1,256.52	1,236.04	20.48	61.348	
4,200.00	4,189.18	3,864.14	3,650.59	10.43	22.15	125.62	861.66	-589.14	1,302.23	1,281.18	21.05	61.865	
4,300.00	4,288.85	3,953.07	3,731.20	10.71	22.90	125.54	892.33	-610.80	1,347.93	1,326.31	21.62	62.354	
4,400.00	4,388.53	4,041.99	3,811.81	10.98	23.66	125.45	922.99	-632.46	1,393.64	1,371.45	22.19	62.816	
4,500.00	4,488.20	4,130.92	3,892.42	11.25	24.42	125.38	953.65	-654.12	1,439.35	1,416.59	22.76	63.254	
4,600.00	4,587.87	4,219.85	3,973.04	11.53	25.17	125.30	984.32	-675.78	1,485.06	1,461.74	23.32	63.669	
4,700.00	4,687.54	4,308.77	4,053.65	11.80	25.93	125.23	1,014.98	-697.44	1,530.77	1,506.88	23.89	64.064	
4,800.00	4,787.21	4,397.70	4,134.26	12.08	26.69	125.17	1,045.64	-719.10	1,576.49	1,552.02	24.46	64.439	

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

Company:	US ROCKIES REGION PLANNING	Local Co-ordinate Reference:	Well P_MIRACLE 9-12
Project:	COLORADO NORTHERN ZONE - 83	TVD Reference:	WELL @ 4963.00ft (Original Well Elev)
Reference Site:	LARIMER_MIRACLE 40-12 PAD	MD Reference:	WELL @ 4963.00ft (Original Well Elev)
Site Error:	0.00ft	North Reference:	True
Reference Well:	P_MIRACLE 9-12	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00ft	Output errors are at	2.00 sigma
Reference Wellbore	P_MIRACLE 9-12	Database:	EDM 2003.21 Single User Db
Reference Design:	PLAN #1 3-22-10 RHS	Offset TVD Reference:	Offset Datum

Offset Design LARIMER_MIRACLE 40-12 PAD - P_MIRACLE 17-12 - P_MIRACLE 17-12 - PLAN #1 3-22-10 RHS												Offset Site Error:	0.00 ft
Survey Program: 0-MWD												Offset Well Error:	0.00 ft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	
4,900.00	4,886.88	4,486.62	4,214.87	12.35	27.45	125.11	1,076.31	-740.76	1,622.21	1,597.17	25.04	64.796	
5,000.00	4,986.56	4,575.55	4,295.49	12.63	28.20	125.05	1,106.97	-762.42	1,667.92	1,642.32	25.61	65.137	
5,100.00	5,086.23	4,664.47	4,376.10	12.90	28.96	125.00	1,137.63	-784.08	1,713.64	1,687.46	26.18	65.462	
5,200.00	5,185.90	4,753.40	4,456.71	13.18	29.72	124.95	1,168.30	-805.74	1,759.36	1,732.61	26.75	65.772	
5,300.00	5,285.57	4,842.32	4,537.32	13.45	30.48	124.90	1,198.96	-827.40	1,805.08	1,777.76	27.32	66.069	
5,400.00	5,385.24	4,931.25	4,617.94	13.72	31.24	124.85	1,229.63	-849.06	1,850.81	1,822.91	27.89	66.354	
5,500.00	5,484.91	5,020.17	4,698.55	14.00	32.00	124.81	1,260.29	-870.72	1,896.53	1,868.06	28.47	66.626	
5,600.00	5,584.59	5,279.06	4,937.74	14.27	33.66	124.76	1,341.01	-927.73	1,938.50	1,908.99	29.51	65.698	
5,693.78	5,678.06	5,546.92	5,193.54	14.53	34.98	124.85	1,405.61	-973.37	1,969.93	1,939.46	30.47	64.646	
5,700.00	5,684.26	5,565.27	5,211.33	14.55	35.05	124.89	1,409.32	-975.99	1,971.72	1,941.17	30.55	64.548	
5,800.00	5,784.07	5,869.68	5,509.91	14.73	36.09	125.40	1,457.13	-1,009.76	1,994.13	1,962.52	31.61	63.081	
5,900.00	5,884.02	6,185.93	5,824.85	14.90	36.68	125.61	1,479.12	-1,025.29	2,004.04	1,971.58	32.46	61.740	
5,925.98	5,910.00	6,268.90	5,907.80	14.95	36.75	-24.32	1,480.18	-1,026.04	2,004.51	1,971.87	32.64	61.407	
6,000.00	5,984.02	6,345.12	5,984.02	15.07	36.81	-24.32	1,480.18	-1,026.04	2,004.51	1,971.63	32.88	60.960	
6,100.00	6,084.02	6,445.12	6,084.02	15.23	36.88	-24.32	1,480.18	-1,026.04	2,004.51	1,971.32	33.19	60.388	
6,200.00	6,184.02	6,545.12	6,184.02	15.39	36.96	-24.32	1,480.18	-1,026.04	2,004.51	1,971.00	33.51	59.822	
6,300.00	6,284.02	6,645.12	6,284.02	15.55	37.04	-24.32	1,480.18	-1,026.04	2,004.51	1,970.68	33.83	59.261	
6,400.00	6,384.02	6,745.12	6,384.02	15.71	37.12	-24.32	1,480.18	-1,026.04	2,004.51	1,970.36	34.15	58.705	
6,500.00	6,484.02	6,845.12	6,484.02	15.87	37.20	-24.32	1,480.18	-1,026.04	2,004.51	1,970.04	34.47	58.154	
6,600.00	6,584.02	6,945.12	6,584.02	16.03	37.28	-24.32	1,480.18	-1,026.04	2,004.51	1,969.72	34.79	57.610	
6,700.00	6,684.02	7,045.12	6,684.02	16.20	37.36	-24.32	1,480.18	-1,026.04	2,004.51	1,969.39	35.12	57.070	
6,800.00	6,784.02	7,145.12	6,784.02	16.37	37.45	-24.32	1,480.18	-1,026.04	2,004.51	1,969.06	35.45	56.537	
6,900.00	6,884.02	7,245.12	6,884.02	16.53	37.53	-24.32	1,480.18	-1,026.04	2,004.51	1,968.72	35.79	56.010	
7,000.00	6,984.02	7,345.12	6,984.02	16.70	37.62	-24.32	1,480.18	-1,026.04	2,004.51	1,968.38	36.13	55.488	
7,100.00	7,084.02	7,445.12	7,084.02	16.87	37.70	-24.32	1,480.18	-1,026.04	2,004.51	1,968.05	36.46	54.973	
7,200.00	7,184.02	7,545.12	7,184.02	17.05	37.79	-24.32	1,480.18	-1,026.04	2,004.51	1,967.71	36.80	54.463	
7,300.00	7,284.02	7,645.12	7,284.02	17.22	37.88	-24.32	1,480.18	-1,026.04	2,004.51	1,967.36	37.15	53.960	
7,400.00	7,384.02	7,745.12	7,384.02	17.39	37.97	-24.32	1,480.18	-1,026.04	2,004.51	1,967.02	37.49	53.462	
7,500.00	7,484.02	7,845.12	7,484.02	17.57	38.06	-24.32	1,480.18	-1,026.04	2,004.51	1,966.67	37.84	52.971	
7,600.00	7,584.02	7,945.12	7,584.02	17.75	38.16	-24.32	1,480.18	-1,026.04	2,004.51	1,966.32	38.19	52.485	
7,700.00	7,684.02	8,045.12	7,684.02	17.92	38.25	-24.32	1,480.18	-1,026.04	2,004.51	1,965.97	38.54	52.006	
7,800.00	7,784.02	8,145.12	7,784.02	18.10	38.35	-24.32	1,480.18	-1,026.04	2,004.51	1,965.61	38.90	51.533	
7,825.98	7,810.00	8,171.09	7,810.00	18.15	38.37	-24.32	1,480.18	-1,026.04	2,004.51	1,965.52	38.99	51.411	

Company:	US ROCKIES REGION PLANNING	Local Co-ordinate Reference:	Well P_MIRACLE 9-12
Project:	COLORADO NORTHERN ZONE - 83	TVD Reference:	WELL @ 4963.00ft (Original Well Elev)
Reference Site:	LARIMER_MIRACLE 40-12 PAD	MD Reference:	WELL @ 4963.00ft (Original Well Elev)
Site Error:	0.00ft	North Reference:	True
Reference Well:	P_MIRACLE 9-12	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00ft	Output errors are at	2.00 sigma
Reference Wellbore	P_MIRACLE 9-12	Database:	EDM 2003.21 Single User Db
Reference Design:	PLAN #1 3-22-10 RHS	Offset TVD Reference:	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
0.00	0.00	0.00	0.00	0.00	0.00	-87.92	0.36	-10.02	10.03				
100.00	100.00	100.00	100.00	0.10	0.10	-87.92	0.36	-10.02	10.03	9.84	0.19	52.504	
200.00	200.00	200.00	200.00	0.32	0.32	-87.92	0.36	-10.02	10.03	9.39	0.64	15.659	
300.00	300.00	300.00	300.00	0.55	0.55	-87.92	0.36	-10.02	10.03	8.94	1.09	9.202	
400.00	400.00	400.00	400.00	0.77	0.77	-87.92	0.36	-10.02	10.03	8.49	1.54	6.515	
500.00	500.00	500.00	500.00	0.99	0.99	-87.92	0.36	-10.02	10.03	8.04	1.99	5.043	
600.00	600.00	600.00	600.00	1.22	1.22	-87.92	0.36	-10.02	10.03	7.59	2.44	4.113	
700.00	700.00	700.00	700.00	1.44	1.44	-87.92	0.36	-10.02	10.03	7.14	2.89	3.473	
750.00	750.00	750.00	750.00	1.56	1.56	-87.92	0.36	-10.02	10.03	6.92	3.11	3.222 CC	
800.00	800.00	799.89	799.88	1.66	1.66	62.34	0.05	-10.32	10.11	6.80	3.31	3.054 ES	
900.00	899.93	899.65	899.58	1.83	1.84	64.68	-2.50	-12.68	10.76	7.09	3.67	2.932 SF	
982.19	981.94	981.64	981.39	1.99	2.00	67.83	-6.49	-16.39	11.81	7.82	3.99	2.962	
1,000.00	999.69	999.41	999.09	2.03	2.04	68.35	-7.58	-17.41	12.13	8.07	4.06	2.988	
1,100.00	1,099.36	1,099.08	1,098.22	2.24	2.26	64.26	-15.20	-24.48	15.08	10.61	4.48	3.368	
1,200.00	1,199.03	1,198.46	1,196.63	2.47	2.52	54.25	-25.30	-33.87	20.55	15.64	4.91	4.184	
1,300.00	1,298.70	1,297.30	1,293.98	2.70	2.81	44.62	-37.82	-45.50	29.25	23.90	5.35	5.471	
1,400.00	1,398.37	1,395.39	1,389.94	2.94	3.16	37.38	-52.67	-59.29	41.48	35.70	5.78	7.171	
1,500.00	1,498.05	1,492.49	1,484.21	3.19	3.55	32.29	-69.74	-75.14	57.24	51.01	6.23	9.187	
1,600.00	1,597.72	1,588.41	1,576.50	3.44	4.00	28.71	-88.88	-92.93	76.44	69.75	6.68	11.436	
1,700.00	1,697.39	1,682.96	1,666.56	3.70	4.51	26.13	-109.96	-112.51	98.98	91.83	7.15	13.851	
1,800.00	1,797.06	1,775.97	1,754.17	3.96	5.06	24.22	-132.80	-133.73	124.76	117.14	7.61	16.383	
1,900.00	1,896.73	1,871.14	1,843.12	4.22	5.67	22.78	-157.62	-156.78	152.70	144.60	8.10	18.850	
2,000.00	1,996.40	1,967.08	1,932.76	4.48	6.31	21.77	-182.67	-180.05	180.76	172.17	8.60	21.026	
2,100.00	2,096.08	2,063.02	2,022.40	4.74	6.96	21.03	-207.72	-203.32	208.86	199.76	9.10	22.950	
2,200.00	2,195.75	2,158.96	2,112.04	5.01	7.62	20.47	-232.77	-226.59	236.99	227.38	9.61	24.660	
2,300.00	2,295.42	2,254.90	2,201.68	5.27	8.29	20.02	-257.82	-249.86	265.13	255.01	10.12	26.188	
2,400.00	2,395.09	2,350.84	2,291.32	5.54	8.96	19.67	-282.87	-273.13	293.29	282.64	10.64	27.558	
2,500.00	2,494.76	2,446.78	2,380.96	5.81	9.64	19.37	-307.92	-296.40	321.45	310.29	11.16	28.793	
2,600.00	2,594.43	2,542.72	2,470.60	6.08	10.32	19.12	-332.98	-319.67	349.62	337.93	11.69	29.911	
2,700.00	2,694.11	2,638.66	2,560.24	6.35	11.00	18.91	-358.03	-342.95	377.79	365.58	12.22	30.927	
2,800.00	2,793.78	2,734.60	2,649.88	6.62	11.69	18.73	-383.08	-366.22	405.97	393.23	12.75	31.853	
2,900.00	2,893.45	2,830.54	2,739.52	6.89	12.38	18.57	-408.13	-389.49	434.15	420.88	13.28	32.702	
3,000.00	2,993.12	2,926.48	2,829.16	7.16	13.07	18.43	-433.18	-412.76	462.34	448.53	13.81	33.481	
3,100.00	3,092.79	3,022.42	2,918.81	7.43	13.76	18.31	-458.23	-436.03	490.53	476.18	14.34	34.199	
3,200.00	3,192.47	3,118.36	3,008.45	7.70	14.45	18.20	-483.28	-459.30	518.71	503.84	14.88	34.862	
3,300.00	3,292.14	3,214.30	3,098.09	7.97	15.14	18.10	-508.33	-482.57	546.90	531.49	15.42	35.477	
3,400.00	3,391.81	3,310.24	3,187.73	8.25	15.84	18.02	-533.39	-505.84	575.10	559.14	15.95	36.048	
3,500.00	3,491.48	3,406.18	3,277.37	8.52	16.53	17.93	-558.44	-529.11	603.29	586.80	16.49	36.580	
3,600.00	3,591.15	3,502.12	3,367.01	8.79	17.23	17.86	-583.49	-552.38	631.48	614.45	17.03	37.077	
3,700.00	3,690.82	3,598.06	3,456.65	9.06	17.93	17.79	-608.54	-575.66	659.68	642.10	17.57	37.541	
3,800.00	3,790.50	3,694.00	3,546.29	9.34	18.62	17.73	-633.59	-598.93	687.87	669.76	18.11	37.976	
3,900.00	3,890.17	3,789.95	3,635.93	9.61	19.32	17.68	-658.64	-622.20	716.07	697.41	18.65	38.385	
4,000.00	3,989.84	3,885.89	3,725.57	9.88	20.02	17.62	-683.69	-645.47	744.26	725.07	19.20	38.770	
4,100.00	4,089.51	3,981.83	3,815.21	10.16	20.72	17.58	-708.75	-668.74	772.46	752.72	19.74	39.132	
4,200.00	4,189.18	4,077.77	3,904.85	10.43	21.41	17.53	-733.80	-692.01	800.66	780.38	20.28	39.474	
4,300.00	4,288.85	4,173.71	3,994.49	10.71	22.11	17.49	-758.85	-715.28	828.86	808.03	20.83	39.798	
4,400.00	4,388.53	4,269.65	4,084.13	10.98	22.81	17.45	-783.90	-738.55	857.06	835.68	21.37	40.104	
4,500.00	4,488.20	4,365.59	4,173.77	11.25	23.51	17.41	-808.95	-761.82	885.25	863.34	21.92	40.395	
4,600.00	4,587.87	4,461.53	4,263.41	11.53	24.21	17.38	-834.00	-785.09	913.45	890.99	22.46	40.670	
4,700.00	4,687.54	4,557.47	4,353.05	11.80	24.91	17.35	-859.05	-808.37	941.65	918.65	23.01	40.933	
4,800.00	4,787.21	4,653.41	4,442.70	12.08	25.61	17.32	-884.11	-831.64	969.85	946.30	23.55	41.182	
4,900.00	4,886.88	4,749.35	4,532.34	12.35	26.31	17.29	-909.16	-854.91	998.05	973.96	24.10	41.420	

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

Company:	US ROCKIES REGION PLANNING	Local Co-ordinate Reference:	Well P_MIRACLE 9-12
Project:	COLORADO NORTHERN ZONE - 83	TVD Reference:	WELL @ 4963.00ft (Original Well Elev)
Reference Site:	LARIMER_MIRACLE 40-12 PAD	MD Reference:	WELL @ 4963.00ft (Original Well Elev)
Site Error:	0.00ft	North Reference:	True
Reference Well:	P_MIRACLE 9-12	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00ft	Output errors are at	2.00 sigma
Reference Wellbore	P_MIRACLE 9-12	Database:	EDM 2003.21 Single User Db
Reference Design:	PLAN #1 3-22-10 RHS	Offset TVD Reference:	Offset Datum

Offset Design LARIMER_MIRACLE 40-12 PAD - P_MIRACLE 20-12 - P_MIRACLE 20-12 - PLAN #1 3-22-10 RHS												Offset Site Error:	0.00 ft
Survey Program: 0-MWD												Offset Well Error:	0.00 ft
Reference	Offset	Semi Major Axis		Distance									
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	4,986.56	4,845.29	4,621.98	12.63	27.01	17.26	-934.21	-878.18	1,026.25	1,001.61	24.64	41.647	
5,100.00	5,086.23	4,941.23	4,711.62	12.90	27.71	17.23	-959.26	-901.45	1,054.45	1,029.26	25.19	41.863	
5,200.00	5,185.90	5,037.17	4,801.26	13.18	28.41	17.21	-984.31	-924.72	1,082.65	1,056.92	25.73	42.070	
5,300.00	5,285.57	5,141.12	4,898.41	13.45	29.15	17.18	-1,011.40	-949.89	1,110.81	1,084.50	26.30	42.232	
5,400.00	5,385.24	5,300.17	5,048.89	13.72	29.99	17.17	-1,049.09	-984.90	1,135.65	1,108.66	27.00	42.068	
5,500.00	5,484.91	5,463.31	5,205.96	14.00	30.67	17.20	-1,081.33	-1,014.85	1,155.03	1,127.37	27.66	41.761	
5,600.00	5,584.59	5,629.61	5,368.39	14.27	31.26	17.25	-1,107.41	-1,039.07	1,168.76	1,140.46	28.29	41.306	
5,693.78	5,678.06	5,787.52	5,524.28	14.53	31.70	17.34	-1,125.73	-1,056.09	1,176.37	1,147.51	28.86	40.759	
5,700.00	5,684.26	5,798.03	5,534.70	14.55	31.73	17.35	-1,126.73	-1,057.02	1,176.70	1,147.81	28.89	40.731	
5,800.00	5,784.07	5,967.42	5,703.25	14.73	32.06	17.46	-1,138.91	-1,068.33	1,180.64	1,151.38	29.26	40.349	
5,900.00	5,884.02	6,137.19	5,872.87	14.90	32.27	17.51	-1,143.77	-1,072.85	1,182.01	1,152.45	29.55	40.000	
5,925.98	5,910.00	6,174.33	5,910.00	14.95	32.30	-132.43	-1,143.86	-1,072.93	1,181.97	1,152.36	29.61	39.918	
6,000.00	5,984.02	6,248.35	5,984.02	15.07	32.36	-132.43	-1,143.86	-1,072.93	1,181.97	1,152.11	29.86	39.581	
6,100.00	6,084.02	6,348.35	6,084.02	15.23	32.43	-132.43	-1,143.86	-1,072.93	1,181.97	1,151.78	30.18	39.159	
6,200.00	6,184.02	6,448.35	6,184.02	15.39	32.51	-132.43	-1,143.86	-1,072.93	1,181.97	1,151.46	30.51	38.741	
6,300.00	6,284.02	6,548.35	6,284.02	15.55	32.59	-132.43	-1,143.86	-1,072.93	1,181.97	1,151.13	30.84	38.329	
6,400.00	6,384.02	6,648.35	6,384.02	15.71	32.67	-132.43	-1,143.86	-1,072.93	1,181.97	1,150.80	31.17	37.922	
6,500.00	6,484.02	6,748.35	6,484.02	15.87	32.75	-132.43	-1,143.86	-1,072.93	1,181.97	1,150.47	31.50	37.520	
6,600.00	6,584.02	6,848.35	6,584.02	16.03	32.83	-132.43	-1,143.86	-1,072.93	1,181.97	1,150.13	31.84	37.123	
6,700.00	6,684.02	6,948.35	6,684.02	16.20	32.92	-132.43	-1,143.86	-1,072.93	1,181.97	1,149.79	32.18	36.731	
6,800.00	6,784.02	7,048.35	6,784.02	16.37	33.00	-132.43	-1,143.86	-1,072.93	1,181.97	1,149.45	32.52	36.345	
6,900.00	6,884.02	7,148.35	6,884.02	16.53	33.09	-132.43	-1,143.86	-1,072.93	1,181.97	1,149.10	32.87	35.964	
7,000.00	6,984.02	7,248.35	6,984.02	16.70	33.18	-132.43	-1,143.86	-1,072.93	1,181.97	1,148.76	33.21	35.588	
7,100.00	7,084.02	7,348.35	7,084.02	16.87	33.27	-132.43	-1,143.86	-1,072.93	1,181.97	1,148.41	33.56	35.218	
7,200.00	7,184.02	7,448.35	7,184.02	17.05	33.36	-132.43	-1,143.86	-1,072.93	1,181.97	1,148.05	33.91	34.852	
7,300.00	7,284.02	7,548.35	7,284.02	17.22	33.45	-132.43	-1,143.86	-1,072.93	1,181.97	1,147.70	34.27	34.492	
7,400.00	7,384.02	7,648.35	7,384.02	17.39	33.55	-132.43	-1,143.86	-1,072.93	1,181.97	1,147.34	34.62	34.137	
7,500.00	7,484.02	7,748.35	7,484.02	17.57	33.64	-132.43	-1,143.86	-1,072.93	1,181.97	1,146.99	34.98	33.788	
7,600.00	7,584.02	7,848.35	7,584.02	17.75	33.74	-132.43	-1,143.86	-1,072.93	1,181.97	1,146.63	35.34	33.443	
7,700.00	7,684.02	7,948.35	7,684.02	17.92	33.83	-132.43	-1,143.86	-1,072.93	1,181.97	1,146.26	35.70	33.104	
7,800.00	7,784.02	8,048.35	7,784.02	18.10	33.93	-132.43	-1,143.86	-1,072.93	1,181.97	1,145.90	36.07	32.770	
7,806.90	7,790.92	8,055.25	7,790.92	18.12	33.94	-132.43	-1,143.86	-1,072.93	1,181.97	1,145.87	36.09	32.747	
7,825.98	7,810.00	8,064.33	7,800.00	18.15	33.95	-132.43	-1,143.86	-1,072.93	1,182.01	1,145.86	36.15	32.701	

Company:	US ROCKIES REGION PLANNING	Local Co-ordinate Reference:	Well P_MIRACLE 9-12
Project:	COLORADO NORTHERN ZONE - 83	TVD Reference:	WELL @ 4963.00ft (Original Well Elev)
Reference Site:	LARIMER_MIRACLE 40-12 PAD	MD Reference:	WELL @ 4963.00ft (Original Well Elev)
Site Error:	0.00ft	North Reference:	True
Reference Well:	P_MIRACLE 9-12	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00ft	Output errors are at	2.00 sigma
Reference Wellbore	P_MIRACLE 9-12	Database:	EDM 2003.21 Single User Db
Reference Design:	PLAN #1 3-22-10 RHS	Offset TVD Reference:	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	-88.96	0.36	-20.05	20.05				
100.00	100.00	100.00	100.00	0.10	0.10	-88.96	0.36	-20.05	20.05	19.86	0.19	104.956	
200.00	200.00	200.00	200.00	0.32	0.32	-88.96	0.36	-20.05	20.05	19.41	0.64	31.303	
300.00	300.00	300.00	300.00	0.55	0.55	-88.96	0.36	-20.05	20.05	18.96	1.09	18.394	
400.00	400.00	400.00	400.00	0.77	0.77	-88.96	0.36	-20.05	20.05	18.51	1.54	13.024	
500.00	500.00	500.00	500.00	0.99	0.99	-88.96	0.36	-20.05	20.05	18.06	1.99	10.081	
600.00	600.00	600.00	600.00	1.22	1.22	-88.96	0.36	-20.05	20.05	17.61	2.44	8.222	
700.00	700.00	700.00	700.00	1.44	1.44	-88.96	0.36	-20.05	20.05	17.16	2.89	6.943	
750.00	750.00	750.00	750.00	1.56	1.56	-88.96	0.36	-20.05	20.05	16.94	3.11	6.441 CC, ES	
800.00	800.00	799.66	799.65	1.66	1.66	62.31	0.46	-20.47	20.27	16.95	3.32	6.109	
900.00	899.93	898.84	898.77	1.83	1.87	71.85	1.26	-23.81	22.36	18.66	3.70	6.044 SF	
982.19	981.94	980.08	979.84	1.99	2.05	83.23	2.50	-29.03	26.63	22.60	4.03	6.606	
1,000.00	999.69	997.64	997.33	2.03	2.09	85.60	2.84	-30.46	27.95	23.84	4.10	6.809	
1,100.00	1,099.36	1,095.95	1,095.11	2.24	2.33	94.38	5.19	-40.35	37.90	33.36	4.53	8.357	
1,200.00	1,199.03	1,193.60	1,191.83	2.47	2.59	97.76	8.29	-53.40	51.43	46.44	4.99	10.316	
1,300.00	1,298.70	1,290.39	1,287.19	2.70	2.88	98.46	12.12	-69.49	68.07	62.62	5.45	12.481	
1,400.00	1,398.37	1,386.09	1,380.88	2.94	3.22	97.95	16.64	-88.47	87.70	81.77	5.94	14.768	
1,500.00	1,498.05	1,481.78	1,473.90	3.19	3.60	96.96	21.82	-110.26	110.09	103.65	6.44	17.098	
1,600.00	1,597.72	1,579.09	1,568.37	3.44	4.03	96.18	27.22	-133.00	133.06	126.10	6.96	19.128	
1,700.00	1,697.39	1,676.40	1,662.83	3.70	4.46	95.63	32.63	-155.74	156.05	148.57	7.48	20.855	
1,800.00	1,797.06	1,773.71	1,757.29	3.96	4.91	95.22	38.04	-178.47	179.05	171.03	8.02	22.335	
1,900.00	1,896.73	1,871.02	1,851.76	4.22	5.37	94.91	43.45	-201.21	202.06	193.50	8.56	23.613	
2,000.00	1,996.40	1,968.34	1,946.22	4.48	5.84	94.66	48.86	-223.95	225.07	215.97	9.10	24.727	
2,100.00	2,096.08	2,065.65	2,040.68	4.74	6.31	94.45	54.26	-246.69	248.08	238.43	9.65	25.703	
2,200.00	2,195.75	2,162.96	2,135.15	5.01	6.79	94.28	59.67	-269.43	271.10	260.90	10.20	26.566	
2,300.00	2,295.42	2,260.27	2,229.61	5.27	7.27	94.14	65.08	-292.17	294.12	283.36	10.76	27.332	
2,400.00	2,395.09	2,357.59	2,324.07	5.54	7.75	94.02	70.49	-314.91	317.14	305.82	11.32	28.017	
2,500.00	2,494.76	2,454.90	2,418.54	5.81	8.24	93.91	75.89	-337.65	340.16	328.28	11.88	28.632	
2,600.00	2,594.43	2,552.21	2,513.00	6.08	8.73	93.82	81.30	-360.39	363.18	350.74	12.44	29.187	
2,700.00	2,694.11	2,649.52	2,607.46	6.35	9.21	93.74	86.71	-383.13	386.21	373.20	13.01	29.691	
2,800.00	2,793.78	2,746.83	2,701.93	6.62	9.71	93.67	92.12	-405.87	409.23	395.66	13.57	30.149	
2,900.00	2,893.45	2,844.15	2,796.39	6.89	10.20	93.60	97.52	-428.60	432.26	418.12	14.14	30.569	
3,000.00	2,993.12	2,941.46	2,890.85	7.16	10.69	93.54	102.93	-451.34	455.28	440.57	14.71	30.953	
3,100.00	3,092.79	3,038.77	2,985.32	7.43	11.18	93.49	108.34	-474.08	478.31	463.03	15.28	31.307	
3,200.00	3,192.47	3,136.08	3,079.78	7.70	11.68	93.44	113.75	-496.82	501.33	485.48	15.85	31.634	
3,300.00	3,292.14	3,233.39	3,174.24	7.97	12.18	93.40	119.15	-519.56	524.36	507.94	16.42	31.937	
3,400.00	3,391.81	3,330.71	3,268.71	8.25	12.67	93.36	124.56	-542.30	547.38	530.39	16.99	32.218	
3,500.00	3,491.48	3,428.02	3,363.17	8.52	13.17	93.32	129.97	-565.04	570.41	552.85	17.56	32.479	
3,600.00	3,591.15	3,525.33	3,457.63	8.79	13.67	93.29	135.38	-587.78	593.44	575.30	18.14	32.723	
3,700.00	3,690.82	3,622.64	3,552.10	9.06	14.16	93.26	140.79	-610.52	616.46	597.76	18.71	32.951	
3,800.00	3,790.50	3,719.96	3,646.56	9.34	14.66	93.23	146.19	-633.26	639.49	620.21	19.28	33.165	
3,900.00	3,890.17	3,817.27	3,741.02	9.61	15.16	93.20	151.60	-656.00	662.52	642.66	19.86	33.365	
4,000.00	3,989.84	3,914.58	3,835.49	9.88	15.66	93.18	157.01	-678.74	685.55	665.12	20.43	33.554	
4,100.00	4,089.51	4,011.89	3,929.95	10.16	16.16	93.16	162.42	-701.47	708.57	687.57	21.01	33.732	
4,200.00	4,189.18	4,109.20	4,024.42	10.43	16.66	93.13	167.82	-724.21	731.60	710.02	21.58	33.899	
4,300.00	4,288.85	4,206.52	4,118.88	10.71	17.16	93.11	173.23	-746.95	754.63	732.47	22.16	34.058	
4,400.00	4,388.53	4,303.83	4,213.34	10.98	17.66	93.09	178.64	-769.69	777.66	754.92	22.73	34.208	
4,500.00	4,488.20	4,401.14	4,307.81	11.25	18.16	93.07	184.05	-792.43	800.68	777.38	23.31	34.350	
4,600.00	4,587.87	4,498.45	4,402.27	11.53	18.66	93.06	189.45	-815.17	823.71	799.83	23.89	34.486	
4,700.00	4,687.54	4,595.76	4,496.73	11.80	19.16	93.04	194.86	-837.91	846.74	822.28	24.46	34.614	
4,800.00	4,787.21	4,693.08	4,591.20	12.08	19.66	93.03	200.27	-860.65	869.77	844.73	25.04	34.736	
4,900.00	4,886.88	4,790.39	4,685.66	12.35	20.16	93.01	205.68	-883.39	892.80	867.18	25.62	34.853	

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

Company:	US ROCKIES REGION PLANNING	Local Co-ordinate Reference:	Well P_MIRACLE 9-12
Project:	COLORADO NORTHERN ZONE - 83	TVD Reference:	WELL @ 4963.00ft (Original Well Elev)
Reference Site:	LARIMER_MIRACLE 40-12 PAD	MD Reference:	WELL @ 4963.00ft (Original Well Elev)
Site Error:	0.00ft	North Reference:	True
Reference Well:	P_MIRACLE 9-12	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00ft	Output errors are at	2.00 sigma
Reference Wellbore	P_MIRACLE 9-12	Database:	EDM 2003.21 Single User Db
Reference Design:	PLAN #1 3-22-10 RHS	Offset TVD Reference:	Offset Datum

Offset Design LARIMER_MIRACLE 40-12 PAD - P_MIRACLE 24-12 - P_MIRACLE 24-12 - PLAN #1 3-22-10 RHS												Offset Site Error:	0.00 ft
Survey Program: 0-MWD												Offset Well Error:	0.00 ft
Reference		Offset		Semi Major Axis			Distance						
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning
5,000.00	4,986.56	4,887.70	4,780.12	12.63	20.66	93.00	211.08	-906.13	915.83	889.63	26.19	34.964	
5,100.00	5,086.23	4,985.01	4,874.59	12.90	21.16	92.98	216.49	-928.87	938.85	912.08	26.77	35.070	
5,200.00	5,185.90	5,082.33	4,969.05	13.18	21.66	92.97	221.90	-951.60	961.88	934.53	27.35	35.171	
5,300.00	5,285.57	5,179.64	5,063.51	13.45	22.16	92.96	227.31	-974.34	984.91	956.98	27.93	35.268	
5,400.00	5,385.24	5,276.95	5,157.98	13.72	22.66	92.95	232.72	-997.08	1,007.94	979.43	28.50	35.361	
5,500.00	5,484.91	5,417.03	5,294.59	14.00	23.19	92.99	239.87	-1,027.16	1,029.22	1,000.09	29.13	35.335	
5,600.00	5,584.59	5,566.39	5,441.72	14.27	23.65	93.17	245.79	-1,052.06	1,045.79	1,016.04	29.75	35.156	
5,693.78	5,678.06	5,708.24	5,582.52	14.53	23.99	93.47	249.76	-1,068.77	1,056.91	1,026.59	30.32	34.859	
5,700.00	5,684.26	5,717.69	5,591.92	14.55	24.01	93.51	249.97	-1,069.65	1,057.50	1,027.14	30.36	34.837	
5,800.00	5,784.07	5,870.30	5,744.17	14.73	24.27	93.95	252.33	-1,079.54	1,064.15	1,033.29	30.86	34.479	
5,900.00	5,884.02	6,010.18	5,884.02	14.90	24.44	94.15	252.86	-1,081.78	1,065.75	1,034.47	31.27	34.077	
5,925.98	5,910.00	6,036.16	5,910.00	14.95	24.47	-55.78	252.86	-1,081.78	1,065.75	1,034.39	31.36	33.980	
6,000.00	5,984.02	6,110.18	5,984.02	15.07	24.55	-55.78	252.86	-1,081.78	1,065.75	1,034.14	31.61	33.714	
6,100.00	6,084.02	6,210.18	6,084.02	15.23	24.67	-55.78	252.86	-1,081.78	1,065.75	1,033.82	31.93	33.377	
6,200.00	6,184.02	6,310.18	6,184.02	15.39	24.79	-55.78	252.86	-1,081.78	1,065.75	1,033.50	32.25	33.043	
6,300.00	6,284.02	6,410.18	6,284.02	15.55	24.91	-55.78	252.86	-1,081.78	1,065.75	1,033.17	32.58	32.712	
6,400.00	6,384.02	6,510.18	6,384.02	15.71	25.03	-55.78	252.86	-1,081.78	1,065.75	1,032.85	32.91	32.386	
6,500.00	6,484.02	6,610.18	6,484.02	15.87	25.15	-55.78	252.86	-1,081.78	1,065.75	1,032.51	33.24	32.063	
6,600.00	6,584.02	6,710.18	6,584.02	16.03	25.27	-55.78	252.86	-1,081.78	1,065.75	1,032.18	33.57	31.743	
6,700.00	6,684.02	6,810.18	6,684.02	16.20	25.40	-55.78	252.86	-1,081.78	1,065.75	1,031.84	33.91	31.428	
6,800.00	6,784.02	6,910.18	6,784.02	16.37	25.53	-55.78	252.86	-1,081.78	1,065.75	1,031.50	34.25	31.116	
6,900.00	6,884.02	7,010.18	6,884.02	16.53	25.65	-55.78	252.86	-1,081.78	1,065.75	1,031.16	34.59	30.809	
7,000.00	6,984.02	7,110.18	6,984.02	16.70	25.78	-55.78	252.86	-1,081.78	1,065.75	1,030.82	34.94	30.505	
7,100.00	7,084.02	7,210.18	7,084.02	16.87	25.91	-55.78	252.86	-1,081.78	1,065.75	1,030.47	35.28	30.205	
7,200.00	7,184.02	7,310.18	7,184.02	17.05	26.05	-55.78	252.86	-1,081.78	1,065.75	1,030.12	35.63	29.909	
7,300.00	7,284.02	7,410.18	7,284.02	17.22	26.18	-55.78	252.86	-1,081.78	1,065.75	1,029.77	35.98	29.617	
7,400.00	7,384.02	7,510.18	7,384.02	17.39	26.31	-55.78	252.86	-1,081.78	1,065.75	1,029.42	36.34	29.329	
7,500.00	7,484.02	7,610.18	7,484.02	17.57	26.45	-55.78	252.86	-1,081.78	1,065.75	1,029.06	36.69	29.044	
7,600.00	7,584.02	7,710.18	7,584.02	17.75	26.59	-55.78	252.86	-1,081.78	1,065.75	1,028.70	37.05	28.764	
7,700.00	7,684.02	7,810.18	7,684.02	17.92	26.72	-55.78	252.86	-1,081.78	1,065.75	1,028.34	37.41	28.487	
7,800.00	7,784.02	7,910.18	7,784.02	18.10	26.86	-55.78	252.86	-1,081.78	1,065.75	1,027.98	37.77	28.215	
7,825.98	7,810.00	7,936.16	7,810.00	18.15	26.90	-55.78	252.86	-1,081.78	1,065.75	1,027.89	37.87	28.144	

Company:	US ROCKIES REGION PLANNING	Local Co-ordinate Reference:	Well P_MIRACLE 9-12
Project:	COLORADO NORTHERN ZONE - 83	TVD Reference:	WELL @ 4963.00ft (Original Well Elev)
Reference Site:	LARIMER_MIRACLE 40-12 PAD	MD Reference:	WELL @ 4963.00ft (Original Well Elev)
Site Error:	0.00ft	North Reference:	True
Reference Well:	P_MIRACLE 9-12	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00ft	Output errors are at	2.00 sigma
Reference Wellbore	P_MIRACLE 9-12	Database:	EDM 2003.21 Single User Db
Reference Design:	PLAN #1 3-22-10 RHS	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.00 ft
Survey Program: 0-MWD												Offset Well Error:	0.00 ft
Reference													
Reference				Offset			Semi Major Axis		Distance				
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning
0.00	0.00	0.00	0.00	0.00	0.00	90.71	-0.37	29.79	29.80				
100.00	100.00	100.00	100.00	0.10	0.10	90.71	-0.37	29.79	29.80	29.61	0.19	155.963	
200.00	200.00	200.00	200.00	0.32	0.32	90.71	-0.37	29.79	29.80	29.16	0.64	46.515	
300.00	300.00	300.00	300.00	0.55	0.55	90.71	-0.37	29.79	29.80	28.71	1.09	27.334	
400.00	400.00	400.00	400.00	0.77	0.77	90.71	-0.37	29.79	29.80	28.26	1.54	19.353	
500.00	500.00	500.00	500.00	0.99	0.99	90.71	-0.37	29.79	29.80	27.81	1.99	14.979	
600.00	600.00	600.00	600.00	1.22	1.22	90.71	-0.37	29.79	29.80	27.36	2.44	12.218	
700.00	700.00	700.00	700.00	1.44	1.44	90.71	-0.37	29.79	29.80	26.91	2.89	10.317	
750.00	750.00	750.00	750.00	1.56	1.56	90.71	-0.37	29.79	29.80	26.68	3.11	9.572 CC	
800.00	800.00	800.22	800.22	1.66	1.67	-120.84	0.03	29.60	29.83	26.50	3.32	8.974 ES	
900.00	899.93	900.37	900.30	1.83	1.89	-132.41	3.19	28.09	30.77	27.05	3.72	8.267 SF	
982.19	981.94	982.07	981.82	1.99	2.08	-148.05	8.10	25.73	34.50	30.45	4.06	8.503	
1,000.00	999.69	999.67	999.36	2.03	2.12	-151.62	9.43	25.09	35.86	31.73	4.13	8.680	
1,100.00	1,099.36	1,097.95	1,097.09	2.24	2.36	-169.28	18.66	20.67	46.30	41.73	4.56	10.148	
1,200.00	1,199.03	1,195.10	1,193.31	2.47	2.62	177.60	30.74	14.87	61.42	56.41	5.01	12.265	
1,300.00	1,298.70	1,290.92	1,287.71	2.70	2.90	168.25	45.54	7.77	80.82	75.36	5.46	14.791	
1,400.00	1,398.37	1,385.24	1,380.05	2.94	3.23	161.51	62.87	-0.54	104.11	98.18	5.93	17.555	
1,500.00	1,498.05	1,480.63	1,472.96	3.19	3.59	156.62	82.35	-9.89	130.20	123.79	6.41	20.321	
1,600.00	1,597.72	1,576.66	1,566.47	3.44	3.97	153.33	102.03	-19.33	156.96	150.07	6.89	22.775	
1,700.00	1,697.39	1,672.68	1,659.98	3.70	4.38	151.00	121.71	-28.77	184.07	176.69	7.38	24.939	
1,800.00	1,797.06	1,768.71	1,753.49	3.96	4.79	149.27	141.40	-38.21	211.38	203.51	7.87	26.848	
1,900.00	1,896.73	1,864.73	1,847.00	4.22	5.21	147.93	161.08	-47.65	238.84	230.47	8.37	28.536	
2,000.00	1,996.40	1,960.76	1,940.51	4.48	5.64	146.87	180.76	-57.10	266.39	257.52	8.87	30.036	
2,100.00	2,096.08	2,056.78	2,034.02	4.74	6.07	146.00	200.44	-66.54	294.01	284.64	9.37	31.375	
2,200.00	2,195.75	2,152.80	2,127.53	5.01	6.50	145.29	220.12	-75.98	321.68	311.80	9.87	32.576	
2,300.00	2,295.42	2,248.83	2,221.05	5.27	6.94	144.69	239.80	-85.42	349.39	339.01	10.38	33.658	
2,400.00	2,395.09	2,344.85	2,314.56	5.54	7.39	144.17	259.49	-94.86	377.13	366.24	10.89	34.637	
2,500.00	2,494.76	2,440.88	2,408.07	5.81	7.83	143.73	279.17	-104.30	404.89	393.49	11.40	35.527	
2,600.00	2,594.43	2,536.90	2,501.58	6.08	8.28	143.34	298.85	-113.75	432.67	420.77	11.91	36.338	
2,700.00	2,694.11	2,632.93	2,595.09	6.35	8.73	143.00	318.53	-123.19	460.47	448.05	12.42	37.080	
2,800.00	2,793.78	2,728.95	2,688.60	6.62	9.18	142.70	338.21	-132.63	488.28	475.35	12.93	37.762	
2,900.00	2,893.45	2,824.98	2,782.11	6.89	9.63	142.43	357.89	-142.07	516.11	502.66	13.44	38.391	
3,000.00	2,993.12	2,921.00	2,875.62	7.16	10.08	142.19	377.57	-151.51	543.94	529.98	13.96	38.971	
3,100.00	3,092.79	3,017.03	2,969.13	7.43	10.53	141.98	397.26	-160.95	571.78	557.31	14.47	39.509	
3,200.00	3,192.47	3,113.05	3,062.64	7.70	10.99	141.78	416.94	-170.39	599.63	584.64	14.99	40.009	
3,300.00	3,292.14	3,209.08	3,156.15	7.97	11.44	141.60	436.62	-179.84	627.48	611.98	15.50	40.474	
3,400.00	3,391.81	3,305.10	3,249.66	8.25	11.90	141.43	456.30	-189.28	655.34	639.32	16.02	40.909	
3,500.00	3,491.48	3,401.13	3,343.17	8.52	12.35	141.28	475.98	-198.72	683.21	666.67	16.54	41.315	
3,600.00	3,591.15	3,497.15	3,436.68	8.79	12.81	141.14	495.66	-208.16	711.07	694.02	17.05	41.696	
3,700.00	3,690.82	3,593.17	3,530.19	9.06	13.27	141.01	515.35	-217.60	738.95	721.37	17.57	42.054	
3,800.00	3,790.50	3,689.20	3,623.70	9.34	13.72	140.89	535.03	-227.04	766.82	748.73	18.09	42.391	
3,900.00	3,890.17	3,785.22	3,717.21	9.61	14.18	140.78	554.71	-236.49	794.70	776.09	18.61	42.708	
4,000.00	3,989.84	3,881.25	3,810.72	9.88	14.64	140.68	574.39	-245.93	822.58	803.45	19.13	43.008	
4,100.00	4,089.51	3,977.27	3,904.24	10.16	15.10	140.58	594.07	-255.37	850.46	830.82	19.65	43.291	
4,200.00	4,189.18	4,073.30	3,997.75	10.43	15.56	140.49	613.75	-264.81	878.34	858.18	20.16	43.560	
4,300.00	4,288.85	4,169.32	4,091.26	10.71	16.01	140.41	633.43	-274.25	906.23	885.55	20.68	43.814	
4,400.00	4,388.53	4,265.35	4,184.77	10.98	16.47	140.33	653.12	-283.69	934.12	912.92	21.20	44.056	
4,500.00	4,488.20	4,361.37	4,278.28	11.25	16.93	140.25	672.80	-293.14	962.01	940.29	21.72	44.286	
4,600.00	4,587.87	4,457.40	4,371.79	11.53	17.39	140.18	692.48	-302.58	989.90	967.66	22.24	44.504	
4,700.00	4,687.54	4,553.42	4,465.30	11.80	17.85	140.11	712.16	-312.02	1,017.79	995.03	22.76	44.713	
4,800.00	4,787.21	4,649.45	4,558.81	12.08	18.31	140.05	731.84	-321.46	1,045.69	1,022.40	23.28	44.911	
4,900.00	4,886.88	4,745.47	4,652.32	12.35	18.77	139.99	751.52	-330.90	1,073.58	1,049.78	23.80	45.101	

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

Company:	US ROCKIES REGION PLANNING	Local Co-ordinate Reference:	Well P_MIRACLE 9-12
Project:	COLORADO NORTHERN ZONE - 83	TVD Reference:	WELL @ 4963.00ft (Original Well Elev)
Reference Site:	LARIMER_MIRACLE 40-12 PAD	MD Reference:	WELL @ 4963.00ft (Original Well Elev)
Site Error:	0.00ft	North Reference:	True
Reference Well:	P_MIRACLE 9-12	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00ft	Output errors are at	2.00 sigma
Reference Wellbore	P_MIRACLE 9-12	Database:	EDM 2003.21 Single User Db
Reference Design:	PLAN #1 3-22-10 RHS	Offset TVD Reference:	Offset Datum

Offset Design LARIMER_MIRACLE 40-12 PAD - P_MIRACLE 8-12 - P_MIRACLE 8-12 - PLAN #1 3-22-10 RHS												Offset Site Error:	0.00 ft
Survey Program: 0-MWD												Offset Well Error:	0.00 ft
Reference	Offset	Semi Major Axis		Distance									
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning
5,000.00	4,986.56	4,841.50	4,745.83	12.63	19.23	139.93	771.21	-340.34	1,101.48	1,077.15	24.32	45.283	
5,100.00	5,086.23	4,937.52	4,839.34	12.90	19.69	139.88	790.89	-349.78	1,129.37	1,104.53	24.85	45.457	
5,200.00	5,185.90	5,033.54	4,932.85	13.18	20.15	139.83	810.57	-359.23	1,157.27	1,131.91	25.37	45.623	
5,300.00	5,285.57	5,129.57	5,026.36	13.45	20.61	139.78	830.25	-368.67	1,185.17	1,159.28	25.89	45.782	
5,400.00	5,385.24	5,225.59	5,119.87	13.72	21.07	139.73	849.93	-378.11	1,213.07	1,186.66	26.41	45.935	
5,500.00	5,484.91	5,321.62	5,213.38	14.00	21.53	139.69	869.61	-387.55	1,240.97	1,214.04	26.93	46.082	
5,600.00	5,584.59	5,458.17	5,346.70	14.27	22.08	139.64	896.21	-400.31	1,268.00	1,240.48	27.52	46.083	
5,693.78	5,678.06	5,618.49	5,504.74	14.53	22.57	139.70	920.40	-411.91	1,288.83	1,260.74	28.09	45.890	
5,700.00	5,684.26	5,629.25	5,515.40	14.55	22.60	139.72	921.74	-412.56	1,290.03	1,261.90	28.13	45.864	
5,800.00	5,784.07	5,804.56	5,689.70	14.73	23.00	140.00	938.43	-420.56	1,304.87	1,276.12	28.74	45.396	
5,900.00	5,884.02	5,982.58	5,867.52	14.90	23.28	140.12	945.52	-423.96	1,311.15	1,281.87	29.28	44.783	
5,925.98	5,910.00	6,025.06	5,910.00	14.95	23.33	-9.82	945.74	-424.07	1,311.37	1,281.97	29.40	44.599	
6,000.00	5,984.02	6,099.09	5,984.02	15.07	23.41	-9.82	945.74	-424.07	1,311.37	1,281.71	29.66	44.212	
6,100.00	6,084.02	6,199.09	6,084.02	15.23	23.53	-9.82	945.74	-424.07	1,311.37	1,281.36	30.01	43.691	
6,200.00	6,184.02	6,299.09	6,184.02	15.39	23.65	-9.82	945.74	-424.07	1,311.37	1,281.00	30.37	43.179	
6,300.00	6,284.02	6,399.09	6,284.02	15.55	23.78	-9.82	945.74	-424.07	1,311.37	1,280.64	30.73	42.675	
6,400.00	6,384.02	6,499.09	6,384.02	15.71	23.90	-9.82	945.74	-424.07	1,311.37	1,280.28	31.09	42.179	
6,500.00	6,484.02	6,599.09	6,484.02	15.87	24.03	-9.82	945.74	-424.07	1,311.37	1,279.92	31.45	41.692	
6,600.00	6,584.02	6,699.09	6,584.02	16.03	24.16	-9.82	945.74	-424.07	1,311.37	1,279.55	31.82	41.213	
6,700.00	6,684.02	6,799.09	6,684.02	16.20	24.29	-9.82	945.74	-424.07	1,311.37	1,279.18	32.19	40.743	
6,800.00	6,784.02	6,899.09	6,784.02	16.37	24.42	-9.82	945.74	-424.07	1,311.37	1,278.81	32.56	40.280	
6,900.00	6,884.02	6,999.09	6,884.02	16.53	24.55	-9.82	945.74	-424.07	1,311.37	1,278.44	32.93	39.825	
7,000.00	6,984.02	7,099.09	6,984.02	16.70	24.68	-9.82	945.74	-424.07	1,311.37	1,278.07	33.30	39.378	
7,100.00	7,084.02	7,199.09	7,084.02	16.87	24.82	-9.82	945.74	-424.07	1,311.37	1,277.69	33.68	38.939	
7,200.00	7,184.02	7,299.09	7,184.02	17.05	24.95	-9.82	945.74	-424.07	1,311.37	1,277.32	34.05	38.508	
7,300.00	7,284.02	7,399.09	7,284.02	17.22	25.09	-9.82	945.74	-424.07	1,311.37	1,276.94	34.43	38.084	
7,400.00	7,384.02	7,499.09	7,384.02	17.39	25.23	-9.82	945.74	-424.07	1,311.37	1,276.56	34.81	37.667	
7,500.00	7,484.02	7,599.09	7,484.02	17.57	25.37	-9.82	945.74	-424.07	1,311.37	1,276.17	35.20	37.258	
7,600.00	7,584.02	7,699.09	7,584.02	17.75	25.51	-9.82	945.74	-424.07	1,311.37	1,275.79	35.58	36.856	
7,700.00	7,684.02	7,799.09	7,684.02	17.92	25.65	-9.82	945.74	-424.07	1,311.37	1,275.40	35.97	36.461	
7,800.00	7,784.02	7,899.09	7,784.02	18.10	25.80	-9.82	945.74	-424.07	1,311.37	1,275.02	36.35	36.073	
7,815.25	7,799.28	7,914.34	7,799.28	18.13	25.82	-9.82	945.74	-424.07	1,311.37	1,274.96	36.41	36.014	
7,825.98	7,810.00	7,920.06	7,805.00	18.15	25.83	-9.82	945.74	-424.07	1,311.38	1,274.94	36.44	35.983	

Company:	US ROCKIES REGION PLANNING	Local Co-ordinate Reference:	Well P_MIRACLE 9-12
Project:	COLORADO NORTHERN ZONE - 83	TVD Reference:	WELL @ 4963.00ft (Original Well Elev)
Reference Site:	LARIMER_MIRACLE 40-12 PAD	MD Reference:	WELL @ 4963.00ft (Original Well Elev)
Site Error:	0.00ft	North Reference:	True
Reference Well:	P_MIRACLE 9-12	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00ft	Output errors are at	2.00 sigma
Reference Wellbore	P_MIRACLE 9-12	Database:	EDM 2003.21 Single User Db
Reference Design:	PLAN #1 3-22-10 RHS	Offset TVD Reference:	Offset Datum

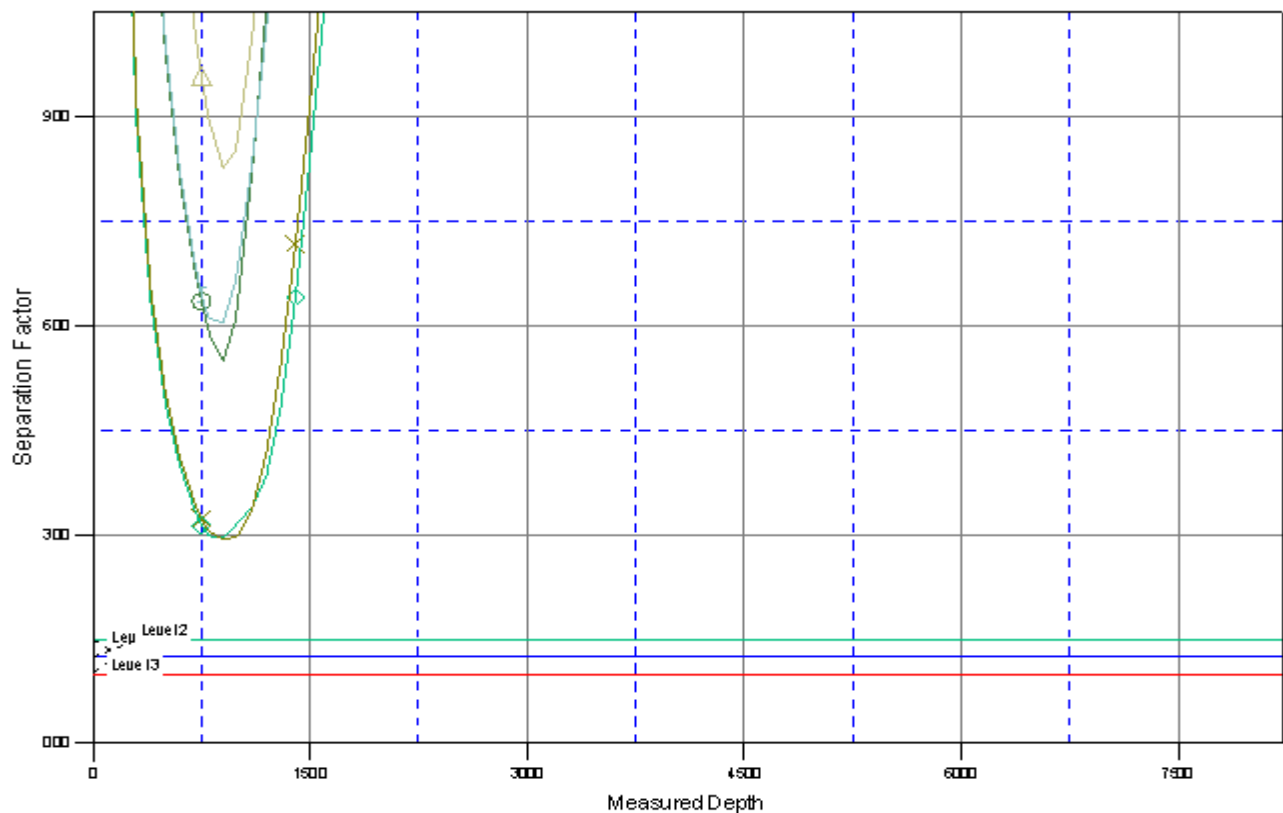
Reference Depths are relative to WELL @ 4963.00ft (Original Well Elev) Coordinates are relative to: P_MIRACLE 9-12
Offset Depths are relative to Offset Datum
Central Meridian is 105° 30' 0.000 W °
Coordinate System is US State Plane 1983, Colorado Northern Zone
Grid Convergence at Surface is: 0.36°







Company:	US ROCKIES REGION PLANNING	Local Co-ordinate Reference:	Well P_MIRACLE 9-12
Project:	COLORADO NORTHERN ZONE - 83	TVD Reference:	WELL @ 4963.00ft (Original Well Elev)
Reference Site:	LARIMER_MIRACLE 40-12 PAD	MD Reference:	WELL @ 4963.00ft (Original Well Elev)
Site Error:	0.00ft	North Reference:	True
Reference Well:	P_MIRACLE 9-12	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00ft	Output errors are at	2.00 sigma
Reference Wellbore	P_MIRACLE 9-12	Database:	EDM 2003.21 Single User Db
Reference Design:	PLAN #1 3-22-10 RHS	Offset TVD Reference:	Offset Datum

Reference Depths are relative to WELL @ 4963.00ft (Original Well Elev) Coordinates are relative to: P_MIRACLE 9-12
Offset Depths are relative to Offset Datum Coordinate System is US State Plane 1983, Colorado Northern Zone
Central Meridian is 105° 30' 0.000 W ° Grid Convergence at Surface is: 0.36°

Separation Factor Plot



LEGEND

ACLE 1-12, PLAN #1 3-22-10 RHS V0  P_MIRACLE 17-12, P_MIRACLE 17-12, PLAN #1 3-22-10 RHS V0  P_MIRACLE 24-12, P_MIRACLE 24-12, PLAN #1 3-22-10 RHS V0
 RACLE 16-12, PLAN #1 3-22-10 RHS V0  P_MIRACLE 20-12, P_MIRACLE 20-12, PLAN #1 3-22-10 RHS V0  P_MIRACLE 8-12, P_MIRACLE 8-12, PLAN #1 3-22-10 RHS V0