



US ROCKIES REGION PLANNING

COLORADO NORTHERN ZONE - 83

LARIMER_MIRACLE 40-12 PAD

P_MIRACLE 8-12

P_MIRACLE 8-12

Plan: PLAN #1 3-22-10 RHS

Standard Planning Report

23 March, 2010

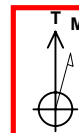




Project: COLORADO NORTHERN ZONE - 83
 Site: LARIMER MIRACLE 40-12 PAD
 Well: P_MIRACLE 8-12
 Wellbore: P_MIRACLE 8-12
 Section: SECTION 12 T5N R68W
 SHL: 2480 FSL 285 FEL
 Design: PLAN #1 3-22-10 RHS
 Latitude: 40° 24' 49.615 N
 Longitude: 104° 56' 43.685 W
 GL: 4948.00
 KB: WELL @ 4963.00ft (Original Well Elev)



Weatherford®



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

FORMATION TOP DETAILS		
TVDPath	MDPath	Formation
3485.00	3546.77	PARKMAN
4115.00	4193.70	SUSSEX
4565.00	4655.80	SHANNON
6905.00	7020.06	NIO A
7195.00	7310.06	CODELL
7655.00	7770.06	JSAND

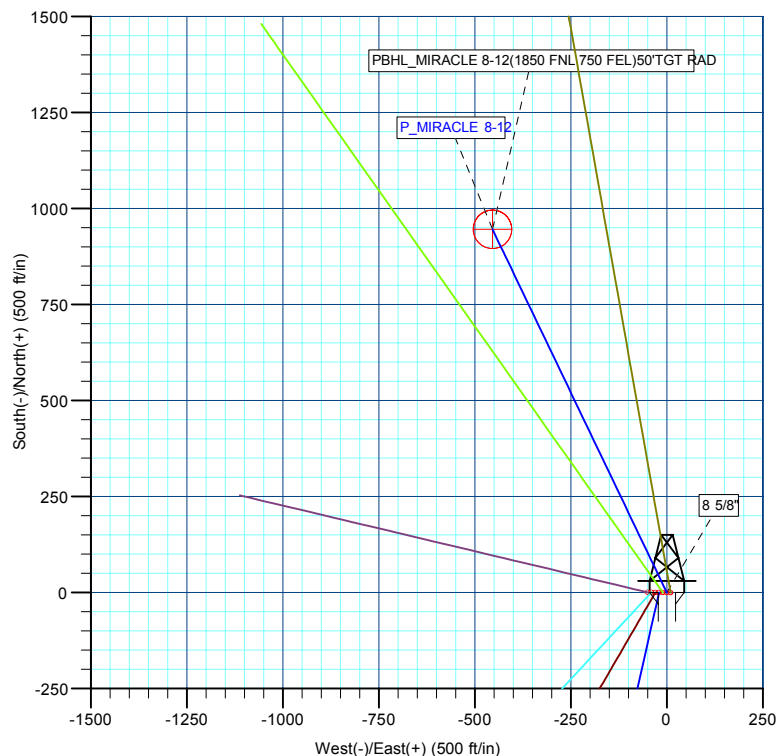
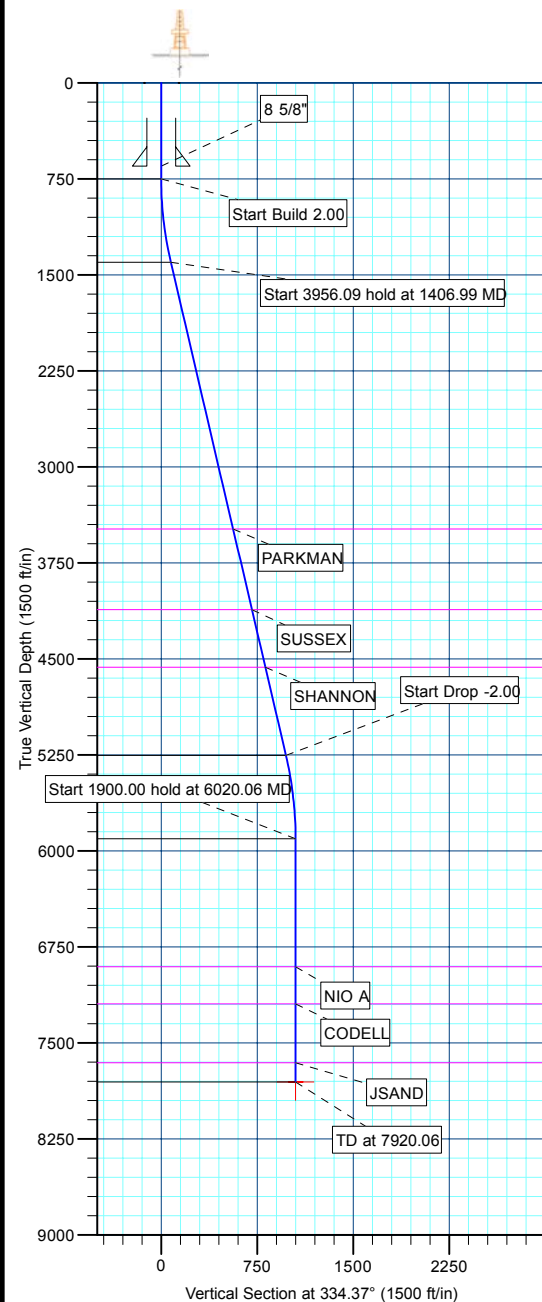
CASING DETAILS			
TVD	MD	Name	Size
650.00	650.00	8 5/8"	8.62

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	
1406.99	13.14	334.37	1401.24	67.63	-32.44	2.00	334.37	75.00	
5363.08	13.14	334.37	5253.76	878.48	-421.42	0.00	0.00	974.33	
6020.06	0.00	0.00	5905.00	946.10	-453.86	2.00	180.00	1049.34	
7920.06	0.00	0.00	7805.00	946.10	-453.86	0.00	0.00	1049.34	

WELLBORE TARGET DETAILS (MAP CO-ORDINATES AND LAT/LONG)							
Name	TVD	+N/-S	+E/-W	Latitude	Longitude	Shape	
PBHL	7805.00	946.10	-453.86	40° 24' 58.964 N	104° 56' 49.553 W	Circle (Radius: 50.00)	

WELL DETAILS: P_MIRACLE 8-12						
+N/-S	+E/-W	Northing	Ground Level: Easting	Latitude	Longitude	Slot
0.00	0.00	1394063.93	3154410.50	40° 24' 49.615 N	104° 56' 43.685 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 9-12, P_MIRACLE 9-12, PLAN #1 3-22-10 RHS V0	
PLAN #1 3-22-10 RHS	



Plan: PLAN #1 3-22-10 RHS (P_MIRACLE 8-12/P_MIRACLE 8-12)		
Created By:	Robert H. Scott	Date: 12:34, March 23 2010

Database:	EDM 2003.21 Single User Db	Local Co-ordinate Reference:	Well P_MIRACLE 8-12
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 8-12	Survey Calculation Method:	Minimum Curvature
Wellbore:	P_MIRACLE 8-12		
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 8-12					
Well Position	+N/-S	0.35 ft	Northing:	1,394,063.93 ft	Latitude:	40° 24' 49.615 N
	+E/-W	-10.02 ft	Easting:	3,154,410.50 ft	Longitude:	104° 56' 43.685 W
Position Uncertainty		0.00 ft	Wellhead Elevation:	ft	Ground Level:	4,948.00 ft

Wellbore	P_MIRACLE 8-12				
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	334.37

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	
1,406.99	13.14	334.37	1,401.24	67.63	-32.44	2.00	2.00	0.00	334.37	
5,363.08	13.14	334.37	5,253.76	878.48	-421.42	0.00	0.00	0.00	0.00	
6,020.06	0.00	0.00	5,905.00	946.10	-453.86	2.00	-2.00	0.00	180.00	
7,920.06	0.00	0.00	7,805.00	946.10	-453.86	0.00	0.00	0.00	0.00	PBHL_MIRACLE 8-

Database:	EDM 2003.21 Single User Db	Local Co-ordinate Reference:	Well P_MIRACLE 8-12
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 8-12	Survey Calculation Method:	Minimum Curvature
Wellbore:	P_MIRACLE 8-12		
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)
750.00	0.00	0.00	750.00	0.00	0.00	0.00	0.00	0.00	0.00
800.00	1.00	334.37	800.00	0.39	-0.19	0.44	2.00	2.00	0.00
900.00	3.00	334.37	899.93	3.54	-1.70	3.93	2.00	2.00	0.00
1,000.00	5.00	334.37	999.68	9.83	-4.72	10.90	2.00	2.00	0.00
1,100.00	7.00	334.37	1,099.13	19.25	-9.24	21.35	2.00	2.00	0.00
1,200.00	9.00	334.37	1,198.15	31.80	-15.26	35.27	2.00	2.00	0.00
1,300.00	11.00	334.37	1,296.63	47.46	-22.77	52.63	2.00	2.00	0.00
1,400.00	13.00	334.37	1,394.44	66.20	-31.76	73.42	2.00	2.00	0.00
1,406.99	13.14	334.37	1,401.24	67.63	-32.44	75.00	2.00	2.00	0.00
1,500.00	13.14	334.37	1,491.82	86.69	-41.59	96.15	0.00	0.00	0.00
1,600.00	13.14	334.37	1,589.20	107.19	-51.42	118.88	0.00	0.00	0.00
1,700.00	13.14	334.37	1,686.58	127.68	-61.25	141.61	0.00	0.00	0.00
1,800.00	13.14	334.37	1,783.97	148.18	-71.08	164.35	0.00	0.00	0.00
1,900.00	13.14	334.37	1,881.35	168.68	-80.92	187.08	0.00	0.00	0.00
2,000.00	13.14	334.37	1,978.73	189.17	-90.75	209.81	0.00	0.00	0.00
2,100.00	13.14	334.37	2,076.11	209.67	-100.58	232.55	0.00	0.00	0.00
2,200.00	13.14	334.37	2,173.49	230.16	-110.41	255.28	0.00	0.00	0.00
2,300.00	13.14	334.37	2,270.88	250.66	-120.25	278.01	0.00	0.00	0.00
2,400.00	13.14	334.37	2,368.26	271.16	-130.08	300.74	0.00	0.00	0.00
2,500.00	13.14	334.37	2,465.64	291.65	-139.91	323.48	0.00	0.00	0.00
2,600.00	13.14	334.37	2,563.02	312.15	-149.74	346.21	0.00	0.00	0.00
2,700.00	13.14	334.37	2,660.40	332.65	-159.58	368.94	0.00	0.00	0.00
2,800.00	13.14	334.37	2,757.79	353.14	-169.41	391.67	0.00	0.00	0.00
2,900.00	13.14	334.37	2,855.17	373.64	-179.24	414.41	0.00	0.00	0.00
3,000.00	13.14	334.37	2,952.55	394.13	-189.07	437.14	0.00	0.00	0.00
3,100.00	13.14	334.37	3,049.93	414.63	-198.91	459.87	0.00	0.00	0.00
3,200.00	13.14	334.37	3,147.31	435.13	-208.74	482.61	0.00	0.00	0.00
3,300.00	13.14	334.37	3,244.69	455.62	-218.57	505.34	0.00	0.00	0.00
3,400.00	13.14	334.37	3,342.08	476.12	-228.40	528.07	0.00	0.00	0.00
3,500.00	13.14	334.37	3,439.46	496.62	-238.24	550.80	0.00	0.00	0.00
PARKMAN									
3,546.77	13.14	334.37	3,485.00	506.20	-242.83	561.43	0.00	0.00	0.00
3,600.00	13.14	334.37	3,536.84	517.11	-248.07	573.54	0.00	0.00	0.00
3,700.00	13.14	334.37	3,634.22	537.61	-257.90	596.27	0.00	0.00	0.00
3,800.00	13.14	334.37	3,731.60	558.11	-267.73	619.00	0.00	0.00	0.00
3,900.00	13.14	334.37	3,828.99	578.60	-277.57	641.73	0.00	0.00	0.00
4,000.00	13.14	334.37	3,926.37	599.10	-287.40	664.47	0.00	0.00	0.00
4,100.00	13.14	334.37	4,023.75	619.59	-297.23	687.20	0.00	0.00	0.00
SUSSEX									
4,193.70	13.14	334.37	4,115.00	638.80	-306.44	708.50	0.00	0.00	0.00
4,200.00	13.14	334.37	4,121.13	640.09	-307.06	709.93	0.00	0.00	0.00
4,300.00	13.14	334.37	4,218.51	660.59	-316.90	732.67	0.00	0.00	0.00
4,400.00	13.14	334.37	4,315.89	681.08	-326.73	755.40	0.00	0.00	0.00
4,500.00	13.14	334.37	4,413.28	701.58	-336.56	778.13	0.00	0.00	0.00
4,600.00	13.14	334.37	4,510.66	722.08	-346.39	800.86	0.00	0.00	0.00
SHANNON									
4,655.80	13.14	334.37	4,565.00	733.51	-351.88	813.55	0.00	0.00	0.00
4,700.00	13.14	334.37	4,608.04	742.57	-356.23	823.60	0.00	0.00	0.00
4,800.00	13.14	334.37	4,705.42	763.07	-366.06	846.33	0.00	0.00	0.00
4,900.00	13.14	334.37	4,802.80	783.57	-375.89	869.06	0.00	0.00	0.00
5,000.00	13.14	334.37	4,900.19	804.06	-385.72	891.79	0.00	0.00	0.00
5,100.00	13.14	334.37	4,997.57	824.56	-395.55	914.53	0.00	0.00	0.00
5,200.00	13.14	334.37	5,094.95	845.05	-405.39	937.26	0.00	0.00	0.00

Database:	EDM 2003.21 Single User Db	Local Co-ordinate Reference:	Well P_MIRACLE 8-12
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 8-12	Survey Calculation Method:	Minimum Curvature
Wellbore:	P_MIRACLE 8-12		
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)
5,300.00	13.14	334.37	5,192.33	865.55	-415.22	959.99	0.00	0.00	0.00
5,363.08	13.14	334.37	5,253.76	878.48	-421.42	974.33	0.00	0.00	0.00
5,400.00	12.40	334.37	5,289.77	885.84	-424.95	982.49	2.00	-2.00	0.00
5,500.00	10.40	334.37	5,387.79	903.66	-433.50	1,002.26	2.00	-2.00	0.00
5,600.00	8.40	334.37	5,486.44	918.39	-440.57	1,018.59	2.00	-2.00	0.00
5,700.00	6.40	334.37	5,585.60	930.00	-446.14	1,031.48	2.00	-2.00	0.00
5,800.00	4.40	334.37	5,685.15	938.49	-450.21	1,040.89	2.00	-2.00	0.00
5,900.00	2.40	334.37	5,784.97	943.84	-452.78	1,046.82	2.00	-2.00	0.00
6,000.00	0.40	334.37	5,884.94	946.04	-453.83	1,049.27	2.00	-2.00	0.00
6,020.06	0.00	0.00	5,905.00	946.10	-453.86	1,049.34	2.00	-2.00	0.00
6,100.00	0.00	0.00	5,984.94	946.10	-453.86	1,049.34	0.00	0.00	0.00
6,200.00	0.00	0.00	6,084.94	946.10	-453.86	1,049.34	0.00	0.00	0.00
6,300.00	0.00	0.00	6,184.94	946.10	-453.86	1,049.34	0.00	0.00	0.00
6,400.00	0.00	0.00	6,284.94	946.10	-453.86	1,049.34	0.00	0.00	0.00
6,500.00	0.00	0.00	6,384.94	946.10	-453.86	1,049.34	0.00	0.00	0.00
6,600.00	0.00	0.00	6,484.94	946.10	-453.86	1,049.34	0.00	0.00	0.00
6,700.00	0.00	0.00	6,584.94	946.10	-453.86	1,049.34	0.00	0.00	0.00
6,800.00	0.00	0.00	6,684.94	946.10	-453.86	1,049.34	0.00	0.00	0.00
6,900.00	0.00	0.00	6,784.94	946.10	-453.86	1,049.34	0.00	0.00	0.00
7,000.00	0.00	0.00	6,884.94	946.10	-453.86	1,049.34	0.00	0.00	0.00
NIO A									
7,020.06	0.00	0.00	6,905.00	946.10	-453.86	1,049.34	0.00	0.00	0.00
7,100.00	0.00	0.00	6,984.94	946.10	-453.86	1,049.34	0.00	0.00	0.00
7,200.00	0.00	0.00	7,084.94	946.10	-453.86	1,049.34	0.00	0.00	0.00
7,300.00	0.00	0.00	7,184.94	946.10	-453.86	1,049.34	0.00	0.00	0.00
CODELL									
7,310.06	0.00	0.00	7,195.00	946.10	-453.86	1,049.34	0.00	0.00	0.00
7,400.00	0.00	0.00	7,284.94	946.10	-453.86	1,049.34	0.00	0.00	0.00
7,500.00	0.00	0.00	7,384.94	946.10	-453.86	1,049.34	0.00	0.00	0.00
7,600.00	0.00	0.00	7,484.94	946.10	-453.86	1,049.34	0.00	0.00	0.00
7,700.00	0.00	0.00	7,584.94	946.10	-453.86	1,049.34	0.00	0.00	0.00
JSAND									
7,770.06	0.00	0.00	7,655.00	946.10	-453.86	1,049.34	0.00	0.00	0.00
7,800.00	0.00	0.00	7,684.94	946.10	-453.86	1,049.34	0.00	0.00	0.00
7,900.00	0.00	0.00	7,784.94	946.10	-453.86	1,049.34	0.00	0.00	0.00
PBHL_MIRACLE 8-12(1850 FNL 750 FEL)50'TGT RAD									
7,920.06	0.00	0.00	7,805.00	946.10	-453.86	1,049.34	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 8-12	0.00	0.00	7,805.00	946.10	-453.86	1,395,007.18	3,153,950.73	40° 24' 58.964 N	104° 56' 49.553 W
- plan hits target center									
- Circle (radius 50.00)									

Database:	EDM 2003.21 Single User Db	Local Co-ordinate Reference:	Well P_MIRACLE 8-12
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 8-12	Survey Calculation Method:	Minimum Curvature
Wellbore:	P_MIRACLE 8-12		
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 (°)	
3,546.77	3,485.00	PARKMAN		0.00		
4,193.70	4,115.00	SUSSEX		0.00		
4,655.80	4,565.00	SHANNON		0.00		
7,020.06	6,905.00	NIO A		0.00		
7,310.06	7,195.00	CODELL		0.00		
7,770.06	7,655.00	JSAND		0.00		



US ROCKIES REGION PLANNING

**COLORADO NORTHERN ZONE - 83
LARIMER_MIRACLE 40-12 PAD
P_MIRACLE 8-12**

**P_MIRACLE 8-12
PLAN #1 3-22-10 RHS**

Anticollision Report

23 March, 2010



Company:	US ROCKIES REGION PLANNING	Local Co-ordinate Reference:	Well P_MIRACLE 8-12
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 8-12	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00ft	Output errors are at	2.00 sigma
Reference Wellbore	P_MIRACLE 8-12	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	3/23/2010		
From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description
0.00	7,920.06	PLAN #1 3-22-10 RHS (P_MIRACLE 8-12	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
Offset Well - Wellbore - Design						
LARIMER_MIRACLE 40-12 PAD						
P_MIRACLE 1-12 - P_MIRACLE 1-12 - PLAN #1 3-22-1C	409.33	409.36	9.81	8.23	6.204	CC, ES
P_MIRACLE 1-12 - P_MIRACLE 1-12 - PLAN #1 3-22-1C	500.00	499.82	10.96	8.97	5.500	SF
P_MIRACLE 16-12 - P_MIRACLE 16-12 - PLAN #1 3-22	839.41	839.20	19.88	16.40	5.714	CC, ES
P_MIRACLE 16-12 - P_MIRACLE 16-12 - PLAN #1 3-22	900.00	899.42	20.44	16.72	5.497	SF
P_MIRACLE 17-12 - P_MIRACLE 17-12 - PLAN #1 3-22	750.00	750.00	10.02	6.91	3.220	CC
P_MIRACLE 17-12 - P_MIRACLE 17-12 - PLAN #1 3-22	800.00	799.90	10.09	6.75	3.025	ES
P_MIRACLE 17-12 - P_MIRACLE 17-12 - PLAN #1 3-22	1,000.00	999.48	11.62	7.40	2.751	SF
P_MIRACLE 20-12 - P_MIRACLE 20-12 - PLAN #1 3-22	750.00	750.00	39.83	36.71	12.793	CC
P_MIRACLE 20-12 - P_MIRACLE 20-12 - PLAN #1 3-22	800.00	799.53	39.92	36.60	12.014	ES
P_MIRACLE 20-12 - P_MIRACLE 20-12 - PLAN #1 3-22	1,000.00	996.44	45.69	41.54	11.032	SF
P_MIRACLE 24-12 - P_MIRACLE 24-12 - PLAN #1 3-22	750.00	750.00	49.85	46.74	16.013	CC, ES
P_MIRACLE 24-12 - P_MIRACLE 24-12 - PLAN #1 3-22	1,000.00	995.49	55.94	51.75	13.364	SF
P_MIRACLE 9-12 - P_MIRACLE 9-12 - PLAN #1 3-22-1C	750.00	750.00	29.80	26.68	9.572	CC
P_MIRACLE 9-12 - P_MIRACLE 9-12 - PLAN #1 3-22-1C	800.00	799.73	29.83	26.50	8.977	ES
P_MIRACLE 9-12 - P_MIRACLE 9-12 - PLAN #1 3-22-1C	900.00	898.92	30.75	27.03	8.264	SF

Offset Design	LARIMER_MIRACLE 40-12 PAD - P_MIRACLE 1-12 - P_MIRACLE 1-12 - PLAN #1 3-22-10 RHS											Offset Site Error:	0.00 ft
Survey Program:	0-MWD											Offset Well Error:	0.00 ft
Reference	Offset	Semi Major Axis		Distance		Minimum Separation		Separation Factor		Warning			
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +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	91.99	-0.35	10.02	10.03				
100.00	100.00	100.00	100.00	0.10	0.10	91.99	-0.35	10.02	10.03	9.84	0.19	52.501	
200.00	200.00	200.00	200.00	0.32	0.32	91.99	-0.35	10.02	10.03	9.39	0.64	15.658	
300.00	300.00	300.00	300.00	0.55	0.55	91.99	-0.35	10.02	10.03	8.94	1.09	9.201	
400.00	400.00	400.03	400.01	0.77	0.77	81.97	1.37	9.72	9.82	8.28	1.54	6.378	
409.33	409.33	409.36	409.33	0.79	0.79	79.98	1.71	9.66	9.81	8.23	1.58	6.204	CC, ES
500.00	500.00	499.82	499.66	0.99	1.00	53.54	6.51	8.81	10.96	8.97	1.99	5.500	SF
600.00	600.00	599.13	598.58	1.22	1.24	25.95	15.02	7.31	16.76	14.30	2.46	6.817	
700.00	700.00	697.72	696.44	1.44	1.51	11.04	26.79	5.23	27.53	24.60	2.93	9.396	
750.00	750.00	746.67	744.87	1.56	1.66	6.70	33.87	3.98	34.49	31.32	3.17	10.878	
800.00	800.00	795.44	792.97	1.67	1.82	29.39	41.73	2.59	42.03	38.67	3.36	12.518	
900.00	899.93	892.56	888.35	1.89	2.17	26.50	59.79	-0.60	57.44	53.62	3.82	15.043	
1,000.00	999.68	989.16	982.53	2.12	2.56	25.50	80.89	-4.33	73.10	68.81	4.29	17.042	

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 8-12
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 8-12	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00ft	Output errors are at	2.00 sigma
Reference Wellbore	P_MIRACLE 8-12	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						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	
1,100.00	1,099.13	1,085.23	1,075.43	2.36	3.01	25.40	104.96	-8.58	88.93	84.15	4.77	18.624	
1,200.00	1,198.15	1,180.76	1,166.95	2.63	3.51	25.78	131.93	-13.35	104.90	99.62	5.28	19.865	
1,300.00	1,296.63	1,275.76	1,257.01	2.93	4.07	26.44	161.72	-18.61	121.01	115.19	5.81	20.817	
1,406.99	1,401.24	1,376.82	1,351.64	3.30	4.72	27.33	196.61	-24.78	138.40	131.98	6.42	21.554	
1,500.00	1,491.82	1,463.98	1,432.22	3.66	5.33	28.10	229.32	-30.56	154.98	147.98	7.00	22.147	
1,600.00	1,589.20	1,558.37	1,518.37	4.07	6.04	28.55	267.30	-37.27	175.66	168.02	7.64	22.993	
1,700.00	1,686.58	1,656.06	1,607.24	4.49	6.79	28.87	307.24	-44.33	197.04	188.72	8.31	23.705	
1,800.00	1,783.97	1,753.74	1,696.10	4.92	7.56	29.12	347.18	-51.38	218.42	209.42	9.00	24.278	
1,900.00	1,881.35	1,851.42	1,784.97	5.36	8.33	29.33	387.11	-58.44	239.81	230.12	9.69	24.744	
2,000.00	1,978.73	1,949.10	1,873.84	5.81	9.11	29.50	427.05	-65.50	261.20	250.81	10.39	25.128	
2,100.00	2,076.11	2,046.79	1,962.70	6.26	9.88	29.65	466.98	-72.56	282.59	271.49	11.10	25.448	
2,200.00	2,173.49	2,144.47	2,051.57	6.72	10.67	29.78	506.92	-79.61	303.99	292.17	11.82	25.718	
2,300.00	2,270.88	2,242.15	2,140.43	7.18	11.45	29.89	546.86	-86.67	325.38	312.84	12.54	25.948	
2,400.00	2,368.26	2,339.83	2,229.30	7.64	12.23	29.98	586.79	-93.73	346.78	333.52	13.26	26.145	
2,500.00	2,465.64	2,437.52	2,318.17	8.11	13.02	30.07	626.73	-100.78	368.18	354.19	13.99	26.316	
2,600.00	2,563.02	2,535.20	2,407.03	8.57	13.81	30.15	666.66	-107.84	389.58	374.85	14.72	26.465	
2,700.00	2,660.40	2,632.88	2,495.90	9.04	14.59	30.21	706.60	-114.90	410.97	395.52	15.45	26.595	
2,800.00	2,757.79	2,730.56	2,584.76	9.51	15.38	30.28	746.54	-121.95	432.37	416.19	16.19	26.711	
2,900.00	2,855.17	2,828.25	2,673.63	9.98	16.17	30.33	786.47	-129.01	453.77	436.85	16.92	26.813	
3,000.00	2,952.55	2,925.93	2,762.50	10.45	16.96	30.38	826.41	-136.07	475.17	457.51	17.66	26.905	
3,100.00	3,049.93	3,023.61	2,851.36	10.93	17.75	30.43	866.34	-143.12	496.57	478.17	18.40	26.988	
3,200.00	3,147.31	3,121.29	2,940.23	11.40	18.54	30.47	906.28	-150.18	517.97	498.83	19.14	27.062	
3,300.00	3,244.69	3,218.98	3,029.09	11.87	19.33	30.51	946.22	-157.24	539.38	519.49	19.88	27.129	
3,400.00	3,342.08	3,316.66	3,117.96	12.35	20.12	30.55	986.15	-164.30	560.78	540.15	20.62	27.190	
3,500.00	3,439.46	3,414.34	3,206.83	12.82	20.91	30.58	1,026.09	-171.35	582.18	560.81	21.37	27.246	
3,600.00	3,536.84	3,512.02	3,295.69	13.30	21.71	30.61	1,066.02	-178.41	603.58	581.47	22.11	27.297	
3,700.00	3,634.22	3,609.71	3,384.56	13.78	22.50	30.64	1,105.96	-185.47	624.98	602.12	22.86	27.344	
3,800.00	3,731.60	3,707.39	3,473.42	14.25	23.29	30.67	1,145.90	-192.52	646.38	622.78	23.60	27.387	
3,900.00	3,828.99	3,805.07	3,562.29	14.73	24.08	30.69	1,185.83	-199.58	667.79	643.44	24.35	27.427	
4,000.00	3,926.37	3,902.75	3,651.16	15.21	24.88	30.72	1,225.77	-206.64	689.19	664.09	25.09	27.464	
4,100.00	4,023.75	4,000.44	3,740.02	15.68	25.67	30.74	1,265.70	-213.69	710.59	684.75	25.84	27.498	
4,200.00	4,121.13	4,098.12	3,828.89	16.16	26.46	30.76	1,305.64	-220.75	731.99	705.40	26.59	27.530	
4,300.00	4,218.51	4,195.80	3,917.76	16.64	27.25	30.78	1,345.58	-227.81	753.39	726.06	27.34	27.560	
4,400.00	4,315.89	4,293.48	4,006.62	17.12	28.05	30.80	1,385.51	-234.86	774.80	746.71	28.09	27.587	
4,500.00	4,413.28	4,391.17	4,095.49	17.59	28.84	30.82	1,425.45	-241.92	796.20	767.37	28.83	27.613	
4,600.00	4,510.66	4,488.85	4,184.35	18.07	29.63	30.83	1,465.39	-248.98	817.60	788.02	29.58	27.638	
4,700.00	4,608.04	4,586.53	4,273.22	18.55	30.43	30.85	1,505.32	-256.04	839.00	808.67	30.33	27.661	
4,800.00	4,705.42	4,684.21	4,362.09	19.03	31.22	30.86	1,545.26	-263.09	860.41	829.33	31.08	27.682	
4,900.00	4,802.80	4,781.90	4,450.95	19.51	32.01	30.88	1,585.19	-270.15	881.81	849.98	31.83	27.702	
5,000.00	4,900.19	4,879.58	4,539.82	19.99	32.81	30.89	1,625.13	-277.21	903.21	870.63	32.58	27.722	
5,100.00	4,997.57	4,977.26	4,628.68	20.47	33.60	30.90	1,665.07	-284.26	924.62	891.28	33.33	27.740	
5,200.00	5,094.95	5,074.94	4,717.55	20.95	34.40	30.92	1,705.00	-291.32	946.02	911.94	34.08	27.757	
5,300.00	5,192.33	5,172.63	4,806.42	21.43	35.19	30.93	1,744.94	-298.38	967.42	932.59	34.83	27.773	
5,363.08	5,253.76	5,234.24	4,862.47	21.73	35.69	30.94	1,770.13	-302.83	980.92	945.62	35.31	27.783	
5,400.00	5,289.77	5,270.27	4,895.24	21.88	35.98	31.02	1,784.86	-305.43	989.02	953.46	35.56	27.812	
5,500.00	5,387.79	5,367.34	4,983.56	22.22	36.77	31.19	1,824.54	-312.44	1,012.96	976.80	36.16	28.011	
5,600.00	5,486.44	5,463.62	5,071.15	22.52	37.55	31.30	1,863.91	-319.40	1,039.79	1,003.09	36.69	28.338	
5,700.00	5,585.60	5,568.14	5,184.90	22.78	38.47	31.28	1,913.78	-328.21	1,068.78	1,031.58	37.21	28.726	
5,800.00	5,685.15	5,739.15	5,325.48	23.00	39.33	31.14	1,968.03	-337.80	1,096.34	1,058.70	37.64	29.127	
5,900.00	5,784.97	5,893.30	5,471.77	23.17	40.10	30.97	2,015.80	-346.24	1,121.85	1,083.88	37.98	29.542	
6,000.00	5,884.94	6,050.48	5,623.41	23.30	40.76	30.75	2,056.46	-353.42	1,145.21	1,107.01	38.20	29.976	
6,020.06	5,905.00	6,082.37	5,654.44	23.32	40.89	5.07	2,063.71	-354.71	1,149.63	1,111.39	38.24	30.065	

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 8-12
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 8-12	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00ft	Output errors are at	2.00 sigma
Reference Wellbore	P_MIRACLE 8-12	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						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	
6,100.00	5,984.94	6,210.88	5,780.26	23.41	41.34	4.73	2,089.45	-359.25	1,165.37	1,126.87	38.50	30.268	
6,200.00	6,084.94	6,374.64	5,942.06	23.53	41.79	4.42	2,114.16	-363.62	1,180.22	1,141.36	38.86	30.373	
6,300.00	6,184.94	6,540.79	6,107.42	23.65	42.11	4.23	2,129.89	-366.40	1,189.54	1,150.32	39.22	30.333	
6,400.00	6,284.94	6,708.25	6,274.73	23.78	42.32	4.15	2,136.16	-367.51	1,193.23	1,153.65	39.57	30.152	
6,500.00	6,384.94	6,818.45	6,384.94	23.90	42.39	4.15	2,136.27	-367.53	1,193.29	1,153.42	39.87	29.927	
6,600.00	6,484.94	6,918.45	6,484.94	24.03	42.46	4.15	2,136.27	-367.53	1,193.29	1,153.12	40.18	29.702	
6,700.00	6,584.94	7,018.45	6,584.94	24.16	42.52	4.15	2,136.27	-367.53	1,193.29	1,152.81	40.48	29.478	
6,800.00	6,684.94	7,118.45	6,684.94	24.29	42.59	4.15	2,136.27	-367.53	1,193.29	1,152.50	40.79	29.255	
6,900.00	6,784.94	7,218.45	6,784.94	24.42	42.66	4.15	2,136.27	-367.53	1,193.29	1,152.19	41.10	29.034	
7,000.00	6,884.94	7,318.45	6,884.94	24.55	42.73	4.15	2,136.27	-367.53	1,193.29	1,151.88	41.41	28.815	
7,100.00	6,984.94	7,418.45	6,984.94	24.68	42.81	4.15	2,136.27	-367.53	1,193.29	1,151.56	41.73	28.597	
7,200.00	7,084.94	7,518.45	7,084.94	24.82	42.88	4.15	2,136.27	-367.53	1,193.29	1,151.25	42.05	28.381	
7,300.00	7,184.94	7,618.45	7,184.94	24.96	42.95	4.15	2,136.27	-367.53	1,193.29	1,150.92	42.37	28.166	
7,400.00	7,284.94	7,718.45	7,284.94	25.09	43.03	4.15	2,136.27	-367.53	1,193.29	1,150.60	42.69	27.953	
7,500.00	7,384.94	7,818.45	7,384.94	25.23	43.10	4.15	2,136.27	-367.53	1,193.29	1,150.28	43.01	27.742	
7,600.00	7,484.94	7,918.45	7,484.94	25.37	43.18	4.15	2,136.27	-367.53	1,193.29	1,149.95	43.34	27.533	
7,700.00	7,584.94	8,018.45	7,584.94	25.51	43.26	4.15	2,136.27	-367.53	1,193.29	1,149.62	43.67	27.326	
7,800.00	7,684.94	8,118.45	7,684.94	25.66	43.34	4.15	2,136.27	-367.53	1,193.29	1,149.29	44.00	27.120	
7,900.00	7,784.94	8,218.45	7,784.94	25.80	43.42	4.15	2,136.27	-367.53	1,193.29	1,148.96	44.33	26.917	
7,920.06	7,805.00	8,238.52	7,805.00	25.83	43.44	4.15	2,136.27	-367.53	1,193.29	1,148.89	44.40	26.876	

Company:	US ROCKIES REGION PLANNING	Local Co-ordinate Reference:	Well P_MIRACLE 8-12
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 8-12	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00ft	Output errors are at	2.00 sigma
Reference Wellbore	P_MIRACLE 8-12	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	-88.95	0.37	-20.05	20.05				
100.00	100.00	100.00	100.00	0.10	0.10	-88.95	0.37	-20.05	20.05	19.86	0.19	104.957	
200.00	200.00	200.00	200.00	0.32	0.32	-88.95	0.37	-20.05	20.05	19.41	0.64	31.303	
300.00	300.00	300.00	300.00	0.55	0.55	-88.95	0.37	-20.05	20.05	18.96	1.09	18.394	
400.00	400.00	400.00	400.00	0.77	0.77	-88.95	0.37	-20.05	20.05	18.51	1.54	13.024	
500.00	500.00	500.00	500.00	0.99	0.99	-88.95	0.37	-20.05	20.05	18.06	1.99	10.081	
600.00	600.00	600.00	600.00	1.22	1.22	-88.95	0.37	-20.05	20.05	17.61	2.44	8.222	
700.00	700.00	700.00	700.00	1.44	1.44	-88.95	0.37	-20.05	20.05	17.16	2.89	6.943	
750.00	750.00	750.00	750.00	1.56	1.56	-88.95	0.37	-20.05	20.05	16.94	3.11	6.441	
800.00	800.00	799.92	799.91	1.67	1.65	-65.66	-0.06	-20.14	19.96	16.64	3.32	6.008	
839.41	839.39	839.20	839.19	1.76	1.72	-70.85	-0.99	-20.35	19.88	16.40	3.48	5.714 CC, ES	
900.00	899.93	899.42	899.36	1.89	1.83	-84.25	-3.43	-20.91	20.44	16.72	3.72	5.497 SF	
1,000.00	999.68	997.97	997.66	2.12	2.02	-112.34	-10.09	-22.41	26.72	22.59	4.13	6.469	
1,100.00	1,099.13	1,094.94	1,094.10	2.36	2.23	-132.08	-19.86	-24.61	42.33	37.79	4.54	9.318	
1,200.00	1,198.15	1,189.76	1,188.03	2.63	2.46	-142.43	-32.49	-27.46	66.22	61.26	4.95	13.367	
1,300.00	1,296.63	1,281.91	1,278.86	2.93	2.73	-147.93	-47.66	-30.88	97.11	91.74	5.37	18.088	
1,406.99	1,401.24	1,377.05	1,372.05	3.30	3.05	-151.23	-66.31	-35.08	137.10	131.29	5.82	23.568	
1,500.00	1,491.82	1,457.08	1,449.92	3.66	3.36	-153.13	-84.32	-39.15	176.09	169.84	6.25	28.191	
1,600.00	1,589.20	1,540.91	1,530.90	4.07	3.72	-154.25	-105.46	-43.91	220.62	213.90	6.72	32.839	
1,700.00	1,686.58	1,622.39	1,608.97	4.49	4.11	-154.84	-128.21	-49.04	267.68	260.48	7.20	37.182	
1,800.00	1,783.97	1,700.00	1,682.68	4.92	4.52	-155.13	-151.89	-54.38	317.14	309.45	7.68	41.276	
1,900.00	1,881.35	1,778.22	1,756.29	5.36	4.99	-155.25	-177.71	-60.20	368.85	360.67	8.18	45.076	
2,000.00	1,978.73	1,852.56	1,825.54	5.81	5.47	-155.25	-204.06	-66.15	422.73	414.05	8.68	48.687	
2,100.00	2,076.11	1,924.52	1,891.89	6.26	5.96	-155.18	-231.23	-72.27	478.68	469.49	9.18	52.121	
2,200.00	2,173.49	1,999.25	1,960.11	6.72	6.50	-155.07	-260.98	-78.98	536.42	526.72	9.70	55.290	
2,300.00	2,270.88	2,080.65	2,034.29	7.18	7.11	-154.95	-293.68	-86.35	594.50	584.25	10.25	58.018	
2,400.00	2,368.26	2,162.05	2,108.47	7.64	7.73	-154.86	-326.38	-93.73	652.58	641.79	10.80	60.439	
2,500.00	2,465.64	2,243.45	2,182.65	8.11	8.35	-154.78	-359.08	-101.10	710.67	699.31	11.35	62.598	
2,600.00	2,563.02	2,324.85	2,256.82	8.57	8.98	-154.72	-391.78	-108.47	768.75	756.84	11.91	64.534	
2,700.00	2,660.40	2,406.25	2,331.00	9.04	9.61	-154.66	-424.48	-115.85	826.83	814.36	12.48	66.275	
2,800.00	2,757.79	2,487.64	2,405.18	9.51	10.25	-154.61	-457.17	-123.22	884.92	871.87	13.04	67.846	
2,900.00	2,855.17	2,569.04	2,479.35	9.98	10.89	-154.57	-489.87	-130.59	943.00	929.39	13.61	69.272	
3,000.00	2,952.55	2,650.44	2,553.53	10.45	11.54	-154.53	-522.57	-137.97	1,001.09	986.90	14.19	70.570	
3,100.00	3,049.93	2,731.84	2,627.71	10.93	12.18	-154.50	-555.27	-145.34	1,059.17	1,044.41	14.76	71.758	
3,200.00	3,147.31	2,813.24	2,701.89	11.40	12.83	-154.47	-587.97	-152.71	1,117.26	1,101.92	15.34	72.846	
3,300.00	3,244.69	2,894.64	2,776.06	11.87	13.48	-154.44	-620.67	-160.09	1,175.35	1,159.43	15.92	73.848	
3,400.00	3,342.08	2,976.04	2,850.24	12.35	14.13	-154.42	-653.37	-167.46	1,233.43	1,216.94	16.50	74.771	
3,500.00	3,439.46	3,057.44	2,924.42	12.82	14.78	-154.39	-686.06	-174.83	1,291.52	1,274.44	17.08	75.625	
3,600.00	3,536.84	3,138.84	2,998.60	13.30	15.43	-154.37	-718.76	-182.20	1,349.60	1,331.94	17.66	76.417	
3,700.00	3,634.22	3,220.24	3,072.77	13.78	16.08	-154.35	-751.46	-189.58	1,407.69	1,389.45	18.25	77.155	
3,800.00	3,731.60	3,301.64	3,146.95	14.25	16.74	-154.34	-784.16	-196.95	1,465.78	1,446.95	18.83	77.842	
3,900.00	3,828.99	3,383.04	3,221.13	14.73	17.39	-154.32	-816.86	-204.32	1,523.86	1,504.45	19.42	78.483	
4,000.00	3,926.37	3,464.43	3,295.30	15.21	18.04	-154.30	-849.56	-211.70	1,581.95	1,561.95	20.00	79.083	
4,100.00	4,023.75	3,545.83	3,369.48	15.68	18.70	-154.29	-882.25	-219.07	1,640.04	1,619.45	20.59	79.646	
4,200.00	4,121.13	3,627.23	3,443.66	16.16	19.36	-154.28	-914.95	-226.44	1,698.12	1,676.94	21.18	80.175	
4,300.00	4,218.51	3,708.63	3,517.84	16.64	20.01	-154.27	-947.65	-233.82	1,756.21	1,734.44	21.77	80.673	
4,400.00	4,315.89	3,790.03	3,592.01	17.12	20.67	-154.26	-980.35	-241.19	1,814.30	1,791.94	22.36	81.142	
4,500.00	4,413.28	3,871.43	3,666.19	17.59	21.33	-154.24	-1,013.05	-248.56	1,872.39	1,849.44	22.95	81.585	
4,600.00	4,510.66	3,952.83	3,740.37	18.07	21.98	-154.23	-1,045.75	-255.94	1,930.47	1,906.93	23.54	82.004	
4,700.00	4,608.04	4,034.23	3,814.55	18.55	22.64	-154.23	-1,078.44	-263.31	1,988.56	1,964.43	24.13	82.400	
4,800.00	4,705.42	4,115.63	3,888.72	19.03	23.30	-154.22	-1,111.14	-270.68	2,046.65	2,021.92	24.72	82.777	
4,900.00	4,802.80	4,197.03	3,962.90	19.51	23.96	-154.21	-1,143.84	-278.05	2,104.73	2,079.42	25.32	83.134	

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 8-12
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 8-12	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00ft	Output errors are at	2.00 sigma
Reference Wellbore	P_MIRACLE 8-12	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	4,900.19	4,278.43	4,037.08	19.99	24.62	-154.20	-1,176.54	-285.43	2,162.82	2,136.91	25.91	83.474	
5,100.00	4,997.57	4,359.83	4,111.26	20.47	25.27	-154.19	-1,209.24	-292.80	2,220.91	2,194.40	26.50	83.797	
5,200.00	5,094.95	4,441.22	4,185.43	20.95	25.93	-154.19	-1,241.94	-300.17	2,279.00	2,251.90	27.10	84.105	
5,300.00	5,192.33	4,522.62	4,259.61	21.43	26.59	-154.18	-1,274.63	-307.55	2,337.08	2,309.39	27.69	84.399	
5,363.08	5,253.76	4,573.97	4,306.40	21.73	27.01	-154.17	-1,295.26	-312.20	2,373.72	2,345.66	28.07	84.577	
5,400.00	5,289.77	4,604.15	4,333.90	21.88	27.25	-154.40	-1,307.38	-314.93	2,395.00	2,366.63	28.37	84.428	
5,500.00	5,387.79	4,687.09	4,409.48	22.22	27.92	-154.93	-1,340.70	-322.44	2,450.83	2,421.70	29.13	84.124	
5,600.00	5,486.44	4,771.71	4,486.60	22.52	28.61	-155.37	-1,374.69	-330.11	2,504.02	2,474.14	29.87	83.817	
5,700.00	5,585.60	4,857.91	4,565.15	22.78	29.31	-155.74	-1,409.32	-337.92	2,554.50	2,523.91	30.59	83.518	
5,800.00	5,685.15	4,945.59	4,645.05	23.00	30.02	-156.04	-1,444.54	-345.86	2,602.22	2,570.95	31.26	83.236	
5,900.00	5,784.97	5,034.64	4,726.20	23.17	30.74	-156.27	-1,480.31	-353.93	2,647.13	2,615.22	31.90	82.974	
6,000.00	5,884.94	5,124.94	4,808.49	23.30	31.47	-156.43	-1,516.59	-362.11	2,689.18	2,656.68	32.50	82.738	
6,020.06	5,905.00	5,143.20	4,825.13	23.32	31.62	177.91	-1,523.93	-363.76	2,697.27	2,664.66	32.62	82.694	
6,100.00	5,984.94	5,216.05	4,891.51	23.41	32.21	178.09	-1,553.19	-370.36	2,729.29	2,696.28	33.00	82.698	
6,200.00	6,084.94	6,221.51	5,858.28	23.53	36.28	179.44	-1,803.86	-426.88	2,759.42	2,723.72	35.70	77.296	
6,300.00	6,184.94	6,548.45	6,184.94	23.65	36.63	179.49	-1,813.82	-429.13	2,760.04	2,723.70	36.34	75.948	
6,400.00	6,284.94	6,648.45	6,284.94	23.78	36.70	179.49	-1,813.82	-429.13	2,760.04	2,723.40	36.64	75.325	
6,500.00	6,384.94	6,748.45	6,384.94	23.90	36.76	179.49	-1,813.82	-429.13	2,760.04	2,723.09	36.95	74.706	
6,600.00	6,484.94	6,848.45	6,484.94	24.03	36.83	179.49	-1,813.82	-429.13	2,760.04	2,722.79	37.25	74.092	
6,700.00	6,584.94	6,948.45	6,584.94	24.16	36.90	179.49	-1,813.82	-429.13	2,760.04	2,722.48	37.56	73.482	
6,800.00	6,684.94	7,048.45	6,684.94	24.29	36.97	179.49	-1,813.82	-429.13	2,760.04	2,722.17	37.87	72.877	
6,900.00	6,784.94	7,148.45	6,784.94	24.42	37.04	179.49	-1,813.82	-429.13	2,760.04	2,721.85	38.19	72.276	
7,000.00	6,884.94	7,248.45	6,884.94	24.55	37.11	179.49	-1,813.82	-429.13	2,760.04	2,721.53	38.50	71.681	
7,100.00	6,984.94	7,348.45	6,984.94	24.68	37.18	179.49	-1,813.82	-429.13	2,760.04	2,721.21	38.82	71.090	
7,200.00	7,084.94	7,448.45	7,084.94	24.82	37.26	179.49	-1,813.82	-429.13	2,760.04	2,720.89	39.15	70.505	
7,300.00	7,184.94	7,548.45	7,184.94	24.96	37.33	179.49	-1,813.82	-429.13	2,760.04	2,720.57	39.47	69.925	
7,400.00	7,284.94	7,648.45	7,284.94	25.09	37.41	179.49	-1,813.82	-429.13	2,760.04	2,720.24	39.80	69.351	
7,500.00	7,384.94	7,748.45	7,384.94	25.23	37.49	179.49	-1,813.82	-429.13	2,760.04	2,719.91	40.13	68.782	
7,600.00	7,484.94	7,848.45	7,484.94	25.37	37.57	179.49	-1,813.82	-429.13	2,760.04	2,719.58	40.46	68.218	
7,700.00	7,584.94	7,948.45	7,584.94	25.51	37.65	179.49	-1,813.82	-429.13	2,760.04	2,719.25	40.79	67.660	
7,800.00	7,684.94	8,048.45	7,684.94	25.66	37.73	179.49	-1,813.82	-429.13	2,760.04	2,718.91	41.13	67.107	
7,900.00	7,784.94	8,148.45	7,784.94	25.80	37.81	179.49	-1,813.82	-429.13	2,760.04	2,718.57	41.47	66.560	
7,920.06	7,805.00	8,168.51	7,805.00	25.83	37.83	179.49	-1,813.82	-429.13	2,760.04	2,718.50	41.53	66.451	

Company:	US ROCKIES REGION PLANNING	Local Co-ordinate Reference:	Well P_MIRACLE 8-12
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 8-12	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00ft	Output errors are at	2.00 sigma
Reference Wellbore	P_MIRACLE 8-12	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	-89.98	0.00	-10.02	10.02				
100.00	100.00	100.00	100.00	0.10	0.10	-89.98	0.00	-10.02	10.02	9.83	0.19	52.469	
200.00	200.00	200.00	200.00	0.32	0.32	-89.98	0.00	-10.02	10.02	9.38	0.64	15.649	
300.00	300.00	300.00	300.00	0.55	0.55	-89.98	0.00	-10.02	10.02	8.93	1.09	9.196	
400.00	400.00	400.00	400.00	0.77	0.77	-89.98	0.00	-10.02	10.02	8.48	1.54	6.511	
500.00	500.00	500.00	500.00	0.99	0.99	-89.98	0.00	-10.02	10.02	8.04	1.99	5.039	
600.00	600.00	600.00	600.00	1.22	1.22	-89.98	0.00	-10.02	10.02	7.59	2.44	4.111	
700.00	700.00	700.00	700.00	1.44	1.44	-89.98	0.00	-10.02	10.02	7.14	2.89	3.471	
750.00	750.00	750.00	750.00	1.56	1.56	-89.98	0.00	-10.02	10.02	6.91	3.11	3.220 CC	
800.00	800.00	799.90	799.90	1.67	1.67	-64.56	0.36	-10.28	10.09	6.75	3.34	3.025 ES	
900.00	899.93	899.69	899.63	1.89	1.89	-66.17	3.20	-12.28	10.59	6.82	3.78	2.806	
1,000.00	999.68	999.48	999.17	2.12	2.12	-68.97	8.87	-16.29	11.62	7.40	4.22	2.751 SF	
1,100.00	1,099.13	1,099.26	1,098.40	2.36	2.36	-72.32	17.37	-22.29	13.21	8.51	4.70	2.811	
1,200.00	1,198.15	1,199.02	1,197.18	2.63	2.63	-75.69	28.69	-30.29	15.38	10.16	5.22	2.944	
1,300.00	1,296.63	1,298.76	1,295.41	2.93	2.93	-78.75	42.80	-40.26	18.14	12.32	5.82	3.118	
1,406.99	1,401.24	1,405.44	1,399.73	3.30	3.30	-81.52	60.98	-53.10	21.75	15.19	6.56	3.317	
1,500.00	1,491.82	1,498.13	1,489.65	3.66	3.68	-80.23	79.34	-66.06	25.65	18.39	7.26	3.533	
1,600.00	1,589.20	1,597.54	1,585.23	4.07	4.13	-73.45	101.66	-81.83	31.16	23.16	8.01	3.892	
1,700.00	1,686.58	1,696.48	1,679.35	4.49	4.65	-64.40	126.55	-99.41	38.86	30.18	8.68	4.476	
1,800.00	1,783.97	1,794.70	1,771.70	4.92	5.23	-55.47	153.87	-118.71	49.51	40.25	9.26	5.344	
1,900.00	1,881.35	1,892.00	1,861.99	5.36	5.87	-47.85	183.47	-139.62	63.56	53.77	9.78	6.495	
2,000.00	1,978.73	1,988.16	1,949.97	5.81	6.57	-41.76	215.17	-162.01	81.12	70.84	10.28	7.890	
2,100.00	2,076.11	2,085.65	2,038.36	6.26	7.32	-37.23	248.77	-185.74	101.03	90.23	10.80	9.356	
2,200.00	2,173.49	2,183.39	2,126.96	6.72	8.10	-34.19	282.47	-209.55	121.37	110.01	11.36	10.688	
2,300.00	2,270.88	2,281.13	2,215.56	7.18	8.88	-32.03	316.18	-233.36	141.94	130.00	11.94	11.888	
2,400.00	2,368.26	2,378.87	2,304.17	7.64	9.68	-30.41	349.88	-257.16	162.65	150.11	12.54	12.970	
2,500.00	2,465.64	2,476.61	2,392.77	8.11	10.48	-29.16	383.58	-280.97	183.46	170.31	13.16	13.946	
2,600.00	2,563.02	2,574.35	2,481.37	8.57	11.28	-28.16	417.28	-304.78	204.34	190.56	13.78	14.829	
2,700.00	2,660.40	2,672.10	2,569.98	9.04	12.09	-27.35	450.99	-328.59	225.27	210.86	14.41	15.630	
2,800.00	2,757.79	2,769.84	2,658.58	9.51	12.91	-26.68	484.69	-352.39	246.23	231.18	15.05	16.360	
2,900.00	2,855.17	2,867.58	2,747.18	9.98	13.72	-26.11	518.39	-376.20	267.22	251.53	15.69	17.026	
3,000.00	2,952.55	2,965.32	2,835.79	10.45	14.54	-25.62	552.10	-400.01	288.23	271.89	16.34	17.637	
3,100.00	3,049.93	3,063.06	2,924.39	10.93	15.37	-25.20	585.80	-423.81	309.26	292.27	16.99	18.199	
3,200.00	3,147.31	3,160.80	3,012.99	11.40	16.19	-24.84	619.50	-447.62	330.30	312.65	17.65	18.716	
3,300.00	3,244.69	3,258.54	3,101.60	11.87	17.01	-24.52	653.21	-471.43	351.36	333.05	18.30	19.195	
3,400.00	3,342.08	3,356.28	3,190.20	12.35	17.84	-24.23	686.91	-495.23	372.42	353.46	18.96	19.638	
3,500.00	3,439.46	3,454.02	3,278.80	12.82	18.67	-23.97	720.61	-519.04	393.49	373.87	19.62	20.051	
3,600.00	3,536.84	3,551.76	3,367.41	13.30	19.49	-23.75	754.32	-542.85	414.57	394.28	20.29	20.434	
3,700.00	3,634.22	3,649.50	3,456.01	13.78	20.32	-23.54	788.02	-566.65	435.65	414.70	20.95	20.793	
3,800.00	3,731.60	3,747.24	3,544.61	14.25	21.15	-23.35	821.72	-590.46	456.74	435.12	21.62	21.128	
3,900.00	3,828.99	3,844.98	3,633.22	14.73	21.98	-23.18	855.43	-614.27	477.83	455.55	22.28	21.443	
4,000.00	3,926.37	3,942.72	3,721.82	15.21	22.81	-23.02	889.13	-638.07	498.93	475.98	22.95	21.738	
4,100.00	4,023.75	4,040.46	3,810.43	15.68	23.65	-22.88	922.83	-661.88	520.03	496.41	23.62	22.015	
4,200.00	4,121.13	4,138.21	3,899.03	16.16	24.48	-22.75	956.53	-685.69	541.13	516.84	24.29	22.277	
4,300.00	4,218.51	4,235.95	3,987.63	16.64	25.31	-22.62	990.24	-709.49	562.24	537.28	24.96	22.524	
4,400.00	4,315.89	4,333.69	4,076.24	17.12	26.14	-22.51	1,023.94	-733.30	583.34	557.71	25.63	22.758	
4,500.00	4,413.28	4,431.43	4,164.84	17.59	26.98	-22.40	1,057.64	-757.11	604.45	578.15	26.30	22.979	
4,600.00	4,510.66	4,529.17	4,253.44	18.07	27.81	-22.30	1,091.35	-780.92	625.56	598.59	26.98	23.189	
4,700.00	4,608.04	4,626.91	4,342.05	18.55	28.64	-22.21	1,125.05	-804.72	646.68	619.03	27.65	23.388	
4,800.00	4,705.42	4,724.65	4,430.65	19.03	29.48	-22.12	1,158.75	-828.53	667.79	639.47	28.32	23.577	
4,900.00	4,802.80	4,822.39	4,519.25	19.51	30.31	-22.04	1,192.46	-852.34	688.91	659.91	29.00	23.757	
5,000.00	4,900.19	4,920.13	4,607.86	19.99	31.14	-21.97	1,226.16	-876.14	710.02	680.35	29.67	23.929	

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 8-12
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 8-12	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00ft	Output errors are at	2.00 sigma
Reference Wellbore	P_MIRACLE 8-12	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	
5,100.00	4,997.57	5,017.87	4,696.46	20.47	31.98	-21.89	1,259.86	-899.95	731.14	700.80	30.35	24.093	
5,200.00	5,094.95	5,147.26	4,814.85	20.95	32.89	-21.85	1,302.49	-930.06	750.32	719.21	31.11	24.121	
5,300.00	5,192.33	5,280.58	4,939.16	21.43	33.67	-21.91	1,341.80	-957.82	765.07	733.20	31.87	24.008	
5,363.08	5,253.76	5,365.48	5,019.44	21.73	34.12	-22.00	1,364.35	-973.76	772.04	739.69	32.35	23.866	
5,400.00	5,289.77	5,415.38	5,066.99	21.88	34.38	-22.09	1,376.70	-982.48	775.50	742.90	32.60	23.790	
5,500.00	5,387.79	5,551.00	5,197.49	22.22	34.99	-22.30	1,406.81	-1,003.75	783.94	750.75	33.19	23.623	
5,600.00	5,486.44	5,687.24	5,330.20	22.52	35.53	-22.47	1,431.96	-1,021.51	790.99	757.30	33.69	23.481	
5,700.00	5,585.60	5,823.99	5,464.73	22.78	35.96	-22.60	1,451.98	-1,035.66	796.62	762.53	34.09	23.366	
5,800.00	5,685.15	5,961.15	5,600.67	23.00	36.31	-22.69	1,466.78	-1,046.11	800.83	766.42	34.41	23.274	
5,900.00	5,784.97	6,098.60	5,737.61	23.17	36.57	-22.75	1,476.26	-1,052.81	803.59	768.96	34.63	23.203	
6,000.00	5,884.94	6,236.21	5,875.12	23.30	36.72	-22.77	1,480.37	-1,055.71	804.89	770.13	34.76	23.156	
6,020.06	5,905.00	6,263.83	5,902.74	23.32	36.75	-48.40	1,480.54	-1,055.83	804.98	770.20	34.77	23.148	
6,100.00	5,984.94	6,346.03	5,984.94	23.41	36.81	-48.40	1,480.55	-1,055.84	804.99	769.97	35.01	22.992	
6,200.00	6,084.94	6,446.03	6,084.94	23.53	36.88	-48.40	1,480.55	-1,055.84	804.99	769.66	35.32	22.790	
6,300.00	6,184.94	6,546.03	6,184.94	23.65	36.96	-48.40	1,480.55	-1,055.84	804.99	769.35	35.64	22.589	
6,400.00	6,284.94	6,646.03	6,284.94	23.78	37.04	-48.40	1,480.55	-1,055.84	804.99	769.03	35.95	22.390	
6,500.00	6,384.94	6,746.03	6,384.94	23.90	37.12	-48.40	1,480.55	-1,055.84	804.99	768.71	36.27	22.192	
6,600.00	6,484.94	6,846.03	6,484.94	24.03	37.20	-48.40	1,480.55	-1,055.84	804.99	768.39	36.60	21.997	
6,700.00	6,584.94	6,946.03	6,584.94	24.16	37.28	-48.40	1,480.55	-1,055.84	804.99	768.06	36.92	21.803	
6,800.00	6,684.94	7,046.03	6,684.94	24.29	37.36	-48.40	1,480.55	-1,055.84	804.99	767.74	37.25	21.611	
6,900.00	6,784.94	7,146.03	6,784.94	24.42	37.45	-48.40	1,480.55	-1,055.84	804.99	767.41	37.58	21.421	
7,000.00	6,884.94	7,246.03	6,884.94	24.55	37.53	-48.40	1,480.55	-1,055.84	804.99	767.07	37.91	21.233	
7,100.00	6,984.94	7,346.03	6,984.94	24.68	37.62	-48.40	1,480.55	-1,055.84	804.99	766.74	38.25	21.047	
7,200.00	7,084.94	7,446.03	7,084.94	24.82	37.70	-48.40	1,480.55	-1,055.84	804.99	766.40	38.58	20.863	
7,300.00	7,184.94	7,546.03	7,184.94	24.96	37.79	-48.40	1,480.55	-1,055.84	804.99	766.06	38.92	20.681	
7,400.00	7,284.94	7,646.03	7,284.94	25.09	37.88	-48.40	1,480.55	-1,055.84	804.99	765.72	39.26	20.502	
7,500.00	7,384.94	7,746.03	7,384.94	25.23	37.97	-48.40	1,480.55	-1,055.84	804.99	765.38	39.61	20.324	
7,600.00	7,484.94	7,846.03	7,484.94	25.37	38.07	-48.40	1,480.55	-1,055.84	804.99	765.03	39.95	20.148	
7,700.00	7,584.94	7,946.03	7,584.94	25.51	38.16	-48.40	1,480.55	-1,055.84	804.99	764.68	40.30	19.974	
7,800.00	7,684.94	8,046.03	7,684.94	25.66	38.25	-48.40	1,480.55	-1,055.84	804.99	764.33	40.65	19.802	
7,900.00	7,784.94	8,146.03	7,784.94	25.80	38.35	-48.40	1,480.55	-1,055.84	804.99	763.98	41.00	19.632	
7,920.06	7,805.00	8,166.09	7,805.00	25.83	38.37	-48.40	1,480.55	-1,055.84	804.99	763.91	41.07	19.598	

Company:	US ROCKIES REGION PLANNING	Local Co-ordinate Reference:	Well P_MIRACLE 8-12
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 8-12	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00ft	Output errors are at	2.00 sigma
Reference Wellbore	P_MIRACLE 8-12	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	-88.95	0.73	-39.82	39.83				
100.00	100.00	100.00	100.00	0.10	0.10	-88.95	0.73	-39.82	39.83	39.63	0.19	208.456	
200.00	200.00	200.00	200.00	0.32	0.32	-88.95	0.73	-39.82	39.83	39.19	0.64	62.171	
300.00	300.00	300.00	300.00	0.55	0.55	-88.95	0.73	-39.82	39.83	38.74	1.09	36.533	
400.00	400.00	400.00	400.00	0.77	0.77	-88.95	0.73	-39.82	39.83	38.29	1.54	25.867	
500.00	500.00	500.00	500.00	0.99	0.99	-88.95	0.73	-39.82	39.83	37.84	1.99	20.021	
600.00	600.00	600.00	600.00	1.22	1.22	-88.95	0.73	-39.82	39.83	37.39	2.44	16.331	
700.00	700.00	700.00	700.00	1.44	1.44	-88.95	0.73	-39.82	39.83	36.94	2.89	13.789	
750.00	750.00	750.00	750.00	1.56	1.56	-88.95	0.73	-39.82	39.83	36.71	3.11	12.793 CC	
800.00	800.00	799.53	799.53	1.67	1.66	-64.33	0.42	-40.11	39.92	36.60	3.32	12.014 ES	
900.00	899.93	898.35	898.28	1.89	1.84	-72.14	-2.08	-42.43	41.15	37.43	3.72	11.050	
1,000.00	999.68	996.44	996.13	2.12	2.03	-85.72	-7.03	-47.03	45.69	41.54	4.14	11.032 SF	
1,100.00	1,099.13	1,093.34	1,092.51	2.36	2.25	-100.47	-14.32	-53.80	56.19	51.62	4.58	12.281	
1,200.00	1,198.15	1,188.60	1,186.89	2.63	2.49	-112.41	-23.82	-62.63	73.92	68.89	5.03	14.708	
1,300.00	1,296.63	1,281.82	1,278.77	2.93	2.76	-120.74	-35.33	-73.32	98.63	93.14	5.49	17.952	
1,406.99	1,401.24	1,378.89	1,373.85	3.30	3.10	-126.59	-49.64	-86.61	132.04	126.02	6.02	21.933	
1,500.00	1,491.82	1,461.18	1,453.90	3.66	3.42	-130.14	-63.61	-99.59	165.51	158.99	6.52	25.399	
1,600.00	1,589.20	1,547.87	1,537.59	4.07	3.81	-132.33	-80.15	-114.95	204.43	197.36	7.07	28.910	
1,700.00	1,686.58	1,632.60	1,618.71	4.49	4.23	-133.55	-98.09	-131.62	246.04	238.39	7.65	32.177	
1,800.00	1,783.97	1,715.30	1,697.14	4.92	4.69	-134.19	-117.30	-149.46	290.10	281.87	8.24	35.216	
1,900.00	1,881.35	1,796.13	1,773.03	5.36	5.19	-134.47	-137.66	-168.38	336.49	327.64	8.84	38.044	
2,000.00	1,978.73	1,884.15	1,855.27	5.81	5.76	-134.62	-160.64	-189.73	383.94	374.45	9.49	40.442	
2,100.00	2,076.11	1,972.17	1,937.51	6.26	6.35	-134.74	-183.63	-211.08	431.39	421.24	10.15	42.485	
2,200.00	2,173.49	2,060.19	2,019.76	6.72	6.94	-134.83	-206.61	-232.43	478.85	468.02	10.82	44.240	
2,300.00	2,270.88	2,148.21	2,102.00	7.18	7.55	-134.91	-229.59	-253.78	526.30	514.80	11.50	45.758	
2,400.00	2,368.26	2,236.23	2,184.24	7.64	8.16	-134.97	-252.58	-275.13	573.76	561.57	12.19	47.081	
2,500.00	2,465.64	2,324.25	2,266.48	8.11	8.78	-135.02	-275.56	-296.48	621.22	608.34	12.88	48.242	
2,600.00	2,563.02	2,412.27	2,348.72	8.57	9.40	-135.07	-298.54	-317.83	668.67	655.10	13.57	49.267	
2,700.00	2,660.40	2,500.29	2,430.96	9.04	10.02	-135.11	-321.53	-339.18	716.13	701.86	14.27	50.177	
2,800.00	2,757.79	2,588.31	2,513.20	9.51	10.64	-135.14	-344.51	-360.53	763.59	748.61	14.98	50.988	
2,900.00	2,855.17	2,676.33	2,595.44	9.98	11.27	-135.17	-367.50	-381.88	811.05	795.36	15.68	51.717	
3,000.00	2,952.55	2,764.35	2,677.68	10.45	11.90	-135.20	-390.48	-403.23	858.51	842.11	16.39	52.374	
3,100.00	3,049.93	2,852.37	2,759.92	10.93	12.53	-135.23	-413.46	-424.58	905.96	888.86	17.10	52.970	
3,200.00	3,147.31	2,940.39	2,842.16	11.40	13.17	-135.25	-436.45	-445.93	953.42	935.61	17.82	53.513	
3,300.00	3,244.69	3,028.42	2,924.40	11.87	13.80	-135.27	-459.43	-467.28	1,000.88	982.35	18.53	54.008	
3,400.00	3,342.08	3,116.44	3,006.65	12.35	14.44	-135.29	-482.41	-488.63	1,048.34	1,029.09	19.25	54.462	
3,500.00	3,439.46	3,204.46	3,088.89	12.82	15.07	-135.30	-505.40	-509.98	1,095.80	1,075.83	19.97	54.879	
3,600.00	3,536.84	3,292.48	3,171.13	13.30	15.71	-135.32	-528.38	-531.33	1,143.26	1,122.57	20.69	55.264	
3,700.00	3,634.22	3,380.50	3,253.37	13.78	16.35	-135.33	-551.36	-552.68	1,190.71	1,169.31	21.41	55.620	
3,800.00	3,731.60	3,468.52	3,335.61	14.25	16.99	-135.35	-574.35	-574.03	1,238.17	1,216.04	22.13	55.949	
3,900.00	3,828.99	3,556.54	3,417.85	14.73	17.62	-135.36	-597.33	-595.38	1,285.63	1,262.78	22.85	56.256	
4,000.00	3,926.37	3,644.56	3,500.09	15.21	18.26	-135.37	-620.31	-616.73	1,333.09	1,309.51	23.58	56.542	
4,100.00	4,023.75	3,732.58	3,582.33	15.68	18.90	-135.38	-643.30	-638.08	1,380.55	1,356.25	24.30	56.809	
4,200.00	4,121.13	3,820.60	3,664.57	16.16	19.54	-135.39	-666.28	-659.43	1,428.01	1,402.98	25.03	57.060	
4,300.00	4,218.51	3,908.62	3,746.81	16.64	20.18	-135.40	-689.26	-680.78	1,475.47	1,449.72	25.75	57.294	
4,400.00	4,315.89	3,996.64	3,829.05	17.12	20.82	-135.41	-712.25	-702.13	1,522.93	1,496.45	26.48	57.515	
4,500.00	4,413.28	4,084.66	3,911.29	17.59	21.46	-135.41	-735.23	-723.48	1,570.39	1,543.18	27.21	57.722	
4,600.00	4,510.66	4,172.68	3,993.54	18.07	22.10	-135.42	-758.21	-744.83	1,617.84	1,589.91	27.93	57.917	
4,700.00	4,608.04	4,260.70	4,075.78	18.55	22.75	-135.43	-781.20	-766.18	1,665.30	1,636.64	28.66	58.102	
4,800.00	4,705.42	4,348.72	4,158.02	19.03	23.39	-135.44	-804.18	-787.53	1,712.76	1,683.37	29.39	58.277	
4,900.00	4,802.80	4,436.74	4,240.26	19.51	24.03	-135.44	-827.16	-808.88	1,760.22	1,730.10	30.12	58.442	
5,000.00	4,900.19	4,524.76	4,322.50	19.99	24.67	-135.45	-850.15	-830.23	1,807.68	1,776.83	30.85	58.599	

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 8-12
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 8-12	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00ft	Output errors are at	2.00 sigma
Reference Wellbore	P_MIRACLE 8-12	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
5,100.00	4,997.57	4,612.78	4,404.74	20.47	25.31	-135.45	-873.13	-851.58	1,855.14	1,823.56	31.58	58.748	
5,200.00	5,094.95	4,700.80	4,486.98	20.95	25.96	-135.46	-896.11	-872.93	1,902.60	1,870.29	32.31	58.890	
5,300.00	5,192.33	4,788.83	4,569.22	21.43	26.60	-135.46	-919.10	-894.28	1,950.06	1,917.02	33.04	59.025	
5,363.08	5,253.76	4,844.35	4,621.10	21.73	27.00	-135.47	-933.59	-907.74	1,979.99	1,946.49	33.50	59.107	
5,400.00	5,289.77	4,876.93	4,651.54	21.88	27.24	-135.74	-942.10	-915.65	1,997.37	1,963.53	33.84	59.023	
5,500.00	5,387.79	4,965.93	4,734.70	22.22	27.89	-136.39	-965.34	-937.24	2,042.90	2,008.20	34.70	58.877	
5,600.00	5,486.44	5,055.97	4,818.83	22.52	28.55	-136.91	-988.85	-959.08	2,086.17	2,050.66	35.51	58.743	
5,700.00	5,585.60	5,200.29	4,954.05	22.78	29.51	-137.21	-1,025.77	-993.37	2,126.82	2,090.36	36.46	58.340	
5,800.00	5,685.15	5,489.61	5,231.51	23.00	30.78	-137.17	-1,085.55	-1,048.90	2,158.92	2,121.30	37.62	57.383	
5,900.00	5,784.97	5,797.38	5,534.06	23.17	31.73	-137.13	-1,126.30	-1,086.76	2,179.53	2,140.92	38.61	56.455	
6,000.00	5,884.94	6,115.96	5,851.64	23.30	32.25	-137.12	-1,143.19	-1,102.45	2,187.86	2,148.52	39.33	55.623	
6,020.06	5,905.00	6,169.33	5,905.00	23.32	32.30	-162.75	-1,143.49	-1,102.73	2,188.02	2,148.59	39.44	55.483	
6,100.00	5,984.94	6,249.26	5,984.94	23.41	32.36	-162.75	-1,143.49	-1,102.73	2,188.02	2,148.38	39.64	55.198	
6,200.00	6,084.94	6,349.26	6,084.94	23.53	32.43	-162.75	-1,143.49	-1,102.73	2,188.02	2,148.11	39.91	54.822	
6,300.00	6,184.94	6,449.26	6,184.94	23.65	32.51	-162.75	-1,143.49	-1,102.73	2,188.02	2,147.84	40.19	54.446	
6,400.00	6,284.94	6,549.26	6,284.94	23.78	32.59	-162.75	-1,143.49	-1,102.73	2,188.02	2,147.56	40.47	54.071	
6,500.00	6,384.94	6,649.26	6,384.94	23.90	32.67	-162.75	-1,143.49	-1,102.73	2,188.02	2,147.28	40.75	53.697	
6,600.00	6,484.94	6,749.26	6,484.94	24.03	32.75	-162.75	-1,143.49	-1,102.73	2,188.02	2,146.99	41.03	53.325	
6,700.00	6,584.94	6,849.26	6,584.94	24.16	32.84	-162.75	-1,143.49	-1,102.73	2,188.02	2,146.70	41.32	52.954	
6,800.00	6,684.94	6,949.26	6,684.94	24.29	32.92	-162.75	-1,143.49	-1,102.73	2,188.02	2,146.41	41.61	52.585	
6,900.00	6,784.94	7,049.26	6,784.94	24.42	33.01	-162.75	-1,143.49	-1,102.73	2,188.02	2,146.12	41.90	52.217	
7,000.00	6,884.94	7,149.26	6,884.94	24.55	33.09	-162.75	-1,143.49	-1,102.73	2,188.02	2,145.83	42.20	51.851	
7,100.00	6,984.94	7,249.26	6,984.94	24.68	33.18	-162.75	-1,143.49	-1,102.73	2,188.02	2,145.53	42.50	51.486	
7,200.00	7,084.94	7,349.26	7,084.94	24.82	33.27	-162.75	-1,143.49	-1,102.73	2,188.02	2,145.23	42.80	51.124	
7,300.00	7,184.94	7,449.26	7,184.94	24.96	33.36	-162.75	-1,143.49	-1,102.73	2,188.02	2,144.92	43.10	50.764	
7,400.00	7,284.94	7,549.26	7,284.94	25.09	33.45	-162.75	-1,143.49	-1,102.73	2,188.02	2,144.62	43.41	50.406	
7,500.00	7,384.94	7,649.26	7,384.94	25.23	33.55	-162.75	-1,143.49	-1,102.73	2,188.02	2,144.31	43.72	50.050	
7,600.00	7,484.94	7,749.26	7,484.94	25.37	33.64	-162.75	-1,143.49	-1,102.73	2,188.02	2,144.00	44.03	49.696	
7,700.00	7,584.94	7,849.26	7,584.94	25.51	33.74	-162.75	-1,143.49	-1,102.73	2,188.02	2,143.68	44.34	49.345	
7,800.00	7,684.94	7,949.26	7,684.94	25.66	33.83	-162.75	-1,143.49	-1,102.73	2,188.02	2,143.37	44.66	48.996	
7,900.00	7,784.94	8,049.26	7,784.94	25.80	33.93	-162.75	-1,143.49	-1,102.73	2,188.02	2,143.05	44.98	48.650	
7,906.16	7,791.09	8,055.42	7,791.09	25.81	33.94	-162.75	-1,143.49	-1,102.73	2,188.02	2,143.03	44.99	48.628	
7,920.06	7,805.00	8,064.33	7,800.00	25.83	33.95	-162.75	-1,143.49	-1,102.73	2,188.03	2,143.00	45.03	48.589	

Company:	US ROCKIES REGION PLANNING	Local Co-ordinate Reference:	Well P_MIRACLE 8-12
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 8-12	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00ft	Output errors are at	2.00 sigma
Reference Wellbore	P_MIRACLE 8-12	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	-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	260.918	
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	799.16	799.16	1.67	1.66	-63.86	0.83	-50.25	50.07	46.74	3.33	15.040	
900.00	899.93	897.42	897.36	1.89	1.87	-66.40	1.61	-53.53	51.93	48.18	3.75	13.839	
1,000.00	999.68	995.49	995.19	2.12	2.08	-70.92	3.16	-60.07	55.94	51.75	4.19	13.364 SF	
1,100.00	1,099.13	1,093.24	1,092.42	2.36	2.32	-76.53	5.48	-69.82	62.49	57.85	4.64	13.468	
1,200.00	1,198.15	1,190.54	1,188.81	2.63	2.58	-82.30	8.55	-82.73	71.98	66.84	5.13	14.019	
1,300.00	1,296.63	1,287.29	1,284.15	2.93	2.88	-87.56	12.36	-98.72	84.60	78.91	5.69	14.875	
1,406.99	1,401.24	1,390.05	1,384.74	3.30	3.24	-92.30	17.21	-119.11	101.62	95.26	6.36	15.976	
1,500.00	1,491.82	1,479.75	1,471.93	3.66	3.60	-95.37	22.07	-139.58	119.05	112.04	7.02	16.969	
1,600.00	1,589.20	1,577.71	1,567.03	4.07	4.02	-97.67	27.52	-162.47	138.46	130.69	7.77	17.823	
1,700.00	1,686.58	1,675.68	1,662.13	4.49	4.46	-99.41	32.96	-185.36	158.03	149.48	8.55	18.477	
1,800.00	1,783.97	1,773.65	1,757.23	4.92	4.91	-100.76	38.40	-208.25	177.71	168.35	9.36	18.983	
1,900.00	1,881.35	1,871.62	1,852.33	5.36	5.38	-101.84	43.85	-231.15	197.47	187.28	10.19	19.382	
2,000.00	1,978.73	1,969.58	1,947.43	5.81	5.84	-102.73	49.29	-254.04	217.28	206.25	11.03	19.701	
2,100.00	2,076.11	2,067.55	2,042.53	6.26	6.32	-103.47	54.74	-276.93	237.13	225.25	11.88	19.959	
2,200.00	2,173.49	2,165.52	2,137.63	6.72	6.80	-104.09	60.18	-299.82	257.01	244.27	12.74	20.172	
2,300.00	2,270.88	2,263.49	2,232.73	7.18	7.28	-104.62	65.63	-322.72	276.92	263.32	13.61	20.349	
2,400.00	2,368.26	2,361.46	2,327.83	7.64	7.77	-105.09	71.07	-345.61	296.85	282.37	14.48	20.498	
2,500.00	2,465.64	2,459.42	2,422.93	8.11	8.26	-105.49	76.51	-368.50	316.80	301.44	15.36	20.624	
2,600.00	2,563.02	2,557.39	2,518.03	8.57	8.75	-105.85	81.96	-391.39	336.76	320.52	16.24	20.733	
2,700.00	2,660.40	2,655.36	2,613.13	9.04	9.24	-106.16	87.40	-414.29	356.73	339.60	17.13	20.827	
2,800.00	2,757.79	2,753.33	2,708.23	9.51	9.74	-106.45	92.85	-437.18	376.71	358.69	18.02	20.909	
2,900.00	2,855.17	2,851.29	2,803.33	9.98	10.23	-106.70	98.29	-460.07	396.70	377.79	18.91	20.982	
3,000.00	2,952.55	2,949.26	2,898.43	10.45	10.73	-106.93	103.73	-482.96	416.69	396.89	19.80	21.045	
3,100.00	3,049.93	3,047.23	2,993.53	10.93	11.23	-107.14	109.18	-505.85	436.69	416.00	20.69	21.102	
3,200.00	3,147.31	3,145.20	3,088.63	11.40	11.73	-107.33	114.62	-528.75	456.70	435.11	21.59	21.153	
3,300.00	3,244.69	3,243.16	3,183.73	11.87	12.23	-107.50	120.07	-551.64	476.71	454.22	22.49	21.198	
3,400.00	3,342.08	3,341.13	3,278.83	12.35	12.72	-107.66	125.51	-574.53	496.72	473.33	23.39	21.239	
3,500.00	3,439.46	3,439.10	3,373.93	12.82	13.22	-107.81	130.95	-597.42	516.74	492.45	24.29	21.276	
3,600.00	3,536.84	3,537.07	3,469.03	13.30	13.73	-107.95	136.40	-620.32	536.76	511.57	25.19	21.310	
3,700.00	3,634.22	3,635.03	3,564.13	13.78	14.23	-108.08	141.84	-643.21	556.78	530.69	26.09	21.341	
3,800.00	3,731.60	3,733.00	3,659.23	14.25	14.73	-108.19	147.29	-666.10	576.81	549.82	26.99	21.369	
3,900.00	3,828.99	3,830.97	3,754.33	14.73	15.23	-108.31	152.73	-688.99	596.84	568.94	27.90	21.395	
4,000.00	3,926.37	3,928.94	3,849.43	15.21	15.73	-108.41	158.17	-711.88	616.87	588.07	28.80	21.419	
4,100.00	4,023.75	4,026.91	3,944.53	15.68	16.23	-108.51	163.62	-734.78	636.90	607.19	29.70	21.441	
4,200.00	4,121.13	4,124.87	4,039.63	16.16	16.74	-108.60	169.06	-757.67	656.93	626.32	30.61	21.462	
4,300.00	4,218.51	4,222.84	4,134.73	16.64	17.24	-108.68	174.51	-780.56	676.96	645.45	31.52	21.481	
4,400.00	4,315.89	4,320.81	4,229.83	17.12	17.74	-108.76	179.95	-803.45	697.00	664.58	32.42	21.498	
4,500.00	4,413.28	4,418.78	4,324.93	17.59	18.25	-108.84	185.39	-826.35	717.04	683.71	33.33	21.515	
4,600.00	4,510.66	4,516.74	4,420.02	18.07	18.75	-108.91	190.84	-849.24	737.08	702.84	34.23	21.530	
4,700.00	4,608.04	4,614.71	4,515.12	18.55	19.25	-108.98	196.28	-872.13	757.12	721.97	35.14	21.545	
4,800.00	4,705.42	4,712.68	4,610.22	19.03	19.76	-109.04	201.73	-895.02	777.16	741.11	36.05	21.558	
4,900.00	4,802.80	4,810.65	4,705.32	19.51	20.26	-109.10	207.17	-917.92	797.20	760.24	36.96	21.571	
5,000.00	4,900.19	4,908.61	4,800.42	19.99	20.77	-109.16	212.62	-940.81	817.24	779.38	37.86	21.583	

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 8-12
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 8-12	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00ft	Output errors are at	2.00 sigma
Reference Wellbore	P_MIRACLE 8-12	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
5,100.00	4,997.57	5,006.58	4,895.52	20.47	21.27	-109.22	218.06	-963.70	837.28	798.51	38.77	21.595	
5,200.00	5,094.95	5,104.55	4,990.62	20.95	21.77	-109.27	223.50	-986.59	857.33	817.64	39.68	21.605	
5,300.00	5,192.33	5,202.52	5,085.72	21.43	22.28	-109.32	228.95	-1,009.48	877.37	836.78	40.59	21.615	
5,363.08	5,253.76	5,264.31	5,145.71	21.73	22.60	-109.35	232.38	-1,023.92	890.01	848.85	41.16	21.622	
5,400.00	5,289.77	5,302.43	5,182.71	21.88	22.78	-109.50	234.49	-1,032.81	897.33	855.83	41.50	21.621	
5,500.00	5,387.79	5,419.55	5,297.06	22.22	23.20	-109.84	240.35	-1,057.43	915.15	872.88	42.28	21.647	
5,600.00	5,486.44	5,537.71	5,413.37	22.52	23.57	-110.13	245.16	-1,077.65	929.76	886.80	42.96	21.643	
5,700.00	5,585.60	5,656.68	5,531.24	22.78	23.87	-110.37	248.87	-1,093.28	941.10	897.56	43.54	21.612	
5,800.00	5,685.15	5,776.26	5,650.29	23.00	24.12	-110.58	251.47	-1,104.17	949.15	905.12	44.03	21.555	
5,900.00	5,784.97	5,896.21	5,770.07	23.17	24.31	-110.74	252.91	-1,110.24	953.87	909.44	44.42	21.473	
6,000.00	5,884.94	6,011.09	5,884.94	23.30	24.44	-110.86	253.23	-1,111.58	955.31	910.61	44.70	21.369	
6,020.06	5,905.00	6,031.16	5,905.00	23.32	24.46	-136.49	253.23	-1,111.58	955.34	910.59	44.75	21.347	
6,100.00	5,984.94	6,111.09	5,984.94	23.41	24.55	-136.49	253.23	-1,111.58	955.34	910.40	44.94	21.257	
6,200.00	6,084.94	6,211.09	6,084.94	23.53	24.67	-136.49	253.23	-1,111.58	955.34	910.14	45.19	21.138	
6,300.00	6,184.94	6,311.09	6,184.94	23.65	24.79	-136.49	253.23	-1,111.58	955.34	909.89	45.45	21.020	
6,400.00	6,284.94	6,411.09	6,284.94	23.78	24.91	-136.49	253.23	-1,111.58	955.34	909.63	45.71	20.901	
6,500.00	6,384.94	6,511.09	6,384.94	23.90	25.03	-136.49	253.23	-1,111.58	955.34	909.37	45.97	20.782	
6,600.00	6,484.94	6,611.09	6,484.94	24.03	25.15	-136.49	253.23	-1,111.58	955.34	909.10	46.23	20.664	
6,700.00	6,584.94	6,711.09	6,584.94	24.16	25.27	-136.49	253.23	-1,111.58	955.34	908.84	46.50	20.545	
6,800.00	6,684.94	6,811.09	6,684.94	24.29	25.40	-136.49	253.23	-1,111.58	955.34	908.57	46.77	20.427	
6,900.00	6,784.94	6,911.09	6,784.94	24.42	25.53	-136.49	253.23	-1,111.58	955.34	908.30	47.04	20.308	
7,000.00	6,884.94	7,011.09	6,884.94	24.55	25.65	-136.49	253.23	-1,111.58	955.34	908.02	47.32	20.190	
7,100.00	6,984.94	7,111.09	6,984.94	24.68	25.78	-136.49	253.23	-1,111.58	955.34	907.74	47.59	20.072	
7,200.00	7,084.94	7,211.09	7,084.94	24.82	25.91	-136.49	253.23	-1,111.58	955.34	907.46	47.88	19.955	
7,300.00	7,184.94	7,311.09	7,184.94	24.96	26.05	-136.49	253.23	-1,111.58	955.34	907.18	48.16	19.838	
7,400.00	7,284.94	7,411.09	7,284.94	25.09	26.18	-136.49	253.23	-1,111.58	955.34	906.89	48.44	19.721	
7,500.00	7,384.94	7,511.09	7,384.94	25.23	26.31	-136.49	253.23	-1,111.58	955.34	906.61	48.73	19.604	
7,600.00	7,484.94	7,611.09	7,484.94	25.37	26.45	-136.49	253.23	-1,111.58	955.34	906.32	49.02	19.488	
7,700.00	7,584.94	7,711.09	7,584.94	25.51	26.59	-136.49	253.23	-1,111.58	955.34	906.02	49.31	19.372	
7,800.00	7,684.94	7,811.09	7,684.94	25.66	26.72	-136.49	253.23	-1,111.58	955.34	905.73	49.61	19.257	
7,900.00	7,784.94	7,911.09	7,784.94	25.80	26.86	-136.49	253.23	-1,111.58	955.34	905.43	49.91	19.142	
7,920.06	7,805.00	7,931.16	7,805.00	25.83	26.89	-136.49	253.23	-1,111.58	955.34	905.37	49.97	19.119	

Company:	US ROCKIES REGION PLANNING	Local Co-ordinate Reference:	Well P_MIRACLE 8-12
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 8-12	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00ft	Output errors are at	2.00 sigma
Reference Wellbore	P_MIRACLE 8-12	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 9-12 - P_MIRACLE 9-12 - 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
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	155.963	
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	
400.00	400.00	400.00	400.00	0.77	0.77	-89.29	0.37	-29.79	29.80	28.26	1.54	19.353	
500.00	500.00	500.00	500.00	0.99	0.99	-89.29	0.37	-29.79	29.80	27.81	1.99	14.979	
600.00	600.00	600.00	600.00	1.22	1.22	-89.29	0.37	-29.79	29.80	27.36	2.44	12.218	
700.00	700.00	700.00	700.00	1.44	1.44	-89.29	0.37	-29.79	29.80	26.91	2.89	10.317	
750.00	750.00	750.00	750.00	1.56	1.56	-89.29	0.37	-29.79	29.80	26.68	3.11	9.572 CC	
800.00	800.00	799.73	799.73	1.67	1.65	-65.13	-0.01	-30.01	29.83	26.50	3.32	8.977 ES	
900.00	899.93	898.92	898.86	1.89	1.83	-76.54	-2.98	-31.73	30.75	27.03	3.72	8.264 SF	
1,000.00	999.68	997.44	997.13	2.12	2.02	-95.54	-8.84	-35.12	35.77	31.64	4.14	8.649	
1,100.00	1,099.13	1,096.08	1,095.45	2.36	2.23	-113.21	-15.75	-39.12	46.18	41.61	4.57	10.112	
1,200.00	1,198.15	1,194.14	1,193.19	2.63	2.45	-126.35	-22.62	-43.10	61.33	56.33	5.00	12.259	
1,300.00	1,296.63	1,291.50	1,290.23	2.93	2.68	-135.71	-29.45	-47.05	80.90	75.45	5.44	14.859	
1,406.99	1,401.24	1,394.76	1,393.15	3.30	2.93	-142.82	-36.68	-51.24	106.30	100.38	5.92	17.957	
1,500.00	1,491.82	1,484.07	1,482.17	3.66	3.15	-147.31	-42.94	-54.86	130.66	124.30	6.36	20.540	
1,600.00	1,589.20	1,580.09	1,577.88	4.07	3.39	-150.59	-49.67	-58.75	157.43	150.59	6.84	23.003	
1,700.00	1,686.58	1,676.12	1,673.59	4.49	3.64	-152.91	-56.40	-62.65	184.54	177.21	7.33	25.165	
1,800.00	1,783.97	1,772.14	1,769.30	4.92	3.88	-154.63	-63.13	-66.54	211.86	204.03	7.83	27.066	
1,900.00	1,881.35	1,868.17	1,865.01	5.36	4.13	-155.96	-69.85	-70.43	239.32	230.99	8.33	28.744	
2,000.00	1,978.73	1,964.19	1,960.71	5.81	4.39	-157.02	-76.58	-74.33	266.87	258.04	8.83	30.232	
2,100.00	2,076.11	2,060.22	2,056.42	6.26	4.64	-157.88	-83.31	-78.22	294.49	285.16	9.33	31.557	
2,200.00	2,173.49	2,156.24	2,152.13	6.72	4.89	-158.59	-90.04	-82.12	322.16	312.32	9.84	32.744	
2,300.00	2,270.88	2,252.27	2,247.84	7.18	5.15	-159.19	-96.77	-86.01	349.87	339.52	10.35	33.811	
2,400.00	2,368.26	2,348.29	2,343.55	7.64	5.40	-159.71	-103.50	-89.90	377.61	366.75	10.86	34.776	
2,500.00	2,465.64	2,444.32	2,439.26	8.11	5.66	-160.15	-110.23	-93.80	405.38	394.01	11.37	35.651	
2,600.00	2,563.02	2,540.34	2,534.97	8.57	5.92	-160.53	-116.96	-97.69	433.16	421.28	11.88	36.449	
2,700.00	2,660.40	2,636.37	2,630.68	9.04	6.18	-160.87	-123.68	-101.59	460.96	448.56	12.40	37.178	
2,800.00	2,757.79	2,732.39	2,726.39	9.51	6.44	-161.17	-130.41	-105.48	488.77	475.86	12.91	37.847	
2,900.00	2,855.17	2,828.41	2,822.10	9.98	6.69	-161.44	-137.14	-109.37	516.60	503.16	13.43	38.463	
3,000.00	2,952.55	2,924.44	2,917.81	10.45	6.95	-161.68	-143.87	-113.27	544.43	530.48	13.95	39.032	
3,100.00	3,049.93	3,020.46	3,013.52	10.93	7.22	-161.90	-150.60	-117.16	572.27	557.80	14.47	39.559	
3,200.00	3,147.31	3,116.49	3,109.23	11.40	7.48	-162.10	-157.33	-121.06	600.12	585.13	14.98	40.048	
3,300.00	3,244.69	3,212.51	3,204.94	11.87	7.74	-162.28	-164.06	-124.95	627.97	612.47	15.50	40.503	
3,400.00	3,342.08	3,308.54	3,300.65	12.35	8.00	-162.44	-170.79	-128.85	655.83	639.81	16.02	40.928	
3,500.00	3,439.46	3,404.56	3,396.36	12.82	8.26	-162.59	-177.51	-132.74	683.70	667.15	16.54	41.325	
3,600.00	3,536.84	3,500.59	3,492.07	13.30	8.52	-162.73	-184.24	-136.63	711.56	694.50	17.06	41.698	
3,700.00	3,634.22	3,596.61	3,587.78	13.78	8.78	-162.86	-190.97	-140.53	739.43	721.85	17.59	42.047	
3,800.00	3,731.60	3,692.64	3,683.48	14.25	9.04	-162.98	-197.70	-144.42	767.31	749.20	18.11	42.376	
3,900.00	3,828.99	3,788.66	3,779.19	14.73	9.31	-163.09	-204.43	-148.32	795.19	776.56	18.63	42.685	
4,000.00	3,926.37	3,884.69	3,874.90	15.21	9.57	-163.19	-211.16	-152.21	823.07	803.92	19.15	42.978	
4,100.00	4,023.75	3,980.71	3,970.61	15.68	9.83	-163.29	-217.89	-156.10	850.95	831.28	19.67	43.254	
4,200.00	4,121.13	4,076.74	4,066.32	16.16	10.09	-163.38	-224.62	-160.00	878.83	858.64	20.20	43.515	
4,300.00	4,218.51	4,172.76	4,162.03	16.64	10.36	-163.46	-231.34	-163.89	906.72	886.00	20.72	43.763	
4,400.00	4,315.89	4,268.78	4,257.74	17.12	10.62	-163.54	-238.07	-167.79	934.61	913.37	21.24	43.999	
4,500.00	4,413.28	4,364.81	4,353.45	17.59	10.88	-163.62	-244.80	-171.68	962.50	940.73	21.76	44.222	
4,600.00	4,510.66	4,460.83	4,449.16	18.07	11.15	-163.69	-251.53	-175.57	990.39	968.10	22.29	44.435	
4,700.00	4,608.04	4,556.86	4,544.87	18.55	11.41	-163.76	-258.26	-179.47	1,018.28	995.47	22.81	44.638	
4,800.00	4,705.42	4,652.88	4,640.58	19.03	11.67	-163.82	-264.99	-183.36	1,046.18	1,022.84	23.34	44.832	
4,900.00	4,802.80	4,748.91	4,736.29	19.51	11.94	-163.88	-271.72	-187.26	1,074.07	1,050.21	23.86	45.016	
5,000.00	4,900.19	4,844.93	4,832.00	19.99	12.20	-163.94	-278.45	-191.15	1,101.97	1,077.58	24.38	45.193	

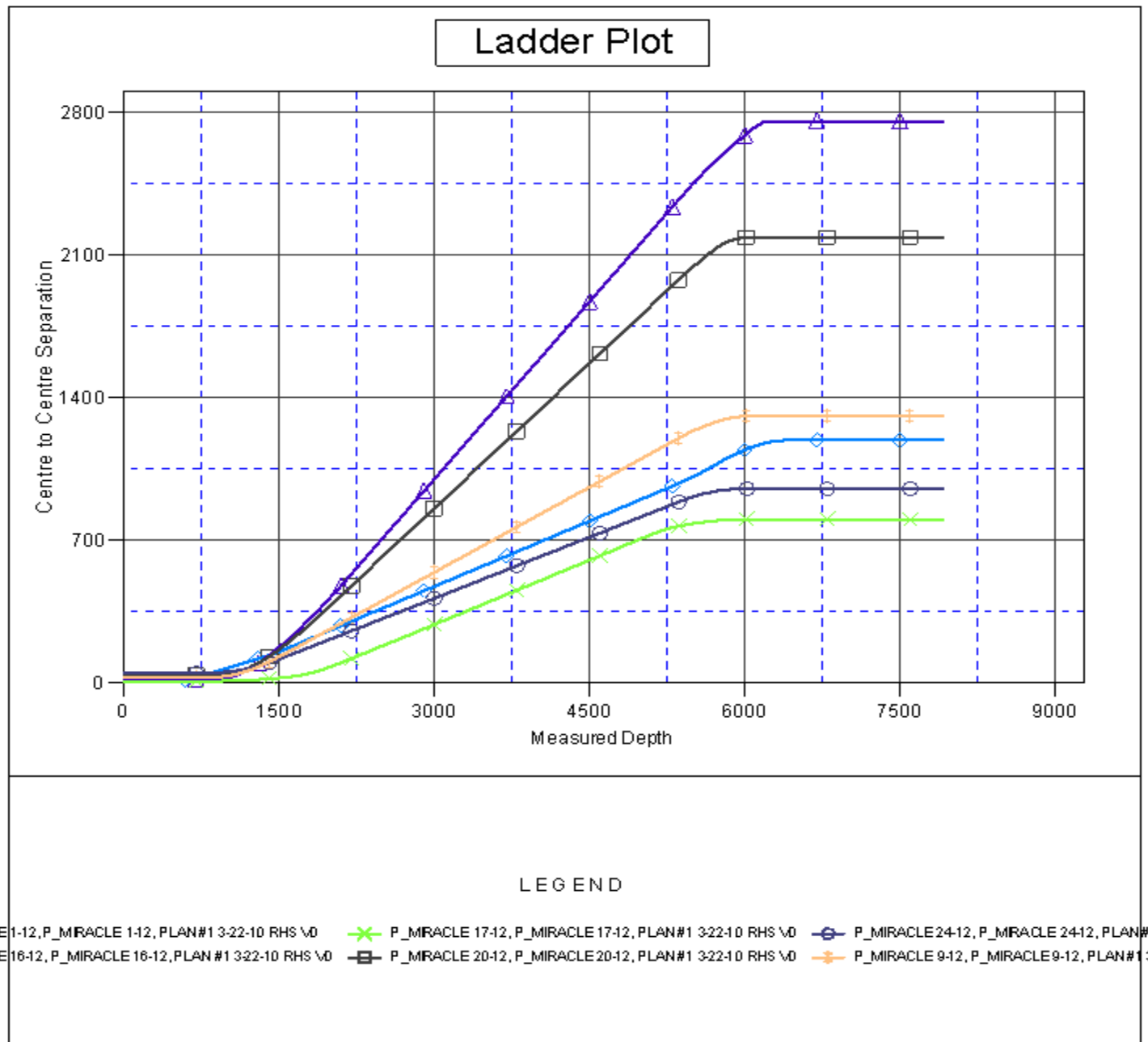
CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Company:	US ROCKIES REGION PLANNING	Local Co-ordinate Reference:	Well P_MIRACLE 8-12
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 8-12	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00ft	Output errors are at	2.00 sigma
Reference Wellbore	P_MIRACLE 8-12	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	
5,100.00	4,997.57	4,940.96	4,927.71	20.47	12.46	-163.99	-285.17	-195.04	1,129.86	1,104.95	24.91	45.362	
5,200.00	5,094.95	5,036.98	5,023.42	20.95	12.73	-164.04	-291.90	-198.94	1,157.76	1,132.33	25.43	45.524	
5,300.00	5,192.33	5,133.01	5,119.13	21.43	12.99	-164.09	-298.63	-202.83	1,185.66	1,159.70	25.96	45.679	
5,363.08	5,253.76	5,193.57	5,179.50	21.73	13.16	-164.12	-302.88	-205.29	1,203.26	1,176.97	26.29	45.773	
5,400.00	5,289.77	5,229.09	5,214.90	21.88	13.26	-164.19	-305.36	-206.73	1,213.34	1,186.83	26.51	45.772	
5,500.00	5,387.79	5,325.89	5,311.38	22.22	13.52	-164.34	-312.15	-210.65	1,238.42	1,211.37	27.05	45.774	
5,600.00	5,486.44	5,423.47	5,408.64	22.52	13.79	-164.42	-318.99	-214.61	1,260.24	1,232.67	27.57	45.711	
5,700.00	5,585.60	5,521.72	5,506.57	22.78	14.06	-164.44	-325.87	-218.60	1,278.76	1,250.71	28.05	45.588	
5,800.00	5,685.15	5,620.52	5,605.04	23.00	14.33	-164.41	-332.79	-222.60	1,293.98	1,265.48	28.49	45.411	
5,900.00	5,784.97	5,733.67	5,717.84	23.17	14.61	-164.29	-340.48	-227.05	1,305.73	1,276.82	28.91	45.158	
6,000.00	5,884.94	5,887.34	5,871.37	23.30	14.88	-164.19	-345.84	-230.15	1,311.17	1,281.87	29.31	44.738	
6,020.06	5,905.00	5,918.27	5,902.29	23.32	14.93	170.18	-346.06	-230.28	1,311.37	1,281.98	29.38	44.633	
6,100.00	5,984.94	6,000.91	5,984.94	23.41	15.07	170.18	-346.07	-230.28	1,311.37	1,281.71	29.66	44.207	
6,200.00	6,084.94	6,100.91	6,084.94	23.53	15.23	170.18	-346.07	-230.28	1,311.37	1,281.35	30.02	43.687	
6,300.00	6,184.94	6,200.91	6,184.94	23.65	15.39	170.18	-346.07	-230.28	1,311.37	1,281.00	30.37	43.174	
6,400.00	6,284.94	6,300.91	6,284.94	23.78	15.55	170.18	-346.07	-230.28	1,311.37	1,280.64	30.73	42.670	
6,500.00	6,384.94	6,400.91	6,384.94	23.90	15.71	170.18	-346.07	-230.28	1,311.37	1,280.28	31.09	42.175	
6,600.00	6,484.94	6,500.91	6,484.94	24.03	15.87	170.18	-346.07	-230.28	1,311.37	1,279.91	31.46	41.688	
6,700.00	6,584.94	6,600.91	6,584.94	24.16	16.04	170.18	-346.07	-230.28	1,311.37	1,279.55	31.82	41.209	
6,800.00	6,684.94	6,700.91	6,684.94	24.29	16.20	170.18	-346.07	-230.28	1,311.37	1,279.18	32.19	40.738	
6,900.00	6,784.94	6,800.91	6,784.94	24.42	16.37	170.18	-346.07	-230.28	1,311.37	1,278.81	32.56	40.276	
7,000.00	6,884.94	6,900.91	6,884.94	24.55	16.54	170.18	-346.07	-230.28	1,311.37	1,278.44	32.93	39.821	
7,100.00	6,984.94	7,000.91	6,984.94	24.68	16.71	170.18	-346.07	-230.28	1,311.37	1,278.07	33.31	39.374	
7,200.00	7,084.94	7,100.91	7,084.94	24.82	16.88	170.18	-346.07	-230.28	1,311.37	1,277.69	33.68	38.935	
7,300.00	7,184.94	7,200.91	7,184.94	24.96	17.05	170.18	-346.07	-230.28	1,311.37	1,277.31	34.06	38.504	
7,400.00	7,284.94	7,300.91	7,284.94	25.09	17.22	170.18	-346.07	-230.28	1,311.37	1,276.93	34.44	38.080	
7,500.00	7,384.94	7,400.91	7,384.94	25.23	17.40	170.18	-346.07	-230.28	1,311.37	1,276.55	34.82	37.664	
7,600.00	7,484.94	7,500.91	7,484.94	25.37	17.57	170.18	-346.07	-230.28	1,311.37	1,276.17	35.20	37.254	
7,700.00	7,584.94	7,600.91	7,584.94	25.51	17.75	170.18	-346.07	-230.28	1,311.37	1,275.79	35.58	36.852	
7,800.00	7,684.94	7,700.91	7,684.94	25.66	17.93	170.18	-346.07	-230.28	1,311.37	1,275.40	35.97	36.457	
7,900.00	7,784.94	7,800.91	7,784.94	25.80	18.11	170.18	-346.07	-230.28	1,311.37	1,275.01	36.36	36.069	
7,920.06	7,805.00	7,820.98	7,805.00	25.83	18.14	170.18	-346.07	-230.28	1,311.37	1,274.94	36.43	35.992	

Company:	US ROCKIES REGION PLANNING	Local Co-ordinate Reference:	Well P_MIRACLE 8-12
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 8-12	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00ft	Output errors are at	2.00 sigma
Reference Wellbore	P_MIRACLE 8-12	Database:	EDM 2003.21 Single User Db
Reference Design:	PLAN #1 3-22-10 RHS	Offset TVD Reference:	Offset Datum

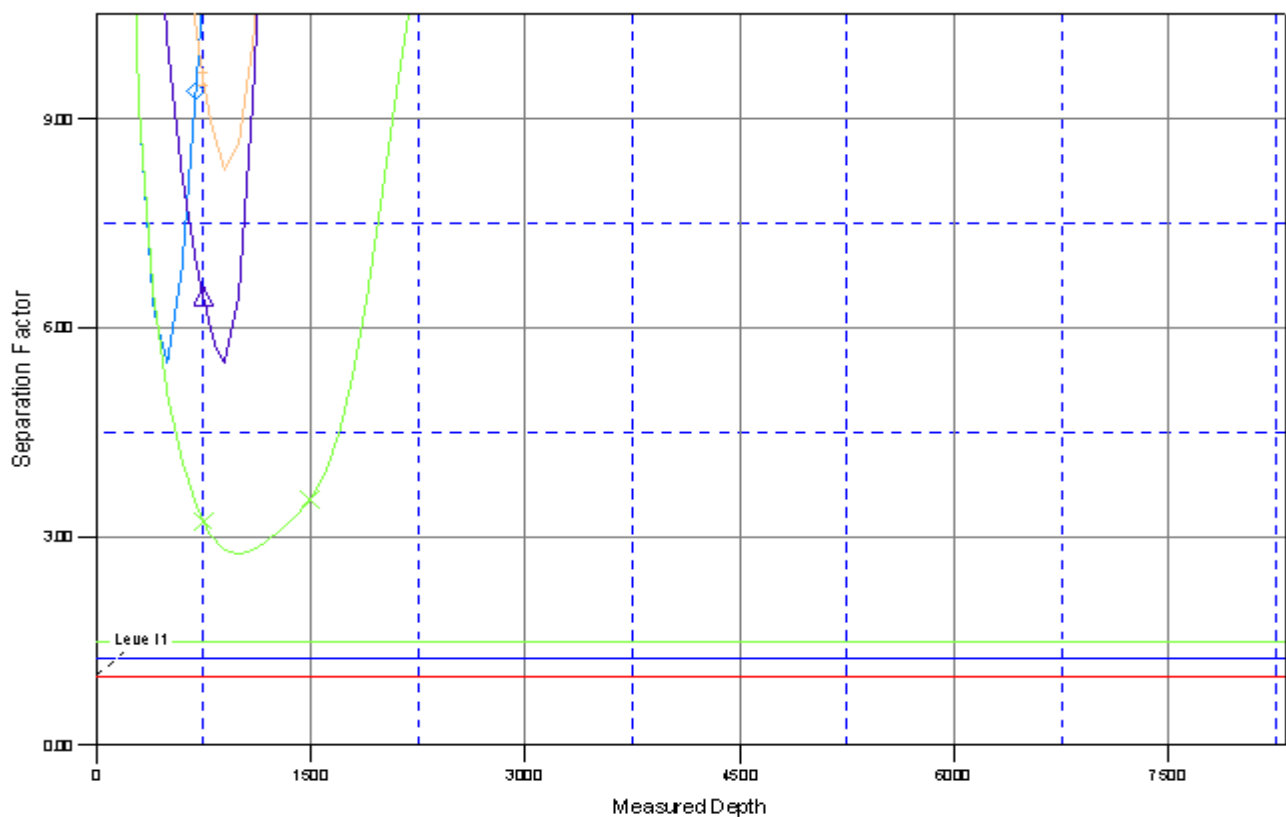
Reference Depths are relative to WELL @ 4963.00ft (Original Well Elev) Coordinates are relative to: P_MIRACLE 8-12
Offset Depths are relative to Offset Datum Coordinate System is US State Plane 1983, Colorado Northern Zone
Central Meridian is 105° 30' 0.000 W ° Grid Convergence at Surface is: 0.36°



Company:	US ROCKIES REGION PLANNING	Local Co-ordinate Reference:	Well P_MIRACLE 8-12
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 8-12	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00ft	Output errors are at	2.00 sigma
Reference Wellbore	P_MIRACLE 8-12	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 8-12
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

LE11-12, P_MIRACLE 11-12, PLAN#1 3-22-10 RHS \0 x P_MIRACLE 17-12, P_MIRACLE 17-12, PLAN#1 3-22-10 RHS \0 ◆ P_MIRACLE 24-12, P_MIRACLE 24-12, PLAN#1
LE16-12, P_MIRACLE 16-12, PLAN#1 3-22-10 RHS \0 ▲ P_MIRACLE 20-12, P_MIRACLE 20-12, PLAN#1 3-22-10 RHS \0 + P_MIRACLE 9-12, P_MIRACLE 9-12, PLAN#1 3