



US ROCKIES REGION PLANNING

COLORADO NORTHERN ZONE - 83

WELD_NRC 19-9 PAD

P_NRC 14-9

P_NRC 14-9

Plan: PLAN #1 1-10-10 RHS

Standard Planning Report

04 February, 2010





P_NRC 14-9
 COLORADO NORTHERN ZONE - 83
 SECTION 9 T1N R67W
 1031 FSL 983 FWL
 LAT: 40° 3' 39.949 N
 LONG: 104° 54' 5.713 W



WELL DETAILS: P_NRC 14-9						
+N/-S	+E/-W	Northing	Easting	Ground Level:	Latitude	Longitude
0.00	0.00	1265668.10	3167496.09	5052.00	40° 3' 39.949 N	104° 54' 5.713 W

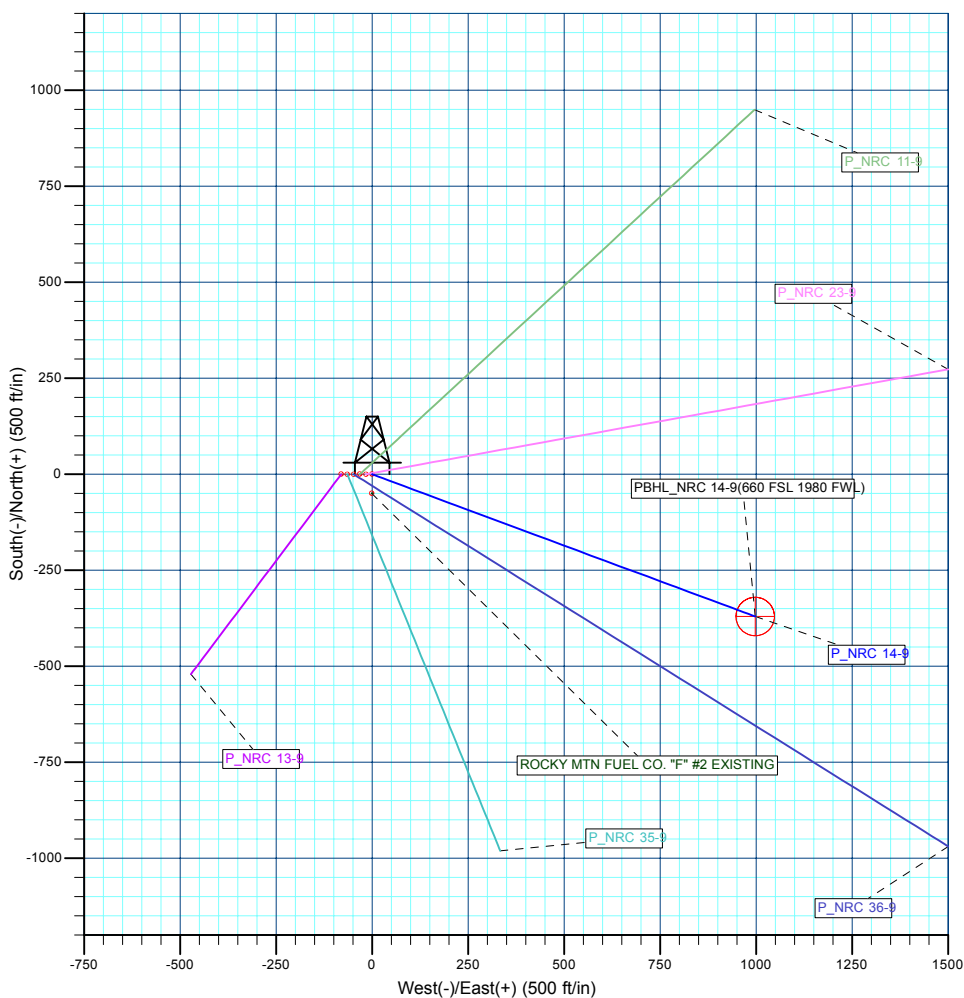
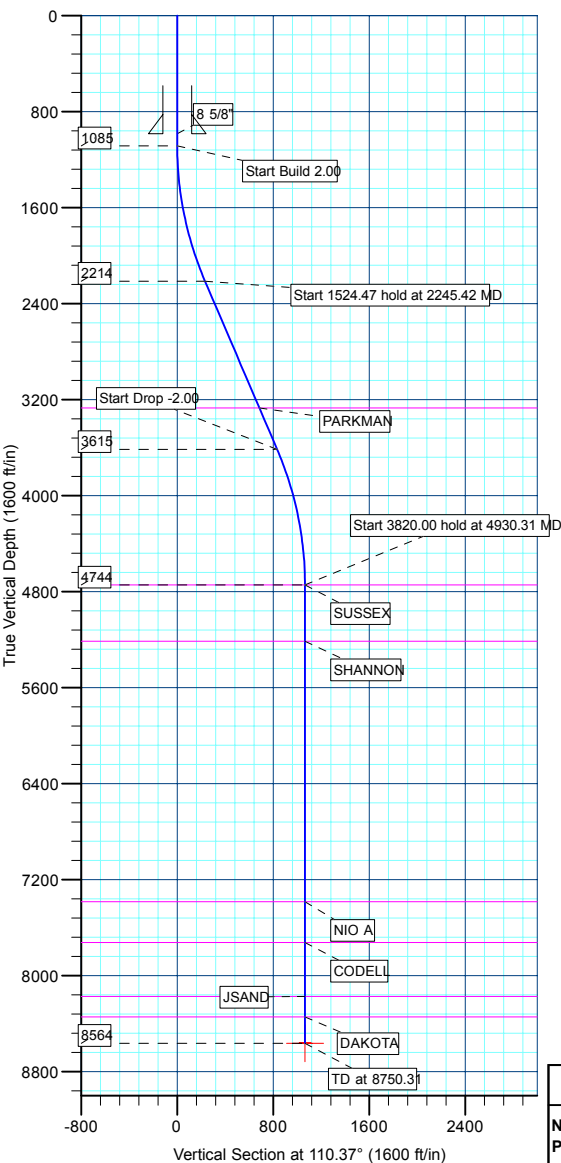
FORMATION TOP DETAILS		
TVDPath	MDPath	Formation
3269.00	3393.37	PARKMAN
4744.00	4930.31	SUSSEX
5214.00	5400.31	SHANNON
7384.00	7570.31	NIO A
7724.00	7910.31	CODELL
8174.00	8360.31	JSAND
8344.00	8530.31	DAKOTA

SECTION DETAILS									
MD	Inc	Azi	TVD	+N/-S	+E/-W	DLeg	TFace	VSec	Target
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
1085.00	0.00	0.00	1085.00	0.00	0.00	0.00	0.00	0.00	
2245.42	23.21	110.37	2213.95	-80.68	217.33	2.00	110.37	231.83	
3769.89	23.21	110.37	3615.05	-289.76	780.54	0.00	0.00	832.58	
4930.31	0.00	0.00	4744.00	-370.44	997.87	2.00	180.00	1064.41	
8750.31	0.00	0.00	8564.00	-370.44	997.87	0.00	0.00	1064.41	PBHL_NRC 14-9(660 FSL 1980 FWL)

CASING DETAILS			
TVD	MD	Name	Size
985.00	985.00	8 5/8"	8.62



KB ELEV:WELL @ 5067.00ft (Original Well Elev)
 GRD ELEV: 5052.00



WELLBORE TARGET DETAILS (MAP CO-ORDINATES AND LAT/LONG)								
Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Shape
PBHL	8564.00	-370.44	997.87	1265304.40	3168496.43	40° 3' 36.288 N 104° 53' 52.879 W		Circle (Radius: 50.00)

Plan: PLAN #1 1-10-10 RHS (P_NRC 14-9/P_NRC 14-9)
 Created By: Robert H. Scott

Database:	EDM 2003.21 Single User Db	Local Co-ordinate Reference:	Well P_NRC 14-9
Company:	US ROCKIES REGION PLANNING	TVD Reference:	WELL @ 5067.00ft (Original Well Elev)
Project:	COLORADO NORTHERN ZONE - 83	MD Reference:	WELL @ 5067.00ft (Original Well Elev)
Site:	WELD_NRC 19-9 PAD	North Reference:	True
Well:	P_NRC 14-9	Survey Calculation Method:	Minimum Curvature
Wellbore:	P_NRC 14-9		
Design:	PLAN #1 1-10-10 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	WELD_NRC 19-9 PAD, SECTION 9 T1N R67W				
Site Position:		Northing:	1,265,667.89 ft	Latitude:	40° 3' 39.949 N
From:	Lat/Long	Easting:	3,167,464.18 ft	Longitude:	104° 54' 6.124 W
Position Uncertainty:	0.00 ft	Slot Radius:	in	Grid Convergence:	0.39 °

Well	P_NRC 14-9					
Well Position	+N/-S	-0.01 ft	Northing:	1,265,668.10 ft	Latitude:	40° 3' 39.949 N
	+E/-W	31.91 ft	Easting:	3,167,496.09 ft	Longitude:	104° 54' 5.713 W
Position Uncertainty		0.00 ft	Wellhead Elevation:	ft	Ground Level:	5,052.00 ft

Wellbore	P_NRC 14-9				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	1/11/2010	9.10	66.80	53,086

Design	PLAN #1 1-10-10 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	110.37

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	
1,085.00	0.00	0.00	1,085.00	0.00	0.00	0.00	0.00	0.00	0.00	
2,245.42	23.21	110.37	2,213.95	-80.68	217.33	2.00	2.00	0.00	110.37	
3,769.89	23.21	110.37	3,615.05	-289.76	780.54	0.00	0.00	0.00	0.00	
4,930.31	0.00	0.00	4,744.00	-370.44	997.87	2.00	-2.00	0.00	180.00	
8,750.31	0.00	0.00	8,564.00	-370.44	997.87	0.00	0.00	0.00	0.00	PBHL_NRC 14-9(6)

Database:	EDM 2003.21 Single User Db	Local Co-ordinate Reference:	Well P_NRC 14-9
Company:	US ROCKIES REGION PLANNING	TVD Reference:	WELL @ 5067.00ft (Original Well Elev)
Project:	COLORADO NORTHERN ZONE - 83	MD Reference:	WELL @ 5067.00ft (Original Well Elev)
Site:	WELD_NRC 19-9 PAD	North Reference:	True
Well:	P_NRC 14-9	Survey Calculation Method:	Minimum Curvature
Wellbore:	P_NRC 14-9		
Design:	PLAN #1 1-10-10 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									
1,085.00	0.00	0.00	1,085.00	0.00	0.00	0.00	0.00	0.00	0.00
1,100.00	0.30	110.37	1,100.00	-0.01	0.04	0.04	2.00	2.00	0.00
1,200.00	2.30	110.37	1,199.97	-0.80	2.16	2.31	2.00	2.00	0.00
1,300.00	4.30	110.37	1,299.80	-2.81	7.56	8.06	2.00	2.00	0.00
1,400.00	6.30	110.37	1,399.37	-6.02	16.22	17.30	2.00	2.00	0.00
1,500.00	8.30	110.37	1,498.55	-10.44	28.13	30.01	2.00	2.00	0.00
1,600.00	10.30	110.37	1,597.23	-16.07	43.28	46.17	2.00	2.00	0.00
1,700.00	12.30	110.37	1,695.29	-22.89	61.65	65.76	2.00	2.00	0.00
1,800.00	14.30	110.37	1,792.60	-30.89	83.21	88.76	2.00	2.00	0.00
1,900.00	16.30	110.37	1,889.05	-40.07	107.95	115.15	2.00	2.00	0.00
2,000.00	18.30	110.37	1,984.52	-50.42	135.83	144.89	2.00	2.00	0.00
2,100.00	20.30	110.37	2,078.90	-61.93	166.81	177.94	2.00	2.00	0.00
2,200.00	22.30	110.37	2,172.06	-74.57	200.86	214.26	2.00	2.00	0.00
Start 1524.47 hold at 2245.42 MD									
2,245.42	23.21	110.37	2,213.95	-80.68	217.33	231.83	2.00	2.00	0.00
2,300.00	23.21	110.37	2,264.11	-88.17	237.50	253.33	0.00	0.00	0.00
2,400.00	23.21	110.37	2,356.02	-101.88	274.44	292.74	0.00	0.00	0.00
2,500.00	23.21	110.37	2,447.93	-115.60	311.39	332.15	0.00	0.00	0.00
2,600.00	23.21	110.37	2,539.83	-129.31	348.33	371.56	0.00	0.00	0.00
2,700.00	23.21	110.37	2,631.74	-143.02	385.27	410.96	0.00	0.00	0.00
2,800.00	23.21	110.37	2,723.65	-156.74	422.22	450.37	0.00	0.00	0.00
2,900.00	23.21	110.37	2,815.56	-170.45	459.16	489.78	0.00	0.00	0.00
3,000.00	23.21	110.37	2,907.46	-184.17	496.11	529.19	0.00	0.00	0.00
3,100.00	23.21	110.37	2,999.37	-197.88	533.05	568.60	0.00	0.00	0.00
3,200.00	23.21	110.37	3,091.28	-211.60	569.99	608.00	0.00	0.00	0.00
3,300.00	23.21	110.37	3,183.19	-225.31	606.94	647.41	0.00	0.00	0.00
PARKMAN									
3,393.37	23.21	110.37	3,269.00	-238.12	641.43	684.21	0.00	0.00	0.00
3,400.00	23.21	110.37	3,275.10	-239.03	643.88	686.82	0.00	0.00	0.00
3,500.00	23.21	110.37	3,367.00	-252.74	680.83	726.23	0.00	0.00	0.00
3,600.00	23.21	110.37	3,458.91	-266.46	717.77	765.63	0.00	0.00	0.00
3,700.00	23.21	110.37	3,550.82	-280.17	754.72	805.04	0.00	0.00	0.00
Start Drop -2.00									
3,769.89	23.21	110.37	3,615.05	-289.76	780.54	832.58	0.00	0.00	0.00
3,800.00	22.61	110.37	3,642.79	-293.84	791.52	844.30	2.00	-2.00	0.00
3,900.00	20.61	110.37	3,735.76	-306.65	826.04	881.12	2.00	-2.00	0.00
4,000.00	18.61	110.37	3,829.95	-318.33	857.50	914.68	2.00	-2.00	0.00
4,100.00	16.61	110.37	3,925.27	-328.85	885.85	944.92	2.00	-2.00	0.00
4,200.00	14.61	110.37	4,021.57	-338.22	911.07	971.82	2.00	-2.00	0.00
4,300.00	12.61	110.37	4,118.76	-346.40	933.13	995.35	2.00	-2.00	0.00
4,400.00	10.61	110.37	4,216.71	-353.40	951.99	1,015.47	2.00	-2.00	0.00
4,500.00	8.61	110.37	4,315.31	-359.21	967.63	1,032.15	2.00	-2.00	0.00
4,600.00	6.61	110.37	4,414.42	-363.82	980.04	1,045.39	2.00	-2.00	0.00
4,700.00	4.61	110.37	4,513.94	-367.22	989.20	1,055.16	2.00	-2.00	0.00
4,800.00	2.61	110.37	4,613.73	-369.41	995.09	1,061.45	2.00	-2.00	0.00
4,900.00	0.61	110.37	4,713.69	-370.38	997.72	1,064.25	2.00	-2.00	0.00
Start 3820.00 hold at 4930.31 MD - SUSSEX									
4,930.31	0.00	0.00	4,744.00	-370.44	997.87	1,064.41	2.00	-2.00	0.00
5,000.00	0.00	0.00	4,813.69	-370.44	997.87	1,064.41	0.00	0.00	0.00
5,100.00	0.00	0.00	4,913.69	-370.44	997.87	1,064.41	0.00	0.00	0.00
5,200.00	0.00	0.00	5,013.69	-370.44	997.87	1,064.41	0.00	0.00	0.00
5,300.00	0.00	0.00	5,113.69	-370.44	997.87	1,064.41	0.00	0.00	0.00

Database:	EDM 2003.21 Single User Db	Local Co-ordinate Reference:	Well P_NRC 14-9
Company:	US ROCKIES REGION PLANNING	TVD Reference:	WELL @ 5067.00ft (Original Well Elev)
Project:	COLORADO NORTHERN ZONE - 83	MD Reference:	WELL @ 5067.00ft (Original Well Elev)
Site:	WELD_NRC 19-9 PAD	North Reference:	True
Well:	P_NRC 14-9	Survey Calculation Method:	Minimum Curvature
Wellbore:	P_NRC 14-9		
Design:	PLAN #1 1-10-10 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)
5,400.00	0.00	0.00	5,213.69	-370.44	997.87	1,064.41	0.00	0.00	0.00
SHANNON									
5,400.31	0.00	0.00	5,214.00	-370.44	997.87	1,064.41	0.00	0.00	0.00
5,500.00	0.00	0.00	5,313.69	-370.44	997.87	1,064.41	0.00	0.00	0.00
5,600.00	0.00	0.00	5,413.69	-370.44	997.87	1,064.41	0.00	0.00	0.00
5,700.00	0.00	0.00	5,513.69	-370.44	997.87	1,064.41	0.00	0.00	0.00
5,800.00	0.00	0.00	5,613.69	-370.44	997.87	1,064.41	0.00	0.00	0.00
5,900.00	0.00	0.00	5,713.69	-370.44	997.87	1,064.41	0.00	0.00	0.00
6,000.00	0.00	0.00	5,813.69	-370.44	997.87	1,064.41	0.00	0.00	0.00
6,100.00	0.00	0.00	5,913.69	-370.44	997.87	1,064.41	0.00	0.00	0.00
6,200.00	0.00	0.00	6,013.69	-370.44	997.87	1,064.41	0.00	0.00	0.00
6,300.00	0.00	0.00	6,113.69	-370.44	997.87	1,064.41	0.00	0.00	0.00
6,400.00	0.00	0.00	6,213.69	-370.44	997.87	1,064.41	0.00	0.00	0.00
6,500.00	0.00	0.00	6,313.69	-370.44	997.87	1,064.41	0.00	0.00	0.00
6,600.00	0.00	0.00	6,413.69	-370.44	997.87	1,064.41	0.00	0.00	0.00
6,700.00	0.00	0.00	6,513.69	-370.44	997.87	1,064.41	0.00	0.00	0.00
6,800.00	0.00	0.00	6,613.69	-370.44	997.87	1,064.41	0.00	0.00	0.00
6,900.00	0.00	0.00	6,713.69	-370.44	997.87	1,064.41	0.00	0.00	0.00
7,000.00	0.00	0.00	6,813.69	-370.44	997.87	1,064.41	0.00	0.00	0.00
7,100.00	0.00	0.00	6,913.69	-370.44	997.87	1,064.41	0.00	0.00	0.00
7,200.00	0.00	0.00	7,013.69	-370.44	997.87	1,064.41	0.00	0.00	0.00
7,300.00	0.00	0.00	7,113.69	-370.44	997.87	1,064.41	0.00	0.00	0.00
7,400.00	0.00	0.00	7,213.69	-370.44	997.87	1,064.41	0.00	0.00	0.00
7,500.00	0.00	0.00	7,313.69	-370.44	997.87	1,064.41	0.00	0.00	0.00
NIO A									
7,570.31	0.00	0.00	7,384.00	-370.44	997.87	1,064.41	0.00	0.00	0.00
7,600.00	0.00	0.00	7,413.69	-370.44	997.87	1,064.41	0.00	0.00	0.00
7,700.00	0.00	0.00	7,513.69	-370.44	997.87	1,064.41	0.00	0.00	0.00
7,800.00	0.00	0.00	7,613.69	-370.44	997.87	1,064.41	0.00	0.00	0.00
7,900.00	0.00	0.00	7,713.69	-370.44	997.87	1,064.41	0.00	0.00	0.00
CODELL									
7,910.31	0.00	0.00	7,724.00	-370.44	997.87	1,064.41	0.00	0.00	0.00
8,000.00	0.00	0.00	7,813.69	-370.44	997.87	1,064.41	0.00	0.00	0.00
8,100.00	0.00	0.00	7,913.69	-370.44	997.87	1,064.41	0.00	0.00	0.00
8,200.00	0.00	0.00	8,013.69	-370.44	997.87	1,064.41	0.00	0.00	0.00
8,300.00	0.00	0.00	8,113.69	-370.44	997.87	1,064.41	0.00	0.00	0.00
JSAND									
8,360.31	0.00	0.00	8,174.00	-370.44	997.87	1,064.41	0.00	0.00	0.00
8,400.00	0.00	0.00	8,213.69	-370.44	997.87	1,064.41	0.00	0.00	0.00
8,500.00	0.00	0.00	8,313.69	-370.44	997.87	1,064.41	0.00	0.00	0.00
DAKOTA									
8,530.31	0.00	0.00	8,344.00	-370.44	997.87	1,064.41	0.00	0.00	0.00
8,600.00	0.00	0.00	8,413.69	-370.44	997.87	1,064.41	0.00	0.00	0.00
8,700.00	0.00	0.00	8,513.69	-370.44	997.87	1,064.41	0.00	0.00	0.00
TD at 8750.31 - PBHL_NRC 14-9(660 FSL 1980 FWL)									
8,750.31	0.00	0.00	8,564.00	-370.44	997.87	1,064.41	0.00	0.00	0.00

Database:	EDM 2003.21 Single User Db	Local Co-ordinate Reference:	Well P_NRC 14-9
Company:	US ROCKIES REGION PLANNING	TVD Reference:	WELL @ 5067.00ft (Original Well Elev)
Project:	COLORADO NORTHERN ZONE - 83	MD Reference:	WELL @ 5067.00ft (Original Well Elev)
Site:	WELD_NRC 19-9 PAD	North Reference:	True
Well:	P_NRC 14-9	Survey Calculation Method:	Minimum Curvature
Wellbore:	P_NRC 14-9		
Design:	PLAN #1 1-10-10 RHS		

Design Targets

Target Name

- hit/miss target	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (ft)	Easting (ft)	Latitude	Longitude
- Shape									
PBHL_NRC 14-9(660)	0.00	0.00	8,564.00	-370.44	997.87	1,265,304.40	3,168,496.43	40° 3' 36.288 N	104° 53' 52.879 W
- plan hits target center									
- Circle (radius 50.00)									

Casing Points

Measured Depth (ft)	Vertical Depth (ft)	Name	Casing Diameter (in)	Hole Diameter (in)
985.00	985.00	8 5/8"	8.62	11.00

Formations

Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)
3,393.37	3,269.00	PARKMAN			
4,930.31	4,744.00	SUSSEX			
5,400.31	5,214.00	SHANNON			
7,570.31	7,384.00	NIO A			
7,910.31	7,724.00	CODELL			
8,360.31	8,174.00	JSAND			
8,530.31	8,344.00	DAKOTA		0.00	

Plan Annotations

Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment
		+N/-S (ft)	+E/-W (ft)	
1,085.00	1,085.00	0.00	0.00	Start Build 2.00
2,245.42	2,213.95	-80.68	217.33	Start 1524.47 hold at 2245.42 MD
3,769.89	3,615.05	-289.76	780.54	Start Drop -2.00
4,930.31	4,744.00	-370.44	997.87	Start 3820.00 hold at 4930.31 MD
8,750.31	8,564.00	-370.44	997.87	TD at 8750.31



US ROCKIES REGION PLANNING

**COLORADO NORTHERN ZONE - 83
WELD_NRC 19-9 PAD
P_NRC 14-9**

**P_NRC 14-9
PLAN #1 1-10-10 RHS**

Anticollision Report

04 February, 2010



Company:	US ROCKIES REGION PLANNING	Local Co-ordinate Reference:	Well P_NRC 14-9
Project:	COLORADO NORTHERN ZONE - 83	TVD Reference:	WELL @ 5067.00ft (Original Well Elev)
Reference Site:	WELD_NRC 19-9 PAD	MD Reference:	WELL @ 5067.00ft (Original Well Elev)
Site Error:	0.00ft	North Reference:	True
Reference Well:	P_NRC 14-9	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00ft	Output errors are at	2.00 sigma
Reference Wellbore	P_NRC 14-9	Database:	EDM 2003.21 Single User Db
Reference Design:	PLAN #1 1-10-10 RHS	Offset TVD Reference:	Offset Datum

Reference	PLAN #1 1-10-10 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	2/4/2010		
From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description
0.00	8,750.31	PLAN #1 1-10-10 RHS (P_NRC 14-9)	MWD	MWD - Standard

Site Name	Reference Measured Depth (ft)	Offset Measured Depth (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Separation Factor	Warning
Summary						
WELD_NRC 19-9 PAD						
P_NRC 11-9 - P_NRC 11-9 - PLAN #1 1-10-10 RHS	1,085.00	1,085.00	31.91	27.29	6.908	CC
P_NRC 11-9 - P_NRC 11-9 - PLAN #1 1-10-10 RHS	1,100.00	1,100.12	31.92	27.23	6.816	ES
P_NRC 11-9 - P_NRC 11-9 - PLAN #1 1-10-10 RHS	1,300.00	1,301.44	34.52	29.03	6.290	SF
P_NRC 13-9 - P_NRC 13-9 - PLAN #1 1-10-10 RHS	1,085.00	1,085.00	80.05	75.43	17.331	CC, ES
P_NRC 13-9 - P_NRC 13-9 - PLAN #1 1-10-10 RHS	1,200.00	1,197.99	83.59	78.55	16.595	SF
P_NRC 23-9 - P_NRC 23-9 - PLAN #1 1-10-10 RHS	1,215.33	1,216.03	15.88	12.68	4.972	CC, ES
P_NRC 23-9 - P_NRC 23-9 - PLAN #1 1-10-10 RHS	1,300.00	1,301.10	16.11	12.70	4.729	SF
P_NRC 35-9 - P_NRC 35-9 - PLAN #1 1-10-10 RHS	1,085.00	1,085.00	64.10	59.48	13.877	CC
P_NRC 35-9 - P_NRC 35-9 - PLAN #1 1-10-10 RHS	1,100.00	1,100.13	64.12	59.44	13.703	ES
P_NRC 35-9 - P_NRC 35-9 - PLAN #1 1-10-10 RHS	1,300.00	1,301.62	68.77	63.36	12.713	SF
P_NRC 36-9 - P_NRC 36-9 - PLAN #1 1-10-10 RHS	1,085.00	1,085.00	47.86	43.24	10.362	CC
P_NRC 36-9 - P_NRC 36-9 - PLAN #1 1-10-10 RHS	1,200.00	1,201.65	48.04	42.99	9.510	ES
P_NRC 36-9 - P_NRC 36-9 - PLAN #1 1-10-10 RHS	3,800.00	3,809.17	196.87	158.63	5.149	SF
ROCKY MTN FUEL CO. "F" #2 EXISTING - ROCKY MT	1,393.38	1,373.78	47.08	-8.81	0.842	Level 1, CC
ROCKY MTN FUEL CO. "F" #2 EXISTING - ROCKY MT	1,500.00	1,479.55	48.96	-11.39	0.811	Level 1, ES, SF

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	Warning
0.00	0.00	0.00	0.00	0.00	0.00	-89.98	0.01	-31.91	31.91				
100.00	100.00	100.00	100.00	0.10	0.10	-89.98	0.01	-31.91	31.91	31.72	0.19	167.018	
200.00	200.00	200.00	200.00	0.32	0.32	-89.98	0.01	-31.91	31.91	31.27	0.64	49.812	
300.00	300.00	300.00	300.00	0.55	0.55	-89.98	0.01	-31.91	31.91	30.82	1.09	29.271	
400.00	400.00	400.00	400.00	0.77	0.77	-89.98	0.01	-31.91	31.91	30.37	1.54	20.725	
500.00	500.00	500.00	500.00	0.99	0.99	-89.98	0.01	-31.91	31.91	29.92	1.99	16.041	
600.00	600.00	600.00	600.00	1.22	1.22	-89.98	0.01	-31.91	31.91	29.47	2.44	13.084	
700.00	700.00	700.00	700.00	1.44	1.44	-89.98	0.01	-31.91	31.91	29.02	2.89	11.048	
800.00	800.00	800.00	800.00	1.67	1.67	-89.98	0.01	-31.91	31.91	28.57	3.34	9.560	
900.00	900.00	900.00	900.00	1.89	1.89	-89.98	0.01	-31.91	31.91	28.12	3.79	8.425	
1,000.00	1,000.00	1,000.00	1,000.00	2.12	2.12	-89.98	0.01	-31.91	31.91	27.67	4.24	7.531	
1,085.00	1,085.00	1,085.00	1,085.00	2.31	2.31	-89.98	0.01	-31.91	31.91	27.29	4.62	6.908	CC
1,100.00	1,100.00	1,100.12	1,100.12	2.34	2.34	159.73	0.04	-31.88	31.92	27.23	4.68	6.816	ES

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_NRC 14-9
Project:	COLORADO NORTHERN ZONE - 83	TVD Reference:	WELL @ 5067.00ft (Original Well Elev)
Reference Site:	WELD_NRC 19-9 PAD	MD Reference:	WELL @ 5067.00ft (Original Well Elev)
Site Error:	0.00ft	North Reference:	True
Reference Well:	P_NRC 14-9	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00ft	Output errors are at	2.00 sigma
Reference Wellbore	P_NRC 14-9	Database:	EDM 2003.21 Single User Db
Reference Design:	PLAN #1 1-10-10 RHS	Offset TVD Reference:	Offset Datum

Offset Design													WELD_NRC 19-9 PAD - P_NRC 11-9 - P_NRC 11-9 - PLAN #1 1-10-10 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			
1,200.00	1,199.97	1,200.90	1,200.87	2.53	2.56	163.89	1.60	-30.19	32.45	27.37	5.09	6.382			
1,300.00	1,299.80	1,301.44	1,301.23	2.73	2.78	173.67	5.56	-25.91	34.52	29.03	5.49	6.290 SF			
1,400.00	1,399.37	1,401.54	1,400.90	2.95	3.01	-173.48	11.86	-19.07	39.60	33.70	5.90	6.711			
1,500.00	1,498.55	1,501.01	1,499.55	3.19	3.26	-161.03	20.47	-9.76	48.91	42.57	6.34	7.716			
1,600.00	1,597.23	1,599.67	1,596.91	3.46	3.53	-151.05	31.29	1.96	62.85	56.03	6.82	9.211			
1,700.00	1,695.29	1,697.34	1,692.68	3.77	3.83	-143.73	44.24	15.99	81.23	73.86	7.37	11.025			
1,800.00	1,792.60	1,793.84	1,786.63	4.13	4.17	-138.45	59.20	32.19	103.71	95.73	7.98	12.996			
1,900.00	1,889.05	1,889.03	1,878.52	4.56	4.56	-134.59	76.06	50.44	130.02	121.35	8.67	14.997			
2,000.00	1,984.52	1,983.02	1,968.40	5.05	4.99	-131.68	94.70	70.63	159.91	150.47	9.44	16.939			
2,100.00	2,078.90	2,077.48	2,058.39	5.61	5.45	-129.95	114.17	91.72	192.54	182.25	10.29	18.717			
2,200.00	2,172.06	2,171.24	2,147.71	6.24	5.94	-129.25	133.50	112.65	227.30	216.12	11.18	20.324			
2,245.42	2,213.95	2,213.56	2,188.03	6.55	6.16	-129.15	142.22	122.09	243.78	232.17	11.61	21.002			
2,300.00	2,264.11	2,264.31	2,236.38	6.95	6.44	-129.41	152.69	133.42	263.84	251.69	12.15	21.714			
2,400.00	2,356.02	2,357.29	2,324.97	7.68	6.95	-129.80	171.85	154.18	300.59	287.43	13.17	22.828			
2,500.00	2,447.93	2,450.27	2,413.55	8.43	7.46	-130.10	191.02	174.94	337.36	323.15	14.21	23.741			
2,600.00	2,539.83	2,543.25	2,502.14	9.20	7.99	-130.35	210.19	195.70	374.14	358.86	15.27	24.499			
2,700.00	2,631.74	2,636.24	2,590.72	9.98	8.52	-130.55	229.36	216.45	410.91	394.57	16.35	25.134			
2,800.00	2,723.65	2,729.22	2,679.31	10.77	9.06	-130.72	248.52	237.21	447.70	430.26	17.44	25.673			
2,900.00	2,815.56	2,822.20	2,767.90	11.56	9.60	-130.86	267.69	257.97	484.48	465.94	18.54	26.134			
3,000.00	2,907.46	2,915.18	2,856.48	12.36	10.15	-130.98	286.86	278.72	521.27	501.62	19.65	26.531			
3,100.00	2,999.37	3,008.16	2,945.07	13.16	10.70	-131.09	306.03	299.48	558.06	537.30	20.76	26.877			
3,200.00	3,091.28	3,101.15	3,033.65	13.97	11.25	-131.18	325.19	320.24	594.85	572.96	21.89	27.181			
3,300.00	3,183.19	3,194.13	3,122.24	14.78	11.80	-131.26	344.36	340.99	631.64	608.63	23.01	27.448			
3,400.00	3,275.10	3,287.11	3,210.83	15.59	12.36	-131.33	363.53	361.75	668.43	644.29	24.14	27.685			
3,500.00	3,367.00	3,380.09	3,299.41	16.41	12.91	-131.40	382.70	382.51	705.23	679.95	25.28	27.897			
3,600.00	3,458.91	3,473.08	3,388.00	17.23	13.47	-131.46	401.87	403.27	742.02	715.60	26.42	28.087			
3,700.00	3,550.82	3,566.06	3,476.58	18.05	14.03	-131.51	421.03	424.02	778.82	751.26	27.56	28.259			
3,769.89	3,615.05	3,631.04	3,538.50	18.82	14.42	-131.55	434.43	438.53	804.53	776.18	28.36	28.369			
3,800.00	3,642.79	3,659.08	3,565.21	18.84	14.59	-131.73	440.21	444.79	815.52	786.81	28.71	28.409			
3,900.00	3,735.76	3,752.72	3,654.42	19.45	15.16	-132.18	459.51	465.69	850.57	820.78	29.80	28.546			
4,000.00	3,829.95	3,847.07	3,744.31	20.02	15.73	-132.42	478.96	486.76	883.43	852.56	30.88	28.613			
4,100.00	3,925.27	3,942.04	3,834.79	20.53	16.31	-132.47	498.54	507.96	914.10	882.16	31.94	28.621			
4,200.00	4,021.57	4,037.49	3,925.73	21.00	16.89	-132.34	518.22	529.26	942.57	909.59	32.98	28.582			
4,300.00	4,118.76	4,133.32	4,017.03	21.42	17.47	-132.06	537.97	550.66	968.89	934.90	33.99	28.505			
4,400.00	4,216.71	4,229.41	4,108.57	21.79	18.06	-131.64	557.78	572.11	993.10	958.13	34.97	28.398			
4,500.00	4,315.31	4,325.63	4,200.24	22.10	18.64	-131.07	577.62	593.59	1,015.28	979.36	35.91	28.269			
4,600.00	4,414.42	4,421.88	4,291.94	22.37	19.23	-130.37	597.46	615.07	1,035.49	998.68	36.82	28.125			
4,700.00	4,513.94	4,518.04	4,383.55	22.59	19.82	-129.54	617.28	636.54	1,053.85	1,016.17	37.67	27.973			
4,800.00	4,613.73	4,613.98	4,474.96	22.76	20.40	-128.59	637.06	657.96	1,070.46	1,031.98	38.48	27.818			
4,900.00	4,713.69	4,709.60	4,566.05	22.88	20.99	-127.52	656.77	679.30	1,085.46	1,046.22	39.23	27.666			
4,930.31	4,744.00	4,738.50	4,593.58	22.91	21.16	-16.81	662.72	685.75	1,089.71	1,050.26	39.45	27.623			
5,000.00	4,813.69	4,804.89	4,656.84	22.97	21.57	-15.85	676.41	700.58	1,099.49	1,059.54	39.95	27.520			
5,100.00	4,913.69	4,900.16	4,747.61	23.07	22.15	-14.51	696.05	721.84	1,114.08	1,073.42	40.66	27.401			
5,200.00	5,013.69	4,995.43	4,838.37	23.16	22.74	-13.20	715.69	743.11	1,129.30	1,087.95	41.34	27.316			
5,300.00	5,113.69	5,090.71	4,929.14	23.26	23.32	-11.92	735.33	764.38	1,145.12	1,103.11	42.00	27.262			
5,400.00	5,213.69	5,185.98	5,019.91	23.36	23.90	-10.68	754.97	785.65	1,161.52	1,118.87	42.65	27.236			
5,500.00	5,313.69	5,281.25	5,110.67	23.47	24.49	-9.47	774.61	806.92	1,178.48	1,135.21	43.27	27.236			
5,600.00	5,413.69	5,376.52	5,201.44	23.57	25.07	-8.29	794.25	828.18	1,195.97	1,152.09	43.87	27.261			
5,700.00	5,513.69	5,471.79	5,292.21	23.68	25.66	-7.14	813.89	849.45	1,213.96	1,169.51	44.46	27.307			
5,800.00	5,613.69	5,567.06	5,382.98	23.79	26.24	-6.03	833.53	870.72	1,232.45	1,187.42	45.02	27.373			
5,900.00	5,713.69	5,662.34	5,473.74	23.90	26.83	-4.95	853.17	891.99	1,251.40	1,205.82	45.58	27.457			
6,000.00	5,813.69	5,787.45	5,593.50	24.01	27.44	-3.63	877.73	918.58	1,269.91	1,223.80	46.12	27.536			

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_NRC 14-9
Project:	COLORADO NORTHERN ZONE - 83	TVD Reference:	WELL @ 5067.00ft (Original Well Elev)
Reference Site:	WELD_NRC 19-9 PAD	MD Reference:	WELL @ 5067.00ft (Original Well Elev)
Site Error:	0.00ft	North Reference:	True
Reference Well:	P_NRC 14-9	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00ft	Output errors are at	2.00 sigma
Reference Wellbore	P_NRC 14-9	Database:	EDM 2003.21 Single User Db
Reference Design:	PLAN #1 1-10-10 RHS	Offset TVD Reference:	Offset Datum

Offset Design												WELD_NRC 19-9 PAD - P_NRC 11-9 - P_NRC 11-9 - PLAN #1 1-10-10 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	5,913.69	5,923.99	5,725.84	24.12	28.00	-2.46	900.50	943.25	1,285.91	1,239.31	46.60	27.593		
6,200.00	6,013.69	6,063.58	5,862.62	24.24	28.48	-1.52	919.34	963.65	1,299.05	1,252.01	47.04	27.615		
6,300.00	6,113.69	6,205.62	6,003.03	24.35	28.89	-0.81	933.85	979.36	1,309.10	1,261.66	47.44	27.595		
6,400.00	6,213.69	6,349.48	6,146.13	24.47	29.20	-0.34	943.71	990.04	1,315.91	1,268.12	47.79	27.535		
6,500.00	6,313.69	6,494.44	6,290.89	24.59	29.43	-0.11	948.71	995.45	1,319.34	1,271.24	48.11	27.425		
6,600.00	6,413.69	6,617.25	6,413.69	24.71	29.55	-0.08	949.34	996.14	1,319.78	1,271.41	48.37	27.286		
6,700.00	6,513.69	6,717.25	6,513.69	24.83	29.66	-0.08	949.34	996.14	1,319.78	1,271.16	48.62	27.144		
6,800.00	6,613.69	6,817.25	6,613.69	24.96	29.76	-0.08	949.34	996.14	1,319.78	1,270.90	48.88	27.003		
6,900.00	6,713.69	6,917.25	6,713.69	25.08	29.86	-0.08	949.34	996.14	1,319.78	1,270.65	49.13	26.862		
7,000.00	6,813.69	7,017.25	6,813.69	25.21	29.97	-0.08	949.34	996.14	1,319.78	1,270.39	49.39	26.720		
7,100.00	6,913.69	7,117.25	6,913.69	25.34	30.08	-0.08	949.34	996.14	1,319.78	1,270.12	49.66	26.579		
7,200.00	7,013.69	7,217.25	7,013.69	25.47	30.19	-0.08	949.34	996.14	1,319.78	1,269.86	49.92	26.437		
7,300.00	7,113.69	7,317.25	7,113.69	25.60	30.30	-0.08	949.34	996.14	1,319.78	1,269.59	50.19	26.296		
7,400.00	7,213.69	7,417.25	7,213.69	25.73	30.41	-0.08	949.34	996.14	1,319.78	1,269.32	50.46	26.155		
7,500.00	7,313.69	7,517.25	7,313.69	25.86	30.52	-0.08	949.34	996.14	1,319.78	1,269.05	50.73	26.014		
7,600.00	7,413.69	7,617.25	7,413.69	26.00	30.64	-0.08	949.34	996.14	1,319.78	1,268.77	51.01	25.874		
7,700.00	7,513.69	7,717.25	7,513.69	26.13	30.75	-0.08	949.34	996.14	1,319.78	1,268.49	51.29	25.734		
7,800.00	7,613.69	7,817.25	7,613.69	26.27	30.87	-0.08	949.34	996.14	1,319.78	1,268.21	51.57	25.594		
7,900.00	7,713.69	7,917.25	7,713.69	26.41	30.98	-0.08	949.34	996.14	1,319.78	1,267.93	51.85	25.454		
8,000.00	7,813.69	8,017.25	7,813.69	26.55	31.10	-0.08	949.34	996.14	1,319.78	1,267.64	52.13	25.315		
8,100.00	7,913.69	8,117.25	7,913.69	26.69	31.22	-0.08	949.34	996.14	1,319.78	1,267.36	52.42	25.176		
8,200.00	8,013.69	8,217.25	8,013.69	26.83	31.34	-0.08	949.34	996.14	1,319.78	1,267.07	52.71	25.037		
8,300.00	8,113.69	8,317.25	8,113.69	26.97	31.47	-0.08	949.34	996.14	1,319.78	1,266.77	53.00	24.899		
8,400.00	8,213.69	8,417.25	8,213.69	27.11	31.59	-0.08	949.34	996.14	1,319.78	1,266.48	53.30	24.762		
8,500.00	8,313.69	8,517.25	8,313.69	27.26	31.71	-0.08	949.34	996.14	1,319.78	1,266.18	53.59	24.625		
8,600.00	8,413.69	8,617.25	8,413.69	27.40	31.84	-0.08	949.34	996.14	1,319.78	1,265.88	53.89	24.489		
8,700.00	8,513.69	8,717.25	8,513.69	27.55	31.97	-0.08	949.34	996.14	1,319.78	1,265.58	54.19	24.353		
8,722.47	8,536.16	8,739.72	8,536.16	27.59	31.99	-0.08	949.34	996.14	1,319.78	1,265.52	54.26	24.322		
8,750.31	8,564.00	8,747.56	8,544.00	27.63	32.00	-0.08	949.34	996.14	1,319.93	1,265.61	54.32	24.301		

Company:	US ROCKIES REGION PLANNING	Local Co-ordinate Reference:	Well P_NRC 14-9
Project:	COLORADO NORTHERN ZONE - 83	TVD Reference:	WELL @ 5067.00ft (Original Well Elev)
Reference Site:	WELD_NRC 19-9 PAD	MD Reference:	WELL @ 5067.00ft (Original Well Elev)
Site Error:	0.00ft	North Reference:	True
Reference Well:	P_NRC 14-9	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00ft	Output errors are at	2.00 sigma
Reference Wellbore	P_NRC 14-9	Database:	EDM 2003.21 Single User Db
Reference Design:	PLAN #1 1-10-10 RHS	Offset TVD Reference:	Offset Datum

Offset Design													WELD_NRC 19-9 PAD - P_NRC 13-9 - P_NRC 13-9 - PLAN #1 1-10-10 RHS	Offset Site Error:	0.00 ft
Survey Program: 0-MWD														Offset Well Error:	0.00 ft
Reference		Offset		Semi Major Axis			Distance						Warning		
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Tooface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor			
0.00	0.00	0.00	0.00	0.00	0.00	-90.00	0.00	-80.05	80.05						
100.00	100.00	100.00	100.00	0.10	0.10	-90.00	0.00	-80.05	80.05	79.86	0.19	419.009			
200.00	200.00	200.00	200.00	0.32	0.32	-90.00	0.00	-80.05	80.05	79.41	0.64	124.968			
300.00	300.00	300.00	300.00	0.55	0.55	-90.00	0.00	-80.05	80.05	78.96	1.09	73.435			
400.00	400.00	400.00	400.00	0.77	0.77	-90.00	0.00	-80.05	80.05	78.51	1.54	51.994			
500.00	500.00	500.00	500.00	0.99	0.99	-90.00	0.00	-80.05	80.05	78.06	1.99	40.244			
600.00	600.00	600.00	600.00	1.22	1.22	-90.00	0.00	-80.05	80.05	77.61	2.44	32.826			
700.00	700.00	700.00	700.00	1.44	1.44	-90.00	0.00	-80.05	80.05	77.16	2.89	27.717			
800.00	800.00	800.00	800.00	1.67	1.67	-90.00	0.00	-80.05	80.05	76.71	3.34	23.984			
900.00	900.00	900.00	900.00	1.89	1.89	-90.00	0.00	-80.05	80.05	76.26	3.79	21.137			
1,000.00	1,000.00	1,000.00	1,000.00	2.12	2.12	-90.00	0.00	-80.05	80.05	75.82	4.24	18.894			
1,085.00	1,085.00	1,085.00	1,085.00	2.31	2.31	-90.00	0.00	-80.05	80.05	75.43	4.62	17.331	CC, ES		
1,100.00	1,100.00	1,099.75	1,099.75	2.34	2.34	159.62	-0.03	-80.08	80.11	75.43	4.68	17.122			
1,200.00	1,199.97	1,197.99	1,197.96	2.53	2.51	158.93	-1.78	-81.39	83.59	78.55	5.04	16.595	SF		
1,300.00	1,299.80	1,295.70	1,295.51	2.73	2.69	157.40	-6.19	-84.71	92.43	87.03	5.40	17.110			
1,400.00	1,399.37	1,392.46	1,391.87	2.95	2.89	155.47	-13.17	-89.96	106.68	100.91	5.78	18.465			
1,500.00	1,498.55	1,487.85	1,486.52	3.19	3.10	153.49	-22.60	-97.05	126.35	120.18	6.17	20.485			
1,600.00	1,597.23	1,581.47	1,578.99	3.46	3.34	151.69	-34.29	-105.85	151.34	144.77	6.58	23.011			
1,700.00	1,695.29	1,672.96	1,668.84	3.77	3.61	150.11	-48.05	-116.20	181.55	174.54	7.01	25.890			
1,800.00	1,792.60	1,766.62	1,760.50	4.13	3.92	148.97	-63.43	-127.77	215.87	208.38	7.49	28.816			
1,900.00	1,889.05	1,859.46	1,851.36	4.56	4.24	148.44	-78.67	-139.24	253.01	245.01	8.00	31.636			
2,000.00	1,984.52	1,951.15	1,941.10	5.05	4.58	148.28	-93.73	-150.57	292.89	284.36	8.53	34.331			
2,100.00	2,078.90	2,041.57	2,029.59	5.61	4.92	148.36	-108.58	-161.74	335.49	326.40	9.09	36.897			
2,200.00	2,172.06	2,130.62	2,116.73	6.24	5.27	148.57	-123.21	-172.74	380.80	371.12	9.68	39.336			
2,245.42	2,213.95	2,170.58	2,155.84	6.55	5.43	148.70	-129.77	-177.68	402.27	392.31	9.96	40.403			
2,300.00	2,264.11	2,218.41	2,202.65	6.95	5.62	149.13	-137.63	-183.59	428.41	418.08	10.33	41.463			
2,400.00	2,356.02	2,306.04	2,288.41	7.68	5.98	149.81	-152.02	-194.42	476.35	465.32	11.03	43.174			
2,500.00	2,447.93	2,393.67	2,374.17	8.43	6.34	150.37	-166.41	-205.24	524.34	512.59	11.75	44.635			
2,600.00	2,539.83	2,481.31	2,459.93	9.20	6.71	150.83	-180.81	-216.07	572.35	559.88	12.47	45.894			
2,700.00	2,631.74	2,568.94	2,545.70	9.98	7.08	151.22	-195.20	-226.90	620.39	607.19	13.20	46.987			
2,800.00	2,723.65	2,656.57	2,631.46	10.77	7.45	151.55	-209.59	-237.73	668.45	654.51	13.94	47.945			
2,900.00	2,815.56	2,744.21	2,717.22	11.56	7.83	151.84	-223.99	-248.56	716.52	701.83	14.69	48.789			
3,000.00	2,907.46	2,831.84	2,802.98	12.36	8.20	152.09	-238.38	-259.38	764.61	749.17	15.43	49.539			
3,100.00	2,999.37	2,919.48	2,888.75	13.16	8.58	152.32	-252.77	-270.21	812.70	796.51	16.19	50.208			
3,200.00	3,091.28	3,007.11	2,974.51	13.97	8.97	152.52	-267.16	-281.04	860.80	843.86	16.94	50.809			
3,300.00	3,183.19	3,094.74	3,060.27	14.78	9.35	152.69	-281.56	-291.87	908.91	891.21	17.70	51.352			
3,400.00	3,275.10	3,182.38	3,146.03	15.59	9.73	152.85	-295.95	-302.70	957.03	938.57	18.46	51.844			
3,500.00	3,367.00	3,270.01	3,231.80	16.41	10.12	153.00	-310.34	-313.52	1,005.15	985.93	19.22	52.294			
3,600.00	3,458.91	3,357.64	3,317.56	17.23	10.51	153.13	-324.74	-324.35	1,053.28	1,033.29	19.98	52.705			
3,700.00	3,550.82	3,445.28	3,403.32	18.05	10.89	153.25	-339.13	-335.18	1,101.41	1,080.66	20.75	53.084			
3,769.89	3,615.05	3,506.52	3,463.26	18.62	11.17	153.33	-349.19	-342.75	1,135.05	1,113.77	21.28	53.331			
3,800.00	3,642.79	3,532.98	3,489.15	18.84	11.28	153.50	-353.53	-346.02	1,149.42	1,127.89	21.53	53.391			
3,900.00	3,735.76	3,621.80	3,576.08	19.45	11.68	153.99	-368.12	-356.99	1,195.34	1,173.05	22.29	53.622			
4,000.00	3,829.95	3,712.02	3,664.37	20.02	12.08	154.36	-382.94	-368.14	1,238.46	1,215.42	23.04	53.748			
4,100.00	3,925.27	3,803.52	3,753.92	20.53	12.49	154.62	-397.97	-379.44	1,278.71	1,254.94	23.77	53.787			
4,200.00	4,021.57	3,896.19	3,844.61	21.00	12.90	154.78	-413.19	-390.89	1,316.07	1,291.59	24.49	53.750			
4,300.00	4,118.76	3,989.93	3,936.35	21.42	13.32	154.85	-428.58	-402.48	1,350.50	1,325.33	25.17	53.648			
4,400.00	4,216.71	4,084.61	4,029.00	21.79	13.74	154.84	-444.13	-414.17	1,381.98	1,356.14	25.84	53.491			
4,500.00	4,315.31	4,180.12	4,122.47	22.10	14.17	154.75	-459.82	-425.97	1,410.47	1,384.00	26.47	53.285			
4,600.00	4,414.42	4,287.42	4,227.52	22.37	14.63	154.54	-477.29	-439.12	1,435.90	1,408.80	27.10	52.980			
4,700.00	4,513.94	4,435.17	4,373.14	22.59	15.07	154.22	-497.23	-454.12	1,455.98	1,428.28	27.70	52.558			
4,800.00	4,613.73	4,586.19	4,523.10	22.76	15.43	153.98	-511.39	-464.77	1,469.55	1,441.34	28.21	52.101			

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_NRC 14-9
Project:	COLORADO NORTHERN ZONE - 83	TVD Reference:	WELL @ 5067.00ft (Original Well Elev)
Reference Site:	WELD_NRC 19-9 PAD	MD Reference:	WELL @ 5067.00ft (Original Well Elev)
Site Error:	0.00ft	North Reference:	True
Reference Well:	P_NRC 14-9	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00ft	Output errors are at	2.00 sigma
Reference Wellbore	P_NRC 14-9	Database:	EDM 2003.21 Single User Db
Reference Design:	PLAN #1 1-10-10 RHS	Offset TVD Reference:	Offset Datum

Offset Design												WELD_NRC 19-9 PAD - P_NRC 13-9 - P_NRC 13-9 - PLAN #1 1-10-10 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	4,713.69	4,739.27	4,675.84	22.88	15.72	153.84	-519.27	-470.70	1,476.43	1,447.82	28.61	51.611		
4,930.31	4,744.00	4,785.89	4,722.44	22.91	15.79	-95.83	-520.37	-471.53	1,477.18	1,448.47	28.71	51.450		
5,000.00	4,813.69	4,877.14	4,813.69	22.97	15.91	-95.85	-520.90	-471.92	1,477.48	1,448.53	28.95	51.042		
5,100.00	4,913.69	4,977.14	4,913.69	23.07	16.04	-95.85	-520.90	-471.92	1,477.48	1,448.25	29.23	50.550		
5,200.00	5,013.69	5,077.14	5,013.69	23.16	16.17	-95.85	-520.90	-471.92	1,477.48	1,447.96	29.51	50.065		
5,300.00	5,113.69	5,177.14	5,113.69	23.26	16.30	-95.85	-520.90	-471.92	1,477.48	1,447.68	29.80	49.582		
5,400.00	5,213.69	5,277.14	5,213.69	23.36	16.43	-95.85	-520.90	-471.92	1,477.48	1,447.39	30.09	49.101		
5,500.00	5,313.69	5,377.14	5,313.69	23.47	16.56	-95.85	-520.90	-471.92	1,477.48	1,447.09	30.39	48.624		
5,600.00	5,413.69	5,477.14	5,413.69	23.57	16.70	-95.85	-520.90	-471.92	1,477.48	1,446.79	30.68	48.150		
5,700.00	5,513.69	5,577.14	5,513.69	23.68	16.84	-95.85	-520.90	-471.92	1,477.48	1,446.49	30.99	47.680		
5,800.00	5,613.69	5,677.14	5,613.69	23.79	16.98	-95.85	-520.90	-471.92	1,477.48	1,446.18	31.29	47.213		
5,900.00	5,713.69	5,777.14	5,713.69	23.90	17.12	-95.85	-520.90	-471.92	1,477.48	1,445.87	31.60	46.750		
6,000.00	5,813.69	5,877.14	5,813.69	24.01	17.26	-95.85	-520.90	-471.92	1,477.48	1,445.56	31.92	46.291		
6,100.00	5,913.69	5,977.14	5,913.69	24.12	17.41	-95.85	-520.90	-471.92	1,477.48	1,445.24	32.23	45.837		
6,200.00	6,013.69	6,077.14	6,013.69	24.24	17.55	-95.85	-520.90	-471.92	1,477.48	1,444.92	32.55	45.387		
6,300.00	6,113.69	6,177.14	6,113.69	24.35	17.70	-95.85	-520.90	-471.92	1,477.48	1,444.60	32.88	44.942		
6,400.00	6,213.69	6,277.14	6,213.69	24.47	17.85	-95.85	-520.90	-471.92	1,477.48	1,444.28	33.20	44.501		
6,500.00	6,313.69	6,377.14	6,313.69	24.59	18.00	-95.85	-520.90	-471.92	1,477.48	1,443.95	33.53	44.066		
6,600.00	6,413.69	6,477.14	6,413.69	24.71	18.15	-95.85	-520.90	-471.92	1,477.48	1,443.62	33.86	43.635		
6,700.00	6,513.69	6,577.14	6,513.69	24.83	18.31	-95.85	-520.90	-471.92	1,477.48	1,443.28	34.19	43.209		
6,800.00	6,613.69	6,677.14	6,613.69	24.96	18.46	-95.85	-520.90	-471.92	1,477.48	1,442.95	34.53	42.788		
6,900.00	6,713.69	6,777.14	6,713.69	25.08	18.62	-95.85	-520.90	-471.92	1,477.48	1,442.61	34.87	42.372		
7,000.00	6,813.69	6,877.14	6,813.69	25.21	18.78	-95.85	-520.90	-471.92	1,477.48	1,442.26	35.21	41.961		
7,100.00	6,913.69	6,977.14	6,913.69	25.34	18.94	-95.85	-520.90	-471.92	1,477.48	1,441.92	35.55	41.555		
7,200.00	7,013.69	7,077.14	7,013.69	25.47	19.10	-95.85	-520.90	-471.92	1,477.48	1,441.57	35.90	41.154		
7,300.00	7,113.69	7,177.14	7,113.69	25.60	19.26	-95.85	-520.90	-471.92	1,477.48	1,441.23	36.25	40.758		
7,400.00	7,213.69	7,277.14	7,213.69	25.73	19.43	-95.85	-520.90	-471.92	1,477.48	1,440.88	36.60	40.368		
7,500.00	7,313.69	7,377.14	7,313.69	25.86	19.59	-95.85	-520.90	-471.92	1,477.48	1,440.52	36.95	39.982		
7,600.00	7,413.69	7,477.14	7,413.69	26.00	19.76	-95.85	-520.90	-471.92	1,477.48	1,440.17	37.31	39.602		
7,700.00	7,513.69	7,577.14	7,513.69	26.13	19.92	-95.85	-520.90	-471.92	1,477.48	1,439.81	37.67	39.226		
7,800.00	7,613.69	7,677.14	7,613.69	26.27	20.09	-95.85	-520.90	-471.92	1,477.48	1,439.45	38.02	38.856		
7,900.00	7,713.69	7,777.14	7,713.69	26.41	20.26	-95.85	-520.90	-471.92	1,477.48	1,439.09	38.39	38.491		
8,000.00	7,813.69	7,877.14	7,813.69	26.55	20.43	-95.85	-520.90	-471.92	1,477.48	1,438.73	38.75	38.131		
8,100.00	7,913.69	7,977.14	7,913.69	26.69	20.60	-95.85	-520.90	-471.92	1,477.48	1,438.36	39.11	37.775		
8,200.00	8,013.69	8,077.14	8,013.69	26.83	20.78	-95.85	-520.90	-471.92	1,477.48	1,438.00	39.48	37.425		
8,300.00	8,113.69	8,177.14	8,113.69	26.97	20.95	-95.85	-520.90	-471.92	1,477.48	1,437.63	39.85	37.079		
8,400.00	8,213.69	8,277.14	8,213.69	27.11	21.13	-95.85	-520.90	-471.92	1,477.48	1,437.26	40.22	36.738		
8,500.00	8,313.69	8,377.14	8,313.69	27.26	21.30	-95.85	-520.90	-471.92	1,477.48	1,436.89	40.59	36.402		
8,505.57	8,319.26	8,382.72	8,319.26	27.27	21.31	-95.85	-520.90	-471.92	1,477.48	1,436.87	40.61	36.384		
8,600.00	8,413.69	8,412.46	8,349.00	27.40	21.36	-95.85	-520.90	-471.92	1,478.89	1,438.05	40.84	36.213		
8,700.00	8,513.69	8,412.46	8,349.00	27.55	21.36	-95.85	-520.90	-471.92	1,486.63	1,445.60	41.02	36.238		
8,750.31	8,564.00	8,412.46	8,349.00	27.63	21.36	-95.85	-520.90	-471.92	1,493.04	1,451.92	41.12	36.311		

Company:	US ROCKIES REGION PLANNING	Local Co-ordinate Reference:	Well P_NRC 14-9
Project:	COLORADO NORTHERN ZONE - 83	TVD Reference:	WELL @ 5067.00ft (Original Well Elev)
Reference Site:	WELD_NRC 19-9 PAD	MD Reference:	WELL @ 5067.00ft (Original Well Elev)
Site Error:	0.00ft	North Reference:	True
Reference Well:	P_NRC 14-9	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00ft	Output errors are at	2.00 sigma
Reference Wellbore	P_NRC 14-9	Database:	EDM 2003.21 Single User Db
Reference Design:	PLAN #1 1-10-10 RHS	Offset TVD Reference:	Offset Datum

Offset Design													WELD_NRC 19-9 PAD - P_NRC 23-9 - P_NRC 23-9 - PLAN #1 1-10-10 RHS	Offset Site Error:	0.00 ft
Survey Program: 0-Good_gyro														Offset Well Error:	0.00 ft
Reference		Offset		Semi Major Axis			Distance						Warning		
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor			
0.00	0.00	0.00	0.00	0.00	0.00	-90.02	0.00	-15.95	15.95						
100.00	100.00	100.00	100.00	0.10	0.04	-90.02	0.00	-15.95	15.95	15.81	0.14	113.935			
200.00	200.00	200.00	200.00	0.32	0.10	-90.02	0.00	-15.95	15.95	15.54	0.42	38.246			
300.00	300.00	300.00	300.00	0.55	0.15	-90.02	0.00	-15.95	15.95	15.26	0.69	22.980			
400.00	400.00	400.00	400.00	0.77	0.20	-90.02	0.00	-15.95	15.95	14.98	0.97	16.424			
500.00	500.00	500.00	500.00	0.99	0.25	-90.02	0.00	-15.95	15.95	14.71	1.25	12.779			
600.00	600.00	600.00	600.00	1.22	0.31	-90.02	0.00	-15.95	15.95	14.43	1.53	10.457			
700.00	700.00	700.00	700.00	1.44	0.36	-90.02	0.00	-15.95	15.95	14.15	1.80	8.850			
800.00	800.00	800.00	800.00	1.67	0.41	-90.02	0.00	-15.95	15.95	13.87	2.08	7.671			
900.00	900.00	900.00	900.00	1.89	0.46	-90.02	0.00	-15.95	15.95	13.60	2.36	6.769			
1,000.00	1,000.00	1,000.00	1,000.00	2.12	0.52	-90.02	0.00	-15.95	15.95	13.32	2.63	6.057			
1,085.00	1,085.00	1,085.00	1,085.00	2.31	0.56	-90.02	0.00	-15.95	15.95	13.08	2.87	5.560			
1,100.00	1,100.00	1,100.08	1,100.08	2.34	0.57	159.69	0.00	-15.92	15.95	13.04	2.91	5.484			
1,200.00	1,199.97	1,200.62	1,200.59	2.53	0.62	164.03	0.41	-13.66	15.88	12.73	3.15	5.034			
1,215.33	1,215.28	1,216.03	1,215.98	2.56	0.63	165.29	0.53	-13.01	15.88	12.68	3.19	4.972 CC, ES			
1,300.00	1,299.80	1,301.10	1,300.89	2.73	0.68	174.97	1.44	-7.94	16.11	12.70	3.41	4.729 SF			
1,400.00	1,399.37	1,401.47	1,400.82	2.95	0.74	-169.10	3.09	1.23	17.60	13.94	3.67	4.802			
1,500.00	1,498.55	1,501.67	1,500.20	3.19	0.82	-152.59	5.36	13.81	21.39	17.43	3.95	5.407			
1,600.00	1,597.23	1,601.67	1,598.87	3.46	0.93	-139.37	8.23	29.77	27.85	23.55	4.30	6.477			
1,700.00	1,695.29	1,701.40	1,696.66	3.77	1.06	-130.06	11.71	49.06	36.84	32.12	4.72	7.809			
1,800.00	1,792.60	1,800.83	1,793.40	4.13	1.23	-123.70	15.77	71.60	48.09	42.86	5.23	9.193			
1,900.00	1,889.05	1,899.91	1,888.97	4.56	1.44	-119.28	20.41	97.35	61.40	55.57	5.84	10.522			
2,000.00	1,984.52	1,998.61	1,983.20	5.05	1.68	-116.10	25.60	126.21	76.65	70.11	6.54	11.724			
2,100.00	2,078.90	2,096.87	2,075.96	5.61	1.96	-113.72	31.35	158.10	93.73	86.38	7.34	12.766			
2,200.00	2,172.06	2,194.91	2,167.51	6.24	2.26	-112.12	37.56	192.59	112.53	104.28	8.24	13.649			
2,245.42	2,213.95	2,239.43	2,209.03	6.55	2.41	-111.94	40.41	208.42	121.52	112.85	8.68	14.008			
2,300.00	2,264.11	2,292.89	2,258.88	6.95	2.58	-112.11	43.84	227.43	132.49	123.29	9.20	14.394			
2,400.00	2,356.02	2,390.85	2,350.23	7.68	2.91	-112.35	50.11	262.25	152.59	142.39	10.20	14.965			
2,500.00	2,447.93	2,488.81	2,441.57	8.43	3.24	-112.54	56.38	297.07	172.69	161.48	11.21	15.406			
2,600.00	2,539.83	2,586.76	2,532.92	9.20	3.57	-112.69	62.66	331.89	192.79	180.55	12.24	15.753			
2,700.00	2,631.74	2,684.72	2,624.26	9.98	3.90	-112.81	68.93	366.71	212.90	199.62	13.28	16.032			
2,800.00	2,723.65	2,782.68	2,715.60	10.77	4.23	-112.91	75.20	401.54	233.00	218.67	14.33	16.259			
2,900.00	2,815.56	2,880.64	2,806.95	11.56	4.57	-112.99	81.48	436.36	253.11	237.72	15.39	16.447			
3,000.00	2,907.46	2,978.59	2,898.29	12.36	4.90	-113.06	87.75	471.18	273.21	256.76	16.45	16.605			
3,100.00	2,999.37	3,076.55	2,989.64	13.16	5.24	-113.12	94.02	506.00	293.32	275.79	17.52	16.739			
3,200.00	3,091.28	3,174.51	3,080.98	13.97	5.58	-113.18	100.29	540.83	313.42	294.83	18.60	16.853			
3,300.00	3,183.19	3,272.47	3,172.32	14.78	5.91	-113.22	106.57	575.65	333.53	313.85	19.67	16.952			
3,400.00	3,275.10	3,370.42	3,263.67	15.59	6.25	-113.27	112.84	610.47	353.63	332.88	20.76	17.038			
3,500.00	3,367.00	3,468.38	3,355.01	16.41	6.59	-113.30	119.11	645.29	373.74	351.90	21.84	17.114			
3,600.00	3,458.91	3,566.34	3,446.36	17.23	6.93	-113.34	125.39	680.12	393.85	370.92	22.92	17.181			
3,700.00	3,550.82	3,664.30	3,537.70	18.05	7.26	-113.37	131.66	714.94	413.95	389.94	24.01	17.240			
3,769.89	3,615.05	3,732.76	3,601.54	18.62	7.50	-113.39	136.04	739.28	428.01	403.24	24.77	17.278			
3,800.00	3,642.79	3,762.27	3,629.06	18.84	7.60	-113.49	137.93	749.77	434.00	408.93	25.07	17.308			
3,900.00	3,735.76	3,860.41	3,720.57	19.45	7.94	-113.54	144.22	784.65	453.02	427.01	26.00	17.422			
4,000.00	3,829.95	3,958.68	3,812.21	20.02	8.28	-113.19	150.51	819.59	470.70	443.78	26.92	17.482			
4,100.00	3,925.27	4,056.96	3,903.86	20.53	8.62	-112.49	156.80	854.53	487.14	459.31	27.83	17.504			
4,200.00	4,021.57	4,155.13	3,995.40	21.00	8.96	-111.47	163.09	889.43	502.46	473.74	28.71	17.499			
4,300.00	4,118.76	4,253.08	4,086.73	21.42	9.30	-110.15	169.36	924.24	516.83	487.27	29.56	17.484			
4,400.00	4,216.71	4,350.67	4,177.73	21.79	9.64	-108.57	175.61	958.94	530.50	500.13	30.36	17.472			
4,500.00	4,315.31	4,447.80	4,268.30	22.10	9.98	-106.73	181.83	993.46	543.69	512.59	31.11	17.477			
4,600.00	4,414.42	4,544.34	4,358.32	22.37	10.31	-104.68	188.01	1,027.78	556.73	524.94	31.78	17.516			
4,700.00	4,513.94	4,640.17	4,447.69	22.59	10.64	-102.43	194.15	1,061.85	569.91	537.54	32.38	17.603			

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_NRC 14-9
Project:	COLORADO NORTHERN ZONE - 83	TVD Reference:	WELL @ 5067.00ft (Original Well Elev)
Reference Site:	WELD_NRC 19-9 PAD	MD Reference:	WELL @ 5067.00ft (Original Well Elev)
Site Error:	0.00ft	North Reference:	True
Reference Well:	P_NRC 14-9	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00ft	Output errors are at	2.00 sigma
Reference Wellbore	P_NRC 14-9	Database:	EDM 2003.21 Single User Db
Reference Design:	PLAN #1 1-10-10 RHS	Offset TVD Reference:	Offset Datum

Offset Design												WELD_NRC 19-9 PAD - P_NRC 23-9 - P_NRC 23-9 - PLAN #1 1-10-10 RHS	Offset Site Error:	0.00 ft
Survey Program: 0-Good_gyro													Offset Well Error:	0.00 ft
Reference		Offset		Semi Major Axis			Distance					Warning		
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Tooface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
4,800.00	4,613.73	4,735.19	4,536.29	22.76	10.97	-100.00	200.24	1,095.62	583.61	550.73	32.87	17.752		
4,900.00	4,713.69	4,829.26	4,624.02	22.88	11.30	-97.44	206.26	1,129.07	598.17	564.90	33.27	17.980		
4,930.31	4,744.00	4,857.58	4,650.42	22.91	11.40	13.72	208.07	1,139.13	602.82	569.45	33.37	18.067		
5,000.00	4,813.69	4,922.56	4,711.02	22.97	11.62	15.75	212.23	1,162.23	614.06	580.50	33.56	18.300		
5,100.00	4,913.69	5,015.81	4,797.97	23.07	11.95	18.55	218.21	1,195.38	631.59	597.81	33.78	18.698		
5,200.00	5,013.69	5,109.06	4,884.92	23.16	12.27	21.20	224.18	1,228.53	650.65	616.71	33.94	19.169		
5,300.00	5,113.69	5,202.31	4,971.87	23.26	12.59	23.71	230.15	1,261.68	671.13	637.06	34.06	19.703		
5,400.00	5,213.69	5,295.56	5,058.83	23.36	12.92	26.09	236.12	1,294.83	692.88	658.73	34.14	20.293		
5,500.00	5,313.69	5,388.81	5,145.78	23.47	13.24	28.32	242.09	1,327.98	715.79	681.60	34.19	20.934		
5,600.00	5,413.69	5,482.05	5,232.73	23.57	13.56	30.43	248.06	1,361.13	739.76	705.54	34.22	21.619		
5,700.00	5,513.69	5,575.30	5,319.69	23.68	13.89	32.41	254.03	1,394.27	764.68	730.45	34.23	22.341		
5,800.00	5,613.69	5,666.61	5,423.98	23.79	14.26	34.55	260.92	1,432.53	789.64	755.44	34.20	23.087		
5,900.00	5,713.69	5,806.15	5,537.55	23.90	14.61	36.46	267.53	1,469.22	812.53	778.35	34.18	23.774		
6,000.00	5,813.69	5,928.81	5,655.60	24.01	14.93	38.06	273.44	1,501.98	832.88	798.72	34.16	24.381		
6,100.00	5,913.69	6,054.26	5,777.69	24.12	15.20	39.37	278.54	1,530.32	850.39	816.23	34.17	24.890		
6,200.00	6,013.69	6,182.09	5,903.27	24.24	15.42	40.40	282.76	1,553.75	864.79	830.59	34.20	25.288		
6,300.00	6,113.69	6,311.84	6,031.70	24.35	15.60	41.17	286.03	1,571.87	875.87	841.61	34.26	25.569		
6,400.00	6,213.69	6,443.03	6,162.25	24.47	15.72	41.68	288.28	1,584.36	883.47	849.13	34.34	25.728		
6,500.00	6,313.69	6,575.11	6,294.15	24.59	15.80	41.95	289.47	1,590.98	887.49	853.03	34.45	25.758		
6,600.00	6,413.69	6,694.65	6,413.69	24.71	15.82	41.99	289.66	1,592.07	888.15	853.55	34.60	25.672		
6,700.00	6,513.69	6,794.65	6,513.69	24.83	15.84	41.99	289.66	1,592.07	888.15	853.41	34.74	25.567		
6,800.00	6,613.69	6,894.65	6,613.69	24.96	15.85	41.99	289.66	1,592.07	888.15	853.27	34.88	25.461		
6,900.00	6,713.69	6,994.65	6,713.69	25.08	15.86	41.99	289.66	1,592.07	888.15	853.12	35.03	25.354		
7,000.00	6,813.69	7,094.65	6,813.69	25.21	15.87	41.99	289.66	1,592.07	888.15	852.97	35.18	25.248		
7,100.00	6,913.69	7,194.65	6,913.69	25.34	15.88	41.99	289.66	1,592.07	888.15	852.82	35.33	25.141		
7,200.00	7,013.69	7,294.65	7,013.69	25.47	15.90	41.99	289.66	1,592.07	888.15	852.67	35.48	25.034		
7,300.00	7,113.69	7,394.65	7,113.69	25.60	15.91	41.99	289.66	1,592.07	888.15	852.52	35.63	24.927		
7,400.00	7,213.69	7,494.65	7,213.69	25.73	15.92	41.99	289.66	1,592.07	888.15	852.36	35.78	24.819		
7,500.00	7,313.69	7,594.65	7,313.69	25.86	15.93	41.99	289.66	1,592.07	888.15	852.21	35.94	24.712		
7,600.00	7,413.69	7,694.65	7,413.69	26.00	15.95	41.99	289.66	1,592.07	888.15	852.05	36.10	24.604		
7,700.00	7,513.69	7,794.65	7,513.69	26.13	15.96	41.99	289.66	1,592.07	888.15	851.89	36.26	24.497		
7,800.00	7,613.69	7,894.65	7,613.69	26.27	15.97	41.99	289.66	1,592.07	888.15	851.73	36.42	24.389		
7,900.00	7,713.69	7,994.65	7,713.69	26.41	15.99	41.99	289.66	1,592.07	888.15	851.57	36.58	24.282		
8,000.00	7,813.69	8,094.65	7,813.69	26.55	16.00	41.99	289.66	1,592.07	888.15	851.41	36.74	24.174		
8,100.00	7,913.69	8,194.65	7,913.69	26.69	16.02	41.99	289.66	1,592.07	888.15	851.25	36.90	24.066		
8,200.00	8,013.69	8,294.65	8,013.69	26.83	16.03	41.99	289.66	1,592.07	888.15	851.08	37.07	23.959		
8,300.00	8,113.69	8,394.65	8,113.69	26.97	16.04	41.99	289.66	1,592.07	888.15	850.91	37.24	23.852		
8,400.00	8,213.69	8,494.65	8,213.69	27.11	16.06	41.99	289.66	1,592.07	888.15	850.74	37.40	23.744		
8,460.93	8,274.62	8,555.58	8,274.62	27.20	16.07	41.99	289.66	1,592.07	888.15	850.64	37.51	23.679		
8,500.00	8,313.69	8,579.97	8,299.00	27.26	16.07	41.99	289.66	1,592.07	888.27	850.70	37.57	23.642		
8,600.00	8,413.69	8,579.97	8,299.00	27.40	16.07	41.99	289.66	1,592.07	895.52	857.80	37.72	23.741		
8,700.00	8,513.69	8,579.97	8,299.00	27.55	16.07	41.99	289.66	1,592.07	913.73	875.86	37.87	24.127		
8,750.31	8,564.00	8,579.97	8,299.00	27.63	16.07	41.99	289.66	1,592.07	926.84	888.89	37.95	24.424		

Company:	US ROCKIES REGION PLANNING	Local Co-ordinate Reference:	Well P_NRC 14-9
Project:	COLORADO NORTHERN ZONE - 83	TVD Reference:	WELL @ 5067.00ft (Original Well Elev)
Reference Site:	WELD_NRC 19-9 PAD	MD Reference:	WELL @ 5067.00ft (Original Well Elev)
Site Error:	0.00ft	North Reference:	True
Reference Well:	P_NRC 14-9	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00ft	Output errors are at	2.00 sigma
Reference Wellbore	P_NRC 14-9	Database:	EDM 2003.21 Single User Db
Reference Design:	PLAN #1 1-10-10 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	-90.01	-0.01	-64.10	64.10						
100.00	100.00	100.00	100.00	0.10	0.10	-90.01	-0.01	-64.10	64.10	63.91	0.19	335.501			
200.00	200.00	200.00	200.00	0.32	0.32	-90.01	-0.01	-64.10	64.10	63.46	0.64	100.062			
300.00	300.00	300.00	300.00	0.55	0.55	-90.01	-0.01	-64.10	64.10	63.01	1.09	58.799			
400.00	400.00	400.00	400.00	0.77	0.77	-90.01	-0.01	-64.10	64.10	62.56	1.54	41.631			
500.00	500.00	500.00	500.00	0.99	0.99	-90.01	-0.01	-64.10	64.10	62.11	1.99	32.223			
600.00	600.00	600.00	600.00	1.22	1.22	-90.01	-0.01	-64.10	64.10	61.66	2.44	26.283			
700.00	700.00	700.00	700.00	1.44	1.44	-90.01	-0.01	-64.10	64.10	61.21	2.89	22.193			
800.00	800.00	800.00	800.00	1.67	1.67	-90.01	-0.01	-64.10	64.10	60.76	3.34	19.204			
900.00	900.00	900.00	900.00	1.89	1.89	-90.01	-0.01	-64.10	64.10	60.31	3.79	16.924			
1,000.00	1,000.00	1,000.00	1,000.00	2.12	2.12	-90.01	-0.01	-64.10	64.10	59.86	4.24	15.129			
1,085.00	1,085.00	1,085.00	1,085.00	2.31	2.31	-90.01	-0.01	-64.10	64.10	59.48	4.62	13.877	CC		
1,100.00	1,100.00	1,100.13	1,100.13	2.34	2.34	159.61	-0.05	-64.08	64.12	59.44	4.68	13.703	ES		
1,200.00	1,199.97	1,200.94	1,200.91	2.53	2.51	158.42	-2.18	-63.22	65.40	60.36	5.04	12.981			
1,300.00	1,299.80	1,301.62	1,301.42	2.73	2.70	155.62	-7.59	-61.02	68.77	63.36	5.41	12.713	SF		
1,400.00	1,399.37	1,402.04	1,401.39	2.95	2.90	151.67	-16.25	-57.51	74.46	68.66	5.80	12.839			
1,500.00	1,498.55	1,502.08	1,500.61	3.19	3.12	147.15	-28.09	-52.71	82.77	76.54	6.23	13.294			
1,600.00	1,597.23	1,601.63	1,598.83	3.46	3.38	142.58	-43.06	-46.64	93.89	87.19	6.71	14.002			
1,700.00	1,695.29	1,700.58	1,695.85	3.77	3.68	138.31	-61.06	-39.33	107.96	100.70	7.26	14.874			
1,800.00	1,792.60	1,798.93	1,791.78	4.13	4.02	134.93	-81.18	-31.17	124.96	117.07	7.89	15.838			
1,900.00	1,889.05	1,896.93	1,887.33	4.56	4.38	133.25	-101.33	-23.00	144.58	136.00	8.58	16.856			
2,000.00	1,984.52	1,994.47	1,982.45	5.05	4.76	132.76	-121.39	-14.86	166.58	157.25	9.32	17.867			
2,100.00	2,078.90	2,091.45	2,077.00	5.61	5.16	133.07	-141.33	-6.78	190.89	180.78	10.12	18.864			
2,200.00	2,172.06	2,187.73	2,170.88	6.24	5.56	133.88	-161.12	1.25	217.57	206.62	10.95	19.862			
2,245.42	2,213.95	2,231.20	2,213.27	6.55	5.75	134.35	-170.06	4.88	230.49	219.15	11.34	20.318			
2,300.00	2,264.11	2,283.33	2,264.11	6.95	5.97	135.14	-180.78	9.23	246.34	234.50	11.84	20.807			
2,400.00	2,356.02	2,378.85	2,357.24	7.68	6.39	136.34	-200.42	17.19	275.48	262.72	12.76	21.590			
2,500.00	2,447.93	2,474.37	2,450.38	8.43	6.81	137.31	-220.06	25.16	304.70	291.01	13.69	22.252			
2,600.00	2,539.83	2,569.89	2,543.52	9.20	7.24	138.12	-239.70	33.13	334.00	319.36	14.64	22.819			
2,700.00	2,631.74	2,665.40	2,636.65	9.98	7.67	138.79	-259.34	41.09	363.34	347.75	15.59	23.307			
2,800.00	2,723.65	2,760.92	2,729.79	10.77	8.11	139.36	-278.98	49.06	392.72	376.17	16.55	23.733			
2,900.00	2,815.56	2,856.44	2,822.93	11.56	8.55	139.86	-298.62	57.03	422.13	404.62	17.51	24.106			
3,000.00	2,907.46	2,951.96	2,916.06	12.36	8.99	140.29	-318.26	64.99	451.57	433.09	18.48	24.436			
3,100.00	2,999.37	3,047.48	3,009.20	13.16	9.43	140.66	-337.90	72.96	481.03	461.58	19.45	24.730			
3,200.00	3,091.28	3,142.99	3,102.34	13.97	9.87	140.99	-357.54	80.92	510.50	490.07	20.43	24.993			
3,300.00	3,183.19	3,238.51	3,195.47	14.78	10.32	141.29	-377.18	88.89	539.99	518.59	21.40	25.230			
3,400.00	3,275.10	3,334.03	3,288.61	15.59	10.77	141.56	-396.82	96.86	569.49	547.11	22.38	25.445			
3,500.00	3,367.00	3,429.55	3,381.75	16.41	11.22	141.80	-416.46	104.82	599.00	575.64	23.36	25.640			
3,600.00	3,458.91	3,525.07	3,474.89	17.23	11.67	142.02	-436.10	112.79	628.52	604.17	24.34	25.818			
3,700.00	3,550.82	3,620.58	3,568.02	18.05	12.12	142.21	-455.74	120.76	658.05	632.72	25.33	25.982			
3,769.89	3,615.05	3,687.34	3,633.12	18.62	12.43	142.34	-469.46	126.32	678.69	652.67	26.01	26.089			
3,800.00	3,642.79	3,716.14	3,661.20	18.84	12.57	142.50	-475.38	128.73	687.46	661.15	26.30	26.134			
3,900.00	3,735.76	3,812.30	3,754.96	19.45	13.03	142.87	-495.16	136.75	714.87	687.65	27.22	26.267			
4,000.00	3,829.95	3,909.18	3,849.42	20.02	13.49	143.03	-515.07	144.82	739.59	711.46	28.13	26.294			
4,100.00	3,925.27	4,006.64	3,944.46	20.53	13.95	143.00	-535.11	152.95	761.61	732.57	29.04	26.227			
4,200.00	4,021.57	4,104.58	4,039.95	21.00	14.42	142.80	-555.25	161.12	780.94	750.99	29.95	26.077			
4,300.00	4,118.76	4,202.87	4,135.79	21.42	14.88	142.43	-575.46	169.32	797.60	766.75	30.85	25.855			
4,400.00	4,216.71	4,301.39	4,231.86	21.79	15.35	141.90	-595.72	177.54	811.61	779.87	31.74	25.570			
4,500.00	4,315.31	4,400.02	4,328.03	22.10	15.82	141.22	-616.00	185.76	823.05	790.43	32.62	25.228			
4,600.00	4,414.42	4,498.65	4,424.20	22.37	16.30	140.38	-636.28	193.99	831.99	798.49	33.50	24.839			
4,700.00	4,513.94	4,597.15	4,520.24	22.59	16.77	139.38	-656.53	202.20	838.51	804.16	34.35	24.408			
4,800.00	4,613.73	4,695.40	4,616.05	22.76	17.24	138.22	-676.73	210.40	842.73	807.54	35.20	23.943			

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_NRC 14-9
Project:	COLORADO NORTHERN ZONE - 83	TVD Reference:	WELL @ 5067.00ft (Original Well Elev)
Reference Site:	WELD_NRC 19-9 PAD	MD Reference:	WELL @ 5067.00ft (Original Well Elev)
Site Error:	0.00ft	North Reference:	True
Reference Well:	P_NRC 14-9	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00ft	Output errors are at	2.00 sigma
Reference Wellbore	P_NRC 14-9	Database:	EDM 2003.21 Single User Db
Reference Design:	PLAN #1 1-10-10 RHS	Offset TVD Reference:	Offset Datum

Offset Design												WELD_NRC 19-9 PAD - P_NRC 35-9 - P_NRC 35-9 - PLAN #1 1-10-10 RHS	Offset Site Error:	0.00 ft
Survey Program: 0-MWD													Offset Well Error:	0.00 ft
Reference		Offset		Semi Major Axis			Distance					Warning		
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Tooface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)		Separation Factor	
4,900.00	4,713.69	4,793.28	4,711.49	22.88	17.71	136.90	-696.86	218.56	844.80	808.77	36.02	23.451		
4,930.31	4,744.00	4,822.86	4,740.33	22.91	17.85	-113.17	-702.94	221.03	845.02	808.75	36.27	23.297		
5,000.00	4,813.69	4,890.81	4,806.59	22.97	18.17	-114.19	-716.91	226.69	845.46	808.59	36.87	22.933		
5,100.00	4,913.69	4,988.32	4,901.67	23.07	18.64	-115.66	-736.96	234.83	846.59	808.88	37.71	22.449		
5,200.00	5,013.69	5,085.83	4,996.74	23.16	19.11	-117.12	-757.01	242.96	848.30	809.76	38.54	22.010		
5,300.00	5,113.69	5,183.34	5,091.82	23.26	19.58	-118.57	-777.06	251.09	850.59	811.23	39.35	21.614		
5,400.00	5,213.69	5,280.84	5,186.90	23.36	20.05	-120.01	-797.11	259.22	853.44	813.29	40.15	21.257		
5,500.00	5,313.69	5,378.35	5,281.97	23.47	20.51	-121.45	-817.15	267.36	856.86	815.94	40.92	20.938		
5,600.00	5,413.69	5,475.86	5,377.05	23.57	20.98	-122.87	-837.20	275.49	860.84	819.16	41.68	20.653		
5,700.00	5,513.69	5,573.37	5,472.13	23.68	21.45	-124.28	-857.25	283.62	865.37	822.96	42.42	20.402		
5,800.00	5,613.69	5,670.87	5,567.20	23.79	21.92	-125.67	-877.30	291.75	870.44	827.31	43.13	20.181		
5,900.00	5,713.69	5,768.38	5,662.28	23.90	22.39	-127.05	-897.35	299.88	876.05	832.22	43.83	19.989		
6,000.00	5,813.69	5,867.28	5,758.73	24.01	22.85	-128.43	-917.65	308.12	882.17	837.67	44.50	19.825		
6,100.00	5,913.69	5,975.25	5,864.55	24.12	23.22	-129.75	-937.46	316.16	888.07	843.01	45.06	19.710		
6,200.00	6,013.69	6,084.72	5,972.59	24.24	23.53	-130.83	-953.77	322.77	893.15	847.62	45.54	19.614		
6,300.00	6,113.69	6,195.40	6,082.42	24.35	23.80	-131.65	-966.35	327.87	897.21	851.25	45.96	19.523		
6,400.00	6,213.69	6,306.98	6,193.60	24.47	24.01	-132.21	-975.05	331.40	900.08	853.76	46.32	19.432		
6,500.00	6,313.69	6,419.12	6,305.62	24.59	24.18	-132.52	-979.75	333.31	901.65	855.02	46.63	19.336		
6,600.00	6,413.69	6,527.20	6,413.69	24.71	24.32	-132.57	-980.62	333.66	901.94	855.04	46.90	19.233		
6,700.00	6,513.69	6,627.20	6,513.69	24.83	24.42	-132.57	-980.62	333.66	901.94	854.80	47.13	19.135		
6,800.00	6,613.69	6,727.20	6,613.69	24.96	24.53	-132.57	-980.62	333.66	901.94	854.56	47.38	19.038		
6,900.00	6,713.69	6,827.20	6,713.69	25.08	24.63	-132.57	-980.62	333.66	901.94	854.32	47.62	18.940		
7,000.00	6,813.69	6,927.20	6,813.69	25.21	24.74	-132.57	-980.62	333.66	901.94	854.07	47.87	18.842		
7,100.00	6,913.69	7,027.20	6,913.69	25.34	24.85	-132.57	-980.62	333.66	901.94	853.82	48.12	18.743		
7,200.00	7,013.69	7,127.20	7,013.69	25.47	24.97	-132.57	-980.62	333.66	901.94	853.57	48.37	18.645		
7,300.00	7,113.69	7,227.20	7,113.69	25.60	25.08	-132.57	-980.62	333.66	901.94	853.31	48.63	18.547		
7,400.00	7,213.69	7,327.20	7,213.69	25.73	25.20	-132.57	-980.62	333.66	901.94	853.05	48.89	18.448		
7,500.00	7,313.69	7,427.20	7,313.69	25.86	25.31	-132.57	-980.62	333.66	901.94	852.79	49.15	18.350		
7,600.00	7,413.69	7,527.20	7,413.69	26.00	25.43	-132.57	-980.62	333.66	901.94	852.52	49.42	18.251		
7,700.00	7,513.69	7,627.20	7,513.69	26.13	25.55	-132.57	-980.62	333.66	901.94	852.25	49.69	18.153		
7,800.00	7,613.69	7,727.20	7,613.69	26.27	25.67	-132.57	-980.62	333.66	901.94	851.98	49.96	18.055		
7,900.00	7,713.69	7,827.20	7,713.69	26.41	25.79	-132.57	-980.62	333.66	901.94	851.71	50.23	17.957		
8,000.00	7,813.69	7,927.20	7,813.69	26.55	25.92	-132.57	-980.62	333.66	901.94	851.44	50.50	17.859		
8,100.00	7,913.69	8,027.20	7,913.69	26.69	26.04	-132.57	-980.62	333.66	901.94	851.16	50.78	17.761		
8,200.00	8,013.69	8,127.20	8,013.69	26.83	26.17	-132.57	-980.62	333.66	901.94	850.88	51.06	17.664		
8,300.00	8,113.69	8,227.20	8,113.69	26.97	26.30	-132.57	-980.62	333.66	901.94	850.59	51.34	17.566		
8,400.00	8,213.69	8,327.20	8,213.69	27.11	26.42	-132.57	-980.62	333.66	901.94	850.31	51.63	17.469		
8,463.09	8,276.78	8,390.29	8,276.78	27.21	26.51	-132.57	-980.62	333.66	901.94	850.13	51.81	17.408		
8,500.00	8,313.69	8,417.51	8,304.00	27.26	26.54	-132.57	-980.62	333.66	901.99	850.09	51.90	17.378		
8,600.00	8,413.69	8,417.51	8,304.00	27.40	26.54	-132.57	-980.62	333.66	908.58	856.53	52.06	17.454		
8,700.00	8,513.69	8,417.51	8,304.00	27.55	26.54	-132.57	-980.62	333.66	925.99	873.78	52.21	17.736		
8,750.31	8,564.00	8,417.51	8,304.00	27.63	26.54	-132.57	-980.62	333.66	938.67	886.38	52.29	17.952		

Company:	US ROCKIES REGION PLANNING	Local Co-ordinate Reference:	Well P_NRC 14-9
Project:	COLORADO NORTHERN ZONE - 83	TVD Reference:	WELL @ 5067.00ft (Original Well Elev)
Reference Site:	WELD_NRC 19-9 PAD	MD Reference:	WELL @ 5067.00ft (Original Well Elev)
Site Error:	0.00ft	North Reference:	True
Reference Well:	P_NRC 14-9	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00ft	Output errors are at	2.00 sigma
Reference Wellbore	P_NRC 14-9	Database:	EDM 2003.21 Single User Db
Reference Design:	PLAN #1 1-10-10 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 Tooface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor			
0.00	0.00	0.00	0.00	0.00	0.00	-90.00	0.00	-47.86	47.86						
100.00	100.00	100.00	100.00	0.10	0.10	-90.00	0.00	-47.86	47.86	47.67	0.19	250.527			
200.00	200.00	200.00	200.00	0.32	0.32	-90.00	0.00	-47.86	47.86	47.22	0.64	74.719			
300.00	300.00	300.00	300.00	0.55	0.55	-90.00	0.00	-47.86	47.86	46.77	1.09	43.907			
400.00	400.00	400.00	400.00	0.77	0.77	-90.00	0.00	-47.86	47.86	46.32	1.54	31.087			
500.00	500.00	500.00	500.00	0.99	0.99	-90.00	0.00	-47.86	47.86	45.87	1.99	24.062			
600.00	600.00	600.00	600.00	1.22	1.22	-90.00	0.00	-47.86	47.86	45.42	2.44	19.627			
700.00	700.00	700.00	700.00	1.44	1.44	-90.00	0.00	-47.86	47.86	44.98	2.89	16.572			
800.00	800.00	800.00	800.00	1.67	1.67	-90.00	0.00	-47.86	47.86	44.53	3.34	14.340			
900.00	900.00	900.00	900.00	1.89	1.89	-90.00	0.00	-47.86	47.86	44.08	3.79	12.638			
1,000.00	1,000.00	1,000.00	1,000.00	2.12	2.12	-90.00	0.00	-47.86	47.86	43.63	4.24	11.297			
1,085.00	1,085.00	1,085.00	1,085.00	2.31	2.31	-90.00	0.00	-47.86	47.86	43.24	4.62	10.362	CC		
1,100.00	1,100.00	1,100.22	1,100.22	2.34	2.34	159.62	-0.03	-47.83	47.87	43.19	4.68	10.227			
1,200.00	1,199.97	1,201.65	1,201.62	2.53	2.53	159.10	-1.26	-45.85	48.04	42.99	5.05	9.510	ES		
1,300.00	1,299.80	1,303.07	1,302.86	2.73	2.73	157.79	-4.41	-40.83	48.51	43.08	5.43	8.930			
1,400.00	1,399.37	1,404.48	1,403.81	2.95	2.94	155.74	-9.45	-32.78	49.32	43.49	5.83	8.464			
1,500.00	1,498.55	1,505.85	1,504.34	3.19	3.18	153.04	-16.37	-21.71	50.52	44.28	6.24	8.092			
1,600.00	1,597.23	1,607.18	1,604.29	3.46	3.46	149.79	-25.18	-7.63	52.20	45.51	6.70	7.793			
1,700.00	1,695.29	1,708.47	1,703.56	3.77	3.78	146.13	-35.86	9.42	54.45	47.23	7.22	7.545			
1,800.00	1,792.60	1,809.69	1,801.99	4.13	4.15	142.22	-48.38	29.42	57.34	49.51	7.83	7.326			
1,900.00	1,889.05	1,910.86	1,899.47	4.56	4.59	138.20	-62.72	52.34	60.94	52.38	8.56	7.119			
2,000.00	1,984.52	2,011.95	1,995.86	5.05	5.09	134.22	-78.87	78.15	65.30	55.86	9.44	6.916			
2,100.00	2,078.90	2,112.95	2,091.04	5.61	5.66	130.39	-96.80	106.80	70.47	59.97	10.49	6.714			
2,200.00	2,172.06	2,213.87	2,184.89	6.24	6.31	126.79	-116.49	138.24	76.44	64.71	11.73	6.518			
2,245.42	2,213.95	2,259.68	2,227.04	6.55	6.64	125.24	-126.00	153.44	79.42	67.07	12.35	6.430			
2,300.00	2,264.11	2,314.69	2,277.27	6.95	7.04	123.21	-137.89	172.43	82.94	69.78	13.16	6.302			
2,400.00	2,356.02	2,414.32	2,367.88	7.68	7.81	119.40	-159.87	207.56	89.31	74.57	14.74	6.058			
2,500.00	2,447.93	2,513.95	2,458.48	8.43	8.60	116.11	-181.86	242.69	96.03	79.65	16.37	5.864			
2,600.00	2,539.83	2,613.58	2,549.08	9.20	9.41	113.25	-203.84	277.82	103.02	84.98	18.03	5.712			
2,700.00	2,631.74	2,713.21	2,639.69	9.98	10.23	110.76	-225.83	312.95	110.23	90.52	19.71	5.592			
2,800.00	2,723.65	2,812.85	2,730.29	10.77	11.05	108.58	-247.82	348.07	117.63	96.23	21.40	5.497			
2,900.00	2,815.56	2,912.48	2,820.90	11.56	11.89	106.66	-269.80	383.20	125.17	102.08	23.09	5.421			
3,000.00	2,907.46	3,012.11	2,911.50	12.36	12.73	104.96	-291.79	418.33	132.84	108.06	24.78	5.360			
3,100.00	2,999.37	3,111.74	3,002.11	13.16	13.57	103.44	-313.78	453.46	140.62	114.14	26.47	5.311			
3,200.00	3,091.28	3,211.38	3,092.71	13.97	14.42	102.09	-335.76	488.59	148.48	120.31	28.17	5.272			
3,300.00	3,183.19	3,311.01	3,183.32	14.78	15.28	100.87	-357.75	523.72	156.41	126.56	29.85	5.239			
3,400.00	3,275.10	3,410.64	3,273.92	15.59	16.13	99.77	-379.74	558.84	164.41	132.87	31.54	5.213			
3,500.00	3,367.00	3,510.27	3,364.53	16.41	16.99	98.77	-401.72	593.97	172.47	139.24	33.23	5.191			
3,600.00	3,458.91	3,609.90	3,455.13	17.23	17.85	97.86	-423.71	629.10	180.57	145.66	34.91	5.173			
3,700.00	3,550.82	3,709.54	3,545.73	18.05	18.71	97.03	-445.69	664.23	188.71	152.12	36.59	5.158			
3,769.89	3,615.05	3,779.17	3,609.06	18.62	19.31	96.49	-461.06	688.78	194.42	156.66	37.76	5.149			
3,800.00	3,642.79	3,809.17	3,636.34	18.84	19.57	96.27	-467.68	699.36	196.87	158.63	38.24	5.149	SF		
3,900.00	3,735.76	3,908.71	3,726.86	19.45	20.44	94.95	-489.65	734.45	204.83	165.13	39.70	5.160			
4,000.00	3,829.95	4,008.04	3,817.19	20.02	21.30	92.81	-511.57	769.47	212.73	171.65	41.07	5.179			
4,100.00	3,925.27	4,107.03	3,907.21	20.53	22.16	89.95	-533.41	804.38	220.93	178.63	42.30	5.223			
4,200.00	4,021.57	4,205.57	3,996.83	21.00	23.02	86.49	-555.16	839.12	229.90	186.58	43.32	5.307			
4,300.00	4,118.76	4,303.54	4,085.91	21.42	23.87	82.54	-576.78	873.66	240.18	196.11	44.08	5.449			
4,400.00	4,216.71	4,400.81	4,174.37	21.79	24.72	78.24	-598.24	907.96	252.34	207.83	44.52	5.669			
4,500.00	4,315.31	4,497.26	4,262.09	22.10	25.56	73.75	-619.53	941.97	266.94	222.31	44.62	5.982			
4,600.00	4,414.42	4,592.79	4,348.96	22.37	26.40	69.20	-640.61	975.65	284.46	240.05	44.41	6.406			
4,700.00	4,513.94	4,687.27	4,434.87	22.59	27.22	64.74	-661.46	1,008.96	305.32	261.41	43.91	6.953			
4,800.00	4,613.73	4,780.59	4,519.74	22.76	28.04	60.48	-682.05	1,041.86	329.80	286.61	43.19	7.636			

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_NRC 14-9
Project:	COLORADO NORTHERN ZONE - 83	TVD Reference:	WELL @ 5067.00ft (Original Well Elev)
Reference Site:	WELD_NRC 19-9 PAD	MD Reference:	WELL @ 5067.00ft (Original Well Elev)
Site Error:	0.00ft	North Reference:	True
Reference Well:	P_NRC 14-9	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00ft	Output errors are at	2.00 sigma
Reference Wellbore	P_NRC 14-9	Database:	EDM 2003.21 Single User Db
Reference Design:	PLAN #1 1-10-10 RHS	Offset TVD Reference:	Offset Datum

Offset Design												WELD_NRC 19-9 PAD - P_NRC 36-9 - P_NRC 36-9 - PLAN #1 1-10-10 RHS	Offset Site Error:	0.00 ft
Survey Program: 0-MWD													Offset Well Error:	0.00 ft
Reference		Offset		Semi Major Axis			Distance					Warning		
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Tooface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)		Separation Factor	
4,900.00	4,713.69	4,872.63	4,603.44	22.88	28.84	56.48	-702.36	1,074.31	358.09	315.78	42.31	8.463		
4,930.31	4,744.00	4,900.25	4,628.56	22.91	29.08	165.70	-708.46	1,084.05	367.44	325.41	42.03	8.743		
5,000.00	4,813.69	4,963.63	4,686.19	22.97	29.64	162.87	-722.44	1,106.40	389.80	348.52	41.28	9.444		
5,100.00	4,913.69	5,054.57	4,768.89	23.07	30.43	159.30	-742.51	1,138.46	423.28	382.97	40.32	10.499		
5,200.00	5,013.69	5,145.51	4,851.59	23.16	31.23	156.24	-762.58	1,170.52	458.10	418.60	39.51	11.596		
5,300.00	5,113.69	5,236.45	4,934.29	23.26	32.03	153.59	-782.65	1,202.59	493.97	455.13	38.84	12.719		
5,400.00	5,213.69	5,327.39	5,016.99	23.36	32.82	151.29	-802.71	1,234.65	530.68	492.37	38.30	13.855		
5,500.00	5,313.69	5,418.32	5,099.69	23.47	33.62	149.28	-822.78	1,266.71	568.06	530.17	37.89	14.994		
5,600.00	5,413.69	5,509.26	5,182.39	23.57	34.42	147.50	-842.85	1,298.78	605.99	568.41	37.57	16.128		
5,700.00	5,513.69	5,624.11	5,287.76	23.68	35.26	145.63	-867.08	1,337.48	642.68	605.42	37.26	17.250		
5,800.00	5,613.69	5,742.86	5,398.54	23.79	35.97	144.11	-889.75	1,373.71	676.19	639.12	37.07	18.240		
5,900.00	5,713.69	5,865.28	5,514.51	23.90	36.62	142.86	-910.55	1,406.95	706.22	669.21	37.01	19.079		
6,000.00	5,813.69	5,991.09	5,635.30	24.01	37.22	141.85	-929.18	1,436.70	732.52	695.46	37.06	19.766		
6,100.00	5,913.69	6,119.91	5,760.47	24.12	37.74	141.06	-945.31	1,462.47	754.86	717.68	37.18	20.303		
6,200.00	6,013.69	6,251.32	5,889.44	24.24	38.18	140.44	-958.67	1,483.83	773.05	735.69	37.36	20.690		
6,300.00	6,113.69	6,384.83	6,021.50	24.35	38.54	139.99	-969.02	1,500.36	786.96	749.36	37.60	20.931		
6,400.00	6,213.69	6,519.90	6,155.89	24.47	38.81	139.69	-976.16	1,511.77	796.45	758.58	37.87	21.032		
6,500.00	6,313.69	6,655.95	6,291.74	24.59	38.99	139.53	-979.94	1,517.82	801.45	763.28	38.17	20.997		
6,600.00	6,413.69	6,777.91	6,413.69	24.71	39.09	139.51	-980.57	1,518.82	802.28	763.79	38.48	20.847		
6,700.00	6,513.69	6,877.91	6,513.69	24.83	39.17	139.51	-980.57	1,518.82	802.28	763.50	38.78	20.689		
6,800.00	6,613.69	6,977.91	6,613.69	24.96	39.24	139.51	-980.57	1,518.82	802.28	763.20	39.08	20.531		
6,900.00	6,713.69	7,077.91	6,713.69	25.08	39.32	139.51	-980.57	1,518.82	802.28	762.90	39.38	20.374		
7,000.00	6,813.69	7,177.91	6,813.69	25.21	39.39	139.51	-980.57	1,518.82	802.28	762.60	39.68	20.218		
7,100.00	6,913.69	7,277.91	6,913.69	25.34	39.47	139.51	-980.57	1,518.82	802.28	762.29	39.99	20.063		
7,200.00	7,013.69	7,377.91	7,013.69	25.47	39.55	139.51	-980.57	1,518.82	802.28	761.98	40.30	19.910		
7,300.00	7,113.69	7,477.91	7,113.69	25.60	39.63	139.51	-980.57	1,518.82	802.28	761.67	40.61	19.757		
7,400.00	7,213.69	7,577.91	7,213.69	25.73	39.71	139.51	-980.57	1,518.82	802.28	761.36	40.92	19.605		
7,500.00	7,313.69	7,677.91	7,313.69	25.86	39.80	139.51	-980.57	1,518.82	802.28	761.04	41.24	19.455		
7,600.00	7,413.69	7,777.91	7,413.69	26.00	39.88	139.51	-980.57	1,518.82	802.28	760.72	41.56	19.306		
7,700.00	7,513.69	7,877.91	7,513.69	26.13	39.96	139.51	-980.57	1,518.82	802.28	760.40	41.88	19.158		
7,800.00	7,613.69	7,977.91	7,613.69	26.27	40.05	139.51	-980.57	1,518.82	802.28	760.08	42.20	19.011		
7,900.00	7,713.69	8,077.91	7,713.69	26.41	40.14	139.51	-980.57	1,518.82	802.28	759.75	42.53	18.865		
8,000.00	7,813.69	8,177.91	7,813.69	26.55	40.23	139.51	-980.57	1,518.82	802.28	759.42	42.85	18.721		
8,100.00	7,913.69	8,277.91	7,913.69	26.69	40.31	139.51	-980.57	1,518.82	802.28	759.09	43.18	18.578		
8,200.00	8,013.69	8,377.91	8,013.69	26.83	40.40	139.51	-980.57	1,518.82	802.28	758.76	43.52	18.436		
8,300.00	8,113.69	8,477.91	8,113.69	26.97	40.50	139.51	-980.57	1,518.82	802.28	758.43	43.85	18.296		
8,400.00	8,213.69	8,577.91	8,213.69	27.11	40.59	139.51	-980.57	1,518.82	802.28	758.09	44.19	18.156		
8,460.93	8,274.62	8,638.84	8,274.62	27.20	40.64	139.51	-980.57	1,518.82	802.28	757.88	44.39	18.072		
8,500.00	8,313.69	8,663.22	8,299.00	27.26	40.67	139.51	-980.57	1,518.82	802.41	757.91	44.50	18.031		
8,600.00	8,413.69	8,663.22	8,299.00	27.40	40.67	139.51	-980.57	1,518.82	810.43	765.75	44.69	18.136		
8,700.00	8,513.69	8,663.22	8,299.00	27.55	40.67	139.51	-980.57	1,518.82	830.51	785.64	44.87	18.509		
8,750.31	8,564.00	8,663.22	8,299.00	27.63	40.67	139.51	-980.57	1,518.82	844.91	799.95	44.96	18.791		

Company:	US ROCKIES REGION PLANNING	Local Co-ordinate Reference:	Well P_NRC 14-9
Project:	COLORADO NORTHERN ZONE - 83	TVD Reference:	WELL @ 5067.00ft (Original Well Elev)
Reference Site:	WELD_NRC 19-9 PAD	MD Reference:	WELL @ 5067.00ft (Original Well Elev)
Site Error:	0.00ft	North Reference:	True
Reference Well:	P_NRC 14-9	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00ft	Output errors are at	2.00 sigma
Reference Wellbore	P_NRC 14-9	Database:	EDM 2003.21 Single User Db
Reference Design:	PLAN #1 1-10-10 RHS	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.00 ft	
Survey Program: 0-UNKNOWN												Offset Well Error:		0.00 ft
Reference				Offset			Semi Major Axis			Distance				Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Tooface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
0.00	0.00	0.00	0.00	0.00	0.00	-179.04	-49.91	-0.84	53.41					
100.00	100.00	81.00	81.00	0.10	1.62	-179.04	-49.91	-0.84	49.91	48.20	1.72	29.094		
200.00	200.00	181.00	181.00	0.32	5.24	-179.04	-49.91	-0.84	49.91	44.35	5.56	8.977		
300.00	300.00	281.00	281.00	0.55	9.24	-179.04	-49.91	-0.84	49.91	40.13	9.79	5.101		
400.00	400.00	381.00	381.00	0.77	13.24	-179.04	-49.91	-0.84	49.91	35.90	14.01	3.563		
500.00	500.00	481.00	481.00	0.99	17.24	-179.04	-49.91	-0.84	49.91	31.68	18.23	2.737		
600.00	600.00	581.00	581.00	1.22	21.24	-179.04	-49.91	-0.84	49.91	27.45	22.46	2.222		
700.00	700.00	681.00	681.00	1.44	25.24	-179.04	-49.91	-0.84	49.91	23.23	26.68	1.871		
800.00	800.00	781.00	781.00	1.67	29.24	-179.04	-49.91	-0.84	49.91	19.00	30.91	1.615		
900.00	900.00	881.00	881.00	1.89	33.24	-179.04	-49.91	-0.84	49.91	14.78	35.13	1.421 Level 3		
1,000.00	1,000.00	981.00	981.00	2.12	37.24	-179.04	-49.91	-0.84	49.91	10.55	39.36	1.268 Level 3		
1,085.00	1,085.00	1,066.00	1,066.00	2.31	40.64	-179.04	-49.91	-0.84	49.91	6.96	42.95	1.162 Level 2		
1,100.00	1,100.00	1,081.00	1,081.00	2.34	41.24	70.64	-49.91	-0.84	49.90	6.32	43.58	1.145 Level 2		
1,200.00	1,199.97	1,180.97	1,180.97	2.53	45.24	73.15	-49.91	-0.84	49.19	1.43	47.77	1.030 Level 2		
1,300.00	1,299.80	1,280.80	1,280.80	2.73	49.23	79.77	-49.91	-0.84	47.84	-4.12	51.96	0.921 Level 1		
1,393.38	1,392.78	1,373.78	1,373.78	2.93	52.95	90.00	-49.91	-0.84	47.08	-8.81	55.89	0.842 Level 1, CC		
1,400.00	1,399.37	1,380.37	1,380.37	2.95	53.21	90.87	-49.91	-0.84	47.08	-9.09	56.17	0.838 Level 1		
1,500.00	1,498.55	1,479.55	1,479.55	3.19	57.18	105.76	-49.91	-0.84	48.96	-11.39	60.34	0.811 Level 1, ES, SF		
1,600.00	1,597.23	1,578.23	1,578.23	3.46	61.13	121.73	-49.91	-0.84	55.60	-8.72	64.32	0.864 Level 1		
1,700.00	1,695.29	1,676.29	1,676.29	3.77	65.05	135.58	-49.91	-0.84	68.08	0.07	68.01	1.001 Level 2		
1,800.00	1,792.60	1,773.60	1,773.60	4.13	68.94	146.06	-49.91	-0.84	86.18	14.74	71.44	1.206 Level 2		
1,900.00	1,889.05	1,870.05	1,870.05	4.56	72.80	153.54	-49.91	-0.84	109.23	34.57	74.66	1.463 Level 3		
2,000.00	1,984.52	1,965.52	1,965.52	5.05	76.62	158.87	-49.91	-0.84	136.67	58.97	77.70	1.759		
2,100.00	2,078.90	2,059.90	2,059.90	5.61	80.40	162.72	-49.91	-0.84	168.08	87.54	80.54	2.087		
2,200.00	2,172.06	2,153.06	2,153.06	6.24	84.12	165.56	-49.91	-0.84	203.21	120.02	83.19	2.443		
2,245.42	2,213.95	2,194.95	2,194.95	6.55	85.80	166.61	-49.91	-0.84	220.33	136.02	84.32	2.613		
2,300.00	2,264.11	2,245.11	2,245.11	6.95	87.80	167.79	-49.91	-0.84	241.39	155.13	86.26	2.798		
2,400.00	2,356.02	2,337.02	2,337.02	7.68	91.48	169.49	-49.91	-0.84	280.15	190.28	89.86	3.117		
2,500.00	2,447.93	2,428.93	2,428.93	8.43	95.16	170.78	-49.91	-0.84	319.06	225.56	93.50	3.412		
2,600.00	2,539.83	2,520.83	2,520.83	9.20	98.83	171.79	-49.91	-0.84	358.08	260.93	97.15	3.686		
2,700.00	2,631.74	2,612.74	2,612.74	9.98	102.51	172.60	-49.91	-0.84	397.18	296.36	100.82	3.940		
2,800.00	2,723.65	2,704.65	2,704.65	10.77	106.19	173.27	-49.91	-0.84	436.34	331.84	104.50	4.176		
2,900.00	2,815.56	2,796.56	2,796.56	11.56	109.86	173.82	-49.91	-0.84	475.54	367.35	108.18	4.396		
3,000.00	2,907.46	2,888.46	2,888.46	12.36	113.54	174.29	-49.91	-0.84	514.76	402.89	111.88	4.601		
3,100.00	2,999.37	2,980.37	2,980.37	13.16	117.21	174.70	-49.91	-0.84	554.02	438.44	115.58	4.794		
3,200.00	3,091.28	3,072.28	3,072.28	13.97	120.89	175.05	-49.91	-0.84	593.29	474.01	119.28	4.974		
3,300.00	3,183.19	3,164.19	3,164.19	14.78	124.57	175.36	-49.91	-0.84	632.58	509.60	122.99	5.144		
3,400.00	3,275.10	3,256.10	3,256.10	15.59	128.24	175.63	-49.91	-0.84	671.89	545.19	126.70	5.303		
3,500.00	3,367.00	3,348.00	3,348.00	16.41	131.92	175.87	-49.91	-0.84	711.20	580.80	130.41	5.454		
3,600.00	3,458.91	3,439.91	3,439.91	17.23	135.60	176.09	-49.91	-0.84	750.53	616.41	134.12	5.596		
3,700.00	3,550.82	3,531.82	3,531.82	18.05	139.27	176.28	-49.91	-0.84	789.86	652.03	137.84	5.730		
3,769.89	3,615.05	3,596.05	3,596.05	18.62	141.84	176.41	-49.91	-0.84	817.36	676.92	140.44	5.820		
3,800.00	3,642.79	3,623.79	3,623.79	18.84	142.95	176.47	-49.91	-0.84	829.06	686.93	142.13	5.833		
3,900.00	3,735.76	3,716.76	3,716.76	19.45	146.67	176.67	-49.91	-0.84	865.82	718.13	147.70	5.862		
4,000.00	3,829.95	3,810.95	3,810.95	20.02	150.44	176.83	-49.91	-0.84	899.33	746.12	153.21	5.870		
4,100.00	3,925.27	3,906.27	3,906.27	20.53	154.25	176.97	-49.91	-0.84	929.54	770.88	158.66	5.859		
4,200.00	4,021.57	4,002.57	4,002.57	21.00	158.10	177.08	-49.91	-0.84	956.40	792.34	164.06	5.829		
4,300.00	4,118.76	4,099.76	4,099.76	21.42	161.99	177.18	-49.91	-0.84	979.90	810.52	169.38	5.785		
4,400.00	4,216.71	4,197.71	4,197.71	21.79	165.91	177.25	-49.91	-0.84	999.99	825.42	174.57	5.728		
4,500.00	4,315.31	4,296.31	4,296.31	22.10	169.85	177.32	-49.91	-0.84	1,016.66	837.05	179.62	5.660		
4,600.00	4,414.42	4,395.42	4,395.42	22.37	173.82	177.36	-49.91	-0.84	1,029.88	845.39	184.49	5.582		
4,700.00	4,513.94	4,494.94	4,494.94	22.59	177.80	177.40	-49.91	-0.84	1,039.64	850.47	189.17	5.496		

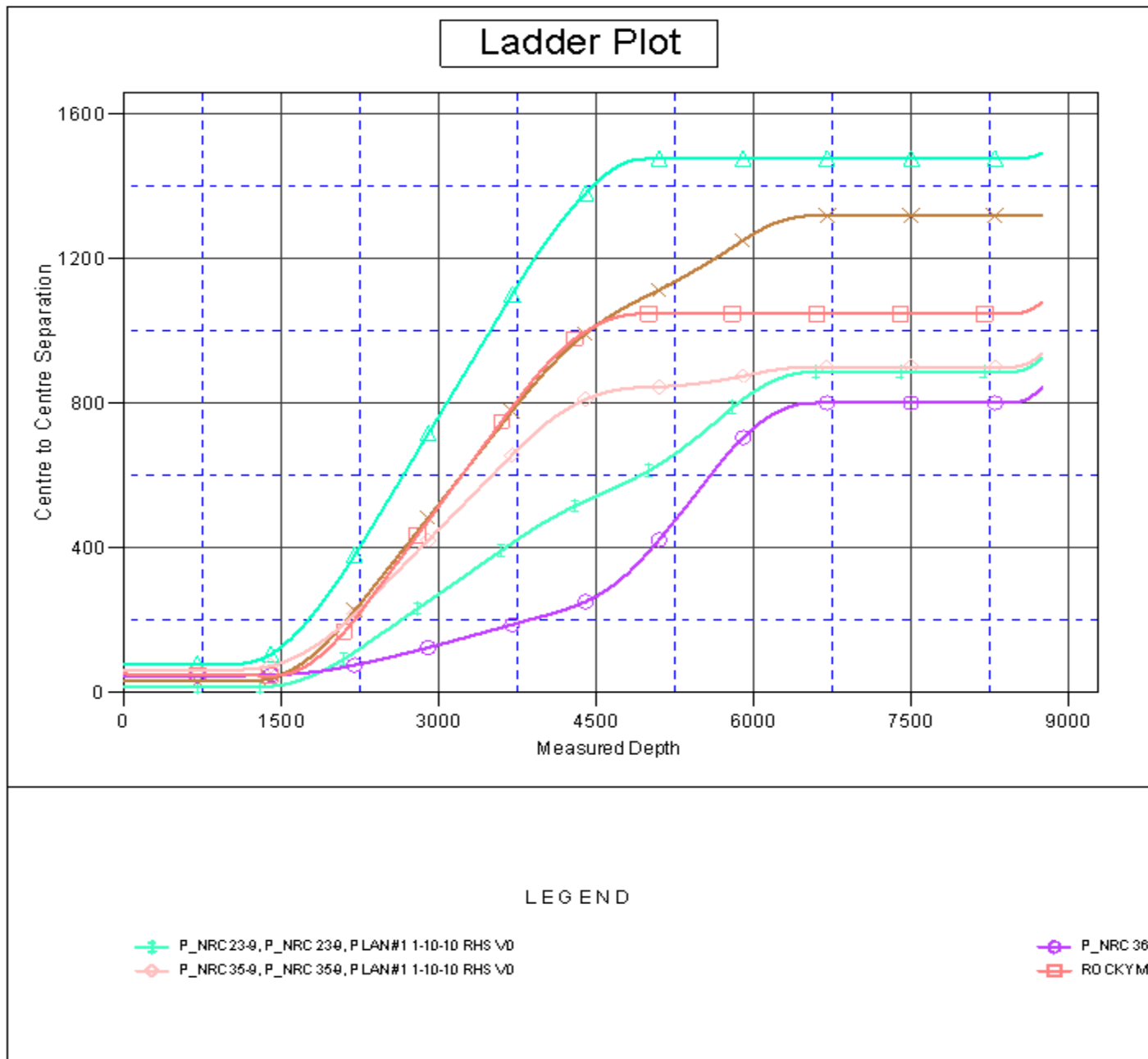
CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Company:	US ROCKIES REGION PLANNING	Local Co-ordinate Reference:	Well P_NRC 14-9
Project:	COLORADO NORTHERN ZONE - 83	TVD Reference:	WELL @ 5067.00ft (Original Well Elev)
Reference Site:	WELD_NRC 19-9 PAD	MD Reference:	WELL @ 5067.00ft (Original Well Elev)
Site Error:	0.00ft	North Reference:	True
Reference Well:	P_NRC 14-9	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00ft	Output errors are at	2.00 sigma
Reference Wellbore	P_NRC 14-9	Database:	EDM 2003.21 Single User Db
Reference Design:	PLAN #1 1-10-10 RHS	Offset TVD Reference:	Offset Datum

Offset Design		WELD_NRC 19-9 PAD - ROCKY MTN FUEL CO. "F" #2 EXISTING - ROCKY MTN FUEL CO. "F" #2 E											Offset Site Error:	0.00 ft
Survey Program:		0-UNKNOWN											Offset Well Error:	0.00 ft
Reference		Offset		Semi Major Axis			Distance						Warning	
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Tooface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
4,800.00	4,613.73	4,594.73	4,594.73	22.76	181.79	177.42	-49.91	-0.84	1,045.93	852.28	193.64	5.401		
4,900.00	4,713.69	4,694.69	4,694.69	22.88	185.79	177.43	-49.91	-0.84	1,048.73	850.84	197.89	5.300		
4,930.31	4,744.00	4,725.00	4,725.00	22.91	187.00	-72.21	-49.91	-0.84	1,048.89	849.76	199.12	5.267		
5,000.00	4,813.69	4,794.69	4,794.69	22.97	189.79	-72.21	-49.91	-0.84	1,048.89	846.86	202.03	5.192		
5,100.00	4,913.69	4,894.69	4,894.69	23.07	193.79	-72.21	-49.91	-0.84	1,048.89	842.69	206.19	5.087		
5,200.00	5,013.69	4,994.69	4,994.69	23.16	197.79	-72.21	-49.91	-0.84	1,048.89	838.52	210.36	4.986		
5,300.00	5,113.69	5,094.69	5,094.69	23.26	201.79	-72.21	-49.91	-0.84	1,048.89	834.35	214.54	4.889		
5,400.00	5,213.69	5,194.69	5,194.69	23.36	205.79	-72.21	-49.91	-0.84	1,048.89	830.18	218.71	4.796		
5,500.00	5,313.69	5,294.69	5,294.69	23.47	209.79	-72.21	-49.91	-0.84	1,048.89	826.00	222.88	4.706		
5,600.00	5,413.69	5,394.69	5,394.69	23.57	213.79	-72.21	-49.91	-0.84	1,048.89	821.83	227.06	4.619		
5,700.00	5,513.69	5,494.69	5,494.69	23.68	217.79	-72.21	-49.91	-0.84	1,048.89	817.65	231.24	4.536		
5,800.00	5,613.69	5,594.69	5,594.69	23.79	221.79	-72.21	-49.91	-0.84	1,048.89	813.47	235.42	4.455		
5,900.00	5,713.69	5,694.69	5,694.69	23.90	225.79	-72.21	-49.91	-0.84	1,048.89	809.29	239.60	4.378		
6,000.00	5,813.69	5,794.69	5,794.69	24.01	229.79	-72.21	-49.91	-0.84	1,048.89	805.11	243.78	4.303		
6,100.00	5,913.69	5,894.69	5,894.69	24.12	233.79	-72.21	-49.91	-0.84	1,048.89	800.92	247.96	4.230		
6,200.00	6,013.69	5,994.69	5,994.69	24.24	237.79	-72.21	-49.91	-0.84	1,048.89	796.74	252.15	4.160		
6,300.00	6,113.69	6,094.69	6,094.69	24.35	241.79	-72.21	-49.91	-0.84	1,048.89	792.55	256.33	4.092		
6,400.00	6,213.69	6,194.69	6,194.69	24.47	245.79	-72.21	-49.91	-0.84	1,048.89	788.37	260.52	4.026		
6,500.00	6,313.69	6,294.69	6,294.69	24.59	249.79	-72.21	-49.91	-0.84	1,048.89	784.18	264.70	3.962		
6,600.00	6,413.69	6,394.69	6,394.69	24.71	253.79	-72.21	-49.91	-0.84	1,048.89	779.99	268.89	3.901		
6,700.00	6,513.69	6,494.69	6,494.69	24.83	257.79	-72.21	-49.91	-0.84	1,048.89	775.80	273.08	3.841		
6,800.00	6,613.69	6,594.69	6,594.69	24.96	261.79	-72.21	-49.91	-0.84	1,048.89	771.61	277.27	3.783		
6,900.00	6,713.69	6,694.69	6,694.69	25.08	265.79	-72.21	-49.91	-0.84	1,048.89	767.42	281.46	3.727		
7,000.00	6,813.69	6,794.69	6,794.69	25.21	269.79	-72.21	-49.91	-0.84	1,048.89	763.23	285.66	3.672		
7,100.00	6,913.69	6,894.69	6,894.69	25.34	273.79	-72.21	-49.91	-0.84	1,048.89	759.04	289.85	3.619		
7,200.00	7,013.69	6,994.69	6,994.69	25.47	277.79	-72.21	-49.91	-0.84	1,048.89	754.84	294.04	3.567		
7,300.00	7,113.69	7,094.69	7,094.69	25.60	281.79	-72.21	-49.91	-0.84	1,048.89	750.65	298.24	3.517		
7,400.00	7,213.69	7,194.69	7,194.69	25.73	285.79	-72.21	-49.91	-0.84	1,048.89	746.45	302.43	3.468		
7,500.00	7,313.69	7,294.69	7,294.69	25.86	289.79	-72.21	-49.91	-0.84	1,048.89	742.26	306.63	3.421		
7,600.00	7,413.69	7,394.69	7,394.69	26.00	293.79	-72.21	-49.91	-0.84	1,048.89	738.06	310.83	3.375		
7,700.00	7,513.69	7,494.69	7,494.69	26.13	297.79	-72.21	-49.91	-0.84	1,048.89	733.86	315.02	3.330		
7,800.00	7,613.69	7,594.69	7,594.69	26.27	301.79	-72.21	-49.91	-0.84	1,048.89	729.66	319.22	3.286		
7,900.00	7,713.69	7,694.69	7,694.69	26.41	305.79	-72.21	-49.91	-0.84	1,048.89	725.47	323.42	3.243		
8,000.00	7,813.69	7,794.69	7,794.69	26.55	309.79	-72.21	-49.91	-0.84	1,048.89	721.27	327.62	3.202		
8,100.00	7,913.69	7,894.69	7,894.69	26.69	313.79	-72.21	-49.91	-0.84	1,048.89	717.07	331.82	3.161		
8,200.00	8,013.69	7,994.69	7,994.69	26.83	317.79	-72.21	-49.91	-0.84	1,048.89	712.87	336.02	3.121		
8,300.00	8,113.69	8,094.69	8,094.69	26.97	321.79	-72.21	-49.91	-0.84	1,048.89	708.66	340.22	3.083		
8,400.00	8,213.69	8,194.69	8,194.69	27.11	325.79	-72.21	-49.91	-0.84	1,048.89	704.46	344.42	3.045		
8,463.09	8,276.78	8,257.78	8,257.78	27.21	328.31	-72.21	-49.91	-0.84	1,048.89	701.81	347.07	3.022		
8,500.00	8,313.69	8,285.00	8,285.00	27.26	329.40	-72.21	-49.91	-0.84	1,048.93	700.69	348.24	3.012		
8,600.00	8,413.69	8,285.00	8,285.00	27.40	329.40	-72.21	-49.91	-0.84	1,054.61	706.17	348.44	3.027		
8,700.00	8,513.69	8,285.00	8,285.00	27.55	329.40	-72.21	-49.91	-0.84	1,069.64	721.00	348.64	3.068		
8,750.31	8,564.00	8,285.00	8,285.00	27.63	329.40	-72.21	-49.91	-0.84	1,080.63	731.88	348.75	3.099		

Company:	US ROCKIES REGION PLANNING	Local Co-ordinate Reference:	Well P_NRC 14-9
Project:	COLORADO NORTHERN ZONE - 83	TVD Reference:	WELL @ 5067.00ft (Original Well Elev)
Reference Site:	WELD_NRC 19-9 PAD	MD Reference:	WELL @ 5067.00ft (Original Well Elev)
Site Error:	0.00ft	North Reference:	True
Reference Well:	P_NRC 14-9	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00ft	Output errors are at	2.00 sigma
Reference Wellbore	P_NRC 14-9	Database:	EDM 2003.21 Single User Db
Reference Design:	PLAN #1 1-10-10 RHS	Offset TVD Reference:	Offset Datum

Reference Depths are relative to WELL @ 5067.00ft (Original Well Elev) Coordinates are relative to: P_NRC 14-9
 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: 0.39°



Company:	US ROCKIES REGION PLANNING	Local Co-ordinate Reference:	Well P_NRC 14-9
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Reference Design:	PLAN #1 1-10-10 RHS	Offset TVD Reference:	Offset Datum

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