



US ROCKIES REGION PLANNING

COLORADO NORTHERN ZONE - 83

WELD_NRC 17-9 PAD

P_NRC 24-9

P_NRC 24-9

Plan: PLAN #1 1-5-10 RHS

Standard Planning Report

05 January, 2010





Azimuths to True North
Magnetic North: 9.06°

Magnetic Field
Strength: 53112.6nT
Dip Angle: 66.82°
Date: 1/5/2010
Model: IGRF200510

WELL DETAILS: P_NRC 24-9

+N/-S	+E/-W	Northing	Ground Level:	Easting	Latitude	Longitude	Slot
0.00	0.00	1268177.86	4997.00	3170044.82	40° 4' 4.580 N	104° 53' 32.712 W	

FORMATION TOP DETAILS

TVDPath	MDPath	Formation
3209.00	3242.37	PARKMAN
4684.00	4745.43	SUSSEX
5154.00	5224.37	SHANNON
7324.00	7409.59	NIO A
7664.00	7749.59	CODELL
8114.00	8199.59	JSAND

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	
1639.36	11.09	154.51	1635.91	-48.27	23.01	2.00	154.51	53.47	
5855.23	11.09	154.51	5773.09	-780.08	371.91	0.00	0.00	864.20	
6409.59	0.00	0.00	6324.00	-828.34	394.92	2.00	180.00	917.67	
8334.59	0.00	0.00	8249.00	-828.34	394.92	0.00	0.00	917.67	PBHL_NRC 24-9(2590 FNL 1315 FEL)50°TGT RAD

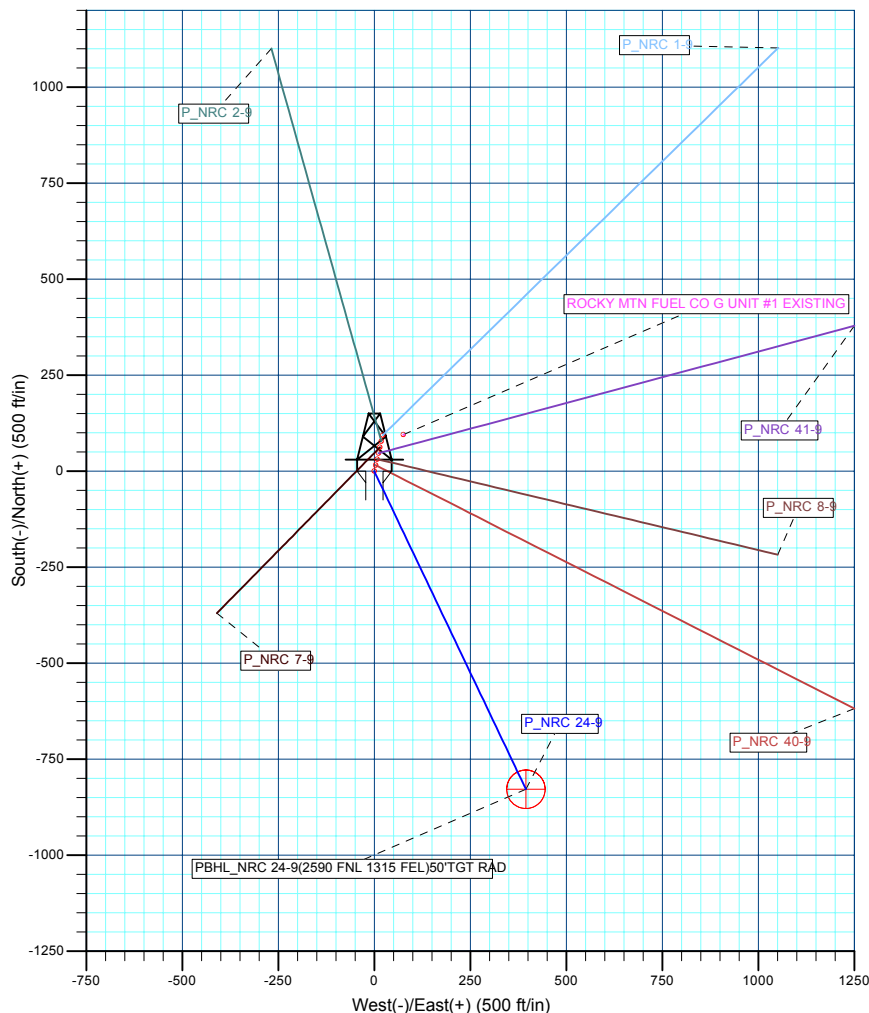
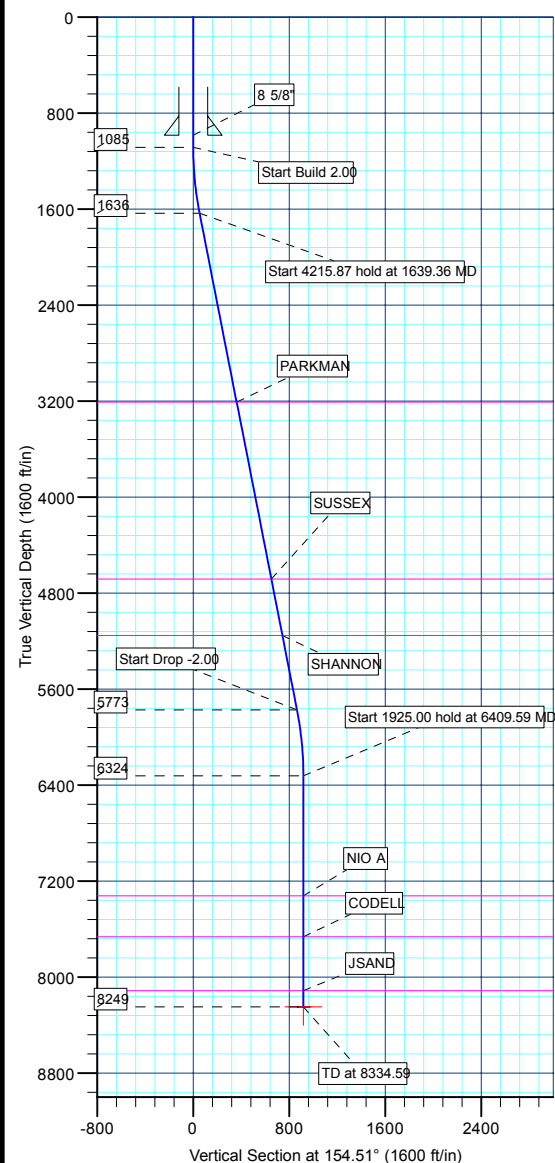
CASING DETAILS

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



B ELEV:WELL @ 5012.00ft (Original Well Elev)

GRD ELEV: 4997.00



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

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Shape
PBHL	8249.00	-828.34	394.92	1267352.24	3170445.40	40° 3' 56.394 N	104° 53' 27.632 W	Circle (Radius: 50.00)

Plan: PLAN #1 1-5-10 RHS (P_NRC 24-9/P_NRC 24-9)

Created By: Robert H. Scott

Database:	EDM 2003.21 Single User Db	Local Co-ordinate Reference:	Well P_NRC 24-9
Company:	US ROCKIES REGION PLANNING	TVD Reference:	WELL @ 5012.00ft (Original Well Elev)
Project:	COLORADO NORTHERN ZONE - 83	MD Reference:	WELL @ 5012.00ft (Original Well Elev)
Site:	WELD_NRC 17-9 PAD	North Reference:	True
Well:	P_NRC 24-9	Survey Calculation Method:	Minimum Curvature
Wellbore:	P_NRC 24-9		
Design:	PLAN #1 1-5-10 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 17-9 PAD, SECTION 9 T1N R67W											
Site Position:						Northing:			1,268,271.65 ft			Latitude:			40° 4' 5.506 N		
From:			Lat/Long			Easting:			3,170,066.29 ft			Longitude:			104° 53' 32.428 W		
Position Uncertainty:			0.00 ft			Slot Radius:			in			Grid Convergence:			0.39 °		

Well	P_NRC 24-9					
Well Position	+N/-S	-93.64 ft	Northing:	1,268,177.86 ft	Latitude:	40° 4' 4.580 N
	+E/-W	-22.11 ft	Easting:	3,170,044.82 ft	Longitude:	104° 53' 32.712 W
Position Uncertainty		0.00 ft	Wellhead Elevation:	ft	Ground Level:	4,997.00 ft

Wellbore	P_NRC 24-9				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF200510	1/5/2010	9.06	66.82	53,113

Design	PLAN #1 1-5-10 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	154.51

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	
1,639.36	11.09	154.51	1,635.91	-48.27	23.01	2.00	2.00	0.00	154.51	
5,855.23	11.09	154.51	5,773.09	-780.08	371.91	0.00	0.00	0.00	0.00	
6,409.59	0.00	0.00	6,324.00	-828.34	394.92	2.00	-2.00	0.00	180.00	
8,334.59	0.00	0.00	8,249.00	-828.34	394.92	0.00	0.00	0.00	0.00	PBHL_NRC 24-9(2)

Database:	EDM 2003.21 Single User Db	Local Co-ordinate Reference:	Well P_NRC 24-9
Company:	US ROCKIES REGION PLANNING	TVD Reference:	WELL @ 5012.00ft (Original Well Elev)
Project:	COLORADO NORTHERN ZONE - 83	MD Reference:	WELL @ 5012.00ft (Original Well Elev)
Site:	WELD_NRC 17-9 PAD	North Reference:	True
Well:	P_NRC 24-9	Survey Calculation Method:	Minimum Curvature
Wellbore:	P_NRC 24-9		
Design:	PLAN #1 1-5-10 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	154.51	1,100.00	-0.04	0.02	0.04	2.00	2.00	0.00
1,200.00	2.30	154.51	1,199.97	-2.08	0.99	2.31	2.00	2.00	0.00
1,300.00	4.30	154.51	1,299.80	-7.28	3.47	8.06	2.00	2.00	0.00
1,400.00	6.30	154.51	1,399.37	-15.62	7.45	17.30	2.00	2.00	0.00
1,500.00	8.30	154.51	1,498.55	-27.09	12.91	30.01	2.00	2.00	0.00
1,600.00	10.30	154.51	1,597.23	-41.67	19.87	46.17	2.00	2.00	0.00
Start 4215.87 hold at 1639.36 MD									
1,639.36	11.09	154.51	1,635.91	-48.27	23.01	53.47	2.00	2.00	0.00
1,700.00	11.09	154.51	1,695.41	-58.79	28.03	65.13	0.00	0.00	0.00
1,800.00	11.09	154.51	1,793.55	-76.15	36.30	84.36	0.00	0.00	0.00
1,900.00	11.09	154.51	1,891.68	-93.51	44.58	103.59	0.00	0.00	0.00
2,000.00	11.09	154.51	1,989.82	-110.87	52.86	122.82	0.00	0.00	0.00
2,100.00	11.09	154.51	2,087.95	-128.23	61.13	142.05	0.00	0.00	0.00
2,200.00	11.09	154.51	2,186.08	-145.58	69.41	161.28	0.00	0.00	0.00
2,300.00	11.09	154.51	2,284.22	-162.94	77.68	180.51	0.00	0.00	0.00
2,400.00	11.09	154.51	2,382.35	-180.30	85.96	199.74	0.00	0.00	0.00
2,500.00	11.09	154.51	2,480.48	-197.66	94.24	218.97	0.00	0.00	0.00
2,600.00	11.09	154.51	2,578.62	-215.02	102.51	238.20	0.00	0.00	0.00
2,700.00	11.09	154.51	2,676.75	-232.38	110.79	257.43	0.00	0.00	0.00
2,800.00	11.09	154.51	2,774.88	-249.73	119.06	276.66	0.00	0.00	0.00
2,900.00	11.09	154.51	2,873.02	-267.09	127.34	295.89	0.00	0.00	0.00
3,000.00	11.09	154.51	2,971.15	-284.45	135.61	315.13	0.00	0.00	0.00
3,100.00	11.09	154.51	3,069.28	-301.81	143.89	334.36	0.00	0.00	0.00
3,200.00	11.09	154.51	3,167.42	-319.17	152.17	353.59	0.00	0.00	0.00
PARKMAN									
3,242.37	11.09	154.51	3,209.00	-326.52	155.67	361.73	0.00	0.00	0.00
3,300.00	11.09	154.51	3,265.55	-336.53	160.44	372.82	0.00	0.00	0.00
3,400.00	11.09	154.51	3,363.69	-353.89	168.72	392.05	0.00	0.00	0.00
3,500.00	11.09	154.51	3,461.82	-371.24	176.99	411.28	0.00	0.00	0.00
3,600.00	11.09	154.51	3,559.95	-388.60	185.27	430.51	0.00	0.00	0.00
3,700.00	11.09	154.51	3,658.09	-405.96	193.54	449.74	0.00	0.00	0.00
3,800.00	11.09	154.51	3,756.22	-423.32	201.82	468.97	0.00	0.00	0.00
3,900.00	11.09	154.51	3,854.35	-440.68	210.10	488.20	0.00	0.00	0.00
4,000.00	11.09	154.51	3,952.49	-458.04	218.37	507.43	0.00	0.00	0.00
4,100.00	11.09	154.51	4,050.62	-475.40	226.65	526.66	0.00	0.00	0.00
4,200.00	11.09	154.51	4,148.75	-492.75	234.92	545.89	0.00	0.00	0.00
4,300.00	11.09	154.51	4,246.89	-510.11	243.20	565.12	0.00	0.00	0.00
4,400.00	11.09	154.51	4,345.02	-527.47	251.47	584.35	0.00	0.00	0.00
4,500.00	11.09	154.51	4,443.15	-544.83	259.75	603.58	0.00	0.00	0.00
4,600.00	11.09	154.51	4,541.29	-562.19	268.03	622.81	0.00	0.00	0.00
4,700.00	11.09	154.51	4,639.42	-579.55	276.30	642.04	0.00	0.00	0.00
SUSSEX									
4,745.43	11.09	154.51	4,684.00	-587.43	280.06	650.78	0.00	0.00	0.00
4,800.00	11.09	154.51	4,737.56	-596.90	284.58	661.27	0.00	0.00	0.00
4,900.00	11.09	154.51	4,835.69	-614.26	292.85	680.50	0.00	0.00	0.00
5,000.00	11.09	154.51	4,933.82	-631.62	301.13	699.73	0.00	0.00	0.00
5,100.00	11.09	154.51	5,031.96	-648.98	309.40	718.96	0.00	0.00	0.00
5,200.00	11.09	154.51	5,130.09	-666.34	317.68	738.19	0.00	0.00	0.00
SHANNON									
5,224.37	11.09	154.51	5,154.00	-670.57	319.70	742.88	0.00	0.00	0.00
5,300.00	11.09	154.51	5,228.22	-683.70	325.96	757.42	0.00	0.00	0.00

Database:	EDM 2003.21 Single User Db	Local Co-ordinate Reference:	Well P_NRC 24-9
Company:	US ROCKIES REGION PLANNING	TVD Reference:	WELL @ 5012.00ft (Original Well Elev)
Project:	COLORADO NORTHERN ZONE - 83	MD Reference:	WELL @ 5012.00ft (Original Well Elev)
Site:	WELD_NRC 17-9 PAD	North Reference:	True
Well:	P_NRC 24-9	Survey Calculation Method:	Minimum Curvature
Wellbore:	P_NRC 24-9		
Design:	PLAN #1 1-5-10 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	11.09	154.51	5,326.36	-701.06	334.23	776.65	0.00	0.00	0.00
5,500.00	11.09	154.51	5,424.49	-718.41	342.51	795.88	0.00	0.00	0.00
5,600.00	11.09	154.51	5,522.62	-735.77	350.78	815.11	0.00	0.00	0.00
5,700.00	11.09	154.51	5,620.76	-753.13	359.06	834.34	0.00	0.00	0.00
5,800.00	11.09	154.51	5,718.89	-770.49	367.34	853.57	0.00	0.00	0.00
Start Drop -2.00									
5,855.23	11.09	154.51	5,773.09	-780.08	371.91	864.20	0.00	0.00	0.00
5,900.00	10.19	154.51	5,817.09	-787.54	375.46	872.46	2.00	-2.00	0.00
6,000.00	8.19	154.51	5,915.80	-801.96	382.34	888.43	2.00	-2.00	0.00
6,100.00	6.19	154.51	6,015.01	-813.26	387.72	900.95	2.00	-2.00	0.00
6,200.00	4.19	154.51	6,114.59	-821.42	391.62	910.00	2.00	-2.00	0.00
6,300.00	2.19	154.51	6,214.43	-826.45	394.01	915.57	2.00	-2.00	0.00
6,400.00	0.19	154.51	6,314.41	-828.33	394.91	917.65	2.00	-2.00	0.00
Start 1925.00 hold at 6409.59 MD									
6,409.59	0.00	0.00	6,324.00	-828.34	394.92	917.67	2.00	-2.00	-1,610.56
6,500.00	0.00	0.00	6,414.41	-828.34	394.92	917.67	0.00	0.00	0.00
6,600.00	0.00	0.00	6,514.41	-828.34	394.92	917.67	0.00	0.00	0.00
6,700.00	0.00	0.00	6,614.41	-828.34	394.92	917.67	0.00	0.00	0.00
6,800.00	0.00	0.00	6,714.41	-828.34	394.92	917.67	0.00	0.00	0.00
6,900.00	0.00	0.00	6,814.41	-828.34	394.92	917.67	0.00	0.00	0.00
7,000.00	0.00	0.00	6,914.41	-828.34	394.92	917.67	0.00	0.00	0.00
7,100.00	0.00	0.00	7,014.41	-828.34	394.92	917.67	0.00	0.00	0.00
7,200.00	0.00	0.00	7,114.41	-828.34	394.92	917.67	0.00	0.00	0.00
7,300.00	0.00	0.00	7,214.41	-828.34	394.92	917.67	0.00	0.00	0.00
7,400.00	0.00	0.00	7,314.41	-828.34	394.92	917.67	0.00	0.00	0.00
NIO A									
7,409.59	0.00	0.00	7,324.00	-828.34	394.92	917.67	0.00	0.00	0.00
7,500.00	0.00	0.00	7,414.41	-828.34	394.92	917.67	0.00	0.00	0.00
7,600.00	0.00	0.00	7,514.41	-828.34	394.92	917.67	0.00	0.00	0.00
7,700.00	0.00	0.00	7,614.41	-828.34	394.92	917.67	0.00	0.00	0.00
CODELL									
7,749.59	0.00	0.00	7,664.00	-828.34	394.92	917.67	0.00	0.00	0.00
7,800.00	0.00	0.00	7,714.41	-828.34	394.92	917.67	0.00	0.00	0.00
7,900.00	0.00	0.00	7,814.41	-828.34	394.92	917.67	0.00	0.00	0.00
8,000.00	0.00	0.00	7,914.41	-828.34	394.92	917.67	0.00	0.00	0.00
8,100.00	0.00	0.00	8,014.41	-828.34	394.92	917.67	0.00	0.00	0.00
JSAND									
8,199.59	0.00	0.00	8,114.00	-828.34	394.92	917.67	0.00	0.00	0.00
8,200.00	0.00	0.00	8,114.41	-828.34	394.92	917.67	0.00	0.00	0.00
8,300.00	0.00	0.00	8,214.41	-828.34	394.92	917.67	0.00	0.00	0.00
PBHL_NRC 24-9(2590 FNL 1315 FEL)50'TGT RAD									
8,334.59	0.00	0.00	8,249.00	-828.34	394.92	917.67	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_NRC 24-9(2590 FNL 1315 FEL)50'TGT RAD	0.00	0.00	8,249.00	-828.34	394.92	1,267,352.24	3,170,445.40	40° 3' 56.394 N	104° 53' 27.632 W
- plan hits target center									
- Circle (radius 50.00)									

Database:	EDM 2003.21 Single User Db	Local Co-ordinate Reference:	Well P_NRC 24-9
Company:	US ROCKIES REGION PLANNING	TVD Reference:	WELL @ 5012.00ft (Original Well Elev)
Project:	COLORADO NORTHERN ZONE - 83	MD Reference:	WELL @ 5012.00ft (Original Well Elev)
Site:	WELD_NRC 17-9 PAD	North Reference:	True
Well:	P_NRC 24-9	Survey Calculation Method:	Minimum Curvature
Wellbore:	P_NRC 24-9		
Design:	PLAN #1 1-5-10 RHS		

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 (°)	
3,242.37	3,209.00	PARKMAN				
4,745.43	4,684.00	SUSSEX				
5,224.37	5,154.00	SHANNON				
7,409.59	7,324.00	NIO A				
7,749.59	7,664.00	CODELL				
8,199.59	8,114.00	JSAND				

Plan Annotations					
Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates			
		+N/-S (ft)	+E/-W (ft)	Comment	
1,085.00	1,085.00	0.00	0.00	Start Build 2.00	
1,639.36	1,635.91	-48.27	23.01	Start 4215.87 hold at 1639.36 MD	
5,855.23	5,773.09	-780.08	371.91	Start Drop -2.00	
6,409.59	6,324.00	-828.34	394.92	Start 1925.00 hold at 6409.59 MD	
8,334.59	8,249.00	-828.34	394.92	TD at 8334.59	



US ROCKIES REGION PLANNING

**COLORADO NORTHERN ZONE - 83
WELD_NRC 17-9 PAD
P_NRC 24-9**

**P_NRC 24-9
PLAN #1 1-5-10 RHS**

Anticollision Report

05 January, 2010



Company:	US ROCKIES REGION PLANNING	Local Co-ordinate Reference:	Well P_NRC 24-9
Project:	COLORADO NORTHERN ZONE - 83	TVD Reference:	WELL @ 5012.00ft (Original Well Elev)
Reference Site:	WELD_NRC 17-9 PAD	MD Reference:	WELL @ 5012.00ft (Original Well Elev)
Site Error:	0.00ft	North Reference:	True
Reference Well:	P_NRC 24-9	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00ft	Output errors are at	2.00 sigma
Reference Wellbore	P_NRC 24-9	Database:	EDM 2003.21 Single User Db
Reference Design:	PLAN #1 1-5-10 RHS	Offset TVD Reference:	Offset Datum

Reference	PLAN #1 1-5-10 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	1/5/2010		
From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description
0.00	8,334.59	PLAN #1 1-5-10 RHS (P_NRC 24-9)	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						
WELD_NRC 17-9 PAD						
P_NRC 1-9 - P_NRC 1-9 - PLAN #1 1-5-10 RHS	1,085.00	1,085.00	96.22	91.60	20.831	CC, ES
P_NRC 1-9 - P_NRC 1-9 - PLAN #1 1-5-10 RHS	1,200.00	1,196.71	99.91	94.85	19.732	SF
P_NRC 2-9 - P_NRC 2-9 - PLAN #1 1-5-10 RHS	1,085.00	1,085.00	80.12	75.50	17.346	CC, ES
P_NRC 2-9 - P_NRC 2-9 - PLAN #1 1-5-10 RHS	1,200.00	1,197.08	83.93	78.86	16.551	SF
P_NRC 40-9 - P_NRC 40-9 - PLAN #1 1-5-10 RHS	1,085.00	1,085.00	16.09	11.47	3.482	CC
P_NRC 40-9 - P_NRC 40-9 - PLAN #1 1-5-10 RHS	1,100.00	1,100.02	16.11	11.43	3.442	ES, SF
P_NRC 41-9 - P_NRC 41-9 - PLAN #1 1-5-10 RHS	1,085.00	1,085.00	47.96	43.34	10.383	CC
P_NRC 41-9 - P_NRC 41-9 - PLAN #1 1-5-10 RHS	1,100.00	1,099.88	48.01	43.33	10.258	ES
P_NRC 41-9 - P_NRC 41-9 - PLAN #1 1-5-10 RHS	1,200.00	1,199.01	50.85	45.79	10.056	SF
P_NRC 7-9 - P_NRC 7-9 - Design #1	1,244.33	1,247.27	63.83	58.63	12.282	CC
P_NRC 7-9 - P_NRC 7-9 - Design #1	1,300.00	1,303.78	63.97	58.57	11.844	ES
P_NRC 7-9 - P_NRC 7-9 - Design #1	1,400.00	1,404.84	65.57	59.79	11.342	SF
P_NRC 8-9 - P_NRC 8-9 - PLAN #1 1-5-10 RHS	1,085.00	1,085.00	32.23	27.62	6.986	CC
P_NRC 8-9 - P_NRC 8-9 - PLAN #1 1-5-10 RHS	1,100.00	1,100.00	32.27	27.59	6.902	ES
P_NRC 8-9 - P_NRC 8-9 - PLAN #1 1-5-10 RHS	1,200.00	1,199.96	34.04	29.00	6.755	SF
ROCKY MTN FUEL CO G UNIT #1 EXISTING - ROCKY	1,085.00	1,066.00	121.46	78.51	2.828	CC
ROCKY MTN FUEL CO G UNIT #1 EXISTING - ROCKY	1,300.00	1,280.80	125.20	73.30	2.412	ES
ROCKY MTN FUEL CO G UNIT #1 EXISTING - ROCKY	1,500.00	1,479.55	137.30	77.22	2.285	SF

Offset Design WELD_NRC 17-9 PAD - P_NRC 1-9 - P_NRC 1-9 - PLAN #1 1-5-10 RHS												
Survey Program: 0-MWD												
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
0.00	0.00	0.00	0.00	0.00	0.00	13.29	93.64	22.11	96.22	96.02	0.19	503.609
100.00	100.00	100.00	100.00	0.10	0.10	13.29	93.64	22.11	96.22	95.57	0.64	150.199
200.00	200.00	200.00	200.00	0.32	0.32	13.29	93.64	22.11	96.22	95.13	1.09	88.261
300.00	300.00	300.00	300.00	0.55	0.55	13.29	93.64	22.11	96.22	94.68	1.54	62.492
400.00	400.00	400.00	400.00	0.77	0.77	13.29	93.64	22.11	96.22	94.23	1.99	48.369
500.00	500.00	500.00	500.00	0.99	0.99	13.29	93.64	22.11	96.22	93.78	2.44	39.453
600.00	600.00	600.00	600.00	1.22	1.22	13.29	93.64	22.11	96.22	93.33	2.89	33.313
700.00	700.00	700.00	700.00	1.44	1.44	13.29	93.64	22.11	96.22	92.88	3.34	28.826
800.00	800.00	800.00	800.00	1.67	1.67	13.29	93.64	22.11	96.22	92.43	3.79	25.405
900.00	900.00	900.00	900.00	1.89	1.89	13.29	93.64	22.11	96.22			

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 24-9
Project:	COLORADO NORTHERN ZONE - 83	TVD Reference:	WELL @ 5012.00ft (Original Well Elev)
Reference Site:	WELD_NRC 17-9 PAD	MD Reference:	WELL @ 5012.00ft (Original Well Elev)
Site Error:	0.00ft	North Reference:	True
Reference Well:	P_NRC 24-9	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00ft	Output errors are at	2.00 sigma
Reference Wellbore	P_NRC 24-9	Database:	EDM 2003.21 Single User Db
Reference Design:	PLAN #1 1-5-10 RHS	Offset TVD Reference:	Offset Datum

Offset Design WELD_NRC 17-9 PAD - P_NRC 1-9 - P_NRC 1-9 - PLAN #1 1-5-10 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)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning	
1,000.00	1,000.00	1,000.00	1,000.00	2.12	2.12	13.29	93.64	22.11	96.22	91.98	4.24	22.709		
1,085.00	1,085.00	1,085.00	1,085.00	2.31	2.31	13.29	93.64	22.11	96.22	91.60	4.62	20.831 CC, ES		
1,100.00	1,100.00	1,099.59	1,099.59	2.34	2.34	-141.23	93.67	22.14	96.28	91.60	4.68	20.570		
1,200.00	1,199.97	1,196.71	1,196.68	2.51	2.55	-141.32	95.16	23.67	99.91	94.85	5.06	19.732 SF		
1,300.00	1,299.80	1,293.32	1,293.13	2.70	2.77	-141.51	98.94	27.52	109.11	103.66	5.45	20.011		
1,400.00	1,399.37	1,388.96	1,388.39	2.90	2.99	-141.74	104.91	33.62	123.83	117.98	5.85	21.170		
1,500.00	1,498.55	1,483.23	1,481.95	3.12	3.22	-141.95	112.98	41.85	143.98	137.72	6.26	23.014		
1,600.00	1,597.23	1,575.72	1,573.32	3.38	3.46	-142.09	122.98	52.06	169.46	162.78	6.68	25.376		
1,639.36	1,635.91	1,611.56	1,608.60	3.49	3.57	-142.13	127.41	56.58	180.92	174.08	6.85	26.419		
1,700.00	1,695.41	1,666.23	1,662.25	3.68	3.74	-142.29	134.76	64.09	199.65	192.52	7.14	27.980		
1,800.00	1,793.55	1,755.16	1,749.06	4.00	4.04	-142.17	148.24	77.85	232.50	224.87	7.63	30.486		
1,900.00	1,891.68	1,842.42	1,833.63	4.34	4.37	-141.73	163.29	93.23	267.74	259.60	8.14	32.896		
2,000.00	1,989.82	1,927.91	1,915.80	4.70	4.73	-141.11	179.79	110.06	305.33	296.66	8.67	35.213		
2,100.00	2,087.95	2,012.39	1,996.28	5.07	5.13	-140.37	197.75	128.41	345.24	336.01	9.22	37.438		
2,200.00	2,186.08	2,103.56	2,082.81	5.46	5.60	-139.64	217.85	148.93	386.10	376.28	9.81	39.344		
2,300.00	2,284.22	2,194.74	2,169.34	5.84	6.09	-139.05	237.95	169.45	427.00	416.58	10.42	40.982		
2,400.00	2,382.35	2,285.91	2,255.87	6.24	6.59	-138.56	258.04	189.97	467.93	456.89	11.04	42.399		
2,500.00	2,480.48	2,377.08	2,342.40	6.64	7.11	-138.15	278.14	210.49	508.89	497.22	11.66	43.634		
2,600.00	2,578.62	2,468.25	2,428.93	7.04	7.63	-137.81	298.24	231.01	549.86	537.57	12.30	44.717		
2,700.00	2,676.75	2,559.43	2,515.46	7.45	8.17	-137.51	318.34	251.53	590.85	577.92	12.94	45.671		
2,800.00	2,774.88	2,650.60	2,601.99	7.86	8.70	-137.25	338.44	272.05	631.85	618.27	13.58	46.517		
2,900.00	2,873.02	2,741.77	2,688.52	8.27	9.25	-137.02	358.53	292.57	672.86	658.63	14.23	47.270		
3,000.00	2,971.15	2,832.95	2,775.05	8.69	9.80	-136.81	378.63	313.09	713.88	698.99	14.89	47.944		
3,100.00	3,069.28	2,924.12	2,861.58	9.10	10.35	-136.63	398.73	333.61	754.91	739.36	15.55	48.550		
3,200.00	3,167.42	3,015.29	2,948.11	9.52	10.90	-136.47	418.83	354.13	795.94	779.73	16.21	49.097		
3,300.00	3,265.55	3,106.46	3,034.64	9.94	11.46	-136.33	438.92	374.65	836.98	820.10	16.88	49.593		
3,400.00	3,363.69	3,197.64	3,121.17	10.36	12.02	-136.19	459.02	395.17	878.02	860.47	17.55	50.044		
3,500.00	3,461.82	3,288.81	3,207.70	10.79	12.59	-136.07	479.12	415.69	919.06	900.84	18.22	50.455		
3,600.00	3,559.95	3,379.98	3,294.23	11.21	13.15	-135.96	499.22	436.21	960.11	941.22	18.89	50.832		
3,700.00	3,658.09	3,471.15	3,380.76	11.63	13.72	-135.86	519.32	456.73	1,001.16	981.59	19.56	51.178		
3,800.00	3,756.22	3,562.33	3,467.29	12.06	14.28	-135.77	539.41	477.25	1,042.21	1,021.97	20.24	51.498		
3,900.00	3,854.35	3,653.50	3,553.82	12.49	14.85	-135.68	559.51	497.77	1,083.26	1,062.35	20.92	51.793		
4,000.00	3,952.49	3,744.67	3,640.35	12.91	15.42	-135.60	579.61	518.29	1,124.32	1,102.72	21.59	52.066		
4,100.00	4,050.62	3,835.84	3,726.88	13.34	15.99	-135.53	599.71	538.81	1,165.37	1,143.10	22.27	52.320		
4,200.00	4,148.75	3,927.02	3,813.41	13.77	16.56	-135.46	619.81	559.33	1,206.43	1,183.48	22.95	52.557		
4,300.00	4,246.89	4,018.19	3,899.94	14.20	17.13	-135.39	639.90	579.85	1,247.49	1,223.86	23.64	52.777		
4,400.00	4,345.02	4,109.36	3,986.47	14.62	17.70	-135.33	660.00	600.37	1,288.55	1,264.23	24.32	52.984		
4,500.00	4,443.15	4,200.53	4,073.00	15.05	18.28	-135.28	680.10	620.89	1,329.62	1,304.61	25.00	53.177		
4,600.00	4,541.29	4,291.71	4,159.53	15.48	18.85	-135.22	700.20	641.41	1,370.68	1,344.99	25.69	53.358		
4,700.00	4,639.42	4,382.88	4,246.06	15.91	19.42	-135.17	720.30	661.93	1,411.75	1,385.37	26.37	53.529		
4,800.00	4,737.56	4,474.05	4,332.59	16.34	20.00	-135.12	740.39	682.45	1,452.81	1,425.75	27.06	53.689		
4,900.00	4,835.69	4,565.23	4,419.12	16.77	20.57	-135.08	760.49	702.97	1,493.88	1,466.13	27.75	53.841		
5,000.00	4,933.82	4,656.40	4,505.65	17.20	21.15	-135.04	780.59	723.49	1,534.94	1,506.51	28.43	53.984		
5,100.00	5,031.96	4,747.57	4,592.18	17.63	21.72	-135.00	800.69	744.01	1,576.01	1,546.89	29.12	54.119		
5,200.00	5,130.09	4,838.74	4,678.71	18.06	22.30	-134.96	820.79	764.53	1,617.08	1,587.27	29.81	54.247		
5,300.00	5,228.22	4,929.92	4,765.24	18.50	22.88	-134.92	840.88	785.05	1,658.15	1,627.65	30.50	54.369		
5,400.00	5,326.36	5,021.09	4,851.77	18.93	23.45	-134.89	860.98	805.57	1,699.22	1,668.03	31.19	54.484		
5,500.00	5,424.49	5,112.26	4,938.30	19.36	24.03	-134.85	881.08	826.09	1,740.29	1,708.41	31.88	54.594		
5,600.00	5,522.62	5,203.43	5,024.83	19.79	24.61	-134.82	901.18	846.61	1,781.36	1,748.79	32.57	54.699		
5,700.00	5,620.76	5,294.61	5,111.37	20.22	25.18	-134.79	921.27	867.13	1,822.43	1,789.17	33.26	54.798		
5,800.00	5,718.89	5,385.78	5,197.90	20.65	25.76	-134.76	941.37	887.65	1,863.50	1,829.55	33.95	54.893		
5,855.23	5,773.09	5,436.14	5,245.69	20.89	26.08	-134.75	952.47	898.98	1,886.19	1,851.86	34.33	54.944		

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 24-9
Project:	COLORADO NORTHERN ZONE - 83	TVD Reference:	WELL @ 5012.00ft (Original Well Elev)
Reference Site:	WELD_NRC 17-9 PAD	MD Reference:	WELL @ 5012.00ft (Original Well Elev)
Site Error:	0.00ft	North Reference:	True
Reference Well:	P_NRC 24-9	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00ft	Output errors are at	2.00 sigma
Reference Wellbore	P_NRC 24-9	Database:	EDM 2003.21 Single User Db
Reference Design:	PLAN #1 1-5-10 RHS	Offset TVD Reference:	Offset Datum

Offset Design WELD_NRC 17-9 PAD - P_NRC 1-9 - P_NRC 1-9 - PLAN #1 1-5-10 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
5,900.00	5,817.09	5,477.05	5,284.52	21.06	26.34	-135.01	961.49	908.19	1,904.35	1,869.64	34.71	54.863	
6,000.00	5,915.80	5,569.10	5,371.88	21.33	26.92	-135.50	981.78	928.91	1,943.28	1,907.78	35.50	54.746	
6,100.00	6,015.01	5,676.36	5,473.71	21.58	27.58	-135.85	1,005.36	952.99	1,979.88	1,943.59	36.28	54.570	
6,200.00	6,114.59	5,927.08	5,715.36	21.78	28.68	-135.84	1,051.90	1,000.50	2,009.84	1,972.54	37.30	53.877	
6,300.00	6,214.43	6,190.80	5,974.79	21.95	29.53	-135.79	1,084.71	1,033.99	2,029.66	1,991.49	38.17	53.170	
6,409.59	6,324.00	6,488.86	6,271.75	22.11	30.10	18.78	1,101.52	1,051.16	2,039.06	2,000.14	38.91	52.399	
6,500.00	6,414.41	6,631.53	6,414.41	22.22	30.24	18.80	1,102.35	1,052.00	2,039.44	2,000.20	39.24	51.978	
6,600.00	6,514.41	6,731.53	6,514.41	22.34	30.34	18.80	1,102.35	1,052.00	2,039.44	1,999.92	39.52	51.601	
6,700.00	6,614.41	6,831.53	6,614.41	22.45	30.44	18.80	1,102.35	1,052.00	2,039.44	1,999.63	39.81	51.225	
6,800.00	6,714.41	6,931.53	6,714.41	22.57	30.55	18.80	1,102.35	1,052.00	2,039.44	1,999.33	40.11	50.850	
6,900.00	6,814.41	7,031.53	6,814.41	22.69	30.65	18.80	1,102.35	1,052.00	2,039.44	1,999.04	40.40	50.478	
7,000.00	6,914.41	7,131.53	6,914.41	22.81	30.76	18.80	1,102.35	1,052.00	2,039.44	1,998.74	40.70	50.107	
7,100.00	7,014.41	7,231.53	7,014.41	22.94	30.86	18.80	1,102.35	1,052.00	2,039.44	1,998.44	41.00	49.738	
7,200.00	7,114.41	7,331.53	7,114.41	23.06	30.97	18.80	1,102.35	1,052.00	2,039.44	1,998.13	41.31	49.372	
7,300.00	7,214.41	7,431.53	7,214.41	23.19	31.08	18.80	1,102.35	1,052.00	2,039.44	1,997.83	41.61	49.008	
7,400.00	7,314.41	7,531.53	7,314.41	23.32	31.19	18.80	1,102.35	1,052.00	2,039.44	1,997.52	41.92	48.646	
7,500.00	7,414.41	7,631.53	7,414.41	23.44	31.30	18.80	1,102.35	1,052.00	2,039.44	1,997.20	42.24	48.286	
7,600.00	7,514.41	7,731.53	7,514.41	23.57	31.41	18.80	1,102.35	1,052.00	2,039.44	1,996.89	42.55	47.929	
7,700.00	7,614.41	7,831.53	7,614.41	23.71	31.53	18.80	1,102.35	1,052.00	2,039.44	1,996.57	42.87	47.575	
7,800.00	7,714.41	7,931.53	7,714.41	23.84	31.64	18.80	1,102.35	1,052.00	2,039.44	1,996.25	43.19	47.223	
7,900.00	7,814.41	8,031.53	7,814.41	23.97	31.76	18.80	1,102.35	1,052.00	2,039.44	1,995.93	43.51	46.874	
8,000.00	7,914.41	8,131.53	7,914.41	24.11	31.87	18.80	1,102.35	1,052.00	2,039.44	1,995.61	43.83	46.528	
8,100.00	8,014.41	8,231.53	8,014.41	24.25	31.99	18.80	1,102.35	1,052.00	2,039.44	1,995.28	44.16	46.184	
8,200.00	8,114.41	8,331.53	8,114.41	24.39	32.11	18.80	1,102.35	1,052.00	2,039.44	1,994.95	44.49	45.844	
8,300.00	8,214.41	8,431.53	8,214.41	24.53	32.23	18.80	1,102.35	1,052.00	2,039.44	1,994.62	44.82	45.506	
8,334.59	8,249.00	8,466.13	8,249.00	24.57	32.27	18.80	1,102.35	1,052.00	2,039.44	1,994.51	44.93	45.389	

Company:	US ROCKIES REGION PLANNING	Local Co-ordinate Reference:	Well P_NRC 24-9
Project:	COLORADO NORTHERN ZONE - 83	TVD Reference:	WELL @ 5012.00ft (Original Well Elev)
Reference Site:	WELD_NRC 17-9 PAD	MD Reference:	WELL @ 5012.00ft (Original Well Elev)
Site Error:	0.00ft	North Reference:	True
Reference Well:	P_NRC 24-9	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00ft	Output errors are at	2.00 sigma
Reference Wellbore	P_NRC 24-9	Database:	EDM 2003.21 Single User Db
Reference Design:	PLAN #1 1-5-10 RHS	Offset TVD Reference:	Offset Datum

Offset Design WELD_NRC 17-9 PAD - P_NRC 2-9 - P_NRC 2-9 - PLAN #1 1-5-10 RHS												Offset Site Error:	0.00 ft
Survey Program: 0-MWD												Offset Well Error:	0.00 ft
Reference		Offset		Semi Major Axis			Distance						
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning
0.00	0.00	0.00	0.00	0.00	0.00	13.33	77.96	18.47	80.12				
100.00	100.00	100.00	100.00	0.10	0.10	13.33	77.96	18.47	80.12	79.93	0.19	419.375	
200.00	200.00	200.00	200.00	0.32	0.32	13.33	77.96	18.47	80.12	79.48	0.64	125.077	
300.00	300.00	300.00	300.00	0.55	0.55	13.33	77.96	18.47	80.12	79.03	1.09	73.499	
400.00	400.00	400.00	400.00	0.77	0.77	13.33	77.96	18.47	80.12	78.58	1.54	52.039	
500.00	500.00	500.00	500.00	0.99	0.99	13.33	77.96	18.47	80.12	78.13	1.99	40.279	
600.00	600.00	600.00	600.00	1.22	1.22	13.33	77.96	18.47	80.12	77.68	2.44	32.854	
700.00	700.00	700.00	700.00	1.44	1.44	13.33	77.96	18.47	80.12	77.23	2.89	27.741	
800.00	800.00	800.00	800.00	1.67	1.67	13.33	77.96	18.47	80.12	76.78	3.34	24.005	
900.00	900.00	900.00	900.00	1.89	1.89	13.33	77.96	18.47	80.12	76.33	3.79	21.155	
1,000.00	1,000.00	1,000.00	1,000.00	2.12	2.12	13.33	77.96	18.47	80.12	75.89	4.24	18.911	
1,085.00	1,085.00	1,085.00	1,085.00	2.31	2.31	13.33	77.96	18.47	80.12	75.50	4.62	17.346 CC, ES	
1,100.00	1,100.00	1,099.64	1,099.64	2.34	2.34	-141.21	78.00	18.46	80.19	75.50	4.68	17.129	
1,200.00	1,199.97	1,197.08	1,197.05	2.51	2.56	-142.82	80.07	17.88	83.93	78.86	5.07	16.551 SF	
1,300.00	1,299.80	1,293.73	1,293.55	2.70	2.78	-146.31	85.28	16.42	93.67	88.21	5.46	17.146	
1,400.00	1,399.37	1,388.94	1,388.37	2.90	3.00	-150.54	93.48	14.13	109.85	103.99	5.85	18.764	
1,500.00	1,498.55	1,482.08	1,480.81	3.12	3.23	-154.60	104.42	11.06	132.71	126.47	6.24	21.267	
1,600.00	1,597.23	1,572.60	1,570.25	3.38	3.47	-158.04	117.83	7.31	162.25	155.63	6.62	24.516	
1,639.36	1,635.91	1,607.40	1,604.51	3.49	3.56	-159.20	123.70	5.67	175.67	168.91	6.76	25.971	
1,700.00	1,695.41	1,660.23	1,656.37	3.68	3.73	-160.88	133.39	2.95	197.70	190.69	7.01	28.198	
1,800.00	1,793.55	1,746.77	1,740.91	4.00	4.01	-163.05	151.20	-2.03	236.50	229.07	7.42	31.861	
1,900.00	1,891.68	1,838.17	1,829.99	4.34	4.33	-164.73	170.90	-7.55	276.47	268.62	7.85	35.207	
2,000.00	1,989.82	1,929.58	1,919.08	4.70	4.68	-165.98	190.60	-13.06	316.59	308.30	8.29	38.195	
2,100.00	2,087.95	2,020.98	2,008.17	5.07	5.03	-166.95	210.30	-18.58	356.81	348.08	8.73	40.866	
2,200.00	2,186.08	2,112.39	2,097.25	5.46	5.40	-167.73	229.99	-24.09	397.10	387.92	9.18	43.262	
2,300.00	2,284.22	2,203.79	2,186.34	5.84	5.77	-168.36	249.69	-29.61	437.44	427.81	9.63	45.419	
2,400.00	2,382.35	2,295.19	2,275.43	6.24	6.16	-168.89	269.39	-35.12	477.82	467.73	10.09	47.366	
2,500.00	2,480.48	2,386.60	2,364.51	6.64	6.55	-169.33	289.09	-40.64	518.23	507.68	10.55	49.131	
2,600.00	2,578.62	2,478.00	2,453.60	7.04	6.94	-169.72	308.78	-46.16	558.66	547.65	11.01	50.737	
2,700.00	2,676.75	2,569.41	2,542.68	7.45	7.34	-170.04	328.48	-51.67	599.10	587.63	11.48	52.202	
2,800.00	2,774.88	2,660.81	2,631.77	7.86	7.74	-170.33	348.18	-57.19	639.57	627.62	11.94	53.543	
2,900.00	2,873.02	2,752.22	2,720.86	8.27	8.15	-170.59	367.88	-62.70	680.04	667.62	12.42	54.774	
3,000.00	2,971.15	2,843.62	2,809.94	8.69	8.56	-170.81	387.57	-68.22	720.52	707.63	12.89	55.908	
3,100.00	3,069.28	2,935.03	2,899.03	9.10	8.97	-171.01	407.27	-73.73	761.01	747.65	13.36	56.956	
3,200.00	3,167.42	3,026.43	2,988.12	9.52	9.38	-171.19	426.97	-79.25	801.51	787.67	13.84	57.925	
3,300.00	3,265.55	3,117.84	3,077.20	9.94	9.79	-171.36	446.67	-84.76	842.02	827.70	14.31	58.825	
3,400.00	3,363.69	3,209.24	3,166.29	10.36	10.21	-171.50	466.36	-90.28	882.53	867.73	14.79	59.662	
3,500.00	3,461.82	3,300.65	3,255.38	10.79	10.62	-171.64	486.06	-95.79	923.04	907.77	15.27	60.442	
3,600.00	3,559.95	3,392.05	3,344.46	11.21	11.04	-171.76	505.76	-101.31	963.56	947.81	15.75	61.171	
3,700.00	3,658.09	3,483.46	3,433.55	11.63	11.46	-171.88	525.46	-106.82	1,004.08	987.85	16.23	61.853	
3,800.00	3,756.22	3,574.86	3,522.64	12.06	11.88	-171.98	545.15	-112.34	1,044.60	1,027.89	16.72	62.493	
3,900.00	3,854.35	3,666.26	3,611.72	12.49	12.30	-172.08	564.85	-117.85	1,085.13	1,067.93	17.20	63.095	
4,000.00	3,952.49	3,757.67	3,700.81	12.91	12.72	-172.17	584.55	-123.37	1,125.66	1,107.98	17.68	63.660	
4,100.00	4,050.62	3,849.07	3,789.90	13.34	13.14	-172.25	604.25	-128.88	1,166.19	1,148.03	18.17	64.194	
4,200.00	4,148.75	3,940.48	3,878.98	13.77	13.56	-172.33	623.94	-134.40	1,206.73	1,188.07	18.65	64.698	
4,300.00	4,246.89	4,031.88	3,968.07	14.20	13.99	-172.41	643.64	-139.91	1,247.26	1,228.12	19.14	65.174	
4,400.00	4,345.02	4,123.29	4,057.16	14.62	14.41	-172.47	663.34	-145.43	1,287.80	1,268.17	19.62	65.625	
4,500.00	4,443.15	4,214.69	4,146.24	15.05	14.83	-172.54	683.04	-150.94	1,328.34	1,308.23	20.11	66.053	
4,600.00	4,541.29	4,306.10	4,235.33	15.48	15.26	-172.60	702.73	-156.46	1,368.88	1,348.28	20.60	66.459	
4,700.00	4,639.42	4,397.50	4,324.41	15.91	15.68	-172.66	722.43	-161.97	1,409.42	1,388.33	21.08	66.845	
4,800.00	4,737.56	4,488.91	4,413.50	16.34	16.11	-172.71	742.13	-167.49	1,449.96	1,428.39	21.57	67.212	
4,900.00	4,835.69	4,580.31	4,502.59	16.77	16.53	-172.76	761.83	-173.00	1,490.50	1,468.44	22.06	67.562	

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 24-9
Project:	COLORADO NORTHERN ZONE - 83	TVD Reference:	WELL @ 5012.00ft (Original Well Elev)
Reference Site:	WELD_NRC 17-9 PAD	MD Reference:	WELL @ 5012.00ft (Original Well Elev)
Site Error:	0.00ft	North Reference:	True
Reference Well:	P_NRC 24-9	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00ft	Output errors are at	2.00 sigma
Reference Wellbore	P_NRC 24-9	Database:	EDM 2003.21 Single User Db
Reference Design:	PLAN #1 1-5-10 RHS	Offset TVD Reference:	Offset Datum

Offset Design WELD_NRC 17-9 PAD - P_NRC 2-9 - P_NRC 2-9 - PLAN #1 1-5-10 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	4,933.82	4,671.72	4,591.67	17.20	16.96	-172.81	781.52	-178.52	1,531.05	1,508.50	22.55	67.896	
5,100.00	5,031.96	4,763.12	4,680.76	17.63	17.39	-172.86	801.22	-184.03	1,571.59	1,548.55	23.04	68.215	
5,200.00	5,130.09	4,854.53	4,769.85	18.06	17.81	-172.90	820.92	-189.55	1,612.14	1,588.61	23.53	68.519	
5,300.00	5,228.22	4,945.93	4,858.93	18.50	18.24	-172.94	840.62	-195.06	1,652.69	1,628.67	24.02	68.811	
5,400.00	5,326.36	5,037.33	4,948.02	18.93	18.67	-172.98	860.31	-200.58	1,693.23	1,668.72	24.51	69.090	
5,500.00	5,424.49	5,128.74	5,037.11	19.36	19.09	-173.02	880.01	-206.09	1,733.78	1,708.78	25.00	69.357	
5,600.00	5,522.62	5,220.14	5,126.19	19.79	19.52	-173.05	899.71	-211.61	1,774.33	1,748.84	25.49	69.614	
5,700.00	5,620.76	5,311.55	5,215.28	20.22	19.95	-173.09	919.41	-217.12	1,814.88	1,788.90	25.98	69.860	
5,800.00	5,718.89	5,402.95	5,304.37	20.65	20.37	-173.12	939.10	-222.64	1,855.43	1,828.96	26.47	70.097	
5,855.23	5,773.09	5,453.44	5,353.57	20.89	20.61	-173.14	949.98	-225.68	1,877.82	1,851.08	26.74	70.223	
5,900.00	5,817.09	5,494.50	5,393.59	21.06	20.80	-173.20	958.83	-228.16	1,895.66	1,868.63	27.03	70.133	
6,000.00	5,915.80	5,587.18	5,483.92	21.33	21.24	-173.31	978.81	-233.75	1,933.18	1,905.55	27.63	69.956	
6,100.00	6,015.01	5,681.12	5,575.47	21.58	21.68	-173.40	999.05	-239.42	1,967.47	1,939.27	28.21	69.751	
6,200.00	6,114.59	5,776.18	5,668.13	21.78	22.12	-173.46	1,019.53	-245.16	1,998.49	1,969.74	28.75	69.521	
6,300.00	6,214.43	5,869.24	5,761.85	21.95	22.91	-173.49	1,059.66	-256.39	2,024.98	1,995.51	29.47	68.713	
6,409.59	6,324.00	6,352.90	6,238.11	22.11	23.78	-18.97	1,098.05	-267.14	2,038.79	2,008.39	30.41	67.053	
6,500.00	6,414.41	6,529.23	6,414.41	22.22	24.01	-18.96	1,100.50	-267.83	2,039.53	2,008.66	30.87	66.075	
6,600.00	6,514.41	6,629.23	6,514.41	22.34	24.14	-18.96	1,100.50	-267.83	2,039.53	2,008.30	31.23	65.301	
6,700.00	6,614.41	6,729.23	6,614.41	22.45	24.26	-18.96	1,100.50	-267.83	2,039.53	2,007.93	31.60	64.540	
6,800.00	6,714.41	6,829.23	6,714.41	22.57	24.39	-18.96	1,100.50	-267.83	2,039.53	2,007.56	31.97	63.793	
6,900.00	6,814.41	6,929.23	6,814.41	22.69	24.52	-18.96	1,100.50	-267.83	2,039.53	2,007.19	32.34	63.059	
7,000.00	6,914.41	7,029.23	6,914.41	22.81	24.65	-18.96	1,100.50	-267.83	2,039.53	2,006.81	32.72	62.338	
7,100.00	7,014.41	7,129.23	7,014.41	22.94	24.79	-18.96	1,100.50	-267.83	2,039.53	2,006.44	33.09	61.630	
7,200.00	7,114.41	7,229.23	7,114.41	23.06	24.92	-18.96	1,100.50	-267.83	2,039.53	2,006.06	33.47	60.934	
7,300.00	7,214.41	7,329.23	7,214.41	23.19	25.06	-18.96	1,100.50	-267.83	2,039.53	2,005.68	33.85	60.251	
7,400.00	7,314.41	7,429.23	7,314.41	23.32	25.19	-18.96	1,100.50	-267.83	2,039.53	2,005.30	34.23	59.580	
7,500.00	7,414.41	7,529.23	7,414.41	23.44	25.33	-18.96	1,100.50	-267.83	2,039.53	2,004.91	34.61	58.921	
7,600.00	7,514.41	7,629.23	7,514.41	23.57	25.47	-18.96	1,100.50	-267.83	2,039.53	2,004.53	35.00	58.274	
7,700.00	7,614.41	7,729.23	7,614.41	23.71	25.61	-18.96	1,100.50	-267.83	2,039.53	2,004.14	35.38	57.638	
7,800.00	7,714.41	7,829.23	7,714.41	23.84	25.75	-18.96	1,100.50	-267.83	2,039.53	2,003.76	35.77	57.014	
7,900.00	7,814.41	7,929.23	7,814.41	23.97	25.90	-18.96	1,100.50	-267.83	2,039.53	2,003.37	36.16	56.401	
8,000.00	7,914.41	8,029.23	7,914.41	24.11	26.04	-18.96	1,100.50	-267.83	2,039.53	2,002.98	36.55	55.799	
8,100.00	8,014.41	8,129.23	8,014.41	24.25	26.19	-18.96	1,100.50	-267.83	2,039.53	2,002.59	36.94	55.207	
8,200.00	8,114.41	8,229.23	8,114.41	24.39	26.33	-18.96	1,100.50	-267.83	2,039.53	2,002.19	37.34	54.626	
8,300.00	8,214.41	8,329.23	8,214.41	24.53	26.48	-18.96	1,100.50	-267.83	2,039.53	2,001.80	37.73	54.055	
8,334.59	8,249.00	8,363.82	8,249.00	24.57	26.53	-18.96	1,100.50	-267.83	2,039.53	2,001.66	37.87	53.860	

Company:	US ROCKIES REGION PLANNING	Local Co-ordinate Reference:	Well P_NRC 24-9
Project:	COLORADO NORTHERN ZONE - 83	TVD Reference:	WELL @ 5012.00ft (Original Well Elev)
Reference Site:	WELD_NRC 17-9 PAD	MD Reference:	WELL @ 5012.00ft (Original Well Elev)
Site Error:	0.00ft	North Reference:	True
Reference Well:	P_NRC 24-9	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00ft	Output errors are at	2.00 sigma
Reference Wellbore	P_NRC 24-9	Database:	EDM 2003.21 Single User Db
Reference Design:	PLAN #1 1-5-10 RHS	Offset TVD Reference:	Offset Datum

Offset Design WELD_NRC 17-9 PAD - P_NRC 40-9 - P_NRC 40-9 - PLAN #1 1-5-10 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	
0.00	0.00	0.00	0.00	0.00	0.00	13.07	15.67	3.64	16.09				
100.00	100.00	100.00	100.00	0.10	0.10	13.07	15.67	3.64	16.09	15.89	0.19	84.192	
200.00	200.00	200.00	200.00	0.32	0.32	13.07	15.67	3.64	16.09	15.44	0.64	25.110	
300.00	300.00	300.00	300.00	0.55	0.55	13.07	15.67	3.64	16.09	14.99	1.09	14.755	
400.00	400.00	400.00	400.00	0.77	0.77	13.07	15.67	3.64	16.09	14.55	1.54	10.447	
500.00	500.00	500.00	500.00	0.99	0.99	13.07	15.67	3.64	16.09	14.10	1.99	8.086	
600.00	600.00	600.00	600.00	1.22	1.22	13.07	15.67	3.64	16.09	13.65	2.44	6.596	
700.00	700.00	700.00	700.00	1.44	1.44	13.07	15.67	3.64	16.09	13.20	2.89	5.569	
800.00	800.00	800.00	800.00	1.67	1.67	13.07	15.67	3.64	16.09	12.75	3.34	4.819	
900.00	900.00	900.00	900.00	1.89	1.89	13.07	15.67	3.64	16.09	12.30	3.79	4.247	
1,000.00	1,000.00	1,000.00	1,000.00	2.12	2.12	13.07	15.67	3.64	16.09	11.85	4.24	3.796	
1,085.00	1,085.00	1,085.00	1,085.00	2.31	2.31	13.07	15.67	3.64	16.09	11.47	4.62	3.482 CC	
1,100.00	1,100.00	1,100.02	1,100.02	2.34	2.34	-141.39	15.65	3.67	16.11	11.43	4.68	3.442 ES, SF	
1,200.00	1,199.97	1,200.14	1,200.10	2.51	2.53	-138.76	14.62	5.70	17.35	12.32	5.04	3.444	
1,300.00	1,299.80	1,300.16	1,299.96	2.70	2.73	-133.55	12.01	10.84	20.65	15.23	5.42	3.812	
1,400.00	1,399.37	1,400.03	1,399.40	2.90	2.94	-127.98	7.83	19.06	26.16	20.34	5.82	4.495	
1,500.00	1,498.55	1,499.66	1,498.21	3.12	3.17	-123.31	2.09	30.34	33.99	27.72	6.27	5.421	
1,600.00	1,597.23	1,598.98	1,596.23	3.38	3.44	-119.75	-5.17	44.63	44.12	37.34	6.78	6.508	
1,639.36	1,635.91	1,637.98	1,634.55	3.49	3.56	-118.62	-8.44	51.06	48.73	41.72	7.00	6.957	
1,700.00	1,695.41	1,697.94	1,693.28	3.68	3.75	-116.66	-13.94	61.87	56.23	48.86	7.37	7.629	
1,800.00	1,793.55	1,796.49	1,789.20	4.00	4.11	-112.17	-24.17	81.99	69.34	61.30	8.04	8.621	
1,900.00	1,891.68	1,894.39	1,883.67	4.34	4.52	-106.91	-35.81	104.88	83.85	75.06	8.78	9.547	
2,000.00	1,989.82	1,991.44	1,976.39	4.70	4.99	-101.49	-48.78	130.41	100.24	90.67	9.57	10.476	
2,100.00	2,087.95	2,087.43	2,067.10	5.07	5.52	-96.25	-63.01	158.39	118.94	108.56	10.38	11.458	
2,200.00	2,186.08	2,182.16	2,155.53	5.46	6.12	-91.38	-78.39	188.64	140.23	129.03	11.20	12.521	
2,300.00	2,284.22	2,275.45	2,241.48	5.84	6.77	-86.97	-94.83	220.97	164.30	152.29	12.01	13.675	
2,400.00	2,382.35	2,368.25	2,325.81	6.24	7.47	-83.02	-112.38	255.49	191.18	178.36	12.82	14.914	
2,500.00	2,480.48	2,463.55	2,412.07	6.64	8.24	-79.80	-130.75	291.62	219.35	205.72	13.63	16.091	
2,600.00	2,578.62	2,558.86	2,498.33	7.04	9.02	-77.31	-149.11	327.74	248.03	233.58	14.44	17.174	
2,700.00	2,676.75	2,654.16	2,584.58	7.45	9.81	-75.33	-167.48	363.86	277.04	261.79	15.25	18.165	
2,800.00	2,774.88	2,749.46	2,670.84	7.86	10.62	-73.73	-185.85	399.98	306.31	290.24	16.06	19.070	
2,900.00	2,873.02	2,844.76	2,757.10	8.27	11.43	-72.40	-204.21	436.11	335.75	318.88	16.88	19.896	
3,000.00	2,971.15	2,940.06	2,843.36	8.69	12.26	-71.29	-222.58	472.23	365.34	347.65	17.69	20.652	
3,100.00	3,069.28	3,035.37	2,929.61	9.10	13.08	-70.34	-240.94	508.35	395.03	376.52	18.51	21.344	
3,200.00	3,167.42	3,130.67	3,015.87	9.52	13.91	-69.53	-259.31	544.48	424.80	405.48	19.33	21.980	
3,300.00	3,265.55	3,225.97	3,102.13	9.94	14.75	-68.82	-277.67	580.60	454.65	434.50	20.15	22.566	
3,400.00	3,363.69	3,321.27	3,188.38	10.36	15.58	-68.20	-296.04	616.72	484.55	463.58	20.97	23.106	
3,500.00	3,461.82	3,416.57	3,274.64	10.79	16.42	-67.66	-314.41	652.85	514.49	492.70	21.79	23.607	
3,600.00	3,559.95	3,511.88	3,360.90	11.21	17.27	-67.17	-332.77	688.97	544.48	521.86	22.62	24.071	
3,700.00	3,658.09	3,607.18	3,447.16	11.63	18.11	-66.73	-351.14	725.09	574.49	551.04	23.45	24.502	
3,800.00	3,756.22	3,702.48	3,533.41	12.06	18.95	-66.34	-369.50	761.21	604.53	580.26	24.27	24.905	
3,900.00	3,854.35	3,797.78	3,619.67	12.49	19.80	-65.98	-387.87	797.34	634.60	609.50	25.10	25.281	
4,000.00	3,952.49	3,893.08	3,705.93	12.91	20.65	-65.66	-406.24	833.46	664.69	638.76	25.93	25.633	
4,100.00	4,050.62	3,988.39	3,792.18	13.34	21.50	-65.36	-424.60	869.58	694.79	668.03	26.76	25.963	
4,200.00	4,148.75	4,083.69	3,878.44	13.77	22.35	-65.09	-442.97	905.71	724.91	697.32	27.59	26.274	
4,300.00	4,246.89	4,178.99	3,964.70	14.20	23.20	-64.84	-461.33	941.83	755.05	726.63	28.42	26.566	
4,400.00	4,345.02	4,274.29	4,050.96	14.62	24.05	-64.61	-479.70	977.95	785.19	755.94	29.25	26.842	
4,500.00	4,443.15	4,369.59	4,137.21	15.05	24.91	-64.39	-498.07	1,014.08	815.35	785.27	30.08	27.103	
4,600.00	4,541.29	4,464.90	4,223.47	15.48	25.76	-64.19	-516.43	1,050.20	845.52	814.60	30.91	27.351	
4,700.00	4,639.42	4,560.20	4,309.73	15.91	26.61	-64.01	-534.80	1,086.32	875.69	843.95	31.75	27.585	
4,800.00	4,737.56	4,655.50	4,395.98	16.34	27.47	-63.84	-553.16	1,122.44	905.87	873.30	32.58	27.808	
4,900.00	4,835.69	4,750.80	4,482.24	16.77	28.32	-63.68	-571.53	1,158.57	936.06	902.66	33.41	28.020	

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 24-9
Project:	COLORADO NORTHERN ZONE - 83	TVD Reference:	WELL @ 5012.00ft (Original Well Elev)
Reference Site:	WELD_NRC 17-9 PAD	MD Reference:	WELL @ 5012.00ft (Original Well Elev)
Site Error:	0.00ft	North Reference:	True
Reference Well:	P_NRC 24-9	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00ft	Output errors are at	2.00 sigma
Reference Wellbore	P_NRC 24-9	Database:	EDM 2003.21 Single User Db
Reference Design:	PLAN #1 1-5-10 RHS	Offset TVD Reference:	Offset Datum

Offset Design WELD_NRC 17-9 PAD - P_NRC 40-9 - P_NRC 40-9 - PLAN #1 1-5-10 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	4,933.82	4,846.10	4,568.50	17.20	29.18	-63.52	-589.90	1,194.69	966.26	932.02	34.24	28.221	
5,100.00	5,031.96	4,941.41	4,654.75	17.63	30.03	-63.38	-608.26	1,230.81	996.46	961.39	35.07	28.414	
5,200.00	5,130.09	5,036.71	4,741.01	18.06	30.89	-63.25	-626.63	1,266.94	1,026.67	990.77	35.90	28.598	
5,300.00	5,228.22	5,132.01	4,827.27	18.50	31.75	-63.12	-644.99	1,303.06	1,056.88	1,020.15	36.73	28.774	
5,400.00	5,326.36	5,227.31	4,913.53	18.93	32.60	-63.00	-663.36	1,339.18	1,087.10	1,049.53	37.56	28.942	
5,500.00	5,424.49	5,322.61	4,999.78	19.36	33.46	-62.89	-681.73	1,375.31	1,117.32	1,078.92	38.39	29.103	
5,600.00	5,522.62	5,417.92	5,086.04	19.79	34.32	-62.78	-700.09	1,411.43	1,147.54	1,108.32	39.22	29.258	
5,700.00	5,620.76	5,519.13	5,214.98	20.22	35.37	-62.70	-726.18	1,462.75	1,176.23	1,136.04	40.19	29.268	
5,800.00	5,718.89	5,713.48	5,358.93	20.65	36.31	-62.78	-751.39	1,512.32	1,200.39	1,159.20	41.19	29.143	
5,855.23	5,773.09	5,800.16	5,441.03	20.89	36.79	-62.90	-763.99	1,537.11	1,211.71	1,169.95	41.76	29.017	
5,900.00	5,817.09	5,871.02	5,508.74	21.06	37.13	-63.17	-773.45	1,555.72	1,219.96	1,177.74	42.22	28.898	
6,000.00	5,915.80	6,030.90	5,663.28	21.33	37.84	-63.68	-792.00	1,592.20	1,235.97	1,192.89	43.09	28.684	
6,100.00	6,015.01	6,192.68	5,821.72	21.58	38.41	-64.07	-806.76	1,621.23	1,248.57	1,204.75	43.82	28.492	
6,200.00	6,114.59	6,355.93	5,983.21	21.78	38.84	-64.35	-817.52	1,642.39	1,257.66	1,213.26	44.40	28.323	
6,300.00	6,214.43	6,520.17	6,146.78	21.95	39.15	-64.53	-824.12	1,655.38	1,263.18	1,218.33	44.84	28.169	
6,409.59	6,324.00	6,697.49	6,324.00	22.11	39.33	89.92	-826.47	1,659.99	1,265.08	1,219.90	45.17	28.004	
6,500.00	6,414.41	6,787.90	6,414.41	22.22	39.40	89.92	-826.47	1,659.99	1,265.08	1,219.69	45.39	27.871	
6,600.00	6,514.41	6,887.90	6,514.41	22.34	39.47	89.92	-826.47	1,659.99	1,265.08	1,219.46	45.62	27.732	
6,700.00	6,614.41	6,987.90	6,614.41	22.45	39.55	89.92	-826.47	1,659.99	1,265.08	1,219.23	45.85	27.592	
6,800.00	6,714.41	7,087.90	6,714.41	22.57	39.63	89.92	-826.47	1,659.99	1,265.08	1,218.99	46.08	27.451	
6,900.00	6,814.41	7,187.90	6,814.41	22.69	39.70	89.92	-826.47	1,659.99	1,265.08	1,218.76	46.32	27.310	
7,000.00	6,914.41	7,287.90	6,914.41	22.81	39.78	89.92	-826.47	1,659.99	1,265.08	1,218.51	46.56	27.169	
7,100.00	7,014.41	7,387.90	7,014.41	22.94	39.86	89.92	-826.47	1,659.99	1,265.08	1,218.27	46.81	27.027	
7,200.00	7,114.41	7,487.90	7,114.41	23.06	39.94	89.92	-826.47	1,659.99	1,265.08	1,218.02	47.06	26.885	
7,300.00	7,214.41	7,587.90	7,214.41	23.19	40.03	89.92	-826.47	1,659.99	1,265.08	1,217.77	47.31	26.743	
7,400.00	7,314.41	7,687.90	7,314.41	23.32	40.11	89.92	-826.47	1,659.99	1,265.08	1,217.52	47.56	26.600	
7,500.00	7,414.41	7,787.90	7,414.41	23.44	40.19	89.92	-826.47	1,659.99	1,265.08	1,217.26	47.82	26.458	
7,600.00	7,514.41	7,887.90	7,514.41	23.57	40.28	89.92	-826.47	1,659.99	1,265.08	1,217.00	48.07	26.315	
7,700.00	7,614.41	7,987.90	7,614.41	23.71	40.36	89.92	-826.47	1,659.99	1,265.08	1,216.74	48.34	26.173	
7,800.00	7,714.41	8,087.90	7,714.41	23.84	40.45	89.92	-826.47	1,659.99	1,265.08	1,216.48	48.60	26.030	
7,900.00	7,814.41	8,187.90	7,814.41	23.97	40.54	89.92	-826.47	1,659.99	1,265.08	1,216.21	48.87	25.888	
8,000.00	7,914.41	8,287.90	7,914.41	24.11	40.63	89.92	-826.47	1,659.99	1,265.08	1,215.94	49.14	25.746	
8,100.00	8,014.41	8,387.90	8,014.41	24.25	40.72	89.92	-826.47	1,659.99	1,265.08	1,215.67	49.41	25.604	
8,200.00	8,114.41	8,487.90	8,114.41	24.39	40.81	89.92	-826.47	1,659.99	1,265.08	1,215.39	49.68	25.462	
8,300.00	8,214.41	8,587.90	8,214.41	24.53	40.91	89.92	-826.47	1,659.99	1,265.08	1,215.12	49.96	25.321	
8,321.11	8,235.52	8,609.01	8,235.52	24.56	40.93	89.92	-826.47	1,659.99	1,265.08	1,215.06	50.02	25.291	
8,334.59	8,249.00	8,617.49	8,244.00	24.57	40.93	89.92	-826.47	1,659.99	1,265.09	1,215.04	50.05	25.275	

Company:	US ROCKIES REGION PLANNING	Local Co-ordinate Reference:	Well P_NRC 24-9
Project:	COLORADO NORTHERN ZONE - 83	TVD Reference:	WELL @ 5012.00ft (Original Well Elev)
Reference Site:	WELD_NRC 17-9 PAD	MD Reference:	WELL @ 5012.00ft (Original Well Elev)
Site Error:	0.00ft	North Reference:	True
Reference Well:	P_NRC 24-9	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00ft	Output errors are at	2.00 sigma
Reference Wellbore	P_NRC 24-9	Database:	EDM 2003.21 Single User Db
Reference Design:	PLAN #1 1-5-10 RHS	Offset TVD Reference:	Offset Datum

Offset Design WELD_NRC 17-9 PAD - P_NRC 41-9 - P_NRC 41-9 - PLAN #1 1-5-10 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	13.50	46.64	11.19	47.96				
100.00	100.00	100.00	100.00	0.10	0.10	13.50	46.64	11.19	47.96	47.77	0.19	251.036	
200.00	200.00	200.00	200.00	0.32	0.32	13.50	46.64	11.19	47.96	47.32	0.64	74.870	
300.00	300.00	300.00	300.00	0.55	0.55	13.50	46.64	11.19	47.96	46.87	1.09	43.996	
400.00	400.00	400.00	400.00	0.77	0.77	13.50	46.64	11.19	47.96	46.42	1.54	31.150	
500.00	500.00	500.00	500.00	0.99	0.99	13.50	46.64	11.19	47.96	45.97	1.99	24.111	
600.00	600.00	600.00	600.00	1.22	1.22	13.50	46.64	11.19	47.96	45.52	2.44	19.666	
700.00	700.00	700.00	700.00	1.44	1.44	13.50	46.64	11.19	47.96	45.07	2.89	16.606	
800.00	800.00	800.00	800.00	1.67	1.67	13.50	46.64	11.19	47.96	44.62	3.34	14.369	
900.00	900.00	900.00	900.00	1.89	1.89	13.50	46.64	11.19	47.96	44.17	3.79	12.664	
1,000.00	1,000.00	1,000.00	1,000.00	2.12	2.12	13.50	46.64	11.19	47.96	43.72	4.24	11.320	
1,085.00	1,085.00	1,085.00	1,085.00	2.31	2.31	13.50	46.64	11.19	47.96	43.34	4.62	10.383 CC	
1,100.00	1,100.00	1,099.88	1,099.88	2.34	2.34	-141.00	46.65	11.23	48.01	43.33	4.68	10.258 ES	
1,200.00	1,199.97	1,199.01	1,198.98	2.51	2.55	-140.35	47.22	13.39	50.85	45.79	5.06	10.056 SF	
1,300.00	1,299.80	1,297.81	1,297.62	2.70	2.76	-138.98	48.68	18.83	58.07	52.62	5.44	10.665	
1,400.00	1,399.37	1,395.99	1,395.38	2.90	2.98	-137.35	51.00	27.48	69.68	63.83	5.85	11.912	
1,500.00	1,498.55	1,493.27	1,491.88	3.12	3.22	-135.79	54.15	39.25	85.66	79.38	6.28	13.644	
1,600.00	1,597.23	1,589.38	1,586.78	3.38	3.48	-134.44	58.09	53.97	105.95	99.21	6.74	15.719	
1,639.36	1,635.91	1,626.84	1,623.61	3.49	3.60	-133.97	59.85	60.54	115.11	108.17	6.94	16.597	
1,700.00	1,695.41	1,684.18	1,679.83	3.68	3.78	-133.32	62.79	71.50	130.06	122.80	7.26	17.920	
1,800.00	1,793.55	1,777.86	1,771.13	4.00	4.11	-131.76	68.21	91.73	156.25	148.42	7.83	19.963	
1,900.00	1,891.68	1,870.28	1,860.48	4.34	4.48	-129.89	74.31	114.51	184.46	176.02	8.44	21.862	
2,000.00	1,989.82	1,961.27	1,947.67	4.70	4.90	-127.89	81.04	139.64	214.79	205.71	9.08	23.643	
2,100.00	2,087.95	2,050.68	2,032.50	5.07	5.36	-125.88	88.35	166.93	247.33	237.56	9.76	25.331	
2,200.00	2,186.08	2,138.40	2,114.82	5.46	5.87	-123.92	96.18	196.17	282.13	271.66	10.47	26.950	
2,300.00	2,284.22	2,224.79	2,194.96	5.84	6.42	-122.04	104.52	227.33	319.22	308.03	11.19	28.523	
2,400.00	2,382.35	2,316.69	2,279.76	6.24	7.05	-120.30	113.68	261.54	357.46	345.50	11.97	29.867	
2,500.00	2,480.48	2,408.60	2,364.57	6.64	7.69	-118.89	122.85	295.75	395.94	383.19	12.75	31.050	
2,600.00	2,578.62	2,500.50	2,449.38	7.04	8.36	-117.74	132.01	329.96	434.58	421.04	13.54	32.094	
2,700.00	2,676.75	2,592.41	2,534.19	7.45	9.03	-116.77	141.17	364.17	473.36	459.02	14.34	33.019	
2,800.00	2,774.88	2,684.31	2,618.99	7.86	9.71	-115.95	150.33	398.38	512.23	497.09	15.13	33.844	
2,900.00	2,873.02	2,776.22	2,703.80	8.27	10.40	-115.24	159.49	432.59	551.17	535.24	15.94	34.585	
3,000.00	2,971.15	2,868.12	2,788.61	8.69	11.10	-114.62	168.66	466.80	590.18	573.44	16.74	35.253	
3,100.00	3,069.28	2,960.03	2,873.41	9.10	11.80	-114.09	177.82	501.01	629.24	611.69	17.55	35.858	
3,200.00	3,167.42	3,051.93	2,958.22	9.52	12.50	-113.61	186.98	535.22	668.34	649.98	18.36	36.404	
3,300.00	3,265.55	3,143.84	3,043.03	9.94	13.21	-113.19	196.14	569.43	707.48	688.30	19.18	36.894	
3,400.00	3,363.69	3,235.74	3,127.84	10.36	13.92	-112.81	205.30	603.64	746.64	726.65	20.00	37.341	
3,500.00	3,461.82	3,327.65	3,212.64	10.79	14.64	-112.47	214.47	637.85	785.83	765.01	20.82	37.750	
3,600.00	3,559.95	3,419.55	3,297.45	11.21	15.35	-112.16	223.63	672.06	825.04	803.40	21.64	38.126	
3,700.00	3,658.09	3,511.45	3,382.26	11.63	16.07	-111.88	232.79	706.27	864.27	841.81	22.47	38.472	
3,800.00	3,756.22	3,603.36	3,467.07	12.06	16.79	-111.62	241.95	740.47	903.52	880.23	23.29	38.792	
3,900.00	3,854.35	3,695.26	3,551.87	12.49	17.51	-111.39	251.12	774.68	942.78	918.66	24.12	39.088	
4,000.00	3,952.49	3,787.17	3,636.68	12.91	18.23	-111.17	260.28	808.89	982.05	957.10	24.95	39.363	
4,100.00	4,050.62	3,879.07	3,721.49	13.34	18.95	-110.97	269.44	843.10	1,021.33	995.56	25.78	39.619	
4,200.00	4,148.75	3,970.98	3,806.30	13.77	19.68	-110.79	278.60	877.31	1,060.63	1,034.02	26.61	39.858	
4,300.00	4,246.89	4,062.88	3,891.10	14.20	20.40	-110.62	287.76	911.52	1,099.93	1,072.49	27.44	40.082	
4,400.00	4,345.02	4,154.79	3,975.91	14.62	21.13	-110.46	296.93	945.73	1,139.24	1,110.96	28.28	40.291	
4,500.00	4,443.15	4,246.69	4,060.72	15.05	21.85	-110.31	306.09	979.94	1,178.55	1,149.45	29.11	40.488	
4,600.00	4,541.29	4,338.60	4,145.53	15.48	22.58	-110.17	315.25	1,014.15	1,217.88	1,187.93	29.94	40.673	
4,700.00	4,639.42	4,430.50	4,230.33	15.91	23.31	-110.04	324.41	1,048.36	1,257.21	1,226.43	30.78	40.847	
4,800.00	4,737.56	4,522.41	4,315.14	16.34	24.03	-109.91	333.57	1,082.57	1,296.54	1,264.93	31.61	41.011	
4,900.00	4,835.69	4,614.31	4,399.95	16.77	24.76	-109.80	342.74	1,116.78	1,335.88	1,303.43	32.45	41.167	

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 24-9
Project:	COLORADO NORTHERN ZONE - 83	TVD Reference:	WELL @ 5012.00ft (Original Well Elev)
Reference Site:	WELD_NRC 17-9 PAD	MD Reference:	WELL @ 5012.00ft (Original Well Elev)
Site Error:	0.00ft	North Reference:	True
Reference Well:	P_NRC 24-9	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00ft	Output errors are at	2.00 sigma
Reference Wellbore	P_NRC 24-9	Database:	EDM 2003.21 Single User Db
Reference Design:	PLAN #1 1-5-10 RHS	Offset TVD Reference:	Offset Datum

Offset Design WELD_NRC 17-9 PAD - P_NRC 41-9 - P_NRC 41-9 - PLAN #1 1-5-10 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	4,933.82	4,706.22	4,484.75	17.20	25.49	-109.69	351.90	1,150.99	1,375.22	1,341.93	33.29	41.314	
5,100.00	5,031.96	4,798.12	4,569.56	17.63	26.22	-109.59	361.06	1,185.20	1,414.57	1,380.44	34.12	41.453	
5,200.00	5,130.09	4,890.03	4,654.37	18.06	26.95	-109.49	370.22	1,219.41	1,453.92	1,418.96	34.96	41.585	
5,300.00	5,228.22	4,981.93	4,739.18	18.50	27.68	-109.40	379.38	1,253.62	1,493.27	1,457.47	35.80	41.711	
5,400.00	5,326.36	5,073.84	4,823.98	18.93	28.41	-109.31	388.55	1,287.83	1,532.63	1,495.99	36.64	41.830	
5,500.00	5,424.49	5,165.74	4,908.79	19.36	29.14	-109.22	397.71	1,322.04	1,571.99	1,534.51	37.48	41.944	
5,600.00	5,522.62	5,257.65	4,993.60	19.79	29.87	-109.15	406.87	1,356.24	1,611.35	1,573.03	38.32	42.053	
5,700.00	5,620.76	5,349.55	5,078.41	20.22	30.60	-109.07	416.03	1,390.45	1,650.72	1,611.56	39.16	42.157	
5,800.00	5,718.89	5,441.46	5,163.21	20.65	31.33	-109.00	425.19	1,424.66	1,690.08	1,650.09	40.00	42.256	
5,855.23	5,773.09	5,492.22	5,210.05	20.89	31.74	-108.96	430.25	1,443.56	1,711.83	1,671.37	40.46	42.309	
5,900.00	5,817.09	5,565.65	5,278.08	21.06	32.25	-109.25	437.41	1,470.28	1,729.06	1,688.03	41.03	42.138	
6,000.00	5,915.80	5,761.87	5,463.06	21.33	33.36	-109.76	454.31	1,533.39	1,762.98	1,720.77	42.21	41.770	
6,100.00	6,015.01	5,966.71	5,660.46	21.58	34.29	-110.15	468.42	1,586.05	1,790.08	1,746.85	43.23	41.405	
6,200.00	6,114.59	6,178.59	5,868.21	21.78	35.02	-110.41	479.13	1,626.06	1,809.97	1,765.87	44.10	41.043	
6,300.00	6,214.43	6,395.53	6,083.48	21.95	35.53	-110.57	485.96	1,651.54	1,822.34	1,777.55	44.78	40.691	
6,409.59	6,324.00	6,636.33	6,324.00	22.11	35.84	43.88	488.57	1,661.31	1,827.02	1,781.70	45.32	40.311	
6,500.00	6,414.41	6,726.74	6,414.41	22.22	35.91	43.88	488.57	1,661.31	1,827.02	1,781.48	45.54	40.117	
6,600.00	6,514.41	6,826.74	6,514.41	22.34	36.00	43.88	488.57	1,661.31	1,827.02	1,781.24	45.78	39.904	
6,700.00	6,614.41	6,926.74	6,614.41	22.45	36.08	43.88	488.57	1,661.31	1,827.02	1,780.99	46.03	39.692	
6,800.00	6,714.41	7,026.74	6,714.41	22.57	36.17	43.88	488.57	1,661.31	1,827.02	1,780.74	46.28	39.479	
6,900.00	6,814.41	7,126.74	6,814.41	22.69	36.26	43.88	488.57	1,661.31	1,827.02	1,780.49	46.53	39.265	
7,000.00	6,914.41	7,226.74	6,914.41	22.81	36.35	43.88	488.57	1,661.31	1,827.02	1,780.24	46.78	39.052	
7,100.00	7,014.41	7,326.74	7,014.41	22.94	36.44	43.88	488.57	1,661.31	1,827.02	1,779.98	47.04	38.838	
7,200.00	7,114.41	7,426.74	7,114.41	23.06	36.54	43.88	488.57	1,661.31	1,827.02	1,779.72	47.30	38.625	
7,300.00	7,214.41	7,526.74	7,214.41	23.19	36.63	43.88	488.57	1,661.31	1,827.02	1,779.46	47.56	38.411	
7,400.00	7,314.41	7,626.74	7,314.41	23.32	36.73	43.88	488.57	1,661.31	1,827.02	1,779.19	47.83	38.198	
7,500.00	7,414.41	7,726.74	7,414.41	23.44	36.82	43.88	488.57	1,661.31	1,827.02	1,778.92	48.10	37.985	
7,600.00	7,514.41	7,826.74	7,514.41	23.57	36.92	43.88	488.57	1,661.31	1,827.02	1,778.65	48.37	37.772	
7,700.00	7,614.41	7,926.74	7,614.41	23.71	37.02	43.88	488.57	1,661.31	1,827.02	1,778.38	48.64	37.559	
7,800.00	7,714.41	8,026.74	7,714.41	23.84	37.12	43.88	488.57	1,661.31	1,827.02	1,778.10	48.92	37.347	
7,900.00	7,814.41	8,126.74	7,814.41	23.97	37.22	43.88	488.57	1,661.31	1,827.02	1,777.82	49.20	37.135	
8,000.00	7,914.41	8,226.74	7,914.41	24.11	37.32	43.88	488.57	1,661.31	1,827.02	1,777.54	49.48	36.924	
8,100.00	8,014.41	8,326.74	8,014.41	24.25	37.42	43.88	488.57	1,661.31	1,827.02	1,777.26	49.77	36.713	
8,200.00	8,114.41	8,426.74	8,114.41	24.39	37.53	43.88	488.57	1,661.31	1,827.02	1,776.97	50.05	36.503	
8,300.00	8,214.41	8,526.74	8,214.41	24.53	37.63	43.88	488.57	1,661.31	1,827.02	1,776.68	50.34	36.293	
8,334.59	8,249.00	8,561.33	8,249.00	24.57	37.67	43.88	488.57	1,661.31	1,827.02	1,776.58	50.44	36.221	

Company:	US ROCKIES REGION PLANNING	Local Co-ordinate Reference:	Well P_NRC 24-9
Project:	COLORADO NORTHERN ZONE - 83	TVD Reference:	WELL @ 5012.00ft (Original Well Elev)
Reference Site:	WELD_NRC 17-9 PAD	MD Reference:	WELL @ 5012.00ft (Original Well Elev)
Site Error:	0.00ft	North Reference:	True
Reference Well:	P_NRC 24-9	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00ft	Output errors are at	2.00 sigma
Reference Wellbore	P_NRC 24-9	Database:	EDM 2003.21 Single User Db
Reference Design:	PLAN #1 1-5-10 RHS	Offset TVD Reference:	Offset Datum

Offset Design WELD_NRC 17-9 PAD - P_NRC 7-9 - P_NRC 7-9 - Design #1													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)	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	13.39	62.30	14.83	64.04					
100.00	100.00	100.00	100.00	0.10	0.10	13.39	62.30	14.83	64.04	63.85	0.19	335.184		
200.00	200.00	200.00	200.00	0.32	0.32	13.39	62.30	14.83	64.04	63.40	0.64	99.967		
300.00	300.00	300.00	300.00	0.55	0.55	13.39	62.30	14.83	64.04	62.95	1.09	58.744		
400.00	400.00	400.00	400.00	0.77	0.77	13.39	62.30	14.83	64.04	62.50	1.54	41.592		
500.00	500.00	500.00	500.00	0.99	0.99	13.39	62.30	14.83	64.04	62.05	1.99	32.193		
600.00	600.00	600.00	600.00	1.22	1.22	13.39	62.30	14.83	64.04	61.60	2.44	26.259		
700.00	700.00	700.00	700.00	1.44	1.44	13.39	62.30	14.83	64.04	61.15	2.89	22.172		
800.00	800.00	800.00	800.00	1.67	1.67	13.39	62.30	14.83	64.04	60.70	3.34	19.186		
900.00	900.00	900.00	900.00	1.89	1.89	13.39	62.30	14.83	64.04	60.25	3.79	16.908		
1,000.00	1,000.00	1,000.00	1,000.00	2.12	2.12	13.39	62.30	14.83	64.04	59.80	4.24	15.114		
1,085.00	1,085.00	1,085.00	1,085.00	2.31	2.31	13.39	62.30	14.83	64.04	59.42	4.62	13.864		
1,100.00	1,100.00	1,100.29	1,100.29	2.34	2.34	-141.16	62.27	14.80	64.03	59.35	4.68	13.686		
1,200.00	1,199.97	1,202.18	1,202.15	2.51	2.52	-143.55	60.59	13.15	63.88	58.84	5.03	12.690		
1,244.33	1,244.24	1,247.27	1,247.18	2.59	2.61	-145.79	59.02	11.61	63.83	58.63	5.20	12.282 CC		
1,300.00	1,299.80	1,303.78	1,303.57	2.70	2.72	-149.62	56.34	8.98	63.97	58.57	5.40	11.844 ES		
1,400.00	1,399.37	1,404.84	1,404.18	2.90	2.92	-159.05	49.57	2.33	65.57	59.79	5.78	11.342 SF		
1,500.00	1,498.55	1,504.32	1,502.92	3.12	3.15	-170.12	40.98	-6.12	70.81	64.63	6.17	11.468		
1,600.00	1,597.23	1,602.93	1,600.78	3.38	3.39	-179.51	32.31	-14.63	81.71	75.13	6.58	12.415		
1,639.36	1,635.91	1,641.62	1,639.18	3.49	3.49	177.49	28.91	-17.97	87.45	80.70	6.75	12.960		
1,700.00	1,695.41	1,701.16	1,698.27	3.68	3.65	173.60	23.68	-23.11	97.09	90.05	7.03	13.807		
1,800.00	1,793.55	1,799.36	1,795.72	4.00	3.91	168.66	15.06	-31.59	113.72	106.20	7.52	15.118		
1,900.00	1,891.68	1,897.56	1,893.16	4.34	4.18	164.99	6.43	-40.07	130.98	122.94	8.04	16.301		
2,000.00	1,989.82	1,995.75	1,990.61	4.70	4.46	162.18	-2.20	-48.55	148.64	140.07	8.57	17.351		
2,100.00	2,087.95	2,093.95	2,088.06	5.07	4.74	159.96	-10.83	-57.03	166.57	157.45	9.11	18.278		
2,200.00	2,186.08	2,192.15	2,185.51	5.46	5.03	158.18	-19.45	-65.51	184.69	175.02	9.67	19.094		
2,300.00	2,284.22	2,290.34	2,282.96	5.84	5.33	156.72	-28.08	-73.99	202.96	192.72	10.24	19.814		
2,400.00	2,382.35	2,388.54	2,380.41	6.24	5.62	155.49	-36.71	-82.47	221.34	210.51	10.82	20.451		
2,500.00	2,480.48	2,486.74	2,477.86	6.64	5.92	154.46	-45.34	-90.95	239.79	228.38	11.41	21.016		
2,600.00	2,578.62	2,584.93	2,575.31	7.04	6.22	153.57	-53.96	-99.42	258.32	246.31	12.00	21.520		
2,700.00	2,676.75	2,683.13	2,672.75	7.45	6.53	152.81	-62.59	-107.90	276.89	264.29	12.60	21.971		
2,800.00	2,774.88	2,781.33	2,770.20	7.86	6.83	152.13	-71.22	-116.38	295.51	282.30	13.21	22.377		
2,900.00	2,873.02	2,879.52	2,867.65	8.27	7.14	151.54	-79.84	-124.86	314.16	300.34	13.81	22.743		
3,000.00	2,971.15	2,977.72	2,965.10	8.69	7.45	151.02	-88.47	-133.34	332.84	318.41	14.43	23.071		
3,100.00	3,069.28	3,075.92	3,062.55	9.10	7.76	150.55	-97.10	-141.82	351.54	336.50	15.04	23.368		
3,200.00	3,167.42	3,174.11	3,160.00	9.52	8.07	150.13	-105.73	-150.30	370.26	354.60	15.66	23.639		
3,300.00	3,265.55	3,272.31	3,257.45	9.94	8.38	149.74	-114.35	-158.78	389.01	372.72	16.29	23.887		
3,400.00	3,363.69	3,370.51	3,354.90	10.36	8.69	149.40	-122.98	-167.25	407.76	390.85	16.91	24.113		
3,500.00	3,461.82	3,468.70	3,452.34	10.79	9.00	149.08	-131.61	-175.73	426.53	409.00	17.54	24.322		
3,600.00	3,559.95	3,566.90	3,549.79	11.21	9.32	148.79	-140.24	-184.21	445.31	427.15	18.17	24.514		
3,700.00	3,658.09	3,665.10	3,647.24	11.63	9.63	148.53	-148.86	-192.69	464.11	445.31	18.80	24.692		
3,800.00	3,756.22	3,763.29	3,744.69	12.06	9.95	148.28	-157.49	-201.17	482.91	463.48	19.43	24.857		
3,900.00	3,854.35	3,861.49	3,842.14	12.49	10.26	148.05	-166.12	-209.65	501.71	481.65	20.06	25.010		
4,000.00	3,952.49	3,959.69	3,939.59	12.91	10.58	147.84	-174.74	-218.13	520.53	499.83	20.70	25.152		
4,100.00	4,050.62	4,057.88	4,037.04	13.34	10.90	147.65	-183.37	-226.61	539.35	518.02	21.33	25.285		
4,200.00	4,148.75	4,156.08	4,134.49	13.77	11.21	147.46	-192.00	-235.08	558.18	536.21	21.97	25.409		
4,300.00	4,246.89	4,254.28	4,231.93	14.20	11.53	147.29	-200.63	-243.56	577.01	554.41	22.60	25.526		
4,400.00	4,345.02	4,352.47	4,329.38	14.62	11.85	147.13	-209.25	-252.04	595.85	572.61	23.24	25.635		
4,500.00	4,443.15	4,450.67	4,426.83	15.05	12.16	146.98	-217.88	-260.52	614.69	590.81	23.88	25.738		
4,600.00	4,541.29	4,548.87	4,524.28	15.48	12.48	146.84	-226.51	-269.00	633.54	609.01	24.52	25.835		
4,700.00	4,639.42	4,647.06	4,621.73	15.91	12.80	146.71	-235.14	-277.48	652.38	627.22	25.16	25.927		
4,800.00	4,737.56	4,745.26	4,719.18	16.34	13.12	146.58	-243.76	-285.96	671.24	645.43	25.80	26.013		

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 24-9
Project:	COLORADO NORTHERN ZONE - 83	TVD Reference:	WELL @ 5012.00ft (Original Well Elev)
Reference Site:	WELD_NRC 17-9 PAD	MD Reference:	WELL @ 5012.00ft (Original Well Elev)
Site Error:	0.00ft	North Reference:	True
Reference Well:	P_NRC 24-9	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00ft	Output errors are at	2.00 sigma
Reference Wellbore	P_NRC 24-9	Database:	EDM 2003.21 Single User Db
Reference Design:	PLAN #1 1-5-10 RHS	Offset TVD Reference:	Offset Datum

Offset Design WELD_NRC 17-9 PAD - P_NRC 7-9 - P_NRC 7-9 - Design #1												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	4,835.69	4,843.46	4,816.63	16.77	13.44	146.47	-252.39	-294.44	690.09	663.64	26.45	26.095	
5,000.00	4,933.82	4,941.65	4,914.08	17.20	13.76	146.35	-261.02	-302.92	708.95	681.86	27.09	26.172	
5,100.00	5,031.96	5,039.85	5,011.52	17.63	14.08	146.25	-269.64	-311.39	727.81	700.08	27.73	26.246	
5,200.00	5,130.09	5,138.05	5,108.97	18.06	14.39	146.15	-278.27	-319.87	746.67	718.30	28.37	26.315	
5,300.00	5,228.22	5,236.24	5,206.42	18.50	14.71	146.05	-286.90	-328.35	765.53	736.52	29.02	26.382	
5,400.00	5,326.36	5,334.44	5,303.87	18.93	15.03	145.96	-295.53	-336.83	784.40	754.74	29.66	26.445	
5,500.00	5,424.49	5,432.64	5,401.32	19.36	15.35	145.87	-304.15	-345.31	803.27	772.96	30.31	26.505	
5,600.00	5,522.62	5,530.83	5,498.77	19.79	15.67	145.79	-312.78	-353.79	822.14	791.19	30.95	26.563	
5,700.00	5,620.76	5,629.03	5,596.22	20.22	15.99	145.71	-321.41	-362.27	841.01	809.41	31.60	26.618	
5,800.00	5,718.89	5,727.23	5,693.67	20.65	16.31	145.63	-330.04	-370.75	859.88	827.64	32.24	26.670	
5,855.23	5,773.09	5,781.46	5,747.49	20.89	16.49	145.59	-334.80	-375.43	870.31	837.71	32.60	26.698	
5,900.00	5,817.09	5,825.47	5,791.16	21.06	16.63	145.64	-338.67	-379.23	878.47	845.57	32.90	26.702	
6,000.00	5,915.80	5,924.11	5,889.05	21.33	16.95	145.63	-347.33	-387.75	894.66	861.14	33.52	26.691	
6,100.00	6,015.01	6,024.90	5,989.09	21.58	17.27	145.48	-356.12	-396.38	908.00	873.90	34.11	26.622	
6,200.00	6,114.59	6,132.94	6,096.62	21.78	17.53	145.30	-363.55	-403.68	917.87	883.26	34.60	26.525	
6,300.00	6,214.43	6,241.58	6,205.06	21.95	17.73	145.20	-368.10	-408.15	923.93	888.94	34.99	26.408	
6,409.59	6,324.00	6,360.55	6,324.00	22.11	17.93	-60.32	-369.72	-409.74	926.18	890.85	35.34	26.210	
6,500.00	6,414.41	6,450.96	6,414.41	22.22	18.06	-60.32	-369.72	-409.74	926.18	890.57	35.61	26.007	
6,600.00	6,514.41	6,550.96	6,514.41	22.34	18.21	-60.32	-369.72	-409.74	926.18	890.28	35.90	25.798	
6,700.00	6,614.41	6,650.96	6,614.41	22.45	18.35	-60.32	-369.72	-409.74	926.18	889.99	36.19	25.590	
6,800.00	6,714.41	6,750.96	6,714.41	22.57	18.50	-60.32	-369.72	-409.74	926.18	889.70	36.49	25.383	
6,900.00	6,814.41	6,850.96	6,814.41	22.69	18.65	-60.32	-369.72	-409.74	926.18	889.40	36.79	25.178	
7,000.00	6,914.41	6,950.96	6,914.41	22.81	18.81	-60.32	-369.72	-409.74	926.18	889.10	37.09	24.973	
7,100.00	7,014.41	7,050.96	7,014.41	22.94	18.96	-60.32	-369.72	-409.74	926.18	888.79	37.39	24.770	
7,200.00	7,114.41	7,150.96	7,114.41	23.06	19.11	-60.32	-369.72	-409.74	926.18	888.49	37.70	24.569	
7,300.00	7,214.41	7,250.96	7,214.41	23.19	19.27	-60.32	-369.72	-409.74	926.18	888.18	38.01	24.368	
7,400.00	7,314.41	7,350.96	7,314.41	23.32	19.43	-60.32	-369.72	-409.74	926.18	887.86	38.32	24.170	
7,500.00	7,414.41	7,450.96	7,414.41	23.44	19.59	-60.32	-369.72	-409.74	926.18	887.55	38.64	23.972	
7,600.00	7,514.41	7,550.96	7,514.41	23.57	19.75	-60.32	-369.72	-409.74	926.18	887.23	38.95	23.777	
7,700.00	7,614.41	7,650.96	7,614.41	23.71	19.91	-60.32	-369.72	-409.74	926.18	886.91	39.27	23.583	
7,800.00	7,714.41	7,750.96	7,714.41	23.84	20.07	-60.32	-369.72	-409.74	926.18	886.59	39.60	23.390	
7,900.00	7,814.41	7,850.96	7,814.41	23.97	20.24	-60.32	-369.72	-409.74	926.18	886.26	39.92	23.200	
8,000.00	7,914.41	7,950.96	7,914.41	24.11	20.40	-60.32	-369.72	-409.74	926.18	885.93	40.25	23.011	
8,100.00	8,014.41	8,050.96	8,014.41	24.25	20.57	-60.32	-369.72	-409.74	926.18	885.60	40.58	22.824	
8,200.00	8,114.41	8,150.96	8,114.41	24.39	20.73	-60.32	-369.72	-409.74	926.18	885.27	40.91	22.638	
8,300.00	8,214.41	8,250.96	8,214.41	24.53	20.90	-60.32	-369.72	-409.74	926.18	884.94	41.25	22.454	
8,334.59	8,249.00	8,285.55	8,249.00	24.57	20.96	-60.32	-369.72	-409.74	926.18	884.82	41.36	22.391	

Company:	US ROCKIES REGION PLANNING	Local Co-ordinate Reference:	Well P_NRC 24-9
Project:	COLORADO NORTHERN ZONE - 83	TVD Reference:	WELL @ 5012.00ft (Original Well Elev)
Reference Site:	WELD_NRC 17-9 PAD	MD Reference:	WELL @ 5012.00ft (Original Well Elev)
Site Error:	0.00ft	North Reference:	True
Reference Well:	P_NRC 24-9	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00ft	Output errors are at	2.00 sigma
Reference Wellbore	P_NRC 24-9	Database:	EDM 2003.21 Single User Db
Reference Design:	PLAN #1 1-5-10 RHS	Offset TVD Reference:	Offset Datum

Offset Design WELD_NRC 17-9 PAD - P_NRC 8-9 - P_NRC 8-9 - PLAN #1 1-5-10 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	
0.00	0.00	0.00	0.00	0.00	0.00	13.56	31.34	7.56	32.23				
100.00	100.00	100.00	100.00	0.10	0.09	13.56	31.34	7.56	32.23	32.05	0.19	172.787	
200.00	200.00	200.00	200.00	0.32	0.32	13.56	31.34	7.56	32.23	31.60	0.64	50.676	
300.00	300.00	300.00	300.00	0.55	0.54	13.56	31.34	7.56	32.23	31.15	1.09	29.692	
400.00	400.00	400.00	400.00	0.77	0.77	13.56	31.34	7.56	32.23	30.70	1.54	20.998	
500.00	500.00	500.00	500.00	0.99	0.99	13.56	31.34	7.56	32.23	30.25	1.98	16.242	
600.00	600.00	600.00	600.00	1.22	1.21	13.56	31.34	7.56	32.23	29.80	2.43	13.242	
700.00	700.00	700.00	700.00	1.44	1.44	13.56	31.34	7.56	32.23	29.35	2.88	11.178	
800.00	800.00	800.00	800.00	1.67	1.66	13.56	31.34	7.56	32.23	28.90	3.33	9.671	
900.00	900.00	900.00	900.00	1.89	1.89	13.56	31.34	7.56	32.23	28.45	3.78	8.521	
1,000.00	1,000.00	1,000.00	1,000.00	2.12	2.11	13.56	31.34	7.56	32.23	28.00	4.23	7.616	
1,085.00	1,085.00	1,085.00	1,085.00	2.31	2.30	13.56	31.34	7.56	32.23	27.62	4.61	6.986 CC	
1,100.00	1,100.00	1,100.00	1,100.00	2.34	2.34	-140.93	31.33	7.59	32.27	27.59	4.67	6.902 ES	
1,200.00	1,199.97	1,199.96	1,199.93	2.51	2.53	-139.49	30.80	9.80	34.04	29.00	5.04	6.755 SF	
1,300.00	1,299.80	1,299.77	1,299.57	2.70	2.73	-136.45	29.47	15.38	38.63	33.21	5.42	7.126	
1,400.00	1,399.37	1,399.29	1,398.66	2.90	2.95	-132.83	27.34	24.31	46.15	40.33	5.83	7.921	
1,500.00	1,498.55	1,498.38	1,496.95	3.12	3.19	-129.41	24.43	36.52	56.69	50.42	6.27	9.041	
1,600.00	1,597.23	1,596.93	1,594.21	3.38	3.46	-126.52	20.75	51.93	70.24	63.48	6.77	10.382	
1,639.36	1,635.91	1,635.55	1,632.16	3.49	3.58	-125.54	19.10	58.86	76.40	69.42	6.98	10.941	
1,700.00	1,695.41	1,694.86	1,690.26	3.68	3.76	-124.00	16.33	70.46	86.43	79.10	7.34	11.780	
1,800.00	1,793.55	1,792.73	1,785.64	4.00	4.11	-120.89	11.25	91.79	103.82	95.84	7.98	13.009	
1,900.00	1,891.68	1,891.03	1,881.34	4.34	4.49	-118.47	6.04	113.63	121.59	112.92	8.67	14.031	
2,000.00	1,989.82	1,989.32	1,977.04	4.70	4.89	-116.67	0.83	135.46	139.51	130.13	9.38	14.877	
2,100.00	2,087.95	2,087.62	2,072.74	5.07	5.31	-115.28	-4.38	157.30	157.54	147.43	10.11	15.580	
2,200.00	2,186.08	2,185.92	2,168.44	5.46	5.73	-114.17	-9.58	179.14	175.64	164.78	10.86	16.170	
2,300.00	2,284.22	2,284.22	2,264.14	5.84	6.17	-113.28	-14.79	200.98	193.79	182.16	11.63	16.668	
2,400.00	2,382.35	2,382.52	2,359.84	6.24	6.61	-112.53	-20.00	222.82	211.98	199.57	12.40	17.093	
2,500.00	2,480.48	2,480.81	2,455.54	6.64	7.06	-111.90	-25.21	244.66	230.19	217.01	13.19	17.459	
2,600.00	2,578.62	2,579.11	2,551.24	7.04	7.51	-111.37	-30.42	266.50	248.43	234.46	13.98	17.775	
2,700.00	2,676.75	2,677.41	2,646.94	7.45	7.97	-110.91	-35.63	288.34	266.69	251.92	14.77	18.051	
2,800.00	2,774.88	2,775.71	2,742.64	7.86	8.43	-110.50	-40.84	310.18	284.96	269.39	15.58	18.294	
2,900.00	2,873.02	2,874.01	2,838.34	8.27	8.89	-110.15	-46.04	332.02	303.25	286.86	16.38	18.510	
3,000.00	2,971.15	2,972.30	2,934.04	8.69	9.36	-109.84	-51.25	353.86	321.54	304.35	17.19	18.701	
3,100.00	3,069.28	3,070.60	3,029.74	9.10	9.82	-109.56	-56.46	375.70	339.84	321.84	18.01	18.873	
3,200.00	3,167.42	3,168.90	3,125.44	9.52	10.29	-109.30	-61.67	397.53	358.15	339.33	18.82	19.027	
3,300.00	3,265.55	3,267.20	3,221.14	9.94	10.77	-109.08	-66.88	419.37	376.47	356.83	19.64	19.167	
3,400.00	3,363.69	3,365.50	3,316.84	10.36	11.24	-108.87	-72.09	441.21	394.79	374.33	20.46	19.294	
3,500.00	3,461.82	3,463.79	3,412.54	10.79	11.71	-108.68	-77.29	463.05	413.12	391.83	21.28	19.411	
3,600.00	3,559.95	3,562.09	3,508.24	11.21	12.19	-108.51	-82.50	484.89	431.45	409.34	22.11	19.517	
3,700.00	3,658.09	3,660.39	3,603.94	11.63	12.67	-108.35	-87.71	506.73	449.78	426.85	22.93	19.615	
3,800.00	3,756.22	3,758.69	3,699.64	12.06	13.14	-108.21	-92.92	528.57	468.11	444.36	23.76	19.703	
3,900.00	3,854.35	3,856.99	3,795.34	12.49	13.62	-108.08	-98.13	550.41	486.45	461.86	24.59	19.782	
4,000.00	3,952.49	3,955.28	3,891.03	12.91	14.10	-107.95	-103.34	572.25	504.79	479.37	25.42	19.855	
4,100.00	4,050.62	4,053.58	3,986.73	13.34	14.58	-107.83	-108.54	594.09	523.14	496.88	26.26	19.923	
4,200.00	4,148.75	4,151.88	4,082.43	13.77	15.06	-107.73	-113.75	615.93	541.48	514.39	27.09	19.985	
4,300.00	4,246.89	4,250.18	4,178.13	14.20	15.54	-107.63	-118.96	637.76	559.83	531.90	27.93	20.044	
4,400.00	4,345.02	4,348.47	4,273.83	14.62	16.02	-107.53	-124.17	659.60	578.18	549.41	28.77	20.099	
4,500.00	4,443.15	4,446.77	4,369.53	15.05	16.50	-107.44	-129.38	681.44	596.53	566.92	29.61	20.150	
4,600.00	4,541.29	4,545.07	4,465.23	15.48	16.98	-107.36	-134.59	703.28	614.88	584.43	30.44	20.197	
4,700.00	4,639.42	4,643.37	4,560.93	15.91	17.46	-107.28	-139.79	725.12	633.23	601.95	31.28	20.242	
4,800.00	4,737.56	4,741.67	4,656.63	16.34	17.95	-107.21	-145.00	746.96	651.58	619.46	32.12	20.284	
4,900.00	4,835.69	4,839.96	4,752.33	16.77	18.43	-107.14	-150.21	768.80	669.94	636.98	32.96	20.324	

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 24-9
Project:	COLORADO NORTHERN ZONE - 83	TVD Reference:	WELL @ 5012.00ft (Original Well Elev)
Reference Site:	WELD_NRC 17-9 PAD	MD Reference:	WELL @ 5012.00ft (Original Well Elev)
Site Error:	0.00ft	North Reference:	True
Reference Well:	P_NRC 24-9	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00ft	Output errors are at	2.00 sigma
Reference Wellbore	P_NRC 24-9	Database:	EDM 2003.21 Single User Db
Reference Design:	PLAN #1 1-5-10 RHS	Offset TVD Reference:	Offset Datum

Offset Design WELD_NRC 17-9 PAD - P_NRC 8-9 - P_NRC 8-9 - PLAN #1 1-5-10 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	4,933.82	4,938.26	4,848.03	17.20	18.91	-107.07	-155.42	790.64	688.29	654.49	33.80	20.362	
5,100.00	5,031.96	5,036.56	4,943.73	17.63	19.39	-107.01	-160.63	812.48	706.65	672.01	34.64	20.397	
5,200.00	5,130.09	5,134.86	5,039.43	18.06	19.88	-106.95	-165.84	834.32	725.01	689.52	35.49	20.431	
5,300.00	5,228.22	5,233.16	5,135.13	18.50	20.36	-106.89	-171.04	856.16	743.36	707.04	36.33	20.462	
5,400.00	5,326.36	5,331.45	5,230.83	18.93	20.84	-106.84	-176.25	877.99	761.72	724.55	37.17	20.492	
5,500.00	5,424.49	5,429.75	5,326.53	19.36	21.33	-106.78	-181.46	899.83	780.08	742.07	38.01	20.521	
5,600.00	5,522.62	5,528.05	5,422.23	19.79	21.81	-106.74	-186.67	921.67	798.44	759.58	38.86	20.548	
5,700.00	5,620.76	5,626.35	5,517.93	20.22	22.30	-106.69	-191.88	943.51	816.80	777.10	39.70	20.574	
5,800.00	5,718.89	5,724.65	5,613.63	20.65	22.78	-106.64	-197.09	965.35	835.16	794.62	40.54	20.599	
5,855.23	5,773.09	5,779.30	5,666.84	20.89	23.05	-106.62	-199.98	977.49	845.30	804.29	41.01	20.612	
5,900.00	5,817.09	5,832.00	5,718.26	21.06	23.25	-106.75	-202.65	988.70	853.18	811.81	41.37	20.624	
6,000.00	5,915.80	5,950.51	5,834.61	21.33	23.63	-107.01	-207.86	1,010.54	868.43	826.40	42.03	20.661	
6,100.00	6,015.01	6,069.96	5,952.73	21.58	23.96	-107.20	-211.98	1,027.79	880.40	837.79	42.61	20.660	
6,200.00	6,114.59	6,190.12	6,072.20	21.78	24.23	-107.35	-214.96	1,040.30	889.04	845.93	43.10	20.625	
6,300.00	6,214.43	6,310.77	6,192.58	21.95	24.45	-107.44	-216.78	1,047.95	894.31	850.81	43.50	20.558	
6,409.59	6,324.00	6,442.23	6,324.00	22.11	24.61	47.03	-217.43	1,050.66	896.22	852.37	43.85	20.439	
6,500.00	6,414.41	6,532.64	6,414.41	22.22	24.72	47.03	-217.43	1,050.66	896.22	852.14	44.08	20.333	
6,600.00	6,514.41	6,632.64	6,514.41	22.34	24.84	47.03	-217.43	1,050.66	896.22	851.90	44.32	20.220	
6,700.00	6,614.41	6,732.64	6,614.41	22.45	24.96	47.03	-217.43	1,050.66	896.22	851.65	44.57	20.106	
6,800.00	6,714.41	6,832.64	6,714.41	22.57	25.08	47.03	-217.43	1,050.66	896.22	851.39	44.83	19.992	
6,900.00	6,814.41	6,932.64	6,814.41	22.69	25.20	47.03	-217.43	1,050.66	896.22	851.14	45.09	19.878	
7,000.00	6,914.41	7,032.64	6,914.41	22.81	25.33	47.03	-217.43	1,050.66	896.22	850.88	45.34	19.765	
7,100.00	7,014.41	7,132.64	7,014.41	22.94	25.45	47.03	-217.43	1,050.66	896.22	850.61	45.61	19.651	
7,200.00	7,114.41	7,232.64	7,114.41	23.06	25.58	47.03	-217.43	1,050.66	896.22	850.35	45.87	19.537	
7,300.00	7,214.41	7,332.64	7,214.41	23.19	25.71	47.03	-217.43	1,050.66	896.22	850.08	46.14	19.423	
7,400.00	7,314.41	7,432.64	7,314.41	23.32	25.84	47.03	-217.43	1,050.66	896.22	849.81	46.41	19.310	
7,500.00	7,414.41	7,532.64	7,414.41	23.44	25.97	47.03	-217.43	1,050.66	896.22	849.53	46.69	19.196	
7,600.00	7,514.41	7,632.64	7,514.41	23.57	26.11	47.03	-217.43	1,050.66	896.22	849.26	46.96	19.083	
7,700.00	7,614.41	7,732.64	7,614.41	23.71	26.24	47.03	-217.43	1,050.66	896.22	848.98	47.24	18.970	
7,800.00	7,714.41	7,832.64	7,714.41	23.84	26.37	47.03	-217.43	1,050.66	896.22	848.70	47.52	18.858	
7,900.00	7,814.41	7,932.64	7,814.41	23.97	26.51	47.03	-217.43	1,050.66	896.22	848.41	47.81	18.746	
8,000.00	7,914.41	8,032.64	7,914.41	24.11	26.65	47.03	-217.43	1,050.66	896.22	848.12	48.10	18.634	
8,100.00	8,014.41	8,132.64	8,014.41	24.25	26.79	47.03	-217.43	1,050.66	896.22	847.83	48.39	18.522	
8,200.00	8,114.41	8,232.64	8,114.41	24.39	26.93	47.03	-217.43	1,050.66	896.22	847.54	48.68	18.411	
8,300.00	8,214.41	8,332.64	8,214.41	24.53	27.07	47.03	-217.43	1,050.66	896.22	847.25	48.97	18.301	
8,321.11	8,235.52	8,353.75	8,235.52	24.56	27.10	47.03	-217.43	1,050.66	896.22	847.19	49.03	18.277	
8,334.59	8,249.00	8,362.23	8,244.00	24.57	27.11	47.03	-217.43	1,050.66	896.24	847.17	49.07	18.265	

Company:	US ROCKIES REGION PLANNING	Local Co-ordinate Reference:	Well P_NRC 24-9
Project:	COLORADO NORTHERN ZONE - 83	TVD Reference:	WELL @ 5012.00ft (Original Well Elev)
Reference Site:	WELD_NRC 17-9 PAD	MD Reference:	WELL @ 5012.00ft (Original Well Elev)
Site Error:	0.00ft	North Reference:	True
Reference Well:	P_NRC 24-9	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00ft	Output errors are at	2.00 sigma
Reference Wellbore	P_NRC 24-9	Database:	EDM 2003.21 Single User Db
Reference Design:	PLAN #1 1-5-10 RHS	Offset TVD Reference:	Offset Datum

Offset Design WELD_NRC 17-9 PAD - ROCKY MTN FUEL CO G UNIT #1 EXISTING - ROCKY MTN FUEL CO G UN												Offset Site Error:	0.00 ft
Survey Program: 0-UNKNOWN												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	38.47	95.08	75.57	122.93				
100.00	100.00	81.00	81.00	0.10	1.62	38.47	95.08	75.57	121.46	119.74	1.72	70.796	
200.00	200.00	181.00	181.00	0.32	5.24	38.47	95.08	75.57	121.46	115.89	5.56	21.843	
300.00	300.00	281.00	281.00	0.55	9.24	38.47	95.08	75.57	121.46	111.67	9.79	12.412	
400.00	400.00	381.00	381.00	0.77	13.24	38.47	95.08	75.57	121.46	107.45	14.01	8.669	
500.00	500.00	481.00	481.00	0.99	17.24	38.47	95.08	75.57	121.46	103.22	18.23	6.661	
600.00	600.00	581.00	581.00	1.22	21.24	38.47	95.08	75.57	121.46	99.00	22.46	5.408	
700.00	700.00	681.00	681.00	1.44	25.24	38.47	95.08	75.57	121.46	94.77	26.68	4.552	
800.00	800.00	781.00	781.00	1.67	29.24	38.47	95.08	75.57	121.46	90.55	30.91	3.929	
900.00	900.00	881.00	881.00	1.89	33.24	38.47	95.08	75.57	121.46	86.32	35.13	3.457	
1,000.00	1,000.00	981.00	981.00	2.12	37.24	38.47	95.08	75.57	121.46	82.10	39.36	3.086	
1,085.00	1,085.00	1,066.00	1,066.00	2.31	40.64	38.47	95.08	75.57	121.46	78.51	42.95	2.828 CC	
1,100.00	1,100.00	1,081.00	1,081.00	2.34	41.24	-116.05	95.08	75.57	121.47	77.89	43.58	2.787	
1,200.00	1,199.97	1,180.97	1,180.97	2.51	45.24	-116.99	95.08	75.57	122.49	74.74	47.75	2.565	
1,300.00	1,299.80	1,280.80	1,280.80	2.70	49.23	-119.28	95.08	75.57	125.20	73.30	51.90	2.412 ES	
1,400.00	1,399.37	1,380.37	1,380.37	2.90	53.21	-122.75	95.08	75.57	129.98	73.96	56.02	2.320	
1,500.00	1,498.55	1,479.55	1,479.55	3.12	57.18	-127.07	95.08	75.57	137.30	77.22	60.08	2.285 SF	
1,600.00	1,597.23	1,578.23	1,578.23	3.38	61.13	-131.89	95.08	75.57	147.66	83.63	64.03	2.306	
1,639.36	1,635.91	1,616.91	1,616.91	3.49	62.68	-133.84	95.08	75.57	152.68	87.13	65.55	2.329	
1,700.00	1,695.41	1,676.41	1,676.41	3.68	65.06	-136.80	95.08	75.57	161.05	93.06	67.99	2.369	
1,800.00	1,793.55	1,774.55	1,774.55	4.00	68.98	-141.07	95.08	75.57	175.68	103.65	72.03	2.439	
1,900.00	1,891.68	1,872.68	1,872.68	4.34	72.91	-144.67	95.08	75.57	191.12	115.05	76.07	2.513	
2,000.00	1,989.82	1,970.82	1,970.82	4.70	76.83	-147.73	95.08	75.57	207.20	127.08	80.12	2.586	
2,100.00	2,087.95	2,068.95	2,068.95	5.07	80.76	-150.35	95.08	75.57	223.78	139.60	84.17	2.659	
2,200.00	2,186.08	2,167.08	2,167.08	5.46	84.68	-152.61	95.08	75.57	240.75	152.52	88.23	2.729	
2,300.00	2,284.22	2,265.22	2,265.22	5.84	88.61	-154.56	95.08	75.57	258.04	165.74	92.30	2.796	
2,400.00	2,382.35	2,363.35	2,363.35	6.24	92.53	-156.28	95.08	75.57	275.58	179.22	96.37	2.860	
2,500.00	2,480.48	2,461.48	2,461.48	6.64	96.46	-157.78	95.08	75.57	293.34	192.90	100.44	2.921	
2,600.00	2,578.62	2,559.62	2,559.62	7.04	100.38	-159.12	95.08	75.57	311.27	206.75	104.52	2.978	
2,700.00	2,676.75	2,657.75	2,657.75	7.45	104.31	-160.31	95.08	75.57	329.35	220.75	108.60	3.033	
2,800.00	2,774.88	2,755.88	2,755.88	7.86	108.24	-161.38	95.08	75.57	347.55	234.87	112.68	3.084	
2,900.00	2,873.02	2,854.02	2,854.02	8.27	112.16	-162.34	95.08	75.57	365.86	249.09	116.77	3.133	
3,000.00	2,971.15	2,952.15	2,952.15	8.69	116.09	-163.20	95.08	75.57	384.26	263.40	120.85	3.180	
3,100.00	3,069.28	3,050.28	3,050.28	9.10	120.01	-163.99	95.08	75.57	402.73	277.79	124.94	3.223	
3,200.00	3,167.42	3,148.42	3,148.42	9.52	123.94	-164.71	95.08	75.57	421.28	292.24	129.03	3.265	
3,300.00	3,265.55	3,246.55	3,246.55	9.94	127.86	-165.37	95.08	75.57	439.88	306.75	133.12	3.304	
3,400.00	3,363.69	3,344.69	3,344.69	10.36	131.79	-165.98	95.08	75.57	458.53	321.31	137.22	3.342	
3,500.00	3,461.82	3,442.82	3,442.82	10.79	135.71	-166.54	95.08	75.57	477.23	335.92	141.31	3.377	
3,600.00	3,559.95	3,540.95	3,540.95	11.21	139.64	-167.06	95.08	75.57	495.97	350.56	145.41	3.411	
3,700.00	3,658.09	3,639.09	3,639.09	11.63	143.56	-167.53	95.08	75.57	514.75	365.24	149.51	3.443	
3,800.00	3,756.22	3,737.22	3,737.22	12.06	147.49	-167.98	95.08	75.57	533.56	379.95	153.61	3.474	
3,900.00	3,854.35	3,835.35	3,835.35	12.49	151.41	-168.39	95.08	75.57	552.40	394.69	157.71	3.503	
4,000.00	3,952.49	3,933.49	3,933.49	12.91	155.34	-168.78	95.08	75.57	571.26	409.45	161.81	3.531	
4,100.00	4,050.62	4,031.62	4,031.62	13.34	159.26	-169.15	95.08	75.57	590.15	424.24	165.91	3.557	
4,200.00	4,148.75	4,129.75	4,129.75	13.77	163.19	-169.49	95.08	75.57	609.06	439.05	170.01	3.583	
4,300.00	4,246.89	4,227.89	4,227.89	14.20	167.12	-169.81	95.08	75.57	627.98	453.87	174.11	3.607	
4,400.00	4,345.02	4,326.02	4,326.02	14.62	171.04	-170.11	95.08	75.57	646.93	468.72	178.21	3.630	
4,500.00	4,443.15	4,424.15	4,424.15	15.05	174.97	-170.39	95.08	75.57	665.89	483.58	182.32	3.652	
4,600.00	4,541.29	4,522.29	4,522.29	15.48	178.89	-170.66	95.08	75.57	684.87	498.45	186.42	3.674	
4,700.00	4,639.42	4,620.42	4,620.42	15.91	182.82	-170.91	95.08	75.57	703.86	513.34	190.53	3.694	
4,800.00	4,737.56	4,718.56	4,718.56	16.34	186.74	-171.15	95.08	75.57	722.87	528.23	194.63	3.714	
4,900.00	4,835.69	4,816.69	4,816.69	16.77	190.67	-171.38	95.08	75.57	741.88	543.14	198.74	3.733	

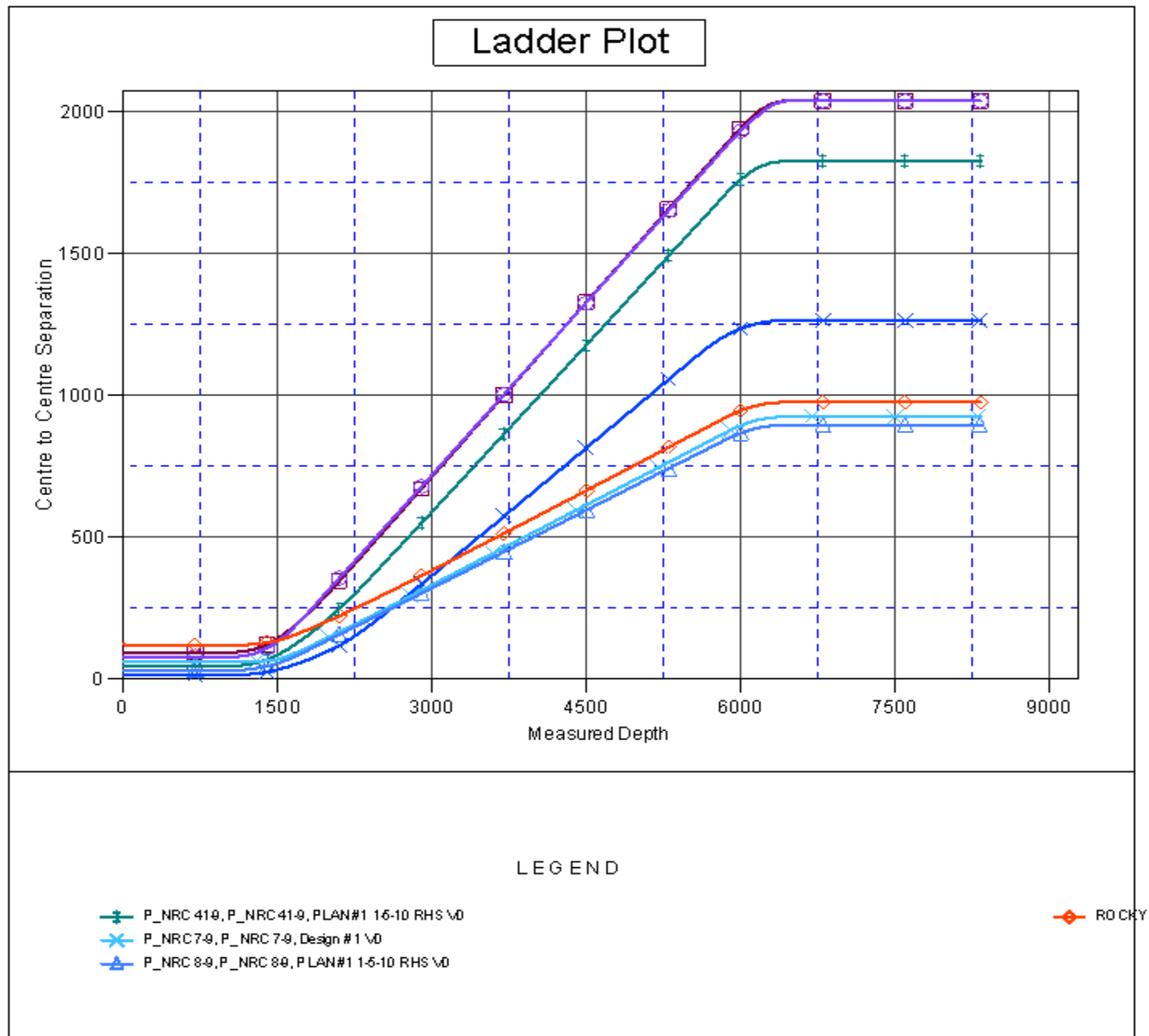
CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Company:	US ROCKIES REGION PLANNING	Local Co-ordinate Reference:	Well P_NRC 24-9
Project:	COLORADO NORTHERN ZONE - 83	TVD Reference:	WELL @ 5012.00ft (Original Well Elev)
Reference Site:	WELD_NRC 17-9 PAD	MD Reference:	WELL @ 5012.00ft (Original Well Elev)
Site Error:	0.00ft	North Reference:	True
Reference Well:	P_NRC 24-9	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00ft	Output errors are at	2.00 sigma
Reference Wellbore	P_NRC 24-9	Database:	EDM 2003.21 Single User Db
Reference Design:	PLAN #1 1-5-10 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						
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	4,933.82	4,914.82	4,914.82	17.20	194.59	-171.60	95.08	75.57	760.91	558.07	202.84	3.751	
5,100.00	5,031.96	5,012.96	5,012.96	17.63	198.52	-171.81	95.08	75.57	779.94	573.00	206.95	3.769	
5,200.00	5,130.09	5,111.09	5,111.09	18.06	202.44	-172.00	95.08	75.57	798.99	587.93	211.06	3.786	
5,300.00	5,228.22	5,209.22	5,209.22	18.50	206.37	-172.19	95.08	75.57	818.04	602.88	215.16	3.802	
5,400.00	5,326.36	5,307.36	5,307.36	18.93	210.29	-172.37	95.08	75.57	837.11	617.84	219.27	3.818	
5,500.00	5,424.49	5,405.49	5,405.49	19.36	214.22	-172.54	95.08	75.57	856.18	632.80	223.38	3.833	
5,600.00	5,522.62	5,503.62	5,503.62	19.79	218.14	-172.70	95.08	75.57	875.25	647.77	227.49	3.847	
5,700.00	5,620.76	5,601.76	5,601.76	20.22	222.07	-172.86	95.08	75.57	894.34	662.74	231.59	3.862	
5,800.00	5,718.89	5,699.89	5,699.89	20.65	226.00	-173.01	95.08	75.57	913.43	677.72	235.70	3.875	
5,855.23	5,773.09	5,754.09	5,754.09	20.89	228.16	-173.09	95.08	75.57	923.97	686.00	237.97	3.883	
5,900.00	5,817.09	5,798.09	5,798.09	21.06	229.92	-173.17	95.08	75.57	932.18	691.72	240.46	3.877	
6,000.00	5,915.80	5,896.80	5,896.80	21.33	233.87	-173.32	95.08	75.57	948.05	702.20	245.85	3.856	
6,100.00	6,015.01	5,996.01	5,996.01	21.58	237.84	-173.44	95.08	75.57	960.48	709.50	250.99	3.827	
6,200.00	6,114.59	6,095.59	6,095.59	21.78	241.82	-173.52	95.08	75.57	969.47	713.61	255.86	3.789	
6,300.00	6,214.43	6,195.43	6,195.43	21.95	245.82	-173.57	95.08	75.57	975.01	714.56	260.45	3.744	
6,409.59	6,324.00	6,305.00	6,305.00	22.11	250.20	-19.08	95.08	75.57	977.09	711.95	265.14	3.685	
6,500.00	6,414.41	6,395.41	6,395.41	22.22	253.82	-19.08	95.08	75.57	977.09	708.17	268.92	3.633	
6,600.00	6,514.41	6,495.41	6,495.41	22.34	257.82	-19.08	95.08	75.57	977.09	704.00	273.09	3.578	
6,700.00	6,614.41	6,595.41	6,595.41	22.45	261.82	-19.08	95.08	75.57	977.09	699.83	277.26	3.524	
6,800.00	6,714.41	6,695.41	6,695.41	22.57	265.82	-19.08	95.08	75.57	977.09	695.65	281.44	3.472	
6,900.00	6,814.41	6,795.41	6,795.41	22.69	269.82	-19.08	95.08	75.57	977.09	691.48	285.61	3.421	
7,000.00	6,914.41	6,895.41	6,895.41	22.81	273.82	-19.08	95.08	75.57	977.09	687.30	289.79	3.372	
7,100.00	7,014.41	6,995.41	6,995.41	22.94	277.82	-19.08	95.08	75.57	977.09	683.12	293.97	3.324	
7,200.00	7,114.41	7,095.41	7,095.41	23.06	281.82	-19.08	95.08	75.57	977.09	678.94	298.15	3.277	
7,300.00	7,214.41	7,195.41	7,195.41	23.19	285.82	-19.08	95.08	75.57	977.09	674.76	302.33	3.232	
7,400.00	7,314.41	7,295.41	7,295.41	23.32	289.82	-19.08	95.08	75.57	977.09	670.58	306.51	3.188	
7,500.00	7,414.41	7,395.41	7,395.41	23.44	293.82	-19.08	95.08	75.57	977.09	666.40	310.69	3.145	
7,600.00	7,514.41	7,495.41	7,495.41	23.57	297.82	-19.08	95.08	75.57	977.09	662.21	314.87	3.103	
7,700.00	7,614.41	7,595.41	7,595.41	23.71	301.82	-19.08	95.08	75.57	977.09	658.03	319.06	3.062	
7,800.00	7,714.41	7,695.41	7,695.41	23.84	305.82	-19.08	95.08	75.57	977.09	653.85	323.24	3.023	
7,900.00	7,814.41	7,795.41	7,795.41	23.97	309.82	-19.08	95.08	75.57	977.09	649.66	327.43	2.984	
8,000.00	7,914.41	7,895.41	7,895.41	24.11	313.82	-19.08	95.08	75.57	977.09	645.47	331.62	2.946	
8,100.00	8,014.41	7,995.41	7,995.41	24.25	317.82	-19.08	95.08	75.57	977.09	641.28	335.80	2.910	
8,200.00	8,114.41	8,095.41	8,095.41	24.39	321.82	-19.08	95.08	75.57	977.09	637.10	339.99	2.874	
8,300.00	8,214.41	8,195.41	8,195.41	24.53	325.82	-19.08	95.08	75.57	977.09	632.91	344.18	2.839	
8,334.59	8,249.00	8,230.00	8,230.00	24.57	327.20	-19.08	95.08	75.57	977.09	631.46	345.63	2.827	

Company:	US ROCKIES REGION PLANNING	Local Co-ordinate Reference:	Well P_NRC 24-9
Project:	COLORADO NORTHERN ZONE - 83	TVD Reference:	WELL @ 5012.00ft (Original Well Elev)
Reference Site:	WELD_NRC 17-9 PAD	MD Reference:	WELL @ 5012.00ft (Original Well Elev)
Site Error:	0.00ft	North Reference:	True
Reference Well:	P_NRC 24-9	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00ft	Output errors are at	2.00 sigma
Reference Wellbore	P_NRC 24-9	Database:	EDM 2003.21 Single User Db
Reference Design:	PLAN #1 1-5-10 RHS	Offset TVD Reference:	Offset Datum

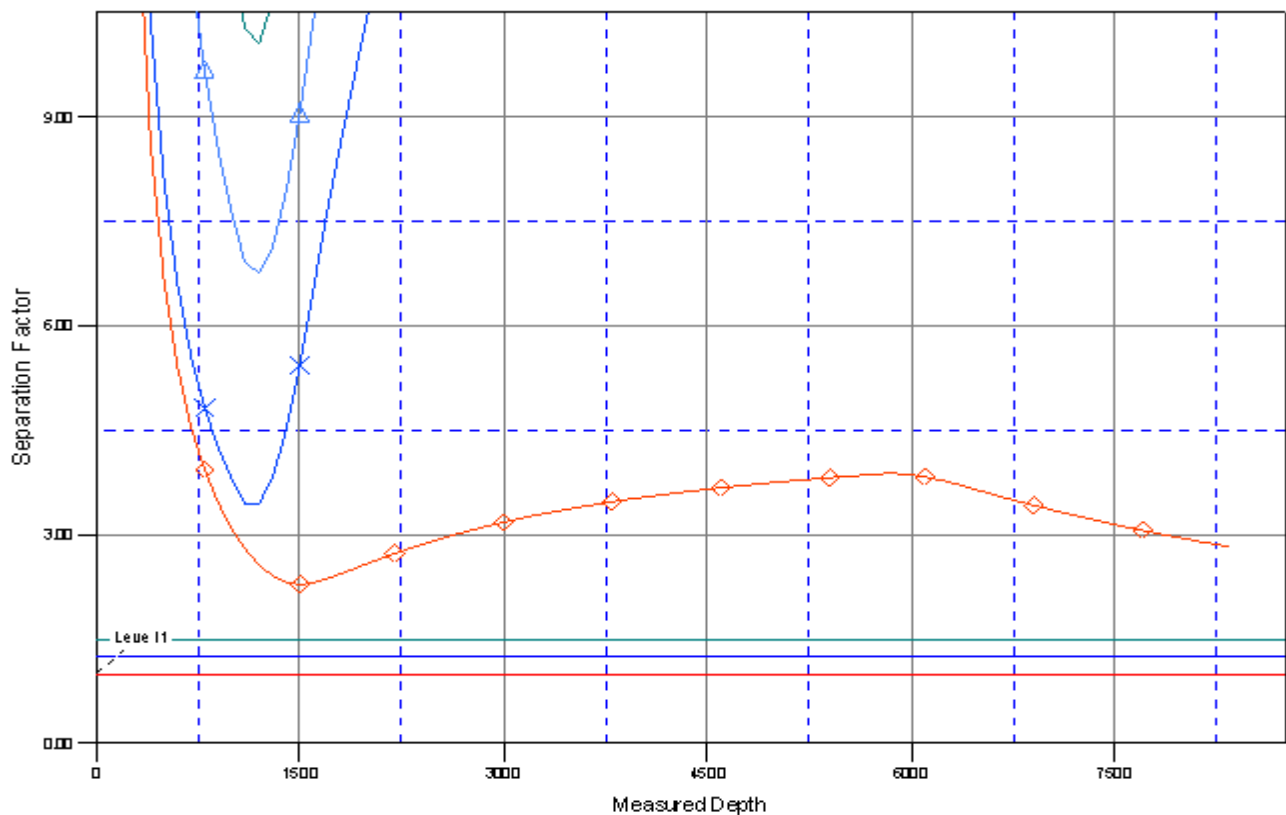
Reference Depths are relative to WELL @ 5012.00ft (Original Well Elev) Coordinates are relative to: P_NRC 24-9
Offset Depths are relative to Offset Datum Coordinate System is US State Plane 1983, Colorado Northern Zone
Central Meridian is 105° 30' 0.000 W ° Grid Convergence at Surface is: 0.39°



Company:	US ROCKIES REGION PLANNING	Local Co-ordinate Reference:	Well P_NRC 24-9
Project:	COLORADO NORTHERN ZONE - 83	TVD Reference:	WELL @ 5012.00ft (Original Well Elev)
Reference Site:	WELD_NRC 17-9 PAD	MD Reference:	WELL @ 5012.00ft (Original Well Elev)
Site Error:	0.00ft	North Reference:	True
Reference Well:	P_NRC 24-9	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00ft	Output errors are at	2.00 sigma
Reference Wellbore	P_NRC 24-9	Database:	EDM 2003.21 Single User Db
Reference Design:	PLAN #1 1-5-10 RHS	Offset TVD Reference:	Offset Datum

Reference Depths are relative to WELL @ 5012.00ft (Original Well Elev) Coordinates are relative to: P_NRC 24-9
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°

Separation Factor Plot



LEGEND

- P_NRC 41-9, P_NRC 41-9, PLAN #1 1-5-10 RHS \0
- P_NRC 7-9, P_NRC 7-9, Design #1 \0
- P_NRC 8-9, P_NRC 8-9, PLAN #1 1-5-10 RHS \0

— ROCKY