



US ROCKIES REGION PLANNING

COLORADO NORTHERN ZONE - 83

WELD_NRC 20-8 PAD

P_NRC 39-8

P_NRC 39-8

Plan: PLAN #1 1-5-10 RHS

Standard Planning Report

05 January, 2010





P_NRC 39-8
COLORADO NORTHERN ZONE - 83
SECTION 8 T1N R67W
1043 FSL 1333 FEL
LAT: 40° 3' 40.183 N
LONG: 104° 54' 35.500 W



WELL DETAILS: P_NRC 39-8						
+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Slot
0.00	0.00	1265676.26	3165180.07	40° 3' 40.183 N	104° 54' 35.500 W	

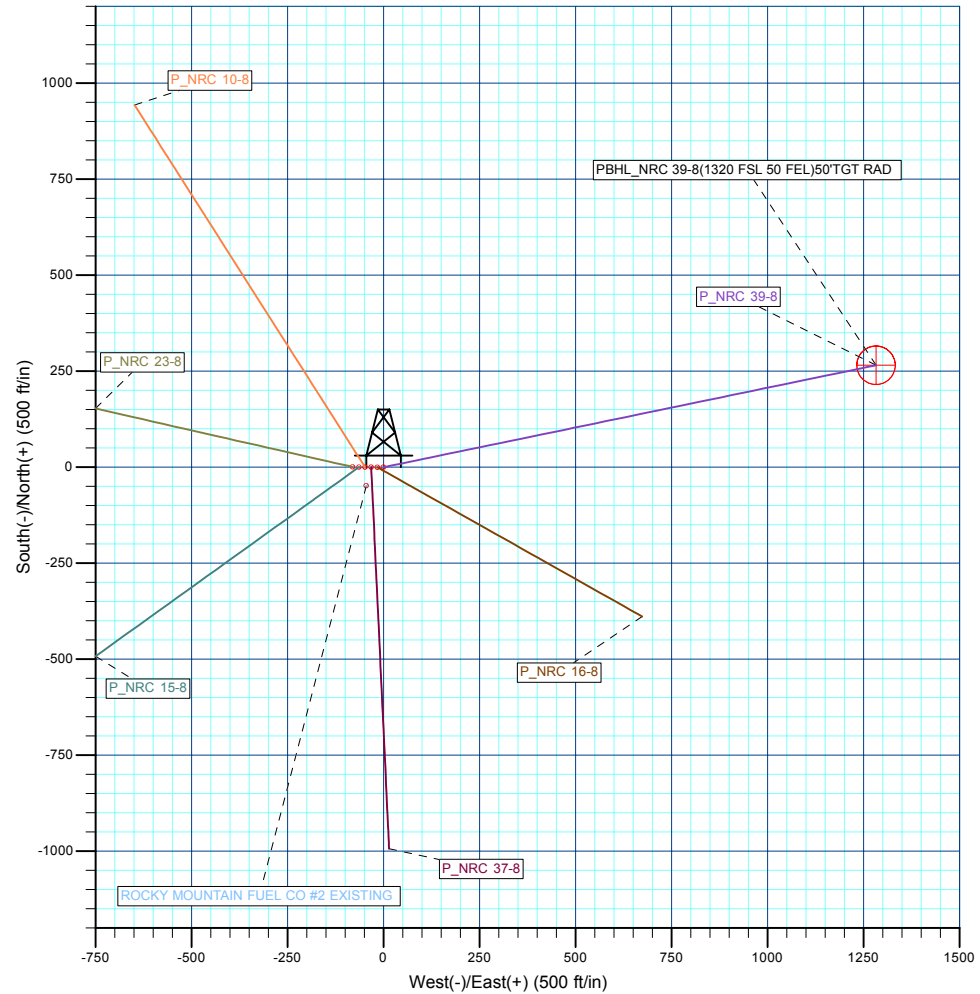
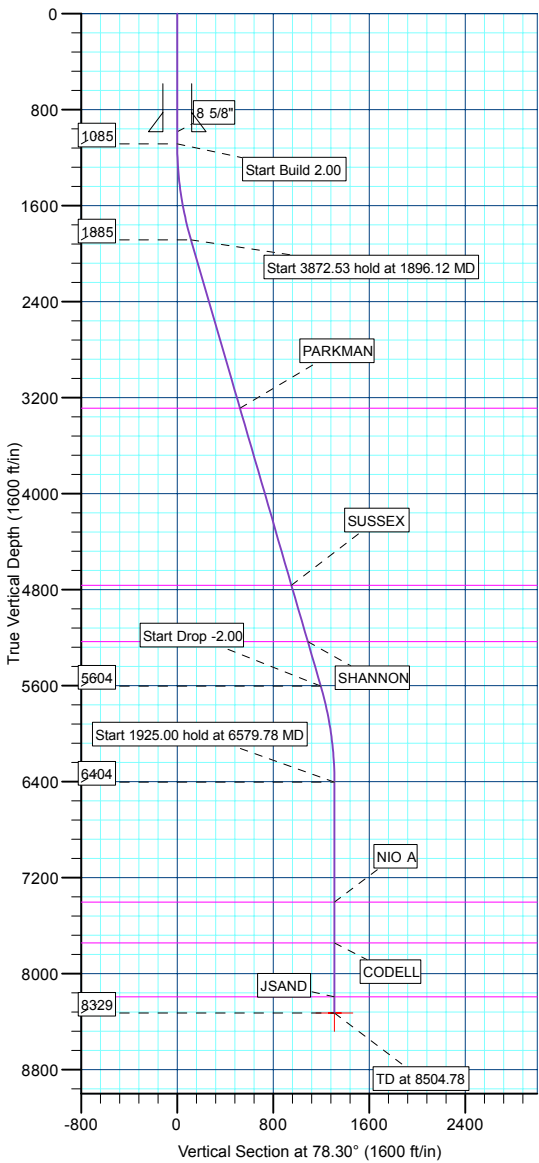
FORMATION TOP DETAILS		
TVDPath	MDPath	Formation
3289.00	3358.00	PARKMAN
4764.00	4894.16	SUSSEX
5234.00	5383.65	SHANNON
7404.00	7579.78	NIO A
7744.00	7919.78	CODELL
8194.00	8369.78	JSAND

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		
1896.12	16.22	78.30	1885.33	23.13	111.70	2.00	78.30	114.06		
5768.65	16.22	78.30	5603.67	242.47	1171.09	0.00	0.00	1195.92		
6579.78	0.00	0.00	6404.00	265.60	1282.78	2.00	180.00	1309.99		
8504.78	0.00	0.00	8329.00	265.60	1282.78	0.00	0.00	1309.99	PBHL_NRC 39-8(1320 FSL 50 FEL)50'TGT RAD	

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



KB ELEV: WELL @ 5071.00ft (Original Well Elev)
GRD ELEV: 5056.00



WELLBORE TARGET DETAILS (MAP CO-ORDINATES AND LAT/LONG)								
Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Shape
PBHL	8329.00	265.60	1282.78	1265950.39	3166461.05	40° 3' 42.808 N	104° 54' 19.001 W	Circle (Radius: 50.00)

Plan: PLAN #1 1-5-10 RHS (P_NRC 39-8/P_NRC 39-8)
 Created By: Robert H. Scott

Database:	EDM 2003.21 Single User Db	Local Co-ordinate Reference:	Well P_NRC 39-8
Company:	US ROCKIES REGION PLANNING	TVD Reference:	WELL @ 5071.00ft (Original Well Elev)
Project:	COLORADO NORTHERN ZONE - 83	MD Reference:	WELL @ 5071.00ft (Original Well Elev)
Site:	WELD_NRC 20-8 PAD	North Reference:	True
Well:	P_NRC 39-8	Survey Calculation Method:	Minimum Curvature
Wellbore:	P_NRC 39-8		
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 20-8 PAD, SECTION 8 T1N R67W				
Site Position:		Northing:	1,265,676.31 ft	Latitude:	40° 3' 40.187 N
From:	Lat/Long	Easting:	3,165,132.20 ft	Longitude:	104° 54' 36.115 W
Position Uncertainty:	0.00 ft	Slot Radius:	in	Grid Convergence:	0.38 °

Well	P_NRC 39-8,					
Well Position	+N/-S	-0.37 ft	Northing:	1,265,676.26 ft	Latitude:	40° 3' 40.183 N
	+E/-W	47.86 ft	Easting:	3,165,180.07 ft	Longitude:	104° 54' 35.500 W
Position Uncertainty		0.00 ft	Wellhead Elevation:	ft	Ground Level:	5,056.00 ft

Wellbore	P_NRC 39-8				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF200510	1/5/2010	9.07	66.81	53,107

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	78.30

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	
1,896.12	16.22	78.30	1,885.33	23.13	111.70	2.00	2.00	0.00	78.30	
5,768.65	16.22	78.30	5,603.67	242.47	1,171.09	0.00	0.00	0.00	0.00	
6,579.78	0.00	0.00	6,404.00	265.60	1,282.78	2.00	-2.00	0.00	180.00	
8,504.78	0.00	0.00	8,329.00	265.60	1,282.78	0.00	0.00	0.00	0.00	PBHL_NRC 39-8(1:

Database:	EDM 2003.21 Single User Db	Local Co-ordinate Reference:	Well P_NRC 39-8
Company:	US ROCKIES REGION PLANNING	TVD Reference:	WELL @ 5071.00ft (Original Well Elev)
Project:	COLORADO NORTHERN ZONE - 83	MD Reference:	WELL @ 5071.00ft (Original Well Elev)
Site:	WELD_NRC 20-8 PAD	North Reference:	True
Well:	P_NRC 39-8	Survey Calculation Method:	Minimum Curvature
Wellbore:	P_NRC 39-8		
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	78.30	1,100.00	0.01	0.04	0.04	2.00	2.00	0.00
1,200.00	2.30	78.30	1,199.97	0.47	2.26	2.31	2.00	2.00	0.00
1,300.00	4.30	78.30	1,299.80	1.63	7.90	8.06	2.00	2.00	0.00
1,400.00	6.30	78.30	1,399.37	3.51	16.94	17.30	2.00	2.00	0.00
1,500.00	8.30	78.30	1,498.55	6.08	29.38	30.01	2.00	2.00	0.00
1,600.00	10.30	78.30	1,597.23	9.36	45.21	46.17	2.00	2.00	0.00
1,700.00	12.30	78.30	1,695.29	13.33	64.39	65.76	2.00	2.00	0.00
1,800.00	14.30	78.30	1,792.60	18.00	86.92	88.76	2.00	2.00	0.00
Start 3872.53 hold at 1896.12 MD									
1,896.12	16.22	78.30	1,885.33	23.13	111.70	114.06	2.00	2.00	0.00
1,900.00	16.22	78.30	1,889.05	23.35	112.76	115.15	0.00	0.00	0.00
2,000.00	16.22	78.30	1,985.07	29.01	140.11	143.08	0.00	0.00	0.00
2,100.00	16.22	78.30	2,081.09	34.67	167.47	171.02	0.00	0.00	0.00
2,200.00	16.22	78.30	2,177.11	40.34	194.83	198.96	0.00	0.00	0.00
2,300.00	16.22	78.30	2,273.13	46.00	222.18	226.89	0.00	0.00	0.00
2,400.00	16.22	78.30	2,369.14	51.67	249.54	254.83	0.00	0.00	0.00
2,500.00	16.22	78.30	2,465.16	57.33	276.89	282.77	0.00	0.00	0.00
2,600.00	16.22	78.30	2,561.18	63.00	304.25	310.70	0.00	0.00	0.00
2,700.00	16.22	78.30	2,657.20	68.66	331.61	338.64	0.00	0.00	0.00
2,800.00	16.22	78.30	2,753.22	74.32	358.96	366.58	0.00	0.00	0.00
2,900.00	16.22	78.30	2,849.24	79.99	386.32	394.51	0.00	0.00	0.00
3,000.00	16.22	78.30	2,945.25	85.65	413.68	422.45	0.00	0.00	0.00
3,100.00	16.22	78.30	3,041.27	91.32	441.03	450.39	0.00	0.00	0.00
3,200.00	16.22	78.30	3,137.29	96.98	468.39	478.33	0.00	0.00	0.00
3,300.00	16.22	78.30	3,233.31	102.64	495.75	506.26	0.00	0.00	0.00
PARKMAN									
3,358.00	16.22	78.30	3,289.00	105.93	511.61	522.47	0.00	0.00	0.00
3,400.00	16.22	78.30	3,329.33	108.31	523.10	534.20	0.00	0.00	0.00
3,500.00	16.22	78.30	3,425.35	113.97	550.46	562.14	0.00	0.00	0.00
3,600.00	16.22	78.30	3,521.36	119.64	577.82	590.07	0.00	0.00	0.00
3,700.00	16.22	78.30	3,617.38	125.30	605.17	618.01	0.00	0.00	0.00
3,800.00	16.22	78.30	3,713.40	130.97	632.53	645.95	0.00	0.00	0.00
3,900.00	16.22	78.30	3,809.42	136.63	659.89	673.88	0.00	0.00	0.00
4,000.00	16.22	78.30	3,905.44	142.29	687.24	701.82	0.00	0.00	0.00
4,100.00	16.22	78.30	4,001.46	147.96	714.60	729.76	0.00	0.00	0.00
4,200.00	16.22	78.30	4,097.48	153.62	741.96	757.69	0.00	0.00	0.00
4,300.00	16.22	78.30	4,193.49	159.29	769.31	785.63	0.00	0.00	0.00
4,400.00	16.22	78.30	4,289.51	164.95	796.67	813.57	0.00	0.00	0.00
4,500.00	16.22	78.30	4,385.53	170.61	824.03	841.50	0.00	0.00	0.00
4,600.00	16.22	78.30	4,481.55	176.28	851.38	869.44	0.00	0.00	0.00
4,700.00	16.22	78.30	4,577.57	181.94	878.74	897.38	0.00	0.00	0.00
4,800.00	16.22	78.30	4,673.59	187.61	906.10	925.31	0.00	0.00	0.00
SUSSEX									
4,894.16	16.22	78.30	4,764.00	192.94	931.86	951.62	0.00	0.00	0.00
4,900.00	16.22	78.30	4,769.60	193.27	933.45	953.25	0.00	0.00	0.00
5,000.00	16.22	78.30	4,865.62	198.94	960.81	981.19	0.00	0.00	0.00
5,100.00	16.22	78.30	4,961.64	204.60	988.17	1,009.12	0.00	0.00	0.00
5,200.00	16.22	78.30	5,057.66	210.26	1,015.52	1,037.06	0.00	0.00	0.00
5,300.00	16.22	78.30	5,153.68	215.93	1,042.88	1,065.00	0.00	0.00	0.00
SHANNON									
5,383.65	16.22	78.30	5,234.00	220.67	1,065.76	1,088.37	0.00	0.00	0.00

Database:	EDM 2003.21 Single User Db	Local Co-ordinate Reference:	Well P_NRC 39-8
Company:	US ROCKIES REGION PLANNING	TVD Reference:	WELL @ 5071.00ft (Original Well Elev)
Project:	COLORADO NORTHERN ZONE - 83	MD Reference:	WELL @ 5071.00ft (Original Well Elev)
Site:	WELD_NRC 20-8 PAD	North Reference:	True
Well:	P_NRC 39-8	Survey Calculation Method:	Minimum Curvature
Wellbore:	P_NRC 39-8		
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	16.22	78.30	5,249.70	221.59	1,070.24	1,092.94	0.00	0.00	0.00
5,500.00	16.22	78.30	5,345.71	227.26	1,097.59	1,120.87	0.00	0.00	0.00
5,600.00	16.22	78.30	5,441.73	232.92	1,124.95	1,148.81	0.00	0.00	0.00
5,700.00	16.22	78.30	5,537.75	238.58	1,152.31	1,176.75	0.00	0.00	0.00
Start Drop -2.00									
5,768.65	16.22	78.30	5,603.67	242.47	1,171.09	1,195.92	0.00	0.00	0.00
5,800.00	15.60	78.30	5,633.82	244.22	1,179.50	1,204.52	2.00	-2.00	0.00
5,900.00	13.60	78.30	5,730.58	249.32	1,204.18	1,229.72	2.00	-2.00	0.00
6,000.00	11.60	78.30	5,828.17	253.75	1,225.53	1,251.52	2.00	-2.00	0.00
6,100.00	9.60	78.30	5,926.46	257.47	1,243.53	1,269.91	2.00	-2.00	0.00
6,200.00	7.60	78.30	6,025.34	260.50	1,258.17	1,284.85	2.00	-2.00	0.00
6,300.00	5.60	78.30	6,124.67	262.83	1,269.41	1,296.34	2.00	-2.00	0.00
6,400.00	3.60	78.30	6,224.34	264.46	1,277.26	1,304.35	2.00	-2.00	0.00
6,500.00	1.60	78.30	6,324.23	265.37	1,281.69	1,308.88	2.00	-2.00	0.00
Start 1925.00 hold at 6579.78 MD									
6,579.78	0.00	0.00	6,404.00	265.60	1,282.78	1,309.99	2.00	-2.00	0.00
6,600.00	0.00	0.00	6,424.22	265.60	1,282.78	1,309.99	0.00	0.00	0.00
6,700.00	0.00	0.00	6,524.22	265.60	1,282.78	1,309.99	0.00	0.00	0.00
6,800.00	0.00	0.00	6,624.22	265.60	1,282.78	1,309.99	0.00	0.00	0.00
6,900.00	0.00	0.00	6,724.22	265.60	1,282.78	1,309.99	0.00	0.00	0.00
7,000.00	0.00	0.00	6,824.22	265.60	1,282.78	1,309.99	0.00	0.00	0.00
7,100.00	0.00	0.00	6,924.22	265.60	1,282.78	1,309.99	0.00	0.00	0.00
7,200.00	0.00	0.00	7,024.22	265.60	1,282.78	1,309.99	0.00	0.00	0.00
7,300.00	0.00	0.00	7,124.22	265.60	1,282.78	1,309.99	0.00	0.00	0.00
7,400.00	0.00	0.00	7,224.22	265.60	1,282.78	1,309.99	0.00	0.00	0.00
7,500.00	0.00	0.00	7,324.22	265.60	1,282.78	1,309.99	0.00	0.00	0.00
NIO A									
7,579.78	0.00	0.00	7,404.00	265.60	1,282.78	1,309.99	0.00	0.00	0.00
7,600.00	0.00	0.00	7,424.22	265.60	1,282.78	1,309.99	0.00	0.00	0.00
7,700.00	0.00	0.00	7,524.22	265.60	1,282.78	1,309.99	0.00	0.00	0.00
7,800.00	0.00	0.00	7,624.22	265.60	1,282.78	1,309.99	0.00	0.00	0.00
7,900.00	0.00	0.00	7,724.22	265.60	1,282.78	1,309.99	0.00	0.00	0.00
CODELL									
7,919.78	0.00	0.00	7,744.00	265.60	1,282.78	1,309.99	0.00	0.00	0.00
8,000.00	0.00	0.00	7,824.22	265.60	1,282.78	1,309.99	0.00	0.00	0.00
8,100.00	0.00	0.00	7,924.22	265.60	1,282.78	1,309.99	0.00	0.00	0.00
8,200.00	0.00	0.00	8,024.22	265.60	1,282.78	1,309.99	0.00	0.00	0.00
8,300.00	0.00	0.00	8,124.22	265.60	1,282.78	1,309.99	0.00	0.00	0.00
JSAND									
8,369.78	0.00	0.00	8,194.00	265.60	1,282.78	1,309.99	0.00	0.00	0.00
8,400.00	0.00	0.00	8,224.22	265.60	1,282.78	1,309.99	0.00	0.00	0.00
8,500.00	0.00	0.00	8,324.22	265.60	1,282.78	1,309.99	0.00	0.00	0.00
PBHL_NRC 39-8(1320 FSL 50 FEL)50'TGT RAD									
8,504.78	0.00	0.00	8,329.00	265.60	1,282.78	1,309.99	0.00	0.00	0.00

Database:	EDM 2003.21 Single User Db	Local Co-ordinate Reference:	Well P_NRC 39-8
Company:	US ROCKIES REGION PLANNING	TVD Reference:	WELL @ 5071.00ft (Original Well Elev)
Project:	COLORADO NORTHERN ZONE - 83	MD Reference:	WELL @ 5071.00ft (Original Well Elev)
Site:	WELD_NRC 20-8 PAD	North Reference:	True
Well:	P_NRC 39-8	Survey Calculation Method:	Minimum Curvature
Wellbore:	P_NRC 39-8		
Design:	PLAN #1 1-5-10 RHS		

Design Targets

Target Name

- hit/miss target	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (ft)	Easting (ft)	Latitude	Longitude
- Shape									
PBHL_NRC 39-8(132)	0.00	0.00	8,329.00	265.60	1,282.78	1,265,950.39	3,166,461.05	40° 3' 42.808 N	104° 54' 19.001 W
- plan hits target center									
- Circle (radius 50.00)									

Casing Points

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

Formations

Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)
3,358.00	3,289.00	PARKMAN			
4,894.16	4,764.00	SUSSEX			
5,383.65	5,234.00	SHANNON			
7,579.78	7,404.00	NIO A			
7,919.78	7,744.00	CODELL			
8,369.78	8,194.00	JSAND			

Plan Annotations

Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment
		+N/-S (ft)	+E/-W (ft)	
1,085.00	1,085.00	0.00	0.00	Start Build 2.00
1,896.12	1,885.33	23.13	111.70	Start 3872.53 hold at 1896.12 MD
5,768.65	5,603.67	242.47	1,171.09	Start Drop -2.00
6,579.78	6,404.00	265.60	1,282.78	Start 1925.00 hold at 6579.78 MD
8,504.78	8,329.00	265.60	1,282.78	TD at 8504.78



US ROCKIES REGION PLANNING

**COLORADO NORTHERN ZONE - 83
WELD_NRC 20-8 PAD
P_NRC 39-8**

**P_NRC 39-8
PLAN #1 1-5-10 RHS**

Anticollision Report

05 January, 2010



Company:	US ROCKIES REGION PLANNING	Local Co-ordinate Reference:	Well P_NRC 39-8
Project:	COLORADO NORTHERN ZONE - 83	TVD Reference:	WELL @ 5071.00ft (Original Well Elev)
Reference Site:	WELD_NRC 20-8 PAD	MD Reference:	WELL @ 5071.00ft (Original Well Elev)
Site Error:	0.00ft	North Reference:	True
Reference Well:	P_NRC 39-8	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00ft	Output errors are at	2.00 sigma
Reference Wellbore	P_NRC 39-8	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	8,504.78	PLAN #1 1-5-10 RHS (P_NRC 39-8)	MWD	MWD - Standard

Site Name Offset Well - Wellbore - Design	Reference	Offset	Distance		Separation Factor	Warning
	Measured Depth (ft)	Measured Depth (ft)	Between Centres (ft)	Between Ellipses (ft)		
WELD_NRC 20-8 PAD						
P_NRC 10-8 - P_NRC 10-8 - PLAN #1 1-5-10 RHS	1,085.00	1,085.00	47.86	43.25	10.363	CC
P_NRC 10-8 - P_NRC 10-8 - PLAN #1 1-5-10 RHS	1,100.00	1,099.86	47.92	43.24	10.232	ES
P_NRC 10-8 - P_NRC 10-8 - PLAN #1 1-5-10 RHS	1,200.00	1,198.84	51.38	46.28	10.073	SF
P_NRC 15-8 - P_NRC 15-8 - PLAN #1 1-5-10 RHS	1,085.00	1,085.00	63.82	59.20	13.817	CC, ES
P_NRC 15-8 - P_NRC 15-8 - PLAN #1 1-5-10 RHS	1,200.00	1,197.79	67.93	62.87	13.430	SF
P_NRC 16-8 - P_NRC 16-8 - PLAN #1 1-5-10 RHS	1,085.00	1,085.00	15.95	11.34	3.454	CC
P_NRC 16-8 - P_NRC 16-8 - PLAN #1 1-5-10 RHS	1,200.00	1,200.54	16.27	11.21	3.212	ES, SF
P_NRC 23-8 - P_NRC 23-8 - PLAN #1 1-5-10 RHS	1,085.00	1,085.00	80.06	75.44	17.332	CC, ES
P_NRC 23-8 - P_NRC 23-8 - PLAN #1 1-5-10 RHS	1,200.00	1,196.78	84.50	79.42	16.636	SF
P_NRC 37-8 - P_NRC 37-8 - PLAN #1 1-5-10 RHS	1,085.00	1,085.00	31.91	27.29	6.909	CC
P_NRC 37-8 - P_NRC 37-8 - PLAN #1 1-5-10 RHS	1,100.00	1,100.01	31.95	27.27	6.826	ES
P_NRC 37-8 - P_NRC 37-8 - PLAN #1 1-5-10 RHS	1,200.00	1,199.97	34.15	29.10	6.762	SF
ROCKY MOUNTAIN FUEL CO #2 EXISTING - ROCKY M	1,085.00	1,067.00	65.53	22.54	1.524	CC
ROCKY MOUNTAIN FUEL CO #2 EXISTING - ROCKY M	1,200.00	1,181.97	67.42	19.61	1.410	Level 3, ES
ROCKY MOUNTAIN FUEL CO #2 EXISTING - ROCKY M	1,300.00	1,281.80	72.24	20.30	1.391	Level 3, SF

Offset Design													Offset Site Error:	0.00 ft
Survey Program: 0-MWD													Offset Well Error:	0.00 ft
Reference	Offset		Semi Major Axis			Highside Toolface (°)	Offset Wellbore Centre		Distance		Minimum Separation (ft)	Separation Factor	Warning	
	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Reference (ft)		+N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)				
0.00	0.00	0.00	0.00	0.00		-89.55	0.37	-47.86	47.86	47.67	0.19	250.534		
100.00	100.00	100.00	100.00	0.10	0.10	-89.55	0.37	-47.86	47.86	47.22	0.64	74.721		
200.00	200.00	200.00	200.00	0.32	0.32	-89.55	0.37	-47.86	47.86	46.77	1.09	43.908		
300.00	300.00	300.00	300.00	0.55	0.55	-89.55	0.37	-47.86	47.86	46.33	1.54	31.088		
400.00	400.00	400.00	400.00	0.77	0.77	-89.55	0.37	-47.86	47.86	45.88	1.99	24.063		
500.00	500.00	500.00	500.00	0.99	0.99	-89.55	0.37	-47.86	47.86	45.43	2.44	19.627		
600.00	600.00	600.00	600.00	1.22	1.22	-89.55	0.37	-47.86	47.86	44.98	2.89	16.572		
700.00	700.00	700.00	700.00	1.44	1.44	-89.55	0.37	-47.86	47.86	44.53	3.34	14.340		
800.00	800.00	800.00	800.00	1.67	1.67	-89.55	0.37	-47.86	47.86	44.08	3.79	12.638		
900.00	900.00	900.00	900.00	1.89	1.89	-89.55	0.37	-47.86	47.86	43.63	4.24	11.297		
1,000.00	1,000.00	1,000.00	1,000.00	2.12	2.12	-89.55	0.37	-47.86	47.86	43.25	4.62	10.363	CC	
1,085.00	1,085.00	1,085.00	1,085.00	2.34	2.34	-167.83	0.41	-47.88	47.92	43.24	4.68	10.232	ES	

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

Company:	US ROCKIES REGION PLANNING	Local Co-ordinate Reference:	Well P_NRC 39-8
Project:	COLORADO NORTHERN ZONE - 83	TVD Reference:	WELL @ 5071.00ft (Original Well Elev)
Reference Site:	WELD_NRC 20-8 PAD	MD Reference:	WELL @ 5071.00ft (Original Well Elev)
Site Error:	0.00ft	North Reference:	True
Reference Well:	P_NRC 39-8	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00ft	Output errors are at	2.00 sigma
Reference Wellbore	P_NRC 39-8	Database:	EDM 2003.21 Single User Db
Reference Design:	PLAN #1 1-5-10 RHS	Offset TVD Reference:	Offset Datum

Offset Design													WELD_NRC 20-8 PAD - P_NRC 10-8 - P_NRC 10-8 - 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 Tooface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor			
1,200.00	1,199.97	1,198.84	1,198.81	2.55	2.56	-166.26	2.28	-49.08	51.38	46.28	5.10	10.073	SF		
1,300.00	1,299.80	1,297.26	1,297.07	2.76	2.78	-163.09	7.00	-52.09	60.28	54.77	5.52	10.931			
1,400.00	1,399.37	1,394.66	1,394.06	2.99	3.01	-159.58	14.48	-56.84	74.78	68.86	5.93	12.615			
1,500.00	1,498.55	1,490.59	1,489.24	3.23	3.25	-156.48	24.55	-63.26	94.92	88.58	6.34	14.961			
1,600.00	1,597.23	1,584.63	1,582.10	3.51	3.50	-154.00	37.03	-71.21	120.61	113.84	6.77	17.819			
1,700.00	1,695.29	1,676.40	1,672.21	3.82	3.78	-152.05	51.68	-80.54	151.68	144.48	7.21	21.052			
1,800.00	1,792.60	1,765.57	1,759.19	4.18	4.09	-150.51	68.24	-91.08	187.95	180.29	7.66	24.541			
1,896.12	1,885.33	1,848.56	1,839.55	4.58	4.41	-149.29	85.70	-102.20	227.51	219.40	8.11	28.038			
1,900.00	1,889.05	1,851.85	1,842.72	4.60	4.42	-149.26	86.43	-102.67	229.20	221.06	8.14	28.173			
2,000.00	1,985.07	1,935.65	1,923.21	5.06	4.78	-148.51	106.12	-115.21	273.79	265.10	8.69	31.512			
2,100.00	2,081.09	2,017.43	2,001.06	5.55	5.18	-147.67	127.24	-128.66	320.41	311.15	9.27	34.579			
2,200.00	2,177.11	2,100.00	2,078.90	6.05	5.62	-146.76	150.46	-143.44	369.05	359.17	9.88	37.368			
2,300.00	2,273.13	2,174.72	2,148.63	6.57	6.06	-145.92	173.09	-157.86	419.62	409.12	10.49	39.991			
2,400.00	2,369.14	2,250.17	2,218.31	7.10	6.55	-145.06	197.50	-173.40	472.11	460.98	11.13	42.401			
2,500.00	2,465.16	2,323.45	2,285.24	7.63	7.05	-144.23	222.67	-189.43	526.47	514.68	11.78	44.673			
2,600.00	2,561.18	2,403.94	2,358.16	8.18	7.64	-143.38	251.41	-207.73	582.10	569.62	12.49	46.618			
2,700.00	2,657.20	2,486.71	2,433.13	8.72	8.27	-142.66	281.00	-226.57	637.86	624.65	13.21	48.284			
2,800.00	2,753.22	2,569.48	2,508.10	9.28	8.91	-142.05	310.58	-245.41	693.67	679.72	13.94	49.748			
2,900.00	2,849.24	2,652.25	2,583.07	9.83	9.56	-141.53	340.17	-264.25	749.52	734.84	14.68	51.043			
3,000.00	2,945.25	2,735.01	2,658.03	10.39	10.21	-141.09	369.75	-283.09	805.42	789.99	15.43	52.193			
3,100.00	3,041.27	2,817.78	2,733.00	10.96	10.88	-140.70	399.34	-301.93	861.34	845.16	16.18	53.219			
3,200.00	3,137.29	2,900.55	2,807.97	11.52	11.54	-140.35	428.92	-320.77	917.29	900.34	16.94	54.138			
3,300.00	3,233.31	2,983.32	2,882.94	12.09	12.22	-140.05	458.51	-339.61	973.26	955.55	17.71	54.962			
3,400.00	3,329.33	3,066.09	2,957.91	12.66	12.89	-139.78	488.09	-358.45	1,029.24	1,010.76	18.48	55.708			
3,500.00	3,425.35	3,148.86	3,032.88	13.23	13.57	-139.54	517.68	-377.29	1,085.24	1,065.99	19.25	56.384			
3,600.00	3,521.36	3,231.62	3,107.85	13.80	14.25	-139.32	547.26	-396.14	1,141.25	1,121.22	20.02	57.001			
3,700.00	3,617.38	3,314.39	3,182.82	14.37	14.94	-139.12	576.85	-414.98	1,197.27	1,176.47	20.80	57.565			
3,800.00	3,713.40	3,397.16	3,257.78	14.95	15.62	-138.94	606.43	-433.82	1,253.30	1,231.72	21.58	58.081			
3,900.00	3,809.42	3,479.93	3,332.75	15.52	16.31	-138.78	636.02	-452.66	1,309.33	1,286.97	22.36	58.555			
4,000.00	3,905.44	3,562.70	3,407.72	16.10	17.00	-138.63	665.60	-471.50	1,365.38	1,342.23	23.15	58.992			
4,100.00	4,001.46	3,645.46	3,482.69	16.67	17.69	-138.49	695.19	-490.34	1,421.43	1,397.49	23.93	59.397			
4,200.00	4,097.48	3,749.15	3,576.77	17.25	18.51	-138.34	731.95	-513.75	1,477.30	1,452.51	24.79	59.592			
4,300.00	4,193.49	3,904.18	3,719.90	17.83	19.51	-138.27	782.16	-545.72	1,530.23	1,504.44	25.78	59.348			
4,400.00	4,289.51	4,068.21	3,874.61	18.40	20.40	-138.40	828.09	-574.97	1,579.02	1,552.27	26.76	59.014			
4,500.00	4,385.53	4,240.90	4,040.56	18.98	21.22	-138.72	868.29	-600.57	1,623.34	1,595.63	27.71	58.578			
4,600.00	4,481.55	4,421.59	4,216.94	19.56	21.92	-139.24	901.25	-621.56	1,662.88	1,634.24	28.63	58.073			
4,700.00	4,577.57	4,609.31	4,402.42	20.14	22.49	-139.94	925.48	-636.99	1,697.35	1,667.84	29.50	57.532			
4,800.00	4,673.59	4,802.80	4,595.14	20.72	22.88	-140.85	939.69	-646.04	1,726.53	1,696.23	30.30	56.983			
4,900.00	4,769.60	4,977.34	4,769.60	21.30	23.09	-141.81	943.13	-648.23	1,750.43	1,719.45	30.98	56.503			
5,000.00	4,865.62	5,073.36	4,865.62	21.88	23.18	-142.36	943.13	-648.23	1,772.81	1,741.27	31.53	56.222			
5,100.00	4,961.64	5,169.38	4,961.64	22.46	23.27	-142.90	943.13	-648.23	1,795.33	1,763.25	32.08	55.961			
5,200.00	5,057.66	5,265.40	5,057.66	23.04	23.37	-143.42	943.13	-648.23	1,818.01	1,785.39	32.63	55.721			
5,300.00	5,153.68	5,361.42	5,153.68	23.62	23.46	-143.93	943.13	-648.23	1,840.84	1,807.67	33.17	55.500			
5,400.00	5,249.70	5,457.43	5,249.70	24.20	23.56	-144.43	943.13	-648.23	1,863.80	1,830.09	33.71	55.297			
5,500.00	5,345.71	5,553.45	5,345.71	24.79	23.66	-144.92	943.13	-648.23	1,886.90	1,852.66	34.24	55.111			
5,600.00	5,441.73	5,649.47	5,441.73	25.37	23.76	-145.39	943.13	-648.23	1,910.12	1,875.35	34.77	54.940			
5,700.00	5,537.75	5,745.49	5,537.75	25.95	23.87	-145.86	943.13	-648.23	1,933.47	1,898.18	35.29	54.783			
5,768.65	5,603.67	5,811.41	5,603.67	26.35	23.94	-146.17	943.13	-648.23	1,949.57	1,913.92	35.65	54.683			
5,800.00	5,633.82	5,841.56	5,633.82	26.51	23.97	-146.39	943.13	-648.23	1,956.81	1,920.93	35.88	54.545			
5,900.00	5,730.58	5,938.32	5,730.58	26.92	24.08	-147.03	943.13	-648.23	1,978.07	1,941.55	36.52	54.160			
6,000.00	5,828.17	6,035.91	5,828.17	27.29	24.18	-147.57	943.13	-648.23	1,996.55	1,959.43	37.12	53.787			
6,100.00	5,926.46	6,134.20	5,926.46	27.62	24.30	-148.02	943.13	-648.23	2,012.19	1,974.52	37.66	53.424			

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 39-8
Project:	COLORADO NORTHERN ZONE - 83	TVD Reference:	WELL @ 5071.00ft (Original Well Elev)
Reference Site:	WELD_NRC 20-8 PAD	MD Reference:	WELL @ 5071.00ft (Original Well Elev)
Site Error:	0.00ft	North Reference:	True
Reference Well:	P_NRC 39-8	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00ft	Output errors are at	2.00 sigma
Reference Wellbore	P_NRC 39-8	Database:	EDM 2003.21 Single User Db
Reference Design:	PLAN #1 1-5-10 RHS	Offset TVD Reference:	Offset Datum

Offset Design												WELD_NRC 20-8 PAD - P_NRC 10-8 - P_NRC 10-8 - 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	
6,200.00	6,025.34	6,233.07	6,025.34	27.90	24.41	-148.38	943.13	-648.23	2,024.93	1,986.77	38.16	53.069		
6,300.00	6,124.67	6,332.41	6,124.67	28.13	24.52	-148.65	943.13	-648.23	2,034.74	1,996.15	38.60	52.720		
6,400.00	6,224.34	6,432.08	6,224.34	28.32	24.64	-148.84	943.13	-648.23	2,041.60	2,002.62	38.98	52.374		
6,500.00	6,324.23	6,531.97	6,324.23	28.47	24.76	-148.94	943.13	-648.23	2,045.47	2,006.16	39.31	52.030		
6,579.78	6,404.00	6,611.74	6,404.00	28.55	24.86	-70.67	943.13	-648.23	2,046.43	2,006.88	39.54	51.753		
6,600.00	6,424.22	6,631.96	6,424.22	28.57	24.88	-70.67	943.13	-648.23	2,046.43	2,006.83	39.60	51.677		
6,700.00	6,524.22	6,731.96	6,524.22	28.68	25.00	-70.67	943.13	-648.23	2,046.43	2,006.53	39.89	51.296		
6,800.00	6,624.22	6,831.96	6,624.22	28.79	25.13	-70.67	943.13	-648.23	2,046.43	2,006.23	40.19	50.917		
6,900.00	6,724.22	6,931.96	6,724.22	28.90	25.25	-70.67	943.13	-648.23	2,046.43	2,005.94	40.49	50.540		
7,000.00	6,824.22	7,031.96	6,824.22	29.01	25.38	-70.67	943.13	-648.23	2,046.43	2,005.63	40.79	50.166		
7,100.00	6,924.22	7,131.96	6,924.22	29.12	25.50	-70.67	943.13	-648.23	2,046.43	2,005.33	41.10	49.793		
7,200.00	7,024.22	7,231.96	7,024.22	29.24	25.63	-70.67	943.13	-648.23	2,046.43	2,005.02	41.41	49.423		
7,300.00	7,124.22	7,331.96	7,124.22	29.35	25.76	-70.67	943.13	-648.23	2,046.43	2,004.71	41.72	49.055		
7,400.00	7,224.22	7,431.96	7,224.22	29.47	25.89	-70.67	943.13	-648.23	2,046.43	2,004.40	42.03	48.690		
7,500.00	7,324.22	7,531.96	7,324.22	29.59	26.03	-70.67	943.13	-648.23	2,046.43	2,004.08	42.35	48.327		
7,600.00	7,424.22	7,631.96	7,424.22	29.70	26.16	-70.67	943.13	-648.23	2,046.43	2,003.76	42.66	47.967		
7,700.00	7,524.22	7,731.96	7,524.22	29.83	26.30	-70.67	943.13	-648.23	2,046.43	2,003.44	42.98	47.610		
7,800.00	7,624.22	7,831.96	7,624.22	29.95	26.43	-70.67	943.13	-648.23	2,046.43	2,003.12	43.31	47.256		
7,900.00	7,724.22	7,931.96	7,724.22	30.07	26.57	-70.67	943.13	-648.23	2,046.43	2,002.80	43.63	46.904		
8,000.00	7,824.22	8,031.96	7,824.22	30.19	26.71	-70.67	943.13	-648.23	2,046.43	2,002.47	43.96	46.555		
8,100.00	7,924.22	8,131.96	7,924.22	30.32	26.85	-70.67	943.13	-648.23	2,046.43	2,002.14	44.29	46.209		
8,200.00	8,024.22	8,231.96	8,024.22	30.44	26.99	-70.67	943.13	-648.23	2,046.43	2,001.81	44.62	45.866		
8,300.00	8,124.22	8,331.96	8,124.22	30.57	27.13	-70.67	943.13	-648.23	2,046.43	2,001.48	44.95	45.526		
8,400.00	8,224.22	8,431.96	8,224.22	30.70	27.28	-70.67	943.13	-648.23	2,046.43	2,001.14	45.29	45.190		
8,463.56	8,287.78	8,495.52	8,287.78	30.78	27.37	-70.67	943.13	-648.23	2,046.43	2,000.93	45.50	44.977		
8,504.78	8,329.00	8,520.74	8,313.00	30.84	27.40	-70.67	943.13	-648.23	2,046.49	2,000.88	45.61	44.868		

Company:	US ROCKIES REGION PLANNING	Local Co-ordinate Reference:	Well P_NRC 39-8
Project:	COLORADO NORTHERN ZONE - 83	TVD Reference:	WELL @ 5071.00ft (Original Well Elev)
Reference Site:	WELD_NRC 20-8 PAD	MD Reference:	WELL @ 5071.00ft (Original Well Elev)
Site Error:	0.00ft	North Reference:	True
Reference Well:	P_NRC 39-8	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00ft	Output errors are at	2.00 sigma
Reference Wellbore	P_NRC 39-8	Database:	EDM 2003.21 Single User Db
Reference Design:	PLAN #1 1-5-10 RHS	Offset TVD Reference:	Offset Datum

Offset Design													WELD_NRC 20-8 PAD - P_NRC 15-8 - P_NRC 15-8 - 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 Tooface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor			
0.00	0.00	0.00	0.00	0.00	0.00	-89.68	0.36	-63.82	63.82						
100.00	100.00	100.00	100.00	0.10	0.10	-89.68	0.36	-63.82	63.82	63.63	0.19	334.040			
200.00	200.00	200.00	200.00	0.32	0.32	-89.68	0.36	-63.82	63.82	63.18	0.64	99.626			
300.00	300.00	300.00	300.00	0.55	0.55	-89.68	0.36	-63.82	63.82	62.73	1.09	58.543			
400.00	400.00	400.00	400.00	0.77	0.77	-89.68	0.36	-63.82	63.82	62.28	1.54	41.450			
500.00	500.00	500.00	500.00	0.99	0.99	-89.68	0.36	-63.82	63.82	61.83	1.99	32.083			
600.00	600.00	600.00	600.00	1.22	1.22	-89.68	0.36	-63.82	63.82	61.38	2.44	26.169			
700.00	700.00	700.00	700.00	1.44	1.44	-89.68	0.36	-63.82	63.82	60.93	2.89	22.096			
800.00	800.00	800.00	800.00	1.67	1.67	-89.68	0.36	-63.82	63.82	60.48	3.34	19.120			
900.00	900.00	900.00	900.00	1.89	1.89	-89.68	0.36	-63.82	63.82	60.03	3.79	16.851			
1,000.00	1,000.00	1,000.00	1,000.00	2.12	2.12	-89.68	0.36	-63.82	63.82	59.58	4.24	15.063			
1,085.00	1,085.00	1,085.00	1,085.00	2.31	2.31	-89.68	0.36	-63.82	63.82	59.20	4.62	13.817	CC, ES		
1,100.00	1,100.00	1,099.73	1,099.73	2.34	2.34	-168.01	0.34	-63.85	63.89	59.21	4.68	13.650			
1,200.00	1,199.97	1,197.79	1,197.77	2.55	2.52	-169.46	-0.94	-65.62	67.93	62.87	5.06	13.430	SF		
1,300.00	1,299.80	1,295.09	1,294.90	2.76	2.71	-172.48	-4.13	-70.07	78.33	72.90	5.44	14.406			
1,400.00	1,399.37	1,390.97	1,390.39	2.99	2.91	-175.91	-9.16	-77.08	95.29	89.47	5.82	16.383			
1,500.00	1,498.55	1,484.83	1,483.53	3.23	3.12	-179.02	-15.89	-86.44	118.84	112.65	6.19	19.192			
1,600.00	1,597.23	1,576.12	1,573.72	3.51	3.36	178.46	-24.14	-97.92	148.87	142.30	6.56	22.678			
1,700.00	1,695.29	1,664.36	1,660.41	3.82	3.62	176.48	-33.70	-111.24	185.13	178.20	6.93	26.707			
1,800.00	1,792.60	1,749.11	1,743.18	4.18	3.91	174.95	-44.35	-126.06	227.35	220.06	7.29	31.169			
1,896.12	1,885.33	1,826.99	1,818.73	4.58	4.21	173.78	-55.39	-141.42	273.26	265.62	7.64	35.784			
1,900.00	1,889.05	1,830.06	1,821.69	4.60	4.22	173.75	-55.85	-142.06	275.21	267.56	7.65	35.962			
2,000.00	1,985.07	1,907.81	1,896.55	5.06	4.55	172.88	-68.10	-159.13	326.82	318.74	8.08	40.450			
2,100.00	2,081.09	1,983.08	1,968.44	5.55	4.92	172.14	-81.10	-177.21	380.65	372.14	8.52	44.703			
2,200.00	2,177.11	2,065.01	2,046.29	6.05	5.35	171.47	-95.99	-197.95	435.86	426.88	8.98	48.543			
2,300.00	2,273.13	2,148.28	2,125.41	6.57	5.80	170.94	-111.14	-219.04	491.12	481.66	9.45	51.946			
2,400.00	2,369.14	2,231.55	2,204.52	7.10	6.27	170.52	-126.29	-240.13	546.40	536.46	9.94	54.979			
2,500.00	2,465.16	2,314.82	2,283.64	7.63	6.75	170.17	-141.44	-261.23	601.69	591.26	10.43	57.692			
2,600.00	2,561.18	2,398.09	2,362.76	8.18	7.24	169.89	-156.59	-282.32	657.00	646.08	10.93	60.124			
2,700.00	2,657.20	2,481.36	2,441.87	8.72	7.73	169.64	-171.75	-303.41	712.32	700.89	11.43	62.308			
2,800.00	2,753.22	2,564.63	2,520.99	9.28	8.24	169.44	-186.90	-324.50	767.65	755.71	11.94	64.283			
2,900.00	2,849.24	2,647.90	2,600.11	9.83	8.74	169.26	-202.05	-345.59	822.99	810.53	12.46	66.074			
3,000.00	2,945.25	2,731.17	2,679.22	10.39	9.25	169.10	-217.20	-366.68	878.32	865.35	12.97	67.705			
3,100.00	3,041.27	2,814.44	2,758.34	10.96	9.77	168.96	-232.35	-387.78	933.67	920.17	13.49	69.194			
3,200.00	3,137.29	2,897.71	2,837.46	11.52	10.29	168.84	-247.50	-408.87	989.01	975.00	14.02	70.556			
3,300.00	3,233.31	2,980.98	2,916.57	12.09	10.81	168.73	-262.65	-429.96	1,044.36	1,029.82	14.54	71.805			
3,400.00	3,329.33	3,064.24	2,995.69	12.66	11.33	168.63	-277.80	-451.05	1,099.71	1,084.64	15.07	72.956			
3,500.00	3,425.35	3,147.51	3,074.81	13.23	11.86	168.54	-292.95	-472.14	1,155.07	1,139.46	15.61	74.018			
3,600.00	3,521.36	3,230.78	3,153.92	13.80	12.38	168.46	-308.10	-493.23	1,210.42	1,194.28	16.14	75.002			
3,700.00	3,617.38	3,314.05	3,233.04	14.37	12.91	168.38	-323.25	-514.32	1,265.78	1,249.11	16.67	75.915			
3,800.00	3,713.40	3,397.32	3,312.16	14.95	13.44	168.32	-338.40	-535.42	1,321.14	1,303.93	17.21	76.764			
3,900.00	3,809.42	3,480.59	3,391.27	15.52	13.97	168.25	-353.55	-556.51	1,376.50	1,358.75	17.75	77.554			
4,000.00	3,905.44	3,563.86	3,470.39	16.10	14.50	168.20	-368.71	-577.60	1,431.86	1,413.57	18.29	78.292			
4,100.00	4,001.46	3,647.13	3,549.51	16.67	15.03	168.14	-383.86	-598.69	1,487.22	1,468.39	18.83	78.983			
4,200.00	4,097.48	3,730.40	3,628.62	17.25	15.57	168.09	-399.01	-619.78	1,542.58	1,523.21	19.37	79.631			
4,300.00	4,193.49	3,813.67	3,707.74	17.83	16.10	168.05	-414.16	-640.87	1,597.94	1,578.03	19.91	80.239			
4,400.00	4,289.51	3,896.94	3,786.86	18.40	16.64	168.00	-429.31	-661.97	1,653.31	1,632.85	20.46	80.812			
4,500.00	4,385.53	3,980.21	3,866.07	18.98	17.25	167.96	-447.42	-687.17	1,708.61	1,687.57	21.04	81.190			
4,600.00	4,481.55	4,063.48	3,945.28	19.56	18.15	167.95	-480.04	-732.59	1,760.18	1,738.33	21.85	80.558			
4,700.00	4,577.57	4,146.75	4,026.35	20.14	18.92	168.07	-505.63	-768.22	1,805.24	1,782.59	22.65	79.685			
4,800.00	4,673.59	4,232.02	4,105.42	20.72	19.50	168.34	-521.58	-790.41	1,843.02	1,819.58	23.44	78.638			
4,900.00	4,769.60	4,317.29	4,184.49	21.30	19.81	168.69	-525.63	-796.06	1,872.97	1,848.86	24.12	77.656			

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 39-8
Project:	COLORADO NORTHERN ZONE - 83	TVD Reference:	WELL @ 5071.00ft (Original Well Elev)
Reference Site:	WELD_NRC 20-8 PAD	MD Reference:	WELL @ 5071.00ft (Original Well Elev)
Site Error:	0.00ft	North Reference:	True
Reference Well:	P_NRC 39-8	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00ft	Output errors are at	2.00 sigma
Reference Wellbore	P_NRC 39-8	Database:	EDM 2003.21 Single User Db
Reference Design:	PLAN #1 1-5-10 RHS	Offset TVD Reference:	Offset Datum

Offset Design												WELD_NRC 20-8 PAD - P_NRC 15-8 - P_NRC 15-8 - 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 Tooface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)		Separation Factor	
5,000.00	4,865.62	4,994.42	4,865.62	21.88	19.91	168.85	-525.63	-796.06	1,900.42	1,875.83	24.58	77.300		
5,100.00	4,961.64	5,090.44	4,961.64	22.46	20.01	169.01	-525.63	-796.06	1,927.87	1,902.82	25.05	76.955		
5,200.00	5,057.66	5,186.45	5,057.66	23.04	20.11	169.17	-525.63	-796.06	1,955.34	1,929.82	25.52	76.620		
5,300.00	5,153.68	5,282.47	5,153.68	23.62	20.22	169.32	-525.63	-796.06	1,982.83	1,956.84	25.99	76.295		
5,400.00	5,249.70	5,378.49	5,249.70	24.20	20.33	169.47	-525.63	-796.06	2,010.32	1,983.86	26.46	75.980		
5,500.00	5,345.71	5,474.51	5,345.71	24.79	20.44	169.61	-525.63	-796.06	2,037.83	2,010.90	26.93	75.674		
5,600.00	5,441.73	5,570.53	5,441.73	25.37	20.55	169.75	-525.63	-796.06	2,065.35	2,037.95	27.40	75.376		
5,700.00	5,537.75	5,666.55	5,537.75	25.95	20.67	169.89	-525.63	-796.06	2,092.88	2,065.01	27.87	75.087		
5,768.65	5,603.67	5,732.46	5,603.67	26.35	20.74	169.98	-525.63	-796.06	2,111.79	2,083.59	28.20	74.893		
5,800.00	5,633.82	5,762.61	5,633.82	26.51	20.78	170.05	-525.63	-796.06	2,120.26	2,091.85	28.41	74.640		
5,900.00	5,730.58	5,859.38	5,730.58	26.92	20.90	170.25	-525.63	-796.06	2,145.11	2,116.09	29.02	73.915		
6,000.00	5,828.17	5,956.97	5,828.17	27.29	21.02	170.42	-525.63	-796.06	2,166.62	2,137.02	29.60	73.208		
6,100.00	5,926.46	6,055.26	5,926.46	27.62	21.14	170.56	-525.63	-796.06	2,184.76	2,154.64	30.13	72.518		
6,200.00	6,025.34	6,154.13	6,025.34	27.90	21.27	170.68	-525.63	-796.06	2,199.51	2,168.90	30.61	71.845		
6,300.00	6,124.67	6,253.46	6,124.67	28.13	21.39	170.76	-525.63	-796.06	2,210.85	2,179.79	31.06	71.187		
6,400.00	6,224.34	6,353.14	6,224.34	28.32	21.52	170.82	-525.63	-796.06	2,218.76	2,187.31	31.45	70.543		
6,500.00	6,324.23	6,453.03	6,324.23	28.47	21.65	170.85	-525.63	-796.06	2,223.23	2,191.43	31.80	69.911		
6,579.78	6,404.00	6,532.80	6,404.00	28.55	21.76	-110.84	-525.63	-796.06	2,224.33	2,192.28	32.05	69.407		
6,600.00	6,424.22	6,553.02	6,424.22	28.57	21.79	-110.84	-525.63	-796.06	2,224.33	2,192.21	32.12	69.256		
6,700.00	6,524.22	6,653.02	6,524.22	28.68	21.92	-110.84	-525.63	-796.06	2,224.33	2,191.85	32.47	68.498		
6,800.00	6,624.22	6,753.02	6,624.22	28.79	22.06	-110.84	-525.63	-796.06	2,224.33	2,191.50	32.83	67.752		
6,900.00	6,724.22	6,853.02	6,724.22	28.90	22.19	-110.84	-525.63	-796.06	2,224.33	2,191.14	33.19	67.017		
7,000.00	6,824.22	6,953.02	6,824.22	29.01	22.33	-110.84	-525.63	-796.06	2,224.33	2,190.77	33.55	66.294		
7,100.00	6,924.22	7,053.02	6,924.22	29.12	22.47	-110.84	-525.63	-796.06	2,224.33	2,190.41	33.92	65.583		
7,200.00	7,024.22	7,153.02	7,024.22	29.24	22.61	-110.84	-525.63	-796.06	2,224.33	2,190.04	34.28	64.882		
7,300.00	7,124.22	7,253.02	7,124.22	29.35	22.76	-110.84	-525.63	-796.06	2,224.33	2,189.68	34.65	64.193		
7,400.00	7,224.22	7,353.02	7,224.22	29.47	22.90	-110.84	-525.63	-796.06	2,224.33	2,189.31	35.02	63.515		
7,500.00	7,324.22	7,453.02	7,324.22	29.59	23.04	-110.84	-525.63	-796.06	2,224.33	2,188.93	35.39	62.848		
7,600.00	7,424.22	7,553.02	7,424.22	29.70	23.19	-110.84	-525.63	-796.06	2,224.33	2,188.56	35.77	62.192		
7,700.00	7,524.22	7,653.02	7,524.22	29.83	23.34	-110.84	-525.63	-796.06	2,224.33	2,188.19	36.14	61.546		
7,800.00	7,624.22	7,753.02	7,624.22	29.95	23.49	-110.84	-525.63	-796.06	2,224.33	2,187.81	36.52	60.911		
7,900.00	7,724.22	7,853.02	7,724.22	30.07	23.64	-110.84	-525.63	-796.06	2,224.33	2,187.43	36.90	60.286		
8,000.00	7,824.22	7,953.02	7,824.22	30.19	23.79	-110.84	-525.63	-796.06	2,224.33	2,187.05	37.28	59.671		
8,100.00	7,924.22	8,053.02	7,924.22	30.32	23.94	-110.84	-525.63	-796.06	2,224.33	2,186.67	37.66	59.066		
8,200.00	8,024.22	8,153.02	8,024.22	30.44	24.10	-110.84	-525.63	-796.06	2,224.33	2,186.28	38.04	58.472		
8,300.00	8,124.22	8,253.02	8,124.22	30.57	24.25	-110.84	-525.63	-796.06	2,224.33	2,185.90	38.43	57.887		
8,400.00	8,224.22	8,353.02	8,224.22	30.70	24.41	-110.84	-525.63	-796.06	2,224.33	2,185.51	38.81	57.311		
8,463.56	8,287.78	8,416.58	8,287.78	30.78	24.51	-110.84	-525.63	-796.06	2,224.33	2,185.27	39.06	56.950		
8,504.78	8,329.00	8,441.80	8,313.00	30.84	24.55	-110.84	-525.63	-796.06	2,224.38	2,185.20	39.19	56.766		

Company:	US ROCKIES REGION PLANNING	Local Co-ordinate Reference:	Well P_NRC 39-8
Project:	COLORADO NORTHERN ZONE - 83	TVD Reference:	WELL @ 5071.00ft (Original Well Elev)
Reference Site:	WELD_NRC 20-8 PAD	MD Reference:	WELL @ 5071.00ft (Original Well Elev)
Site Error:	0.00ft	North Reference:	True
Reference Well:	P_NRC 39-8	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00ft	Output errors are at	2.00 sigma
Reference Wellbore	P_NRC 39-8	Database:	EDM 2003.21 Single User Db
Reference Design:	PLAN #1 1-5-10 RHS	Offset TVD Reference:	Offset Datum

Offset Design WELD_NRC 20-8 PAD - P_NRC 16-8 - P_NRC 16-8 - 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 Tooface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)		Separation Factor
0.00	0.00	0.00	0.00	0.00	0.00	-90.03	-0.01	-15.95	15.95				
100.00	100.00	100.00	100.00	0.10	0.10	-90.03	-0.01	-15.95	15.95	15.76	0.19	83.509	
200.00	200.00	200.00	200.00	0.32	0.32	-90.03	-0.01	-15.95	15.95	15.31	0.64	24.906	
300.00	300.00	300.00	300.00	0.55	0.55	-90.03	-0.01	-15.95	15.95	14.86	1.09	14.636	
400.00	400.00	400.00	400.00	0.77	0.77	-90.03	-0.01	-15.95	15.95	14.41	1.54	10.362	
500.00	500.00	500.00	500.00	0.99	0.99	-90.03	-0.01	-15.95	15.95	13.97	1.99	8.021	
600.00	600.00	600.00	600.00	1.22	1.22	-90.03	-0.01	-15.95	15.95	13.52	2.44	6.542	
700.00	700.00	700.00	700.00	1.44	1.44	-90.03	-0.01	-15.95	15.95	13.07	2.89	5.524	
800.00	800.00	800.00	800.00	1.67	1.67	-90.03	-0.01	-15.95	15.95	12.62	3.34	4.780	
900.00	900.00	900.00	900.00	1.89	1.89	-90.03	-0.01	-15.95	15.95	12.17	3.79	4.213	
1,000.00	1,000.00	1,000.00	1,000.00	2.12	2.12	-90.03	-0.01	-15.95	15.95	11.72	4.24	3.766	
1,085.00	1,085.00	1,085.00	1,085.00	2.31	2.31	-90.03	-0.01	-15.95	15.95	11.34	4.62	3.454	CC
1,100.00	1,100.00	1,100.07	1,100.07	2.34	2.34	-168.43	-0.03	-15.92	15.96	11.28	4.68	3.409	
1,200.00	1,199.97	1,200.54	1,200.51	2.55	2.53	-174.02	-1.15	-13.93	16.27	11.21	5.07	3.212	ES, SF
1,300.00	1,299.80	1,300.90	1,300.69	2.76	2.72	173.13	-4.00	-8.87	17.71	12.25	5.46	3.244	
1,400.00	1,399.37	1,401.06	1,400.42	2.99	2.94	157.44	-8.56	-0.78	21.47	15.59	5.87	3.654	
1,500.00	1,498.55	1,500.94	1,499.48	3.23	3.17	143.98	-14.81	10.31	28.31	21.97	6.34	4.466	
1,600.00	1,597.23	1,600.45	1,597.67	3.51	3.44	134.37	-22.71	24.34	38.27	31.41	6.86	5.576	
1,700.00	1,695.29	1,699.51	1,694.81	3.82	3.75	127.89	-32.24	41.24	51.12	43.66	7.46	6.851	
1,800.00	1,792.60	1,798.03	1,790.70	4.18	4.11	123.46	-43.35	60.95	66.64	58.49	8.15	8.179	
1,896.12	1,885.33	1,892.40	1,881.86	4.58	4.50	120.70	-55.31	82.18	83.88	74.98	8.89	9.431	
1,900.00	1,889.05	1,896.20	1,885.53	4.60	4.52	120.65	-55.80	83.05	84.61	75.68	8.93	9.479	
2,000.00	1,985.07	1,994.38	1,980.27	5.06	4.96	119.59	-68.43	105.47	103.53	93.75	9.78	10.587	
2,100.00	2,081.09	2,092.56	2,075.02	5.55	5.42	118.87	-81.07	127.89	122.47	111.80	10.67	11.476	
2,200.00	2,177.11	2,190.74	2,169.77	6.05	5.89	118.33	-93.70	150.31	141.43	129.83	11.60	12.197	
2,300.00	2,273.13	2,288.92	2,264.52	6.57	6.38	117.93	-106.33	172.72	160.39	147.85	12.54	12.787	
2,400.00	2,369.14	2,387.10	2,359.26	7.10	6.88	117.60	-118.97	195.14	179.37	165.86	13.51	13.277	
2,500.00	2,465.16	2,485.28	2,454.01	7.63	7.38	117.34	-131.60	217.56	198.34	183.85	14.49	13.686	
2,600.00	2,561.18	2,583.46	2,548.76	8.18	7.90	117.13	-144.23	239.98	217.32	201.84	15.49	14.033	
2,700.00	2,657.20	2,681.64	2,643.50	8.72	8.41	116.95	-156.87	262.40	236.30	219.81	16.49	14.329	
2,800.00	2,753.22	2,779.82	2,738.25	9.28	8.93	116.80	-169.50	284.82	255.29	237.78	17.51	14.584	
2,900.00	2,849.24	2,877.99	2,833.00	9.83	9.46	116.67	-182.14	307.24	274.27	255.75	18.53	14.805	
3,000.00	2,945.25	2,976.17	2,927.74	10.39	9.98	116.55	-194.77	329.66	293.26	273.71	19.55	14.999	
3,100.00	3,041.27	3,074.35	3,022.49	10.96	10.51	116.45	-207.40	352.08	312.25	291.67	20.58	15.170	
3,200.00	3,137.29	3,172.53	3,117.24	11.52	11.05	116.36	-220.04	374.50	331.24	309.62	21.62	15.322	
3,300.00	3,233.31	3,270.71	3,211.98	12.09	11.58	116.28	-232.67	396.92	350.23	327.57	22.66	15.457	
3,400.00	3,329.33	3,368.89	3,306.73	12.66	12.11	116.21	-245.30	419.34	369.22	345.51	23.70	15.578	
3,500.00	3,425.35	3,467.07	3,401.48	13.23	12.65	116.14	-257.94	441.75	388.21	363.46	24.75	15.687	
3,600.00	3,521.36	3,565.25	3,496.22	13.80	13.19	116.09	-270.57	464.17	407.20	381.40	25.80	15.786	
3,700.00	3,617.38	3,663.43	3,590.97	14.37	13.73	116.03	-283.21	486.59	426.19	399.34	26.85	15.875	
3,800.00	3,713.40	3,761.61	3,685.72	14.95	14.27	115.98	-295.84	509.01	445.18	417.28	27.90	15.957	
3,900.00	3,809.42	3,859.79	3,780.46	15.52	14.81	115.94	-308.47	531.43	464.17	435.22	28.95	16.032	
4,000.00	3,905.44	3,957.97	3,875.21	16.10	15.35	115.90	-321.11	553.85	483.16	453.16	30.01	16.101	
4,100.00	4,001.46	4,056.15	3,969.96	16.67	15.89	115.86	-333.74	576.27	502.16	471.09	31.07	16.165	
4,200.00	4,097.48	4,156.76	4,067.19	17.25	16.40	115.88	-346.43	598.78	521.02	488.93	32.09	16.237	
4,300.00	4,193.49	4,259.55	4,167.32	17.83	16.81	116.25	-357.82	619.00	539.15	506.13	33.01	16.331	
4,400.00	4,289.51	4,362.29	4,268.17	18.40	17.16	116.97	-367.44	636.07	556.50	522.64	33.86	16.437	
4,500.00	4,385.53	4,464.72	4,369.35	18.98	17.45	118.00	-375.26	649.94	573.19	538.55	34.63	16.551	
4,600.00	4,481.55	4,566.59	4,470.47	19.56	17.70	119.31	-381.26	660.60	589.38	554.05	35.33	16.680	
4,700.00	4,577.57	4,667.64	4,571.15	20.14	17.91	120.88	-385.48	668.08	605.30	569.34	35.96	16.835	
4,800.00	4,673.59	4,767.63	4,671.02	20.72	18.07	122.67	-387.92	672.42	621.17	584.68	36.49	17.024	
4,900.00	4,769.60	4,866.23	4,769.60	21.30	18.20	124.65	-388.67	673.74	637.26	600.33	36.93	17.255	

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 39-8
Project:	COLORADO NORTHERN ZONE - 83	TVD Reference:	WELL @ 5071.00ft (Original Well Elev)
Reference Site:	WELD_NRC 20-8 PAD	MD Reference:	WELL @ 5071.00ft (Original Well Elev)
Site Error:	0.00ft	North Reference:	True
Reference Well:	P_NRC 39-8	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00ft	Output errors are at	2.00 sigma
Reference Wellbore	P_NRC 39-8	Database:	EDM 2003.21 Single User Db
Reference Design:	PLAN #1 1-5-10 RHS	Offset TVD Reference:	Offset Datum

Offset Design												WELD_NRC 20-8 PAD - P_NRC 16-8 - P_NRC 16-8 - 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 Tooface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)		Separation Factor	
5,000.00	4,865.62	4,962.25	4,865.62	21.88	18.31	126.61	-388.67	673.74	653.98	616.65	37.33	17.521		
5,100.00	4,961.64	5,058.27	4,961.64	22.46	18.43	128.48	-388.67	673.74	671.44	633.74	37.69	17.812		
5,200.00	5,057.66	5,154.29	5,057.66	23.04	18.54	130.26	-388.67	673.74	689.59	651.54	38.04	18.126		
5,300.00	5,153.68	5,250.31	5,153.68	23.62	18.66	131.94	-388.67	673.74	708.38	670.00	38.38	18.458		
5,400.00	5,249.70	5,346.32	5,249.70	24.20	18.78	133.55	-388.67	673.74	727.75	689.06	38.70	18.807		
5,500.00	5,345.71	5,442.34	5,345.71	24.79	18.90	135.07	-388.67	673.74	747.67	708.67	39.01	19.169		
5,600.00	5,441.73	5,538.36	5,441.73	25.37	19.03	136.51	-388.67	673.74	768.09	728.78	39.31	19.542		
5,700.00	5,537.75	5,634.38	5,537.75	25.95	19.15	137.88	-388.67	673.74	788.97	749.37	39.60	19.924		
5,768.65	5,603.67	5,700.30	5,603.67	26.35	19.24	138.79	-388.67	673.74	803.55	763.75	39.80	20.191		
5,800.00	5,633.82	5,730.44	5,633.82	26.51	19.28	139.27	-388.67	673.74	810.14	770.26	39.88	20.312		
5,900.00	5,730.58	5,827.21	5,730.58	26.92	19.41	140.64	-388.67	673.74	829.70	789.59	40.10	20.688		
6,000.00	5,828.17	5,924.80	5,828.17	27.29	19.54	141.79	-388.67	673.74	846.86	806.53	40.32	21.002		
6,100.00	5,926.46	6,023.09	5,926.46	27.62	19.67	142.72	-388.67	673.74	861.49	820.95	40.54	21.251		
6,200.00	6,025.34	6,121.96	6,025.34	27.90	19.81	143.45	-388.67	673.74	873.49	832.74	40.75	21.436		
6,300.00	6,124.67	6,221.30	6,124.67	28.13	19.95	144.01	-388.67	673.74	882.77	841.81	40.95	21.555		
6,400.00	6,224.34	6,320.97	6,224.34	28.32	20.09	144.38	-388.67	673.74	889.27	848.12	41.15	21.610		
6,500.00	6,324.23	6,420.86	6,324.23	28.47	20.23	144.60	-388.67	673.74	892.96	851.62	41.34	21.600		
6,579.78	6,404.00	6,500.63	6,404.00	28.55	20.34	-137.05	-388.67	673.74	893.87	852.38	41.49	21.544		
6,600.00	6,424.22	6,520.85	6,424.22	28.57	20.37	-137.05	-388.67	673.74	893.87	852.32	41.54	21.516		
6,700.00	6,524.22	6,620.85	6,524.22	28.68	20.52	-137.05	-388.67	673.74	893.87	852.04	41.83	21.369		
6,800.00	6,624.22	6,720.85	6,624.22	28.79	20.67	-137.05	-388.67	673.74	893.87	851.75	42.12	21.224		
6,900.00	6,724.22	6,820.85	6,724.22	28.90	20.82	-137.05	-388.67	673.74	893.87	851.46	42.41	21.079		
7,000.00	6,824.22	6,920.85	6,824.22	29.01	20.96	-137.05	-388.67	673.74	893.87	851.17	42.70	20.934		
7,100.00	6,924.22	7,020.85	6,924.22	29.12	21.12	-137.05	-388.67	673.74	893.87	850.87	42.99	20.790		
7,200.00	7,024.22	7,120.85	7,024.22	29.24	21.27	-137.05	-388.67	673.74	893.87	850.57	43.29	20.647		
7,300.00	7,124.22	7,220.85	7,124.22	29.35	21.42	-137.05	-388.67	673.74	893.87	850.27	43.59	20.504		
7,400.00	7,224.22	7,320.85	7,224.22	29.47	21.58	-137.05	-388.67	673.74	893.87	849.97	43.90	20.363		
7,500.00	7,324.22	7,420.85	7,324.22	29.59	21.73	-137.05	-388.67	673.74	893.87	849.66	44.20	20.222		
7,600.00	7,424.22	7,520.85	7,424.22	29.70	21.89	-137.05	-388.67	673.74	893.87	849.36	44.51	20.082		
7,700.00	7,524.22	7,620.85	7,524.22	29.83	22.05	-137.05	-388.67	673.74	893.87	849.04	44.82	19.943		
7,800.00	7,624.22	7,720.85	7,624.22	29.95	22.21	-137.05	-388.67	673.74	893.87	848.73	45.13	19.804		
7,900.00	7,724.22	7,820.85	7,724.22	30.07	22.37	-137.05	-388.67	673.74	893.87	848.42	45.45	19.667		
8,000.00	7,824.22	7,920.85	7,824.22	30.19	22.53	-137.05	-388.67	673.74	893.87	848.10	45.77	19.531		
8,100.00	7,924.22	8,020.85	7,924.22	30.32	22.69	-137.05	-388.67	673.74	893.87	847.78	46.09	19.395		
8,200.00	8,024.22	8,120.85	8,024.22	30.44	22.86	-137.05	-388.67	673.74	893.87	847.46	46.41	19.261		
8,300.00	8,124.22	8,220.85	8,124.22	30.57	23.02	-137.05	-388.67	673.74	893.87	847.13	46.73	19.127		
8,400.00	8,224.22	8,320.85	8,224.22	30.70	23.19	-137.05	-388.67	673.74	893.87	846.81	47.06	18.995		
8,504.78	8,329.00	8,425.63	8,329.00	30.84	23.36	-137.05	-388.67	673.74	893.87	846.46	47.40	18.857		

Company:	US ROCKIES REGION PLANNING	Local Co-ordinate Reference:	Well P_NRC 39-8
Project:	COLORADO NORTHERN ZONE - 83	TVD Reference:	WELL @ 5071.00ft (Original Well Elev)
Reference Site:	WELD_NRC 20-8 PAD	MD Reference:	WELL @ 5071.00ft (Original Well Elev)
Site Error:	0.00ft	North Reference:	True
Reference Well:	P_NRC 39-8	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00ft	Output errors are at	2.00 sigma
Reference Wellbore	P_NRC 39-8	Database:	EDM 2003.21 Single User Db
Reference Design:	PLAN #1 1-5-10 RHS	Offset TVD Reference:	Offset Datum

Offset Design													WELD_NRC 20-8 PAD - P_NRC 23-8 - P_NRC 23-8 - 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 Tooface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor			
0.00	0.00	0.00	0.00	0.00	0.00	-89.48	0.72	-80.05	80.06						
100.00	100.00	100.00	100.00	0.10	0.10	-89.48	0.72	-80.05	80.06	79.86	0.19	419.026			
200.00	200.00	200.00	200.00	0.32	0.32	-89.48	0.72	-80.05	80.06	79.41	0.64	124.973			
300.00	300.00	300.00	300.00	0.55	0.55	-89.48	0.72	-80.05	80.06	78.97	1.09	73.438			
400.00	400.00	400.00	400.00	0.77	0.77	-89.48	0.72	-80.05	80.06	78.52	1.54	51.996			
500.00	500.00	500.00	500.00	0.99	0.99	-89.48	0.72	-80.05	80.06	78.07	1.99	40.245			
600.00	600.00	600.00	600.00	1.22	1.22	-89.48	0.72	-80.05	80.06	77.62	2.44	32.827			
700.00	700.00	700.00	700.00	1.44	1.44	-89.48	0.72	-80.05	80.06	77.17	2.89	27.718			
800.00	800.00	800.00	800.00	1.67	1.67	-89.48	0.72	-80.05	80.06	76.72	3.34	23.985			
900.00	900.00	900.00	900.00	1.89	1.89	-89.48	0.72	-80.05	80.06	76.27	3.79	21.138			
1,000.00	1,000.00	1,000.00	1,000.00	2.12	2.12	-89.48	0.72	-80.05	80.06	75.82	4.24	18.895			
1,085.00	1,085.00	1,085.00	1,085.00	2.31	2.31	-89.48	0.72	-80.05	80.06	75.44	4.62	17.332	CC, ES		
1,100.00	1,100.00	1,099.60	1,099.60	2.34	2.34	-167.78	0.73	-80.09	80.13	75.45	4.68	17.115			
1,200.00	1,199.97	1,196.78	1,196.75	2.55	2.54	-167.77	1.21	-82.18	84.50	79.42	5.08	16.636	SF		
1,300.00	1,299.80	1,293.20	1,293.02	2.76	2.75	-167.74	2.40	-87.43	95.57	90.09	5.48	17.454			
1,400.00	1,399.37	1,388.24	1,387.68	2.99	2.96	-167.70	4.28	-95.69	113.24	107.37	5.87	19.303			
1,500.00	1,498.55	1,481.31	1,480.05	3.23	3.19	-167.64	6.79	-106.74	137.38	131.13	6.25	21.977			
1,600.00	1,597.23	1,571.86	1,569.52	3.51	3.44	-167.56	9.87	-120.30	167.81	161.18	6.63	25.314			
1,700.00	1,695.29	1,659.40	1,655.56	3.82	3.70	-167.47	13.44	-136.02	204.31	197.31	7.00	29.188			
1,800.00	1,792.60	1,743.54	1,737.76	4.18	3.99	-167.35	17.42	-153.54	246.63	239.27	7.36	33.494			
1,896.12	1,885.33	1,820.89	1,812.83	4.58	4.29	-167.22	21.55	-171.71	292.54	284.83	7.71	37.960			
1,900.00	1,889.05	1,823.94	1,815.77	4.60	4.30	-167.22	21.72	-172.47	294.49	286.77	7.72	38.132			
2,000.00	1,985.07	1,902.03	1,891.00	5.06	4.63	-167.27	26.36	-192.89	346.04	337.89	8.15	42.462			
2,100.00	2,081.09	1,987.16	1,972.76	5.55	5.03	-167.27	31.61	-216.02	398.51	389.91	8.60	46.319			
2,200.00	2,177.11	2,072.29	2,054.52	6.05	5.44	-167.27	36.87	-239.16	450.98	441.91	9.07	49.733			
2,300.00	2,273.13	2,157.42	2,136.27	6.57	5.87	-167.27	42.13	-262.30	503.45	493.91	9.54	52.768			
2,400.00	2,369.14	2,242.55	2,218.03	7.10	6.30	-167.27	47.38	-285.43	555.92	545.90	10.02	55.475			
2,500.00	2,465.16	2,327.68	2,299.78	7.63	6.75	-167.27	52.64	-308.57	608.39	597.88	10.51	57.899			
2,600.00	2,561.18	2,412.81	2,381.54	8.18	7.20	-167.27	57.89	-331.70	660.86	649.86	11.00	60.078			
2,700.00	2,657.20	2,497.93	2,463.30	8.72	7.66	-167.27	63.15	-354.84	713.33	701.83	11.50	62.044			
2,800.00	2,753.22	2,583.06	2,545.05	9.28	8.13	-167.27	68.40	-377.98	765.80	753.80	12.00	63.822			
2,900.00	2,849.24	2,668.19	2,626.81	9.83	8.60	-167.27	73.66	-401.11	818.27	805.77	12.50	65.439			
3,000.00	2,945.25	2,753.32	2,708.56	10.39	9.07	-167.27	78.92	-424.25	870.74	857.73	13.01	66.913			
3,100.00	3,041.27	2,838.45	2,790.32	10.96	9.55	-167.27	84.17	-447.38	923.21	909.69	13.52	68.261			
3,200.00	3,137.29	2,923.58	2,872.07	11.52	10.03	-167.27	89.43	-470.52	975.68	961.64	14.04	69.499			
3,300.00	3,233.31	3,008.71	2,953.83	12.09	10.51	-167.27	94.68	-493.66	1,028.15	1,013.59	14.56	70.637			
3,400.00	3,329.33	3,093.84	3,035.59	12.66	10.99	-167.27	99.94	-516.79	1,080.62	1,065.55	15.07	71.687			
3,500.00	3,425.35	3,178.96	3,117.34	13.23	11.47	-167.27	105.20	-539.93	1,133.09	1,117.50	15.59	72.658			
3,600.00	3,521.36	3,264.09	3,199.10	13.80	11.96	-167.27	110.45	-563.06	1,185.56	1,169.44	16.12	73.559			
3,700.00	3,617.38	3,349.22	3,280.85	14.37	12.45	-167.27	115.71	-586.20	1,238.03	1,221.39	16.64	74.396			
3,800.00	3,713.40	3,434.35	3,362.61	14.95	12.93	-167.27	120.96	-609.34	1,290.50	1,273.33	17.17	75.176			
3,900.00	3,809.42	3,519.48	3,444.36	15.52	13.42	-167.27	126.22	-632.47	1,342.97	1,325.28	17.69	75.904			
4,000.00	3,905.44	3,604.61	3,526.12	16.10	13.91	-167.27	131.48	-655.61	1,395.44	1,377.22	18.22	76.586			
4,100.00	4,001.46	3,689.74	3,607.88	16.67	14.40	-167.27	136.73	-678.74	1,447.91	1,429.16	18.75	77.224			
4,200.00	4,097.48	3,774.87	3,689.63	17.25	14.89	-167.27	141.99	-701.88	1,500.38	1,481.10	19.28	77.823			
4,300.00	4,193.49	3,859.99	3,771.39	17.83	15.39	-167.27	147.24	-725.02	1,552.85	1,533.04	19.81	78.386			
4,400.00	4,289.51	3,945.12	3,853.14	18.40	15.88	-167.28	152.50	-748.15	1,605.32	1,584.98	20.34	78.917			
4,500.00	4,385.53	4,030.25	3,934.90	18.98	16.37	-167.28	157.76	-771.29	1,657.79	1,636.92	20.87	79.418			
4,600.00	4,481.55	4,115.38	4,016.65	19.56	16.87	-167.28	163.01	-794.43	1,710.26	1,688.85	21.41	79.892			
4,700.00	4,577.57	4,200.51	4,098.41	20.14	17.36	-167.28	168.27	-817.56	1,762.73	1,740.79	21.94	80.339			
4,800.00	4,673.59	4,285.64	4,180.17	20.72	17.86	-167.28	173.52	-840.70	1,815.20	1,792.72	22.48	80.764			
4,900.00	4,769.60	4,370.77	4,261.92	21.30	18.35	-167.28	178.78	-863.83	1,867.67	1,844.66	23.01	81.166			

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 39-8
Project:	COLORADO NORTHERN ZONE - 83	TVD Reference:	WELL @ 5071.00ft (Original Well Elev)
Reference Site:	WELD_NRC 20-8 PAD	MD Reference:	WELL @ 5071.00ft (Original Well Elev)
Site Error:	0.00ft	North Reference:	True
Reference Well:	P_NRC 39-8	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00ft	Output errors are at	2.00 sigma
Reference Wellbore	P_NRC 39-8	Database:	EDM 2003.21 Single User Db
Reference Design:	PLAN #1 1-5-10 RHS	Offset TVD Reference:	Offset Datum

Offset Design												WELD_NRC 20-8 PAD - P_NRC 23-8 - P_NRC 23-8 - 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 Tooface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)		Separation Factor	
5,000.00	4,865.62	4,455.90	4,343.68	21.88	18.85	-167.28	184.03	-886.97	1,920.14	1,896.59	23.55	81.549		
5,100.00	4,961.64	4,541.02	4,425.43	22.46	19.34	-167.28	189.29	-910.11	1,972.61	1,948.53	24.08	81.912		
5,200.00	5,057.66	4,626.15	4,507.19	23.04	19.84	-167.28	194.55	-933.24	2,025.08	2,000.46	24.62	82.259		
5,300.00	5,153.68	4,711.28	4,588.94	23.62	20.34	-167.28	199.80	-956.38	2,077.55	2,052.39	25.16	82.589		
5,400.00	5,249.70	4,796.41	4,670.70	24.20	20.83	-167.28	205.06	-979.51	2,130.02	2,104.33	25.69	82.904		
5,500.00	5,345.71	4,881.54	4,752.46	24.79	21.33	-167.28	210.31	-1,002.65	2,182.49	2,156.26	26.23	83.205		
5,600.00	5,441.73	4,966.67	4,834.21	25.37	21.83	-167.28	215.57	-1,025.79	2,234.96	2,208.19	26.77	83.492		
5,700.00	5,537.75	5,051.80	4,915.97	25.95	22.32	-167.28	220.83	-1,048.92	2,287.43	2,260.12	27.31	83.767		
5,768.65	5,603.67	5,110.24	4,972.09	26.35	22.67	-167.28	224.43	-1,064.81	2,323.45	2,295.77	27.68	83.950		
5,800.00	5,633.82	5,137.01	4,997.81	26.51	22.82	-167.36	226.09	-1,072.08	2,339.76	2,311.85	27.91	83.829		
5,900.00	5,730.58	5,223.56	5,080.92	26.92	23.33	-167.59	231.43	-1,095.60	2,389.85	2,361.23	28.62	83.503		
6,000.00	5,828.17	5,311.75	5,165.62	27.29	23.84	-167.78	236.88	-1,119.57	2,436.96	2,407.66	29.30	83.180		
6,100.00	5,926.46	5,401.48	5,251.79	27.62	24.37	-167.94	242.42	-1,143.96	2,481.03	2,451.09	29.94	82.866		
6,200.00	6,025.34	5,492.64	5,339.35	27.90	24.90	-168.05	248.04	-1,168.73	2,522.02	2,491.47	30.55	82.561		
6,300.00	6,124.67	5,585.13	5,428.17	28.13	25.44	-168.13	253.75	-1,193.87	2,559.88	2,528.76	31.12	82.270		
6,400.00	6,224.34	5,678.82	5,518.15	28.32	25.99	-168.18	259.54	-1,219.33	2,594.55	2,562.91	31.64	81.993		
6,500.00	6,324.23	5,948.35	5,778.71	28.47	27.24	-168.02	274.76	-1,286.32	2,625.34	2,592.77	32.57	80.618		
6,579.78	6,404.00	6,578.34	6,404.00	28.55	28.63	-89.48	289.28	-1,350.24	2,633.12	2,599.21	33.92	77.633		
6,600.00	6,424.22	6,598.56	6,424.22	28.57	28.65	-89.48	289.28	-1,350.24	2,633.12	2,599.14	33.98	77.485		
6,700.00	6,524.22	6,698.56	6,524.22	28.68	28.75	-89.48	289.28	-1,350.24	2,633.12	2,598.81	34.32	76.729		
6,800.00	6,624.22	6,798.56	6,624.22	28.79	28.86	-89.48	289.28	-1,350.24	2,633.12	2,598.47	34.65	75.981		
6,900.00	6,724.22	6,898.56	6,724.22	28.90	28.97	-89.48	289.28	-1,350.24	2,633.12	2,598.13	34.99	75.243		
7,000.00	6,824.22	6,998.56	6,824.22	29.01	29.09	-89.48	289.28	-1,350.24	2,633.12	2,597.79	35.34	74.514		
7,100.00	6,924.22	7,098.56	6,924.22	29.12	29.20	-89.48	289.28	-1,350.24	2,633.12	2,597.44	35.68	73.794		
7,200.00	7,024.22	7,198.56	7,024.22	29.24	29.31	-89.48	289.28	-1,350.24	2,633.12	2,597.09	36.03	73.082		
7,300.00	7,124.22	7,298.56	7,124.22	29.35	29.43	-89.48	289.28	-1,350.24	2,633.12	2,596.75	36.38	72.381		
7,400.00	7,224.22	7,398.56	7,224.22	29.47	29.55	-89.48	289.28	-1,350.24	2,633.12	2,596.39	36.73	71.688		
7,500.00	7,324.22	7,498.56	7,324.22	29.59	29.66	-89.48	289.28	-1,350.24	2,633.12	2,596.04	37.08	71.004		
7,600.00	7,424.22	7,598.56	7,424.22	29.70	29.78	-89.48	289.28	-1,350.24	2,633.12	2,595.68	37.44	70.329		
7,700.00	7,524.22	7,698.56	7,524.22	29.83	29.90	-89.48	289.28	-1,350.24	2,633.12	2,595.33	37.80	69.663		
7,800.00	7,624.22	7,798.56	7,624.22	29.95	30.03	-89.48	289.28	-1,350.24	2,633.12	2,594.97	38.16	69.007		
7,900.00	7,724.22	7,898.56	7,724.22	30.07	30.15	-89.48	289.28	-1,350.24	2,633.12	2,594.61	38.52	68.359		
8,000.00	7,824.22	7,998.56	7,824.22	30.19	30.27	-89.48	289.28	-1,350.24	2,633.12	2,594.24	38.88	67.720		
8,100.00	7,924.22	8,098.56	7,924.22	30.32	30.40	-89.48	289.28	-1,350.24	2,633.12	2,593.88	39.25	67.090		
8,200.00	8,024.22	8,198.56	8,024.22	30.44	30.53	-89.48	289.28	-1,350.24	2,633.12	2,593.51	39.61	66.468		
8,300.00	8,124.22	8,298.56	8,124.22	30.57	30.65	-89.48	289.28	-1,350.24	2,633.12	2,593.14	39.98	65.855		
8,400.00	8,224.22	8,398.56	8,224.22	30.70	30.78	-89.48	289.28	-1,350.24	2,633.12	2,592.77	40.35	65.251		
8,463.56	8,287.78	8,462.12	8,287.78	30.78	30.86	-89.48	289.28	-1,350.24	2,633.12	2,592.53	40.59	64.871		
8,504.78	8,329.00	8,487.34	8,313.00	30.84	30.90	-89.48	289.28	-1,350.24	2,633.17	2,592.46	40.71	64.676		

Company:	US ROCKIES REGION PLANNING	Local Co-ordinate Reference:	Well P_NRC 39-8
Project:	COLORADO NORTHERN ZONE - 83	TVD Reference:	WELL @ 5071.00ft (Original Well Elev)
Reference Site:	WELD_NRC 20-8 PAD	MD Reference:	WELL @ 5071.00ft (Original Well Elev)
Site Error:	0.00ft	North Reference:	True
Reference Well:	P_NRC 39-8	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00ft	Output errors are at	2.00 sigma
Reference Wellbore	P_NRC 39-8	Database:	EDM 2003.21 Single User Db
Reference Design:	PLAN #1 1-5-10 RHS	Offset TVD Reference:	Offset Datum

Offset Design													WELD_NRC 20-8 PAD - P_NRC 37-8 - P_NRC 37-8 - 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 Tooface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor			
0.00	0.00	0.00	0.00	0.00	0.00	-89.35	0.36	-31.91	31.91						
100.00	100.00	100.00	100.00	0.10	0.10	-89.35	0.36	-31.91	31.91	31.72	0.19	167.028			
200.00	200.00	200.00	200.00	0.32	0.32	-89.35	0.36	-31.91	31.91	31.27	0.64	49.815			
300.00	300.00	300.00	300.00	0.55	0.55	-89.35	0.36	-31.91	31.91	30.82	1.09	29.273			
400.00	400.00	400.00	400.00	0.77	0.77	-89.35	0.36	-31.91	31.91	30.37	1.54	20.726			
500.00	500.00	500.00	500.00	0.99	0.99	-89.35	0.36	-31.91	31.91	29.92	1.99	16.042			
600.00	600.00	600.00	600.00	1.22	1.22	-89.35	0.36	-31.91	31.91	29.47	2.44	13.085			
700.00	700.00	700.00	700.00	1.44	1.44	-89.35	0.36	-31.91	31.91	29.02	2.89	11.049			
800.00	800.00	800.00	800.00	1.67	1.67	-89.35	0.36	-31.91	31.91	28.57	3.34	9.561			
900.00	900.00	900.00	900.00	1.89	1.89	-89.35	0.36	-31.91	31.91	28.12	3.79	8.426			
1,000.00	1,000.00	1,000.00	1,000.00	2.12	2.12	-89.35	0.36	-31.91	31.91	27.67	4.24	7.532			
1,085.00	1,085.00	1,085.00	1,085.00	2.31	2.31	-89.35	0.36	-31.91	31.91	27.29	4.62	6.909	CC		
1,100.00	1,100.00	1,100.01	1,100.01	2.34	2.34	-167.74	0.32	-31.91	31.95	27.27	4.68	6.826	ES		
1,200.00	1,199.97	1,199.97	1,199.94	2.55	2.51	-172.35	-1.94	-31.80	34.15	29.10	5.05	6.762	SF		
1,300.00	1,299.80	1,299.44	1,299.24	2.76	2.69	178.44	-7.65	-31.53	40.51	35.09	5.43	7.466			
1,400.00	1,399.37	1,398.02	1,397.40	2.99	2.88	168.77	-16.71	-31.11	52.16	46.35	5.81	8.972			
1,500.00	1,498.55	1,495.31	1,493.91	3.23	3.09	161.02	-28.94	-30.53	69.55	63.33	6.22	11.181			
1,600.00	1,597.23	1,590.95	1,588.32	3.51	3.34	155.43	-44.15	-29.81	92.58	85.93	6.65	13.918			
1,700.00	1,695.29	1,684.73	1,680.36	3.82	3.61	151.47	-62.11	-28.97	120.96	113.85	7.11	17.010			
1,800.00	1,792.60	1,779.21	1,772.82	4.18	3.92	149.07	-81.54	-28.05	153.36	145.75	7.61	20.161			
1,896.12	1,885.33	1,869.14	1,860.82	4.58	4.23	147.96	-100.04	-27.18	187.24	179.13	8.11	23.099			
1,900.00	1,889.05	1,872.75	1,864.35	4.60	4.24	147.95	-100.78	-27.15	188.65	180.53	8.13	23.209			
2,000.00	1,985.07	1,965.81	1,955.42	5.06	4.58	147.67	-119.92	-26.25	225.24	216.52	8.72	25.822			
2,100.00	2,081.09	2,058.87	2,046.48	5.55	4.93	147.47	-139.06	-25.35	261.84	252.50	9.34	28.036			
2,200.00	2,177.11	2,151.93	2,137.55	6.05	5.29	147.32	-158.19	-24.45	298.43	288.46	9.97	29.921			
2,300.00	2,273.13	2,244.99	2,228.62	6.57	5.66	147.20	-177.33	-23.55	335.03	324.40	10.62	31.536			
2,400.00	2,369.14	2,338.05	2,319.69	7.10	6.04	147.11	-196.47	-22.65	371.62	360.34	11.29	32.930			
2,500.00	2,465.16	2,431.12	2,410.76	7.63	6.43	147.03	-215.61	-21.75	408.22	396.26	11.96	34.140			
2,600.00	2,561.18	2,524.18	2,501.82	8.18	6.81	146.97	-234.75	-20.85	444.82	432.18	12.64	35.197			
2,700.00	2,657.20	2,617.24	2,592.89	8.72	7.21	146.91	-253.89	-19.94	481.42	468.09	13.33	36.126			
2,800.00	2,753.22	2,710.30	2,683.96	9.28	7.60	146.87	-273.02	-19.04	518.01	503.99	14.02	36.948			
2,900.00	2,849.24	2,803.36	2,775.03	9.83	8.00	146.83	-292.16	-18.14	554.61	539.89	14.72	37.678			
3,000.00	2,945.25	2,896.42	2,866.09	10.39	8.40	146.79	-311.30	-17.24	591.21	575.79	15.42	38.331			
3,100.00	3,041.27	2,989.48	2,957.16	10.96	8.80	146.76	-330.44	-16.34	627.81	611.68	16.13	38.917			
3,200.00	3,137.29	3,082.54	3,048.23	11.52	9.21	146.73	-349.58	-15.44	664.41	647.57	16.84	39.445			
3,300.00	3,233.31	3,175.61	3,139.30	12.09	9.61	146.71	-368.72	-14.54	701.01	683.45	17.56	39.924			
3,400.00	3,329.33	3,268.67	3,230.36	12.66	10.02	146.68	-387.86	-13.64	737.61	719.33	18.28	40.359			
3,500.00	3,425.35	3,361.73	3,321.43	13.23	10.43	146.66	-406.99	-12.74	774.21	755.21	19.00	40.756			
3,600.00	3,521.36	3,454.79	3,412.50	13.80	10.84	146.64	-426.13	-11.84	810.81	791.09	19.72	41.120			
3,700.00	3,617.38	3,547.85	3,503.57	14.37	11.25	146.63	-445.27	-10.94	847.41	826.97	20.44	41.454			
3,800.00	3,713.40	3,640.91	3,594.63	14.95	11.66	146.61	-464.41	-10.04	884.01	862.84	21.17	41.762			
3,900.00	3,809.42	3,733.97	3,685.70	15.52	12.07	146.60	-483.55	-9.14	920.61	898.71	21.90	42.046			
4,000.00	3,905.44	3,827.03	3,776.77	16.10	12.49	146.58	-502.69	-8.24	957.21	934.58	22.62	42.310			
4,100.00	4,001.46	3,920.10	3,867.84	16.67	12.90	146.57	-521.82	-7.34	993.81	970.45	23.35	42.554			
4,200.00	4,097.48	4,013.16	3,958.90	17.25	13.31	146.56	-540.96	-6.44	1,030.41	1,006.32	24.08	42.782			
4,300.00	4,193.49	4,106.22	4,049.97	17.83	13.73	146.55	-560.10	-5.53	1,067.01	1,042.19	24.82	42.995			
4,400.00	4,289.51	4,199.28	4,141.04	18.40	14.14	146.54	-579.24	-4.63	1,103.61	1,078.06	25.55	43.194			
4,500.00	4,385.53	4,292.34	4,232.11	18.98	14.56	146.53	-598.38	-3.73	1,140.21	1,113.92	26.28	43.380			
4,600.00	4,481.55	4,385.40	4,323.17	19.56	14.98	146.52	-617.52	-2.83	1,176.81	1,149.79	27.02	43.555			
4,700.00	4,577.57	4,478.46	4,414.24	20.14	15.39	146.51	-636.66	-1.93	1,213.41	1,185.65	27.75	43.719			
4,800.00	4,673.59	4,571.52	4,505.31	20.72	15.81	146.51	-655.79	-1.03	1,250.01	1,221.52	28.49	43.874			
4,900.00	4,769.60	4,664.59	4,596.38	21.30	16.23	146.50	-674.93	-0.13	1,286.61	1,257.38	29.23	44.020			

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 39-8
Project:	COLORADO NORTHERN ZONE - 83	TVD Reference:	WELL @ 5071.00ft (Original Well Elev)
Reference Site:	WELD_NRC 20-8 PAD	MD Reference:	WELL @ 5071.00ft (Original Well Elev)
Site Error:	0.00ft	North Reference:	True
Reference Well:	P_NRC 39-8	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00ft	Output errors are at	2.00 sigma
Reference Wellbore	P_NRC 39-8	Database:	EDM 2003.21 Single User Db
Reference Design:	PLAN #1 1-5-10 RHS	Offset TVD Reference:	Offset Datum

Offset Design													WELD_NRC 20-8 PAD - P_NRC 37-8 - P_NRC 37-8 - 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			
5,000.00	4,865.62	4,757.65	4,687.45	21.88	16.64	146.49	-694.07	0.77	1,323.21	1,293.24	29.97	44.158			
5,100.00	4,961.64	4,850.71	4,778.51	22.46	17.06	146.48	-713.21	1.67	1,359.81	1,329.11	30.70	44.289			
5,200.00	5,057.66	4,943.77	4,869.58	23.04	17.48	146.48	-732.35	2.57	1,396.41	1,364.97	31.44	44.413			
5,300.00	5,153.68	5,036.83	4,960.65	23.62	17.90	146.47	-751.49	3.47	1,433.01	1,400.83	32.18	44.530			
5,400.00	5,249.70	5,129.89	5,051.72	24.20	18.32	146.47	-770.63	4.37	1,469.61	1,436.69	32.92	44.642			
5,500.00	5,345.71	5,222.95	5,142.78	24.79	18.74	146.46	-789.76	5.27	1,506.21	1,472.55	33.66	44.748			
5,600.00	5,441.73	5,316.01	5,233.85	25.37	19.15	146.46	-808.90	6.17	1,542.81	1,508.41	34.40	44.849			
5,700.00	5,537.75	5,409.08	5,324.92	25.95	19.57	146.45	-828.04	7.07	1,579.41	1,544.27	35.14	44.945			
5,768.65	5,603.67	5,472.96	5,387.44	26.35	19.86	146.45	-841.18	7.69	1,604.54	1,568.89	35.65	45.009			
5,800.00	5,633.82	5,502.19	5,416.04	26.51	19.99	146.58	-847.19	7.97	1,615.88	1,579.97	35.91	44.996			
5,900.00	5,730.58	5,596.07	5,507.91	26.92	20.41	146.92	-866.50	8.88	1,650.26	1,613.58	36.68	44.985			
6,000.00	5,828.17	5,690.87	5,600.67	27.29	20.84	147.15	-885.99	9.80	1,681.89	1,644.46	37.42	44.941			
6,100.00	5,926.46	5,786.46	5,694.22	27.62	21.27	147.29	-905.65	10.73	1,710.73	1,672.60	38.13	44.867			
6,200.00	6,025.34	5,882.73	5,788.43	27.90	21.71	147.33	-925.45	11.66	1,736.78	1,697.98	38.79	44.768			
6,300.00	6,124.67	6,025.55	5,928.61	28.13	22.24	147.18	-952.66	12.94	1,759.15	1,719.63	39.52	44.517			
6,400.00	6,224.34	6,193.05	6,094.47	28.32	22.66	147.03	-975.82	14.03	1,775.08	1,734.96	40.12	44.240			
6,500.00	6,324.23	6,363.40	6,264.26	28.47	22.98	146.94	-989.41	14.67	1,784.22	1,743.62	40.60	43.946			
6,579.78	6,404.00	6,500.33	6,401.13	28.55	23.18	-134.79	-993.00	14.84	1,786.55	1,745.65	40.90	43.678			
6,600.00	6,424.22	6,523.43	6,424.22	28.57	23.21	-134.79	-993.01	14.84	1,786.56	1,745.59	40.96	43.615			
6,700.00	6,524.22	6,623.43	6,524.22	28.68	23.33	-134.79	-993.01	14.84	1,786.56	1,745.32	41.24	43.322			
6,800.00	6,624.22	6,723.43	6,624.22	28.79	23.44	-134.79	-993.01	14.84	1,786.56	1,745.05	41.51	43.041			
6,900.00	6,724.22	6,823.43	6,724.22	28.90	23.55	-134.79	-993.01	14.84	1,786.56	1,744.78	41.78	42.760			
7,000.00	6,824.22	6,923.43	6,824.22	29.01	23.66	-134.79	-993.01	14.84	1,786.56	1,744.50	42.06	42.480			
7,100.00	6,924.22	7,023.43	6,924.22	29.12	23.77	-134.79	-993.01	14.84	1,786.56	1,744.22	42.33	42.201			
7,200.00	7,024.22	7,123.43	7,024.22	29.24	23.88	-134.79	-993.01	14.84	1,786.56	1,743.94	42.62	41.922			
7,300.00	7,124.22	7,223.43	7,124.22	29.35	24.00	-134.79	-993.01	14.84	1,786.56	1,743.66	42.90	41.644			
7,400.00	7,224.22	7,323.43	7,224.22	29.47	24.12	-134.79	-993.01	14.84	1,786.56	1,743.37	43.19	41.367			
7,500.00	7,324.22	7,423.43	7,324.22	29.59	24.23	-134.79	-993.01	14.84	1,786.56	1,743.08	43.48	41.091			
7,600.00	7,424.22	7,523.43	7,424.22	29.70	24.35	-134.79	-993.01	14.84	1,786.56	1,742.79	43.77	40.817			
7,700.00	7,524.22	7,623.43	7,524.22	29.83	24.48	-134.79	-993.01	14.84	1,786.56	1,742.49	44.07	40.543			
7,800.00	7,624.22	7,723.43	7,624.22	29.95	24.60	-134.79	-993.01	14.84	1,786.56	1,742.19	44.36	40.271			
7,900.00	7,724.22	7,823.43	7,724.22	30.07	24.72	-134.79	-993.01	14.84	1,786.56	1,741.89	44.66	40.000			
8,000.00	7,824.22	7,923.43	7,824.22	30.19	24.85	-134.79	-993.01	14.84	1,786.56	1,741.59	44.97	39.731			
8,100.00	7,924.22	8,023.43	7,924.22	30.32	24.98	-134.79	-993.01	14.84	1,786.56	1,741.28	45.27	39.463			
8,200.00	8,024.22	8,123.43	8,024.22	30.44	25.10	-134.79	-993.01	14.84	1,786.56	1,740.98	45.58	39.196			
8,300.00	8,124.22	8,223.43	8,124.22	30.57	25.23	-134.79	-993.01	14.84	1,786.56	1,740.67	45.89	38.931			
8,400.00	8,224.22	8,323.43	8,224.22	30.70	25.36	-134.79	-993.01	14.84	1,786.56	1,740.35	46.20	38.668			
8,504.78	8,329.00	8,428.20	8,329.00	30.84	25.50	-134.79	-993.01	14.84	1,786.56	1,740.02	46.53	38.394			

Company:	US ROCKIES REGION PLANNING	Local Co-ordinate Reference:	Well P_NRC 39-8
Project:	COLORADO NORTHERN ZONE - 83	TVD Reference:	WELL @ 5071.00ft (Original Well Elev)
Reference Site:	WELD_NRC 20-8 PAD	MD Reference:	WELL @ 5071.00ft (Original Well Elev)
Site Error:	0.00ft	North Reference:	True
Reference Well:	P_NRC 39-8	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00ft	Output errors are at	2.00 sigma
Reference Wellbore	P_NRC 39-8	Database:	EDM 2003.21 Single User Db
Reference Design:	PLAN #1 1-5-10 RHS	Offset TVD Reference:	Offset Datum

Offset Design												WELD_NRC 20-8 PAD - ROCKY MOUNTAIN FUEL CO #2 EXISTING - ROCKY MOUNTAIN FUEL CO	Offset Site Error:	0.00 ft
Survey Program: 0-UNKNOWN													Offset Well Error:	0.00 ft
Reference		Offset		Semi Major Axis			Distance					Warning		
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Tooface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
0.00	0.00	0.00	0.00	0.00	0.00	-137.22	-48.09	-44.50	67.95					
100.00	100.00	82.00	82.00	0.10	1.64	-137.22	-48.09	-44.50	65.53	63.79	1.74	37.755		
200.00	200.00	182.00	182.00	0.32	5.28	-137.22	-48.09	-44.50	65.53	59.93	5.60	11.700		
300.00	300.00	282.00	282.00	0.55	9.28	-137.22	-48.09	-44.50	65.53	55.70	9.83	6.669		
400.00	400.00	382.00	382.00	0.77	13.28	-137.22	-48.09	-44.50	65.53	51.48	14.05	4.664		
500.00	500.00	482.00	482.00	0.99	17.28	-137.22	-48.09	-44.50	65.53	47.25	18.27	3.586		
600.00	600.00	582.00	582.00	1.22	21.28	-137.22	-48.09	-44.50	65.53	43.03	22.50	2.912		
700.00	700.00	682.00	682.00	1.44	25.28	-137.22	-48.09	-44.50	65.53	38.80	26.72	2.452		
800.00	800.00	782.00	782.00	1.67	29.28	-137.22	-48.09	-44.50	65.53	34.58	30.95	2.117		
900.00	900.00	882.00	882.00	1.89	33.28	-137.22	-48.09	-44.50	65.53	30.35	35.17	1.863		
1,000.00	1,000.00	982.00	982.00	2.12	37.28	-137.22	-48.09	-44.50	65.53	26.13	39.40	1.663		
1,085.00	1,085.00	1,067.00	1,067.00	2.31	40.68	-137.22	-48.09	-44.50	65.53	22.54	42.99	1.524	CC	
1,100.00	1,100.00	1,082.00	1,082.00	2.34	41.28	144.50	-48.09	-44.50	65.56	21.94	43.62	1.503		
1,200.00	1,199.97	1,181.97	1,181.97	2.55	45.28	145.60	-48.09	-44.50	67.42	19.61	47.80	1.410	Level 3, ES	
1,300.00	1,299.80	1,281.80	1,281.80	2.76	49.27	148.12	-48.09	-44.50	72.24	20.30	51.94	1.391	Level 3, SF	
1,400.00	1,399.37	1,381.37	1,381.37	2.99	53.25	151.53	-48.09	-44.50	80.24	24.25	55.99	1.433	Level 3	
1,500.00	1,498.55	1,480.55	1,480.55	3.23	57.22	155.22	-48.09	-44.50	91.62	31.69	59.94	1.529		
1,600.00	1,597.23	1,579.23	1,579.23	3.51	61.17	158.75	-48.09	-44.50	106.53	42.78	63.75	1.671		
1,700.00	1,695.29	1,677.29	1,677.29	3.82	65.09	161.88	-48.09	-44.50	125.03	57.62	67.41	1.855		
1,800.00	1,792.60	1,774.60	1,774.60	4.18	68.98	164.54	-48.09	-44.50	147.11	76.20	70.91	2.075		
1,896.12	1,885.33	1,867.33	1,867.33	4.58	72.69	166.67	-48.09	-44.50	171.67	97.57	74.10	2.317		
1,900.00	1,889.05	1,871.05	1,871.05	4.60	72.84	166.76	-48.09	-44.50	172.73	98.48	74.25	2.326		
2,000.00	1,985.07	1,967.07	1,967.07	5.06	76.68	168.59	-48.09	-44.50	200.07	121.91	78.16	2.560		
2,100.00	2,081.09	2,063.09	2,063.09	5.55	80.52	169.98	-48.09	-44.50	227.56	145.47	82.09	2.772		
2,200.00	2,177.11	2,159.11	2,159.11	6.05	84.36	171.07	-48.09	-44.50	255.14	169.12	86.03	2.966		
2,300.00	2,273.13	2,255.13	2,255.13	6.57	88.21	171.95	-48.09	-44.50	282.80	192.83	89.97	3.143		
2,400.00	2,369.14	2,351.14	2,351.14	7.10	92.05	172.67	-48.09	-44.50	310.50	216.58	93.92	3.306		
2,500.00	2,465.16	2,447.16	2,447.16	7.63	95.89	173.27	-48.09	-44.50	338.25	240.37	97.88	3.456		
2,600.00	2,561.18	2,543.18	2,543.18	8.18	99.73	173.78	-48.09	-44.50	366.02	264.19	101.84	3.594		
2,700.00	2,657.20	2,639.20	2,639.20	8.72	103.57	174.22	-48.09	-44.50	393.82	288.02	105.80	3.722		
2,800.00	2,753.22	2,735.22	2,735.22	9.28	107.41	174.61	-48.09	-44.50	421.63	311.87	109.76	3.841		
2,900.00	2,849.24	2,831.24	2,831.24	9.83	111.25	174.94	-48.09	-44.50	449.46	335.73	113.73	3.952		
3,000.00	2,945.25	2,927.25	2,927.25	10.39	115.09	175.24	-48.09	-44.50	477.30	359.61	117.70	4.055		
3,100.00	3,041.27	3,023.27	3,023.27	10.96	118.93	175.50	-48.09	-44.50	505.16	383.49	121.67	4.152		
3,200.00	3,137.29	3,119.29	3,119.29	11.52	122.77	175.73	-48.09	-44.50	533.02	407.38	125.64	4.242		
3,300.00	3,233.31	3,215.31	3,215.31	12.09	126.61	175.95	-48.09	-44.50	560.89	431.28	129.61	4.327		
3,400.00	3,329.33	3,311.33	3,311.33	12.66	130.45	176.14	-48.09	-44.50	588.76	455.18	133.58	4.407		
3,500.00	3,425.35	3,407.35	3,407.35	13.23	134.29	176.31	-48.09	-44.50	616.64	479.08	137.56	4.483		
3,600.00	3,521.36	3,503.36	3,503.36	13.80	138.13	176.47	-48.09	-44.50	644.53	502.99	141.54	4.554		
3,700.00	3,617.38	3,599.38	3,599.38	14.37	141.98	176.62	-48.09	-44.50	672.42	526.91	145.51	4.621		
3,800.00	3,713.40	3,695.40	3,695.40	14.95	145.82	176.75	-48.09	-44.50	700.31	550.82	149.49	4.685		
3,900.00	3,809.42	3,791.42	3,791.42	15.52	149.66	176.88	-48.09	-44.50	728.21	574.74	153.47	4.745		
4,000.00	3,905.44	3,887.44	3,887.44	16.10	153.50	176.99	-48.09	-44.50	756.11	598.66	157.45	4.802		
4,100.00	4,001.46	3,983.46	3,983.46	16.67	157.34	177.10	-48.09	-44.50	784.01	622.59	161.43	4.857		
4,200.00	4,097.48	4,079.48	4,079.48	17.25	161.18	177.20	-48.09	-44.50	811.92	646.51	165.40	4.909		
4,300.00	4,193.49	4,175.49	4,175.49	17.83	165.02	177.29	-48.09	-44.50	839.82	670.44	169.38	4.958		
4,400.00	4,289.51	4,271.51	4,271.51	18.40	168.86	177.38	-48.09	-44.50	867.73	694.37	173.37	5.005		
4,500.00	4,385.53	4,367.53	4,367.53	18.98	172.70	177.46	-48.09	-44.50	895.64	718.30	177.35	5.050		
4,600.00	4,481.55	4,463.55	4,463.55	19.56	176.54	177.54	-48.09	-44.50	923.56	742.23	181.33	5.093		
4,700.00	4,577.57	4,559.57	4,559.57	20.14	180.38	177.61	-48.09	-44.50	951.47	766.16	185.31	5.135		
4,800.00	4,673.59	4,655.59	4,655.59	20.72	184.22	177.68	-48.09	-44.50	979.39	790.09	189.29	5.174		
4,900.00	4,769.60	4,751.60	4,751.60	21.30	188.06	177.74	-48.09	-44.50	1,007.30	814.03	193.27	5.212		

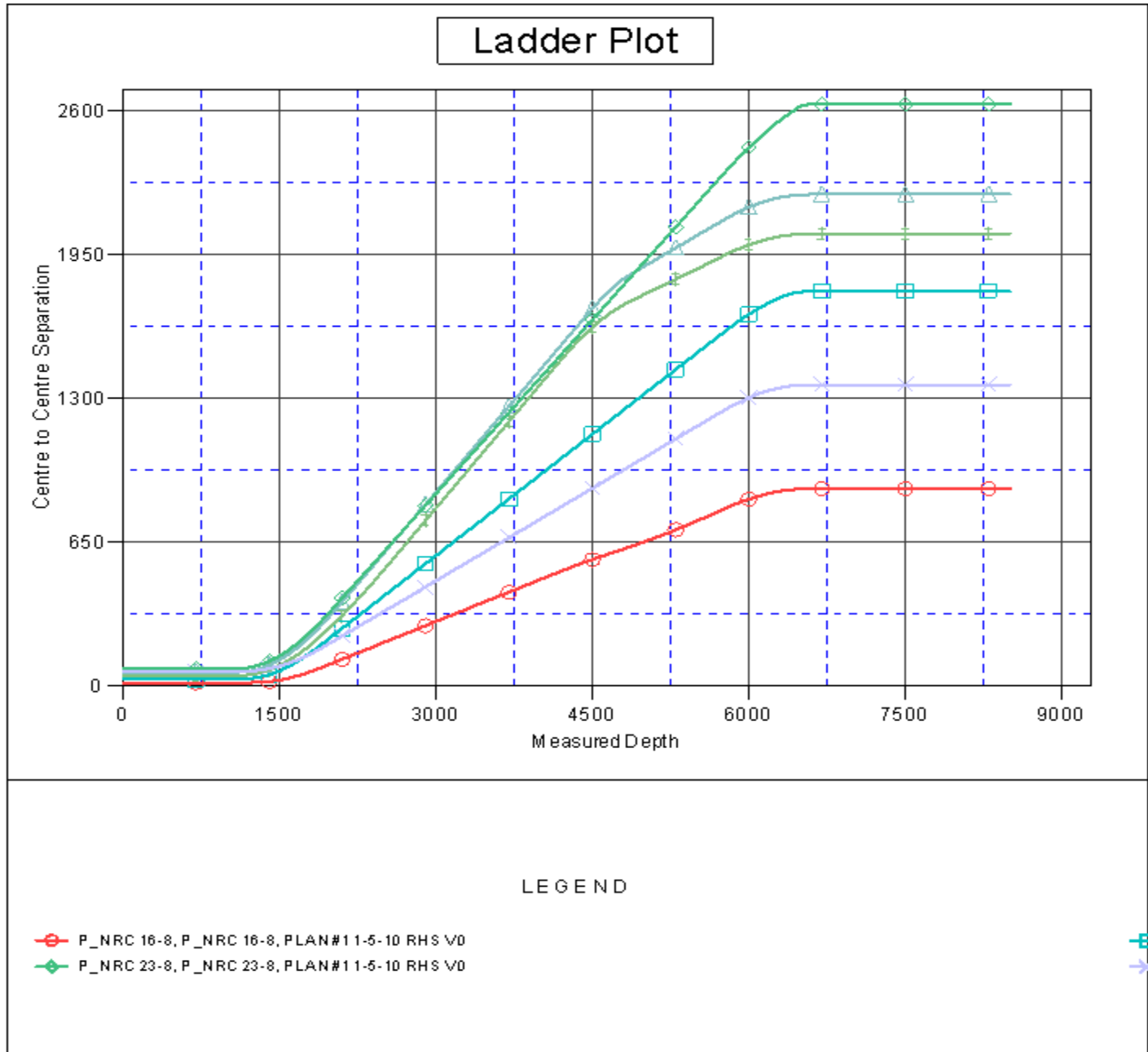
CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Company:	US ROCKIES REGION PLANNING	Local Co-ordinate Reference:	Well P_NRC 39-8
Project:	COLORADO NORTHERN ZONE - 83	TVD Reference:	WELL @ 5071.00ft (Original Well Elev)
Reference Site:	WELD_NRC 20-8 PAD	MD Reference:	WELL @ 5071.00ft (Original Well Elev)
Site Error:	0.00ft	North Reference:	True
Reference Well:	P_NRC 39-8	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00ft	Output errors are at	2.00 sigma
Reference Wellbore	P_NRC 39-8	Database:	EDM 2003.21 Single User Db
Reference Design:	PLAN #1 1-5-10 RHS	Offset TVD Reference:	Offset Datum

Offset Design												WELD_NRC 20-8 PAD - ROCKY MOUNTAIN FUEL CO #2 EXISTING - ROCKY MOUNTAIN FUEL CO	Offset Site Error:	0.00 ft
Survey Program: 0-UNKNOWN													Offset Well Error:	0.00 ft
Reference		Offset		Semi Major Axis			Distance						Warning	
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Tooface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
5,000.00	4,865.62	4,847.62	4,847.62	21.88	191.90	177.81	-48.09	-44.50	1,035.22	837.96	197.26	5.248		
5,100.00	4,961.64	4,943.64	4,943.64	22.46	195.75	177.86	-48.09	-44.50	1,063.14	861.90	201.24	5.283		
5,200.00	5,057.66	5,039.66	5,039.66	23.04	199.59	177.92	-48.09	-44.50	1,091.06	885.84	205.22	5.316		
5,300.00	5,153.68	5,135.68	5,135.68	23.62	203.43	177.97	-48.09	-44.50	1,118.98	909.77	209.20	5.349		
5,400.00	5,249.70	5,231.70	5,231.70	24.20	207.27	178.02	-48.09	-44.50	1,146.90	933.71	213.19	5.380		
5,500.00	5,345.71	5,327.71	5,327.71	24.79	211.11	178.07	-48.09	-44.50	1,174.82	957.65	217.17	5.410		
5,600.00	5,441.73	5,423.73	5,423.73	25.37	214.95	178.11	-48.09	-44.50	1,202.74	981.59	221.16	5.438		
5,700.00	5,537.75	5,519.75	5,519.75	25.95	218.79	178.15	-48.09	-44.50	1,230.67	1,005.53	225.14	5.466		
5,768.65	5,603.67	5,585.67	5,585.67	26.35	221.43	178.18	-48.09	-44.50	1,249.84	1,021.96	227.87	5.485		
5,800.00	5,633.82	5,615.82	5,615.82	26.51	222.63	178.20	-48.09	-44.50	1,258.42	1,028.68	229.74	5.478		
5,900.00	5,730.58	5,712.58	5,712.58	26.92	226.50	178.25	-48.09	-44.50	1,283.61	1,047.99	235.62	5.448		
6,000.00	5,828.17	5,810.17	5,810.17	27.29	230.41	178.29	-48.09	-44.50	1,305.41	1,064.01	241.39	5.408		
6,100.00	5,926.46	5,908.46	5,908.46	27.62	234.34	178.33	-48.09	-44.50	1,323.79	1,076.85	246.94	5.361		
6,200.00	6,025.34	6,007.34	6,007.34	27.90	238.29	178.36	-48.09	-44.50	1,338.73	1,086.48	252.24	5.307		
6,300.00	6,124.67	6,106.67	6,106.67	28.13	242.27	178.38	-48.09	-44.50	1,350.21	1,092.92	257.28	5.248		
6,400.00	6,224.34	6,206.34	6,206.34	28.32	246.25	178.39	-48.09	-44.50	1,358.21	1,096.18	262.04	5.183		
6,500.00	6,324.23	6,306.23	6,306.23	28.47	250.25	178.40	-48.09	-44.50	1,362.74	1,096.26	266.48	5.114		
6,579.78	6,404.00	6,386.00	6,386.00	28.55	253.44	-103.30	-48.09	-44.50	1,363.85	1,094.05	269.80	5.055		
6,600.00	6,424.22	6,406.22	6,406.22	28.57	254.25	-103.30	-48.09	-44.50	1,363.85	1,093.21	270.65	5.039		
6,700.00	6,524.22	6,506.22	6,506.22	28.68	258.25	-103.30	-48.09	-44.50	1,363.85	1,089.03	274.82	4.963		
6,800.00	6,624.22	6,606.22	6,606.22	28.79	262.25	-103.30	-48.09	-44.50	1,363.85	1,084.86	278.99	4.888		
6,900.00	6,724.22	6,706.22	6,706.22	28.90	266.25	-103.30	-48.09	-44.50	1,363.85	1,080.68	283.17	4.816		
7,000.00	6,824.22	6,806.22	6,806.22	29.01	270.25	-103.30	-48.09	-44.50	1,363.85	1,076.50	287.35	4.746		
7,100.00	6,924.22	6,906.22	6,906.22	29.12	274.25	-103.30	-48.09	-44.50	1,363.85	1,072.33	291.53	4.678		
7,200.00	7,024.22	7,006.22	7,006.22	29.24	278.25	-103.30	-48.09	-44.50	1,363.85	1,068.15	295.70	4.612		
7,300.00	7,124.22	7,106.22	7,106.22	29.35	282.25	-103.30	-48.09	-44.50	1,363.85	1,063.97	299.89	4.548		
7,400.00	7,224.22	7,206.22	7,206.22	29.47	286.25	-103.30	-48.09	-44.50	1,363.85	1,059.78	304.07	4.485		
7,500.00	7,324.22	7,306.22	7,306.22	29.59	290.25	-103.30	-48.09	-44.50	1,363.85	1,055.60	308.25	4.425		
7,600.00	7,424.22	7,406.22	7,406.22	29.70	294.25	-103.30	-48.09	-44.50	1,363.85	1,051.42	312.43	4.365		
7,700.00	7,524.22	7,506.22	7,506.22	29.83	298.25	-103.30	-48.09	-44.50	1,363.85	1,047.24	316.62	4.308		
7,800.00	7,624.22	7,606.22	7,606.22	29.95	302.25	-103.30	-48.09	-44.50	1,363.85	1,043.05	320.80	4.251		
7,900.00	7,724.22	7,706.22	7,706.22	30.07	306.25	-103.30	-48.09	-44.50	1,363.85	1,038.86	324.99	4.197		
8,000.00	7,824.22	7,806.22	7,806.22	30.19	310.25	-103.30	-48.09	-44.50	1,363.85	1,034.68	329.17	4.143		
8,100.00	7,924.22	7,906.22	7,906.22	30.32	314.25	-103.30	-48.09	-44.50	1,363.85	1,030.49	333.36	4.091		
8,200.00	8,024.22	8,006.22	8,006.22	30.44	318.25	-103.30	-48.09	-44.50	1,363.85	1,026.30	337.55	4.040		
8,300.00	8,124.22	8,106.22	8,106.22	30.57	322.25	-103.30	-48.09	-44.50	1,363.85	1,022.11	341.74	3.991		
8,400.00	8,224.22	8,206.22	8,206.22	30.70	326.25	-103.30	-48.09	-44.50	1,363.85	1,017.92	345.93	3.943		
8,504.78	8,329.00	8,311.00	8,311.00	30.84	330.44	-103.30	-48.09	-44.50	1,363.85	1,013.53	350.32	3.893		

Company:	US ROCKIES REGION PLANNING	Local Co-ordinate Reference:	Well P_NRC 39-8
Project:	COLORADO NORTHERN ZONE - 83	TVD Reference:	WELL @ 5071.00ft (Original Well Elev)
Reference Site:	WELD_NRC 20-8 PAD	MD Reference:	WELL @ 5071.00ft (Original Well Elev)
Site Error:	0.00ft	North Reference:	True
Reference Well:	P_NRC 39-8	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00ft	Output errors are at	2.00 sigma
Reference Wellbore	P_NRC 39-8	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 @ 5071.00ft (Original Well Elev) Coordinates are relative to: P_NRC 39-8
 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: 0.38°



Company:	US ROCKIES REGION PLANNING	Local Co-ordinate Reference:	Well P_NRC 39-8
Project:	COLORADO NORTHERN ZONE - 83	TVD Reference:	WELL @ 5071.00ft (Original Well Elev)
Reference Site:	WELD_NRC 20-8 PAD	MD Reference:	WELL @ 5071.00ft (Original Well Elev)
Site Error:	0.00ft	North Reference:	True
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