



US ROCKIES REGION PLANNING

COLORADO NORTHERN ZONE - 83

WELD_NRC 20-8 PAD

P_NRC 10-8

P_NRC 10-8

Plan: PLAN #1 1-5-10 RHS

Standard Planning Report

04 February, 2010





Azimuths to True North
Magnetic North: 9.07°

Magnetic Field
Strength: 53106.6nT
Dip Angle: 66.81°
Date: 1/5/2010
Model: IGRF200510

WELL DETAILS: P_NRC 10-8

+N/-S	+E/-W	Northing	Ground Level:	Easting	Latitude	Longitude	Slot
0.00	0.00	1265676.31	5056.00	3165132.20	40° 3' 40.187 N	104° 54' 36.115 W	

FORMATION TOP DETAILS

TVDPath	MDPath	Formation
3273.00	3413.96	PARKMAN
4748.00	4955.74	SUSSEX
5218.00	5425.74	SHANNON
7388.00	7595.74	NIO A
7728.00	7935.74	CODELL
8178.00	8385.74	JSAND
8348.00	8555.74	DAKOTA

SECTION DETAILS

MD	Inc	Azi	TVD	+N/-S	+E/-W	DLeg	TFace	VSec	Target
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
1085.00	0.00	0.00	1085.00	0.00	0.00	0.00	0.00	0.00	
2338.64	25.07	327.51	2299.01	227.70	-145.00	2.00	327.51	269.95	
3702.10	25.07	327.51	3533.99	715.06	-455.37	0.00	0.00	847.74	
4955.74	0.00	0.00	4748.00	942.76	-600.37	2.00	180.00	1117.69	
8775.74	0.00	0.00	8568.00	942.76	-600.37	0.00	0.00	1117.69	PBHL_NRC 10-8(1980 FSL 1980 FEL)50°TGT RAD

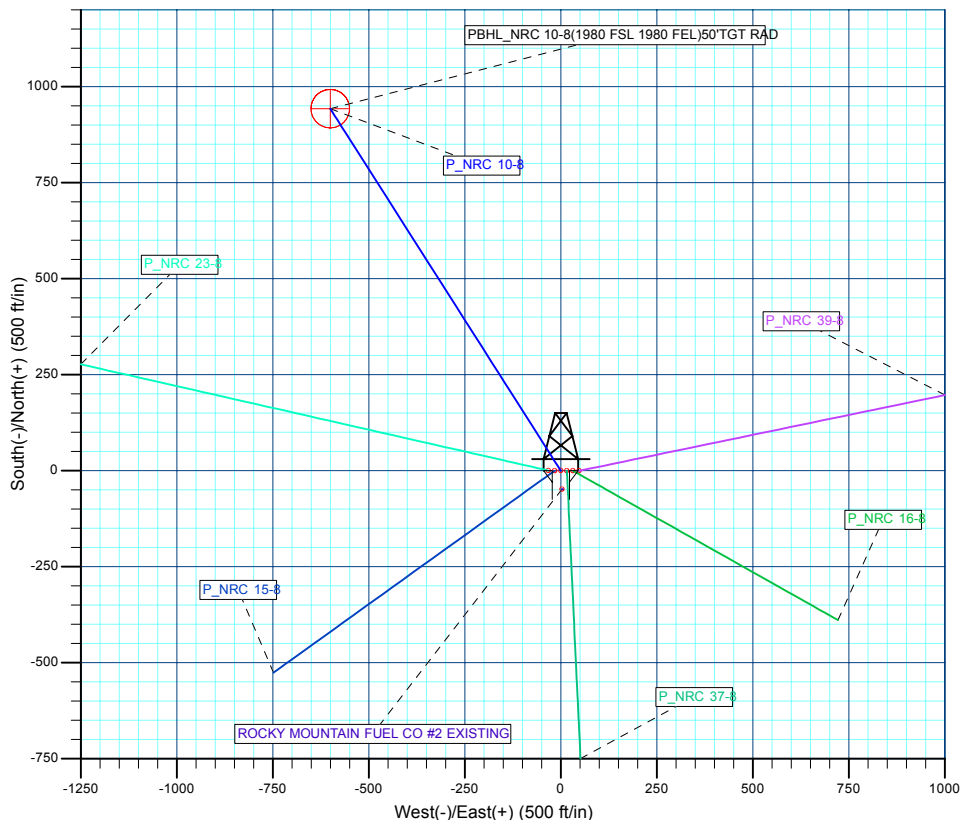
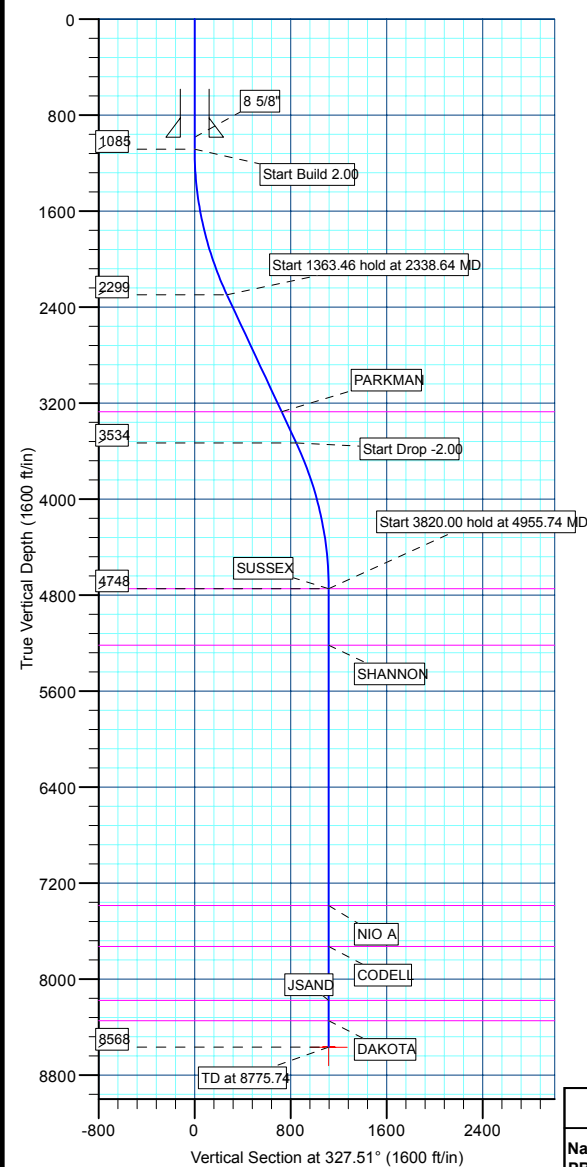
CASING DETAILS

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



B 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
PBH	8568.00	942.76	-600.37	1266615.05	3164525.58	40° 3' 49.504 N	104° 54' 43.837 W	Circle (Radius: 50.00)

Plan: PLAN #1 1-5-10 RHS (P_NRC 10-8/P_NRC 10-8)

Created By: Robert H. Scott

Database:	EDM 2003.21 Single User Db	Local Co-ordinate Reference:	Well P_NRC 10-8
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 10-8	Survey Calculation Method:	Minimum Curvature
Wellbore:	P_NRC 10-8		
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 10-8					
Well Position	+N/-S	0.00 ft	Northing:	1,265,676.31 ft	Latitude:	40° 3' 40.187 N
	+E/-W	0.00 ft	Easting:	3,165,132.20 ft	Longitude:	104° 54' 36.115 W
Position Uncertainty		0.00 ft	Wellhead Elevation:	ft	Ground Level:	5,056.00 ft

Wellbore	P_NRC 10-8				
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	327.51

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	
2,338.64	25.07	327.51	2,299.01	227.70	-145.00	2.00	2.00	0.00	327.51	
3,702.10	25.07	327.51	3,533.99	715.06	-455.37	0.00	0.00	0.00	0.00	
4,955.74	0.00	0.00	4,748.00	942.76	-600.37	2.00	-2.00	0.00	180.00	
8,775.74	0.00	0.00	8,568.00	942.76	-600.37	0.00	0.00	0.00	0.00	PBHL_NRC 10-8(1'

Database:	EDM 2003.21 Single User Db	Local Co-ordinate Reference:	Well P_NRC 10-8
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 10-8	Survey Calculation Method:	Minimum Curvature
Wellbore:	P_NRC 10-8		
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	327.51	1,100.00	0.03	-0.02	0.04	2.00	2.00	0.00
1,200.00	2.30	327.51	1,199.97	1.95	-1.24	2.31	2.00	2.00	0.00
1,300.00	4.30	327.51	1,299.80	6.80	-4.33	8.06	2.00	2.00	0.00
1,400.00	6.30	327.51	1,399.37	14.59	-9.29	17.30	2.00	2.00	0.00
1,500.00	8.30	327.51	1,498.55	25.31	-16.12	30.01	2.00	2.00	0.00
1,600.00	10.30	327.51	1,597.23	38.94	-24.80	46.17	2.00	2.00	0.00
1,700.00	12.30	327.51	1,695.29	55.47	-35.32	65.76	2.00	2.00	0.00
1,800.00	14.30	327.51	1,792.60	74.87	-47.68	88.76	2.00	2.00	0.00
1,900.00	16.30	327.51	1,889.05	97.13	-61.85	115.15	2.00	2.00	0.00
2,000.00	18.30	327.51	1,984.52	122.21	-77.83	144.89	2.00	2.00	0.00
2,100.00	20.30	327.51	2,078.90	150.09	-95.58	177.94	2.00	2.00	0.00
2,200.00	22.30	327.51	2,172.06	180.72	-115.09	214.26	2.00	2.00	0.00
2,300.00	24.30	327.51	2,263.90	214.09	-136.33	253.81	2.00	2.00	0.00
Start 1363.46 hold at 2338.64 MD									
2,338.64	25.07	327.51	2,299.01	227.70	-145.00	269.95	2.00	2.00	0.00
2,400.00	25.07	327.51	2,354.59	249.63	-158.97	295.95	0.00	0.00	0.00
2,500.00	25.07	327.51	2,445.17	285.38	-181.73	338.33	0.00	0.00	0.00
2,600.00	25.07	327.51	2,535.74	321.12	-204.50	380.71	0.00	0.00	0.00
2,700.00	25.07	327.51	2,626.32	356.86	-227.26	423.08	0.00	0.00	0.00
2,800.00	25.07	327.51	2,716.90	392.61	-250.02	465.46	0.00	0.00	0.00
2,900.00	25.07	327.51	2,807.47	428.35	-272.78	507.84	0.00	0.00	0.00
3,000.00	25.07	327.51	2,898.05	464.10	-295.55	550.21	0.00	0.00	0.00
3,100.00	25.07	327.51	2,988.63	499.84	-318.31	592.59	0.00	0.00	0.00
3,200.00	25.07	327.51	3,079.20	535.59	-341.07	634.97	0.00	0.00	0.00
3,300.00	25.07	327.51	3,169.78	571.33	-363.84	677.34	0.00	0.00	0.00
3,400.00	25.07	327.51	3,260.36	607.07	-386.60	719.72	0.00	0.00	0.00
PARKMAN									
3,413.96	25.07	327.51	3,273.00	612.06	-389.78	725.64	0.00	0.00	0.00
3,500.00	25.07	327.51	3,350.93	642.82	-409.36	762.10	0.00	0.00	0.00
3,600.00	25.07	327.51	3,441.51	678.56	-432.12	804.48	0.00	0.00	0.00
3,700.00	25.07	327.51	3,532.09	714.31	-454.89	846.85	0.00	0.00	0.00
Start Drop -2.00									
3,702.10	25.07	327.51	3,533.99	715.06	-455.37	847.74	0.00	0.00	0.00
3,800.00	23.11	327.51	3,623.36	748.77	-476.83	887.71	2.00	-2.00	0.00
3,900.00	21.11	327.51	3,716.00	780.52	-497.05	925.35	2.00	-2.00	0.00
4,000.00	19.11	327.51	3,809.89	809.53	-515.53	959.74	2.00	-2.00	0.00
4,100.00	17.11	327.51	3,904.93	835.75	-532.23	990.83	2.00	-2.00	0.00
4,200.00	15.11	327.51	4,001.00	859.16	-547.13	1,018.58	2.00	-2.00	0.00
4,300.00	13.11	327.51	4,097.97	879.73	-560.23	1,042.97	2.00	-2.00	0.00
4,400.00	11.11	327.51	4,195.74	897.43	-571.51	1,063.96	2.00	-2.00	0.00
4,500.00	9.11	327.51	4,294.18	912.24	-580.94	1,081.52	2.00	-2.00	0.00
4,600.00	7.11	327.51	4,393.17	924.15	-588.52	1,095.63	2.00	-2.00	0.00
4,700.00	5.11	327.51	4,492.60	933.13	-594.24	1,106.28	2.00	-2.00	0.00
4,800.00	3.11	327.51	4,592.34	939.19	-598.10	1,113.46	2.00	-2.00	0.00
4,900.00	1.11	327.51	4,692.26	942.30	-600.08	1,117.15	2.00	-2.00	0.00
Start 3820.00 hold at 4955.74 MD - SUSSEX									
4,955.74	0.00	0.00	4,748.00	942.76	-600.37	1,117.69	2.00	-2.00	0.00
5,000.00	0.00	0.00	4,792.26	942.76	-600.37	1,117.69	0.00	0.00	0.00
5,100.00	0.00	0.00	4,892.26	942.76	-600.37	1,117.69	0.00	0.00	0.00
5,200.00	0.00	0.00	4,992.26	942.76	-600.37	1,117.69	0.00	0.00	0.00
5,300.00	0.00	0.00	5,092.26	942.76	-600.37	1,117.69	0.00	0.00	0.00

Database:	EDM 2003.21 Single User Db	Local Co-ordinate Reference:	Well P_NRC 10-8
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 10-8	Survey Calculation Method:	Minimum Curvature
Wellbore:	P_NRC 10-8		
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	0.00	0.00	5,192.26	942.76	-600.37	1,117.69	0.00	0.00	0.00
SHANNON									
5,425.74	0.00	0.00	5,218.00	942.76	-600.37	1,117.69	0.00	0.00	0.00
5,500.00	0.00	0.00	5,292.26	942.76	-600.37	1,117.69	0.00	0.00	0.00
5,600.00	0.00	0.00	5,392.26	942.76	-600.37	1,117.69	0.00	0.00	0.00
5,700.00	0.00	0.00	5,492.26	942.76	-600.37	1,117.69	0.00	0.00	0.00
5,800.00	0.00	0.00	5,592.26	942.76	-600.37	1,117.69	0.00	0.00	0.00
5,900.00	0.00	0.00	5,692.26	942.76	-600.37	1,117.69	0.00	0.00	0.00
6,000.00	0.00	0.00	5,792.26	942.76	-600.37	1,117.69	0.00	0.00	0.00
6,100.00	0.00	0.00	5,892.26	942.76	-600.37	1,117.69	0.00	0.00	0.00
6,200.00	0.00	0.00	5,992.26	942.76	-600.37	1,117.69	0.00	0.00	0.00
6,300.00	0.00	0.00	6,092.26	942.76	-600.37	1,117.69	0.00	0.00	0.00
6,400.00	0.00	0.00	6,192.26	942.76	-600.37	1,117.69	0.00	0.00	0.00
6,500.00	0.00	0.00	6,292.26	942.76	-600.37	1,117.69	0.00	0.00	0.00
6,600.00	0.00	0.00	6,392.26	942.76	-600.37	1,117.69	0.00	0.00	0.00
6,700.00	0.00	0.00	6,492.26	942.76	-600.37	1,117.69	0.00	0.00	0.00
6,800.00	0.00	0.00	6,592.26	942.76	-600.37	1,117.69	0.00	0.00	0.00
6,900.00	0.00	0.00	6,692.26	942.76	-600.37	1,117.69	0.00	0.00	0.00
7,000.00	0.00	0.00	6,792.26	942.76	-600.37	1,117.69	0.00	0.00	0.00
7,100.00	0.00	0.00	6,892.26	942.76	-600.37	1,117.69	0.00	0.00	0.00
7,200.00	0.00	0.00	6,992.26	942.76	-600.37	1,117.69	0.00	0.00	0.00
7,300.00	0.00	0.00	7,092.26	942.76	-600.37	1,117.69	0.00	0.00	0.00
7,400.00	0.00	0.00	7,192.26	942.76	-600.37	1,117.69	0.00	0.00	0.00
7,500.00	0.00	0.00	7,292.26	942.76	-600.37	1,117.69	0.00	0.00	0.00
NIO A									
7,595.74	0.00	0.00	7,388.00	942.76	-600.37	1,117.69	0.00	0.00	0.00
7,600.00	0.00	0.00	7,392.26	942.76	-600.37	1,117.69	0.00	0.00	0.00
7,700.00	0.00	0.00	7,492.26	942.76	-600.37	1,117.69	0.00	0.00	0.00
7,800.00	0.00	0.00	7,592.26	942.76	-600.37	1,117.69	0.00	0.00	0.00
7,900.00	0.00	0.00	7,692.26	942.76	-600.37	1,117.69	0.00	0.00	0.00
CODELL									
7,935.74	0.00	0.00	7,728.00	942.76	-600.37	1,117.69	0.00	0.00	0.00
8,000.00	0.00	0.00	7,792.26	942.76	-600.37	1,117.69	0.00	0.00	0.00
8,100.00	0.00	0.00	7,892.26	942.76	-600.37	1,117.69	0.00	0.00	0.00
8,200.00	0.00	0.00	7,992.26	942.76	-600.37	1,117.69	0.00	0.00	0.00
8,300.00	0.00	0.00	8,092.26	942.76	-600.37	1,117.69	0.00	0.00	0.00
JSAND									
8,385.74	0.00	0.00	8,178.00	942.76	-600.37	1,117.69	0.00	0.00	0.00
8,400.00	0.00	0.00	8,192.26	942.76	-600.37	1,117.69	0.00	0.00	0.00
8,500.00	0.00	0.00	8,292.26	942.76	-600.37	1,117.69	0.00	0.00	0.00
DAKOTA									
8,555.74	0.00	0.00	8,348.00	942.76	-600.37	1,117.69	0.00	0.00	0.00
8,600.00	0.00	0.00	8,392.26	942.76	-600.37	1,117.69	0.00	0.00	0.00
8,700.00	0.00	0.00	8,492.26	942.76	-600.37	1,117.69	0.00	0.00	0.00
TD at 8775.74 - PBHL_NRC 10-8(1980 FSL 1980 FEL)50°TGT RAD									
8,775.74	0.00	0.00	8,568.00	942.76	-600.37	1,117.69	0.00	0.00	0.00

Database:	EDM 2003.21 Single User Db	Local Co-ordinate Reference:	Well P_NRC 10-8
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 10-8	Survey Calculation Method:	Minimum Curvature
Wellbore:	P_NRC 10-8		
Design:	PLAN #1 1-5-10 RHS		

Design Targets									
Target Name									
- hit/miss target	Dip Angle	Dip Dir.	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
- Shape	(°)	(°)	(ft)	(ft)	(ft)	(ft)	(ft)		
PBHL_NRC 10-8(198 - plan hits target center - Circle (radius 50.00)	0.00	0.00	8,568.00	942.76	-600.37	1,266,615.05	3,164,525.58	40° 3' 49.504 N	104° 54' 43.837 W

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

Formations						
Measured Depth	Vertical Depth		Name	Lithology	Dip	Dip Direction
(ft)	(ft)				(°)	(°)
3,413.96	3,273.00	PARKMAN				
4,955.74	4,748.00	SUSSEX				
5,425.74	5,218.00	SHANNON				
7,595.74	7,388.00	NIO A				
7,935.74	7,728.00	CODELL				
8,385.74	8,178.00	JSAND				
8,555.74	8,348.00	DAKOTA			0.00	

Plan Annotations					
Measured Depth	Vertical Depth	Local Coordinates			
(ft)	(ft)	+N/-S	+E/-W	Comment	
(ft)	(ft)	(ft)	(ft)		
1,085.00	1,085.00	0.00	0.00	Start Build 2.00	
2,338.64	2,299.01	227.70	-145.00	Start 1363.46 hold at 2338.64 MD	
3,702.10	3,533.99	715.06	-455.37	Start Drop -2.00	
4,955.74	4,748.00	942.76	-600.37	Start 3820.00 hold at 4955.74 MD	
8,775.74	8,568.00	942.76	-600.37	TD at 8775.74	



US ROCKIES REGION PLANNING

**COLORADO NORTHERN ZONE - 83
WELD_NRC 20-8 PAD
P_NRC 10-8**

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

Anticollision Report

04 February, 2010



Company:	US ROCKIES REGION PLANNING	Local Co-ordinate Reference:	Well P_NRC 10-8
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 10-8	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00ft	Output errors are at	2.00 sigma
Reference Wellbore	P_NRC 10-8	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 2/4/2010			
From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description
0.00	8,775.74	PLAN #1 1-5-10 RHS (P_NRC 10-8)	MWD	MWD - Standard

Summary						
Site Name Offset Well - Wellbore - Design	Reference Measured Depth (ft)	Offset Measured Depth (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Separation Factor	Warning
WELD_NRC 20-8 PAD						
P_NRC 15-8 - P_NRC 15-8 - PLAN #1 1-5-10 RHS	1,085.00	1,085.00	15.95	11.34	3.454	CC
P_NRC 15-8 - P_NRC 15-8 - PLAN #1 1-5-10 RHS	1,100.00	1,099.93	15.97	11.28	3.410	ES
P_NRC 15-8 - P_NRC 15-8 - PLAN #1 1-5-10 RHS	1,200.00	1,199.39	16.90	11.82	3.326	SF
P_NRC 16-8 - P_NRC 16-8 - PLAN #1 1-5-10 RHS	1,085.00	1,085.00	31.91	27.29	6.909	CC
P_NRC 16-8 - P_NRC 16-8 - PLAN #1 1-5-10 RHS	1,100.00	1,099.85	31.97	27.28	6.827	ES, SF
P_NRC 23-8 - P_NRC 23-8 - PLAN #1 1-5-10 RHS	1,085.00	1,085.00	32.19	27.57	6.969	CC
P_NRC 23-8 - P_NRC 23-8 - PLAN #1 1-5-10 RHS	1,100.00	1,099.84	32.21	27.52	6.876	ES
P_NRC 23-8 - P_NRC 23-8 - PLAN #1 1-5-10 RHS	1,300.00	1,297.50	35.94	30.41	6.499	SF
P_NRC 37-8 - P_NRC 37-8 - PLAN #1 1-5-10 RHS	1,085.00	1,085.00	15.95	11.34	3.454	CC
P_NRC 37-8 - P_NRC 37-8 - PLAN #1 1-5-10 RHS	1,100.00	1,100.00	15.98	11.30	3.413	ES, SF
P_NRC 39-8 - P_NRC 39-8 - PLAN #1 1-5-10 RHS	1,085.00	1,085.00	47.86	43.25	10.363	CC
P_NRC 39-8 - P_NRC 39-8 - PLAN #1 1-5-10 RHS	1,100.00	1,099.76	47.92	43.24	10.232	ES
P_NRC 39-8 - P_NRC 39-8 - PLAN #1 1-5-10 RHS	1,200.00	1,198.03	51.36	46.26	10.066	SF
ROCKY MOUNTAIN FUEL CO #2 EXISTING - ROCKY M	1,085.00	1,067.00	48.58	5.59	1.130	Level 2, CC
ROCKY MOUNTAIN FUEL CO #2 EXISTING - ROCKY M	1,200.00	1,181.97	50.62	2.80	1.059	Level 2, ES, SF

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 Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	
0.00	0.00	0.00	0.00	0.00	0.00	-90.05	-0.01	-15.95	15.95				
100.00	100.00	100.00	100.00	0.10	0.10	-90.05	-0.01	-15.95	15.95	15.76	0.19	83.509	
200.00	200.00	200.00	200.00	0.32	0.32	-90.05	-0.01	-15.95	15.95	15.31	0.64	24.906	
300.00	300.00	300.00	300.00	0.55	0.55	-90.05	-0.01	-15.95	15.95	14.86	1.09	14.636	
400.00	400.00	400.00	400.00	0.77	0.77	-90.05	-0.01	-15.95	15.95	14.41	1.54	10.362	
500.00	500.00	500.00	500.00	0.99	0.99	-90.05	-0.01	-15.95	15.95	13.97	1.99	8.021	
600.00	600.00	600.00	600.00	1.22	1.22	-90.05	-0.01	-15.95	15.95	13.52	2.44	6.542	
700.00	700.00	700.00	700.00	1.44	1.44	-90.05	-0.01	-15.95	15.95	13.07	2.89	5.524	
800.00	800.00	800.00	800.00	1.67	1.67	-90.05	-0.01	-15.95	15.95	12.62	3.34	4.780	
900.00	900.00	900.00	900.00	1.89	1.89	-90.05	-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	-90.05	-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	-90.05	-0.01	-15.95	15.95	11.34	4.62	3.454	CC
1,100.00	1,100.00	1,099.93	1,099.93	2.34	2.34	-57.75	-0.04	-15.99	15.97	11.28	4.68	3.410	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 10-8
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 10-8	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00ft	Output errors are at	2.00 sigma
Reference Wellbore	P_NRC 10-8	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 Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	
1,200.00	1,199.97	1,199.39	1,199.35	2.56	2.52	-68.68	-1.34	-17.81	16.90	11.82	5.08	3.326 SF	
1,300.00	1,299.80	1,298.40	1,298.20	2.79	2.71	-89.54	-4.65	-22.41	21.46	15.96	5.49	3.906	
1,400.00	1,399.37	1,396.61	1,396.00	3.02	2.92	-106.95	-9.89	-29.71	32.05	26.14	5.92	5.417	
1,500.00	1,498.55	1,493.65	1,492.27	3.27	3.14	-117.28	-16.99	-39.59	48.78	42.42	6.36	7.674	
1,600.00	1,597.23	1,589.20	1,586.60	3.54	3.40	-123.06	-25.83	-51.90	71.01	64.19	6.82	10.416	
1,700.00	1,695.29	1,682.93	1,678.60	3.85	3.68	-126.42	-36.28	-66.45	98.32	91.01	7.31	13.453	
1,800.00	1,792.60	1,774.57	1,767.93	4.21	4.00	-128.42	-48.20	-83.03	130.40	122.57	7.83	16.644	
1,900.00	1,889.05	1,863.87	1,854.31	4.62	4.36	-129.64	-61.40	-101.42	167.05	158.64	8.40	19.878	
2,000.00	1,984.52	1,950.62	1,937.51	5.08	4.76	-130.36	-75.73	-121.36	208.05	199.04	9.02	23.074	
2,100.00	2,078.90	2,037.34	2,020.00	5.62	5.20	-130.82	-91.33	-143.08	253.00	243.31	9.68	26.124	
2,200.00	2,172.06	2,125.23	2,103.51	6.21	5.67	-131.40	-107.32	-165.34	300.33	289.92	10.40	28.869	
2,300.00	2,263.90	2,211.80	2,185.76	6.88	6.15	-132.05	-123.07	-187.27	349.82	338.66	11.16	31.346	
2,338.64	2,299.01	2,244.87	2,217.19	7.16	6.34	-132.30	-129.09	-195.65	369.54	358.08	11.46	32.236	
2,400.00	2,354.59	2,297.23	2,266.93	7.61	6.64	-133.17	-138.62	-208.91	401.14	389.15	11.99	33.467	
2,500.00	2,445.17	2,382.55	2,347.99	8.37	7.14	-134.34	-154.14	-230.52	452.77	439.91	12.86	35.208	
2,600.00	2,535.74	2,467.87	2,429.06	9.15	7.65	-135.26	-169.66	-252.13	504.50	490.75	13.75	36.686	
2,700.00	2,626.32	2,553.19	2,510.13	9.93	8.17	-136.01	-185.19	-273.74	556.31	541.65	14.66	37.950	
2,800.00	2,716.90	2,638.51	2,591.19	10.73	8.69	-136.64	-200.71	-295.35	608.18	592.60	15.58	39.040	
2,900.00	2,807.47	2,723.83	2,672.26	11.54	9.21	-137.17	-216.24	-316.96	660.10	643.59	16.51	39.987	
3,000.00	2,898.05	2,809.16	2,753.32	12.35	9.74	-137.62	-231.76	-338.57	712.05	694.60	17.45	40.815	
3,100.00	2,988.63	2,894.48	2,834.39	13.17	10.27	-138.01	-247.28	-360.19	764.03	745.64	18.39	41.544	
3,200.00	3,079.20	2,979.80	2,915.46	13.99	10.80	-138.35	-262.81	-381.80	816.03	796.69	19.34	42.188	
3,300.00	3,169.78	3,065.12	2,996.52	14.82	11.34	-138.65	-278.33	-403.41	868.05	847.75	20.30	42.763	
3,400.00	3,260.36	3,150.44	3,077.59	15.65	11.88	-138.91	-293.86	-425.02	920.09	898.83	21.26	43.277	
3,500.00	3,350.93	3,235.76	3,158.65	16.48	12.41	-139.15	-309.38	-446.63	972.13	949.91	22.23	43.740	
3,600.00	3,441.51	3,321.08	3,239.72	17.31	12.96	-139.36	-324.91	-468.24	1,024.19	1,001.00	23.19	44.159	
3,702.10	3,533.99	3,408.20	3,322.49	18.17	13.51	-139.56	-340.75	-490.31	1,077.36	1,053.17	24.18	44.547	
3,800.00	3,623.36	3,492.41	3,402.50	18.88	14.05	-140.41	-356.08	-511.64	1,127.24	1,102.06	25.19	44.758	
3,900.00	3,716.00	3,579.77	3,485.51	19.48	14.60	-141.09	-371.97	-533.77	1,175.89	1,149.75	26.14	44.984	
4,000.00	3,809.89	3,668.39	3,569.70	20.05	15.17	-141.61	-388.10	-556.21	1,222.15	1,195.06	27.09	45.123	
4,100.00	3,904.93	3,758.15	3,654.98	20.57	15.75	-141.97	-404.43	-578.95	1,265.98	1,237.96	28.01	45.190	
4,200.00	4,001.00	3,848.94	3,741.25	21.04	16.33	-142.21	-420.95	-601.94	1,307.35	1,278.42	28.92	45.201	
4,300.00	4,097.97	3,940.65	3,828.39	21.47	16.92	-142.32	-437.63	-625.17	1,346.23	1,316.43	29.81	45.167	
4,400.00	4,195.74	4,062.72	3,944.83	21.85	17.55	-142.21	-458.98	-654.88	1,381.94	1,351.23	30.71	45.000	
4,500.00	4,294.18	4,201.64	4,079.08	22.18	18.13	-142.06	-479.80	-683.88	1,412.33	1,380.78	31.55	44.769	
4,600.00	4,393.17	4,344.90	4,219.15	22.46	18.64	-141.95	-497.28	-708.21	1,437.04	1,404.75	32.29	44.510	
4,700.00	4,492.60	4,491.69	4,364.06	22.70	19.08	-141.86	-510.93	-727.21	1,455.86	1,422.93	32.92	44.218	
4,800.00	4,592.34	4,641.14	4,512.61	22.88	19.43	-141.80	-520.35	-740.33	1,468.62	1,435.18	33.44	43.917	
4,900.00	4,692.26	4,792.24	4,663.46	23.02	19.68	-141.77	-525.28	-747.18	1,475.21	1,441.37	33.84	43.596	
4,955.74	4,748.00	4,876.80	4,748.00	23.07	19.78	-174.25	-526.01	-748.20	1,476.18	1,442.18	34.00	43.411	
5,000.00	4,792.26	4,921.06	4,792.26	23.11	19.83	-174.25	-526.01	-748.20	1,476.18	1,442.07	34.11	43.276	
5,100.00	4,892.26	5,021.06	4,892.26	23.21	19.94	-174.25	-526.01	-748.20	1,476.18	1,441.82	34.36	42.956	
5,200.00	4,992.26	5,121.06	4,992.26	23.30	20.04	-174.25	-526.01	-748.20	1,476.18	1,441.56	34.62	42.636	
5,300.00	5,092.26	5,221.06	5,092.26	23.40	20.15	-174.25	-526.01	-748.20	1,476.18	1,441.30	34.88	42.316	
5,400.00	5,192.26	5,321.06	5,192.26	23.50	20.26	-174.25	-526.01	-748.20	1,476.18	1,441.03	35.15	41.997	
5,500.00	5,292.26	5,421.06	5,292.26	23.61	20.38	-174.25	-526.01	-748.20	1,476.18	1,440.76	35.42	41.677	
5,600.00	5,392.26	5,521.06	5,392.26	23.71	20.49	-174.25	-526.01	-748.20	1,476.18	1,440.49	35.69	41.359	
5,700.00	5,492.26	5,621.06	5,492.26	23.82	20.61	-174.25	-526.01	-748.20	1,476.18	1,440.21	35.97	41.041	
5,800.00	5,592.26	5,721.06	5,592.26	23.92	20.73	-174.25	-526.01	-748.20	1,476.18	1,439.93	36.25	40.724	
5,900.00	5,692.26	5,821.06	5,692.26	24.03	20.85	-174.25	-526.01	-748.20	1,476.18	1,439.65	36.53	40.408	
6,000.00	5,792.26	5,921.06	5,792.26	24.14	20.97	-174.25	-526.01	-748.20	1,476.18	1,439.36	36.82	40.094	
6,100.00	5,892.26	6,021.06	5,892.26	24.26	21.10	-174.25	-526.01	-748.20	1,476.18	1,439.07	37.11	39.780	

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 10-8
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 10-8	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00ft	Output errors are at	2.00 sigma
Reference Wellbore	P_NRC 10-8	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						
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning
6,200.00	5,992.26	6,121.06	5,992.26	24.37	21.22	-174.25	-526.01	-748.20	1,476.18	1,438.78	37.40	39.469	
6,300.00	6,092.26	6,221.06	6,092.26	24.49	21.35	-174.25	-526.01	-748.20	1,476.18	1,438.48	37.70	39.159	
6,400.00	6,192.26	6,321.06	6,192.26	24.60	21.48	-174.25	-526.01	-748.20	1,476.18	1,438.19	38.00	38.850	
6,500.00	6,292.26	6,421.06	6,292.26	24.72	21.61	-174.25	-526.01	-748.20	1,476.18	1,437.88	38.30	38.544	
6,600.00	6,392.26	6,521.06	6,392.26	24.84	21.74	-174.25	-526.01	-748.20	1,476.18	1,437.58	38.60	38.240	
6,700.00	6,492.26	6,621.06	6,492.26	24.96	21.88	-174.25	-526.01	-748.20	1,476.18	1,437.27	38.91	37.937	
6,800.00	6,592.26	6,721.06	6,592.26	25.09	22.01	-174.25	-526.01	-748.20	1,476.18	1,436.96	39.22	37.637	
6,900.00	6,692.26	6,821.06	6,692.26	25.21	22.15	-174.25	-526.01	-748.20	1,476.18	1,436.65	39.53	37.339	
7,000.00	6,792.26	6,921.06	6,792.26	25.34	22.29	-174.25	-526.01	-748.20	1,476.18	1,436.33	39.85	37.043	
7,100.00	6,892.26	7,021.06	6,892.26	25.46	22.43	-174.25	-526.01	-748.20	1,476.18	1,436.01	40.17	36.749	
7,200.00	6,992.26	7,121.06	6,992.26	25.59	22.57	-174.25	-526.01	-748.20	1,476.18	1,435.69	40.49	36.458	
7,300.00	7,092.26	7,221.06	7,092.26	25.72	22.71	-174.25	-526.01	-748.20	1,476.18	1,435.37	40.81	36.169	
7,400.00	7,192.26	7,321.06	7,192.26	25.85	22.85	-174.25	-526.01	-748.20	1,476.18	1,435.04	41.14	35.883	
7,500.00	7,292.26	7,421.06	7,292.26	25.98	23.00	-174.25	-526.01	-748.20	1,476.18	1,434.72	41.47	35.599	
7,600.00	7,392.26	7,521.06	7,392.26	26.12	23.14	-174.25	-526.01	-748.20	1,476.18	1,434.39	41.80	35.318	
7,700.00	7,492.26	7,621.06	7,492.26	26.25	23.29	-174.25	-526.01	-748.20	1,476.18	1,434.05	42.13	35.040	
7,800.00	7,592.26	7,721.06	7,592.26	26.39	23.44	-174.25	-526.01	-748.20	1,476.18	1,433.72	42.46	34.764	
7,900.00	7,692.26	7,821.06	7,692.26	26.53	23.59	-174.25	-526.01	-748.20	1,476.18	1,433.38	42.80	34.490	
8,000.00	7,792.26	7,921.06	7,792.26	26.66	23.74	-174.25	-526.01	-748.20	1,476.18	1,433.04	43.14	34.219	
8,100.00	7,892.26	8,021.06	7,892.26	26.80	23.89	-174.25	-526.01	-748.20	1,476.18	1,432.70	43.48	33.951	
8,200.00	7,992.26	8,121.06	7,992.26	26.94	24.05	-174.25	-526.01	-748.20	1,476.18	1,432.36	43.82	33.686	
8,300.00	8,092.26	8,221.06	8,092.26	27.09	24.20	-174.25	-526.01	-748.20	1,476.18	1,432.01	44.17	33.423	
8,400.00	8,192.26	8,321.06	8,192.26	27.23	24.36	-174.25	-526.01	-748.20	1,476.18	1,431.67	44.51	33.163	
8,500.00	8,292.26	8,421.06	8,292.26	27.37	24.51	-174.25	-526.01	-748.20	1,476.18	1,431.32	44.86	32.905	
8,600.00	8,392.26	8,521.06	8,392.26	27.52	24.67	-174.25	-526.01	-748.20	1,476.18	1,430.97	45.21	32.650	
8,700.00	8,492.26	8,621.06	8,492.26	27.67	24.83	-174.25	-526.01	-748.20	1,476.18	1,430.62	45.56	32.398	
8,775.74	8,568.00	8,696.80	8,568.00	27.78	24.95	-174.25	-526.01	-748.20	1,476.18	1,430.35	45.83	32.209	

Company:	US ROCKIES REGION PLANNING	Local Co-ordinate Reference:	Well P_NRC 10-8
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 10-8	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00ft	Output errors are at	2.00 sigma
Reference Wellbore	P_NRC 10-8	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						
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning
0.00	0.00	0.00	0.00	0.00	0.00	90.68	-0.38	31.91	31.91				
100.00	100.00	100.00	100.00	0.10	0.10	90.68	-0.38	31.91	31.91	31.72	0.19	167.029	
200.00	200.00	200.00	200.00	0.32	0.32	90.68	-0.38	31.91	31.91	31.27	0.64	49.816	
300.00	300.00	300.00	300.00	0.55	0.55	90.68	-0.38	31.91	31.91	30.82	1.09	29.273	
400.00	400.00	400.00	400.00	0.77	0.77	90.68	-0.38	31.91	31.91	30.37	1.54	20.726	
500.00	500.00	500.00	500.00	0.99	0.99	90.68	-0.38	31.91	31.91	29.92	1.99	16.042	
600.00	600.00	600.00	600.00	1.22	1.22	90.68	-0.38	31.91	31.91	29.47	2.44	13.085	
700.00	700.00	700.00	700.00	1.44	1.44	90.68	-0.38	31.91	31.91	29.02	2.89	11.049	
800.00	800.00	800.00	800.00	1.67	1.67	90.68	-0.38	31.91	31.91	28.57	3.34	9.561	
900.00	900.00	900.00	900.00	1.89	1.89	90.68	-0.38	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	90.68	-0.38	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	90.68	-0.38	31.91	31.91	27.29	4.62	6.909 CC	
1,100.00	1,100.00	1,099.85	1,099.85	2.34	2.34	123.26	-0.40	31.94	31.97	27.28	4.68	6.827 ES, SF	
1,200.00	1,199.97	1,198.72	1,198.69	2.56	2.52	127.99	-1.49	33.87	35.31	30.22	5.08	6.946	
1,300.00	1,299.80	1,296.81	1,296.62	2.79	2.72	136.56	-4.22	38.73	44.56	39.08	5.48	8.126	
1,400.00	1,399.37	1,393.49	1,392.90	3.02	2.92	144.49	-8.53	46.37	60.62	54.73	5.88	10.307	
1,500.00	1,498.55	1,488.15	1,486.82	3.27	3.14	150.22	-14.28	56.58	83.61	77.34	6.27	13.329	
1,600.00	1,597.23	1,580.24	1,577.78	3.54	3.39	154.04	-21.34	69.11	113.27	106.62	6.66	17.011	
1,700.00	1,695.29	1,669.26	1,665.22	3.85	3.66	156.55	-29.53	83.63	149.26	142.22	7.04	21.204	
1,800.00	1,792.60	1,754.81	1,748.72	4.21	3.95	158.22	-38.65	99.82	191.22	183.81	7.41	25.789	
1,900.00	1,889.05	1,836.53	1,827.94	4.62	4.26	159.32	-48.50	117.30	238.82	231.04	7.78	30.683	
2,000.00	1,984.52	1,921.12	1,909.57	5.08	4.63	160.18	-59.38	136.60	290.81	282.64	8.16	35.617	
2,100.00	2,078.90	2,004.55	1,990.09	5.62	5.00	160.87	-70.11	155.65	345.68	337.13	8.55	40.447	
2,200.00	2,172.06	2,086.06	2,068.75	6.21	5.39	161.42	-80.60	174.27	403.35	394.42	8.93	45.165	
2,300.00	2,263.90	2,165.54	2,145.45	6.88	5.77	161.87	-90.83	192.42	463.77	454.45	9.32	49.780	
2,338.64	2,299.01	2,195.70	2,174.55	7.16	5.92	162.01	-94.71	199.30	487.84	478.37	9.46	51.543	
2,400.00	2,354.59	2,243.32	2,220.51	7.61	6.15	162.50	-100.84	210.18	526.38	516.61	9.77	53.865	
2,500.00	2,445.17	2,320.93	2,295.41	8.37	6.54	163.16	-110.83	227.90	589.24	578.96	10.28	57.313	
2,600.00	2,535.74	2,398.54	2,370.31	9.15	6.94	163.70	-120.81	245.62	652.13	641.33	10.80	60.385	
2,700.00	2,626.32	2,476.16	2,445.21	9.93	7.34	164.14	-130.80	263.34	715.06	703.73	11.33	63.124	
2,800.00	2,716.90	2,553.77	2,520.11	10.73	7.74	164.51	-140.79	281.07	778.01	766.14	11.86	65.584	
2,900.00	2,807.47	2,631.38	2,595.00	11.54	8.15	164.82	-150.77	298.79	840.97	828.57	12.40	67.802	
3,000.00	2,898.05	2,708.99	2,669.90	12.35	8.56	165.09	-160.76	316.51	903.94	891.00	12.95	69.808	
3,100.00	2,988.63	2,786.61	2,744.80	13.17	8.97	165.33	-170.75	334.23	966.93	953.43	13.50	71.626	
3,200.00	3,079.20	2,864.22	2,819.70	13.99	9.38	165.54	-180.74	351.96	1,029.93	1,015.87	14.05	73.281	
3,300.00	3,169.78	2,941.83	2,894.60	14.82	9.80	165.72	-190.72	369.68	1,092.93	1,078.32	14.61	74.793	
3,400.00	3,260.36	3,019.45	2,969.50	15.65	10.22	165.88	-200.71	387.40	1,155.94	1,140.76	15.17	76.180	
3,500.00	3,350.93	3,097.06	3,044.40	16.48	10.64	166.03	-210.70	405.13	1,218.95	1,203.21	15.74	77.454	
3,600.00	3,441.51	3,174.67	3,119.30	17.31	11.06	166.16	-220.68	422.85	1,281.97	1,265.67	16.30	78.627	
3,702.10	3,533.99	3,253.91	3,195.77	18.17	11.49	166.28	-230.88	440.94	1,346.31	1,329.43	16.89	79.734	
3,800.00	3,623.36	3,330.92	3,270.08	18.88	11.91	166.72	-240.79	458.53	1,406.74	1,389.16	17.58	80.026	
3,900.00	3,716.00	3,411.61	3,347.96	19.48	12.35	167.10	-251.17	476.95	1,465.79	1,447.53	18.25	80.297	
4,000.00	3,809.89	3,494.28	3,427.73	20.05	12.80	167.40	-261.81	495.83	1,522.05	1,503.14	18.92	80.464	
4,100.00	3,904.93	3,578.80	3,509.30	20.57	13.26	167.64	-272.69	515.13	1,575.47	1,555.91	19.56	80.546	
4,200.00	4,001.00	3,665.09	3,592.58	21.04	13.74	167.83	-283.79	534.84	1,625.98	1,605.80	20.18	80.559	
4,300.00	4,097.97	3,753.04	3,677.45	21.47	14.22	167.97	-295.11	554.92	1,673.51	1,652.73	20.78	80.517	
4,400.00	4,195.74	3,842.54	3,763.82	21.85	14.71	168.07	-306.63	575.36	1,718.02	1,696.66	21.36	80.429	
4,500.00	4,294.18	3,933.48	3,851.58	22.18	15.22	168.13	-318.33	596.12	1,759.45	1,737.54	21.91	80.304	
4,600.00	4,393.17	4,025.75	3,940.62	22.46	15.73	168.15	-330.20	617.19	1,797.76	1,775.33	22.43	80.149	
4,700.00	4,492.60	4,118.57	4,039.25	22.70	16.36	168.09	-345.82	644.90	1,832.75	1,809.76	23.00	79.695	
4,800.00	4,592.34	4,211.96	4,130.29	22.88	17.28	167.87	-371.05	689.68	1,859.12	1,835.32	23.80	78.105	
4,900.00	4,692.26	4,307.00	4,225.52	23.02	17.91	167.74	-385.83	715.90	1,873.64	1,849.15	24.50	76.482	

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 10-8
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 10-8	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00ft	Output errors are at	2.00 sigma
Reference Wellbore	P_NRC 10-8	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						
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
4,955.74	4,748.00	4,817.36	4,720.73	23.07	18.14	135.21	-388.88	721.32	1,876.39	1,851.56	24.83	75.569	
5,000.00	4,792.26	4,888.89	4,792.26	23.11	18.23	135.21	-389.04	721.60	1,876.51	1,851.49	25.02	75.003	
5,100.00	4,892.26	4,988.89	4,892.26	23.21	18.34	135.21	-389.04	721.60	1,876.51	1,851.15	25.35	74.011	
5,200.00	4,992.26	5,088.89	4,992.26	23.30	18.46	135.21	-389.04	721.60	1,876.51	1,850.81	25.69	73.034	
5,300.00	5,092.26	5,188.89	5,092.26	23.40	18.59	135.21	-389.04	721.60	1,876.51	1,850.47	26.04	72.074	
5,400.00	5,192.26	5,288.89	5,192.26	23.50	18.71	135.21	-389.04	721.60	1,876.51	1,850.13	26.38	71.130	
5,500.00	5,292.26	5,388.89	5,292.26	23.61	18.84	135.21	-389.04	721.60	1,876.51	1,849.78	26.73	70.202	
5,600.00	5,392.26	5,488.89	5,392.26	23.71	18.96	135.21	-389.04	721.60	1,876.51	1,849.43	27.08	69.290	
5,700.00	5,492.26	5,588.89	5,492.26	23.82	19.09	135.21	-389.04	721.60	1,876.51	1,849.07	27.44	68.395	
5,800.00	5,592.26	5,688.89	5,592.26	23.92	19.22	135.21	-389.04	721.60	1,876.51	1,848.71	27.79	67.516	
5,900.00	5,692.26	5,788.89	5,692.26	24.03	19.35	135.21	-389.04	721.60	1,876.51	1,848.35	28.15	66.653	
6,000.00	5,792.26	5,888.89	5,792.26	24.14	19.49	135.21	-389.04	721.60	1,876.51	1,847.99	28.52	65.806	
6,100.00	5,892.26	5,988.89	5,892.26	24.26	19.62	135.21	-389.04	721.60	1,876.51	1,847.63	28.88	64.975	
6,200.00	5,992.26	6,088.89	5,992.26	24.37	19.76	135.21	-389.04	721.60	1,876.51	1,847.26	29.25	64.159	
6,300.00	6,092.26	6,188.89	6,092.26	24.49	19.90	135.21	-389.04	721.60	1,876.51	1,846.89	29.62	63.358	
6,400.00	6,192.26	6,288.89	6,192.26	24.60	20.04	135.21	-389.04	721.60	1,876.51	1,846.52	29.99	62.573	
6,500.00	6,292.26	6,388.89	6,292.26	24.72	20.18	135.21	-389.04	721.60	1,876.51	1,846.14	30.36	61.803	
6,600.00	6,392.26	6,488.89	6,392.26	24.84	20.33	135.21	-389.04	721.60	1,876.51	1,845.77	30.74	61.048	
6,700.00	6,492.26	6,588.89	6,492.26	24.96	20.47	135.21	-389.04	721.60	1,876.51	1,845.39	31.12	60.307	
6,800.00	6,592.26	6,688.89	6,592.26	25.09	20.62	135.21	-389.04	721.60	1,876.51	1,845.01	31.50	59.580	
6,900.00	6,692.26	6,788.89	6,692.26	25.21	20.77	135.21	-389.04	721.60	1,876.51	1,844.63	31.88	58.867	
7,000.00	6,792.26	6,888.89	6,792.26	25.34	20.92	135.21	-389.04	721.60	1,876.51	1,844.25	32.26	58.168	
7,100.00	6,892.26	6,988.89	6,892.26	25.46	21.07	135.21	-389.04	721.60	1,876.51	1,843.86	32.65	57.482	
7,200.00	6,992.26	7,088.89	6,992.26	25.59	21.22	135.21	-389.04	721.60	1,876.51	1,843.48	33.03	56.809	
7,300.00	7,092.26	7,188.89	7,092.26	25.72	21.37	135.21	-389.04	721.60	1,876.51	1,843.09	33.42	56.150	
7,400.00	7,192.26	7,288.89	7,192.26	25.85	21.53	135.21	-389.04	721.60	1,876.51	1,842.70	33.81	55.503	
7,500.00	7,292.26	7,388.89	7,292.26	25.98	21.68	135.21	-389.04	721.60	1,876.51	1,842.31	34.20	54.868	
7,600.00	7,392.26	7,488.89	7,392.26	26.12	21.84	135.21	-389.04	721.60	1,876.51	1,841.91	34.59	54.246	
7,700.00	7,492.26	7,588.89	7,492.26	26.25	22.00	135.21	-389.04	721.60	1,876.51	1,841.52	34.99	53.635	
7,800.00	7,592.26	7,688.89	7,592.26	26.39	22.16	135.21	-389.04	721.60	1,876.51	1,841.13	35.38	53.036	
7,900.00	7,692.26	7,788.89	7,692.26	26.53	22.32	135.21	-389.04	721.60	1,876.51	1,840.73	35.78	52.448	
8,000.00	7,792.26	7,888.89	7,792.26	26.66	22.48	135.21	-389.04	721.60	1,876.51	1,840.33	36.18	51.872	
8,100.00	7,892.26	7,988.89	7,892.26	26.80	22.64	135.21	-389.04	721.60	1,876.51	1,839.93	36.57	51.306	
8,200.00	7,992.26	8,088.89	7,992.26	26.94	22.81	135.21	-389.04	721.60	1,876.51	1,839.53	36.97	50.751	
8,300.00	8,092.26	8,188.89	8,092.26	27.09	22.97	135.21	-389.04	721.60	1,876.51	1,839.13	37.38	50.206	
8,400.00	8,192.26	8,288.89	8,192.26	27.23	23.14	135.21	-389.04	721.60	1,876.51	1,838.73	37.78	49.672	
8,500.00	8,292.26	8,388.89	8,292.26	27.37	23.30	135.21	-389.04	721.60	1,876.51	1,838.33	38.18	49.147	
8,600.00	8,392.26	8,488.89	8,392.26	27.52	23.47	135.21	-389.04	721.60	1,876.51	1,837.92	38.59	48.632	
8,700.00	8,492.26	8,588.89	8,492.26	27.67	23.64	135.21	-389.04	721.60	1,876.51	1,837.52	38.99	48.127	
8,749.08	8,541.35	8,637.97	8,541.35	27.74	23.72	135.21	-389.04	721.60	1,876.51	1,837.32	39.19	47.882	
8,775.74	8,568.00	8,660.63	8,568.00	27.78	23.76	135.21	-389.04	721.60	1,876.51	1,837.22	39.29	47.760	

Company:	US ROCKIES REGION PLANNING	Local Co-ordinate Reference:	Well P_NRC 10-8
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 10-8	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00ft	Output errors are at	2.00 sigma
Reference Wellbore	P_NRC 10-8	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									
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning
0.00	0.00	0.00	0.00	0.00	0.00	-89.37	0.35	-32.19	32.19				
100.00	100.00	100.00	100.00	0.10	0.10	-89.37	0.35	-32.19	32.19	32.00	0.19	168.493	
200.00	200.00	200.00	200.00	0.32	0.32	-89.37	0.35	-32.19	32.19	31.55	0.64	50.252	
300.00	300.00	300.00	300.00	0.55	0.55	-89.37	0.35	-32.19	32.19	31.10	1.09	29.530	
400.00	400.00	400.00	400.00	0.77	0.77	-89.37	0.35	-32.19	32.19	30.65	1.54	20.908	
500.00	500.00	500.00	500.00	0.99	0.99	-89.37	0.35	-32.19	32.19	30.20	1.99	16.183	
600.00	600.00	600.00	600.00	1.22	1.22	-89.37	0.35	-32.19	32.19	29.75	2.44	13.200	
700.00	700.00	700.00	700.00	1.44	1.44	-89.37	0.35	-32.19	32.19	29.30	2.89	11.145	
800.00	800.00	800.00	800.00	1.67	1.67	-89.37	0.35	-32.19	32.19	28.85	3.34	9.644	
900.00	900.00	900.00	900.00	1.89	1.89	-89.37	0.35	-32.19	32.19	28.40	3.79	8.500	
1,000.00	1,000.00	1,000.00	1,000.00	2.12	2.12	-89.37	0.35	-32.19	32.19	27.95	4.24	7.598	
1,085.00	1,085.00	1,085.00	1,085.00	2.31	2.31	-89.37	0.35	-32.19	32.19	27.57	4.62	6.969	CC
1,100.00	1,100.00	1,099.84	1,099.84	2.34	2.34	-56.93	0.36	-32.23	32.21	27.52	4.68	6.876	ES
1,200.00	1,199.97	1,198.72	1,198.69	2.56	2.54	-59.35	0.85	-34.39	33.19	28.09	5.10	6.503	
1,300.00	1,299.80	1,297.50	1,297.30	2.79	2.76	-64.84	2.10	-39.87	35.94	30.41	5.53	6.499	SF
1,400.00	1,399.37	1,396.05	1,395.44	3.02	2.98	-71.98	4.09	-48.64	40.91	34.94	5.97	6.854	
1,500.00	1,498.55	1,494.28	1,492.89	3.27	3.22	-79.21	6.82	-60.65	48.55	42.11	6.44	7.540	
1,600.00	1,597.23	1,592.11	1,589.46	3.54	3.49	-85.53	10.27	-75.84	59.06	52.10	6.96	8.489	
1,700.00	1,695.29	1,689.43	1,684.95	3.85	3.80	-90.60	14.42	-94.14	72.46	64.92	7.54	9.611	
1,800.00	1,792.60	1,786.15	1,779.17	4.21	4.15	-94.51	19.26	-115.44	88.68	80.48	8.20	10.816	
1,900.00	1,889.05	1,882.20	1,871.95	4.62	4.54	-97.45	24.77	-139.66	107.62	98.67	8.95	12.029	
2,000.00	1,984.52	1,979.52	1,965.42	5.08	4.99	-100.19	30.77	-166.08	128.51	118.72	9.80	13.119	
2,100.00	2,078.90	2,076.70	2,058.76	5.62	5.46	-103.34	36.77	-192.50	150.46	139.73	10.73	14.023	
2,200.00	2,172.06	2,173.37	2,151.59	6.21	5.95	-106.67	42.74	-218.77	173.81	162.07	11.74	14.811	
2,300.00	2,263.90	2,269.41	2,243.82	6.88	6.44	-110.03	48.67	-244.87	198.86	186.07	12.79	15.544	
2,338.64	2,299.01	2,306.32	2,279.27	7.16	6.64	-111.31	50.95	-254.90	209.07	195.85	13.21	15.823	
2,400.00	2,354.59	2,364.85	2,335.48	7.61	6.95	-113.49	54.56	-270.81	225.67	211.77	13.90	16.238	
2,500.00	2,445.17	2,460.23	2,427.08	8.37	7.46	-116.42	60.45	-296.73	253.26	238.25	15.02	16.865	
2,600.00	2,535.74	2,555.61	2,518.68	9.15	7.98	-118.78	66.34	-322.65	281.36	265.22	16.14	17.430	
2,700.00	2,626.32	2,650.99	2,610.29	9.93	8.50	-120.72	72.23	-348.57	309.83	292.56	17.27	17.939	
2,800.00	2,716.90	2,746.37	2,701.89	10.73	9.03	-122.33	78.11	-374.50	338.56	320.16	18.40	18.396	
2,900.00	2,807.47	2,841.75	2,793.49	11.54	9.57	-123.69	84.00	-400.42	367.51	347.97	19.54	18.809	
3,000.00	2,898.05	2,937.13	2,885.09	12.35	10.10	-124.85	89.89	-426.34	396.62	375.94	20.68	19.181	
3,100.00	2,988.63	3,032.52	2,976.70	13.17	10.64	-125.85	95.78	-452.26	425.85	404.03	21.82	19.518	
3,200.00	3,079.20	3,127.90	3,068.30	13.99	11.18	-126.73	101.67	-478.19	455.19	432.23	22.96	19.825	
3,300.00	3,169.78	3,223.28	3,159.90	14.82	11.73	-127.49	107.56	-504.11	484.62	460.52	24.11	20.104	
3,400.00	3,260.36	3,318.66	3,251.50	15.65	12.27	-128.18	113.45	-530.03	514.12	488.87	25.25	20.360	
3,500.00	3,350.93	3,414.04	3,343.10	16.48	12.82	-128.78	119.34	-555.95	543.68	517.28	26.40	20.594	
3,600.00	3,441.51	3,509.42	3,434.71	17.31	13.36	-129.33	125.23	-581.88	573.28	545.74	27.55	20.810	
3,702.10	3,533.99	3,606.81	3,528.23	18.17	13.93	-129.83	131.24	-608.34	603.56	574.83	28.72	21.013	
3,800.00	3,623.36	3,700.55	3,618.26	18.88	14.47	-130.59	137.03	-633.82	631.58	601.76	29.82	21.179	
3,900.00	3,716.00	3,796.97	3,710.86	19.48	15.02	-131.06	142.98	-660.03	658.06	627.18	30.88	21.310	
4,000.00	3,809.89	3,893.96	3,804.01	20.05	15.58	-131.27	148.97	-686.38	682.32	650.38	31.94	21.361	
4,100.00	3,904.93	3,991.39	3,897.58	20.57	16.15	-131.22	154.98	-712.86	704.36	671.36	33.00	21.342	
4,200.00	4,001.00	4,089.15	3,991.46	21.04	16.71	-130.96	161.02	-739.43	724.21	690.15	34.06	21.264	
4,300.00	4,097.97	4,187.11	4,085.54	21.47	17.28	-130.48	167.07	-766.06	741.89	706.79	35.10	21.137	
4,400.00	4,195.74	4,285.16	4,179.71	21.85	17.85	-129.81	173.12	-792.70	757.50	721.38	36.12	20.970	
4,500.00	4,294.18	4,383.18	4,273.84	22.18	18.42	-128.95	179.17	-819.34	771.13	734.01	37.12	20.771	
4,600.00	4,393.17	4,481.05	4,367.83	22.46	18.99	-127.91	185.21	-845.94	782.90	744.80	38.10	20.550	
4,700.00	4,492.60	4,578.64	4,461.56	22.70	19.56	-126.68	191.24	-872.47	792.96	753.92	39.03	20.314	
4,800.00	4,592.34	4,675.85	4,554.92	22.88	20.13	-125.28	197.24	-898.88	801.47	761.54	39.93	20.073	
4,900.00	4,692.26	4,772.55	4,647.78	23.02	20.69	-123.71	203.21	-925.17	808.65	767.87	40.77	19.833	

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 10-8
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 10-8	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00ft	Output errors are at	2.00 sigma
Reference Wellbore	P_NRC 10-8	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 Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	
4,955.74	4,748.00	4,826.18	4,699.29	23.07	21.01	-155.25	206.52	-939.74	812.15	770.93	41.22	19.704	
5,000.00	4,792.26	4,868.69	4,740.11	23.11	21.25	-154.44	209.15	-951.29	814.89	773.32	41.57	19.601	
5,100.00	4,892.26	4,964.73	4,832.35	23.21	21.82	-152.61	215.08	-977.40	821.74	779.38	42.36	19.398	
5,200.00	4,992.26	5,060.76	4,924.58	23.30	22.38	-150.81	221.01	-1,003.50	829.47	786.35	43.12	19.238	
5,300.00	5,092.26	5,156.80	5,016.81	23.40	22.94	-149.05	226.94	-1,029.60	838.05	794.21	43.84	19.118	
5,400.00	5,192.26	5,252.84	5,109.05	23.50	23.50	-147.32	232.87	-1,055.70	847.46	802.94	44.52	19.036	
5,500.00	5,292.26	5,348.88	5,201.28	23.61	24.06	-145.63	238.80	-1,081.80	857.68	812.51	45.17	18.988	
5,600.00	5,392.26	5,444.92	5,293.51	23.71	24.62	-143.98	244.72	-1,107.90	868.67	822.88	45.79	18.972	
5,700.00	5,492.26	5,540.95	5,385.74	23.82	25.19	-142.37	250.65	-1,134.00	880.41	834.03	46.37	18.985	
5,800.00	5,592.26	5,636.99	5,477.98	23.92	25.75	-140.79	256.58	-1,160.10	892.86	845.93	46.93	19.026	
5,900.00	5,692.26	5,733.03	5,570.21	24.03	26.31	-139.26	262.51	-1,186.20	906.00	858.54	47.46	19.091	
6,000.00	5,792.26	5,843.77	5,676.94	24.14	26.84	-137.63	269.04	-1,214.95	919.18	871.26	47.93	19.178	
6,100.00	5,892.26	5,960.53	5,790.61	24.26	27.29	-136.19	274.95	-1,240.96	930.94	882.62	48.32	19.266	
6,200.00	5,992.26	6,079.36	5,907.31	24.37	27.68	-135.02	279.91	-1,262.77	940.93	892.26	48.68	19.330	
6,300.00	6,092.26	6,199.89	6,026.52	24.49	28.01	-134.11	283.83	-1,280.05	948.93	899.93	49.00	19.366	
6,400.00	6,192.26	6,321.73	6,147.68	24.60	28.27	-133.47	286.67	-1,292.53	954.74	905.44	49.29	19.369	
6,500.00	6,292.26	6,444.44	6,270.14	24.72	28.47	-133.09	288.37	-1,300.01	958.23	908.67	49.57	19.333	
6,600.00	6,392.26	6,566.60	6,392.26	24.84	28.62	-132.97	288.90	-1,302.37	959.34	909.52	49.82	19.254	
6,700.00	6,492.26	6,666.60	6,492.26	24.96	28.72	-132.97	288.90	-1,302.37	959.34	909.28	50.06	19.163	
6,800.00	6,592.26	6,766.60	6,592.26	25.09	28.83	-132.97	288.90	-1,302.37	959.34	909.03	50.31	19.070	
6,900.00	6,692.26	6,866.60	6,692.26	25.21	28.94	-132.97	288.90	-1,302.37	959.34	908.79	50.55	18.976	
7,000.00	6,792.26	6,966.60	6,792.26	25.34	29.05	-132.97	288.90	-1,302.37	959.34	908.54	50.80	18.883	
7,100.00	6,892.26	7,066.60	6,892.26	25.46	29.16	-132.97	288.90	-1,302.37	959.34	908.28	51.06	18.790	
7,200.00	6,992.26	7,166.60	6,992.26	25.59	29.28	-132.97	288.90	-1,302.37	959.34	908.03	51.31	18.696	
7,300.00	7,092.26	7,266.60	7,092.26	25.72	29.39	-132.97	288.90	-1,302.37	959.34	907.77	51.57	18.603	
7,400.00	7,192.26	7,366.60	7,192.26	25.85	29.51	-132.97	288.90	-1,302.37	959.34	907.51	51.83	18.509	
7,500.00	7,292.26	7,466.60	7,292.26	25.98	29.63	-132.97	288.90	-1,302.37	959.34	907.25	52.09	18.416	
7,600.00	7,392.26	7,566.60	7,392.26	26.12	29.75	-132.97	288.90	-1,302.37	959.34	906.98	52.36	18.322	
7,700.00	7,492.26	7,666.60	7,492.26	26.25	29.87	-132.97	288.90	-1,302.37	959.34	906.71	52.63	18.229	
7,800.00	7,592.26	7,766.60	7,592.26	26.39	29.99	-132.97	288.90	-1,302.37	959.34	906.44	52.90	18.136	
7,900.00	7,692.26	7,866.60	7,692.26	26.53	30.11	-132.97	288.90	-1,302.37	959.34	906.17	53.17	18.043	
8,000.00	7,792.26	7,966.60	7,792.26	26.66	30.23	-132.97	288.90	-1,302.37	959.34	905.89	53.45	17.950	
8,100.00	7,892.26	8,066.60	7,892.26	26.80	30.36	-132.97	288.90	-1,302.37	959.34	905.62	53.72	17.857	
8,200.00	7,992.26	8,166.60	7,992.26	26.94	30.49	-132.97	288.90	-1,302.37	959.34	905.34	54.00	17.764	
8,300.00	8,092.26	8,266.60	8,092.26	27.09	30.61	-132.97	288.90	-1,302.37	959.34	905.05	54.29	17.672	
8,400.00	8,192.26	8,366.60	8,192.26	27.23	30.74	-132.97	288.90	-1,302.37	959.34	904.77	54.57	17.580	
8,500.00	8,292.26	8,466.60	8,292.26	27.37	30.87	-132.97	288.90	-1,302.37	959.34	904.48	54.86	17.488	
8,600.00	8,392.26	8,487.34	8,313.00	27.52	30.90	-132.97	288.90	-1,302.37	962.61	907.58	55.03	17.491	
8,700.00	8,492.26	8,487.34	8,313.00	27.67	30.90	-132.97	288.90	-1,302.37	975.94	920.76	55.18	17.686	
8,775.74	8,568.00	8,487.34	8,313.00	27.78	30.90	-132.97	288.90	-1,302.37	992.65	937.36	55.29	17.952	

Company:	US ROCKIES REGION PLANNING	Local Co-ordinate Reference:	Well P_NRC 10-8
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 10-8	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00ft	Output errors are at	2.00 sigma
Reference Wellbore	P_NRC 10-8	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									
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	Warning
0.00	0.00	0.00	0.00	0.00	0.00	90.05	-0.01	15.95	15.95				
100.00	100.00	100.00	100.00	0.10	0.10	90.05	-0.01	15.95	15.95	15.76	0.19	83.509	
200.00	200.00	200.00	200.00	0.32	0.32	90.05	-0.01	15.95	15.95	15.31	0.64	24.906	
300.00	300.00	300.00	300.00	0.55	0.55	90.05	-0.01	15.95	15.95	14.86	1.09	14.636	
400.00	400.00	400.00	400.00	0.77	0.77	90.05	-0.01	15.95	15.95	14.41	1.54	10.362	
500.00	500.00	500.00	500.00	0.99	0.99	90.05	-0.01	15.95	15.95	13.97	1.99	8.021	
600.00	600.00	600.00	600.00	1.22	1.22	90.05	-0.01	15.95	15.95	13.52	2.44	6.542	
700.00	700.00	700.00	700.00	1.44	1.44	90.05	-0.01	15.95	15.95	13.07	2.89	5.524	
800.00	800.00	800.00	800.00	1.67	1.67	90.05	-0.01	15.95	15.95	12.62	3.34	4.780	
900.00	900.00	900.00	900.00	1.89	1.89	90.05	-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	90.05	-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	90.05	-0.01	15.95	15.95	11.34	4.62	3.454 CC	
1,100.00	1,100.00	1,100.00	1,100.00	2.34	2.34	122.79	-0.05	15.96	15.98	11.30	4.68	3.413 ES, SF	
1,200.00	1,199.97	1,199.80	1,199.77	2.56	2.51	136.27	-2.31	16.06	17.82	12.75	5.07	3.515	
1,300.00	1,299.80	1,298.82	1,298.62	2.79	2.69	157.94	-7.98	16.33	25.43	19.97	5.46	4.660	
1,400.00	1,399.37	1,396.41	1,395.80	3.02	2.88	172.79	-16.90	16.75	41.02	35.18	5.84	7.020	
1,500.00	1,498.55	1,491.96	1,490.59	3.27	3.09	-179.18	-28.84	17.31	64.13	57.90	6.23	10.296	
1,600.00	1,597.23	1,584.90	1,582.36	3.54	3.32	-174.72	-43.47	18.00	94.04	87.43	6.61	14.225	
1,700.00	1,695.29	1,674.74	1,670.58	3.85	3.58	-172.03	-60.43	18.80	130.28	123.29	6.99	18.639	
1,800.00	1,792.60	1,765.67	1,759.57	4.21	3.87	-170.38	-79.13	19.68	171.30	163.93	7.37	23.228	
1,900.00	1,889.05	1,855.34	1,847.32	4.62	4.18	-169.45	-97.57	20.55	215.50	207.74	7.76	27.772	
2,000.00	1,984.52	1,943.46	1,933.54	5.08	4.50	-168.92	-115.69	21.40	262.76	254.61	8.14	32.265	
2,100.00	2,078.90	2,029.91	2,018.14	5.62	4.82	-168.60	-133.47	22.23	313.01	304.48	8.53	36.707	
2,200.00	2,172.06	2,114.58	2,101.01	6.21	5.15	-168.41	-150.89	23.05	366.19	357.28	8.91	41.099	
2,300.00	2,263.90	2,197.39	2,182.04	6.88	5.47	-168.30	-167.92	23.86	422.24	412.95	9.29	45.441	
2,338.64	2,299.01	2,228.86	2,212.84	7.16	5.60	-168.27	-174.39	24.16	444.65	435.21	9.44	47.102	
2,400.00	2,354.59	2,278.60	2,261.51	7.61	5.80	-168.39	-184.62	24.64	480.57	470.82	9.75	49.283	
2,500.00	2,445.17	2,359.67	2,340.84	8.37	6.13	-168.56	-201.29	25.43	539.11	528.84	10.27	52.508	
2,600.00	2,535.74	2,440.74	2,420.17	9.15	6.47	-168.70	-217.96	26.21	597.65	586.86	10.79	55.377	
2,700.00	2,626.32	2,521.80	2,499.50	9.93	6.80	-168.81	-234.63	27.00	656.20	644.87	11.33	57.941	
2,800.00	2,716.90	2,602.87	2,578.83	10.73	7.14	-168.90	-251.30	27.78	714.74	702.88	11.86	60.241	
2,900.00	2,807.47	2,683.93	2,658.15	11.54	7.49	-168.98	-267.97	28.56	773.29	760.88	12.41	62.310	
3,000.00	2,898.05	2,765.00	2,737.48	12.35	7.84	-169.05	-284.65	29.35	831.84	818.88	12.96	64.181	
3,100.00	2,988.63	2,846.06	2,816.81	13.17	8.18	-169.10	-301.32	30.13	890.39	876.87	13.52	65.878	
3,200.00	3,079.20	2,927.13	2,896.14	13.99	8.53	-169.16	-317.99	30.92	948.94	934.86	14.07	67.424	
3,300.00	3,169.78	3,008.19	2,975.47	14.82	8.88	-169.20	-334.66	31.70	1,007.49	992.85	14.64	68.836	
3,400.00	3,260.36	3,089.26	3,054.80	15.65	9.24	-169.24	-351.33	32.49	1,066.04	1,050.83	15.20	70.130	
3,500.00	3,350.93	3,170.32	3,134.13	16.48	9.59	-169.28	-368.00	33.27	1,124.59	1,108.82	15.77	71.319	
3,600.00	3,441.51	3,251.39	3,213.45	17.31	9.94	-169.31	-384.67	34.06	1,183.14	1,166.80	16.34	72.415	
3,702.10	3,533.99	3,334.15	3,294.45	18.17	10.31	-169.34	-401.70	34.86	1,242.91	1,225.99	16.92	73.449	
3,800.00	3,623.36	3,414.47	3,373.04	18.88	10.66	-169.60	-418.21	35.63	1,298.89	1,281.28	17.61	73.742	
3,900.00	3,716.00	3,498.40	3,455.17	19.48	11.03	-169.81	-435.47	36.45	1,353.25	1,334.97	18.28	74.031	
4,000.00	3,809.89	3,584.14	3,539.07	20.05	11.41	-169.97	-453.11	37.28	1,404.70	1,385.77	18.93	74.212	
4,100.00	3,904.93	3,671.58	3,624.65	20.57	11.80	-170.09	-471.09	38.12	1,453.16	1,433.61	19.56	74.303	
4,200.00	4,001.00	3,760.63	3,711.79	21.04	12.19	-170.16	-489.40	38.98	1,498.60	1,478.44	20.16	74.320	
4,300.00	4,097.97	3,851.17	3,800.39	21.47	12.59	-170.21	-508.02	39.86	1,540.95	1,520.20	20.75	74.275	
4,400.00	4,195.74	3,943.10	3,890.35	21.85	13.00	-170.22	-526.93	40.75	1,580.17	1,558.86	21.30	74.178	
4,500.00	4,294.18	4,036.29	3,981.54	22.18	13.42	-170.20	-546.09	41.65	1,616.20	1,594.37	21.83	74.036	
4,600.00	4,393.17	4,130.64	4,073.87	22.46	13.84	-170.16	-565.50	42.56	1,649.02	1,626.69	22.33	73.857	
4,700.00	4,492.60	4,226.04	4,167.22	22.70	14.26	-170.08	-585.12	43.49	1,678.59	1,655.79	22.79	73.645	
4,800.00	4,592.34	4,322.35	4,261.48	22.88	14.69	-169.98	-604.92	44.42	1,704.87	1,681.64	23.23	73.405	
4,900.00	4,692.26	4,419.48	4,356.52	23.02	15.13	-169.85	-624.90	45.36	1,727.84	1,704.21	23.62	73.140	

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 10-8
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 10-8	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00ft	Output errors are at	2.00 sigma
Reference Wellbore	P_NRC 10-8	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						
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
4,955.74	4,748.00	4,473.93	4,409.80	23.07	15.37	157.74	-636.10	45.89	1,739.19	1,715.36	23.83	72.982	
5,000.00	4,792.26	4,517.24	4,452.19	23.11	15.57	157.84	-645.00	46.31	1,747.80	1,723.78	24.02	72.750	
5,100.00	4,892.26	4,615.10	4,547.95	23.21	16.01	158.06	-665.13	47.25	1,767.27	1,742.80	24.48	72.203	
5,200.00	4,992.26	4,712.95	4,643.71	23.30	16.44	158.28	-685.25	48.20	1,786.77	1,761.84	24.93	71.675	
5,300.00	5,092.26	4,810.81	4,739.47	23.40	16.88	158.49	-705.38	49.15	1,806.29	1,780.91	25.38	71.165	
5,400.00	5,192.26	4,908.67	4,835.23	23.50	17.32	158.70	-725.50	50.09	1,825.83	1,800.00	25.84	70.671	
5,500.00	5,292.26	5,006.53	4,930.99	23.61	17.76	158.90	-745.63	51.04	1,845.40	1,819.11	26.29	70.194	
5,600.00	5,392.26	5,104.38	5,026.76	23.71	18.20	159.10	-765.75	51.99	1,864.98	1,838.24	26.74	69.732	
5,700.00	5,492.26	5,202.24	5,122.52	23.82	18.64	159.30	-785.88	52.94	1,884.59	1,857.39	27.20	69.285	
5,800.00	5,592.26	5,300.10	5,218.28	23.92	19.08	159.49	-806.00	53.88	1,904.22	1,876.57	27.66	68.853	
5,900.00	5,692.26	5,397.96	5,314.04	24.03	19.52	159.68	-826.13	54.83	1,923.87	1,895.76	28.11	68.433	
6,000.00	5,792.26	5,495.82	5,409.80	24.14	19.96	159.86	-846.25	55.78	1,943.54	1,914.97	28.57	68.027	
6,100.00	5,892.26	5,593.67	5,505.56	24.26	20.40	160.04	-866.38	56.72	1,963.23	1,934.20	29.03	67.633	
6,200.00	5,992.26	5,691.53	5,601.32	24.37	20.85	160.21	-886.50	57.67	1,982.94	1,953.45	29.49	67.251	
6,300.00	6,092.26	5,789.39	5,697.08	24.49	21.29	160.39	-906.63	58.62	2,002.66	1,972.72	29.94	66.881	
6,400.00	6,192.26	5,887.25	5,792.85	24.60	21.73	160.56	-926.75	59.56	2,022.40	1,992.00	30.40	66.521	
6,500.00	6,292.26	6,140.66	6,042.45	24.72	22.54	160.91	-969.99	61.60	2,039.41	2,008.23	31.18	65.404	
6,600.00	6,392.26	6,457.09	6,357.89	24.84	23.12	161.09	-992.95	62.68	2,046.40	2,014.44	31.96	64.023	
6,700.00	6,492.26	6,591.47	6,492.26	24.96	23.29	161.10	-993.38	62.70	2,046.53	2,014.15	32.38	63.198	
6,800.00	6,592.26	6,691.47	6,592.26	25.09	23.40	161.10	-993.38	62.70	2,046.53	2,013.80	32.73	62.530	
6,900.00	6,692.26	6,791.47	6,692.26	25.21	23.51	161.10	-993.38	62.70	2,046.53	2,013.46	33.08	61.874	
7,000.00	6,792.26	6,891.47	6,792.26	25.34	23.62	161.10	-993.38	62.70	2,046.53	2,013.11	33.43	61.227	
7,100.00	6,892.26	6,991.47	6,892.26	25.46	23.73	161.10	-993.38	62.70	2,046.53	2,012.76	33.78	60.589	
7,200.00	6,992.26	7,091.47	6,992.26	25.59	23.85	161.10	-993.38	62.70	2,046.53	2,012.40	34.13	59.961	
7,300.00	7,092.26	7,191.47	7,092.26	25.72	23.96	161.10	-993.38	62.70	2,046.53	2,012.05	34.49	59.341	
7,400.00	7,192.26	7,291.47	7,192.26	25.85	24.08	161.10	-993.38	62.70	2,046.53	2,011.69	34.85	58.731	
7,500.00	7,292.26	7,391.47	7,292.26	25.98	24.20	161.10	-993.38	62.70	2,046.53	2,011.33	35.21	58.129	
7,600.00	7,392.26	7,491.47	7,392.26	26.12	24.32	161.10	-993.38	62.70	2,046.53	2,010.96	35.57	57.537	
7,700.00	7,492.26	7,591.47	7,492.26	26.25	24.44	161.10	-993.38	62.70	2,046.53	2,010.60	35.93	56.953	
7,800.00	7,592.26	7,691.47	7,592.26	26.39	24.56	161.10	-993.38	62.70	2,046.53	2,010.23	36.30	56.379	
7,900.00	7,692.26	7,791.47	7,692.26	26.53	24.68	161.10	-993.38	62.70	2,046.53	2,009.86	36.67	55.812	
8,000.00	7,792.26	7,891.47	7,792.26	26.66	24.81	161.10	-993.38	62.70	2,046.53	2,009.49	37.04	55.255	
8,100.00	7,892.26	7,991.47	7,892.26	26.80	24.93	161.10	-993.38	62.70	2,046.53	2,009.12	37.41	54.706	
8,200.00	7,992.26	8,091.47	7,992.26	26.94	25.06	161.10	-993.38	62.70	2,046.53	2,008.75	37.78	54.165	
8,300.00	8,092.26	8,191.47	8,092.26	27.09	25.19	161.10	-993.38	62.70	2,046.53	2,008.37	38.16	53.633	
8,400.00	8,192.26	8,291.47	8,192.26	27.23	25.32	161.10	-993.38	62.70	2,046.53	2,008.00	38.53	53.108	
8,500.00	8,292.26	8,391.47	8,292.26	27.37	25.45	161.10	-993.38	62.70	2,046.53	2,007.62	38.91	52.592	
8,518.17	8,310.43	8,409.64	8,310.43	27.40	25.48	161.10	-993.38	62.70	2,046.53	2,007.55	38.98	52.499	
8,600.00	8,392.26	8,432.20	8,333.00	27.52	25.51	161.10	-993.38	62.70	2,047.39	2,008.20	39.19	52.248	
8,700.00	8,492.26	8,432.20	8,333.00	27.67	25.51	161.10	-993.38	62.70	2,052.72	2,013.33	39.39	52.119	
8,775.74	8,568.00	8,432.20	8,333.00	27.78	25.51	161.10	-993.38	62.70	2,059.98	2,020.44	39.54	52.103	

Company:	US ROCKIES REGION PLANNING	Local Co-ordinate Reference:	Well P_NRC 10-8
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 10-8	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00ft	Output errors are at	2.00 sigma
Reference Wellbore	P_NRC 10-8	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 39-8 - P_NRC 39-8 - 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									
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning
0.00	0.00	0.00	0.00	0.00	0.00	90.45	-0.37	47.86	47.86				
100.00	100.00	100.00	100.00	0.10	0.10	90.45	-0.37	47.86	47.86	47.67	0.19	250.534	
200.00	200.00	200.00	200.00	0.32	0.32	90.45	-0.37	47.86	47.86	47.22	0.64	74.721	
300.00	300.00	300.00	300.00	0.55	0.55	90.45	-0.37	47.86	47.86	46.77	1.09	43.908	
400.00	400.00	400.00	400.00	0.77	0.77	90.45	-0.37	47.86	47.86	46.33	1.54	31.088	
500.00	500.00	500.00	500.00	0.99	0.99	90.45	-0.37	47.86	47.86	45.88	1.99	24.063	
600.00	600.00	600.00	600.00	1.22	1.22	90.45	-0.37	47.86	47.86	45.43	2.44	19.627	
700.00	700.00	700.00	700.00	1.44	1.44	90.45	-0.37	47.86	47.86	44.98	2.89	16.572	
800.00	800.00	800.00	800.00	1.67	1.67	90.45	-0.37	47.86	47.86	44.53	3.34	14.340	
900.00	900.00	900.00	900.00	1.89	1.89	90.45	-0.37	47.86	47.86	44.08	3.79	12.638	
1,000.00	1,000.00	1,000.00	1,000.00	2.12	2.12	90.45	-0.37	47.86	47.86	43.63	4.24	11.297	
1,085.00	1,085.00	1,085.00	1,085.00	2.31	2.31	90.45	-0.37	47.86	47.86	43.25	4.62	10.363 CC	
1,100.00	1,100.00	1,099.76	1,099.76	2.34	2.34	122.96	-0.36	47.90	47.92	43.24	4.68	10.232 ES	
1,200.00	1,199.97	1,198.03	1,198.00	2.56	2.54	124.48	0.08	50.05	51.36	46.26	5.10	10.066 SF	
1,300.00	1,299.80	1,295.76	1,295.57	2.79	2.75	127.53	1.20	55.45	60.19	54.67	5.52	10.905	
1,400.00	1,399.37	1,392.48	1,391.89	3.02	2.97	130.85	2.97	64.01	74.59	68.65	5.94	12.561	
1,500.00	1,498.55	1,487.75	1,486.42	3.27	3.20	133.69	5.36	75.54	94.59	88.22	6.36	14.871	
1,600.00	1,597.23	1,581.16	1,578.68	3.54	3.46	135.86	8.32	89.83	120.09	113.30	6.79	17.685	
1,700.00	1,695.29	1,672.33	1,668.23	3.85	3.73	137.41	11.79	106.61	150.95	143.72	7.23	20.868	
1,800.00	1,792.60	1,760.94	1,754.69	4.21	4.04	138.48	15.72	125.59	186.97	179.28	7.69	24.299	
1,900.00	1,889.05	1,846.70	1,837.76	4.62	4.38	139.17	20.04	146.44	227.95	219.77	8.18	27.876	
2,000.00	1,984.52	1,932.06	1,919.84	5.08	4.75	139.64	24.79	169.39	273.48	264.79	8.69	31.466	
2,100.00	2,078.90	2,019.40	2,003.70	5.62	5.16	140.17	29.74	193.28	321.84	312.60	9.24	34.826	
2,200.00	2,172.06	2,105.25	2,086.13	6.21	5.58	140.73	34.60	216.77	372.65	362.83	9.82	37.960	
2,300.00	2,263.90	2,189.51	2,167.04	6.88	6.00	141.27	39.37	239.82	425.91	415.49	10.42	40.883	
2,338.64	2,299.01	2,221.63	2,197.87	7.16	6.16	141.47	41.19	248.60	447.15	436.49	10.66	41.961	
2,400.00	2,354.59	2,272.41	2,246.63	7.61	6.43	142.24	44.07	262.50	481.19	470.11	11.08	43.415	
2,500.00	2,445.17	2,355.18	2,326.11	8.37	6.86	143.27	48.76	285.14	536.78	524.99	11.79	45.511	
2,600.00	2,535.74	2,437.95	2,405.58	9.15	7.30	144.12	53.44	307.78	592.47	579.95	12.52	47.317	
2,700.00	2,626.32	2,520.71	2,485.05	9.93	7.75	144.82	58.13	330.42	648.24	634.97	13.26	48.884	
2,800.00	2,716.90	2,603.48	2,564.52	10.73	8.19	145.41	62.82	353.07	704.06	690.05	14.01	50.252	
2,900.00	2,807.47	2,686.25	2,644.00	11.54	8.65	145.92	67.51	375.71	759.92	745.15	14.77	51.453	
3,000.00	2,898.05	2,769.02	2,723.47	12.35	9.11	146.35	72.20	398.35	815.82	800.28	15.54	52.513	
3,100.00	2,988.63	2,851.79	2,802.94	13.17	9.57	146.73	76.88	421.00	871.75	855.44	16.31	53.456	
3,200.00	3,079.20	2,934.55	2,882.41	13.99	10.03	147.06	81.57	443.64	927.70	910.61	17.09	54.297	
3,300.00	3,169.78	3,017.32	2,961.89	14.82	10.49	147.36	86.26	466.28	983.67	965.80	17.87	55.052	
3,400.00	3,260.36	3,100.09	3,041.36	15.65	10.96	147.62	90.95	488.92	1,039.66	1,021.00	18.65	55.732	
3,500.00	3,350.93	3,182.86	3,120.83	16.48	11.42	147.86	95.64	511.57	1,095.66	1,076.21	19.44	56.347	
3,600.00	3,441.51	3,265.63	3,200.31	17.31	11.89	148.08	100.32	534.21	1,151.67	1,131.43	20.24	56.906	
3,702.10	3,533.99	3,350.13	3,281.44	18.17	12.37	148.27	105.11	557.32	1,208.86	1,187.81	21.05	57.426	
3,800.00	3,623.36	3,431.98	3,360.03	18.88	12.84	149.07	109.75	579.72	1,262.53	1,240.62	21.91	57.620	
3,900.00	3,716.00	3,517.20	3,441.86	19.48	13.33	149.72	114.57	603.03	1,314.84	1,292.10	22.75	57.801	
4,000.00	3,809.89	3,603.94	3,525.15	20.05	13.82	150.23	119.49	626.76	1,364.57	1,340.99	23.57	57.884	
4,100.00	3,904.93	3,692.11	3,609.81	20.57	14.33	150.62	124.48	650.88	1,411.64	1,387.26	24.39	57.888	
4,200.00	4,001.00	3,781.60	3,695.74	21.04	14.84	150.90	129.55	675.36	1,456.03	1,430.85	25.18	57.830	
4,300.00	4,097.97	3,872.30	3,782.82	21.47	15.36	151.08	134.69	700.17	1,497.67	1,471.73	25.95	57.724	
4,400.00	4,195.74	3,964.09	3,870.96	21.85	15.89	151.17	139.89	725.28	1,536.56	1,509.87	26.69	57.580	
4,500.00	4,294.18	4,056.87	3,960.05	22.18	16.42	151.17	145.14	750.67	1,572.66	1,545.26	27.40	57.407	
4,600.00	4,393.17	4,150.52	4,049.97	22.46	16.96	151.10	150.45	776.29	1,605.96	1,577.89	28.07	57.213	
4,700.00	4,492.60	4,244.94	4,140.62	22.70	17.51	150.95	155.79	802.11	1,636.44	1,607.74	28.71	57.003	
4,800.00	4,592.34	4,339.99	4,231.89	22.88	18.06	150.73	161.18	828.12	1,664.12	1,634.82	29.31	56.784	
4,900.00	4,692.26	4,435.57	4,323.67	23.02	18.61	150.44	166.59	854.26	1,688.99	1,659.13	29.86	56.560	

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 10-8
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 10-8	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00ft	Output errors are at	2.00 sigma
Reference Wellbore	P_NRC 10-8	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 39-8 - P_NRC 39-8 - 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						
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
4,955.74	4,748.00	4,489.03	4,375.00	23.07	18.92	117.75	169.62	868.89	1,701.64	1,671.49	30.15	56.434	
5,000.00	4,792.26	4,531.53	4,415.81	23.11	19.16	117.49	172.03	880.52	1,711.36	1,680.96	30.40	56.296	
5,100.00	4,892.26	4,627.55	4,508.00	23.21	19.72	116.92	177.47	906.78	1,733.44	1,702.49	30.96	55.993	
5,200.00	4,992.26	4,723.57	4,600.20	23.30	20.28	116.36	182.91	933.05	1,755.69	1,724.18	31.51	55.715	
5,300.00	5,092.26	4,819.59	4,692.39	23.40	20.83	115.81	188.34	959.32	1,778.10	1,746.04	32.06	55.461	
5,400.00	5,192.26	4,915.61	4,784.59	23.50	21.39	115.28	193.78	985.59	1,800.67	1,768.06	32.60	55.227	
5,500.00	5,292.26	5,011.63	4,876.79	23.61	21.95	114.76	199.22	1,011.85	1,823.38	1,790.24	33.14	55.013	
5,600.00	5,392.26	5,107.64	4,968.98	23.71	22.51	114.25	204.66	1,038.12	1,846.24	1,812.56	33.68	54.817	
5,700.00	5,492.26	5,203.66	5,061.18	23.82	23.06	113.75	210.10	1,064.39	1,869.23	1,835.02	34.21	54.637	
5,800.00	5,592.26	5,299.68	5,153.37	23.92	23.62	113.27	215.54	1,090.66	1,892.36	1,857.62	34.74	54.473	
5,900.00	5,692.26	5,395.70	5,245.57	24.03	24.18	112.80	220.98	1,116.92	1,915.62	1,880.36	35.26	54.324	
6,000.00	5,792.26	5,491.72	5,337.76	24.14	24.74	112.34	226.41	1,143.19	1,939.00	1,903.21	35.78	54.188	
6,100.00	5,892.26	5,587.74	5,429.96	24.26	25.30	111.88	231.85	1,169.46	1,962.50	1,926.20	36.30	54.064	
6,200.00	5,992.26	5,683.75	5,522.15	24.37	25.85	111.44	237.29	1,195.72	1,986.11	1,949.30	36.81	53.952	
6,300.00	6,092.26	5,796.26	5,630.21	24.49	26.49	110.94	243.64	1,226.38	2,009.79	1,972.41	37.38	53.773	
6,400.00	6,192.26	6,040.38	5,867.79	24.60	27.42	110.08	254.96	1,281.07	2,029.32	1,991.11	38.21	53.114	
6,500.00	6,292.26	6,292.68	6,117.38	24.72	28.12	109.54	262.31	1,316.57	2,041.63	2,002.71	38.92	52.463	
6,600.00	6,392.26	6,549.52	6,373.74	24.84	28.52	109.34	265.19	1,330.49	2,046.37	2,006.89	39.48	51.830	
6,700.00	6,492.26	6,668.04	6,492.26	24.96	28.65	109.33	265.23	1,330.64	2,046.43	2,006.63	39.80	51.418	
6,800.00	6,592.26	6,768.04	6,592.26	25.09	28.75	109.33	265.23	1,330.64	2,046.43	2,006.33	40.10	51.038	
6,900.00	6,692.26	6,868.04	6,692.26	25.21	28.86	109.33	265.23	1,330.64	2,046.43	2,006.03	40.39	50.661	
7,000.00	6,792.26	6,968.04	6,792.26	25.34	28.97	109.33	265.23	1,330.64	2,046.43	2,005.73	40.70	50.285	
7,100.00	6,892.26	7,068.04	6,892.26	25.46	29.09	109.33	265.23	1,330.64	2,046.43	2,005.43	41.00	49.912	
7,200.00	6,992.26	7,168.04	6,992.26	25.59	29.20	109.33	265.23	1,330.64	2,046.43	2,005.12	41.31	49.541	
7,300.00	7,092.26	7,268.04	7,092.26	25.72	29.31	109.33	265.23	1,330.64	2,046.43	2,004.81	41.62	49.172	
7,400.00	7,192.26	7,368.04	7,192.26	25.85	29.43	109.33	265.23	1,330.64	2,046.43	2,004.50	41.93	48.806	
7,500.00	7,292.26	7,468.04	7,292.26	25.98	29.55	109.33	265.23	1,330.64	2,046.43	2,004.18	42.24	48.443	
7,600.00	7,392.26	7,568.04	7,392.26	26.12	29.67	109.33	265.23	1,330.64	2,046.43	2,003.86	42.56	48.082	
7,700.00	7,492.26	7,668.04	7,492.26	26.25	29.79	109.33	265.23	1,330.64	2,046.43	2,003.55	42.88	47.724	
7,800.00	7,592.26	7,768.04	7,592.26	26.39	29.91	109.33	265.23	1,330.64	2,046.43	2,003.22	43.20	47.369	
7,900.00	7,692.26	7,868.04	7,692.26	26.53	30.03	109.33	265.23	1,330.64	2,046.43	2,002.90	43.53	47.016	
8,000.00	7,792.26	7,968.04	7,792.26	26.66	30.15	109.33	265.23	1,330.64	2,046.43	2,002.57	43.85	46.666	
8,100.00	7,892.26	8,068.04	7,892.26	26.80	30.28	109.33	265.23	1,330.64	2,046.43	2,002.25	44.18	46.320	
8,200.00	7,992.26	8,168.04	7,992.26	26.94	30.40	109.33	265.23	1,330.64	2,046.43	2,001.92	44.51	45.976	
8,300.00	8,092.26	8,268.04	8,092.26	27.09	30.53	109.33	265.23	1,330.64	2,046.43	2,001.58	44.84	45.635	
8,400.00	8,192.26	8,368.04	8,192.26	27.23	30.66	109.33	265.23	1,330.64	2,046.43	2,001.25	45.18	45.297	
8,500.00	8,292.26	8,468.04	8,292.26	27.37	30.79	109.33	265.23	1,330.64	2,046.43	2,000.91	45.51	44.962	
8,509.26	8,301.52	8,477.29	8,301.52	27.39	30.80	109.33	265.23	1,330.64	2,046.43	2,000.88	45.55	44.931	
8,600.00	8,392.26	8,504.78	8,329.00	27.52	30.84	109.33	265.23	1,330.64	2,047.40	2,001.66	45.75	44.754	
8,700.00	8,492.26	8,504.78	8,329.00	27.67	30.84	109.33	265.23	1,330.64	2,052.93	2,007.01	45.92	44.705	
8,775.74	8,568.00	8,504.78	8,329.00	27.78	30.84	109.33	265.23	1,330.64	2,060.34	2,014.28	46.05	44.737	

Company:	US ROCKIES REGION PLANNING	Local Co-ordinate Reference:	Well P_NRC 10-8
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 10-8	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00ft	Output errors are at	2.00 sigma
Reference Wellbore	P_NRC 10-8	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						
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	176.04	-48.47	3.36	51.81				
100.00	100.00	82.00	82.00	0.10	1.64	176.04	-48.47	3.36	48.58	46.85	1.74	27.992	
200.00	200.00	182.00	182.00	0.32	5.28	176.04	-48.47	3.36	48.58	42.98	5.60	8.675	
300.00	300.00	282.00	282.00	0.55	9.28	176.04	-48.47	3.36	48.58	38.76	9.83	4.945	
400.00	400.00	382.00	382.00	0.77	13.28	176.04	-48.47	3.36	48.58	34.53	14.05	3.458	
500.00	500.00	482.00	482.00	0.99	17.28	176.04	-48.47	3.36	48.58	30.31	18.27	2.658	
600.00	600.00	582.00	582.00	1.22	21.28	176.04	-48.47	3.36	48.58	26.08	22.50	2.159	
700.00	700.00	682.00	682.00	1.44	25.28	176.04	-48.47	3.36	48.58	21.86	26.72	1.818	
800.00	800.00	782.00	782.00	1.67	29.28	176.04	-48.47	3.36	48.58	17.63	30.95	1.570	
900.00	900.00	882.00	882.00	1.89	33.28	176.04	-48.47	3.36	48.58	13.41	35.17	1.381 Level 3	
1,000.00	1,000.00	982.00	982.00	2.12	37.28	176.04	-48.47	3.36	48.58	9.18	39.40	1.233 Level 2	
1,085.00	1,085.00	1,067.00	1,067.00	2.31	40.68	176.04	-48.47	3.36	48.58	5.59	42.99	1.130 Level 2, CC	
1,100.00	1,100.00	1,082.00	1,082.00	2.34	41.28	-151.50	-48.47	3.36	48.62	4.99	43.62	1.114 Level 2	
1,200.00	1,199.97	1,181.97	1,181.97	2.56	45.28	-152.70	-48.47	3.36	50.62	2.80	47.82	1.059 Level 2, ES, SF	
1,300.00	1,299.80	1,281.80	1,281.80	2.79	49.27	-155.37	-48.47	3.36	55.80	3.85	51.95	1.074 Level 2	
1,400.00	1,399.37	1,381.37	1,381.37	3.02	53.25	-158.74	-48.47	3.36	64.32	8.32	56.00	1.149 Level 2	
1,500.00	1,498.55	1,480.55	1,480.55	3.27	57.22	-162.12	-48.47	3.36	76.30	16.37	59.93	1.273 Level 3	
1,600.00	1,597.23	1,579.23	1,579.23	3.54	61.17	-165.14	-48.47	3.36	91.83	28.10	63.73	1.441 Level 3	
1,700.00	1,695.29	1,677.29	1,677.29	3.85	65.09	-167.65	-48.47	3.36	110.90	43.51	67.38	1.646	
1,800.00	1,792.60	1,774.60	1,774.60	4.21	68.98	-169.68	-48.47	3.36	133.48	62.61	70.87	1.883	
1,900.00	1,889.05	1,871.05	1,871.05	4.62	72.84	-171.29	-48.47	3.36	159.53	85.35	74.18	2.151	
2,000.00	1,984.52	1,966.52	1,966.52	5.08	76.66	-172.58	-48.47	3.36	189.00	111.71	77.29	2.445	
2,100.00	2,078.90	2,060.90	2,060.90	5.62	80.44	-173.60	-48.47	3.36	221.84	141.63	80.20	2.766	
2,200.00	2,172.06	2,154.06	2,154.06	6.21	84.16	-174.43	-48.47	3.36	257.99	175.10	82.89	3.112	
2,300.00	2,263.90	2,245.90	2,245.90	6.88	87.84	-175.09	-48.47	3.36	297.40	212.05	85.35	3.484	
2,338.64	2,299.01	2,281.01	2,281.01	7.16	89.24	-175.32	-48.47	3.36	313.49	227.26	86.24	3.635	
2,400.00	2,354.59	2,336.59	2,336.59	7.61	91.46	-175.67	-48.47	3.36	339.43	250.99	88.43	3.838	
2,500.00	2,445.17	2,427.17	2,427.17	8.37	95.09	-176.15	-48.47	3.36	381.72	289.69	92.03	4.148	
2,600.00	2,535.74	2,517.74	2,517.74	9.15	98.71	-176.54	-48.47	3.36	424.02	328.40	95.63	4.434	
2,700.00	2,626.32	2,608.32	2,608.32	9.93	102.33	-176.85	-48.47	3.36	466.34	367.11	99.23	4.699	
2,800.00	2,716.90	2,698.90	2,698.90	10.73	105.96	-177.11	-48.47	3.36	508.67	405.83	102.85	4.946	
2,900.00	2,807.47	2,789.47	2,789.47	11.54	109.58	-177.34	-48.47	3.36	551.01	444.54	106.46	5.176	
3,000.00	2,898.05	2,880.05	2,880.05	12.35	113.20	-177.53	-48.47	3.36	593.35	483.27	110.09	5.390	
3,100.00	2,988.63	2,970.63	2,970.63	13.17	116.83	-177.69	-48.47	3.36	635.70	521.99	113.71	5.590	
3,200.00	3,079.20	3,061.20	3,061.20	13.99	120.45	-177.84	-48.47	3.36	678.05	560.71	117.34	5.779	
3,300.00	3,169.78	3,151.78	3,151.78	14.82	124.07	-177.96	-48.47	3.36	720.40	599.43	120.97	5.955	
3,400.00	3,260.36	3,242.36	3,242.36	15.65	127.69	-178.08	-48.47	3.36	762.76	638.15	124.60	6.121	
3,500.00	3,350.93	3,332.93	3,332.93	16.48	131.32	-178.18	-48.47	3.36	805.12	676.88	128.24	6.278	
3,600.00	3,441.51	3,423.51	3,423.51	17.31	134.94	-178.27	-48.47	3.36	847.48	715.60	131.88	6.426	
3,702.10	3,533.99	3,515.99	3,515.99	18.17	138.64	-178.35	-48.47	3.36	890.73	755.14	135.59	6.569	
3,800.00	3,623.36	3,605.36	3,605.36	18.88	142.21	-178.45	-48.47	3.36	930.68	789.57	141.11	6.595	
3,900.00	3,716.00	3,698.00	3,698.00	19.48	145.92	-178.53	-48.47	3.36	968.31	821.61	146.70	6.601	
4,000.00	3,809.89	3,791.89	3,791.89	20.05	149.68	-178.60	-48.47	3.36	1,002.69	850.46	152.23	6.587	
4,100.00	3,904.93	3,886.93	3,886.93	20.57	153.48	-178.65	-48.47	3.36	1,033.77	876.02	157.76	6.553	
4,200.00	4,001.00	3,983.00	3,983.00	21.04	157.32	-178.70	-48.47	3.36	1,061.52	898.32	163.20	6.504	
4,300.00	4,097.97	4,079.97	4,079.97	21.47	161.20	-178.74	-48.47	3.36	1,085.90	917.35	168.55	6.443	
4,400.00	4,195.74	4,177.74	4,177.74	21.85	165.11	-178.78	-48.47	3.36	1,106.88	933.12	173.76	6.370	
4,500.00	4,294.18	4,276.18	4,276.18	22.18	169.05	-178.80	-48.47	3.36	1,124.44	945.61	178.83	6.288	
4,600.00	4,393.17	4,375.17	4,375.17	22.46	173.01	-178.82	-48.47	3.36	1,138.55	954.82	183.74	6.197	
4,700.00	4,492.60	4,474.60	4,474.60	22.70	176.98	-178.84	-48.47	3.36	1,149.20	960.75	188.45	6.098	
4,800.00	4,592.34	4,574.34	4,574.34	22.88	180.97	-178.85	-48.47	3.36	1,156.38	963.41	192.97	5.993	
4,900.00	4,692.26	4,674.26	4,674.26	23.02	184.97	-178.85	-48.47	3.36	1,160.06	962.81	197.25	5.881	

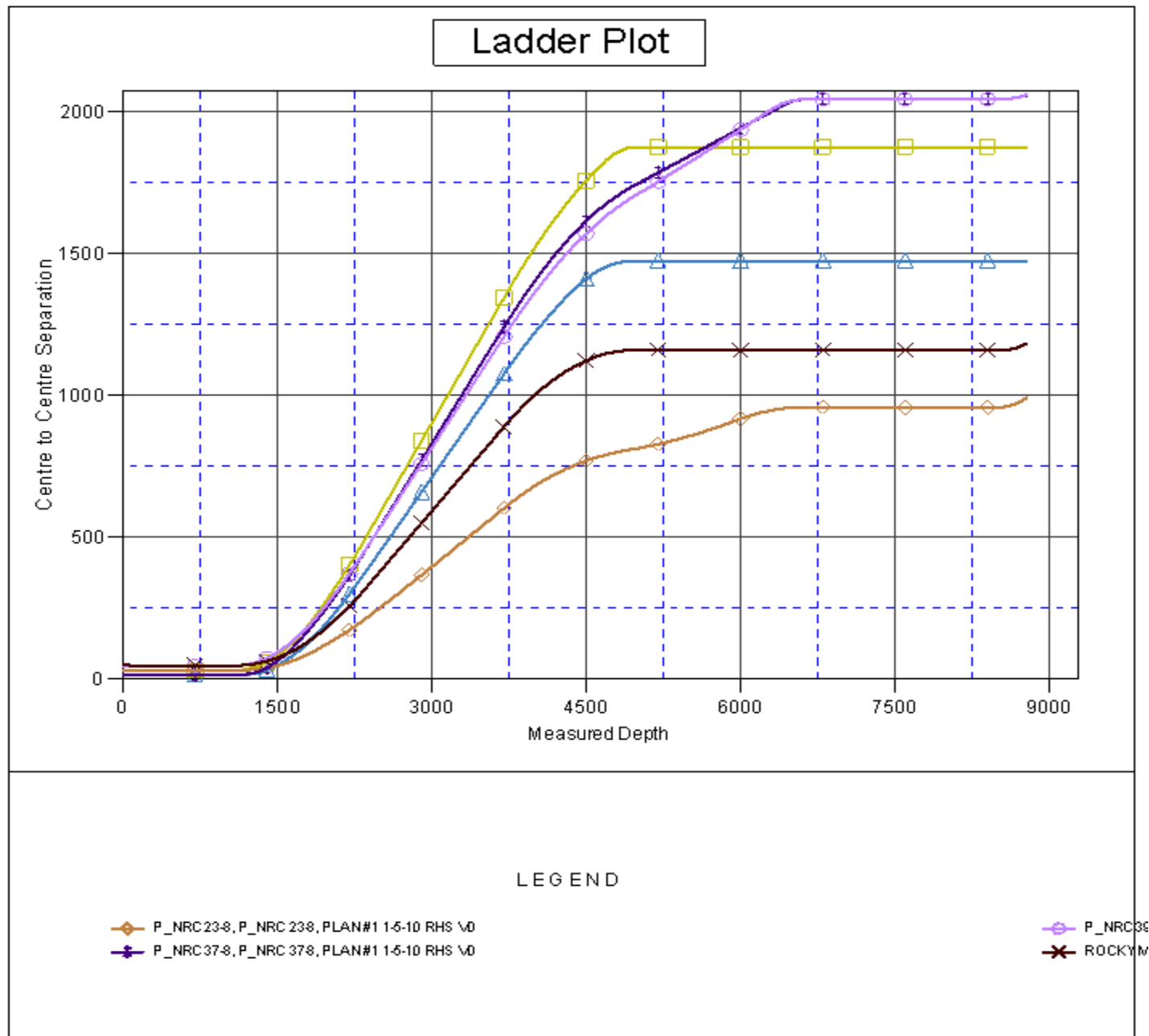
CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Company:	US ROCKIES REGION PLANNING	Local Co-ordinate Reference:	Well P_NRC 10-8
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 10-8	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00ft	Output errors are at	2.00 sigma
Reference Wellbore	P_NRC 10-8	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
WELD_NRC 20-8 PAD - ROCKY MOUNTAIN FUEL CO #2 EXISTING - ROCKY MOUNTAIN FUEL CO												Offset Well Error:	0.00 ft
Survey Program: 0-UNKNOWN													
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
4,955.74	4,748.00	4,730.00	4,730.00	23.07	187.20	148.66	-48.47	3.36	1,160.61	961.07	199.54	5.817	
5,000.00	4,792.26	4,774.26	4,774.26	23.11	188.97	148.66	-48.47	3.36	1,160.61	959.23	201.38	5.763	
5,100.00	4,892.26	4,874.26	4,874.26	23.21	192.97	148.66	-48.47	3.36	1,160.61	955.06	205.55	5.646	
5,200.00	4,992.26	4,974.26	4,974.26	23.30	196.97	148.66	-48.47	3.36	1,160.61	950.88	209.72	5.534	
5,300.00	5,092.26	5,074.26	5,074.26	23.40	200.97	148.66	-48.47	3.36	1,160.61	946.71	213.90	5.426	
5,400.00	5,192.26	5,174.26	5,174.26	23.50	204.97	148.66	-48.47	3.36	1,160.61	942.53	218.08	5.322	
5,500.00	5,292.26	5,274.26	5,274.26	23.61	208.97	148.66	-48.47	3.36	1,160.61	938.35	222.26	5.222	
5,600.00	5,392.26	5,374.26	5,374.26	23.71	212.97	148.66	-48.47	3.36	1,160.61	934.17	226.44	5.126	
5,700.00	5,492.26	5,474.26	5,474.26	23.82	216.97	148.66	-48.47	3.36	1,160.61	929.99	230.62	5.033	
5,800.00	5,592.26	5,574.26	5,574.26	23.92	220.97	148.66	-48.47	3.36	1,160.61	925.81	234.80	4.943	
5,900.00	5,692.26	5,674.26	5,674.26	24.03	224.97	148.66	-48.47	3.36	1,160.61	921.62	238.98	4.856	
6,000.00	5,792.26	5,774.26	5,774.26	24.14	228.97	148.66	-48.47	3.36	1,160.61	917.44	243.17	4.773	
6,100.00	5,892.26	5,874.26	5,874.26	24.26	232.97	148.66	-48.47	3.36	1,160.61	913.25	247.35	4.692	
6,200.00	5,992.26	5,974.26	5,974.26	24.37	236.97	148.66	-48.47	3.36	1,160.61	909.07	251.54	4.614	
6,300.00	6,092.26	6,074.26	6,074.26	24.49	240.97	148.66	-48.47	3.36	1,160.61	904.88	255.73	4.538	
6,400.00	6,192.26	6,174.26	6,174.26	24.60	244.97	148.66	-48.47	3.36	1,160.61	900.69	259.92	4.465	
6,500.00	6,292.26	6,274.26	6,274.26	24.72	248.97	148.66	-48.47	3.36	1,160.61	896.50	264.11	4.394	
6,600.00	6,392.26	6,374.26	6,374.26	24.84	252.97	148.66	-48.47	3.36	1,160.61	892.31	268.30	4.326	
6,700.00	6,492.26	6,474.26	6,474.26	24.96	256.97	148.66	-48.47	3.36	1,160.61	888.11	272.49	4.259	
6,800.00	6,592.26	6,574.26	6,574.26	25.09	260.97	148.66	-48.47	3.36	1,160.61	883.92	276.69	4.195	
6,900.00	6,692.26	6,674.26	6,674.26	25.21	264.97	148.66	-48.47	3.36	1,160.61	879.73	280.88	4.132	
7,000.00	6,792.26	6,774.26	6,774.26	25.34	268.97	148.66	-48.47	3.36	1,160.61	875.53	285.07	4.071	
7,100.00	6,892.26	6,874.26	6,874.26	25.46	272.97	148.66	-48.47	3.36	1,160.61	871.34	289.27	4.012	
7,200.00	6,992.26	6,974.26	6,974.26	25.59	276.97	148.66	-48.47	3.36	1,160.61	867.14	293.47	3.955	
7,300.00	7,092.26	7,074.26	7,074.26	25.72	280.97	148.66	-48.47	3.36	1,160.61	862.94	297.66	3.899	
7,400.00	7,192.26	7,174.26	7,174.26	25.85	284.97	148.66	-48.47	3.36	1,160.61	858.75	301.86	3.845	
7,500.00	7,292.26	7,274.26	7,274.26	25.98	288.97	148.66	-48.47	3.36	1,160.61	854.55	306.06	3.792	
7,600.00	7,392.26	7,374.26	7,374.26	26.12	292.97	148.66	-48.47	3.36	1,160.61	850.35	310.26	3.741	
7,700.00	7,492.26	7,474.26	7,474.26	26.25	296.97	148.66	-48.47	3.36	1,160.61	846.15	314.46	3.691	
7,800.00	7,592.26	7,574.26	7,574.26	26.39	300.97	148.66	-48.47	3.36	1,160.61	841.95	318.66	3.642	
7,900.00	7,692.26	7,674.26	7,674.26	26.53	304.97	148.66	-48.47	3.36	1,160.61	837.75	322.86	3.595	
8,000.00	7,792.26	7,774.26	7,774.26	26.66	308.97	148.66	-48.47	3.36	1,160.61	833.55	327.06	3.549	
8,100.00	7,892.26	7,874.26	7,874.26	26.80	312.97	148.66	-48.47	3.36	1,160.61	829.35	331.26	3.504	
8,200.00	7,992.26	7,974.26	7,974.26	26.94	316.97	148.66	-48.47	3.36	1,160.61	825.14	335.46	3.460	
8,300.00	8,092.26	8,074.26	8,074.26	27.09	320.97	148.66	-48.47	3.36	1,160.61	820.94	339.67	3.417	
8,400.00	8,192.26	8,174.26	8,174.26	27.23	324.97	148.66	-48.47	3.36	1,160.61	816.74	343.87	3.375	
8,500.00	8,292.26	8,274.26	8,274.26	27.37	328.97	148.66	-48.47	3.36	1,160.61	812.53	348.07	3.334	
8,523.77	8,316.03	8,298.03	8,298.03	27.41	329.92	148.66	-48.47	3.36	1,160.61	811.53	349.07	3.325	
8,600.00	8,392.26	8,318.00	8,318.00	27.52	330.72	148.66	-48.47	3.36	1,161.97	811.94	350.03	3.320	
8,700.00	8,492.26	8,318.00	8,318.00	27.67	330.72	148.66	-48.47	3.36	1,171.08	820.85	350.23	3.344	
8,775.74	8,568.00	8,318.00	8,318.00	27.78	330.72	148.66	-48.47	3.36	1,183.57	833.18	350.39	3.378	

Company:	US ROCKIES REGION PLANNING	Local Co-ordinate Reference:	Well P_NRC 10-8
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 10-8	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00ft	Output errors are at	2.00 sigma
Reference Wellbore	P_NRC 10-8	Database:	EDM 2003.21 Single User Db
Reference Design:	PLAN #1 1-5-10 RHS	Offset TVD Reference:	Offset Datum

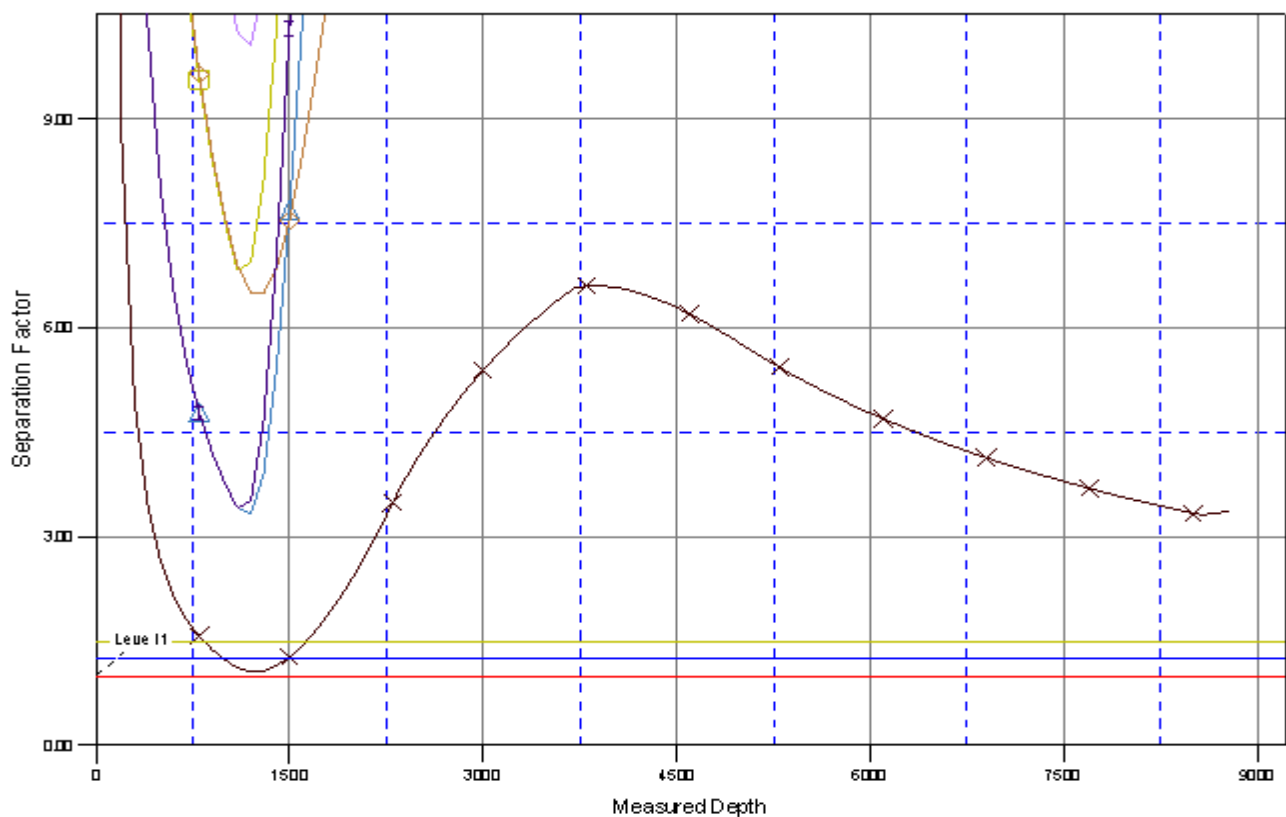
Reference Depths are relative to WELL @ 5071.00ft (Original Well Elev) Coordinates are relative to: P_NRC 10-8
Offset Depths are relative to Offset Datum Coordinate System is US State Plane 1983, Colorado Northern Zone
Central Meridian is 105° 30' 0.000 W ° Grid Convergence at Surface is: 0.38°





Company:	US ROCKIES REGION PLANNING	Local Co-ordinate Reference:	Well P_NRC 10-8
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 10-8	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00ft	Output errors are at	2.00 sigma
Reference Wellbore	P_NRC 10-8	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 10-8
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°

Separation Factor Plot



LEGEND

 P_NRC23-8, P_NRC 23-8, PLAN#1 1-5-10 RHS \0
 P_NRC37-8, P_NRC 37-8, PLAN#1 1-5-10 RHS \0

 P_NRC30-8, P_NRC 30-8, PLAN#1 1-5-10 RHS \0
 ROCKY MOUNTAIN