



US ROCKIES REGION PLANNING

COLORADO NORTHERN ZONE - 83

WELD_NRC 19-9 PAD

P_NRC 11-9

P_NRC 11-9

Plan: PLAN #1 1-10-10 RHS

Standard Planning Report

04 February, 2010





Azimuths to True North
 Magnetic North: 9.10°
 Magnetic Field
 Strength: 53085.9nT
 Dip Angle: 66.80°
 Date: 1/11/2010
 Model: IGRF2010

WELL DETAILS: P_NRC 11-9

+N/-S	+E/-W	Northing	Ground Level: Easting	Latitude	Longitude	Slot
0.00	0.00	1265667.89	3167464.18	40° 3' 39.949 N	104° 54' 6.124 W	

FORMATION TOP DETAILS

TVDPath	MDPath	Formation
3249.00	3327.18	PARKMAN
4724.00	4875.38	SUSSEX
5194.00	5368.71	SHANNON
7364.00	7567.56	NIO A
7704.00	7907.56	CODELL
8154.00	8357.56	JSAND
8324.00	8527.56	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	
1969.47	17.69	47.28	1955.49	91.90	99.52	2.00	47.28	135.45	
5683.08	17.69	47.28	5493.51	857.43	928.53	0.00	0.00	1263.87	
6567.56	0.00	0.00	6364.00	949.33	1028.05	2.00	180.00	1399.32	
8747.56	0.00	0.00	8544.00	949.33	1028.05	0.00	0.00	1399.32	PBHL_NRC 11-9(1980 FSL 1980 FWL)

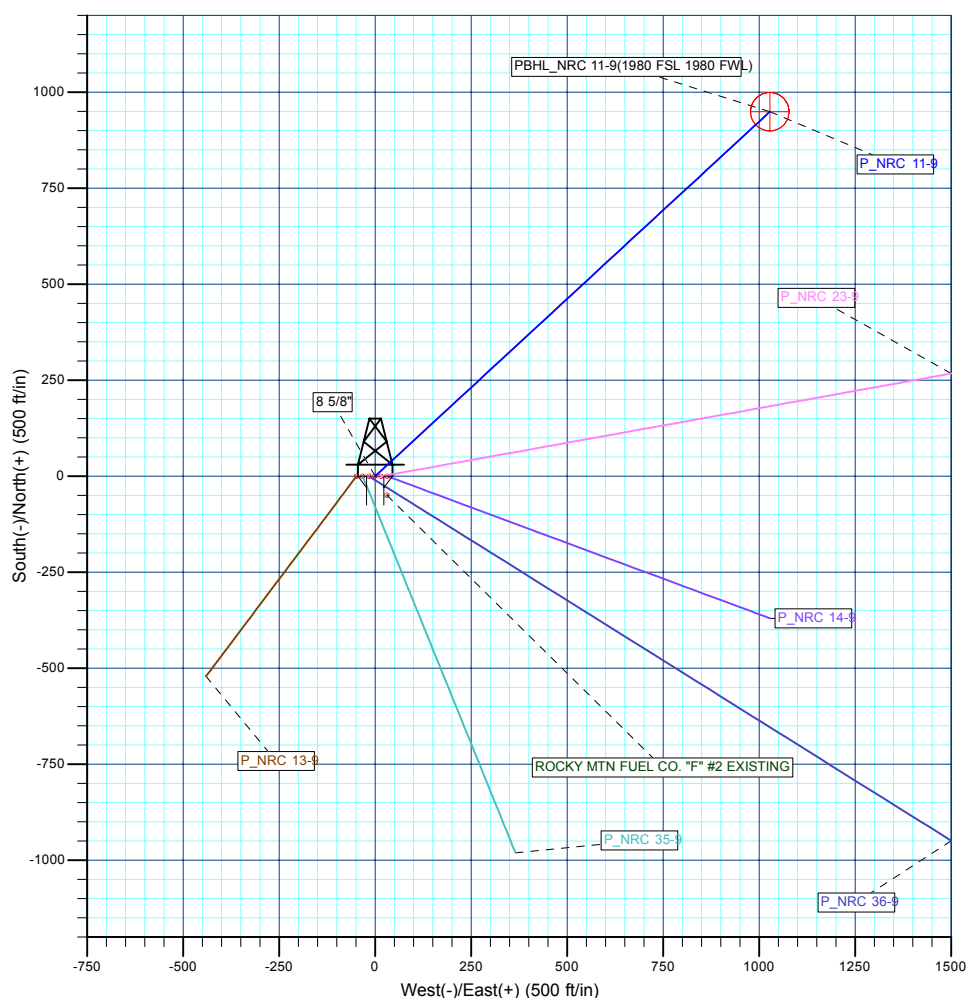
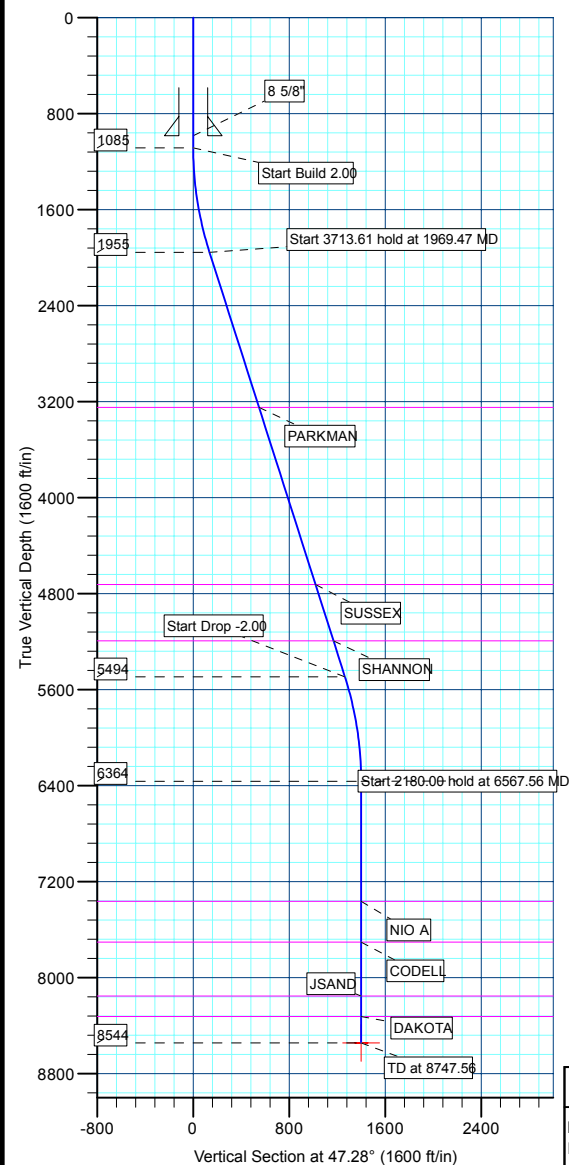
CASING DETAILS

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



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

GRD ELEV: 5052.00



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

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Shape
PBHL	8544.00	949.33	1028.05	1266624.13	3168485.79	40° 3' 49.331 N 104° 53' 52.901 W		Circle (Radius: 50.00)

Plan: PLAN #1 1-10-10 RHS (P_NRC 11-9/P_NRC 11-9)

Created By: Robert H. Scott

Database:	EDM 2003.21 Single User Db	Local Co-ordinate Reference:	Well P_NRC 11-9
Company:	US ROCKIES REGION PLANNING	TVD Reference:	WELL @ 5067.00ft (Original Well Elev)
Project:	COLORADO NORTHERN ZONE - 83	MD Reference:	WELL @ 5067.00ft (Original Well Elev)
Site:	WELD_NRC 19-9 PAD	North Reference:	True
Well:	P_NRC 11-9	Survey Calculation Method:	Minimum Curvature
Wellbore:	P_NRC 11-9		
Design:	PLAN #1 1-10-10 RHS		

Project	COLORADO NORTHERN ZONE - 83, KERR MCGEE OIL & GAS ONSHORE LP		
Map System:	US State Plane 1983	System Datum:	Mean Sea Level
Geo Datum:	North American Datum 1983		
Map Zone:	Colorado Northern Zone		

Site						WELD_NRC 19-9 PAD, SECTION 9 T1N R67W											
Site Position:						Northing:			1,265,667.89 ft			Latitude:			40° 3' 39.949 N		
From:			Lat/Long			Easting:			3,167,464.18 ft			Longitude:			104° 54' 6.124 W		
Position Uncertainty:			0.00 ft			Slot Radius:			in			Grid Convergence:			0.39 °		

Well	P_NRC 11-9					
Well Position	+N/-S	0.00 ft	Northing:	1,265,667.89 ft	Latitude:	40° 3' 39.949 N
	+E/-W	0.00 ft	Easting:	3,167,464.18 ft	Longitude:	104° 54' 6.124 W
Position Uncertainty		0.00 ft	Wellhead Elevation:	ft	Ground Level:	5,052.00 ft

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

Design	PLAN #1 1-10-10 RHS			
Audit Notes:				
Version:	Phase:	PLAN	Tie On Depth:	0.00
Vertical Section:	Depth From (TVD) (ft)	+N/-S (ft)	+E/-W (ft)	Direction (°)
	0.00	0.00	0.00	47.28

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	
1,969.47	17.69	47.28	1,955.49	91.90	99.52	2.00	2.00	0.00	47.28	
5,683.08	17.69	47.28	5,493.51	857.43	928.53	0.00	0.00	0.00	0.00	
6,567.56	0.00	0.00	6,364.00	949.33	1,028.05	2.00	-2.00	0.00	180.00	
8,747.56	0.00	0.00	8,544.00	949.33	1,028.05	0.00	0.00	0.00	0.00	PBHL_NRC 11-9(1'

Database:	EDM 2003.21 Single User Db	Local Co-ordinate Reference:	Well P_NRC 11-9
Company:	US ROCKIES REGION PLANNING	TVD Reference:	WELL @ 5067.00ft (Original Well Elev)
Project:	COLORADO NORTHERN ZONE - 83	MD Reference:	WELL @ 5067.00ft (Original Well Elev)
Site:	WELD_NRC 19-9 PAD	North Reference:	True
Well:	P_NRC 11-9	Survey Calculation Method:	Minimum Curvature
Wellbore:	P_NRC 11-9		
Design:	PLAN #1 1-10-10 RHS		

Planned Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
Start Build 2.00									
1,085.00	0.00	0.00	1,085.00	0.00	0.00	0.00	0.00	0.00	0.00
1,100.00	0.30	47.28	1,100.00	0.03	0.03	0.04	2.00	2.00	0.00
1,200.00	2.30	47.28	1,199.97	1.57	1.70	2.31	2.00	2.00	0.00
1,300.00	4.30	47.28	1,299.80	5.47	5.92	8.06	2.00	2.00	0.00
1,400.00	6.30	47.28	1,399.37	11.74	12.71	17.30	2.00	2.00	0.00
1,500.00	8.30	47.28	1,498.55	20.36	22.04	30.01	2.00	2.00	0.00
1,600.00	10.30	47.28	1,597.23	31.32	33.92	46.17	2.00	2.00	0.00
1,700.00	12.30	47.28	1,695.29	44.61	48.31	65.76	2.00	2.00	0.00
1,800.00	14.30	47.28	1,792.60	60.22	65.21	88.76	2.00	2.00	0.00
1,900.00	16.30	47.28	1,889.05	78.12	84.60	115.15	2.00	2.00	0.00
Start 3713.61 hold at 1969.47 MD									
1,969.47	17.69	47.28	1,955.49	91.90	99.52	135.45	2.00	2.00	0.00
2,000.00	17.69	47.28	1,984.57	98.19	106.33	144.73	0.00	0.00	0.00
2,100.00	17.69	47.28	2,079.84	118.80	128.65	175.12	0.00	0.00	0.00
2,200.00	17.69	47.28	2,175.12	139.42	150.98	205.50	0.00	0.00	0.00
2,300.00	17.69	47.28	2,270.39	160.03	173.30	235.89	0.00	0.00	0.00
2,400.00	17.69	47.28	2,365.66	180.65	195.62	266.27	0.00	0.00	0.00
2,500.00	17.69	47.28	2,460.93	201.26	217.95	296.66	0.00	0.00	0.00
2,600.00	17.69	47.28	2,556.20	221.87	240.27	327.05	0.00	0.00	0.00
2,700.00	17.69	47.28	2,651.47	242.49	262.60	357.43	0.00	0.00	0.00
2,800.00	17.69	47.28	2,746.75	263.10	284.92	387.82	0.00	0.00	0.00
2,900.00	17.69	47.28	2,842.02	283.72	307.24	418.20	0.00	0.00	0.00
3,000.00	17.69	47.28	2,937.29	304.33	329.57	448.59	0.00	0.00	0.00
3,100.00	17.69	47.28	3,032.56	324.95	351.89	478.97	0.00	0.00	0.00
3,200.00	17.69	47.28	3,127.83	345.56	374.21	509.36	0.00	0.00	0.00
3,300.00	17.69	47.28	3,223.10	366.17	396.54	539.75	0.00	0.00	0.00
PARKMAN									
3,327.18	17.69	47.28	3,249.00	371.78	402.61	548.01	0.00	0.00	0.00
3,400.00	17.69	47.28	3,318.38	386.79	418.86	570.13	0.00	0.00	0.00
3,500.00	17.69	47.28	3,413.65	407.40	441.18	600.52	0.00	0.00	0.00
3,600.00	17.69	47.28	3,508.92	428.02	463.51	630.90	0.00	0.00	0.00
3,700.00	17.69	47.28	3,604.19	448.63	485.83	661.29	0.00	0.00	0.00
3,800.00	17.69	47.28	3,699.46	469.25	508.16	691.68	0.00	0.00	0.00
3,900.00	17.69	47.28	3,794.73	489.86	530.48	722.06	0.00	0.00	0.00
4,000.00	17.69	47.28	3,890.01	510.47	552.80	752.45	0.00	0.00	0.00
4,100.00	17.69	47.28	3,985.28	531.09	575.13	782.83	0.00	0.00	0.00
4,200.00	17.69	47.28	4,080.55	551.70	597.45	813.22	0.00	0.00	0.00
4,300.00	17.69	47.28	4,175.82	572.32	619.77	843.60	0.00	0.00	0.00
4,400.00	17.69	47.28	4,271.09	592.93	642.10	873.99	0.00	0.00	0.00
4,500.00	17.69	47.28	4,366.37	613.55	664.42	904.38	0.00	0.00	0.00
4,600.00	17.69	47.28	4,461.64	634.16	686.75	934.76	0.00	0.00	0.00
4,700.00	17.69	47.28	4,556.91	654.78	709.07	965.15	0.00	0.00	0.00
4,800.00	17.69	47.28	4,652.18	675.39	731.39	995.53	0.00	0.00	0.00
SUSSEX									
4,875.38	17.69	47.28	4,724.00	690.93	748.22	1,018.44	0.00	0.00	0.00
4,900.00	17.69	47.28	4,747.45	696.00	753.72	1,025.92	0.00	0.00	0.00
5,000.00	17.69	47.28	4,842.72	716.62	776.04	1,056.30	0.00	0.00	0.00
5,100.00	17.69	47.28	4,938.00	737.23	798.36	1,086.69	0.00	0.00	0.00
5,200.00	17.69	47.28	5,033.27	757.85	820.69	1,117.08	0.00	0.00	0.00
5,300.00	17.69	47.28	5,128.54	778.46	843.01	1,147.46	0.00	0.00	0.00
SHANNON									
5,368.71	17.69	47.28	5,194.00	792.63	858.35	1,168.34	0.00	0.00	0.00

Database:	EDM 2003.21 Single User Db	Local Co-ordinate Reference:	Well P_NRC 11-9
Company:	US ROCKIES REGION PLANNING	TVD Reference:	WELL @ 5067.00ft (Original Well Elev)
Project:	COLORADO NORTHERN ZONE - 83	MD Reference:	WELL @ 5067.00ft (Original Well Elev)
Site:	WELD_NRC 19-9 PAD	North Reference:	True
Well:	P_NRC 11-9	Survey Calculation Method:	Minimum Curvature
Wellbore:	P_NRC 11-9		
Design:	PLAN #1 1-10-10 RHS		

Planned Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
5,400.00	17.69	47.28	5,223.81	799.08	865.33	1,177.85	0.00	0.00	0.00
5,500.00	17.69	47.28	5,319.08	819.69	887.66	1,208.23	0.00	0.00	0.00
5,600.00	17.69	47.28	5,414.35	840.30	909.98	1,238.62	0.00	0.00	0.00
Start Drop -2.00									
5,683.08	17.69	47.28	5,493.51	857.43	928.53	1,263.87	0.00	0.00	0.00
5,700.00	17.35	47.28	5,509.64	860.89	932.27	1,268.96	2.00	-2.00	0.00
5,800.00	15.35	47.28	5,605.59	879.98	952.95	1,297.11	2.00	-2.00	0.00
5,900.00	13.35	47.28	5,702.47	896.80	971.16	1,321.89	2.00	-2.00	0.00
6,000.00	11.35	47.28	5,800.15	911.31	986.88	1,343.28	2.00	-2.00	0.00
6,100.00	9.35	47.28	5,898.51	923.50	1,000.08	1,361.25	2.00	-2.00	0.00
6,200.00	7.35	47.28	5,997.45	933.35	1,010.75	1,375.77	2.00	-2.00	0.00
6,300.00	5.35	47.28	6,096.83	940.86	1,018.87	1,386.84	2.00	-2.00	0.00
6,400.00	3.35	47.28	6,196.54	946.00	1,024.45	1,394.42	2.00	-2.00	0.00
6,500.00	1.35	47.28	6,296.45	948.79	1,027.46	1,398.52	2.00	-2.00	0.00
Start 2180.00 hold at 6567.56 MD									
6,567.56	0.00	0.00	6,364.00	949.33	1,028.05	1,399.32	2.00	-2.00	0.00
6,600.00	0.00	0.00	6,396.44	949.33	1,028.05	1,399.32	0.00	0.00	0.00
6,700.00	0.00	0.00	6,496.44	949.33	1,028.05	1,399.32	0.00	0.00	0.00
6,800.00	0.00	0.00	6,596.44	949.33	1,028.05	1,399.32	0.00	0.00	0.00
6,900.00	0.00	0.00	6,696.44	949.33	1,028.05	1,399.32	0.00	0.00	0.00
7,000.00	0.00	0.00	6,796.44	949.33	1,028.05	1,399.32	0.00	0.00	0.00
7,100.00	0.00	0.00	6,896.44	949.33	1,028.05	1,399.32	0.00	0.00	0.00
7,200.00	0.00	0.00	6,996.44	949.33	1,028.05	1,399.32	0.00	0.00	0.00
7,300.00	0.00	0.00	7,096.44	949.33	1,028.05	1,399.32	0.00	0.00	0.00
7,400.00	0.00	0.00	7,196.44	949.33	1,028.05	1,399.32	0.00	0.00	0.00
7,500.00	0.00	0.00	7,296.44	949.33	1,028.05	1,399.32	0.00	0.00	0.00
NIO A									
7,567.56	0.00	0.00	7,364.00	949.33	1,028.05	1,399.32	0.00	0.00	0.00
7,600.00	0.00	0.00	7,396.44	949.33	1,028.05	1,399.32	0.00	0.00	0.00
7,700.00	0.00	0.00	7,496.44	949.33	1,028.05	1,399.32	0.00	0.00	0.00
7,800.00	0.00	0.00	7,596.44	949.33	1,028.05	1,399.32	0.00	0.00	0.00
7,900.00	0.00	0.00	7,696.44	949.33	1,028.05	1,399.32	0.00	0.00	0.00
CODELL									
7,907.56	0.00	0.00	7,704.00	949.33	1,028.05	1,399.32	0.00	0.00	0.00
8,000.00	0.00	0.00	7,796.44	949.33	1,028.05	1,399.32	0.00	0.00	0.00
8,100.00	0.00	0.00	7,896.44	949.33	1,028.05	1,399.32	0.00	0.00	0.00
8,200.00	0.00	0.00	7,996.44	949.33	1,028.05	1,399.32	0.00	0.00	0.00
8,300.00	0.00	0.00	8,096.44	949.33	1,028.05	1,399.32	0.00	0.00	0.00
JSAND									
8,357.56	0.00	0.00	8,154.00	949.33	1,028.05	1,399.32	0.00	0.00	0.00
8,400.00	0.00	0.00	8,196.44	949.33	1,028.05	1,399.32	0.00	0.00	0.00
8,500.00	0.00	0.00	8,296.44	949.33	1,028.05	1,399.32	0.00	0.00	0.00
DAKOTA									
8,527.56	0.00	0.00	8,324.00	949.33	1,028.05	1,399.32	0.00	0.00	0.00
8,600.00	0.00	0.00	8,396.44	949.33	1,028.05	1,399.32	0.00	0.00	0.00
8,700.00	0.00	0.00	8,496.44	949.33	1,028.05	1,399.32	0.00	0.00	0.00
TD at 8747.56 - PBHL_NRC 11-9(1980 FSL 1980 FWL)									
8,747.56	0.00	0.00	8,544.00	949.33	1,028.05	1,399.32	0.00	0.00	0.00

Database:	EDM 2003.21 Single User Db	Local Co-ordinate Reference:	Well P_NRC 11-9
Company:	US ROCKIES REGION PLANNING	TVD Reference:	WELL @ 5067.00ft (Original Well Elev)
Project:	COLORADO NORTHERN ZONE - 83	MD Reference:	WELL @ 5067.00ft (Original Well Elev)
Site:	WELD_NRC 19-9 PAD	North Reference:	True
Well:	P_NRC 11-9	Survey Calculation Method:	Minimum Curvature
Wellbore:	P_NRC 11-9		
Design:	PLAN #1 1-10-10 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 11-9(198 - plan hits target center - Circle (radius 50.00)	0.00	0.00	8,544.00	949.33	1,028.05	1,266,624.13	3,168,485.79	40° 3' 49.331 N	104° 53' 52.901 W

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

Formations						
	Measured Depth	Vertical Depth			Dip	Dip Direction
	(ft)	(ft)	Name	Lithology	(°)	(°)
	3,327.18	3,249.00	PARKMAN			
	4,875.38	4,724.00	SUSSEX			
	5,368.71	5,194.00	SHANNON			
	7,567.56	7,364.00	NIO A			
	7,907.56	7,704.00	CODELL			
	8,357.56	8,154.00	JSAND			
	8,527.56	8,324.00	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
	1,969.47	1,955.49	91.90	99.52	Start 3713.61 hold at 1969.47 MD
	5,683.08	5,493.51	857.43	928.53	Start Drop -2.00
	6,567.56	6,364.00	949.33	1,028.05	Start 2180.00 hold at 6567.56 MD
	8,747.56	8,544.00	949.33	1,028.05	TD at 8747.56



US ROCKIES REGION PLANNING

**COLORADO NORTHERN ZONE - 83
WELD_NRC 19-9 PAD
P_NRC 11-9**

**P_NRC 11-9
PLAN #1 1-10-10 RHS**

Anticollision Report

04 February, 2010



Company:	US ROCKIES REGION PLANNING	Local Co-ordinate Reference:	Well P_NRC 11-9
Project:	COLORADO NORTHERN ZONE - 83	TVD Reference:	WELL @ 5067.00ft (Original Well Elev)
Reference Site:	WELD_NRC 19-9 PAD	MD Reference:	WELL @ 5067.00ft (Original Well Elev)
Site Error:	0.00ft	North Reference:	True
Reference Well:	P_NRC 11-9	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00ft	Output errors are at	2.00 sigma
Reference Wellbore	P_NRC 11-9	Database:	EDM 2003.21 Single User Db
Reference Design:	PLAN #1 1-10-10 RHS	Offset TVD Reference:	Offset Datum

Reference	PLAN #1 1-10-10 RHS		
Filter type:	NO GLOBAL FILTER: Using user defined selection & filtering criteria		
Interpolation Method:	Stations	Error Model:	ISCWSA
Depth Range:	0.00 to 20,000.00ft	Scan Method:	Closest Approach 3D
Results Limited by:	Maximum center-center distance of 10,000.00ft	Error Surface:	Elliptical Conic
Warning Levels Evaluated at:	2.00 Sigma		

Survey Tool Program	Date 2/4/2010			
From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description
0.00	8,747.56	PLAN #1 1-10-10 RHS (P_NRC 11-9)	MWD	MWD - Standard

Summary						
Site Name	Reference Measured Depth (ft)	Offset Measured Depth (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Separation Factor	Warning
Offset Well - Wellbore - Design						
WELD_NRC 19-9 PAD						
P_NRC 13-9 - P_NRC 13-9 - PLAN #1 1-10-10 RHS	1,085.00	1,085.00	48.14	43.52	10.423	CC
P_NRC 13-9 - P_NRC 13-9 - PLAN #1 1-10-10 RHS	1,100.00	1,099.85	48.20	43.51	10.295	ES
P_NRC 13-9 - P_NRC 13-9 - PLAN #1 1-10-10 RHS	1,200.00	1,198.67	51.32	46.26	10.127	SF
P_NRC 14-9 - P_NRC 14-9 - PLAN #1 1-10-10 RHS	1,085.00	1,085.00	31.91	27.29	6.908	CC
P_NRC 14-9 - P_NRC 14-9 - PLAN #1 1-10-10 RHS	1,100.00	1,099.84	31.92	27.23	6.816	ES
P_NRC 14-9 - P_NRC 14-9 - PLAN #1 1-10-10 RHS	1,300.00	1,297.46	34.46	28.97	6.277	SF
P_NRC 23-9 - P_NRC 23-9 - PLAN #1 1-10-10 RHS	1,085.00	1,085.00	15.95	13.08	5.560	CC
P_NRC 23-9 - P_NRC 23-9 - PLAN #1 1-10-10 RHS	1,100.00	1,099.92	15.96	13.05	5.485	ES
P_NRC 23-9 - P_NRC 23-9 - PLAN #1 1-10-10 RHS	1,200.00	1,199.36	16.56	13.38	5.212	SF
P_NRC 35-9 - P_NRC 35-9 - PLAN #1 1-10-10 RHS	1,085.00	1,085.00	32.19	27.57	6.969	CC
P_NRC 35-9 - P_NRC 35-9 - PLAN #1 1-10-10 RHS	1,100.00	1,100.06	32.20	27.52	6.879	ES
P_NRC 35-9 - P_NRC 35-9 - PLAN #1 1-10-10 RHS	1,200.00	1,200.36	33.22	28.16	6.557	SF
P_NRC 36-9 - P_NRC 36-9 - PLAN #1 1-10-10 RHS	1,169.33	1,169.70	15.88	10.92	3.203	CC
P_NRC 36-9 - P_NRC 36-9 - PLAN #1 1-10-10 RHS	1,200.00	1,200.48	15.94	10.86	3.137	ES, SF
ROCKY MTN FUEL CO. "F" #2 EXISTING - ROCKY MT	1,085.00	1,066.00	58.80	15.85	1.369	Level 3, CC
ROCKY MTN FUEL CO. "F" #2 EXISTING - ROCKY MT	1,400.00	1,380.37	64.33	8.16	1.145	Level 2, ES, SF

Offset Design WELD_NRC 19-9 PAD - P_NRC 13-9 - P_NRC 13-9 - PLAN #1 1-10-10 RHS											
Survey Program: 0-MWD											
Reference Offset Semi Major Axis Distance											
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)
0.00	0.00	0.00	0.00	0.00	0.00	-90.01	-0.01	-48.14	48.14		
100.00	100.00	100.00	100.00	0.10	0.10	-90.01	-0.01	-48.14	48.14	47.95	0.19
200.00	200.00	200.00	200.00	0.32	0.32	-90.01	-0.01	-48.14	48.14	47.50	0.64
300.00	300.00	300.00	300.00	0.55	0.55	-90.01	-0.01	-48.14	48.14	47.05	1.09
400.00	400.00	400.00	400.00	0.77	0.77	-90.01	-0.01	-48.14	48.14	46.60	1.54
500.00	500.00	500.00	500.00	0.99	0.99	-90.01	-0.01	-48.14	48.14	46.15	1.99
600.00	600.00	600.00	600.00	1.22	1.22	-90.01	-0.01	-48.14	48.14	45.70	2.44
700.00	700.00	700.00	700.00	1.44	1.44	-90.01	-0.01	-48.14	48.14	45.26	2.89
800.00	800.00	800.00	800.00	1.67	1.67	-90.01	-0.01	-48.14	48.14	44.81	3.34
900.00	900.00	900.00	900.00	1.89	1.89	-90.01	-0.01	-48.14	48.14	44.36	3.79
1,000.00	1,000.00	1,000.00	1,000.00	2.12	2.12	-90.01	-0.01	-48.14	48.14	43.91	4.24
1,085.00	1,085.00	1,085.00	1,085.00	2.31	2.31	-90.01	-0.01	-48.14	48.14	43.52	4.62
											10.423 CC

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 11-9
Project:	COLORADO NORTHERN ZONE - 83	TVD Reference:	WELL @ 5067.00ft (Original Well Elev)
Reference Site:	WELD_NRC 19-9 PAD	MD Reference:	WELL @ 5067.00ft (Original Well Elev)
Site Error:	0.00ft	North Reference:	True
Reference Well:	P_NRC 11-9	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00ft	Output errors are at	2.00 sigma
Reference Wellbore	P_NRC 11-9	Database:	EDM 2003.21 Single User Db
Reference Design:	PLAN #1 1-10-10 RHS	Offset TVD Reference:	Offset Datum

Offset Design WELD_NRC 19-9 PAD - P_NRC 13-9 - P_NRC 13-9 - PLAN #1 1-10-10 RHS												Offset Site Error:	0.00 ft
Survey Program: 0-MWD												Offset Well Error:	0.00 ft
Reference	Offset	Semi Major Axis		Distance									
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning
1,100.00	1,100.00	1,099.85	1,099.85	2.34	2.34	-137.36	-0.04	-48.17	48.20	43.51	4.68	10.295	ES
1,200.00	1,199.97	1,198.67	1,198.64	2.56	2.51	-141.00	-1.81	-49.50	51.32	46.26	5.07	10.127	SF
1,300.00	1,299.80	1,296.68	1,296.49	2.78	2.70	-148.37	-6.26	-52.84	60.02	54.56	5.46	11.000	
1,400.00	1,399.37	1,393.21	1,392.61	3.01	2.89	-156.36	-13.25	-58.10	75.39	69.55	5.84	12.904	
1,500.00	1,498.55	1,487.61	1,486.28	3.26	3.10	-163.03	-22.58	-65.12	97.94	91.72	6.22	15.737	
1,600.00	1,597.23	1,579.30	1,576.86	3.53	3.34	-168.00	-34.01	-73.72	127.54	120.95	6.60	19.333	
1,700.00	1,695.29	1,667.79	1,663.78	3.84	3.59	-171.57	-47.22	-83.66	163.84	156.87	6.96	23.537	
1,800.00	1,792.60	1,757.82	1,751.89	4.20	3.89	-174.19	-61.99	-94.77	205.40	198.07	7.33	28.032	
1,900.00	1,889.05	1,846.88	1,839.05	4.60	4.20	-176.00	-76.62	-105.77	250.37	242.68	7.69	32.566	
1,969.47	1,955.49	1,907.79	1,898.66	4.92	4.42	-176.94	-86.62	-113.30	283.53	275.60	7.93	35.732	
2,000.00	1,984.57	1,934.38	1,924.68	5.07	4.51	-177.30	-90.99	-116.59	298.44	290.37	8.07	36.986	
2,100.00	2,079.84	2,021.47	2,009.91	5.57	4.84	-178.29	-105.30	-127.35	347.34	338.83	8.51	40.808	
2,200.00	2,175.12	2,108.57	2,095.15	6.09	5.18	-179.03	-119.60	-138.11	396.30	387.34	8.96	44.215	
2,300.00	2,270.39	2,195.66	2,180.38	6.63	5.53	-179.61	-133.90	-148.87	445.30	435.88	9.42	47.260	
2,400.00	2,365.66	2,282.75	2,265.62	7.18	5.88	-179.92	-148.21	-159.63	494.33	484.44	9.89	49.991	
2,500.00	2,460.93	2,369.85	2,350.85	7.74	6.24	-179.54	-162.51	-170.39	543.37	533.01	10.36	52.451	
2,600.00	2,556.20	2,456.94	2,436.09	8.31	6.60	-179.22	-176.82	-181.15	592.44	581.60	10.84	54.675	
2,700.00	2,651.47	2,544.04	2,521.32	8.89	6.97	-178.95	-191.12	-191.91	641.51	630.20	11.32	56.692	
2,800.00	2,746.75	2,631.13	2,606.56	9.47	7.34	-178.72	-205.43	-202.68	690.59	678.80	11.80	58.528	
2,900.00	2,842.02	2,718.22	2,691.79	10.06	7.71	-178.52	-219.73	-213.44	739.69	727.40	12.29	60.205	
3,000.00	2,937.29	2,805.32	2,777.02	10.65	8.09	-178.35	-234.03	-224.20	788.78	776.01	12.78	61.740	
3,100.00	3,032.56	2,892.41	2,862.26	11.24	8.47	-178.19	-248.34	-234.96	837.88	824.62	13.27	63.150	
3,200.00	3,127.83	2,979.50	2,947.49	11.84	8.85	-178.05	-262.64	-245.72	886.99	873.23	13.76	64.448	
3,300.00	3,223.10	3,066.60	3,032.73	12.43	9.23	-177.93	-276.95	-256.48	936.10	921.84	14.26	65.648	
3,400.00	3,318.38	3,153.69	3,117.96	13.03	9.61	-177.82	-291.25	-267.24	985.21	970.45	14.76	66.759	
3,500.00	3,413.65	3,240.79	3,203.20	13.63	9.99	-177.72	-305.56	-278.00	1,034.33	1,019.07	15.26	67.791	
3,600.00	3,508.92	3,327.88	3,288.43	14.24	10.37	-177.63	-319.86	-288.76	1,083.44	1,067.69	15.76	68.751	
3,700.00	3,604.19	3,414.97	3,373.67	14.84	10.76	-177.54	-334.17	-299.53	1,132.56	1,116.30	16.26	69.646	
3,800.00	3,699.46	3,502.07	3,458.90	15.45	11.15	-177.47	-348.47	-310.29	1,181.68	1,164.92	16.77	70.483	
3,900.00	3,794.73	3,589.16	3,544.13	16.05	11.53	-177.40	-362.77	-321.05	1,230.81	1,213.54	17.27	71.266	
4,000.00	3,890.01	3,676.25	3,629.37	16.66	11.92	-177.33	-377.08	-331.81	1,279.93	1,262.15	17.78	72.001	
4,100.00	3,985.28	3,763.35	3,714.60	17.27	12.31	-177.27	-391.38	-342.57	1,329.06	1,310.77	18.28	72.691	
4,200.00	4,080.55	3,850.44	3,799.84	17.88	12.70	-177.21	-405.69	-353.33	1,378.18	1,359.39	18.79	73.341	
4,300.00	4,175.82	3,937.54	3,885.07	18.49	13.09	-177.16	-419.99	-364.09	1,427.31	1,408.01	19.30	73.953	
4,400.00	4,271.09	4,024.63	3,970.31	19.10	13.48	-177.11	-434.30	-374.85	1,476.44	1,456.63	19.81	74.532	
4,500.00	4,366.37	4,111.72	4,055.54	19.71	13.87	-177.07	-448.60	-385.62	1,525.56	1,505.24	20.32	75.079	
4,600.00	4,461.64	4,198.82	4,140.78	20.32	14.26	-177.03	-462.90	-396.38	1,574.69	1,553.86	20.83	75.598	
4,700.00	4,556.91	4,326.28	4,265.70	20.93	14.76	-176.97	-483.13	-411.59	1,623.43	1,602.01	21.42	75.791	
4,800.00	4,652.18	4,535.20	4,472.36	21.54	15.32	-176.95	-507.33	-429.80	1,667.19	1,645.05	22.14	75.307	
4,900.00	4,747.45	4,758.35	4,694.91	22.15	15.75	-177.01	-519.81	-439.18	1,704.10	1,681.25	22.85	74.564	
5,000.00	4,842.72	4,906.18	4,842.72	22.76	15.95	-177.08	-520.91	-440.02	1,735.01	1,711.59	23.42	74.071	
5,100.00	4,938.00	5,001.45	4,938.00	23.38	16.07	-177.13	-520.91	-440.02	1,765.37	1,741.47	23.90	73.876	
5,200.00	5,033.27	5,096.72	5,033.27	23.99	16.19	-177.18	-520.91	-440.02	1,795.72	1,771.35	24.37	73.684	
5,300.00	5,128.54	5,191.99	5,128.54	24.60	16.32	-177.23	-520.91	-440.02	1,826.07	1,801.22	24.85	73.495	
5,400.00	5,223.81	5,287.27	5,223.81	25.22	16.44	-177.27	-520.91	-440.02	1,856.42	1,831.10	25.32	73.309	
5,500.00	5,319.08	5,382.54	5,319.08	25.83	16.57	-177.32	-520.91	-440.02	1,886.78	1,860.98	25.80	73.127	
5,600.00	5,414.35	5,477.81	5,414.35	26.45	16.70	-177.36	-520.91	-440.02	1,917.14	1,890.85	26.28	72.947	
5,683.08	5,493.51	5,556.97	5,493.51	26.96	16.81	-177.39	-520.91	-440.02	1,942.36	1,915.68	26.68	72.800	
5,700.00	5,509.64	5,573.10	5,509.64	27.05	16.83	-177.40	-520.91	-440.02	1,947.44	1,920.65	26.79	72.687	
5,800.00	5,605.59	5,669.05	5,605.59	27.50	16.96	-177.47	-520.91	-440.02	1,975.57	1,948.16	27.41	72.082	
5,900.00	5,702.47	5,765.92	5,702.47	27.91	17.10	-177.52	-520.91	-440.02	2,000.33	1,972.35	27.98	71.483	
6,000.00	5,800.15	5,863.60	5,800.15	28.28	17.24	-177.57	-520.91	-440.02	2,021.70	1,993.18	28.52	70.890	

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 11-9
Project:	COLORADO NORTHERN ZONE - 83	TVD Reference:	WELL @ 5067.00ft (Original Well Elev)
Reference Site:	WELD_NRC 19-9 PAD	MD Reference:	WELL @ 5067.00ft (Original Well Elev)
Site Error:	0.00ft	North Reference:	True
Reference Well:	P_NRC 11-9	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00ft	Output errors are at	2.00 sigma
Reference Wellbore	P_NRC 11-9	Database:	EDM 2003.21 Single User Db
Reference Design:	PLAN #1 1-10-10 RHS	Offset TVD Reference:	Offset Datum

Offset Design WELD_NRC 19-9 PAD - P_NRC 13-9 - P_NRC 13-9 - PLAN #1 1-10-10 RHS												Offset Site Error:	0.00 ft
Survey Program: 0-MWD												Offset Well Error:	0.00 ft
Reference	Offset	Semi Major Axis		Distance									
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
6,100.00	5,898.51	5,961.97	5,898.51	28.60	17.38	177.60	-520.91	-440.02	2,039.65	2,010.64	29.01	70.304	
6,200.00	5,997.45	6,060.90	5,997.45	28.88	17.53	177.63	-520.91	-440.02	2,054.17	2,024.70	29.46	69.725	
6,300.00	6,096.83	6,160.29	6,096.83	29.11	17.67	177.65	-520.91	-440.02	2,065.22	2,035.35	29.87	69.152	
6,400.00	6,196.54	6,259.99	6,196.54	29.30	17.82	177.67	-520.91	-440.02	2,072.80	2,042.58	30.22	68.584	
6,500.00	6,296.45	6,359.90	6,296.45	29.44	17.97	177.68	-520.91	-440.02	2,076.90	2,046.36	30.53	68.021	
6,567.56	6,364.00	6,427.46	6,364.00	29.51	18.08	-135.04	-520.91	-440.02	2,077.69	2,046.98	30.72	67.640	
6,600.00	6,396.44	6,459.90	6,396.44	29.54	18.13	-135.04	-520.91	-440.02	2,077.69	2,046.86	30.83	67.386	
6,700.00	6,496.44	6,559.90	6,496.44	29.64	18.28	-135.04	-520.91	-440.02	2,077.69	2,046.49	31.21	66.581	
6,800.00	6,596.44	6,659.90	6,596.44	29.74	18.44	-135.04	-520.91	-440.02	2,077.69	2,046.11	31.58	65.791	
6,900.00	6,696.44	6,759.90	6,696.44	29.85	18.59	-135.04	-520.91	-440.02	2,077.69	2,045.74	31.96	65.016	
7,000.00	6,796.44	6,859.90	6,796.44	29.95	18.75	-135.04	-520.91	-440.02	2,077.69	2,045.36	32.33	64.255	
7,100.00	6,896.44	6,959.90	6,896.44	30.06	18.91	-135.04	-520.91	-440.02	2,077.69	2,044.98	32.72	63.509	
7,200.00	6,996.44	7,059.90	6,996.44	30.17	19.07	-135.04	-520.91	-440.02	2,077.69	2,044.60	33.10	62.776	
7,300.00	7,096.44	7,159.90	7,096.44	30.28	19.23	-135.04	-520.91	-440.02	2,077.69	2,044.21	33.48	62.057	
7,400.00	7,196.44	7,259.90	7,196.44	30.39	19.40	-135.04	-520.91	-440.02	2,077.69	2,043.83	33.87	61.352	
7,500.00	7,296.44	7,359.90	7,296.44	30.50	19.56	-135.04	-520.91	-440.02	2,077.69	2,043.44	34.25	60.659	
7,600.00	7,396.44	7,459.90	7,396.44	30.62	19.73	-135.04	-520.91	-440.02	2,077.69	2,043.05	34.64	59.980	
7,700.00	7,496.44	7,559.90	7,496.44	30.73	19.90	-135.04	-520.91	-440.02	2,077.69	2,042.66	35.03	59.313	
7,800.00	7,596.44	7,659.90	7,596.44	30.85	20.06	-135.04	-520.91	-440.02	2,077.69	2,042.27	35.42	58.658	
7,900.00	7,696.44	7,759.90	7,696.44	30.96	20.23	-135.04	-520.91	-440.02	2,077.69	2,041.88	35.81	58.016	
8,000.00	7,796.44	7,859.90	7,796.44	31.08	20.40	-135.04	-520.91	-440.02	2,077.69	2,041.49	36.21	57.385	
8,100.00	7,896.44	7,959.90	7,896.44	31.20	20.57	-135.04	-520.91	-440.02	2,077.69	2,041.09	36.60	56.766	
8,200.00	7,996.44	8,059.90	7,996.44	31.32	20.75	-135.04	-520.91	-440.02	2,077.69	2,040.70	37.00	56.159	
8,300.00	8,096.44	8,159.90	8,096.44	31.44	20.92	-135.04	-520.91	-440.02	2,077.69	2,040.30	37.39	55.562	
8,400.00	8,196.44	8,259.90	8,196.44	31.57	21.10	-135.04	-520.91	-440.02	2,077.69	2,039.90	37.79	54.976	
8,500.00	8,296.44	8,359.90	8,296.44	31.69	21.27	-135.04	-520.91	-440.02	2,077.69	2,039.50	38.19	54.401	
8,536.58	8,333.02	8,396.47	8,333.02	31.74	21.33	-135.04	-520.91	-440.02	2,077.69	2,039.35	38.34	54.194	
8,600.00	8,396.44	8,412.46	8,349.00	31.82	21.36	-135.04	-520.91	-440.02	2,078.23	2,039.74	38.49	53.989	
8,700.00	8,496.44	8,412.46	8,349.00	31.94	21.36	-135.04	-520.91	-440.02	2,082.92	2,044.23	38.69	53.841	
8,747.56	8,544.00	8,412.46	8,349.00	32.00	21.36	-135.04	-520.91	-440.02	2,086.82	2,048.05	38.78	53.813	

Company:	US ROCKIES REGION PLANNING	Local Co-ordinate Reference:	Well P_NRC 11-9
Project:	COLORADO NORTHERN ZONE - 83	TVD Reference:	WELL @ 5067.00ft (Original Well Elev)
Reference Site:	WELD_NRC 19-9 PAD	MD Reference:	WELL @ 5067.00ft (Original Well Elev)
Site Error:	0.00ft	North Reference:	True
Reference Well:	P_NRC 11-9	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00ft	Output errors are at	2.00 sigma
Reference Wellbore	P_NRC 11-9	Database:	EDM 2003.21 Single User Db
Reference Design:	PLAN #1 1-10-10 RHS	Offset TVD Reference:	Offset Datum

Offset Design WELD_NRC 19-9 PAD - P_NRC 14-9 - P_NRC 14-9 - PLAN #1 1-10-10 RHS												Offset Site Error:	0.00 ft
Survey Program: 0-MWD												Offset Well Error:	0.00 ft
Reference	Offset	Semi Major Axis		Distance									
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	90.02	-0.01	31.91	31.91				
100.00	100.00	100.00	100.00	0.10	0.10	90.02	-0.01	31.91	31.91	31.72	0.19	167.018	
200.00	200.00	200.00	200.00	0.32	0.32	90.02	-0.01	31.91	31.91	31.27	0.64	49.812	
300.00	300.00	300.00	300.00	0.55	0.55	90.02	-0.01	31.91	31.91	30.82	1.09	29.271	
400.00	400.00	400.00	400.00	0.77	0.77	90.02	-0.01	31.91	31.91	30.37	1.54	20.725	
500.00	500.00	500.00	500.00	0.99	0.99	90.02	-0.01	31.91	31.91	29.92	1.99	16.041	
600.00	600.00	600.00	600.00	1.22	1.22	90.02	-0.01	31.91	31.91	29.47	2.44	13.084	
700.00	700.00	700.00	700.00	1.44	1.44	90.02	-0.01	31.91	31.91	29.02	2.89	11.048	
800.00	800.00	800.00	800.00	1.67	1.67	90.02	-0.01	31.91	31.91	28.57	3.34	9.560	
900.00	900.00	900.00	900.00	1.89	1.89	90.02	-0.01	31.91	31.91	28.12	3.79	8.425	
1,000.00	1,000.00	1,000.00	1,000.00	2.12	2.12	90.02	-0.01	31.91	31.91	27.67	4.24	7.531	
1,085.00	1,085.00	1,085.00	1,085.00	2.31	2.31	90.02	-0.01	31.91	31.91	27.29	4.62	6.908 CC	
1,100.00	1,100.00	1,099.84	1,099.84	2.34	2.34	42.81	-0.03	31.95	31.92	27.23	4.68	6.816 ES	
1,200.00	1,199.97	1,198.76	1,198.73	2.56	2.53	46.86	-0.80	34.03	32.44	27.36	5.08	6.383	
1,300.00	1,299.80	1,297.46	1,297.26	2.78	2.73	56.38	-2.75	39.29	34.46	28.97	5.49	6.277 SF	
1,400.00	1,399.37	1,395.74	1,395.13	3.01	2.94	68.92	-5.87	47.69	39.39	33.48	5.91	6.661	
1,500.00	1,498.55	1,493.42	1,492.03	3.26	3.17	81.09	-10.13	59.16	48.47	42.10	6.37	7.608	
1,600.00	1,597.23	1,590.32	1,587.70	3.53	3.43	90.81	-15.48	73.58	62.08	55.21	6.87	9.037	
1,700.00	1,695.29	1,686.27	1,681.86	3.84	3.73	97.83	-21.89	90.85	80.08	72.65	7.42	10.786	
1,800.00	1,792.60	1,781.11	1,774.28	4.20	4.07	102.74	-29.30	110.81	102.12	94.08	8.04	12.700	
1,900.00	1,889.05	1,874.70	1,864.74	4.60	4.45	106.16	-37.65	133.30	127.93	119.20	8.73	14.653	
1,969.47	1,955.49	1,938.91	1,926.32	4.92	4.75	107.90	-43.98	150.34	147.97	138.71	9.26	15.984	
2,000.00	1,984.57	1,966.93	1,953.07	5.07	4.88	108.67	-46.89	158.17	157.25	147.74	9.50	16.548	
2,100.00	2,079.84	2,058.05	2,039.45	5.57	5.37	110.20	-56.97	185.35	189.06	178.71	10.35	18.273	
2,200.00	2,175.12	2,148.03	2,123.80	6.09	5.91	110.68	-67.87	214.70	222.85	211.60	11.24	19.821	
2,300.00	2,270.39	2,236.72	2,205.95	6.63	6.49	110.52	-79.50	246.04	258.50	246.32	12.18	21.225	
2,400.00	2,365.66	2,329.21	2,290.95	7.18	7.16	110.12	-92.18	280.20	295.24	282.06	13.18	22.398	
2,500.00	2,460.93	2,422.19	2,376.41	7.74	7.85	109.81	-104.94	314.55	332.01	317.80	14.21	23.365	
2,600.00	2,556.20	2,515.17	2,461.87	8.31	8.55	109.55	-117.69	348.90	368.78	353.53	15.26	24.170	
2,700.00	2,651.47	2,608.15	2,547.33	8.89	9.26	109.35	-130.44	383.25	405.56	389.24	16.32	24.847	
2,800.00	2,746.75	2,701.13	2,632.78	9.47	9.99	109.18	-143.19	417.60	442.34	424.94	17.40	25.423	
2,900.00	2,842.02	2,794.12	2,718.24	10.06	10.72	109.03	-155.94	451.95	479.13	460.64	18.49	25.915	
3,000.00	2,937.29	2,887.10	2,803.70	10.65	11.46	108.91	-168.70	486.31	515.92	496.33	19.59	26.341	
3,100.00	3,032.56	2,980.08	2,889.16	11.24	12.20	108.80	-181.45	520.66	552.71	532.01	20.69	26.713	
3,200.00	3,127.83	3,073.06	2,974.61	11.84	12.95	108.70	-194.20	555.01	589.50	567.69	21.80	27.038	
3,300.00	3,223.10	3,166.05	3,060.07	12.43	13.70	108.62	-206.95	589.36	626.29	603.37	22.92	27.326	
3,400.00	3,318.38	3,259.03	3,145.53	13.03	14.45	108.55	-219.71	623.71	663.08	639.04	24.04	27.582	
3,500.00	3,413.65	3,352.01	3,230.99	13.63	15.20	108.48	-232.46	658.06	699.87	674.71	25.17	27.810	
3,600.00	3,508.92	3,444.99	3,316.45	14.24	15.96	108.42	-245.21	692.41	736.67	710.37	26.29	28.016	
3,700.00	3,604.19	3,537.97	3,401.90	14.84	16.72	108.36	-257.96	726.77	773.46	746.04	27.43	28.201	
3,800.00	3,699.46	3,630.96	3,487.36	15.45	17.48	108.32	-270.71	761.12	810.26	781.70	28.56	28.369	
3,900.00	3,794.73	3,723.94	3,572.82	16.05	18.24	108.27	-283.47	795.47	847.05	817.36	29.70	28.521	
4,000.00	3,890.01	3,829.06	3,669.67	16.66	19.02	108.26	-297.69	833.78	883.53	852.67	30.86	28.631	
4,100.00	3,985.28	3,947.78	3,780.62	17.27	19.72	108.45	-312.39	873.37	917.76	885.75	32.01	28.671	
4,200.00	4,080.55	4,068.53	3,895.16	17.88	20.37	108.87	-325.68	909.18	949.39	916.24	33.15	28.641	
4,300.00	4,175.82	4,190.92	4,012.79	18.49	20.96	109.50	-337.43	940.82	978.41	944.14	34.27	28.554	
4,400.00	4,271.09	4,314.52	4,132.94	19.10	21.47	110.32	-347.51	967.97	1,004.84	969.49	35.35	28.428	
4,500.00	4,366.37	4,438.89	4,254.98	19.71	21.91	111.34	-355.82	990.36	1,028.74	992.35	36.39	28.273	
4,600.00	4,461.64	4,563.56	4,378.25	20.32	22.27	112.53	-362.29	1,007.80	1,050.21	1,012.84	37.38	28.098	
4,700.00	4,556.91	4,688.07	4,502.05	20.93	22.56	113.89	-366.89	1,020.18	1,069.39	1,031.08	38.31	27.914	
4,800.00	4,652.18	4,811.95	4,625.67	21.54	22.77	115.41	-369.60	1,027.49	1,086.45	1,047.28	39.17	27.734	
4,900.00	4,747.45	4,933.76	4,747.45	22.15	22.91	117.07	-370.45	1,029.78	1,101.61	1,061.64	39.96	27.567	

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 11-9
Project:	COLORADO NORTHERN ZONE - 83	TVD Reference:	WELL @ 5067.00ft (Original Well Elev)
Reference Site:	WELD_NRC 19-9 PAD	MD Reference:	WELL @ 5067.00ft (Original Well Elev)
Site Error:	0.00ft	North Reference:	True
Reference Well:	P_NRC 11-9	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00ft	Output errors are at	2.00 sigma
Reference Wellbore	P_NRC 11-9	Database:	EDM 2003.21 Single User Db
Reference Design:	PLAN #1 1-10-10 RHS	Offset TVD Reference:	Offset Datum

Offset Design WELD_NRC 19-9 PAD - P_NRC 14-9 - P_NRC 14-9 - PLAN #1 1-10-10 RHS												Offset Site Error:	0.00 ft
Survey Program: 0-MWD												Offset Well Error:	0.00 ft
Reference	Offset	Semi Major Axis		Distance									
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning
5,000.00	4,842.72	5,029.03	4,842.72	22.76	23.00	118.41	-370.45	1,029.78	1,116.29	1,075.63	40.66	27.452	
5,100.00	4,938.00	5,124.31	4,938.00	23.38	23.09	119.71	-370.45	1,029.78	1,131.60	1,090.25	41.35	27.369	
5,200.00	5,033.27	5,219.58	5,033.27	23.99	23.18	120.98	-370.45	1,029.78	1,147.51	1,105.50	42.01	27.316	
5,300.00	5,128.54	5,314.85	5,128.54	24.60	23.28	122.22	-370.45	1,029.78	1,163.99	1,121.34	42.65	27.291	
5,400.00	5,223.81	5,410.12	5,223.81	25.22	23.38	123.43	-370.45	1,029.78	1,181.03	1,137.75	43.28	27.291	
5,500.00	5,319.08	5,505.39	5,319.08	25.83	23.47	124.60	-370.45	1,029.78	1,198.60	1,154.71	43.88	27.314	
5,600.00	5,414.35	5,600.67	5,414.35	26.45	23.57	125.74	-370.45	1,029.78	1,216.67	1,172.20	44.47	27.359	
5,683.08	5,493.51	5,679.82	5,493.51	26.96	23.66	126.67	-370.45	1,029.78	1,232.05	1,187.10	44.95	27.412	
5,700.00	5,509.64	5,695.95	5,509.64	27.05	23.68	126.90	-370.45	1,029.78	1,235.19	1,190.14	45.05	27.417	
5,800.00	5,605.59	5,791.90	5,605.59	27.50	23.78	128.19	-370.45	1,029.78	1,252.79	1,207.21	45.59	27.482	
5,900.00	5,702.47	5,888.78	5,702.47	27.91	23.89	129.30	-370.45	1,029.78	1,268.60	1,222.53	46.07	27.534	
6,000.00	5,800.15	5,986.46	5,800.15	28.28	24.00	130.24	-370.45	1,029.78	1,282.48	1,235.96	46.52	27.569	
6,100.00	5,898.51	6,084.83	5,898.51	28.60	24.11	131.03	-370.45	1,029.78	1,294.29	1,247.37	46.92	27.586	
6,200.00	5,997.45	6,183.76	5,997.45	28.88	24.22	131.65	-370.45	1,029.78	1,303.94	1,256.67	47.28	27.581	
6,300.00	6,096.83	6,283.14	6,096.83	29.11	24.34	132.12	-370.45	1,029.78	1,311.35	1,263.76	47.59	27.553	
6,400.00	6,196.54	6,382.85	6,196.54	29.30	24.45	132.44	-370.45	1,029.78	1,316.46	1,268.59	47.87	27.501	
6,500.00	6,296.45	6,482.76	6,296.45	29.44	24.57	132.61	-370.45	1,029.78	1,319.24	1,271.13	48.11	27.422	
6,567.56	6,364.00	6,550.31	6,364.00	29.51	24.65	179.92	-370.45	1,029.78	1,319.78	1,271.53	48.25	27.353	
6,600.00	6,396.44	6,582.75	6,396.44	29.54	24.69	179.92	-370.45	1,029.78	1,319.78	1,271.45	48.33	27.310	
6,700.00	6,496.44	6,682.75	6,496.44	29.64	24.81	179.92	-370.45	1,029.78	1,319.78	1,271.20	48.58	27.169	
6,800.00	6,596.44	6,782.75	6,596.44	29.74	24.94	179.92	-370.45	1,029.78	1,319.78	1,270.95	48.83	27.027	
6,900.00	6,696.44	6,882.75	6,696.44	29.85	25.06	179.92	-370.45	1,029.78	1,319.78	1,270.69	49.09	26.886	
7,000.00	6,796.44	6,982.75	6,796.44	29.95	25.19	179.92	-370.45	1,029.78	1,319.78	1,270.43	49.35	26.745	
7,100.00	6,896.44	7,082.75	6,896.44	30.06	25.32	179.92	-370.45	1,029.78	1,319.78	1,270.17	49.61	26.603	
7,200.00	6,996.44	7,182.75	6,996.44	30.17	25.44	179.92	-370.45	1,029.78	1,319.78	1,269.90	49.87	26.462	
7,300.00	7,096.44	7,282.75	7,096.44	30.28	25.57	179.92	-370.45	1,029.78	1,319.78	1,269.64	50.14	26.321	
7,400.00	7,196.44	7,382.75	7,196.44	30.39	25.71	179.92	-370.45	1,029.78	1,319.78	1,269.37	50.41	26.180	
7,500.00	7,296.44	7,482.75	7,296.44	30.50	25.84	179.92	-370.45	1,029.78	1,319.78	1,269.09	50.69	26.039	
7,600.00	7,396.44	7,582.75	7,396.44	30.62	25.97	179.92	-370.45	1,029.78	1,319.78	1,268.82	50.96	25.898	
7,700.00	7,496.44	7,682.75	7,496.44	30.73	26.11	179.92	-370.45	1,029.78	1,319.78	1,268.54	51.24	25.758	
7,800.00	7,596.44	7,782.75	7,596.44	30.85	26.25	179.92	-370.45	1,029.78	1,319.78	1,268.26	51.52	25.618	
7,900.00	7,696.44	7,882.75	7,696.44	30.96	26.38	179.92	-370.45	1,029.78	1,319.78	1,267.98	51.80	25.478	
8,000.00	7,796.44	7,982.75	7,796.44	31.08	26.52	179.92	-370.45	1,029.78	1,319.78	1,267.69	52.09	25.339	
8,100.00	7,896.44	8,082.75	7,896.44	31.20	26.66	179.92	-370.45	1,029.78	1,319.78	1,267.41	52.37	25.200	
8,200.00	7,996.44	8,182.75	7,996.44	31.32	26.80	179.92	-370.45	1,029.78	1,319.78	1,267.12	52.66	25.061	
8,300.00	8,096.44	8,282.75	8,096.44	31.44	26.95	179.92	-370.45	1,029.78	1,319.78	1,266.82	52.95	24.923	
8,400.00	8,196.44	8,382.75	8,196.44	31.57	27.09	179.92	-370.45	1,029.78	1,319.78	1,266.53	53.25	24.786	
8,500.00	8,296.44	8,482.75	8,296.44	31.69	27.23	179.92	-370.45	1,029.78	1,319.78	1,266.23	53.54	24.649	
8,600.00	8,396.44	8,582.75	8,396.44	31.82	27.38	179.92	-370.45	1,029.78	1,319.78	1,265.94	53.84	24.512	
8,700.00	8,496.44	8,682.75	8,496.44	31.94	27.53	179.92	-370.45	1,029.78	1,319.78	1,265.64	54.14	24.376	
8,747.56	8,544.00	8,730.31	8,544.00	32.00	27.60	179.92	-370.45	1,029.78	1,319.78	1,265.49	54.29	24.312	

Company:	US ROCKIES REGION PLANNING	Local Co-ordinate Reference:	Well P_NRC 11-9
Project:	COLORADO NORTHERN ZONE - 83	TVD Reference:	WELL @ 5067.00ft (Original Well Elev)
Reference Site:	WELD_NRC 19-9 PAD	MD Reference:	WELL @ 5067.00ft (Original Well Elev)
Site Error:	0.00ft	North Reference:	True
Reference Well:	P_NRC 11-9	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00ft	Output errors are at	2.00 sigma
Reference Wellbore	P_NRC 11-9	Database:	EDM 2003.21 Single User Db
Reference Design:	PLAN #1 1-10-10 RHS	Offset TVD Reference:	Offset Datum

Offset Design WELD_NRC 19-9 PAD - P_NRC 23-9 - P_NRC 23-9 - PLAN #1 1-10-10 RHS												Offset Site Error:	0.00 ft
Survey Program: 0-Good_gyro												Offset Well Error:	0.00 ft
Reference	Offset	Semi Major Axis		Distance		Warning							
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	
0.00	0.00	0.00	0.00	0.00	0.00	90.06	-0.02	15.95	15.95				
100.00	100.00	100.00	100.00	0.10	0.04	90.06	-0.02	15.95	15.95	15.81	0.14	113.935	
200.00	200.00	200.00	200.00	0.32	0.10	90.06	-0.02	15.95	15.95	15.54	0.42	38.246	
300.00	300.00	300.00	300.00	0.55	0.15	90.06	-0.02	15.95	15.95	15.26	0.69	22.980	
400.00	400.00	400.00	400.00	0.77	0.20	90.06	-0.02	15.95	15.95	14.98	0.97	16.424	
500.00	500.00	500.00	500.00	0.99	0.25	90.06	-0.02	15.95	15.95	14.71	1.25	12.779	
600.00	600.00	600.00	600.00	1.22	0.31	90.06	-0.02	15.95	15.95	14.43	1.53	10.457	
700.00	700.00	700.00	700.00	1.44	0.36	90.06	-0.02	15.95	15.95	14.15	1.80	8.850	
800.00	800.00	800.00	800.00	1.67	0.41	90.06	-0.02	15.95	15.95	13.87	2.08	7.671	
900.00	900.00	900.00	900.00	1.89	0.46	90.06	-0.02	15.95	15.95	13.60	2.36	6.769	
1,000.00	1,000.00	1,000.00	1,000.00	2.12	0.52	90.06	-0.02	15.95	15.95	13.32	2.63	6.057	
1,085.00	1,085.00	1,085.00	1,085.00	2.31	0.56	90.06	-0.02	15.95	15.95	13.08	2.87	5.560 CC	
1,100.00	1,100.00	1,099.92	1,099.92	2.34	0.57	42.85	-0.01	15.99	15.96	13.05	2.91	5.485 ES	
1,200.00	1,199.97	1,199.36	1,199.33	2.56	0.62	46.76	0.39	18.20	16.56	13.38	3.18	5.212 SF	
1,300.00	1,299.80	1,298.74	1,298.54	2.78	0.68	55.39	1.40	23.80	18.38	14.93	3.45	5.331	
1,400.00	1,399.37	1,397.99	1,397.37	3.01	0.74	65.84	3.01	32.76	21.96	18.23	3.73	5.887	
1,500.00	1,498.55	1,497.08	1,495.66	3.26	0.82	75.33	5.23	45.07	27.70	23.65	4.05	6.842	
1,600.00	1,597.23	1,595.93	1,593.23	3.53	0.92	82.70	8.04	60.68	35.69	31.26	4.43	8.059	
1,700.00	1,695.29	1,694.51	1,689.92	3.84	1.05	88.04	11.44	79.53	45.87	40.99	4.88	9.401	
1,800.00	1,792.60	1,792.76	1,785.58	4.20	1.22	91.84	15.40	101.56	58.13	52.72	5.41	10.743	
1,900.00	1,889.05	1,890.64	1,880.06	4.60	1.42	94.55	19.93	126.71	72.39	66.35	6.03	12.000	
1,969.47	1,955.49	1,958.39	1,944.92	4.92	1.58	95.96	23.40	145.97	83.43	76.91	6.52	12.791	
2,000.00	1,984.57	1,988.10	1,973.22	5.07	1.65	96.49	25.01	154.89	88.55	81.81	6.75	13.123	
2,100.00	2,079.84	2,085.17	2,064.97	5.57	1.92	96.77	30.62	186.04	106.26	98.73	7.52	14.122	
2,200.00	2,175.12	2,182.38	2,155.83	6.09	2.22	95.68	36.75	220.05	125.23	116.89	8.34	15.016	
2,300.00	2,270.39	2,280.48	2,247.31	6.63	2.54	94.64	43.03	254.92	144.51	135.33	9.18	15.734	
2,400.00	2,365.66	2,378.57	2,338.78	7.18	2.87	93.86	49.31	289.79	163.82	153.78	10.05	16.307	
2,500.00	2,460.93	2,476.67	2,430.25	7.74	3.20	93.23	55.59	324.66	183.16	172.24	10.92	16.773	
2,600.00	2,556.20	2,574.76	2,521.72	8.31	3.53	92.73	61.88	359.53	202.51	190.71	11.80	17.156	
2,700.00	2,651.47	2,672.86	2,613.20	8.89	3.86	92.31	68.16	394.41	221.88	209.18	12.70	17.476	
2,800.00	2,746.75	2,770.95	2,704.67	9.47	4.19	91.96	74.44	429.28	241.25	227.66	13.59	17.747	
2,900.00	2,842.02	2,869.05	2,796.14	10.06	4.53	91.67	80.72	464.15	260.64	246.14	14.50	17.977	
3,000.00	2,937.29	2,967.14	2,887.61	10.65	4.86	91.41	87.00	499.02	280.03	264.62	15.41	18.176	
3,100.00	3,032.56	3,065.24	2,979.09	11.24	5.20	91.19	93.28	533.89	299.42	283.10	16.32	18.349	
3,200.00	3,127.83	3,163.33	3,070.56	11.84	5.54	90.99	99.57	568.76	318.81	301.58	17.23	18.501	
3,300.00	3,223.10	3,261.43	3,162.03	12.43	5.87	90.82	105.85	603.63	338.21	320.06	18.15	18.635	
3,400.00	3,318.38	3,359.52	3,253.50	13.03	6.21	90.67	112.13	638.51	357.62	338.55	19.07	18.753	
3,500.00	3,413.65	3,457.62	3,344.98	13.63	6.55	90.53	118.41	673.38	377.02	357.03	19.99	18.859	
3,600.00	3,508.92	3,555.71	3,436.45	14.24	6.89	90.40	124.69	708.25	396.43	375.51	20.91	18.955	
3,700.00	3,604.19	3,653.81	3,527.92	14.84	7.23	90.29	130.97	743.12	415.84	394.00	21.84	19.041	
3,800.00	3,699.46	3,751.91	3,619.39	15.45	7.57	90.19	137.26	777.99	435.25	412.48	22.77	19.119	
3,900.00	3,794.73	3,850.00	3,710.87	16.05	7.91	90.09	143.54	812.86	454.66	430.97	23.69	19.190	
4,000.00	3,890.01	3,948.10	3,802.34	16.66	8.25	90.00	149.82	847.73	474.07	449.45	24.62	19.255	
4,100.00	3,985.28	4,046.19	3,893.81	17.27	8.59	89.92	156.10	882.61	493.48	467.93	25.55	19.314	
4,200.00	4,080.55	4,144.29	3,985.28	17.88	8.93	89.85	162.38	917.48	512.90	486.42	26.48	19.369	
4,300.00	4,175.82	4,242.38	4,076.76	18.49	9.26	89.78	168.67	952.35	532.31	504.90	27.41	19.419	
4,400.00	4,271.09	4,340.48	4,168.23	19.10	9.60	89.72	174.95	987.22	551.73	523.38	28.34	19.466	
4,500.00	4,366.37	4,438.57	4,259.70	19.71	9.94	89.66	181.23	1,022.09	571.14	541.87	29.27	19.510	
4,600.00	4,461.64	4,536.67	4,351.17	20.32	10.28	89.60	187.51	1,056.96	590.56	560.35	30.21	19.550	
4,700.00	4,556.91	4,634.76	4,442.65	20.93	10.62	89.55	193.79	1,091.84	609.98	578.84	31.14	19.588	
4,800.00	4,652.18	4,732.86	4,534.12	21.54	10.97	89.50	200.07	1,126.71	629.39	597.32	32.07	19.623	
4,900.00	4,747.45	4,830.95	4,625.59	22.15	11.31	89.46	206.36	1,161.58	648.81	615.80	33.01	19.656	

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 11-9
Project:	COLORADO NORTHERN ZONE - 83	TVD Reference:	WELL @ 5067.00ft (Original Well Elev)
Reference Site:	WELD_NRC 19-9 PAD	MD Reference:	WELL @ 5067.00ft (Original Well Elev)
Site Error:	0.00ft	North Reference:	True
Reference Well:	P_NRC 11-9	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00ft	Output errors are at	2.00 sigma
Reference Wellbore	P_NRC 11-9	Database:	EDM 2003.21 Single User Db
Reference Design:	PLAN #1 1-10-10 RHS	Offset TVD Reference:	Offset Datum

Offset Design WELD_NRC 19-9 PAD - P_NRC 23-9 - P_NRC 23-9 - PLAN #1 1-10-10 RHS												Offset Site Error:	0.00 ft
Survey Program: 0-Good_gyro												Offset Well Error:	0.00 ft
Reference	Offset	Semi Major Axis		Distance									
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning
5,000.00	4,842.72	4,929.05	4,717.06	22.76	11.65	89.41	212.64	1,196.45	668.23	634.29	33.94	19.687	
5,100.00	4,938.00	5,027.14	4,808.54	23.38	11.99	89.37	218.92	1,231.32	687.65	652.77	34.88	19.716	
5,200.00	5,033.27	5,125.24	4,900.01	23.99	12.33	89.34	225.20	1,266.19	707.07	671.25	35.81	19.743	
5,300.00	5,128.54	5,223.34	4,991.48	24.60	12.67	89.30	231.48	1,301.06	726.49	689.74	36.75	19.769	
5,400.00	5,223.81	5,321.43	5,082.95	25.22	13.01	89.26	237.76	1,335.94	745.91	708.22	37.68	19.794	
5,500.00	5,319.08	5,419.53	5,174.43	25.83	13.35	89.23	244.05	1,370.81	765.33	726.71	38.62	19.817	
5,600.00	5,414.35	5,517.62	5,265.90	26.45	13.69	89.20	250.33	1,405.68	784.75	745.19	39.56	19.839	
5,683.08	5,493.51	5,599.62	5,342.36	26.96	13.97	89.18	255.58	1,434.82	800.88	760.54	40.34	19.855	
5,700.00	5,509.64	5,619.07	5,360.54	27.05	14.04	89.24	256.81	1,441.66	804.13	763.63	40.50	19.857	
5,800.00	5,605.59	5,734.64	5,469.42	27.50	14.41	89.57	263.67	1,479.74	822.13	780.79	41.33	19.890	
5,900.00	5,702.47	5,851.07	5,580.61	27.91	14.73	89.86	269.79	1,513.70	838.06	795.98	42.08	19.915	
6,000.00	5,800.15	5,968.27	5,693.86	28.28	15.02	90.09	275.13	1,543.37	851.88	809.14	42.74	19.932	
6,100.00	5,898.51	6,086.14	5,808.90	28.60	15.26	90.29	279.67	1,568.58	863.56	820.26	43.31	19.941	
6,200.00	5,997.45	6,204.58	5,925.47	28.88	15.46	90.44	283.39	1,589.21	873.07	829.29	43.78	19.941	
6,300.00	6,096.83	6,323.49	6,043.26	29.11	15.61	90.54	286.26	1,605.13	880.38	836.21	44.16	19.934	
6,400.00	6,196.54	6,442.74	6,161.96	29.30	15.72	90.61	288.26	1,616.25	885.47	841.01	44.46	19.917	
6,500.00	6,296.45	6,562.22	6,281.27	29.44	15.79	90.63	289.39	1,622.50	888.32	843.66	44.66	19.889	
6,567.56	6,364.00	6,643.01	6,362.04	29.51	15.82	137.91	289.65	1,623.95	888.98	844.23	44.76	19.863	
6,600.00	6,396.44	6,677.41	6,396.44	29.54	15.82	137.91	289.65	1,623.98	888.99	844.20	44.79	19.847	
6,700.00	6,496.44	6,777.41	6,496.44	29.64	15.83	137.91	289.65	1,623.98	888.99	844.09	44.91	19.796	
6,800.00	6,596.44	6,877.41	6,596.44	29.74	15.85	137.91	289.65	1,623.98	888.99	843.97	45.02	19.745	
6,900.00	6,696.44	6,977.41	6,696.44	29.85	15.86	137.91	289.65	1,623.98	888.99	843.85	45.14	19.693	
7,000.00	6,796.44	7,077.41	6,796.44	29.95	15.87	137.91	289.65	1,623.98	888.99	843.73	45.26	19.641	
7,100.00	6,896.44	7,177.41	6,896.44	30.06	15.88	137.91	289.65	1,623.98	888.99	843.61	45.38	19.588	
7,200.00	6,996.44	7,277.41	6,996.44	30.17	15.89	137.91	289.65	1,623.98	888.99	843.49	45.51	19.536	
7,300.00	7,096.44	7,377.41	7,096.44	30.28	15.91	137.91	289.65	1,623.98	888.99	843.36	45.63	19.482	
7,400.00	7,196.44	7,477.41	7,196.44	30.39	15.92	137.91	289.65	1,623.98	888.99	843.24	45.76	19.429	
7,500.00	7,296.44	7,577.41	7,296.44	30.50	15.93	137.91	289.65	1,623.98	888.99	843.11	45.88	19.375	
7,600.00	7,396.44	7,677.41	7,396.44	30.62	15.95	137.91	289.65	1,623.98	888.99	842.98	46.01	19.321	
7,700.00	7,496.44	7,777.41	7,496.44	30.73	15.96	137.91	289.65	1,623.98	888.99	842.85	46.14	19.266	
7,800.00	7,596.44	7,877.41	7,596.44	30.85	15.97	137.91	289.65	1,623.98	888.99	842.72	46.27	19.212	
7,900.00	7,696.44	7,977.41	7,696.44	30.96	15.99	137.91	289.65	1,623.98	888.99	842.59	46.41	19.157	
8,000.00	7,796.44	8,077.41	7,796.44	31.08	16.00	137.91	289.65	1,623.98	888.99	842.45	46.54	19.102	
8,100.00	7,896.44	8,177.41	7,896.44	31.20	16.01	137.91	289.65	1,623.98	888.99	842.32	46.68	19.046	
8,200.00	7,996.44	8,277.41	7,996.44	31.32	16.03	137.91	289.65	1,623.98	888.99	842.18	46.81	18.991	
8,300.00	8,096.44	8,377.41	8,096.44	31.44	16.04	137.91	289.65	1,623.98	888.99	842.04	46.95	18.935	
8,400.00	8,196.44	8,477.41	8,196.44	31.57	16.06	137.91	289.65	1,623.98	888.99	841.90	47.09	18.879	
8,500.00	8,296.44	8,577.41	8,296.44	31.69	16.07	137.91	289.65	1,623.98	888.99	841.76	47.23	18.822	
8,600.00	8,396.44	8,579.97	8,299.00	31.82	16.07	137.91	289.65	1,623.98	894.32	846.96	47.36	18.885	
8,700.00	8,496.44	8,579.97	8,299.00	31.94	16.07	137.91	289.65	1,623.98	910.65	863.17	47.48	19.179	
8,747.56	8,544.00	8,579.97	8,299.00	32.00	16.07	137.91	289.65	1,623.98	922.14	874.59	47.54	19.396	

Company:	US ROCKIES REGION PLANNING	Local Co-ordinate Reference:	Well P_NRC 11-9
Project:	COLORADO NORTHERN ZONE - 83	TVD Reference:	WELL @ 5067.00ft (Original Well Elev)
Reference Site:	WELD_NRC 19-9 PAD	MD Reference:	WELL @ 5067.00ft (Original Well Elev)
Site Error:	0.00ft	North Reference:	True
Reference Well:	P_NRC 11-9	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00ft	Output errors are at	2.00 sigma
Reference Wellbore	P_NRC 11-9	Database:	EDM 2003.21 Single User Db
Reference Design:	PLAN #1 1-10-10 RHS	Offset TVD Reference:	Offset Datum

Offset Design WELD_NRC 19-9 PAD - P_NRC 35-9 - P_NRC 35-9 - PLAN #1 1-10-10 RHS												Offset Site Error:	0.00 ft
Survey Program: 0-MWD												Offset Well Error:	0.00 ft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside 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	-90.04	-0.02	-32.19	32.19				
100.00	100.00	100.00	100.00	0.10	0.10	-90.04	-0.02	-32.19	32.19	32.00	0.19	168.483	
200.00	200.00	200.00	200.00	0.32	0.32	-90.04	-0.02	-32.19	32.19	31.55	0.64	50.249	
300.00	300.00	300.00	300.00	0.55	0.55	-90.04	-0.02	-32.19	32.19	31.10	1.09	29.528	
400.00	400.00	400.00	400.00	0.77	0.77	-90.04	-0.02	-32.19	32.19	30.65	1.54	20.907	
500.00	500.00	500.00	500.00	0.99	0.99	-90.04	-0.02	-32.19	32.19	30.20	1.99	16.182	
600.00	600.00	600.00	600.00	1.22	1.22	-90.04	-0.02	-32.19	32.19	29.75	2.44	13.199	
700.00	700.00	700.00	700.00	1.44	1.44	-90.04	-0.02	-32.19	32.19	29.30	2.89	11.145	
800.00	800.00	800.00	800.00	1.67	1.67	-90.04	-0.02	-32.19	32.19	28.85	3.34	9.644	
900.00	900.00	900.00	900.00	1.89	1.89	-90.04	-0.02	-32.19	32.19	28.40	3.79	8.499	
1,000.00	1,000.00	1,000.00	1,000.00	2.12	2.12	-90.04	-0.02	-32.19	32.19	27.95	4.24	7.597	
1,085.00	1,085.00	1,085.00	1,085.00	2.31	2.31	-90.04	-0.02	-32.19	32.19	27.57	4.62	6.969 CC	
1,100.00	1,100.00	1,100.06	1,100.06	2.34	2.34	-137.43	-0.06	-32.17	32.20	27.52	4.68	6.879 ES	
1,200.00	1,199.97	1,200.36	1,200.33	2.56	2.51	-143.73	-2.17	-31.32	33.22	28.16	5.07	6.557 SF	
1,300.00	1,299.80	1,300.09	1,299.89	2.78	2.70	-157.52	-7.50	-29.16	37.40	31.94	5.46	6.853	
1,400.00	1,399.37	1,398.76	1,398.14	3.01	2.89	-172.95	-15.93	-25.74	47.38	41.53	5.86	8.092	
1,500.00	1,498.55	1,495.93	1,494.52	3.26	3.11	174.80	-27.28	-21.13	64.42	58.16	6.26	10.283	
1,600.00	1,597.23	1,591.15	1,588.52	3.53	3.35	166.45	-41.35	-15.43	88.27	81.58	6.69	13.196	
1,700.00	1,695.29	1,684.04	1,679.69	3.84	3.63	160.89	-57.85	-8.73	118.30	111.17	7.13	16.591	
1,800.00	1,792.60	1,776.03	1,769.45	4.20	3.94	157.14	-76.49	-1.17	153.72	146.13	7.59	20.240	
1,900.00	1,889.05	1,868.02	1,859.14	4.60	4.27	154.99	-95.40	6.50	192.62	184.54	8.08	23.835	
1,969.47	1,955.49	1,931.21	1,920.76	4.92	4.52	154.08	-108.39	11.77	221.41	212.98	8.43	26.268	
2,000.00	1,984.57	1,958.84	1,947.70	5.07	4.62	153.90	-114.07	14.07	234.36	225.76	8.60	27.237	
2,100.00	2,079.84	2,049.36	2,035.97	5.57	4.99	153.42	-132.69	21.62	276.82	267.62	9.19	30.112	
2,200.00	2,175.12	2,139.88	2,124.23	6.09	5.36	153.06	-151.30	29.17	319.28	309.48	9.80	32.583	
2,300.00	2,270.39	2,230.40	2,212.50	6.63	5.75	152.79	-169.91	36.72	361.75	351.33	10.42	34.717	
2,400.00	2,365.66	2,320.92	2,300.76	7.18	6.14	152.58	-188.52	44.27	404.23	393.18	11.05	36.570	
2,500.00	2,460.93	2,411.44	2,389.02	7.74	6.53	152.40	-207.13	51.82	446.71	435.02	11.70	38.189	
2,600.00	2,556.20	2,501.96	2,477.29	8.31	6.94	152.26	-225.75	59.37	489.20	476.85	12.35	39.612	
2,700.00	2,651.47	2,592.48	2,565.55	8.89	7.34	152.14	-244.36	66.92	531.69	518.68	13.01	40.868	
2,800.00	2,746.75	2,683.00	2,653.81	9.47	7.75	152.04	-262.97	74.47	574.18	560.50	13.68	41.983	
2,900.00	2,842.02	2,773.52	2,742.08	10.06	8.17	151.95	-281.58	82.02	616.67	602.32	14.35	42.978	
3,000.00	2,937.29	2,864.04	2,830.34	10.65	8.58	151.87	-300.19	89.57	659.16	644.13	15.02	43.871	
3,100.00	3,032.56	2,954.56	2,918.61	11.24	9.00	151.80	-318.81	97.12	701.65	685.94	15.71	44.675	
3,200.00	3,127.83	3,045.09	3,006.87	11.84	9.42	151.74	-337.42	104.67	744.14	727.75	16.39	45.403	
3,300.00	3,223.10	3,135.61	3,095.13	12.43	9.84	151.69	-356.03	112.22	786.64	769.56	17.08	46.063	
3,400.00	3,318.38	3,226.13	3,183.40	13.03	10.26	151.64	-374.64	119.77	829.13	811.36	17.77	46.666	
3,500.00	3,413.65	3,316.65	3,271.66	13.63	10.69	151.60	-393.25	127.32	871.62	853.16	18.46	47.217	
3,600.00	3,508.92	3,407.17	3,359.92	14.24	11.11	151.56	-411.87	134.87	914.12	894.96	19.16	47.722	
3,700.00	3,604.19	3,497.69	3,448.19	14.84	11.54	151.52	-430.48	142.41	956.61	936.76	19.85	48.187	
3,800.00	3,699.46	3,588.21	3,536.45	15.45	11.97	151.49	-449.09	149.96	999.11	978.56	20.55	48.617	
3,900.00	3,794.73	3,678.73	3,624.72	16.05	12.39	151.46	-467.70	157.51	1,041.60	1,020.35	21.25	49.014	
4,000.00	3,890.01	3,769.25	3,712.98	16.66	12.82	151.43	-486.31	165.06	1,084.10	1,062.15	21.95	49.383	
4,100.00	3,985.28	3,859.77	3,801.24	17.27	13.25	151.41	-504.93	172.61	1,126.59	1,103.94	22.66	49.726	
4,200.00	4,080.55	3,950.29	3,889.51	17.88	13.68	151.38	-523.54	180.16	1,169.09	1,145.73	23.36	50.046	
4,300.00	4,175.82	4,040.81	3,977.77	18.49	14.11	151.36	-542.15	187.71	1,211.59	1,187.52	24.07	50.345	
4,400.00	4,271.09	4,131.33	4,066.03	19.10	14.54	151.34	-560.76	195.26	1,254.08	1,229.31	24.77	50.625	
4,500.00	4,366.37	4,221.85	4,154.30	19.71	14.97	151.32	-579.38	202.81	1,296.58	1,271.10	25.48	50.888	
4,600.00	4,461.64	4,312.37	4,242.56	20.32	15.41	151.30	-597.99	210.36	1,339.08	1,312.89	26.19	51.134	
4,700.00	4,556.91	4,402.89	4,330.83	20.93	15.84	151.29	-616.60	217.91	1,381.57	1,354.68	26.90	51.367	
4,800.00	4,652.18	4,493.41	4,419.09	21.54	16.27	151.27	-635.21	225.46	1,424.07	1,396.46	27.61	51.586	
4,900.00	4,747.45	4,583.93	4,507.35	22.15	16.70	151.26	-653.82	233.01	1,466.57	1,438.25	28.32	51.792	

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 11-9
Project:	COLORADO NORTHERN ZONE - 83	TVD Reference:	WELL @ 5067.00ft (Original Well Elev)
Reference Site:	WELD_NRC 19-9 PAD	MD Reference:	WELL @ 5067.00ft (Original Well Elev)
Site Error:	0.00ft	North Reference:	True
Reference Well:	P_NRC 11-9	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00ft	Output errors are at	2.00 sigma
Reference Wellbore	P_NRC 11-9	Database:	EDM 2003.21 Single User Db
Reference Design:	PLAN #1 1-10-10 RHS	Offset TVD Reference:	Offset Datum

Offset Design WELD_NRC 19-9 PAD - P_NRC 35-9 - P_NRC 35-9 - PLAN #1 1-10-10 RHS												Offset Site Error:	0.00 ft
Survey Program: 0-MWD												Offset Well Error:	0.00 ft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	
5,000.00	4,842.72	4,674.45	4,595.62	22.76	17.14	151.24	-672.44	240.56	1,509.06	1,480.04	29.03	51.988	
5,100.00	4,938.00	4,764.97	4,683.88	23.38	17.57	151.23	-691.05	248.11	1,551.56	1,521.82	29.74	52.173	
5,200.00	5,033.27	4,855.49	4,772.14	23.99	18.00	151.22	-709.66	255.66	1,594.06	1,563.61	30.45	52.349	
5,300.00	5,128.54	4,946.01	4,860.41	24.60	18.44	151.20	-728.27	263.21	1,636.55	1,605.39	31.16	52.516	
5,400.00	5,223.81	5,036.53	4,948.67	25.22	18.87	151.19	-746.88	270.76	1,679.05	1,647.18	31.88	52.674	
5,500.00	5,319.08	5,127.05	5,036.94	25.83	19.31	151.18	-765.50	278.31	1,721.55	1,688.96	32.59	52.825	
5,600.00	5,414.35	5,217.57	5,125.20	26.45	19.74	151.17	-784.11	285.86	1,764.05	1,730.74	33.30	52.969	
5,683.08	5,493.51	5,292.78	5,198.53	26.96	20.10	151.16	-799.57	292.13	1,799.36	1,765.46	33.90	53.084	
5,700.00	5,509.64	5,308.11	5,213.48	27.05	20.18	151.24	-802.72	293.41	1,806.50	1,772.46	34.04	53.068	
5,800.00	5,605.59	5,399.46	5,302.56	27.50	20.62	151.61	-821.51	301.03	1,847.14	1,812.30	34.84	53.023	
5,900.00	5,702.47	5,491.99	5,392.78	27.91	21.06	151.90	-840.53	308.74	1,884.95	1,849.35	35.60	52.946	
6,000.00	5,800.15	5,585.56	5,484.02	28.28	21.51	152.10	-859.77	316.55	1,919.90	1,883.57	36.33	52.845	
6,100.00	5,898.51	5,680.07	5,576.17	28.60	21.97	152.22	-879.20	324.43	1,951.96	1,914.94	37.02	52.724	
6,200.00	5,997.45	5,775.40	5,669.13	28.88	22.42	152.27	-898.81	332.38	1,981.11	1,943.43	37.67	52.588	
6,300.00	6,096.83	5,893.50	5,784.35	29.11	22.96	152.18	-922.81	342.12	2,007.21	1,968.87	38.34	52.348	
6,400.00	6,196.54	6,101.08	5,988.79	29.30	23.57	151.89	-955.89	355.53	2,026.77	1,987.68	39.09	51.852	
6,500.00	6,296.45	6,314.34	6,200.95	29.44	24.02	151.72	-975.50	363.49	2,037.85	1,998.18	39.67	51.370	
6,567.56	6,364.00	6,460.08	6,346.58	29.51	24.24	-161.05	-980.46	365.50	2,040.43	2,000.46	39.97	51.049	
6,600.00	6,396.44	6,509.95	6,396.44	29.54	24.30	-161.05	-980.63	365.57	2,040.49	2,000.41	40.09	50.903	
6,700.00	6,496.44	6,609.95	6,496.44	29.64	24.40	-161.05	-980.63	365.57	2,040.49	2,000.13	40.37	50.550	
6,800.00	6,596.44	6,709.95	6,596.44	29.74	24.51	-161.05	-980.63	365.57	2,040.49	1,999.84	40.65	50.198	
6,900.00	6,696.44	6,809.95	6,696.44	29.85	24.62	-161.05	-980.63	365.57	2,040.49	1,999.56	40.94	49.847	
7,000.00	6,796.44	6,909.95	6,796.44	29.95	24.72	-161.05	-980.63	365.57	2,040.49	1,999.27	41.22	49.497	
7,100.00	6,896.44	7,009.95	6,896.44	30.06	24.84	-161.05	-980.63	365.57	2,040.49	1,998.98	41.52	49.149	
7,200.00	6,996.44	7,109.95	6,996.44	30.17	24.95	-161.05	-980.63	365.57	2,040.49	1,998.68	41.81	48.803	
7,300.00	7,096.44	7,209.95	7,096.44	30.28	25.06	-161.05	-980.63	365.57	2,040.49	1,998.38	42.11	48.458	
7,400.00	7,196.44	7,309.95	7,196.44	30.39	25.18	-161.05	-980.63	365.57	2,040.49	1,998.08	42.41	48.115	
7,500.00	7,296.44	7,409.95	7,296.44	30.50	25.29	-161.05	-980.63	365.57	2,040.49	1,997.78	42.71	47.774	
7,600.00	7,396.44	7,509.95	7,396.44	30.62	25.41	-161.05	-980.63	365.57	2,040.49	1,997.48	43.02	47.434	
7,700.00	7,496.44	7,609.95	7,496.44	30.73	25.53	-161.05	-980.63	365.57	2,040.49	1,997.17	43.32	47.097	
7,800.00	7,596.44	7,709.95	7,596.44	30.85	25.65	-161.05	-980.63	365.57	2,040.49	1,996.86	43.64	46.762	
7,900.00	7,696.44	7,809.95	7,696.44	30.96	25.77	-161.05	-980.63	365.57	2,040.49	1,996.54	43.95	46.430	
8,000.00	7,796.44	7,909.95	7,796.44	31.08	25.89	-161.05	-980.63	365.57	2,040.49	1,996.23	44.26	46.099	
8,100.00	7,896.44	8,009.95	7,896.44	31.20	26.02	-161.05	-980.63	365.57	2,040.49	1,995.91	44.58	45.771	
8,200.00	7,996.44	8,109.95	7,996.44	31.32	26.15	-161.05	-980.63	365.57	2,040.49	1,995.59	44.90	45.445	
8,300.00	8,096.44	8,209.95	8,096.44	31.44	26.27	-161.05	-980.63	365.57	2,040.49	1,995.27	45.22	45.121	
8,400.00	8,196.44	8,309.95	8,196.44	31.57	26.40	-161.05	-980.63	365.57	2,040.49	1,994.95	45.55	44.800	
8,500.00	8,296.44	8,409.95	8,296.44	31.69	26.53	-161.05	-980.63	365.57	2,040.49	1,994.62	45.87	44.482	
8,600.00	8,396.44	8,417.51	8,304.00	31.82	26.54	-161.05	-980.63	365.57	2,042.59	1,996.53	46.05	44.352	
8,700.00	8,496.44	8,417.51	8,304.00	31.94	26.54	-161.05	-980.63	365.57	2,049.55	2,003.32	46.22	44.339	
8,747.56	8,544.00	8,417.51	8,304.00	32.00	26.54	-161.05	-980.63	365.57	2,054.56	2,008.25	46.31	44.370	

Company:	US ROCKIES REGION PLANNING	Local Co-ordinate Reference:	Well P_NRC 11-9
Project:	COLORADO NORTHERN ZONE - 83	TVD Reference:	WELL @ 5067.00ft (Original Well Elev)
Reference Site:	WELD_NRC 19-9 PAD	MD Reference:	WELL @ 5067.00ft (Original Well Elev)
Site Error:	0.00ft	North Reference:	True
Reference Well:	P_NRC 11-9	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00ft	Output errors are at	2.00 sigma
Reference Wellbore	P_NRC 11-9	Database:	EDM 2003.21 Single User Db
Reference Design:	PLAN #1 1-10-10 RHS	Offset TVD Reference:	Offset Datum

Offset Design WELD_NRC 19-9 PAD - P_NRC 36-9 - P_NRC 36-9 - PLAN #1 1-10-10 RHS												Offset Site Error:	0.00 ft
Survey Program: 0-MWD												Offset Well Error:	0.00 ft
Reference		Offset		Semi Major Axis			Distance						
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	-90.06	-0.02	-15.95	15.95				
100.00	100.00	100.00	100.00	0.10	0.10	-90.06	-0.02	-15.95	15.95	15.76	0.19	83.509	
200.00	200.00	200.00	200.00	0.32	0.32	-90.06	-0.02	-15.95	15.95	15.31	0.64	24.906	
300.00	300.00	300.00	300.00	0.55	0.55	-90.06	-0.02	-15.95	15.95	14.86	1.09	14.636	
400.00	400.00	400.00	400.00	0.77	0.77	-90.06	-0.02	-15.95	15.95	14.41	1.54	10.362	
500.00	500.00	500.00	500.00	0.99	0.99	-90.06	-0.02	-15.95	15.95	13.97	1.99	8.021	
600.00	600.00	600.00	600.00	1.22	1.22	-90.06	-0.02	-15.95	15.95	13.52	2.44	6.542	
700.00	700.00	700.00	700.00	1.44	1.44	-90.06	-0.02	-15.95	15.95	13.07	2.89	5.524	
800.00	800.00	800.00	800.00	1.67	1.67	-90.06	-0.02	-15.95	15.95	12.62	3.34	4.780	
900.00	900.00	900.00	900.00	1.89	1.89	-90.06	-0.02	-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	-90.06	-0.02	-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	-90.06	-0.02	-15.95	15.95	11.34	4.62	3.454	
1,100.00	1,100.00	1,100.07	1,100.07	2.34	2.34	-137.51	-0.04	-15.92	15.95	11.27	4.68	3.406	
1,169.33	1,169.32	1,169.70	1,169.69	2.49	2.47	-142.80	-0.68	-14.89	15.88	10.92	4.96	3.203 CC	
1,200.00	1,199.97	1,200.48	1,200.44	2.56	2.53	-147.48	-1.25	-13.98	15.94	10.86	5.08	3.137 ES, SF	
1,300.00	1,299.80	1,300.57	1,300.37	2.78	2.72	-170.39	-4.32	-9.08	17.93	12.44	5.48	3.270	
1,400.00	1,399.37	1,400.08	1,399.45	3.01	2.93	166.40	-9.20	-1.28	25.18	19.28	5.90	4.267	
1,500.00	1,498.55	1,498.76	1,497.32	3.26	3.16	151.70	-15.84	9.33	38.39	32.03	6.35	6.043	
1,600.00	1,597.23	1,596.36	1,593.65	3.53	3.43	143.39	-24.17	22.63	56.74	49.90	6.84	8.296	
1,700.00	1,695.29	1,692.64	1,688.09	3.84	3.72	138.45	-34.08	38.47	79.63	72.26	7.37	10.807	
1,800.00	1,792.60	1,787.40	1,780.38	4.20	4.06	135.27	-45.47	56.67	106.74	98.79	7.95	13.423	
1,900.00	1,889.05	1,880.44	1,870.26	4.60	4.45	133.06	-58.23	77.05	137.84	129.25	8.60	16.036	
1,969.47	1,955.49	1,943.97	1,931.16	4.92	4.75	131.87	-67.83	92.39	161.72	152.64	9.08	17.803	
2,000.00	1,984.57	1,971.62	1,957.53	5.07	4.88	131.54	-72.23	99.42	172.69	163.37	9.32	18.533	
2,100.00	2,079.84	2,061.32	2,042.53	5.57	5.36	130.25	-87.43	123.71	209.64	199.51	10.13	20.705	
2,200.00	2,175.12	2,149.56	2,125.23	6.09	5.90	128.77	-103.75	149.79	248.24	237.25	10.98	22.599	
2,300.00	2,270.39	2,236.23	2,205.49	6.63	6.47	127.22	-121.09	177.50	288.55	276.66	11.89	24.274	
2,400.00	2,365.66	2,321.70	2,283.65	7.18	7.09	125.65	-139.45	206.81	330.62	317.80	12.82	25.782	
2,500.00	2,460.93	2,411.66	2,365.46	7.74	7.79	124.22	-159.30	238.53	373.55	359.73	13.82	27.031	
2,600.00	2,556.20	2,501.62	2,447.27	8.31	8.50	123.07	-179.15	270.25	416.64	401.81	14.83	28.096	
2,700.00	2,651.47	2,591.58	2,529.08	8.89	9.23	122.14	-199.00	301.97	459.83	443.98	15.85	29.008	
2,800.00	2,746.75	2,681.54	2,610.88	9.47	9.96	121.37	-218.85	333.69	503.11	486.22	16.89	29.796	
2,900.00	2,842.02	2,771.50	2,692.69	10.06	10.71	120.73	-238.71	365.41	546.45	528.52	17.93	30.482	
3,000.00	2,937.29	2,861.46	2,774.50	10.65	11.46	120.17	-258.56	397.12	589.84	570.86	18.98	31.085	
3,100.00	3,032.56	2,951.42	2,856.31	11.24	12.22	119.70	-278.41	428.84	633.26	613.23	20.03	31.616	
3,200.00	3,127.83	3,041.38	2,938.12	11.84	12.98	119.28	-298.26	460.56	676.72	655.63	21.09	32.088	
3,300.00	3,223.10	3,131.35	3,019.93	12.43	13.74	118.91	-318.11	492.28	720.21	698.05	22.15	32.510	
3,400.00	3,318.38	3,221.31	3,101.74	13.03	14.51	118.59	-337.97	524.00	763.71	740.49	23.22	32.888	
3,500.00	3,413.65	3,311.27	3,183.55	13.63	15.28	118.30	-357.82	555.72	807.23	782.94	24.29	33.229	
3,600.00	3,508.92	3,401.23	3,265.36	14.24	16.05	118.04	-377.67	587.43	850.77	825.40	25.37	33.538	
3,700.00	3,604.19	3,491.19	3,347.17	14.84	16.82	117.80	-397.52	619.15	894.32	867.88	26.44	33.819	
3,800.00	3,699.46	3,581.15	3,428.98	15.45	17.60	117.59	-417.38	650.87	937.88	910.36	27.52	34.075	
3,900.00	3,794.73	3,671.11	3,510.79	16.05	18.38	117.40	-437.23	682.59	981.46	952.85	28.61	34.310	
4,000.00	3,890.01	3,761.07	3,592.60	16.66	19.16	117.22	-457.08	714.31	1,025.04	995.35	29.69	34.526	
4,100.00	3,985.28	3,851.03	3,674.41	17.27	19.94	117.05	-476.93	746.03	1,068.62	1,037.85	30.77	34.725	
4,200.00	4,080.55	3,940.99	3,756.22	17.88	20.72	116.90	-496.78	777.74	1,112.22	1,080.35	31.86	34.909	
4,300.00	4,175.82	4,030.95	3,838.03	18.49	21.50	116.77	-516.64	809.46	1,155.81	1,122.87	32.95	35.080	
4,400.00	4,271.09	4,120.92	3,919.84	19.10	22.28	116.64	-536.49	841.18	1,199.42	1,165.38	34.04	35.238	
4,500.00	4,366.37	4,210.88	4,001.65	19.71	23.06	116.52	-556.34	872.90	1,243.03	1,207.90	35.13	35.386	
4,600.00	4,461.64	4,300.84	4,083.46	20.32	23.85	116.40	-576.19	904.62	1,286.64	1,250.42	36.22	35.524	
4,700.00	4,556.91	4,390.80	4,165.27	20.93	24.63	116.30	-596.04	936.34	1,330.26	1,292.95	37.31	35.653	
4,800.00	4,652.18	4,480.76	4,247.08	21.54	25.42	116.20	-615.90	968.05	1,373.88	1,335.47	38.40	35.775	

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 11-9
Project:	COLORADO NORTHERN ZONE - 83	TVD Reference:	WELL @ 5067.00ft (Original Well Elev)
Reference Site:	WELD_NRC 19-9 PAD	MD Reference:	WELL @ 5067.00ft (Original Well Elev)
Site Error:	0.00ft	North Reference:	True
Reference Well:	P_NRC 11-9	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00ft	Output errors are at	2.00 sigma
Reference Wellbore	P_NRC 11-9	Database:	EDM 2003.21 Single User Db
Reference Design:	PLAN #1 1-10-10 RHS	Offset TVD Reference:	Offset Datum

Offset Design WELD_NRC 19-9 PAD - P_NRC 36-9 - P_NRC 36-9 - PLAN #1 1-10-10 RHS												Offset Site Error:	0.00 ft
Survey Program: 0-MWD												Offset Well Error:	0.00 ft
Reference	Offset	Semi Major Axis		Distance									
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
4,900.00	4,747.45	4,570.72	4,328.89	22.15	26.20	116.11	-635.75	999.77	1,417.50	1,378.00	39.50	35.888	
5,000.00	4,842.72	4,660.68	4,410.70	22.76	26.99	116.02	-655.60	1,031.49	1,461.13	1,420.53	40.59	35.996	
5,100.00	4,938.00	4,750.64	4,492.51	23.38	27.78	115.94	-675.45	1,063.21	1,504.76	1,463.07	41.69	36.097	
5,200.00	5,033.27	4,840.60	4,574.32	23.99	28.56	115.87	-695.31	1,094.93	1,548.39	1,505.60	42.78	36.192	
5,300.00	5,128.54	4,930.56	4,656.12	24.60	29.35	115.79	-715.16	1,126.65	1,592.02	1,548.14	43.88	36.282	
5,400.00	5,223.81	5,020.53	4,737.93	25.22	30.14	115.73	-735.01	1,158.37	1,635.65	1,590.68	44.98	36.368	
5,500.00	5,319.08	5,110.49	4,819.74	25.83	30.92	115.66	-754.86	1,190.08	1,679.29	1,633.22	46.07	36.449	
5,600.00	5,414.35	5,200.45	4,901.55	26.45	31.71	115.60	-774.71	1,221.80	1,722.93	1,675.76	47.17	36.526	
5,683.08	5,493.51	5,275.19	4,969.52	26.96	32.37	115.55	-791.21	1,248.15	1,759.19	1,711.10	48.08	36.587	
5,700.00	5,509.64	5,290.42	4,983.37	27.05	32.50	115.69	-794.57	1,253.52	1,766.55	1,718.24	48.31	36.570	
5,800.00	5,605.59	5,380.75	5,065.52	27.50	33.29	116.40	-814.50	1,285.37	1,809.27	1,759.75	49.53	36.531	
5,900.00	5,702.47	5,471.56	5,148.10	27.91	34.09	116.99	-834.54	1,317.39	1,850.61	1,799.91	50.70	36.505	
6,000.00	5,800.15	5,611.54	5,276.14	28.28	35.18	117.29	-864.55	1,365.33	1,889.84	1,837.84	52.00	36.344	
6,100.00	5,898.51	5,792.62	5,445.48	28.60	36.25	117.41	-898.54	1,419.64	1,923.82	1,870.57	53.25	36.128	
6,200.00	5,997.45	5,981.20	5,625.75	28.88	37.18	117.50	-927.83	1,466.43	1,951.87	1,897.52	54.35	35.911	
6,300.00	6,096.83	6,176.17	5,815.54	29.11	37.94	117.55	-951.43	1,504.14	1,973.66	1,918.37	55.29	35.699	
6,400.00	6,196.54	6,376.13	6,012.87	29.30	38.52	117.57	-968.46	1,531.35	1,988.93	1,932.90	56.03	35.497	
6,500.00	6,296.45	6,579.42	6,215.28	29.44	38.90	117.58	-978.25	1,547.00	1,997.49	1,940.92	56.58	35.306	
6,567.56	6,364.00	6,717.73	6,353.51	29.51	39.05	164.85	-980.55	1,550.66	1,999.41	1,942.58	56.83	35.183	
6,600.00	6,396.44	6,760.67	6,396.44	29.54	39.08	164.85	-980.58	1,550.73	1,999.44	1,942.54	56.90	35.138	
6,700.00	6,496.44	6,860.67	6,496.44	29.64	39.15	164.85	-980.58	1,550.73	1,999.44	1,942.33	57.11	35.011	
6,800.00	6,596.44	6,960.67	6,596.44	29.74	39.23	164.85	-980.58	1,550.73	1,999.44	1,942.12	57.32	34.883	
6,900.00	6,696.44	7,060.67	6,696.44	29.85	39.30	164.85	-980.58	1,550.73	1,999.44	1,941.91	57.53	34.754	
7,000.00	6,796.44	7,160.67	6,796.44	29.95	39.38	164.85	-980.58	1,550.73	1,999.44	1,941.69	57.75	34.624	
7,100.00	6,896.44	7,260.67	6,896.44	30.06	39.46	164.85	-980.58	1,550.73	1,999.44	1,941.47	57.97	34.494	
7,200.00	6,996.44	7,360.67	6,996.44	30.17	39.54	164.85	-980.58	1,550.73	1,999.44	1,941.25	58.19	34.363	
7,300.00	7,096.44	7,460.67	7,096.44	30.28	39.62	164.85	-980.58	1,550.73	1,999.44	1,941.03	58.41	34.231	
7,400.00	7,196.44	7,560.67	7,196.44	30.39	39.70	164.85	-980.58	1,550.73	1,999.44	1,940.80	58.64	34.099	
7,500.00	7,296.44	7,660.67	7,296.44	30.50	39.78	164.85	-980.58	1,550.73	1,999.44	1,940.57	58.87	33.966	
7,600.00	7,396.44	7,760.67	7,396.44	30.62	39.87	164.85	-980.58	1,550.73	1,999.44	1,940.34	59.10	33.833	
7,700.00	7,496.44	7,860.67	7,496.44	30.73	39.95	164.85	-980.58	1,550.73	1,999.44	1,940.11	59.33	33.700	
7,800.00	7,596.44	7,960.67	7,596.44	30.85	40.04	164.85	-980.58	1,550.73	1,999.44	1,939.87	59.57	33.566	
7,900.00	7,696.44	8,060.67	7,696.44	30.96	40.12	164.85	-980.58	1,550.73	1,999.44	1,939.63	59.81	33.432	
8,000.00	7,796.44	8,160.67	7,796.44	31.08	40.21	164.85	-980.58	1,550.73	1,999.44	1,939.39	60.05	33.298	
8,100.00	7,896.44	8,260.67	7,896.44	31.20	40.30	164.85	-980.58	1,550.73	1,999.44	1,939.15	60.29	33.164	
8,200.00	7,996.44	8,360.67	7,996.44	31.32	40.39	164.85	-980.58	1,550.73	1,999.44	1,938.90	60.54	33.029	
8,300.00	8,096.44	8,460.67	8,096.44	31.44	40.48	164.85	-980.58	1,550.73	1,999.44	1,938.65	60.78	32.894	
8,400.00	8,196.44	8,560.67	8,196.44	31.57	40.57	164.85	-980.58	1,550.73	1,999.44	1,938.40	61.03	32.759	
8,500.00	8,296.44	8,660.67	8,296.44	31.69	40.66	164.85	-980.58	1,550.73	1,999.44	1,938.15	61.29	32.624	
8,600.00	8,396.44	8,663.22	8,299.00	31.82	40.67	164.85	-980.58	1,550.73	2,001.81	1,940.39	61.43	32.589	
8,700.00	8,496.44	8,663.22	8,299.00	31.94	40.67	164.85	-980.58	1,550.73	2,009.16	1,947.60	61.56	32.637	
8,747.56	8,544.00	8,663.22	8,299.00	32.00	40.67	164.85	-980.58	1,550.73	2,014.39	1,952.77	61.63	32.687	

Company:	US ROCKIES REGION PLANNING	Local Co-ordinate Reference:	Well P_NRC 11-9
Project:	COLORADO NORTHERN ZONE - 83	TVD Reference:	WELL @ 5067.00ft (Original Well Elev)
Reference Site:	WELD_NRC 19-9 PAD	MD Reference:	WELL @ 5067.00ft (Original Well Elev)
Site Error:	0.00ft	North Reference:	True
Reference Well:	P_NRC 11-9	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00ft	Output errors are at	2.00 sigma
Reference Wellbore	P_NRC 11-9	Database:	EDM 2003.21 Single User Db
Reference Design:	PLAN #1 1-10-10 RHS	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.00 ft
Survey Program: 0-UNKNOWN												Offset Well Error:	0.00 ft
Reference	Offset	Semi Major Axis					Distance						Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside 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	148.10	-49.92	31.07	61.79				
100.00	100.00	81.00	81.00	0.10	1.62	148.10	-49.92	31.07	58.80	57.08	1.72	34.273	
200.00	200.00	181.00	181.00	0.32	5.24	148.10	-49.92	31.07	58.80	53.24	5.56	10.575	
300.00	300.00	281.00	281.00	0.55	9.24	148.10	-49.92	31.07	58.80	49.01	9.79	6.009	
400.00	400.00	381.00	381.00	0.77	13.24	148.10	-49.92	31.07	58.80	44.79	14.01	4.197	
500.00	500.00	481.00	481.00	0.99	17.24	148.10	-49.92	31.07	58.80	40.56	18.23	3.225	
600.00	600.00	581.00	581.00	1.22	21.24	148.10	-49.92	31.07	58.80	36.34	22.46	2.618	
700.00	700.00	681.00	681.00	1.44	25.24	148.10	-49.92	31.07	58.80	32.11	26.68	2.203	
800.00	800.00	781.00	781.00	1.67	29.24	148.10	-49.92	31.07	58.80	27.89	30.91	1.902	
900.00	900.00	881.00	881.00	1.89	33.24	148.10	-49.92	31.07	58.80	23.66	35.13	1.674	
1,000.00	1,000.00	981.00	981.00	2.12	37.24	148.10	-49.92	31.07	58.80	19.44	39.36	1.494 Level 3	
1,085.00	1,085.00	1,066.00	1,066.00	2.31	40.64	148.10	-49.92	31.07	58.80	15.85	42.95	1.369 Level 3, CC	
1,100.00	1,100.00	1,081.00	1,081.00	2.34	41.24	100.86	-49.92	31.07	58.81	15.22	43.58	1.349 Level 3	
1,200.00	1,199.97	1,180.97	1,180.97	2.56	45.24	103.00	-49.92	31.07	59.27	11.48	47.80	1.240 Level 2	
1,300.00	1,299.80	1,280.80	1,280.80	2.78	49.23	108.26	-49.92	31.07	60.83	8.83	52.00	1.170 Level 2	
1,400.00	1,399.37	1,380.37	1,380.37	3.01	53.21	116.00	-49.92	31.07	64.33	8.16	56.17	1.145 Level 2, ES, SF	
1,500.00	1,498.55	1,479.55	1,479.55	3.26	57.18	125.12	-49.92	31.07	70.85	10.60	60.26	1.176 Level 2	
1,600.00	1,597.23	1,578.23	1,578.23	3.53	61.13	134.26	-49.92	31.07	81.29	17.11	64.18	1.267 Level 3	
1,700.00	1,695.29	1,676.29	1,676.29	3.84	65.05	142.42	-49.92	31.07	96.09	28.19	67.90	1.415 Level 3	
1,800.00	1,792.60	1,773.60	1,773.60	4.20	68.94	149.16	-49.92	31.07	115.31	43.89	71.42	1.615	
1,900.00	1,889.05	1,870.05	1,870.05	4.60	72.80	154.51	-49.92	31.07	138.78	64.05	74.72	1.857	
1,969.47	1,955.49	1,936.49	1,936.49	4.92	75.46	157.52	-49.92	31.07	157.47	80.57	76.90	2.048	
2,000.00	1,984.57	1,965.57	1,965.57	5.07	76.62	158.74	-49.92	31.07	166.13	88.09	78.04	2.129	
2,100.00	2,079.84	2,060.84	2,060.84	5.57	80.43	161.96	-49.92	31.07	194.91	113.08	81.83	2.382	
2,200.00	2,175.12	2,156.12	2,156.12	6.09	84.24	164.36	-49.92	31.07	224.11	138.46	85.65	2.616	
2,300.00	2,270.39	2,251.39	2,251.39	6.63	88.06	166.21	-49.92	31.07	253.59	164.09	89.51	2.833	
2,400.00	2,365.66	2,346.66	2,346.66	7.18	91.87	167.67	-49.92	31.07	283.26	189.89	93.37	3.034	
2,500.00	2,460.93	2,441.93	2,441.93	7.74	95.68	168.86	-49.92	31.07	313.07	215.82	97.26	3.219	
2,600.00	2,556.20	2,537.20	2,537.20	8.31	99.49	169.83	-49.92	31.07	342.98	241.84	101.15	3.391	
2,700.00	2,651.47	2,632.47	2,632.47	8.89	103.30	170.66	-49.92	31.07	372.97	267.93	105.04	3.551	
2,800.00	2,746.75	2,727.75	2,727.75	9.47	107.11	171.36	-49.92	31.07	403.02	294.07	108.95	3.699	
2,900.00	2,842.02	2,823.02	2,823.02	10.06	110.92	171.96	-49.92	31.07	433.11	320.25	112.86	3.838	
3,000.00	2,937.29	2,918.29	2,918.29	10.65	114.73	172.49	-49.92	31.07	463.24	346.47	116.77	3.967	
3,100.00	3,032.56	3,013.56	3,013.56	11.24	118.54	172.95	-49.92	31.07	493.41	372.72	120.68	4.088	
3,200.00	3,127.83	3,108.83	3,108.83	11.84	122.35	173.36	-49.92	31.07	523.59	398.99	124.60	4.202	
3,300.00	3,223.10	3,204.10	3,204.10	12.43	126.16	173.72	-49.92	31.07	553.81	425.28	128.52	4.309	
3,400.00	3,318.38	3,299.38	3,299.38	13.03	129.98	174.05	-49.92	31.07	584.03	451.59	132.44	4.410	
3,500.00	3,413.65	3,394.65	3,394.65	13.63	133.79	174.34	-49.92	31.07	614.28	477.91	136.37	4.505	
3,600.00	3,508.92	3,489.92	3,489.92	14.24	137.60	174.61	-49.92	31.07	644.54	504.24	140.29	4.594	
3,700.00	3,604.19	3,585.19	3,585.19	14.84	141.41	174.85	-49.92	31.07	674.81	530.59	144.22	4.679	
3,800.00	3,699.46	3,680.46	3,680.46	15.45	145.22	175.07	-49.92	31.07	705.08	556.94	148.15	4.759	
3,900.00	3,794.73	3,775.73	3,775.73	16.05	149.03	175.27	-49.92	31.07	735.37	583.30	152.07	4.836	
4,000.00	3,890.01	3,871.01	3,871.01	16.66	152.84	175.46	-49.92	31.07	765.67	609.66	156.00	4.908	
4,100.00	3,985.28	3,966.28	3,966.28	17.27	156.65	175.63	-49.92	31.07	795.97	636.04	159.93	4.977	
4,200.00	4,080.55	4,061.55	4,061.55	17.88	160.46	175.79	-49.92	31.07	826.28	662.41	163.87	5.042	
4,300.00	4,175.82	4,156.82	4,156.82	18.49	164.27	175.94	-49.92	31.07	856.59	688.80	167.80	5.105	
4,400.00	4,271.09	4,252.09	4,252.09	19.10	168.08	176.08	-49.92	31.07	886.91	715.18	171.73	5.165	
4,500.00	4,366.37	4,347.37	4,347.37	19.71	171.89	176.21	-49.92	31.07	917.24	741.57	175.66	5.222	
4,600.00	4,461.64	4,442.64	4,442.64	20.32	175.71	176.33	-49.92	31.07	947.56	767.97	179.60	5.276	
4,700.00	4,556.91	4,537.91	4,537.91	20.93	179.52	176.45	-49.92	31.07	977.89	794.36	183.53	5.328	
4,800.00	4,652.18	4,633.18	4,633.18	21.54	183.33	176.55	-49.92	31.07	1,008.23	820.76	187.47	5.378	
4,900.00	4,747.45	4,728.45	4,728.45	22.15	187.14	176.65	-49.92	31.07	1,038.57	847.17	191.40	5.426	

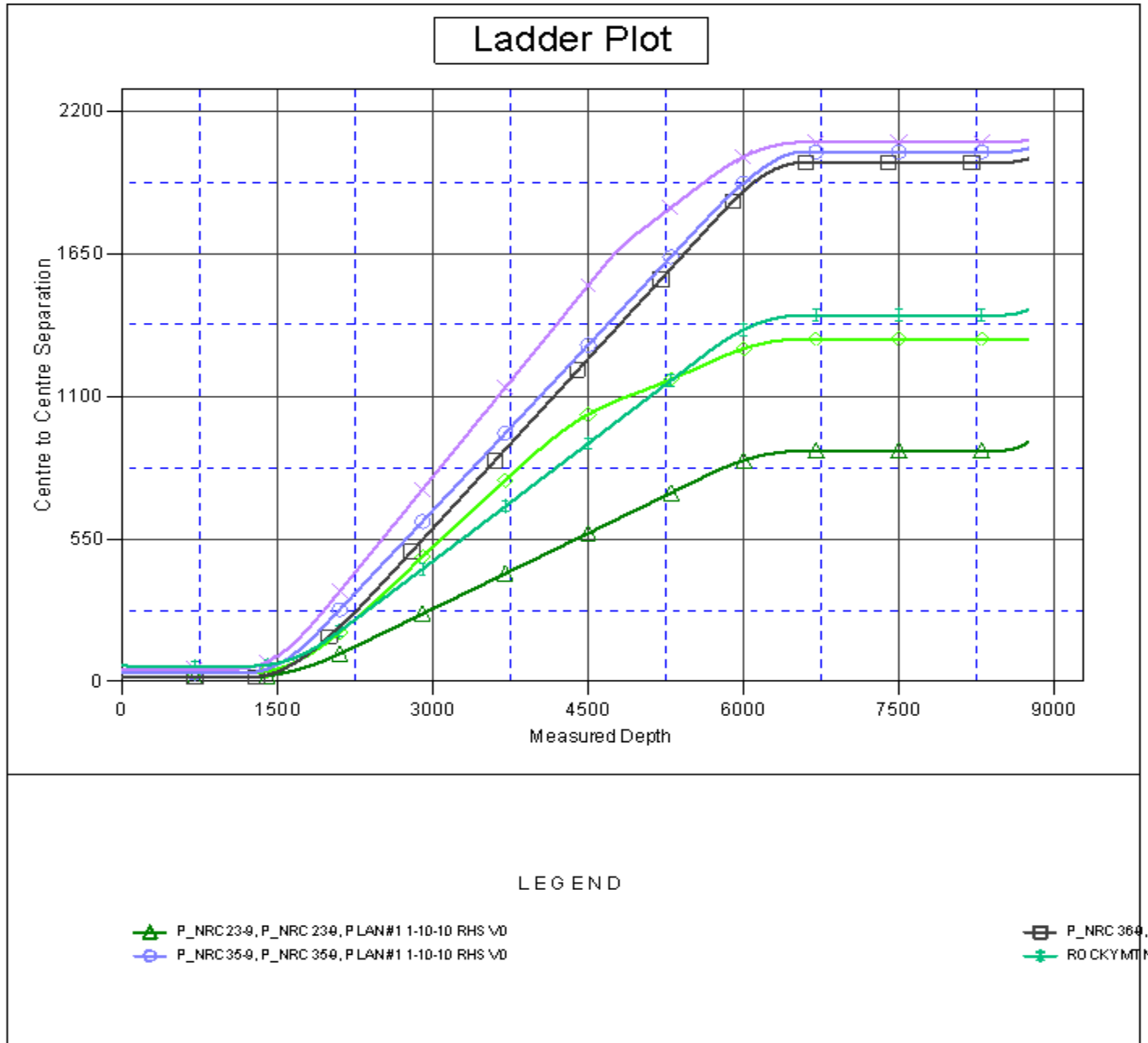
CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Company:	US ROCKIES REGION PLANNING	Local Co-ordinate Reference:	Well P_NRC 11-9
Project:	COLORADO NORTHERN ZONE - 83	TVD Reference:	WELL @ 5067.00ft (Original Well Elev)
Reference Site:	WELD_NRC 19-9 PAD	MD Reference:	WELL @ 5067.00ft (Original Well Elev)
Site Error:	0.00ft	North Reference:	True
Reference Well:	P_NRC 11-9	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00ft	Output errors are at	2.00 sigma
Reference Wellbore	P_NRC 11-9	Database:	EDM 2003.21 Single User Db
Reference Design:	PLAN #1 1-10-10 RHS	Offset TVD Reference:	Offset Datum

Offset Design WELD_NRC 19-9 PAD - ROCKY MTN FUEL CO. "F" #2 EXISTING - ROCKY MTN FUEL CO. "F" #2 E												Offset Site Error:	0.00 ft
Survey Program: 0-UNKNOWN												Offset Well Error:	0.00 ft
Reference		Offset		Semi Major Axis			Distance						
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning
5,000.00	4,842.72	4,823.72	4,823.72	22.76	190.95	176.75	-49.92	31.07	1,068.91	873.57	195.34	5.472	
5,100.00	4,938.00	4,919.00	4,919.00	23.38	194.76	176.84	-49.92	31.07	1,099.25	899.98	199.27	5.516	
5,200.00	5,033.27	5,014.27	5,014.27	23.99	198.57	176.92	-49.92	31.07	1,129.59	926.39	203.21	5.559	
5,300.00	5,128.54	5,109.54	5,109.54	24.60	202.38	177.00	-49.92	31.07	1,159.94	952.80	207.14	5.600	
5,400.00	5,223.81	5,204.81	5,204.81	25.22	206.19	177.08	-49.92	31.07	1,190.29	979.21	211.08	5.639	
5,500.00	5,319.08	5,300.08	5,300.08	25.83	210.00	177.15	-49.92	31.07	1,220.64	1,005.62	215.02	5.677	
5,600.00	5,414.35	5,395.35	5,395.35	26.45	213.81	177.22	-49.92	31.07	1,250.99	1,032.04	218.95	5.714	
5,683.08	5,493.51	5,474.51	5,474.51	26.96	216.98	177.28	-49.92	31.07	1,276.21	1,053.99	222.22	5.743	
5,700.00	5,509.64	5,490.64	5,490.64	27.05	217.63	177.29	-49.92	31.07	1,281.30	1,058.05	223.25	5.739	
5,800.00	5,605.59	5,586.59	5,586.59	27.50	221.46	177.38	-49.92	31.07	1,309.42	1,080.20	229.22	5.713	
5,900.00	5,702.47	5,683.47	5,683.47	27.91	225.34	177.45	-49.92	31.07	1,334.18	1,099.04	235.14	5.674	
6,000.00	5,800.15	5,781.15	5,781.15	28.28	229.25	177.51	-49.92	31.07	1,355.55	1,114.70	240.86	5.628	
6,100.00	5,898.51	5,879.51	5,879.51	28.60	233.18	177.56	-49.92	31.07	1,373.51	1,127.15	246.35	5.575	
6,200.00	5,997.45	5,978.45	5,978.45	28.88	237.14	177.60	-49.92	31.07	1,388.02	1,136.42	251.60	5.517	
6,300.00	6,096.83	6,077.83	6,077.83	29.11	241.11	177.62	-49.92	31.07	1,399.07	1,142.49	256.58	5.453	
6,400.00	6,196.54	6,177.54	6,177.54	29.30	245.10	177.64	-49.92	31.07	1,406.65	1,145.37	261.28	5.384	
6,500.00	6,296.45	6,277.45	6,277.45	29.44	249.10	177.65	-49.92	31.07	1,410.75	1,145.08	265.67	5.310	
6,567.56	6,364.00	6,345.00	6,345.00	29.51	251.80	-135.07	-49.92	31.07	1,411.54	1,143.09	268.45	5.258	
6,600.00	6,396.44	6,377.44	6,377.44	29.54	253.10	-135.07	-49.92	31.07	1,411.54	1,141.74	269.80	5.232	
6,700.00	6,496.44	6,477.44	6,477.44	29.64	257.10	-135.07	-49.92	31.07	1,411.54	1,137.57	273.97	5.152	
6,800.00	6,596.44	6,577.44	6,577.44	29.74	261.10	-135.07	-49.92	31.07	1,411.54	1,133.39	278.15	5.075	
6,900.00	6,696.44	6,677.44	6,677.44	29.85	265.10	-135.07	-49.92	31.07	1,411.54	1,129.21	282.33	5.000	
7,000.00	6,796.44	6,777.44	6,777.44	29.95	269.10	-135.07	-49.92	31.07	1,411.54	1,125.03	286.51	4.927	
7,100.00	6,896.44	6,877.44	6,877.44	30.06	273.10	-135.07	-49.92	31.07	1,411.54	1,120.85	290.69	4.856	
7,200.00	6,996.44	6,977.44	6,977.44	30.17	277.10	-135.07	-49.92	31.07	1,411.54	1,116.67	294.87	4.787	
7,300.00	7,096.44	7,077.44	7,077.44	30.28	281.10	-135.07	-49.92	31.07	1,411.54	1,112.49	299.05	4.720	
7,400.00	7,196.44	7,177.44	7,177.44	30.39	285.10	-135.07	-49.92	31.07	1,411.54	1,108.31	303.23	4.655	
7,500.00	7,296.44	7,277.44	7,277.44	30.50	289.10	-135.07	-49.92	31.07	1,411.54	1,104.13	307.42	4.592	
7,600.00	7,396.44	7,377.44	7,377.44	30.62	293.10	-135.07	-49.92	31.07	1,411.54	1,099.94	311.60	4.530	
7,700.00	7,496.44	7,477.44	7,477.44	30.73	297.10	-135.07	-49.92	31.07	1,411.54	1,095.75	315.79	4.470	
7,800.00	7,596.44	7,577.44	7,577.44	30.85	301.10	-135.07	-49.92	31.07	1,411.54	1,091.57	319.97	4.411	
7,900.00	7,696.44	7,677.44	7,677.44	30.96	305.10	-135.07	-49.92	31.07	1,411.54	1,087.38	324.16	4.354	
8,000.00	7,796.44	7,777.44	7,777.44	31.08	309.10	-135.07	-49.92	31.07	1,411.54	1,083.19	328.35	4.299	
8,100.00	7,896.44	7,877.44	7,877.44	31.20	313.10	-135.07	-49.92	31.07	1,411.54	1,079.00	332.54	4.245	
8,200.00	7,996.44	7,977.44	7,977.44	31.32	317.10	-135.07	-49.92	31.07	1,411.54	1,074.81	336.73	4.192	
8,300.00	8,096.44	8,077.44	8,077.44	31.44	321.10	-135.07	-49.92	31.07	1,411.54	1,070.62	340.92	4.140	
8,400.00	8,196.44	8,177.44	8,177.44	31.57	325.10	-135.07	-49.92	31.07	1,411.54	1,066.43	345.11	4.090	
8,500.00	8,296.44	8,277.44	8,277.44	31.69	329.10	-135.07	-49.92	31.07	1,411.54	1,062.24	349.30	4.041	
8,600.00	8,396.44	8,285.00	8,285.00	31.82	329.40	-135.07	-49.92	31.07	1,414.57	1,064.77	349.80	4.044	
8,700.00	8,496.44	8,285.00	8,285.00	31.94	329.40	-135.07	-49.92	31.07	1,424.60	1,074.61	349.99	4.070	
8,747.56	8,544.00	8,285.00	8,285.00	32.00	329.40	-135.07	-49.92	31.07	1,431.80	1,081.72	350.08	4.090	

Company:	US ROCKIES REGION PLANNING	Local Co-ordinate Reference:	Well P_NRC 11-9
Project:	COLORADO NORTHERN ZONE - 83	TVD Reference:	WELL @ 5067.00ft (Original Well Elev)
Reference Site:	WELD_NRC 19-9 PAD	MD Reference:	WELL @ 5067.00ft (Original Well Elev)
Site Error:	0.00ft	North Reference:	True
Reference Well:	P_NRC 11-9	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00ft	Output errors are at	2.00 sigma
Reference Wellbore	P_NRC 11-9	Database:	EDM 2003.21 Single User Db
Reference Design:	PLAN #1 1-10-10 RHS	Offset TVD Reference:	Offset Datum

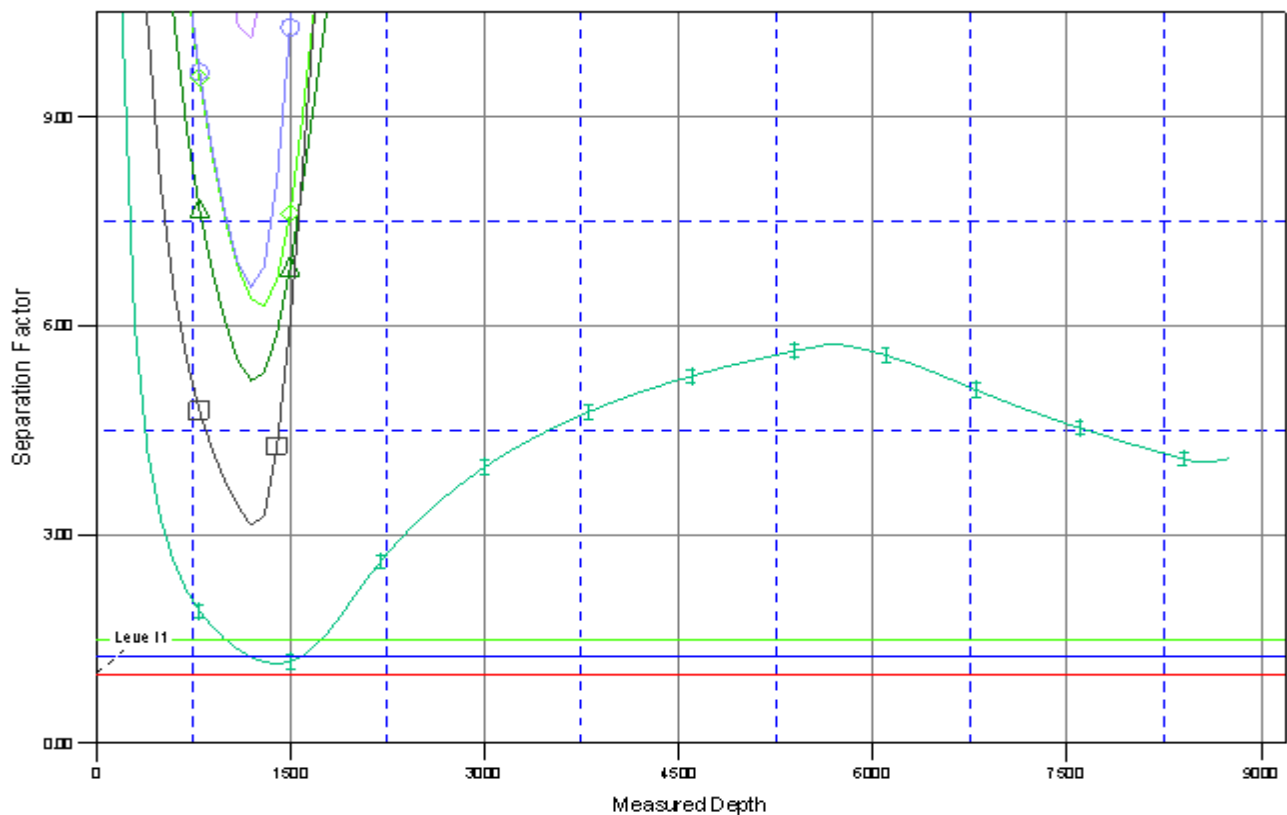
Reference Depths are relative to WELL @ 5067.00ft (Original Well Elev) Coordinates are relative to: P_NRC 11-9
Offset Depths are relative to Offset Datum Coordinate System is US State Plane 1983, Colorado Northern Zone
Central Meridian is 105° 30' 0.000 W ° Grid Convergence at Surface is: 0.39°





Company:	US ROCKIES REGION PLANNING	Local Co-ordinate Reference:	Well P_NRC 11-9
Project:	COLORADO NORTHERN ZONE - 83	TVD Reference:	WELL @ 5067.00ft (Original Well Elev)
Reference Site:	WELD_NRC 19-9 PAD	MD Reference:	WELL @ 5067.00ft (Original Well Elev)
Site Error:	0.00ft	North Reference:	True
Reference Well:	P_NRC 11-9	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00ft	Output errors are at	2.00 sigma
Reference Wellbore	P_NRC 11-9	Database:	EDM 2003.21 Single User Db
Reference Design:	PLAN #1 1-10-10 RHS	Offset TVD Reference:	Offset Datum



Reference Depths are relative to WELL @ 5067.00ft (Original Well Elev) Coordinates are relative to: P_NRC 11-9
Offset Depths are relative to Offset Datum Coordinate System is US State Plane 1983, Colorado Northern Zone
Central Meridian is 105° 30' 0.000 W ° Grid Convergence at Surface is: 0.39°

Separation Factor Plot



LEGEND

 P_NRC 23-9, P_NRC 23-9, P LAN#1 1-10-10 RHS V0
 P_NRC 35-9, P_NRC 35-9, P LAN#1 1-10-10 RHS V0

 P_NRC 36-9, I
 ROCKY MOUNTAIN