



US ROCKIES REGION PLANNING

COLORADO NORTHERN ZONE - 83

WELD_NRC 17-9 PAD

P_NRC 40-9

P_NRC 40-9

Plan: PLAN #1 1-5-10 RHS

Standard Planning Report

05 January, 2010





Azimuths to True North
Magnetic North: 9.06°

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

WELL DETAILS: P_NRC 40-9

+N/-S	+E/-W	Northing	Ground Level:	Easting	Latitude	Longitude	Slot
0.00	0.00	1268193.55	4997.00	3170048.35	40° 4' 4.735 N	104° 53' 32.665 W	

FORMATION TOP DETAILS

TVDPath	MDPath	Formation
3204.00	3338.52	PARKMAN
4679.00	4968.19	SUSSEX
5149.00	5487.25	SHANNON
7319.00	7692.49	NIO A
7659.00	8032.49	CODELL
8109.00	8482.49	JSAND

SECTION DETAILS

MD	Inc	Azi	TVD	+N/-S	+E/-W	DLeg	TFace	VSec	Target
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
1085.00	0.00	0.00	1085.00	0.00	0.00	0.00	0.00	0.00	
2343.21	25.16	116.95	2303.15	-123.22	242.36	2.00	116.95	271.89	
5434.28	25.16	116.95	5100.85	-718.91	1413.99	0.00	0.00	1586.26	
6692.49	0.00	0.00	6319.00	-842.14	1656.36	2.00	180.00	1858.15	
8617.49	0.00	0.00	8244.00	-842.14	1656.36	0.00	0.00	1858.15	PBHL_NRC 40-9(2590 FNL 50 FEL)50°TGT RA

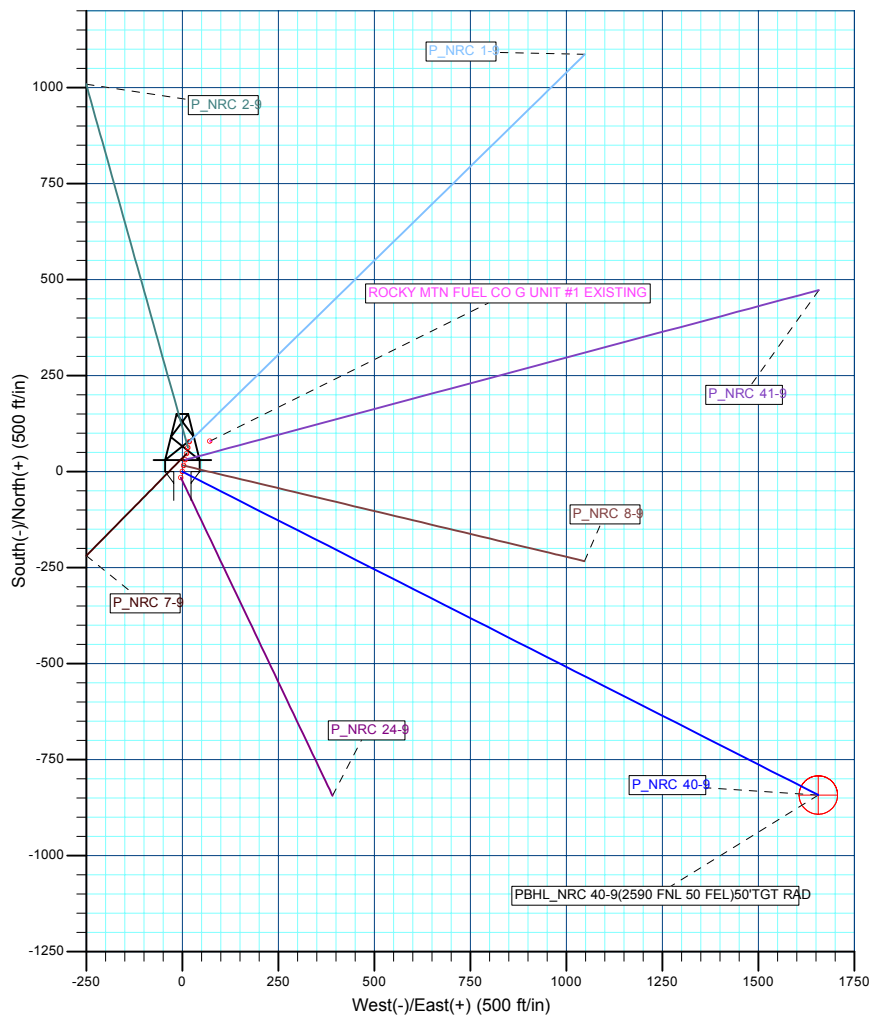
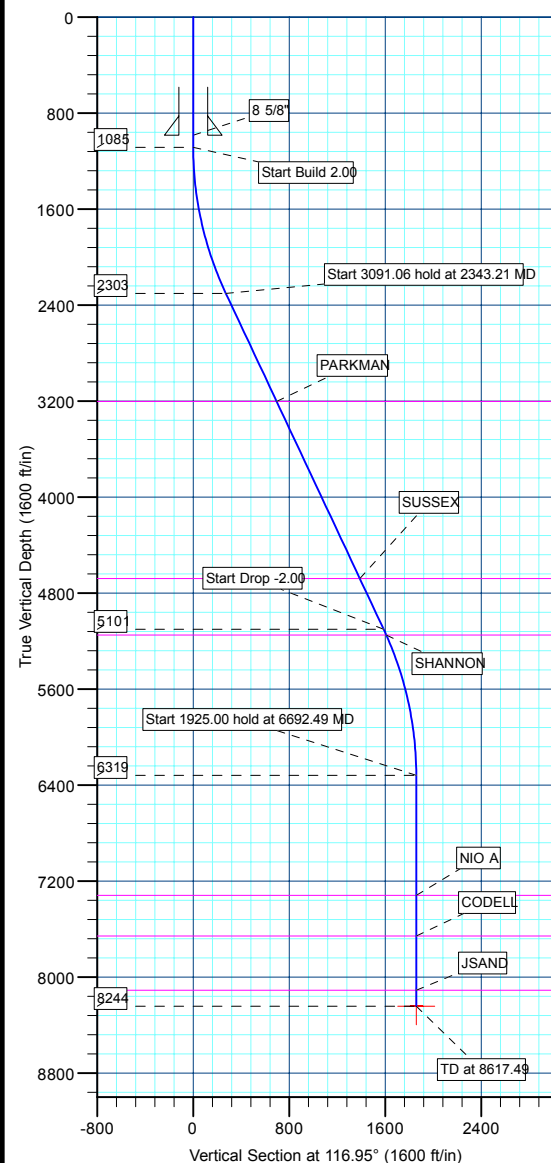
CASING DETAILS

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



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

GRD ELEV: 4997.00



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

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Shape
PBHL	8244.00	-842.14	1656.36	1267362.78	3171710.43	40° 3' 56.412 N	104° 53' 11.360 W	Circle (Radius: 50.00)

Plan: PLAN #1 1-5-10 RHS (P_NRC 40-9/P_NRC 40-9)

Created By: Robert H. Scott

Database:	EDM 2003.21 Single User Db	Local Co-ordinate Reference:	Well P_NRC 40-9
Company:	US ROCKIES REGION PLANNING	TVD Reference:	WELL @ 5012.00ft (Original Well Elev)
Project:	COLORADO NORTHERN ZONE - 83	MD Reference:	WELL @ 5012.00ft (Original Well Elev)
Site:	WELD_NRC 17-9 PAD	North Reference:	True
Well:	P_NRC 40-9	Survey Calculation Method:	Minimum Curvature
Wellbore:	P_NRC 40-9		
Design:	PLAN #1 1-5-10 RHS		

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

Site						WELD_NRC 17-9 PAD, SECTION 9 T1N R67W											
Site Position:						Northing:			1,268,271.65 ft			Latitude:			40° 4' 5.506 N		
From:			Lat/Long			Easting:			3,170,066.29 ft			Longitude:			104° 53' 32.428 W		
Position Uncertainty:			0.00 ft			Slot Radius:			in			Grid Convergence:			0.39 °		

Well	P_NRC 40-9					
Well Position	+N/-S	-77.97 ft	Northing:	1,268,193.55 ft	Latitude:	40° 4' 4.735 N
	+E/-W	-18.47 ft	Easting:	3,170,048.35 ft	Longitude:	104° 53' 32.665 W
Position Uncertainty		0.00 ft	Wellhead Elevation:	ft	Ground Level:	4,997.00 ft

Wellbore	P_NRC 40-9				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF200510	1/5/2010	9.06	66.82	53,113

Design	PLAN #1 1-5-10 RHS			
Audit Notes:				
Version:	Phase:	PLAN	Tie On Depth:	0.00
Vertical Section:	Depth From (TVD) (ft)	+N/-S (ft)	+E/-W (ft)	Direction (°)
	0.00	0.00	0.00	116.95

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	
2,343.21	25.16	116.95	2,303.15	-123.22	242.36	2.00	2.00	0.00	116.95	
5,434.28	25.16	116.95	5,100.85	-718.91	1,413.99	0.00	0.00	0.00	0.00	
6,692.49	0.00	0.00	6,319.00	-842.14	1,656.36	2.00	-2.00	0.00	180.00	
8,617.49	0.00	0.00	8,244.00	-842.14	1,656.36	0.00	0.00	0.00	0.00	PBHL_NRC 40-9(2)

Database:	EDM 2003.21 Single User Db	Local Co-ordinate Reference:	Well P_NRC 40-9
Company:	US ROCKIES REGION PLANNING	TVD Reference:	WELL @ 5012.00ft (Original Well Elev)
Project:	COLORADO NORTHERN ZONE - 83	MD Reference:	WELL @ 5012.00ft (Original Well Elev)
Site:	WELD_NRC 17-9 PAD	North Reference:	True
Well:	P_NRC 40-9	Survey Calculation Method:	Minimum Curvature
Wellbore:	P_NRC 40-9		
Design:	PLAN #1 1-5-10 RHS		

Planned Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
Start Build 2.00									
1,085.00	0.00	0.00	1,085.00	0.00	0.00	0.00	0.00	0.00	0.00
1,100.00	0.30	116.95	1,100.00	-0.02	0.04	0.04	2.00	2.00	0.00
1,200.00	2.30	116.95	1,199.97	-1.05	2.06	2.31	2.00	2.00	0.00
1,300.00	4.30	116.95	1,299.80	-3.65	7.19	8.06	2.00	2.00	0.00
1,400.00	6.30	116.95	1,399.37	-7.84	15.42	17.30	2.00	2.00	0.00
1,500.00	8.30	116.95	1,498.55	-13.60	26.75	30.01	2.00	2.00	0.00
1,600.00	10.30	116.95	1,597.23	-20.92	41.15	46.17	2.00	2.00	0.00
1,700.00	12.30	116.95	1,695.29	-29.80	58.62	65.76	2.00	2.00	0.00
1,800.00	14.30	116.95	1,792.60	-40.23	79.12	88.76	2.00	2.00	0.00
1,900.00	16.30	116.95	1,889.05	-52.19	102.64	115.15	2.00	2.00	0.00
2,000.00	18.30	116.95	1,984.52	-65.66	129.15	144.89	2.00	2.00	0.00
2,100.00	20.30	116.95	2,078.90	-80.64	158.61	177.94	2.00	2.00	0.00
2,200.00	22.30	116.95	2,172.06	-97.10	190.99	214.26	2.00	2.00	0.00
2,300.00	24.30	116.95	2,263.90	-115.03	226.25	253.81	2.00	2.00	0.00
Start 3091.06 hold at 2343.21 MD									
2,343.21	25.16	116.95	2,303.15	-123.22	242.36	271.89	2.00	2.00	0.00
2,400.00	25.16	116.95	2,354.55	-134.17	263.89	296.04	0.00	0.00	0.00
2,500.00	25.16	116.95	2,445.06	-153.44	301.79	338.56	0.00	0.00	0.00
2,600.00	25.16	116.95	2,535.57	-172.71	339.70	381.08	0.00	0.00	0.00
2,700.00	25.16	116.95	2,626.08	-191.98	377.60	423.60	0.00	0.00	0.00
2,800.00	25.16	116.95	2,716.59	-211.25	415.50	466.12	0.00	0.00	0.00
2,900.00	25.16	116.95	2,807.09	-230.52	453.41	508.64	0.00	0.00	0.00
3,000.00	25.16	116.95	2,897.60	-249.80	491.31	551.17	0.00	0.00	0.00
3,100.00	25.16	116.95	2,988.11	-269.07	529.21	593.69	0.00	0.00	0.00
3,200.00	25.16	116.95	3,078.62	-288.34	567.12	636.21	0.00	0.00	0.00
3,300.00	25.16	116.95	3,169.13	-307.61	605.02	678.73	0.00	0.00	0.00
PARKMAN									
3,338.52	25.16	116.95	3,204.00	-315.03	619.62	695.11	0.00	0.00	0.00
3,400.00	25.16	116.95	3,259.64	-326.88	642.93	721.25	0.00	0.00	0.00
3,500.00	25.16	116.95	3,350.15	-346.15	680.83	763.77	0.00	0.00	0.00
3,600.00	25.16	116.95	3,440.66	-365.42	718.73	806.29	0.00	0.00	0.00
3,700.00	25.16	116.95	3,531.17	-384.69	756.64	848.82	0.00	0.00	0.00
3,800.00	25.16	116.95	3,621.68	-403.97	794.54	891.34	0.00	0.00	0.00
3,900.00	25.16	116.95	3,712.19	-423.24	832.44	933.86	0.00	0.00	0.00
4,000.00	25.16	116.95	3,802.70	-442.51	870.35	976.38	0.00	0.00	0.00
4,100.00	25.16	116.95	3,893.21	-461.78	908.25	1,018.90	0.00	0.00	0.00
4,200.00	25.16	116.95	3,983.71	-481.05	946.16	1,061.42	0.00	0.00	0.00
4,300.00	25.16	116.95	4,074.22	-500.32	984.06	1,103.95	0.00	0.00	0.00
4,400.00	25.16	116.95	4,164.73	-519.59	1,021.96	1,146.47	0.00	0.00	0.00
4,500.00	25.16	116.95	4,255.24	-538.87	1,059.87	1,188.99	0.00	0.00	0.00
4,600.00	25.16	116.95	4,345.75	-558.14	1,097.77	1,231.51	0.00	0.00	0.00
4,700.00	25.16	116.95	4,436.26	-577.41	1,135.67	1,274.03	0.00	0.00	0.00
4,800.00	25.16	116.95	4,526.77	-596.68	1,173.58	1,316.55	0.00	0.00	0.00
4,900.00	25.16	116.95	4,617.28	-615.95	1,211.48	1,359.07	0.00	0.00	0.00
SUSSEX									
4,968.19	25.16	116.95	4,679.00	-629.09	1,237.33	1,388.07	0.00	0.00	0.00
5,000.00	25.16	116.95	4,707.79	-635.22	1,249.39	1,401.60	0.00	0.00	0.00
5,100.00	25.16	116.95	4,798.30	-654.49	1,287.29	1,444.12	0.00	0.00	0.00
5,200.00	25.16	116.95	4,888.81	-673.76	1,325.19	1,486.64	0.00	0.00	0.00
5,300.00	25.16	116.95	4,979.32	-693.04	1,363.10	1,529.16	0.00	0.00	0.00
5,400.00	25.16	116.95	5,069.83	-712.31	1,401.00	1,571.68	0.00	0.00	0.00
Start Drop -2.00									

Database:	EDM 2003.21 Single User Db	Local Co-ordinate Reference:	Well P_NRC 40-9
Company:	US ROCKIES REGION PLANNING	TVD Reference:	WELL @ 5012.00ft (Original Well Elev)
Project:	COLORADO NORTHERN ZONE - 83	MD Reference:	WELL @ 5012.00ft (Original Well Elev)
Site:	WELD_NRC 17-9 PAD	North Reference:	True
Well:	P_NRC 40-9	Survey Calculation Method:	Minimum Curvature
Wellbore:	P_NRC 40-9		
Design:	PLAN #1 1-5-10 RHS		

Planned Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
5,434.28	25.16	116.95	5,100.85	-718.91	1,413.99	1,586.26	0.00	0.00	0.00
SHANNON									
5,487.25	24.10	116.95	5,149.00	-728.92	1,433.67	1,608.34	2.00	-2.00	0.00
5,500.00	23.85	116.95	5,160.65	-731.27	1,438.29	1,613.52	2.00	-2.00	0.00
5,600.00	21.85	116.95	5,252.80	-748.87	1,472.91	1,652.35	2.00	-2.00	0.00
5,700.00	19.85	116.95	5,346.24	-765.00	1,504.63	1,687.94	2.00	-2.00	0.00
5,800.00	17.85	116.95	5,440.88	-779.64	1,533.43	1,720.25	2.00	-2.00	0.00
5,900.00	15.85	116.95	5,536.58	-792.77	1,559.27	1,749.23	2.00	-2.00	0.00
6,000.00	13.85	116.95	5,633.23	-804.39	1,582.11	1,774.86	2.00	-2.00	0.00
6,100.00	11.85	116.95	5,730.72	-814.47	1,601.93	1,797.10	2.00	-2.00	0.00
6,200.00	9.85	116.95	5,828.93	-823.00	1,618.71	1,815.92	2.00	-2.00	0.00
6,300.00	7.85	116.95	5,927.74	-829.97	1,632.43	1,831.30	2.00	-2.00	0.00
6,400.00	5.85	116.95	6,027.02	-835.38	1,643.06	1,843.23	2.00	-2.00	0.00
6,500.00	3.85	116.95	6,126.65	-839.21	1,650.59	1,851.68	2.00	-2.00	0.00
6,600.00	1.85	116.95	6,226.53	-841.46	1,655.02	1,856.65	2.00	-2.00	0.00
Start 1925.00 hold at 6692.49 MD									
6,692.49	0.00	0.00	6,319.00	-842.14	1,656.36	1,858.15	2.00	-2.00	0.00
6,700.00	0.00	0.00	6,326.51	-842.14	1,656.36	1,858.15	0.00	0.00	0.00
6,800.00	0.00	0.00	6,426.51	-842.14	1,656.36	1,858.15	0.00	0.00	0.00
6,900.00	0.00	0.00	6,526.51	-842.14	1,656.36	1,858.15	0.00	0.00	0.00
7,000.00	0.00	0.00	6,626.51	-842.14	1,656.36	1,858.15	0.00	0.00	0.00
7,100.00	0.00	0.00	6,726.51	-842.14	1,656.36	1,858.15	0.00	0.00	0.00
7,200.00	0.00	0.00	6,826.51	-842.14	1,656.36	1,858.15	0.00	0.00	0.00
7,300.00	0.00	0.00	6,926.51	-842.14	1,656.36	1,858.15	0.00	0.00	0.00
7,400.00	0.00	0.00	7,026.51	-842.14	1,656.36	1,858.15	0.00	0.00	0.00
7,500.00	0.00	0.00	7,126.51	-842.14	1,656.36	1,858.15	0.00	0.00	0.00
7,600.00	0.00	0.00	7,226.51	-842.14	1,656.36	1,858.15	0.00	0.00	0.00
NIO A									
7,692.49	0.00	0.00	7,319.00	-842.14	1,656.36	1,858.15	0.00	0.00	0.00
7,700.00	0.00	0.00	7,326.51	-842.14	1,656.36	1,858.15	0.00	0.00	0.00
7,800.00	0.00	0.00	7,426.51	-842.14	1,656.36	1,858.15	0.00	0.00	0.00
7,900.00	0.00	0.00	7,526.51	-842.14	1,656.36	1,858.15	0.00	0.00	0.00
8,000.00	0.00	0.00	7,626.51	-842.14	1,656.36	1,858.15	0.00	0.00	0.00
CODELL									
8,032.49	0.00	0.00	7,659.00	-842.14	1,656.36	1,858.15	0.00	0.00	0.00
8,100.00	0.00	0.00	7,726.51	-842.14	1,656.36	1,858.15	0.00	0.00	0.00
8,200.00	0.00	0.00	7,826.51	-842.14	1,656.36	1,858.15	0.00	0.00	0.00
8,300.00	0.00	0.00	7,926.51	-842.14	1,656.36	1,858.15	0.00	0.00	0.00
8,400.00	0.00	0.00	8,026.51	-842.14	1,656.36	1,858.15	0.00	0.00	0.00
JSAND									
8,482.49	0.00	0.00	8,109.00	-842.14	1,656.36	1,858.15	0.00	0.00	0.00
8,500.00	0.00	0.00	8,126.51	-842.14	1,656.36	1,858.15	0.00	0.00	0.00
8,600.00	0.00	0.00	8,226.51	-842.14	1,656.36	1,858.15	0.00	0.00	0.00
PBHL_NRC 40-9(2590 FNL 50 FEL)50'TGT RA									
8,617.49	0.00	0.00	8,244.00	-842.14	1,656.36	1,858.15	0.00	0.00	0.00

Database:	EDM 2003.21 Single User Db	Local Co-ordinate Reference:	Well P_NRC 40-9
Company:	US ROCKIES REGION PLANNING	TVD Reference:	WELL @ 5012.00ft (Original Well Elev)
Project:	COLORADO NORTHERN ZONE - 83	MD Reference:	WELL @ 5012.00ft (Original Well Elev)
Site:	WELD_NRC 17-9 PAD	North Reference:	True
Well:	P_NRC 40-9	Survey Calculation Method:	Minimum Curvature
Wellbore:	P_NRC 40-9		
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 40-9(259 - plan hits target center - Circle (radius 50.00)	0.00	0.00	8,244.00	-842.14	1,656.36	1,267,362.78	3,171,710.43	40° 3' 56.412 N	104° 53' 11.360 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)				(°)	(°)
3,338.52	3,204.00		PARKMAN			
4,968.19	4,679.00		SUSSEX			
5,487.25	5,149.00		SHANNON			
7,692.49	7,319.00		NIO A			
8,032.49	7,659.00		CODELL			
8,482.49	8,109.00		JSAND			

Plan Annotations				
Measured Depth	Vertical Depth	Local Coordinates		Comment
(ft)	(ft)	+N/-S (ft)	+E/-W (ft)	
1,085.00	1,085.00	0.00	0.00	Start Build 2.00
2,343.21	2,303.15	-123.22	242.36	Start 3091.06 hold at 2343.21 MD
5,434.28	5,100.85	-718.91	1,413.99	Start Drop -2.00
6,692.49	6,319.00	-842.14	1,656.36	Start 1925.00 hold at 6692.49 MD
8,617.49	8,244.00	-842.14	1,656.36	TD at 8617.49



US ROCKIES REGION PLANNING

**COLORADO NORTHERN ZONE - 83
WELD_NRC 17-9 PAD
P_NRC 40-9**

**P_NRC 40-9
PLAN #1 1-5-10 RHS**

Anticollision Report

05 January, 2010



Company:	US ROCKIES REGION PLANNING	Local Co-ordinate Reference:	Well P_NRC 40-9
Project:	COLORADO NORTHERN ZONE - 83	TVD Reference:	WELL @ 5012.00ft (Original Well Elev)
Reference Site:	WELD_NRC 17-9 PAD	MD Reference:	WELL @ 5012.00ft (Original Well Elev)
Site Error:	0.00ft	North Reference:	True
Reference Well:	P_NRC 40-9	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00ft	Output errors are at	2.00 sigma
Reference Wellbore	P_NRC 40-9	Database:	EDM 2003.21 Single User Db
Reference Design:	PLAN #1 1-5-10 RHS	Offset TVD Reference:	Offset Datum

Reference	PLAN #1 1-5-10 RHS		
Filter type:	NO GLOBAL FILTER: Using user defined selection & filtering criteria		
Interpolation Method:	Stations	Error Model:	ISCWSA
Depth Range:	0.00 to 20,000.00ft	Scan Method:	Closest Approach 3D
Results Limited by:	Maximum center-center distance of 10,000.00ft	Error Surface:	Elliptical Conic
Warning Levels Evaluated at:	2.00 Sigma		

Survey Tool Program	Date 1/5/2010			
From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description
0.00	8,617.49	PLAN #1 1-5-10 RHS (P_NRC 40-9)	MWD	MWD - Standard

Summary						
Site Name	Reference Measured Depth (ft)	Offset Measured Depth (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Separation Factor	Warning
Offset Well - Wellbore - Design						
WELD_NRC 17-9 PAD						
P_NRC 1-9 - P_NRC 1-9 - PLAN #1 1-5-10 RHS	1,085.00	1,085.00	80.13	75.51	17.348	CC
P_NRC 1-9 - P_NRC 1-9 - PLAN #1 1-5-10 RHS	1,100.00	1,099.65	80.17	75.49	17.124	ES
P_NRC 1-9 - P_NRC 1-9 - PLAN #1 1-5-10 RHS	1,300.00	1,294.65	88.75	83.26	16.160	SF
P_NRC 24-9 - P_NRC 24-9 - PLAN #1 1-5-10 RHS	1,085.00	1,085.00	16.09	11.47	3.482	CC
P_NRC 24-9 - P_NRC 24-9 - PLAN #1 1-5-10 RHS	1,100.00	1,099.93	16.11	11.43	3.442	ES, SF
P_NRC 2-9 - P_NRC 2-9 - PLAN #1 1-5-10 RHS	1,085.00	1,085.00	64.04	59.42	13.864	CC
P_NRC 2-9 - P_NRC 2-9 - PLAN #1 1-5-10 RHS	1,100.00	1,099.71	64.08	59.40	13.685	ES
P_NRC 2-9 - P_NRC 2-9 - PLAN #1 1-5-10 RHS	1,200.00	1,197.65	66.64	61.55	13.096	SF
P_NRC 41-9 - P_NRC 41-9 - PLAN #1 1-5-10 RHS	1,085.00	1,085.00	31.88	27.26	6.901	CC
P_NRC 41-9 - P_NRC 41-9 - PLAN #1 1-5-10 RHS	1,100.00	1,099.92	31.90	27.22	6.815	ES
P_NRC 41-9 - P_NRC 41-9 - PLAN #1 1-5-10 RHS	1,200.00	1,199.37	33.51	28.43	6.604	SF
P_NRC 7-9 - P_NRC 7-9 - Design #1	1,341.68	1,344.04	44.15	38.55	7.883	CC, ES
P_NRC 7-9 - P_NRC 7-9 - Design #1	1,400.00	1,402.05	45.15	39.32	7.746	SF
P_NRC 8-9 - P_NRC 8-9 - PLAN #1 1-5-10 RHS	1,085.00	1,085.00	16.15	11.54	3.500	CC
P_NRC 8-9 - P_NRC 8-9 - PLAN #1 1-5-10 RHS	1,100.00	1,100.00	16.16	11.48	3.456	ES
P_NRC 8-9 - P_NRC 8-9 - PLAN #1 1-5-10 RHS	1,200.00	1,199.99	16.69	11.64	3.301	SF
ROCKY MTN FUEL CO G UNIT #1 EXISTING - ROCKY	1,486.75	1,466.43	103.39	43.59	1.729	CC
ROCKY MTN FUEL CO G UNIT #1 EXISTING - ROCKY	1,600.00	1,578.23	104.95	40.41	1.626	ES
ROCKY MTN FUEL CO G UNIT #1 EXISTING - ROCKY	1,700.00	1,676.29	110.03	41.41	1.604	SF

Offset Design	WELD_NRC 17-9 PAD - P_NRC 1-9 - P_NRC 1-9 - PLAN #1 1-5-10 RHS											Offset Site Error:	0.00 ft
Survey Program:	0-MWD											Offset Well Error:	0.00 ft
Reference Measured Depth (ft)	Vertical Depth (ft)	Offset Measured Depth (ft)	Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning
0.00	0.00	0.00	0.00	0.00	0.00	13.33	77.97	18.47	80.13				
100.00	100.00	100.00	100.00	0.10	0.10	13.33	77.97	18.47	80.13	79.94	0.19	419.417	
200.00	200.00	200.00	200.00	0.32	0.32	13.33	77.97	18.47	80.13	79.49	0.64	125.089	
300.00	300.00	300.00	300.00	0.55	0.55	13.33	77.97	18.47	80.13	79.04	1.09	73.506	
400.00	400.00	400.00	400.00	0.77	0.77	13.33	77.97	18.47	80.13	78.59	1.54	52.045	
500.00	500.00	500.00	500.00	0.99	0.99	13.33	77.97	18.47	80.13	78.14	1.99	40.283	
600.00	600.00	600.00	600.00	1.22	1.22	13.33	77.97	18.47	80.13	77.69	2.44	32.858	
700.00	700.00	700.00	700.00	1.44	1.44	13.33	77.97	18.47	80.13	77.24	2.89	27.744	
800.00	800.00	800.00	800.00	1.67	1.67	13.33	77.97	18.47	80.13	76.79	3.34	24.007	

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 40-9
Project:	COLORADO NORTHERN ZONE - 83	TVD Reference:	WELL @ 5012.00ft (Original Well Elev)
Reference Site:	WELD_NRC 17-9 PAD	MD Reference:	WELL @ 5012.00ft (Original Well Elev)
Site Error:	0.00ft	North Reference:	True
Reference Well:	P_NRC 40-9	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00ft	Output errors are at	2.00 sigma
Reference Wellbore	P_NRC 40-9	Database:	EDM 2003.21 Single User Db
Reference Design:	PLAN #1 1-5-10 RHS	Offset TVD Reference:	Offset Datum

Offset Design WELD_NRC 17-9 PAD - P_NRC 1-9 - P_NRC 1-9 - PLAN #1 1-5-10 RHS												Offset Site Error:	0.00 ft
Survey Program: 0-MWD												Offset Well Error:	0.00 ft
Reference	Offset	Semi Major Axis		Distance								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	
900.00	900.00	900.00	900.00	1.89	1.89	13.33	77.97	18.47	80.13	76.34	3.79	21.158	
1,000.00	1,000.00	1,000.00	1,000.00	2.12	2.12	13.33	77.97	18.47	80.13	75.89	4.24	18.913	
1,085.00	1,085.00	1,085.00	1,085.00	2.31	2.31	13.33	77.97	18.47	80.13	75.51	4.62	17.348 CC	
1,100.00	1,100.00	1,099.65	1,099.65	2.34	2.34	-103.63	78.00	18.50	80.17	75.49	4.68	17.124 ES	
1,200.00	1,199.97	1,197.28	1,197.25	2.53	2.55	-104.28	79.51	20.04	82.59	77.50	5.08	16.254	
1,300.00	1,299.80	1,294.65	1,294.46	2.73	2.77	-105.75	83.34	23.95	88.75	83.26	5.49	16.160 SF	
1,400.00	1,399.37	1,391.51	1,390.92	2.94	2.99	-107.71	89.43	30.17	98.75	92.83	5.92	16.680	
1,500.00	1,498.55	1,487.65	1,486.32	3.18	3.23	-109.80	97.74	38.65	112.64	106.26	6.37	17.672	
1,600.00	1,597.23	1,582.85	1,580.35	3.45	3.48	-111.76	108.17	49.30	130.44	123.58	6.86	19.008	
1,700.00	1,695.29	1,676.92	1,672.72	3.76	3.77	-113.46	120.61	62.00	152.13	144.74	7.40	20.567	
1,800.00	1,792.60	1,769.67	1,763.17	4.12	4.09	-114.85	134.95	76.64	177.65	169.66	7.99	22.242	
1,900.00	1,889.05	1,860.91	1,851.46	4.54	4.44	-115.95	151.05	93.08	206.90	198.26	8.64	23.943	
2,000.00	1,984.52	1,950.51	1,937.40	5.03	4.84	-116.77	168.76	111.17	239.79	230.42	9.37	25.599	
2,100.00	2,078.90	2,040.50	2,022.96	5.59	5.27	-117.42	188.28	131.09	276.05	265.88	10.17	27.139	
2,200.00	2,172.06	2,132.58	2,110.35	6.23	5.75	-118.28	208.58	151.82	314.30	303.24	11.06	28.426	
2,300.00	2,263.90	2,223.73	2,196.86	6.94	6.25	-119.29	228.67	172.33	354.30	342.30	12.00	29.522	
2,343.21	2,303.15	2,262.80	2,233.94	7.27	6.46	-119.76	237.28	181.13	372.16	359.73	12.43	29.948	
2,400.00	2,354.55	2,314.01	2,282.54	7.72	6.75	-120.76	248.57	192.65	395.91	382.90	13.01	30.426	
2,500.00	2,445.06	2,404.19	2,368.14	8.53	7.26	-122.27	268.45	212.95	437.95	423.89	14.06	31.142	
2,600.00	2,535.57	2,494.38	2,453.73	9.36	7.78	-123.51	288.33	233.25	480.19	465.06	15.13	31.731	
2,700.00	2,626.08	2,584.56	2,539.32	10.20	8.31	-124.56	308.21	253.55	522.60	506.38	16.22	32.222	
2,800.00	2,716.59	2,674.74	2,624.91	11.05	8.85	-125.45	328.09	273.84	565.12	547.81	17.32	32.636	
2,900.00	2,807.09	2,764.93	2,710.50	11.91	9.39	-126.21	347.97	294.14	607.74	589.32	18.42	32.988	
3,000.00	2,897.60	2,855.11	2,796.09	12.77	9.93	-126.88	367.85	314.44	650.44	630.90	19.54	33.292	
3,100.00	2,988.11	2,945.29	2,881.68	13.64	10.48	-127.46	387.73	334.74	693.20	672.54	20.66	33.555	
3,200.00	3,078.62	3,035.48	2,967.27	14.52	11.03	-127.98	407.61	355.03	736.02	714.23	21.78	33.786	
3,300.00	3,169.13	3,125.66	3,052.86	15.40	11.58	-128.44	427.49	375.33	778.87	755.96	22.92	33.989	
3,400.00	3,259.64	3,215.84	3,138.45	16.28	12.14	-128.85	447.37	395.63	821.77	797.72	24.05	34.168	
3,500.00	3,350.15	3,306.03	3,224.05	17.16	12.69	-129.22	467.25	415.92	864.69	839.51	25.19	34.329	
3,600.00	3,440.66	3,396.21	3,309.64	18.05	13.25	-129.55	487.13	436.22	907.65	881.32	26.33	34.472	
3,700.00	3,531.17	3,486.39	3,395.23	18.93	13.81	-129.86	507.01	456.52	950.62	923.15	27.47	34.601	
3,800.00	3,621.68	3,576.58	3,480.82	19.82	14.37	-130.14	526.89	476.82	993.62	965.00	28.62	34.718	
3,900.00	3,712.19	3,666.76	3,566.41	20.71	14.93	-130.40	546.77	497.11	1,036.63	1,006.86	29.77	34.825	
4,000.00	3,802.70	3,756.94	3,652.00	21.60	15.50	-130.63	566.65	517.41	1,079.66	1,048.74	30.92	34.922	
4,100.00	3,893.21	3,847.13	3,737.59	22.50	16.06	-130.85	586.53	537.71	1,122.70	1,090.64	32.07	35.010	
4,200.00	3,983.71	3,937.31	3,823.18	23.39	16.62	-131.05	606.41	558.01	1,165.76	1,132.54	33.22	35.092	
4,300.00	4,074.22	4,027.49	3,908.77	24.28	17.19	-131.24	626.29	578.30	1,208.83	1,174.45	34.37	35.167	
4,400.00	4,164.73	4,117.68	3,994.37	25.18	17.76	-131.41	646.17	598.60	1,251.90	1,216.37	35.53	35.237	
4,500.00	4,255.24	4,207.86	4,079.96	26.07	18.32	-131.58	666.05	618.90	1,294.99	1,258.30	36.68	35.301	
4,600.00	4,345.75	4,298.04	4,165.55	26.97	18.89	-131.73	685.93	639.20	1,338.08	1,300.24	37.84	35.361	
4,700.00	4,436.26	4,388.23	4,251.14	27.87	19.46	-131.87	705.81	659.49	1,381.18	1,342.18	39.00	35.417	
4,800.00	4,526.77	4,478.41	4,336.73	28.76	20.03	-132.01	725.69	679.79	1,424.29	1,384.13	40.16	35.469	
4,900.00	4,617.28	4,568.59	4,422.32	29.66	20.59	-132.13	745.57	700.09	1,467.40	1,426.08	41.31	35.517	
5,000.00	4,707.79	4,658.78	4,507.91	30.56	21.16	-132.25	765.45	720.39	1,510.52	1,468.04	42.47	35.563	
5,100.00	4,798.30	4,748.96	4,593.50	31.46	21.73	-132.36	785.33	740.68	1,553.64	1,510.00	43.63	35.606	
5,200.00	4,888.81	4,839.14	4,679.09	32.36	22.30	-132.47	805.20	760.98	1,596.77	1,551.97	44.79	35.646	
5,300.00	4,979.32	4,929.33	4,764.68	33.26	22.87	-132.57	825.08	781.28	1,639.90	1,593.94	45.96	35.684	
5,400.00	5,069.83	5,019.51	4,850.28	34.16	23.44	-132.67	844.96	801.58	1,683.03	1,635.92	47.12	35.720	
5,434.28	5,100.85	5,050.42	4,879.61	34.46	23.64	-132.70	851.78	808.53	1,697.82	1,650.31	47.52	35.732	
5,500.00	5,160.65	5,109.92	4,936.09	34.98	24.01	-133.19	864.90	821.92	1,725.71	1,677.41	48.30	35.729	
5,600.00	5,252.80	5,201.29	5,022.80	35.64	24.59	-133.81	885.04	842.49	1,766.34	1,716.92	49.42	35.741	
5,700.00	5,346.24	5,293.56	5,110.37	36.24	25.18	-134.31	905.38	863.26	1,804.75	1,754.23	50.52	35.721	

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 40-9
Project:	COLORADO NORTHERN ZONE - 83	TVD Reference:	WELL @ 5012.00ft (Original Well Elev)
Reference Site:	WELD_NRC 17-9 PAD	MD Reference:	WELL @ 5012.00ft (Original Well Elev)
Site Error:	0.00ft	North Reference:	True
Reference Well:	P_NRC 40-9	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00ft	Output errors are at	2.00 sigma
Reference Wellbore	P_NRC 40-9	Database:	EDM 2003.21 Single User Db
Reference Design:	PLAN #1 1-5-10 RHS	Offset TVD Reference:	Offset Datum

Offset Design WELD_NRC 17-9 PAD - P_NRC 1-9 - P_NRC 1-9 - PLAN #1 1-5-10 RHS												Offset Site Error:	0.00 ft
Survey Program: 0-MWD												Offset Well Error:	0.00 ft
Reference	Offset	Semi Major Axis			Distance								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	
5,800.00	5,440.88	5,386.63	5,198.70	36.78	25.77	-134.68	925.89	884.20	1,840.92	1,789.31	51.60	35.675	
5,900.00	5,536.58	5,480.38	5,287.68	37.28	26.36	-134.93	946.56	905.30	1,874.81	1,822.15	52.66	35.605	
6,000.00	5,633.23	5,574.69	5,377.19	37.72	26.96	-135.08	967.35	926.53	1,906.41	1,852.73	53.68	35.515	
6,100.00	5,730.72	5,676.26	5,473.61	38.10	27.58	-135.09	989.67	949.33	1,935.70	1,881.00	54.70	35.390	
6,200.00	5,828.93	5,812.42	5,604.13	38.43	28.22	-134.95	1,016.79	977.01	1,961.41	1,905.72	55.70	35.217	
6,300.00	5,927.74	5,951.80	5,739.49	38.71	28.77	-134.81	1,040.02	1,000.73	1,982.76	1,926.20	56.56	35.059	
6,400.00	6,027.02	6,093.92	5,878.99	38.94	29.25	-134.70	1,058.93	1,020.04	1,999.62	1,942.33	57.29	34.903	
6,500.00	6,126.65	6,238.20	6,021.82	39.12	29.64	-134.60	1,073.16	1,034.56	2,011.87	1,953.99	57.88	34.761	
6,600.00	6,226.53	6,384.03	6,167.03	39.25	29.94	-134.52	1,082.40	1,044.00	2,019.44	1,961.12	58.32	34.626	
6,692.49	6,319.00	6,519.70	6,302.58	39.33	30.13	-17.51	1,086.35	1,048.04	2,022.23	1,963.63	58.60	34.511	
6,700.00	6,326.51	6,530.73	6,313.61	39.34	30.14	-17.50	1,086.48	1,048.16	2,022.28	1,963.67	58.62	34.501	
6,800.00	6,426.51	6,643.64	6,426.51	39.41	30.26	-17.50	1,086.68	1,048.37	2,022.37	1,963.54	58.83	34.379	
6,900.00	6,526.51	6,743.64	6,526.51	39.48	30.36	-17.50	1,086.68	1,048.37	2,022.37	1,963.34	59.03	34.260	
7,000.00	6,626.51	6,843.64	6,626.51	39.56	30.46	-17.50	1,086.68	1,048.37	2,022.37	1,963.13	59.23	34.142	
7,100.00	6,726.51	6,943.64	6,726.51	39.64	30.56	-17.50	1,086.68	1,048.37	2,022.37	1,962.93	59.44	34.022	
7,200.00	6,826.51	7,043.64	6,826.51	39.71	30.66	-17.50	1,086.68	1,048.37	2,022.37	1,962.72	59.65	33.902	
7,300.00	6,926.51	7,143.64	6,926.51	39.79	30.77	-17.50	1,086.68	1,048.37	2,022.37	1,962.50	59.87	33.781	
7,400.00	7,026.51	7,243.64	7,026.51	39.87	30.87	-17.50	1,086.68	1,048.37	2,022.37	1,962.29	60.08	33.659	
7,500.00	7,126.51	7,343.64	7,126.51	39.95	30.98	-17.50	1,086.68	1,048.37	2,022.37	1,962.07	60.30	33.537	
7,600.00	7,226.51	7,443.64	7,226.51	40.04	31.09	-17.50	1,086.68	1,048.37	2,022.37	1,961.85	60.52	33.415	
7,700.00	7,326.51	7,543.64	7,326.51	40.12	31.20	-17.50	1,086.68	1,048.37	2,022.37	1,961.62	60.75	33.292	
7,800.00	7,426.51	7,643.64	7,426.51	40.20	31.31	-17.50	1,086.68	1,048.37	2,022.37	1,961.40	60.97	33.168	
7,900.00	7,526.51	7,743.64	7,526.51	40.29	31.43	-17.50	1,086.68	1,048.37	2,022.37	1,961.17	61.20	33.044	
8,000.00	7,626.51	7,843.64	7,626.51	40.38	31.54	-17.50	1,086.68	1,048.37	2,022.37	1,960.94	61.43	32.920	
8,100.00	7,726.51	7,943.64	7,726.51	40.46	31.65	-17.50	1,086.68	1,048.37	2,022.37	1,960.70	61.67	32.795	
8,200.00	7,826.51	8,043.64	7,826.51	40.55	31.77	-17.50	1,086.68	1,048.37	2,022.37	1,960.47	61.90	32.670	
8,300.00	7,926.51	8,143.64	7,926.51	40.64	31.89	-17.50	1,086.68	1,048.37	2,022.37	1,960.23	62.14	32.545	
8,400.00	8,026.51	8,243.64	8,026.51	40.73	32.01	-17.50	1,086.68	1,048.37	2,022.37	1,959.99	62.38	32.419	
8,500.00	8,126.51	8,343.64	8,126.51	40.82	32.13	-17.50	1,086.68	1,048.37	2,022.37	1,959.74	62.62	32.294	
8,600.00	8,226.51	8,443.64	8,226.51	40.92	32.25	-17.50	1,086.68	1,048.37	2,022.37	1,959.50	62.87	32.168	
8,617.49	8,244.00	8,461.13	8,244.00	40.93	32.27	-17.50	1,086.68	1,048.37	2,022.37	1,959.46	62.91	32.146	

Company:	US ROCKIES REGION PLANNING	Local Co-ordinate Reference:	Well P_NRC 40-9
Project:	COLORADO NORTHERN ZONE - 83	TVD Reference:	WELL @ 5012.00ft (Original Well Elev)
Reference Site:	WELD_NRC 17-9 PAD	MD Reference:	WELL @ 5012.00ft (Original Well Elev)
Site Error:	0.00ft	North Reference:	True
Reference Well:	P_NRC 40-9	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00ft	Output errors are at	2.00 sigma
Reference Wellbore	P_NRC 40-9	Database:	EDM 2003.21 Single User Db
Reference Design:	PLAN #1 1-5-10 RHS	Offset TVD Reference:	Offset Datum

Offset Design WELD_NRC 17-9 PAD - P_NRC 24-9 - P_NRC 24-9 - PLAN #1 1-5-10 RHS												Offset Site Error:	0.00 ft
Survey Program: 0-MWD												Offset Well Error:	0.00 ft
Reference		Offset		Semi Major Axis			Distance						
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning
0.00	0.00	0.00	0.00	0.00	0.00	-166.93	-15.67	-3.64	16.09				
100.00	100.00	100.00	100.00	0.10	0.10	-166.93	-15.67	-3.64	16.09	15.89	0.19	84.192	
200.00	200.00	200.00	200.00	0.32	0.32	-166.93	-15.67	-3.64	16.09	15.44	0.64	25.110	
300.00	300.00	300.00	300.00	0.55	0.55	-166.93	-15.67	-3.64	16.09	14.99	1.09	14.755	
400.00	400.00	400.00	400.00	0.77	0.77	-166.93	-15.67	-3.64	16.09	14.55	1.54	10.447	
500.00	500.00	500.00	500.00	0.99	0.99	-166.93	-15.67	-3.64	16.09	14.10	1.99	8.086	
600.00	600.00	600.00	600.00	1.22	1.22	-166.93	-15.67	-3.64	16.09	13.65	2.44	6.596	
700.00	700.00	700.00	700.00	1.44	1.44	-166.93	-15.67	-3.64	16.09	13.20	2.89	5.569	
800.00	800.00	800.00	800.00	1.67	1.67	-166.93	-15.67	-3.64	16.09	12.75	3.34	4.819	
900.00	900.00	900.00	900.00	1.89	1.89	-166.93	-15.67	-3.64	16.09	12.30	3.79	4.247	
1,000.00	1,000.00	1,000.00	1,000.00	2.12	2.12	-166.93	-15.67	-3.64	16.09	11.85	4.24	3.796	
1,085.00	1,085.00	1,085.00	1,085.00	2.31	2.31	-166.93	-15.67	-3.64	16.09	11.47	4.62	3.482 CC	
1,100.00	1,100.00	1,099.93	1,099.93	2.34	2.34	76.17	-15.70	-3.62	16.11	11.43	4.68	3.442 ES, SF	
1,200.00	1,199.97	1,199.48	1,199.45	2.53	2.51	78.76	-17.73	-2.65	17.35	12.31	5.04	3.442	
1,300.00	1,299.80	1,298.94	1,298.74	2.73	2.69	83.88	-22.88	-0.20	20.62	15.20	5.42	3.805	
1,400.00	1,399.37	1,398.24	1,397.61	2.94	2.89	89.32	-31.11	3.72	26.10	20.27	5.83	4.478	
1,500.00	1,498.55	1,497.30	1,495.88	3.18	3.11	93.83	-42.40	9.11	33.88	27.60	6.28	5.394	
1,600.00	1,597.23	1,596.07	1,593.36	3.45	3.37	97.20	-56.71	15.93	43.95	37.16	6.79	6.470	
1,700.00	1,695.29	1,694.96	1,690.46	3.76	3.66	100.11	-73.58	23.97	56.04	48.66	7.38	7.592	
1,800.00	1,792.60	1,793.96	1,787.62	4.12	3.98	104.48	-90.77	32.17	69.17	61.12	8.05	8.597	
1,900.00	1,889.05	1,892.63	1,884.45	4.54	4.32	109.63	-107.90	40.33	83.71	74.94	8.77	9.543	
2,000.00	1,984.52	1,990.85	1,980.84	5.03	4.67	114.96	-124.95	48.46	100.19	90.65	9.54	10.502	
2,100.00	2,078.90	2,088.51	2,076.67	5.59	5.03	120.12	-141.90	56.54	119.06	108.73	10.33	11.523	
2,200.00	2,172.06	2,185.47	2,171.82	6.23	5.40	124.91	-158.73	64.57	140.64	129.52	11.13	12.639	
2,300.00	2,263.90	2,281.62	2,266.18	6.94	5.77	129.24	-175.42	72.52	165.18	153.26	11.92	13.860	
2,343.21	2,303.15	2,322.90	2,306.69	7.27	5.93	130.96	-182.58	75.94	176.73	164.47	12.26	14.420	
2,400.00	2,354.55	2,377.02	2,359.79	7.72	6.15	133.21	-191.98	80.42	192.43	179.72	12.71	15.136	
2,500.00	2,445.06	2,472.32	2,453.32	8.53	6.53	136.40	-208.52	88.31	220.63	207.11	13.52	16.319	
2,600.00	2,535.57	2,567.62	2,546.84	9.36	6.91	138.86	-225.06	96.19	249.32	234.99	14.33	17.400	
2,700.00	2,626.08	2,662.92	2,640.36	10.20	7.30	140.82	-241.61	104.08	278.35	263.21	15.14	18.383	
2,800.00	2,716.59	2,758.22	2,733.89	11.05	7.69	142.41	-258.15	111.97	307.62	291.67	15.96	19.275	
2,900.00	2,807.09	2,853.53	2,827.41	11.91	8.08	143.73	-274.69	119.85	337.08	320.30	16.78	20.087	
3,000.00	2,897.60	2,948.83	2,920.93	12.77	8.47	144.83	-291.24	127.74	366.67	349.06	17.61	20.827	
3,100.00	2,988.11	3,044.13	3,014.46	13.64	8.87	145.77	-307.78	135.63	396.36	377.93	18.43	21.502	
3,200.00	3,078.62	3,139.43	3,107.98	14.52	9.27	146.58	-324.32	143.51	426.14	406.88	19.26	22.121	
3,300.00	3,169.13	3,234.73	3,201.50	15.40	9.67	147.28	-340.87	151.40	455.99	435.89	20.10	22.690	
3,400.00	3,259.64	3,330.04	3,295.03	16.28	10.07	147.89	-357.41	159.29	485.89	464.96	20.93	23.213	
3,500.00	3,350.15	3,425.34	3,388.55	17.16	10.47	148.44	-373.95	167.18	515.84	494.07	21.77	23.697	
3,600.00	3,440.66	3,520.64	3,482.07	18.05	10.87	148.93	-390.49	175.06	545.82	523.22	22.61	24.145	
3,700.00	3,531.17	3,615.94	3,575.60	18.93	11.28	149.36	-407.04	182.95	575.84	552.39	23.45	24.561	
3,800.00	3,621.68	3,711.24	3,669.12	19.82	11.68	149.75	-423.58	190.84	605.88	581.60	24.29	24.949	
3,900.00	3,712.19	3,806.55	3,762.64	20.71	12.09	150.11	-440.12	198.72	635.95	610.82	25.13	25.310	
4,000.00	3,802.70	3,901.85	3,856.17	21.60	12.49	150.43	-456.67	206.61	666.04	640.07	25.97	25.649	
4,100.00	3,893.21	3,997.15	3,949.69	22.50	12.90	150.73	-473.21	214.50	696.14	669.33	26.81	25.966	
4,200.00	3,983.71	4,092.45	4,043.21	23.39	13.31	151.00	-489.75	222.38	726.26	698.61	27.65	26.264	
4,300.00	4,074.22	4,187.75	4,136.74	24.28	13.71	151.25	-506.30	230.27	756.40	727.90	28.50	26.544	
4,400.00	4,164.73	4,283.05	4,230.26	25.18	14.12	151.48	-522.84	238.16	786.55	757.21	29.34	26.809	
4,500.00	4,255.24	4,378.36	4,323.78	26.07	14.53	151.69	-539.38	246.05	816.70	786.52	30.18	27.059	
4,600.00	4,345.75	4,473.66	4,417.30	26.97	14.94	151.89	-555.92	253.93	846.87	815.84	31.03	27.296	
4,700.00	4,436.26	4,568.96	4,510.83	27.87	15.35	152.07	-572.47	261.82	877.04	845.18	31.87	27.520	
4,800.00	4,526.77	4,664.26	4,604.35	28.76	15.76	152.24	-589.01	269.71	907.23	874.51	32.71	27.733	
4,900.00	4,617.28	4,759.56	4,697.87	29.66	16.17	152.40	-605.55	277.59	937.42	903.86	33.56	27.936	

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 40-9
Project:	COLORADO NORTHERN ZONE - 83	TVD Reference:	WELL @ 5012.00ft (Original Well Elev)
Reference Site:	WELD_NRC 17-9 PAD	MD Reference:	WELL @ 5012.00ft (Original Well Elev)
Site Error:	0.00ft	North Reference:	True
Reference Well:	P_NRC 40-9	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00ft	Output errors are at	2.00 sigma
Reference Wellbore	P_NRC 40-9	Database:	EDM 2003.21 Single User Db
Reference Design:	PLAN #1 1-5-10 RHS	Offset TVD Reference:	Offset Datum

Offset Design WELD_NRC 17-9 PAD - P_NRC 24-9 - P_NRC 24-9 - PLAN #1 1-5-10 RHS												Offset Site Error:	0.00 ft
Survey Program: 0-MWD												Offset Well Error:	0.00 ft
Reference		Offset		Semi Major Axis			Distance						
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning
5,000.00	4,707.79	4,854.87	4,791.40	30.56	16.58	152.55	-622.10	285.48	967.61	933.21	34.40	28.129	
5,100.00	4,798.30	4,950.17	4,884.92	31.46	16.99	152.70	-638.64	293.37	997.82	962.57	35.24	28.313	
5,200.00	4,888.81	5,045.47	4,978.44	32.36	17.40	152.83	-655.18	301.25	1,028.02	991.94	36.09	28.489	
5,300.00	4,979.32	5,140.77	5,071.97	33.26	17.81	152.96	-671.73	309.14	1,058.23	1,021.31	36.93	28.657	
5,400.00	5,069.83	5,236.07	5,165.49	34.16	18.22	153.07	-688.27	317.03	1,088.45	1,050.68	37.77	28.818	
5,434.28	5,100.85	5,268.74	5,197.55	34.46	18.36	153.11	-693.94	319.73	1,098.81	1,060.75	38.06	28.871	
5,500.00	5,160.65	5,331.58	5,259.22	34.98	18.63	153.35	-704.85	324.93	1,118.03	1,079.42	38.61	28.955	
5,600.00	5,252.80	5,427.93	5,353.76	35.64	19.05	153.61	-721.57	332.91	1,144.79	1,105.37	39.42	29.044	
5,700.00	5,346.24	5,525.06	5,449.08	36.24	19.47	153.76	-738.43	340.94	1,168.52	1,128.30	40.22	29.053	
5,800.00	5,440.88	5,622.85	5,545.04	36.78	19.89	153.81	-755.41	349.04	1,189.21	1,148.19	41.03	28.987	
5,900.00	5,536.58	5,721.18	5,641.54	37.28	20.31	153.76	-772.48	357.17	1,206.84	1,165.01	41.83	28.851	
6,000.00	5,633.23	5,819.94	5,738.46	37.72	20.74	153.61	-789.62	365.35	1,221.40	1,178.76	42.63	28.650	
6,100.00	5,730.72	5,908.79	5,825.74	38.10	21.08	153.43	-804.60	372.49	1,233.15	1,189.83	43.32	28.465	
6,200.00	5,828.93	6,000.00	5,915.80	38.43	21.33	153.27	-817.62	378.70	1,243.07	1,199.19	43.87	28.333	
6,300.00	5,927.74	6,075.87	5,991.03	38.71	21.52	153.17	-826.48	382.92	1,251.11	1,206.83	44.28	28.255	
6,400.00	6,027.02	6,159.68	6,074.40	38.94	21.70	153.08	-834.18	386.59	1,257.36	1,212.74	44.63	28.176	
6,500.00	6,126.65	6,243.62	6,158.12	39.12	21.86	153.02	-839.67	389.21	1,261.78	1,216.89	44.88	28.111	
6,600.00	6,226.53	6,327.64	6,242.06	39.25	21.99	152.98	-842.95	390.77	1,264.35	1,219.29	45.06	28.059	
6,692.49	6,319.00	6,409.59	6,324.00	39.33	22.11	-90.08	-844.01	391.28	1,265.09	1,219.92	45.17	28.008	
6,699.98	6,326.49	6,412.08	6,326.49	39.34	22.11	-90.08	-844.01	391.28	1,265.08	1,219.90	45.18	28.001	
6,700.00	6,326.51	6,412.10	6,326.51	39.34	22.11	-90.08	-844.01	391.28	1,265.08	1,219.90	45.18	28.001	
6,800.00	6,426.51	6,512.10	6,426.51	39.41	22.24	-90.08	-844.01	391.28	1,265.08	1,219.66	45.42	27.854	
6,900.00	6,526.51	6,612.10	6,526.51	39.48	22.35	-90.08	-844.01	391.28	1,265.08	1,219.43	45.65	27.715	
7,000.00	6,626.51	6,712.10	6,626.51	39.56	22.47	-90.08	-844.01	391.28	1,265.08	1,219.20	45.88	27.575	
7,100.00	6,726.51	6,812.10	6,726.51	39.64	22.59	-90.08	-844.01	391.28	1,265.08	1,218.97	46.11	27.434	
7,200.00	6,826.51	6,912.10	6,826.51	39.71	22.71	-90.08	-844.01	391.28	1,265.08	1,218.73	46.35	27.293	
7,300.00	6,926.51	7,012.10	6,926.51	39.79	22.83	-90.08	-844.01	391.28	1,265.08	1,218.49	46.59	27.151	
7,400.00	7,026.51	7,112.10	7,026.51	39.87	22.95	-90.08	-844.01	391.28	1,265.08	1,218.24	46.84	27.010	
7,500.00	7,126.51	7,212.10	7,126.51	39.95	23.08	-90.08	-844.01	391.28	1,265.08	1,217.99	47.09	26.868	
7,600.00	7,226.51	7,312.10	7,226.51	40.04	23.20	-90.08	-844.01	391.28	1,265.08	1,217.74	47.34	26.725	
7,700.00	7,326.51	7,412.10	7,326.51	40.12	23.33	-90.08	-844.01	391.28	1,265.08	1,217.49	47.59	26.583	
7,800.00	7,426.51	7,512.10	7,426.51	40.20	23.46	-90.08	-844.01	391.28	1,265.08	1,217.23	47.85	26.440	
7,900.00	7,526.51	7,612.10	7,526.51	40.29	23.59	-90.08	-844.01	391.28	1,265.08	1,216.97	48.11	26.298	
8,000.00	7,626.51	7,712.10	7,626.51	40.38	23.72	-90.08	-844.01	391.28	1,265.08	1,216.71	48.37	26.155	
8,100.00	7,726.51	7,812.10	7,726.51	40.46	23.86	-90.08	-844.01	391.28	1,265.08	1,216.45	48.63	26.013	
8,200.00	7,826.51	7,912.10	7,826.51	40.55	23.99	-90.08	-844.01	391.28	1,265.08	1,216.18	48.90	25.871	
8,300.00	7,926.51	8,012.10	7,926.51	40.64	24.13	-90.08	-844.01	391.28	1,265.08	1,215.91	49.17	25.729	
8,400.00	8,026.51	8,112.10	8,026.51	40.73	24.26	-90.08	-844.01	391.28	1,265.08	1,215.64	49.44	25.587	
8,500.00	8,126.51	8,212.10	8,126.51	40.82	24.40	-90.08	-844.01	391.28	1,265.08	1,215.36	49.72	25.445	
8,600.00	8,226.51	8,312.10	8,226.51	40.92	24.54	-90.08	-844.01	391.28	1,265.08	1,215.08	50.00	25.304	
8,617.49	8,244.00	8,329.59	8,244.00	40.93	24.57	-90.08	-844.01	391.28	1,265.08	1,215.03	50.05	25.279	

Company:	US ROCKIES REGION PLANNING	Local Co-ordinate Reference:	Well P_NRC 40-9
Project:	COLORADO NORTHERN ZONE - 83	TVD Reference:	WELL @ 5012.00ft (Original Well Elev)
Reference Site:	WELD_NRC 17-9 PAD	MD Reference:	WELL @ 5012.00ft (Original Well Elev)
Site Error:	0.00ft	North Reference:	True
Reference Well:	P_NRC 40-9	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00ft	Output errors are at	2.00 sigma
Reference Wellbore	P_NRC 40-9	Database:	EDM 2003.21 Single User Db
Reference Design:	PLAN #1 1-5-10 RHS	Offset TVD Reference:	Offset Datum

Offset Design WELD_NRC 17-9 PAD - P_NRC 2-9 - P_NRC 2-9 - PLAN #1 1-5-10 RHS												Offset Site Error: 0.00 ft	
Survey Program: 0-MWD												Offset Well Error: 0.00 ft	
Reference		Offset		Semi Major Axis		Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	
0.00	0.00	0.00	0.00	0.00	0.00	13.39	62.30	14.83	64.04				
100.00	100.00	100.00	100.00	0.10	0.10	13.39	62.30	14.83	64.04	63.85	0.19	335.184	
200.00	200.00	200.00	200.00	0.32	0.32	13.39	62.30	14.83	64.04	63.40	0.64	99.967	
300.00	300.00	300.00	300.00	0.55	0.55	13.39	62.30	14.83	64.04	62.95	1.09	58.744	
400.00	400.00	400.00	400.00	0.77	0.77	13.39	62.30	14.83	64.04	62.50	1.54	41.592	
500.00	500.00	500.00	500.00	0.99	0.99	13.39	62.30	14.83	64.04	62.05	1.99	32.193	
600.00	600.00	600.00	600.00	1.22	1.22	13.39	62.30	14.83	64.04	61.60	2.44	26.259	
700.00	700.00	700.00	700.00	1.44	1.44	13.39	62.30	14.83	64.04	61.15	2.89	22.172	
800.00	800.00	800.00	800.00	1.67	1.67	13.39	62.30	14.83	64.04	60.70	3.34	19.186	
900.00	900.00	900.00	900.00	1.89	1.89	13.39	62.30	14.83	64.04	60.25	3.79	16.908	
1,000.00	1,000.00	1,000.00	1,000.00	2.12	2.12	13.39	62.30	14.83	64.04	59.80	4.24	15.114	
1,085.00	1,085.00	1,085.00	1,085.00	2.31	2.31	13.39	62.30	14.83	64.04	59.42	4.62	13.864 CC	
1,100.00	1,100.00	1,099.71	1,099.71	2.34	2.34	-103.61	62.33	14.82	64.08	59.40	4.68	13.685 ES	
1,200.00	1,199.97	1,197.65	1,197.62	2.53	2.56	-106.32	64.43	14.24	66.64	61.55	5.09	13.096 SF	
1,300.00	1,299.80	1,294.91	1,294.72	2.73	2.78	-112.27	69.70	12.76	73.74	68.24	5.50	13.401	
1,400.00	1,399.37	1,390.94	1,390.36	2.94	3.00	-119.55	78.01	10.43	86.47	80.55	5.92	14.603	
1,500.00	1,498.55	1,485.20	1,483.90	3.18	3.23	-126.43	89.17	7.31	105.61	99.27	6.34	16.656	
1,600.00	1,597.23	1,577.19	1,574.78	3.45	3.48	-132.08	102.91	3.46	131.38	124.62	6.76	19.435	
1,700.00	1,695.29	1,666.49	1,662.50	3.76	3.75	-136.40	118.93	-1.02	163.56	156.39	7.18	22.782	
1,800.00	1,792.60	1,754.16	1,748.11	4.12	4.03	-139.63	137.13	-6.12	201.74	194.14	7.61	26.527	
1,900.00	1,889.05	1,844.17	1,835.83	4.54	4.36	-142.27	156.52	-11.55	243.79	235.74	8.05	30.289	
2,000.00	1,984.52	1,932.71	1,922.13	5.03	4.69	-144.38	175.61	-16.89	288.85	280.34	8.50	33.973	
2,100.00	2,078.90	2,019.69	2,006.91	5.59	5.03	-146.12	194.35	-22.14	336.86	327.89	8.97	37.566	
2,200.00	2,172.06	2,104.99	2,090.04	6.23	5.37	-147.55	212.73	-27.29	387.78	378.33	9.44	41.062	
2,300.00	2,263.90	2,188.51	2,171.44	6.94	5.71	-148.75	230.73	-32.33	441.54	431.61	9.93	44.454	
2,343.21	2,303.15	2,224.02	2,206.06	7.27	5.86	-149.21	238.38	-34.47	465.64	455.49	10.15	45.886	
2,400.00	2,354.55	2,270.46	2,251.32	7.72	6.05	-150.12	248.39	-37.27	497.70	487.22	10.47	47.518	
2,500.00	2,445.06	2,352.23	2,331.02	8.53	6.40	-151.48	266.01	-42.20	554.33	543.27	11.06	50.130	
2,600.00	2,535.57	2,434.01	2,410.72	9.36	6.75	-152.58	283.63	-47.14	611.13	599.48	11.65	52.450	
2,700.00	2,626.08	2,515.78	2,490.42	10.20	7.11	-153.50	301.26	-52.07	668.06	655.81	12.25	54.519	
2,800.00	2,716.59	2,597.56	2,570.12	11.05	7.46	-154.28	318.88	-57.01	725.09	712.23	12.86	56.372	
2,900.00	2,807.09	2,679.33	2,649.82	11.91	7.82	-154.94	336.50	-61.94	782.20	768.72	13.48	58.036	
3,000.00	2,897.60	2,761.10	2,729.52	12.77	8.19	-155.52	354.12	-66.87	839.37	825.27	14.10	59.538	
3,100.00	2,988.11	2,842.88	2,809.22	13.64	8.55	-156.02	371.74	-71.81	896.59	881.87	14.72	60.899	
3,200.00	3,078.62	2,924.65	2,888.92	14.52	8.92	-156.46	389.37	-76.74	953.85	938.50	15.35	62.138	
3,300.00	3,169.13	3,006.43	2,968.62	15.40	9.29	-156.85	406.99	-81.68	1,011.14	995.16	15.98	63.268	
3,400.00	3,259.64	3,088.20	3,048.32	16.28	9.66	-157.20	424.61	-86.61	1,068.47	1,051.85	16.62	64.302	
3,500.00	3,350.15	3,169.97	3,128.02	17.16	10.03	-157.51	442.23	-91.54	1,125.81	1,108.56	17.25	65.251	
3,600.00	3,440.66	3,251.75	3,207.72	18.05	10.40	-157.80	459.86	-96.48	1,183.18	1,165.29	17.89	66.126	
3,700.00	3,531.17	3,333.52	3,287.42	18.93	10.77	-158.05	477.48	-101.41	1,240.57	1,222.03	18.53	66.934	
3,800.00	3,621.68	3,415.29	3,367.12	19.82	11.15	-158.29	495.10	-106.35	1,297.97	1,278.79	19.18	67.682	
3,900.00	3,712.19	3,497.07	3,446.82	20.71	11.52	-158.50	512.72	-111.28	1,355.38	1,335.56	19.82	68.376	
4,000.00	3,802.70	3,578.84	3,526.52	21.60	11.90	-158.70	530.34	-116.21	1,412.81	1,392.34	20.47	69.022	
4,100.00	3,893.21	3,660.62	3,606.22	22.50	12.27	-158.88	547.97	-121.15	1,470.24	1,449.13	21.12	69.624	
4,200.00	3,983.71	3,742.39	3,685.92	23.39	12.65	-159.05	565.59	-126.08	1,527.69	1,505.92	21.77	70.187	
4,300.00	4,074.22	3,824.16	3,765.62	24.28	13.03	-159.21	583.21	-131.02	1,585.14	1,562.73	22.42	70.715	
4,400.00	4,164.73	3,905.94	3,845.32	25.18	13.40	-159.36	600.83	-135.95	1,642.60	1,619.54	23.07	71.209	
4,500.00	4,255.24	3,987.71	3,925.02	26.07	13.78	-159.49	618.45	-140.88	1,700.07	1,676.35	23.72	71.674	
4,600.00	4,345.75	4,069.49	4,004.72	26.97	14.16	-159.62	636.08	-145.82	1,757.54	1,733.17	24.37	72.111	
4,700.00	4,436.26	4,151.26	4,084.42	27.87	14.54	-159.74	653.70	-150.75	1,815.02	1,790.00	25.03	72.524	
4,800.00	4,526.77	4,233.03	4,164.12	28.76	14.92	-159.85	671.32	-155.69	1,872.51	1,846.83	25.68	72.913	
4,900.00	4,617.28	4,314.81	4,243.82	29.66	15.30	-159.95	688.94	-160.62	1,930.00	1,903.66	26.34	73.281	

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 40-9
Project:	COLORADO NORTHERN ZONE - 83	TVD Reference:	WELL @ 5012.00ft (Original Well Elev)
Reference Site:	WELD_NRC 17-9 PAD	MD Reference:	WELL @ 5012.00ft (Original Well Elev)
Site Error:	0.00ft	North Reference:	True
Reference Well:	P_NRC 40-9	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00ft	Output errors are at	2.00 sigma
Reference Wellbore	P_NRC 40-9	Database:	EDM 2003.21 Single User Db
Reference Design:	PLAN #1 1-5-10 RHS	Offset TVD Reference:	Offset Datum

Offset Design WELD_NRC 17-9 PAD - P_NRC 2-9 - P_NRC 2-9 - PLAN #1 1-5-10 RHS												Offset Site Error:	0.00 ft
Survey Program: 0-MWD												Offset Well Error:	0.00 ft
Reference	Offset	Semi Major Axis		Distance									
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning
5,000.00	4,707.79	4,396.58	4,323.52	30.56	15.68	-160.05	706.56	-165.55	1,987.49	1,960.50	26.99	73.630	
5,100.00	4,798.30	4,478.35	4,403.22	31.46	16.06	-160.14	724.19	-170.49	2,044.98	2,017.34	27.65	73.961	
5,200.00	4,888.81	4,560.13	4,482.92	32.36	16.44	-160.23	741.81	-175.42	2,102.48	2,074.18	28.31	74.275	
5,300.00	4,979.32	4,641.90	4,562.62	33.26	16.82	-160.32	759.43	-180.36	2,159.99	2,131.02	28.96	74.574	
5,400.00	5,069.83	4,723.68	4,642.32	34.16	17.20	-160.40	777.05	-185.29	2,217.49	2,187.87	29.62	74.858	
5,434.28	5,100.85	4,751.71	4,669.64	34.46	17.33	-160.42	783.09	-186.98	2,237.20	2,207.36	29.85	74.952	
5,500.00	5,160.65	4,805.86	4,722.42	34.98	17.58	-160.76	794.76	-190.25	2,274.42	2,244.04	30.38	74.869	
5,600.00	5,252.80	4,889.79	4,804.22	35.64	17.98	-161.22	812.85	-195.31	2,328.76	2,297.62	31.15	74.763	
5,700.00	5,346.24	4,975.48	4,887.73	36.24	18.38	-161.60	831.32	-200.48	2,380.31	2,348.41	31.90	74.625	
5,800.00	5,440.88	5,062.82	4,972.86	36.78	18.78	-161.92	850.14	-205.75	2,428.99	2,396.37	32.62	74.464	
5,900.00	5,536.58	5,151.70	5,059.49	37.28	19.20	-162.18	869.29	-211.12	2,474.74	2,441.43	33.31	74.287	
6,000.00	5,633.23	5,242.02	5,147.52	37.72	19.62	-162.38	888.76	-216.57	2,517.52	2,483.54	33.97	74.100	
6,100.00	5,730.72	5,333.68	5,236.84	38.10	20.05	-162.54	908.51	-222.10	2,557.27	2,522.67	34.60	73.908	
6,200.00	5,828.93	5,426.54	5,327.36	38.43	20.48	-162.64	928.52	-227.70	2,593.96	2,558.77	35.19	73.714	
6,300.00	5,927.74	5,520.51	5,418.94	38.71	20.92	-162.71	948.77	-233.37	2,627.54	2,591.80	35.74	73.522	
6,400.00	6,027.02	5,615.47	5,511.49	38.94	21.37	-162.73	969.23	-239.10	2,657.99	2,621.74	36.25	73.333	
6,500.00	6,126.65	5,711.30	5,604.89	39.12	21.82	-162.71	989.88	-244.88	2,685.26	2,648.55	36.71	73.150	
6,600.00	6,226.53	5,807.88	5,699.02	39.25	22.27	-162.65	1,010.70	-250.71	2,709.35	2,672.22	37.13	72.973	
6,692.49	6,319.00	6,240.20	6,125.63	39.33	23.58	-45.11	1,075.67	-268.90	2,724.33	2,686.05	38.28	71.160	
6,700.00	6,326.51	6,283.92	6,169.23	39.34	23.66	-45.08	1,078.78	-269.77	2,724.81	2,686.43	38.38	70.996	
6,800.00	6,426.51	6,541.33	6,426.51	39.41	24.03	-45.01	1,084.84	-271.47	2,725.75	2,686.82	38.93	70.021	
6,900.00	6,526.51	6,641.33	6,526.51	39.48	24.15	-45.01	1,084.84	-271.47	2,725.75	2,686.53	39.23	69.488	
7,000.00	6,626.51	6,741.33	6,626.51	39.56	24.28	-45.01	1,084.84	-271.47	2,725.75	2,686.22	39.53	68.959	
7,100.00	6,726.51	6,841.33	6,726.51	39.64	24.41	-45.01	1,084.84	-271.47	2,725.75	2,685.92	39.83	68.432	
7,200.00	6,826.51	6,941.33	6,826.51	39.71	24.54	-45.01	1,084.84	-271.47	2,725.75	2,685.61	40.14	67.910	
7,300.00	6,926.51	7,041.33	6,926.51	39.79	24.67	-45.01	1,084.84	-271.47	2,725.75	2,685.30	40.45	67.390	
7,400.00	7,026.51	7,141.33	7,026.51	39.87	24.80	-45.01	1,084.84	-271.47	2,725.75	2,684.99	40.76	66.875	
7,500.00	7,126.51	7,241.33	7,126.51	39.95	24.94	-45.01	1,084.84	-271.47	2,725.75	2,684.68	41.07	66.363	
7,600.00	7,226.51	7,341.33	7,226.51	40.04	25.07	-45.01	1,084.84	-271.47	2,725.75	2,684.36	41.39	65.855	
7,700.00	7,326.51	7,441.33	7,326.51	40.12	25.21	-45.01	1,084.84	-271.47	2,725.75	2,684.04	41.71	65.351	
7,800.00	7,426.51	7,541.33	7,426.51	40.20	25.35	-45.01	1,084.84	-271.47	2,725.75	2,683.72	42.03	64.851	
7,900.00	7,526.51	7,641.33	7,526.51	40.29	25.49	-45.01	1,084.84	-271.47	2,725.75	2,683.40	42.35	64.356	
8,000.00	7,626.51	7,741.33	7,626.51	40.38	25.63	-45.01	1,084.84	-271.47	2,725.75	2,683.07	42.68	63.864	
8,100.00	7,726.51	7,841.33	7,726.51	40.46	25.77	-45.01	1,084.84	-271.47	2,725.75	2,682.74	43.01	63.377	
8,200.00	7,826.51	7,941.33	7,826.51	40.55	25.91	-45.01	1,084.84	-271.47	2,725.75	2,682.41	43.34	62.894	
8,300.00	7,926.51	8,041.33	7,926.51	40.64	26.06	-45.01	1,084.84	-271.47	2,725.75	2,682.08	43.67	62.415	
8,400.00	8,026.51	8,141.33	8,026.51	40.73	26.20	-45.01	1,084.84	-271.47	2,725.75	2,681.75	44.01	61.941	
8,500.00	8,126.51	8,241.33	8,126.51	40.82	26.35	-45.01	1,084.84	-271.47	2,725.75	2,681.41	44.34	61.471	
8,600.00	8,226.51	8,341.33	8,226.51	40.92	26.50	-45.01	1,084.84	-271.47	2,725.75	2,681.07	44.68	61.005	
8,617.49	8,244.00	8,358.82	8,244.00	40.93	26.52	-45.01	1,084.84	-271.47	2,725.75	2,681.01	44.74	60.924	

Company:	US ROCKIES REGION PLANNING	Local Co-ordinate Reference:	Well P_NRC 40-9
Project:	COLORADO NORTHERN ZONE - 83	TVD Reference:	WELL @ 5012.00ft (Original Well Elev)
Reference Site:	WELD_NRC 17-9 PAD	MD Reference:	WELL @ 5012.00ft (Original Well Elev)
Site Error:	0.00ft	North Reference:	True
Reference Well:	P_NRC 40-9	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00ft	Output errors are at	2.00 sigma
Reference Wellbore	P_NRC 40-9	Database:	EDM 2003.21 Single User Db
Reference Design:	PLAN #1 1-5-10 RHS	Offset TVD Reference:	Offset Datum

Offset Design WELD_NRC 17-9 PAD - P_NRC 41-9 - P_NRC 41-9 - PLAN #1 1-5-10 RHS												Offset Site Error:	0.00 ft
Survey Program: 0-MWD												Offset Well Error:	0.00 ft
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Semi Major Axis Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning
0.00	0.00	0.00	0.00	0.00	0.00	13.71	30.97	7.56	31.88				
100.00	100.00	100.00	100.00	0.10	0.10	13.71	30.97	7.56	31.88	31.69	0.19	166.847	
200.00	200.00	200.00	200.00	0.32	0.32	13.71	30.97	7.56	31.88	31.24	0.64	49.762	
300.00	300.00	300.00	300.00	0.55	0.55	13.71	30.97	7.56	31.88	30.79	1.09	29.241	
400.00	400.00	400.00	400.00	0.77	0.77	13.71	30.97	7.56	31.88	30.34	1.54	20.704	
500.00	500.00	500.00	500.00	0.99	0.99	13.71	30.97	7.56	31.88	29.89	1.99	16.025	
600.00	600.00	600.00	600.00	1.22	1.22	13.71	30.97	7.56	31.88	29.44	2.44	13.071	
700.00	700.00	700.00	700.00	1.44	1.44	13.71	30.97	7.56	31.88	28.99	2.89	11.037	
800.00	800.00	800.00	800.00	1.67	1.67	13.71	30.97	7.56	31.88	28.54	3.34	9.550	
900.00	900.00	900.00	900.00	1.89	1.89	13.71	30.97	7.56	31.88	28.09	3.79	8.417	
1,000.00	1,000.00	1,000.00	1,000.00	2.12	2.12	13.71	30.97	7.56	31.88	27.64	4.24	7.524	
1,085.00	1,085.00	1,085.00	1,085.00	2.31	2.31	13.71	30.97	7.56	31.88	27.26	4.62	6.901 CC	
1,100.00	1,100.00	1,099.92	1,099.92	2.34	2.34	-103.24	30.98	7.59	31.90	27.22	4.68	6.815 ES	
1,200.00	1,199.97	1,199.37	1,199.33	2.53	2.55	-103.60	31.56	9.76	33.51	28.43	5.07	6.604 SF	
1,300.00	1,299.80	1,298.70	1,298.51	2.73	2.76	-104.37	33.03	15.25	37.58	32.10	5.48	6.855	
1,400.00	1,399.37	1,397.85	1,397.23	2.94	2.98	-105.29	35.38	24.04	44.13	38.21	5.92	7.458	
1,500.00	1,498.55	1,496.71	1,495.29	3.18	3.23	-106.16	38.61	36.08	53.14	46.75	6.39	8.318	
1,600.00	1,597.23	1,595.19	1,592.50	3.45	3.50	-106.87	42.69	51.32	64.59	57.68	6.91	9.345	
1,700.00	1,695.29	1,693.22	1,688.66	3.76	3.80	-107.42	47.61	69.69	78.48	70.98	7.50	10.459	
1,800.00	1,792.60	1,790.72	1,783.60	4.12	4.15	-107.80	53.34	91.10	94.76	86.58	8.18	11.588	
1,900.00	1,889.05	1,887.61	1,877.15	4.54	4.55	-108.05	59.86	115.45	113.41	104.46	8.95	12.674	
2,000.00	1,984.52	1,983.82	1,969.15	5.03	5.01	-108.19	67.15	142.64	134.38	124.55	9.82	13.678	
2,100.00	2,078.90	2,079.29	2,059.44	5.59	5.52	-108.23	75.16	172.56	157.63	146.82	10.81	14.576	
2,200.00	2,172.06	2,173.95	2,147.92	6.23	6.09	-108.19	83.87	205.08	183.12	171.20	11.92	15.359	
2,300.00	2,263.90	2,269.03	2,235.79	6.94	6.72	-108.21	93.27	240.16	210.65	197.50	13.15	16.020	
2,343.21	2,303.15	2,310.43	2,273.99	7.27	7.00	-108.41	97.39	255.57	222.93	209.22	13.71	16.260	
2,400.00	2,354.55	2,364.78	2,324.14	7.72	7.38	-109.02	102.81	275.80	239.22	224.74	14.48	16.526	
2,500.00	2,445.06	2,460.49	2,412.46	8.53	8.07	-109.91	112.35	311.43	267.96	252.11	15.85	16.907	
2,600.00	2,535.57	2,556.20	2,500.77	9.36	8.76	-110.63	121.89	347.05	296.74	279.49	17.25	17.200	
2,700.00	2,626.08	2,651.90	2,589.09	10.20	9.47	-111.22	131.43	382.68	325.56	306.89	18.68	17.431	
2,800.00	2,716.59	2,747.61	2,677.40	11.05	10.19	-111.72	140.97	418.30	354.41	334.29	20.12	17.615	
2,900.00	2,807.09	2,843.32	2,765.72	11.91	10.91	-112.14	150.52	453.93	383.28	361.70	21.58	17.763	
3,000.00	2,897.60	2,939.02	2,854.03	12.77	11.64	-112.50	160.06	489.55	412.17	389.12	23.05	17.885	
3,100.00	2,988.11	3,034.73	2,942.35	13.64	12.37	-112.82	169.60	525.18	441.06	416.54	24.52	17.986	
3,200.00	3,078.62	3,130.44	3,030.67	14.52	13.11	-113.09	179.14	560.80	469.97	443.97	26.01	18.071	
3,300.00	3,169.13	3,226.14	3,118.98	15.40	13.85	-113.34	188.68	596.43	498.89	471.39	27.50	18.143	
3,400.00	3,259.64	3,321.85	3,207.30	16.28	14.59	-113.56	198.22	632.05	527.82	498.82	28.99	18.204	
3,500.00	3,350.15	3,417.56	3,295.61	17.16	15.34	-113.75	207.76	667.68	556.75	526.25	30.50	18.257	
3,600.00	3,440.66	3,513.27	3,383.93	18.05	16.08	-113.93	217.30	703.30	585.68	553.68	32.00	18.302	
3,700.00	3,531.17	3,608.97	3,472.25	18.93	16.83	-114.08	226.84	738.93	614.63	581.12	33.51	18.342	
3,800.00	3,621.68	3,704.68	3,560.56	19.82	17.58	-114.23	236.39	774.55	643.57	608.55	35.02	18.377	
3,900.00	3,712.19	3,800.39	3,648.88	20.71	18.33	-114.36	245.93	810.18	672.52	635.99	36.53	18.408	
4,000.00	3,802.70	3,896.09	3,737.19	21.60	19.09	-114.48	255.47	845.80	701.47	663.42	38.05	18.436	
4,100.00	3,893.21	3,991.80	3,825.51	22.50	19.84	-114.60	265.01	881.42	730.43	690.86	39.57	18.460	
4,200.00	3,983.71	4,087.51	3,913.82	23.39	20.60	-114.70	274.55	917.05	759.38	718.30	41.09	18.482	
4,300.00	4,074.22	4,183.22	4,002.14	24.28	21.35	-114.79	284.09	952.67	788.34	745.74	42.61	18.502	
4,400.00	4,164.73	4,278.92	4,090.46	25.18	22.11	-114.88	293.63	988.30	817.30	773.17	44.13	18.520	
4,500.00	4,255.24	4,374.63	4,178.77	26.07	22.86	-114.97	303.17	1,023.92	846.27	800.61	45.65	18.536	
4,600.00	4,345.75	4,470.34	4,267.09	26.97	23.62	-115.04	312.71	1,059.55	875.23	828.05	47.18	18.551	
4,700.00	4,436.26	4,566.04	4,355.40	27.87	24.38	-115.12	322.26	1,095.17	904.20	855.49	48.71	18.564	
4,800.00	4,526.77	4,661.75	4,443.72	28.76	25.14	-115.18	331.80	1,130.80	933.16	882.93	50.23	18.577	
4,900.00	4,617.28	4,757.46	4,532.04	29.66	25.90	-115.25	341.34	1,166.42	962.13	910.37	51.76	18.588	

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 40-9
Project:	COLORADO NORTHERN ZONE - 83	TVD Reference:	WELL @ 5012.00ft (Original Well Elev)
Reference Site:	WELD_NRC 17-9 PAD	MD Reference:	WELL @ 5012.00ft (Original Well Elev)
Site Error:	0.00ft	North Reference:	True
Reference Well:	P_NRC 40-9	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00ft	Output errors are at	2.00 sigma
Reference Wellbore	P_NRC 40-9	Database:	EDM 2003.21 Single User Db
Reference Design:	PLAN #1 1-5-10 RHS	Offset TVD Reference:	Offset Datum

Offset Design WELD_NRC 17-9 PAD - P_NRC 41-9 - P_NRC 41-9 - PLAN #1 1-5-10 RHS												Offset Site Error:	0.00 ft
Survey Program: 0-MWD												Offset Well Error:	0.00 ft
Reference	Offset	Semi Major Axis		Distance									
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning
5,000.00	4,707.79	4,853.16	4,620.35	30.56	26.66	-115.31	350.88	1,202.05	991.10	937.81	53.29	18.598	
5,100.00	4,798.30	4,948.87	4,708.67	31.46	27.42	-115.36	360.42	1,237.67	1,020.07	965.25	54.82	18.608	
5,200.00	4,888.81	5,044.58	4,796.98	32.36	28.18	-115.42	369.96	1,273.30	1,049.04	992.69	56.35	18.617	
5,300.00	4,979.32	5,140.29	4,885.30	33.26	28.94	-115.47	379.50	1,308.92	1,078.01	1,020.13	57.88	18.625	
5,400.00	5,069.83	5,235.99	4,973.62	34.16	29.70	-115.52	389.04	1,344.55	1,106.98	1,047.57	59.41	18.633	
5,434.28	5,100.85	5,268.80	5,003.89	34.46	29.96	-115.53	392.31	1,356.76	1,116.92	1,056.98	59.94	18.635	
5,500.00	5,160.65	5,331.79	5,062.02	34.98	30.46	-115.88	398.59	1,380.21	1,135.64	1,074.72	60.93	18.640	
5,600.00	5,252.80	5,427.96	5,150.75	35.64	31.23	-116.25	408.18	1,416.00	1,162.93	1,100.60	62.33	18.657	
5,700.00	5,346.24	5,526.66	5,241.87	36.24	31.99	-116.43	418.00	1,452.65	1,188.72	1,125.02	63.71	18.659	
5,800.00	5,440.88	5,634.19	5,342.18	36.78	32.68	-116.53	428.02	1,490.07	1,212.46	1,147.48	64.98	18.659	
5,900.00	5,536.58	5,742.84	5,444.92	37.28	33.27	-116.61	437.15	1,524.16	1,233.83	1,167.75	66.09	18.670	
6,000.00	5,633.23	5,852.51	5,549.92	37.72	33.80	-116.68	445.34	1,554.73	1,252.80	1,185.71	67.09	18.675	
6,100.00	5,730.72	5,963.10	5,656.95	38.10	34.27	-116.75	452.53	1,581.61	1,269.31	1,201.34	67.97	18.674	
6,200.00	5,828.93	6,074.50	5,765.76	38.43	34.69	-116.80	458.70	1,604.62	1,283.33	1,214.58	68.75	18.667	
6,300.00	5,927.74	6,186.58	5,876.10	38.71	35.04	-116.84	463.79	1,623.64	1,294.82	1,225.41	69.41	18.656	
6,400.00	6,027.02	6,299.23	5,987.68	38.94	35.33	-116.87	467.78	1,638.53	1,303.76	1,233.81	69.95	18.639	
6,500.00	6,126.65	6,412.31	6,100.21	39.12	35.56	-116.89	470.64	1,649.21	1,310.11	1,239.74	70.37	18.617	
6,600.00	6,226.53	6,525.67	6,213.37	39.25	35.73	-116.90	472.35	1,655.60	1,313.88	1,243.20	70.68	18.589	
6,692.49	6,319.00	6,630.65	6,318.32	39.33	35.84	0.06	472.90	1,657.66	1,315.04	1,244.17	70.87	18.556	
6,700.00	6,326.51	6,638.84	6,326.51	39.34	35.84	0.06	472.90	1,657.67	1,315.04	1,244.16	70.88	18.553	
6,800.00	6,426.51	6,738.84	6,426.51	39.41	35.92	0.06	472.90	1,657.67	1,315.04	1,244.00	71.04	18.510	
6,900.00	6,526.51	6,838.84	6,526.51	39.48	36.01	0.06	472.90	1,657.67	1,315.04	1,243.83	71.21	18.466	
7,000.00	6,626.51	6,938.84	6,626.51	39.56	36.09	0.06	472.90	1,657.67	1,315.04	1,243.65	71.39	18.421	
7,100.00	6,726.51	7,038.84	6,726.51	39.64	36.18	0.06	472.90	1,657.67	1,315.04	1,243.48	71.56	18.377	
7,200.00	6,826.51	7,138.84	6,826.51	39.71	36.27	0.06	472.90	1,657.67	1,315.04	1,243.30	71.74	18.331	
7,300.00	6,926.51	7,238.84	6,926.51	39.79	36.36	0.06	472.90	1,657.67	1,315.04	1,243.12	71.92	18.285	
7,400.00	7,026.51	7,338.84	7,026.51	39.87	36.45	0.06	472.90	1,657.67	1,315.04	1,242.94	72.10	18.239	
7,500.00	7,126.51	7,438.84	7,126.51	39.95	36.55	0.06	472.90	1,657.67	1,315.04	1,242.76	72.28	18.193	
7,600.00	7,226.51	7,538.84	7,226.51	40.04	36.64	0.06	472.90	1,657.67	1,315.04	1,242.57	72.47	18.146	
7,700.00	7,326.51	7,638.84	7,326.51	40.12	36.74	0.06	472.90	1,657.67	1,315.04	1,242.38	72.66	18.099	
7,800.00	7,426.51	7,738.84	7,426.51	40.20	36.83	0.06	472.90	1,657.67	1,315.04	1,242.19	72.85	18.051	
7,900.00	7,526.51	7,838.84	7,526.51	40.29	36.93	0.06	472.90	1,657.67	1,315.04	1,242.00	73.04	18.004	
8,000.00	7,626.51	7,938.84	7,626.51	40.38	37.03	0.06	472.90	1,657.67	1,315.04	1,241.80	73.24	17.956	
8,100.00	7,726.51	8,038.84	7,726.51	40.46	37.13	0.06	472.90	1,657.67	1,315.04	1,241.60	73.44	17.907	
8,200.00	7,826.51	8,138.84	7,826.51	40.55	37.23	0.06	472.90	1,657.67	1,315.04	1,241.40	73.64	17.859	
8,300.00	7,926.51	8,238.84	7,926.51	40.64	37.33	0.06	472.90	1,657.67	1,315.04	1,241.20	73.84	17.810	
8,400.00	8,026.51	8,338.84	8,026.51	40.73	37.43	0.06	472.90	1,657.67	1,315.04	1,241.00	74.04	17.761	
8,500.00	8,126.51	8,438.84	8,126.51	40.82	37.54	0.06	472.90	1,657.67	1,315.04	1,240.79	74.25	17.711	
8,600.00	8,226.51	8,538.84	8,226.51	40.92	37.64	0.06	472.90	1,657.67	1,315.04	1,240.58	74.46	17.662	
8,617.49	8,244.00	8,556.33	8,244.00	40.93	37.66	0.06	472.90	1,657.67	1,315.04	1,240.55	74.49	17.653	

Company:	US ROCKIES REGION PLANNING	Local Co-ordinate Reference:	Well P_NRC 40-9
Project:	COLORADO NORTHERN ZONE - 83	TVD Reference:	WELL @ 5012.00ft (Original Well Elev)
Reference Site:	WELD_NRC 17-9 PAD	MD Reference:	WELL @ 5012.00ft (Original Well Elev)
Site Error:	0.00ft	North Reference:	True
Reference Well:	P_NRC 40-9	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00ft	Output errors are at	2.00 sigma
Reference Wellbore	P_NRC 40-9	Database:	EDM 2003.21 Single User Db
Reference Design:	PLAN #1 1-5-10 RHS	Offset TVD Reference:	Offset Datum

Offset Design WELD_NRC 17-9 PAD - P_NRC 7-9 - P_NRC 7-9 - Design #1												Offset Site Error:	0.00 ft
Survey Program: 0-MWD												Offset Well Error:	0.00 ft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	
0.00	0.00	0.00	0.00	0.00	0.00	13.50	46.63	11.19	47.95				
100.00	100.00	100.00	100.00	0.10	0.10	13.50	46.63	11.19	47.95	47.76	0.19	250.993	
200.00	200.00	200.00	200.00	0.32	0.32	13.50	46.63	11.19	47.95	47.31	0.64	74.858	
300.00	300.00	300.00	300.00	0.55	0.55	13.50	46.63	11.19	47.95	46.86	1.09	43.989	
400.00	400.00	400.00	400.00	0.77	0.77	13.50	46.63	11.19	47.95	46.41	1.54	31.145	
500.00	500.00	500.00	500.00	0.99	0.99	13.50	46.63	11.19	47.95	45.96	1.99	24.107	
600.00	600.00	600.00	600.00	1.22	1.22	13.50	46.63	11.19	47.95	45.51	2.44	19.663	
700.00	700.00	700.00	700.00	1.44	1.44	13.50	46.63	11.19	47.95	45.06	2.89	16.603	
800.00	800.00	800.00	800.00	1.67	1.67	13.50	46.63	11.19	47.95	44.61	3.34	14.367	
900.00	900.00	900.00	900.00	1.89	1.89	13.50	46.63	11.19	47.95	44.17	3.79	12.661	
1,000.00	1,000.00	1,000.00	1,000.00	2.12	2.12	13.50	46.63	11.19	47.95	43.72	4.24	11.318	
1,085.00	1,085.00	1,085.00	1,085.00	2.31	2.31	13.50	46.63	11.19	47.95	43.33	4.62	10.382	
1,100.00	1,100.00	1,100.22	1,100.22	2.34	2.34	-103.52	46.60	11.17	47.93	43.25	4.68	10.241	
1,200.00	1,199.97	1,201.55	1,201.52	2.53	2.52	-107.77	44.94	9.53	46.61	41.56	5.05	9.233	
1,300.00	1,299.80	1,302.32	1,302.11	2.73	2.71	-119.36	40.75	5.42	44.50	39.07	5.43	8.190	
1,341.68	1,341.34	1,344.04	1,343.69	2.81	2.80	-126.53	38.28	2.99	44.15	38.55	5.60	7.883 CC, ES	
1,400.00	1,399.37	1,402.05	1,401.41	2.94	2.92	-138.44	34.13	-1.09	45.15	39.32	5.83	7.746 SF	
1,500.00	1,498.55	1,500.25	1,498.88	3.18	3.14	-159.41	25.67	-9.40	53.38	47.16	6.22	8.583	
1,600.00	1,597.23	1,597.58	1,595.47	3.45	3.38	-174.00	17.12	-17.81	70.19	63.58	6.61	10.620	
1,700.00	1,695.29	1,694.16	1,691.31	3.76	3.63	177.36	8.63	-26.15	93.16	86.15	7.01	13.292	
1,800.00	1,792.60	1,789.88	1,786.30	4.12	3.88	172.33	0.22	-34.41	120.69	113.27	7.42	16.267	
1,900.00	1,889.05	1,884.61	1,880.32	4.54	4.15	169.34	-8.10	-42.59	152.03	144.19	7.84	19.390	
2,000.00	1,984.52	1,978.25	1,973.24	5.03	4.41	167.54	-16.33	-50.68	186.81	178.54	8.27	22.586	
2,100.00	2,078.90	2,070.68	2,064.97	5.59	4.68	166.45	-24.45	-58.66	224.85	216.14	8.71	25.815	
2,200.00	2,172.06	2,161.78	2,155.38	6.23	4.94	165.78	-32.45	-66.53	266.03	256.87	9.16	29.055	
2,300.00	2,263.90	2,251.46	2,244.37	6.94	5.21	165.39	-40.33	-74.27	310.28	300.67	9.61	32.291	
2,343.21	2,303.15	2,289.73	2,282.35	7.27	5.33	165.27	-43.70	-77.57	330.33	320.52	9.81	33.686	
2,400.00	2,354.55	2,339.84	2,332.08	7.72	5.48	165.29	-48.10	-81.90	357.05	346.91	10.13	35.234	
2,500.00	2,445.06	2,428.08	2,419.65	8.53	5.74	165.32	-55.85	-89.52	404.10	393.37	10.72	37.692	
2,600.00	2,535.57	2,516.32	2,507.22	9.36	6.01	165.34	-63.60	-97.14	451.14	439.83	11.32	39.859	
2,700.00	2,626.08	2,604.56	2,594.79	10.20	6.28	165.36	-71.36	-104.76	498.19	486.27	11.92	41.780	
2,800.00	2,716.59	2,692.80	2,682.35	11.05	6.56	165.38	-79.11	-112.38	545.24	532.71	12.54	43.492	
2,900.00	2,807.09	2,781.04	2,769.92	11.91	6.83	165.39	-86.86	-120.00	592.29	579.14	13.15	45.025	
3,000.00	2,897.60	2,869.28	2,857.49	12.77	7.11	165.40	-94.61	-127.61	639.34	625.56	13.78	46.394	
3,100.00	2,988.11	2,957.52	2,945.06	13.64	7.38	165.41	-102.37	-135.23	686.39	671.98	14.41	47.628	
3,200.00	3,078.62	3,045.76	3,032.63	14.52	7.66	165.42	-110.12	-142.85	733.44	718.39	15.05	48.746	
3,300.00	3,169.13	3,134.01	3,120.20	15.40	7.94	165.43	-117.87	-150.47	780.49	764.81	15.68	49.761	
3,400.00	3,259.64	3,222.25	3,207.76	16.28	8.22	165.44	-125.62	-158.09	827.54	811.21	16.33	50.687	
3,500.00	3,350.15	3,310.49	3,295.33	17.16	8.50	165.44	-133.38	-165.71	874.59	857.62	16.97	51.535	
3,600.00	3,440.66	3,398.73	3,382.90	18.05	8.78	165.45	-141.13	-173.33	921.64	904.02	17.62	52.313	
3,700.00	3,531.17	3,486.97	3,470.47	18.93	9.06	165.45	-148.88	-180.95	968.69	950.42	18.27	53.030	
3,800.00	3,621.68	3,575.21	3,558.04	19.82	9.34	165.46	-156.63	-188.57	1,015.74	996.82	18.92	53.691	
3,900.00	3,712.19	3,663.45	3,645.60	20.71	9.63	165.46	-164.39	-196.19	1,062.79	1,043.22	19.57	54.304	
4,000.00	3,802.70	3,751.69	3,733.17	21.60	9.91	165.46	-172.14	-203.81	1,109.84	1,089.61	20.23	54.873	
4,100.00	3,893.21	3,839.93	3,820.74	22.50	10.19	165.47	-179.89	-211.42	1,156.89	1,136.01	20.88	55.403	
4,200.00	3,983.71	3,928.17	3,908.31	23.39	10.48	165.47	-187.64	-219.04	1,203.94	1,182.40	21.54	55.897	
4,300.00	4,074.22	4,016.41	3,995.88	24.28	10.76	165.47	-195.40	-226.66	1,250.99	1,228.79	22.20	56.359	
4,400.00	4,164.73	4,104.65	4,083.45	25.18	11.05	165.47	-203.15	-234.28	1,298.04	1,275.18	22.86	56.791	
4,500.00	4,255.24	4,192.89	4,171.01	26.07	11.33	165.48	-210.90	-241.90	1,345.09	1,321.57	23.52	57.197	
4,600.00	4,345.75	4,281.13	4,258.58	26.97	11.62	165.48	-218.65	-249.52	1,392.13	1,367.96	24.18	57.578	
4,700.00	4,436.26	4,369.37	4,346.15	27.87	11.90	165.48	-226.41	-257.14	1,439.18	1,414.34	24.84	57.938	
4,800.00	4,526.77	4,457.61	4,433.72	28.76	12.19	165.48	-234.16	-264.76	1,486.23	1,460.73	25.50	58.277	

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 40-9
Project:	COLORADO NORTHERN ZONE - 83	TVD Reference:	WELL @ 5012.00ft (Original Well Elev)
Reference Site:	WELD_NRC 17-9 PAD	MD Reference:	WELL @ 5012.00ft (Original Well Elev)
Site Error:	0.00ft	North Reference:	True
Reference Well:	P_NRC 40-9	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00ft	Output errors are at	2.00 sigma
Reference Wellbore	P_NRC 40-9	Database:	EDM 2003.21 Single User Db
Reference Design:	PLAN #1 1-5-10 RHS	Offset TVD Reference:	Offset Datum

Offset Design WELD_NRC 17-9 PAD - P_NRC 7-9 - P_NRC 7-9 - Design #1												Offset Site Error:	0.00 ft
Survey Program: 0-MWD												Offset Well Error:	0.00 ft
Reference		Offset		Semi Major Axis			Distance						
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	4,617.28	4,545.85	4,521.29	29.66	12.47	165.49	-241.91	-272.38	1,533.28	1,507.12	26.17	58.597	
5,000.00	4,707.79	4,634.09	4,608.85	30.56	12.76	165.49	-249.66	-280.00	1,580.33	1,553.50	26.83	58.900	
5,100.00	4,798.30	4,722.33	4,696.42	31.46	13.04	165.49	-257.42	-287.62	1,627.38	1,599.89	27.50	59.187	
5,200.00	4,888.81	4,810.57	4,783.99	32.36	13.33	165.49	-265.17	-295.24	1,674.43	1,646.27	28.16	59.459	
5,300.00	4,979.32	4,898.81	4,871.56	33.26	13.62	165.49	-272.92	-302.85	1,721.48	1,692.65	28.83	59.718	
5,400.00	5,069.83	4,987.05	4,959.13	34.16	13.90	165.49	-280.67	-310.47	1,768.53	1,739.04	29.49	59.964	
5,434.28	5,100.85	5,017.30	4,989.14	34.46	14.00	165.49	-283.33	-313.08	1,784.66	1,754.94	29.72	60.046	
5,500.00	5,160.65	5,075.63	5,047.03	34.98	14.19	165.66	-288.46	-318.12	1,814.93	1,784.68	30.26	59.986	
5,600.00	5,252.80	5,165.63	5,136.35	35.64	14.48	165.86	-296.36	-325.89	1,858.49	1,827.47	31.02	59.912	
5,700.00	5,346.24	5,257.05	5,227.07	36.24	14.78	166.02	-304.40	-333.79	1,898.98	1,867.23	31.76	59.800	
5,800.00	5,440.88	5,349.76	5,319.07	36.78	15.08	166.13	-312.54	-341.79	1,936.36	1,903.90	32.46	59.654	
5,900.00	5,536.58	5,443.65	5,412.25	37.28	15.39	166.19	-320.79	-349.90	1,970.57	1,937.44	33.13	59.481	
6,000.00	5,633.23	5,538.62	5,506.50	37.72	15.70	166.22	-329.13	-358.10	2,001.59	1,967.82	33.76	59.285	
6,100.00	5,730.72	5,634.54	5,601.69	38.10	16.01	166.21	-337.56	-366.38	2,029.37	1,995.02	34.36	59.068	
6,200.00	5,828.93	5,731.30	5,697.71	38.43	16.33	166.16	-346.06	-374.74	2,053.91	2,019.00	34.91	58.834	
6,300.00	5,927.74	5,828.78	5,794.45	38.71	16.64	166.07	-354.63	-383.15	2,075.16	2,039.74	35.42	58.585	
6,400.00	6,027.02	5,926.86	5,891.78	38.94	16.96	165.95	-363.24	-391.62	2,093.11	2,057.22	35.89	58.321	
6,500.00	6,126.65	6,040.46	6,004.54	39.12	17.31	165.76	-373.04	-401.25	2,107.67	2,071.33	36.34	57.991	
6,600.00	6,226.53	6,203.46	6,166.98	39.25	17.67	165.56	-382.51	-410.55	2,116.79	2,080.02	36.77	57.568	
6,692.49	6,319.00	6,355.55	6,319.00	39.33	17.92	-77.56	-385.38	-413.38	2,119.54	2,082.51	37.03	57.245	
6,700.00	6,326.51	6,363.06	6,326.51	39.34	17.93	-77.56	-385.38	-413.38	2,119.54	2,082.49	37.05	57.211	
6,800.00	6,426.51	6,463.06	6,426.51	39.41	18.08	-77.56	-385.38	-413.38	2,119.54	2,082.21	37.33	56.777	
6,900.00	6,526.51	6,563.06	6,526.51	39.48	18.22	-77.56	-385.38	-413.38	2,119.54	2,081.92	37.61	56.351	
7,000.00	6,626.51	6,663.06	6,626.51	39.56	18.37	-77.56	-385.38	-413.38	2,119.54	2,081.64	37.90	55.926	
7,100.00	6,726.51	6,763.06	6,726.51	39.64	18.52	-77.56	-385.38	-413.38	2,119.54	2,081.35	38.19	55.503	
7,200.00	6,826.51	6,863.06	6,826.51	39.71	18.67	-77.56	-385.38	-413.38	2,119.54	2,081.06	38.48	55.083	
7,300.00	6,926.51	6,963.06	6,926.51	39.79	18.82	-77.56	-385.38	-413.38	2,119.54	2,080.76	38.77	54.664	
7,400.00	7,026.51	7,063.06	7,026.51	39.87	18.98	-77.56	-385.38	-413.38	2,119.54	2,080.47	39.07	54.248	
7,500.00	7,126.51	7,163.06	7,126.51	39.95	19.13	-77.56	-385.38	-413.38	2,119.54	2,080.16	39.37	53.834	
7,600.00	7,226.51	7,263.06	7,226.51	40.04	19.29	-77.56	-385.38	-413.38	2,119.54	2,079.86	39.68	53.422	
7,700.00	7,326.51	7,363.06	7,326.51	40.12	19.45	-77.56	-385.38	-413.38	2,119.54	2,079.56	39.98	53.013	
7,800.00	7,426.51	7,463.06	7,426.51	40.20	19.61	-77.56	-385.38	-413.38	2,119.54	2,079.25	40.29	52.607	
7,900.00	7,526.51	7,563.06	7,526.51	40.29	19.77	-77.56	-385.38	-413.38	2,119.54	2,078.94	40.60	52.204	
8,000.00	7,626.51	7,663.06	7,626.51	40.38	19.93	-77.56	-385.38	-413.38	2,119.54	2,078.62	40.91	51.804	
8,100.00	7,726.51	7,763.06	7,726.51	40.46	20.09	-77.56	-385.38	-413.38	2,119.54	2,078.31	41.23	51.406	
8,200.00	7,826.51	7,863.06	7,826.51	40.55	20.26	-77.56	-385.38	-413.38	2,119.54	2,077.99	41.55	51.012	
8,300.00	7,926.51	7,963.06	7,926.51	40.64	20.42	-77.56	-385.38	-413.38	2,119.54	2,077.67	41.87	50.620	
8,400.00	8,026.51	8,063.06	8,026.51	40.73	20.59	-77.56	-385.38	-413.38	2,119.54	2,077.34	42.19	50.232	
8,500.00	8,126.51	8,163.06	8,126.51	40.82	20.75	-77.56	-385.38	-413.38	2,119.54	2,077.02	42.52	49.848	
8,600.00	8,226.51	8,263.06	8,226.51	40.92	20.92	-77.56	-385.38	-413.38	2,119.54	2,076.69	42.85	49.466	
8,617.49	8,244.00	8,280.55	8,244.00	40.93	20.95	-77.56	-385.38	-413.38	2,119.54	2,076.63	42.91	49.400	

Company:	US ROCKIES REGION PLANNING	Local Co-ordinate Reference:	Well P_NRC 40-9
Project:	COLORADO NORTHERN ZONE - 83	TVD Reference:	WELL @ 5012.00ft (Original Well Elev)
Reference Site:	WELD_NRC 17-9 PAD	MD Reference:	WELL @ 5012.00ft (Original Well Elev)
Site Error:	0.00ft	North Reference:	True
Reference Well:	P_NRC 40-9	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00ft	Output errors are at	2.00 sigma
Reference Wellbore	P_NRC 40-9	Database:	EDM 2003.21 Single User Db
Reference Design:	PLAN #1 1-5-10 RHS	Offset TVD Reference:	Offset Datum

Offset Design WELD_NRC 17-9 PAD - P_NRC 8-9 - P_NRC 8-9 - PLAN #1 1-5-10 RHS												Offset Site Error:	0.00 ft
Survey Program: 0-MWD												Offset Well Error:	0.00 ft
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Semi Major Axis Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning
0.00	0.00	0.00	0.00	0.00	0.00	14.04	15.67	3.92	16.15				
100.00	100.00	100.00	100.00	0.10	0.09	14.04	15.67	3.92	16.15	15.96	0.19	86.573	
200.00	200.00	200.00	200.00	0.32	0.32	14.04	15.67	3.92	16.15	15.51	0.64	25.391	
300.00	300.00	300.00	300.00	0.55	0.54	14.04	15.67	3.92	16.15	15.07	1.09	14.877	
400.00	400.00	400.00	400.00	0.77	0.77	14.04	15.67	3.92	16.15	14.62	1.54	10.521	
500.00	500.00	500.00	500.00	0.99	0.99	14.04	15.67	3.92	16.15	14.17	1.98	8.138	
600.00	600.00	600.00	600.00	1.22	1.21	14.04	15.67	3.92	16.15	13.72	2.43	6.635	
700.00	700.00	700.00	700.00	1.44	1.44	14.04	15.67	3.92	16.15	13.27	2.88	5.601	
800.00	800.00	800.00	800.00	1.67	1.66	14.04	15.67	3.92	16.15	12.82	3.33	4.845	
900.00	900.00	900.00	900.00	1.89	1.89	14.04	15.67	3.92	16.15	12.37	3.78	4.269	
1,000.00	1,000.00	1,000.00	1,000.00	2.12	2.11	14.04	15.67	3.92	16.15	11.92	4.23	3.816	
1,085.00	1,085.00	1,085.00	1,085.00	2.31	2.30	14.04	15.67	3.92	16.15	11.54	4.61	3.500 CC	
1,100.00	1,100.00	1,100.00	1,100.00	2.34	2.34	-102.91	15.66	3.96	16.16	11.48	4.68	3.456 ES	
1,200.00	1,199.97	1,199.99	1,199.96	2.53	2.53	-102.70	15.13	6.16	16.69	11.64	5.06	3.301 SF	
1,300.00	1,299.80	1,299.97	1,299.77	2.73	2.73	-102.23	13.80	11.76	18.04	12.58	5.46	3.306	
1,400.00	1,399.37	1,399.93	1,399.29	2.94	2.95	-101.60	11.66	20.74	20.21	14.32	5.89	3.432	
1,500.00	1,498.55	1,499.85	1,498.41	3.18	3.19	-100.93	8.71	33.09	23.19	16.83	6.36	3.644	
1,600.00	1,597.23	1,599.74	1,596.97	3.45	3.46	-100.27	4.97	48.78	26.99	20.09	6.90	3.910	
1,700.00	1,695.29	1,699.57	1,694.87	3.76	3.78	-99.68	0.43	67.80	31.60	24.08	7.53	4.199	
1,800.00	1,792.60	1,799.39	1,792.13	4.12	4.14	-99.95	-4.77	89.63	36.98	28.74	8.24	4.488	
1,900.00	1,889.05	1,899.15	1,889.26	4.54	4.52	-104.21	-10.06	111.79	43.11	34.09	9.02	4.780	
2,000.00	1,984.52	1,998.70	1,986.18	5.03	4.93	-111.10	-15.33	133.91	50.58	40.77	9.81	5.156	
2,100.00	2,078.90	2,097.92	2,082.77	5.59	5.35	-119.07	-20.59	155.95	60.24	49.69	10.55	5.712	
2,200.00	2,172.06	2,196.69	2,178.93	6.23	5.78	-126.93	-25.82	177.90	72.80	61.61	11.19	6.506	
2,300.00	2,263.90	2,294.89	2,274.53	6.94	6.21	-133.97	-31.03	199.71	88.73	76.99	11.74	7.557	
2,343.21	2,303.15	2,337.11	2,315.64	7.27	6.40	-136.68	-33.26	209.10	96.72	84.76	11.96	8.088	
2,400.00	2,354.55	2,392.51	2,369.57	7.72	6.65	-139.90	-36.20	221.40	107.84	95.57	12.26	8.794	
2,500.00	2,445.06	2,490.07	2,464.56	8.53	7.10	-144.20	-41.37	243.08	128.01	115.19	12.82	9.984	
2,600.00	2,535.57	2,587.63	2,559.54	9.36	7.55	-147.33	-46.54	264.75	148.69	135.29	13.41	11.089	
2,700.00	2,626.08	2,685.19	2,654.52	10.20	8.00	-149.69	-51.71	286.43	169.70	155.68	14.02	12.103	
2,800.00	2,716.59	2,782.75	2,749.50	11.05	8.46	-151.52	-56.88	308.10	190.92	176.27	14.65	13.030	
2,900.00	2,807.09	2,880.31	2,844.48	11.91	8.92	-153.00	-62.05	329.78	212.29	196.99	15.30	13.878	
3,000.00	2,897.60	2,977.87	2,939.46	12.77	9.38	-154.20	-67.21	351.45	233.77	217.81	15.95	14.653	
3,100.00	2,988.11	3,075.43	3,034.44	13.64	9.85	-155.20	-72.38	373.13	255.33	238.71	16.62	15.363	
3,200.00	3,078.62	3,172.99	3,129.42	14.52	10.31	-156.04	-77.55	394.80	276.95	259.66	17.29	16.015	
3,300.00	3,169.13	3,270.55	3,224.40	15.40	10.78	-156.76	-82.72	416.48	298.63	280.65	17.97	16.615	
3,400.00	3,259.64	3,368.10	3,319.38	16.28	11.25	-157.39	-87.89	438.15	320.34	301.68	18.66	17.168	
3,500.00	3,350.15	3,465.66	3,414.36	17.16	11.72	-157.93	-93.06	459.83	342.08	322.73	19.35	17.679	
3,600.00	3,440.66	3,563.22	3,509.34	18.05	12.19	-158.41	-98.23	481.50	363.85	343.81	20.04	18.153	
3,700.00	3,531.17	3,660.78	3,604.32	18.93	12.67	-158.84	-103.40	503.18	385.64	364.90	20.74	18.593	
3,800.00	3,621.68	3,758.34	3,699.30	19.82	13.14	-159.22	-108.57	524.85	407.45	386.01	21.44	19.002	
3,900.00	3,712.19	3,855.90	3,794.28	20.71	13.61	-159.56	-113.74	546.53	429.27	407.13	22.15	19.384	
4,000.00	3,802.70	3,953.46	3,889.26	21.60	14.09	-159.87	-118.91	568.20	451.11	428.26	22.85	19.741	
4,100.00	3,893.21	4,051.02	3,984.24	22.50	14.57	-160.15	-124.08	589.88	472.96	449.40	23.56	20.075	
4,200.00	3,983.71	4,148.58	4,079.22	23.39	15.04	-160.40	-129.25	611.55	494.82	470.55	24.27	20.388	
4,300.00	4,074.22	4,246.14	4,174.20	24.28	15.52	-160.64	-134.41	633.23	516.69	491.71	24.98	20.683	
4,400.00	4,164.73	4,343.69	4,269.18	25.18	16.00	-160.85	-139.58	654.90	538.56	512.87	25.69	20.960	
4,500.00	4,255.24	4,441.25	4,364.16	26.07	16.47	-161.05	-144.75	676.58	560.44	534.04	26.41	21.222	
4,600.00	4,345.75	4,538.81	4,459.14	26.97	16.95	-161.23	-149.92	698.25	582.33	555.21	27.12	21.469	
4,700.00	4,436.26	4,636.37	4,554.12	27.87	17.43	-161.40	-155.09	719.93	604.22	576.38	27.84	21.702	
4,800.00	4,526.77	4,733.93	4,649.10	28.76	17.91	-161.56	-160.26	741.60	626.12	597.56	28.56	21.924	
4,900.00	4,617.28	4,831.49	4,744.08	29.66	18.39	-161.71	-165.43	763.28	648.02	618.75	29.28	22.134	

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 40-9
Project:	COLORADO NORTHERN ZONE - 83	TVD Reference:	WELL @ 5012.00ft (Original Well Elev)
Reference Site:	WELD_NRC 17-9 PAD	MD Reference:	WELL @ 5012.00ft (Original Well Elev)
Site Error:	0.00ft	North Reference:	True
Reference Well:	P_NRC 40-9	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00ft	Output errors are at	2.00 sigma
Reference Wellbore	P_NRC 40-9	Database:	EDM 2003.21 Single User Db
Reference Design:	PLAN #1 1-5-10 RHS	Offset TVD Reference:	Offset Datum

Offset Design WELD_NRC 17-9 PAD - P_NRC 8-9 - P_NRC 8-9 - PLAN #1 1-5-10 RHS												Offset Site Error:	0.00 ft
Survey Program: 0-MWD												Offset Well Error:	0.00 ft
Reference		Offset		Semi Major Axis			Distance						
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning
5,000.00	4,707.79	4,929.05	4,839.06	30.56	18.87	-161.84	-170.60	784.95	669.93	639.93	30.00	22.333	
5,100.00	4,798.30	5,026.61	4,934.04	31.46	19.34	-161.97	-175.77	806.63	691.84	661.12	30.72	22.522	
5,200.00	4,888.81	5,124.17	5,029.02	32.36	19.82	-162.09	-180.94	828.30	713.75	682.31	31.44	22.703	
5,300.00	4,979.32	5,221.73	5,124.00	33.26	20.30	-162.21	-186.11	849.98	735.66	703.50	32.16	22.874	
5,400.00	5,069.83	5,319.29	5,218.98	34.16	20.78	-162.32	-191.28	871.65	757.58	724.70	32.88	23.038	
5,434.28	5,100.85	5,352.73	5,251.54	34.46	20.95	-162.35	-193.05	879.08	765.10	731.96	33.13	23.093	
5,500.00	5,160.65	5,417.00	5,314.11	34.98	21.26	-162.48	-196.45	893.36	778.80	745.14	33.66	23.139	
5,600.00	5,252.80	5,515.33	5,409.85	35.64	21.75	-162.60	-201.66	915.21	796.95	762.51	34.43	23.146	
5,700.00	5,346.24	5,614.21	5,506.11	36.24	22.24	-162.62	-206.90	937.18	811.81	776.61	35.20	23.065	
5,800.00	5,440.88	5,713.52	5,602.79	36.78	22.73	-162.56	-212.16	959.24	823.37	787.42	35.95	22.902	
5,900.00	5,536.58	5,800.00	5,687.01	37.28	23.14	-162.43	-216.73	978.37	831.81	795.18	36.63	22.709	
6,000.00	5,633.23	5,885.68	5,770.85	37.72	23.43	-162.31	-220.82	995.54	838.79	801.58	37.20	22.546	
6,100.00	5,730.72	5,965.40	5,849.30	38.10	23.68	-162.21	-224.11	1,009.31	844.86	807.18	37.68	22.421	
6,200.00	5,828.93	6,045.08	5,928.07	38.43	23.90	-162.14	-226.88	1,020.95	850.00	811.91	38.09	22.318	
6,300.00	5,927.74	6,124.74	6,007.13	38.71	24.09	-162.07	-229.15	1,030.46	854.20	815.78	38.42	22.235	
6,400.00	6,027.02	6,200.00	6,082.04	38.94	24.26	-162.03	-230.82	1,037.47	857.46	818.80	38.66	22.177	
6,500.00	6,126.65	6,283.99	6,165.84	39.12	24.40	-161.99	-232.15	1,043.04	859.76	820.90	38.85	22.128	
6,600.00	6,226.53	6,363.60	6,245.38	39.25	24.52	-161.97	-232.88	1,046.10	861.11	822.15	38.96	22.103	
6,692.49	6,319.00	6,437.23	6,319.00	39.33	24.61	-45.01	-233.10	1,047.02	861.52	822.52	39.00	22.092	
6,700.00	6,326.51	6,444.74	6,326.51	39.34	24.62	-45.01	-233.10	1,047.02	861.52	822.50	39.02	22.081	
6,800.00	6,426.51	6,544.74	6,426.51	39.41	24.73	-45.01	-233.10	1,047.02	861.52	822.22	39.30	21.923	
6,900.00	6,526.51	6,644.74	6,526.51	39.48	24.85	-45.01	-233.10	1,047.02	861.52	821.94	39.58	21.766	
7,000.00	6,626.51	6,744.74	6,626.51	39.56	24.97	-45.01	-233.10	1,047.02	861.52	821.65	39.87	21.609	
7,100.00	6,726.51	6,844.74	6,726.51	39.64	25.09	-45.01	-233.10	1,047.02	861.52	821.36	40.16	21.452	
7,200.00	6,826.51	6,944.74	6,826.51	39.71	25.22	-45.01	-233.10	1,047.02	861.52	821.07	40.45	21.296	
7,300.00	6,926.51	7,044.74	6,926.51	39.79	25.34	-45.01	-233.10	1,047.02	861.52	820.77	40.75	21.141	
7,400.00	7,026.51	7,144.74	7,026.51	39.87	25.47	-45.01	-233.10	1,047.02	861.52	820.47	41.05	20.987	
7,500.00	7,126.51	7,244.74	7,126.51	39.95	25.60	-45.01	-233.10	1,047.02	861.52	820.17	41.35	20.834	
7,600.00	7,226.51	7,344.74	7,226.51	40.04	25.73	-45.01	-233.10	1,047.02	861.52	819.86	41.66	20.682	
7,700.00	7,326.51	7,444.74	7,326.51	40.12	25.86	-45.01	-233.10	1,047.02	861.52	819.56	41.96	20.531	
7,800.00	7,426.51	7,544.74	7,426.51	40.20	25.99	-45.01	-233.10	1,047.02	861.52	819.25	42.27	20.380	
7,900.00	7,526.51	7,644.74	7,526.51	40.29	26.12	-45.01	-233.10	1,047.02	861.52	818.93	42.58	20.231	
8,000.00	7,626.51	7,744.74	7,626.51	40.38	26.26	-45.01	-233.10	1,047.02	861.52	818.62	42.90	20.082	
8,100.00	7,726.51	7,844.74	7,726.51	40.46	26.39	-45.01	-233.10	1,047.02	861.52	818.30	43.22	19.935	
8,200.00	7,826.51	7,944.74	7,826.51	40.55	26.53	-45.01	-233.10	1,047.02	861.52	817.98	43.54	19.789	
8,300.00	7,926.51	8,044.74	7,926.51	40.64	26.67	-45.01	-233.10	1,047.02	861.52	817.66	43.86	19.644	
8,400.00	8,026.51	8,144.74	8,026.51	40.73	26.80	-45.01	-233.10	1,047.02	861.52	817.34	44.18	19.500	
8,500.00	8,126.51	8,244.74	8,126.51	40.82	26.95	-45.01	-233.10	1,047.02	861.52	817.01	44.51	19.357	
8,600.00	8,226.51	8,344.74	8,226.51	40.92	27.09	-45.01	-233.10	1,047.02	861.52	816.69	44.83	19.216	
8,617.49	8,244.00	8,362.23	8,244.00	40.93	27.11	-45.01	-233.10	1,047.02	861.52	816.63	44.89	19.191	

Company:	US ROCKIES REGION PLANNING	Local Co-ordinate Reference:	Well P_NRC 40-9
Project:	COLORADO NORTHERN ZONE - 83	TVD Reference:	WELL @ 5012.00ft (Original Well Elev)
Reference Site:	WELD_NRC 17-9 PAD	MD Reference:	WELL @ 5012.00ft (Original Well Elev)
Site Error:	0.00ft	North Reference:	True
Reference Well:	P_NRC 40-9	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00ft	Output errors are at	2.00 sigma
Reference Wellbore	P_NRC 40-9	Database:	EDM 2003.21 Single User Db
Reference Design:	PLAN #1 1-5-10 RHS	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.00 ft
Survey Program: 0-UNKNOWN												Offset Well Error:	0.00 ft
Reference		Offset		Semi Major Axis			Distance						
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning
0.00	0.00	0.00	0.00	0.00	0.00	42.17	79.42	71.93	108.82				
100.00	100.00	81.00	81.00	0.10	1.62	42.17	79.42	71.93	107.15	105.43	1.72	62.456	
200.00	200.00	181.00	181.00	0.32	5.24	42.17	79.42	71.93	107.15	101.59	5.56	19.270	
300.00	300.00	281.00	281.00	0.55	9.24	42.17	79.42	71.93	107.15	97.36	9.79	10.950	
400.00	400.00	381.00	381.00	0.77	13.24	42.17	79.42	71.93	107.15	93.14	14.01	7.648	
500.00	500.00	481.00	481.00	0.99	17.24	42.17	79.42	71.93	107.15	88.91	18.23	5.876	
600.00	600.00	581.00	581.00	1.22	21.24	42.17	79.42	71.93	107.15	84.69	22.46	4.771	
700.00	700.00	681.00	681.00	1.44	25.24	42.17	79.42	71.93	107.15	80.46	26.68	4.015	
800.00	800.00	781.00	781.00	1.67	29.24	42.17	79.42	71.93	107.15	76.24	30.91	3.467	
900.00	900.00	881.00	881.00	1.89	33.24	42.17	79.42	71.93	107.15	72.01	35.13	3.050	
1,000.00	1,000.00	981.00	981.00	2.12	37.24	42.17	79.42	71.93	107.15	67.79	39.36	2.722	
1,085.00	1,085.00	1,066.00	1,066.00	2.31	40.64	42.17	79.42	71.93	107.15	64.20	42.95	2.495	
1,100.00	1,100.00	1,081.00	1,081.00	2.34	41.24	-74.80	79.42	71.93	107.14	63.56	43.58	2.458	
1,200.00	1,199.97	1,180.97	1,180.97	2.53	45.24	-75.99	79.42	71.93	106.57	58.80	47.76	2.231	
1,300.00	1,299.80	1,280.80	1,280.80	2.73	49.23	-79.05	79.42	71.93	105.32	53.37	51.95	2.027	
1,400.00	1,399.37	1,380.37	1,380.37	2.94	53.21	-84.06	79.42	71.93	103.96	47.81	56.15	1.851	
1,486.75	1,485.43	1,466.43	1,466.43	3.14	56.66	-90.00	79.42	71.93	103.39	43.59	59.80	1.729 CC	
1,500.00	1,498.55	1,479.55	1,479.55	3.18	57.18	-91.03	79.42	71.93	103.41	43.05	60.36	1.713	
1,600.00	1,597.23	1,578.23	1,578.23	3.45	61.13	-99.74	79.42	71.93	104.95	40.41	64.54	1.626 ES	
1,700.00	1,695.29	1,676.29	1,676.29	3.76	65.05	-109.58	79.42	71.93	110.03	41.41	68.61	1.604 SF	
1,800.00	1,792.60	1,773.60	1,773.60	4.12	68.94	-119.61	79.42	71.93	119.86	47.41	72.45	1.654	
1,900.00	1,889.05	1,870.05	1,870.05	4.54	72.80	-128.93	79.42	71.93	135.14	59.18	75.96	1.779	
2,000.00	1,984.52	1,965.52	1,965.52	5.03	76.62	-137.00	79.42	71.93	155.96	76.82	79.14	1.971	
2,100.00	2,078.90	2,059.90	2,059.90	5.59	80.40	-143.65	79.42	71.93	182.03	100.02	82.00	2.220	
2,200.00	2,172.06	2,153.06	2,153.06	6.23	84.12	-149.02	79.42	71.93	212.92	128.32	84.60	2.517	
2,300.00	2,263.90	2,244.90	2,244.90	6.94	87.80	-153.31	79.42	71.93	248.24	161.29	86.95	2.855	
2,343.21	2,303.15	2,284.15	2,284.15	7.27	89.37	-154.89	79.42	71.93	264.79	176.90	87.89	3.013	
2,400.00	2,354.55	2,335.55	2,335.55	7.72	91.42	-156.91	79.42	71.93	287.17	197.46	89.71	3.201	
2,500.00	2,445.06	2,426.06	2,426.06	8.53	95.04	-159.80	79.42	71.93	327.20	234.19	93.01	3.518	
2,600.00	2,535.57	2,516.57	2,516.57	9.36	98.66	-162.07	79.42	71.93	367.79	271.40	96.39	3.816	
2,700.00	2,626.08	2,607.08	2,607.08	10.20	102.28	-163.89	79.42	71.93	408.77	308.95	99.82	4.095	
2,800.00	2,716.59	2,697.59	2,697.59	11.05	105.90	-165.38	79.42	71.93	450.04	346.74	103.30	4.357	
2,900.00	2,807.09	2,788.09	2,788.09	11.91	109.52	-166.63	79.42	71.93	491.52	384.71	106.80	4.602	
3,000.00	2,897.60	2,878.60	2,878.60	12.77	113.14	-167.68	79.42	71.93	533.16	422.83	110.33	4.832	
3,100.00	2,988.11	2,969.11	2,969.11	13.64	116.76	-168.58	79.42	71.93	574.94	461.06	113.88	5.049	
3,200.00	3,078.62	3,059.62	3,059.62	14.52	120.38	-169.36	79.42	71.93	616.81	499.37	117.44	5.252	
3,300.00	3,169.13	3,150.13	3,150.13	15.40	124.01	-170.04	79.42	71.93	658.77	537.76	121.01	5.444	
3,400.00	3,259.64	3,240.64	3,240.64	16.28	127.63	-170.64	79.42	71.93	700.80	576.20	124.60	5.624	
3,500.00	3,350.15	3,331.15	3,331.15	17.16	131.25	-171.17	79.42	71.93	742.88	614.69	128.19	5.795	
3,600.00	3,440.66	3,421.66	3,421.66	18.05	134.87	-171.65	79.42	71.93	785.01	653.22	131.79	5.957	
3,700.00	3,531.17	3,512.17	3,512.17	18.93	138.49	-172.08	79.42	71.93	827.18	691.79	135.39	6.110	
3,800.00	3,621.68	3,602.68	3,602.68	19.82	142.11	-172.46	79.42	71.93	869.38	730.39	139.00	6.255	
3,900.00	3,712.19	3,693.19	3,693.19	20.71	145.73	-172.81	79.42	71.93	911.62	769.01	142.61	6.393	
4,000.00	3,802.70	3,783.70	3,783.70	21.60	149.35	-173.13	79.42	71.93	953.88	807.65	146.22	6.523	
4,100.00	3,893.21	3,874.21	3,874.21	22.50	152.97	-173.42	79.42	71.93	996.16	846.32	149.84	6.648	
4,200.00	3,983.71	3,964.71	3,964.71	23.39	156.59	-173.69	79.42	71.93	1,038.46	885.00	153.46	6.767	
4,300.00	4,074.22	4,055.22	4,055.22	24.28	160.21	-173.94	79.42	71.93	1,080.78	923.69	157.08	6.880	
4,400.00	4,164.73	4,145.73	4,145.73	25.18	163.83	-174.17	79.42	71.93	1,123.11	962.40	160.71	6.988	
4,500.00	4,255.24	4,236.24	4,236.24	26.07	167.45	-174.38	79.42	71.93	1,165.46	1,001.12	164.34	7.092	
4,600.00	4,345.75	4,326.75	4,326.75	26.97	171.07	-174.58	79.42	71.93	1,207.82	1,039.85	167.97	7.191	
4,700.00	4,436.26	4,417.26	4,417.26	27.87	174.69	-174.76	79.42	71.93	1,250.19	1,078.59	171.60	7.286	
4,800.00	4,526.77	4,507.77	4,507.77	28.76	178.31	-174.93	79.42	71.93	1,292.57	1,117.34	175.23	7.376	

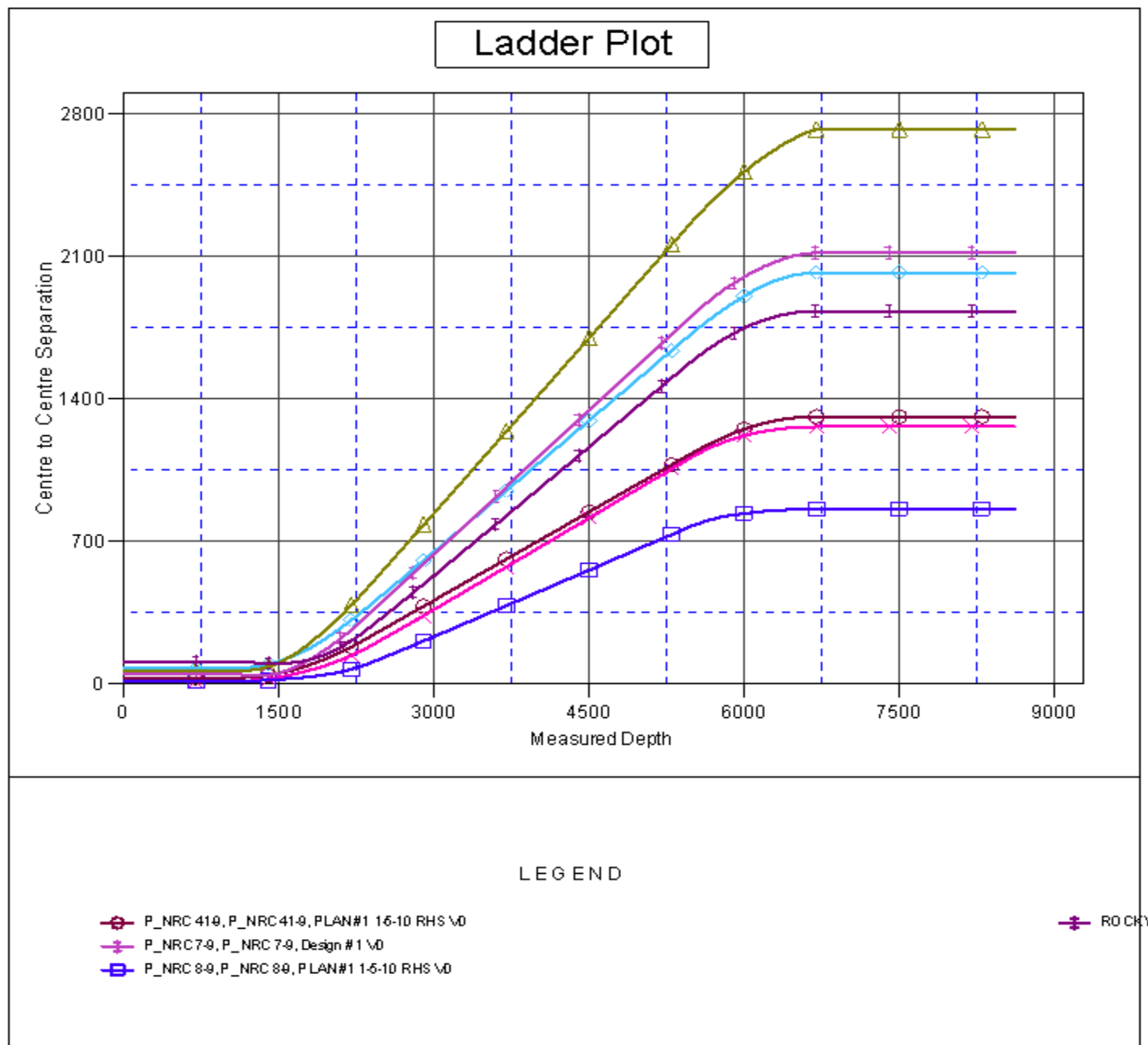
CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Company:	US ROCKIES REGION PLANNING	Local Co-ordinate Reference:	Well P_NRC 40-9
Project:	COLORADO NORTHERN ZONE - 83	TVD Reference:	WELL @ 5012.00ft (Original Well Elev)
Reference Site:	WELD_NRC 17-9 PAD	MD Reference:	WELL @ 5012.00ft (Original Well Elev)
Site Error:	0.00ft	North Reference:	True
Reference Well:	P_NRC 40-9	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00ft	Output errors are at	2.00 sigma
Reference Wellbore	P_NRC 40-9	Database:	EDM 2003.21 Single User Db
Reference Design:	PLAN #1 1-5-10 RHS	Offset TVD Reference:	Offset Datum

Offset Design WELD_NRC 17-9 PAD - ROCKY MTN FUEL CO G UNIT #1 EXISTING - ROCKY MTN FUEL CO G UN												Offset Site Error:	0.00 ft
Survey Program: 0-UNKNOWN												Offset Well Error:	0.00 ft
Reference		Offset		Semi Major Axis			Distance						
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning
4,900.00	4,617.28	4,598.28	4,598.28	29.66	181.93	-175.09	79.42	71.93	1,334.96	1,156.10	178.86	7.464	
5,000.00	4,707.79	4,688.79	4,688.79	30.56	185.55	-175.25	79.42	71.93	1,377.36	1,194.86	182.50	7.547	
5,100.00	4,798.30	4,779.30	4,779.30	31.46	189.17	-175.39	79.42	71.93	1,419.76	1,233.63	186.13	7.628	
5,200.00	4,888.81	4,869.81	4,869.81	32.36	192.79	-175.52	79.42	71.93	1,462.17	1,272.40	189.77	7.705	
5,300.00	4,979.32	4,960.32	4,960.32	33.26	196.41	-175.65	79.42	71.93	1,504.59	1,311.18	193.41	7.779	
5,400.00	5,069.83	5,050.83	5,050.83	34.16	200.03	-175.77	79.42	71.93	1,547.02	1,349.97	197.05	7.851	
5,434.28	5,100.85	5,081.85	5,081.85	34.46	201.27	-175.81	79.42	71.93	1,561.56	1,363.27	198.29	7.875	
5,500.00	5,160.65	5,141.65	5,141.65	34.98	203.67	-175.92	79.42	71.93	1,588.76	1,386.13	202.63	7.841	
5,600.00	5,252.80	5,233.80	5,233.80	35.64	207.35	-176.08	79.42	71.93	1,627.51	1,418.38	209.13	7.782	
5,700.00	5,346.24	5,327.24	5,327.24	36.24	211.09	-176.21	79.42	71.93	1,663.03	1,447.52	215.51	7.717	
5,800.00	5,440.88	5,421.88	5,421.88	36.78	214.88	-176.33	79.42	71.93	1,695.28	1,473.53	221.75	7.645	
5,900.00	5,536.58	5,517.58	5,517.58	37.28	218.70	-176.43	79.42	71.93	1,724.21	1,496.38	227.83	7.568	
6,000.00	5,633.23	5,614.23	5,614.23	37.72	222.57	-176.51	79.42	71.93	1,749.79	1,516.06	233.73	7.486	
6,100.00	5,730.72	5,711.72	5,711.72	38.10	226.47	-176.58	79.42	71.93	1,771.99	1,532.56	239.43	7.401	
6,200.00	5,828.93	5,809.93	5,809.93	38.43	230.40	-176.64	79.42	71.93	1,790.78	1,545.87	244.91	7.312	
6,300.00	5,927.74	5,908.74	5,908.74	38.71	234.35	-176.69	79.42	71.93	1,806.14	1,556.00	250.14	7.220	
6,400.00	6,027.02	6,008.02	6,008.02	38.94	238.32	-176.72	79.42	71.93	1,818.05	1,562.93	255.11	7.126	
6,500.00	6,126.65	6,107.65	6,107.65	39.12	242.31	-176.75	79.42	71.93	1,826.49	1,566.68	259.80	7.030	
6,600.00	6,226.53	6,207.53	6,207.53	39.25	246.30	-176.76	79.42	71.93	1,831.45	1,567.26	264.19	6.932	
6,692.49	6,319.00	6,300.00	6,300.00	39.33	250.00	-59.82	79.42	71.93	1,832.94	1,564.98	267.97	6.840	
6,700.00	6,326.51	6,307.51	6,307.51	39.34	250.30	-59.82	79.42	71.93	1,832.94	1,564.66	268.28	6.832	
6,800.00	6,426.51	6,407.51	6,407.51	39.41	254.30	-59.82	79.42	71.93	1,832.94	1,560.52	272.42	6.728	
6,900.00	6,526.51	6,507.51	6,507.51	39.48	258.30	-59.82	79.42	71.93	1,832.94	1,556.37	276.57	6.627	
7,000.00	6,626.51	6,607.51	6,607.51	39.56	262.30	-59.82	79.42	71.93	1,832.94	1,552.22	280.72	6.529	
7,100.00	6,726.51	6,707.51	6,707.51	39.64	266.30	-59.82	79.42	71.93	1,832.94	1,548.07	284.87	6.434	
7,200.00	6,826.51	6,807.51	6,807.51	39.71	270.30	-59.82	79.42	71.93	1,832.94	1,543.92	289.02	6.342	
7,300.00	6,926.51	6,907.51	6,907.51	39.79	274.30	-59.82	79.42	71.93	1,832.94	1,539.77	293.17	6.252	
7,400.00	7,026.51	7,007.51	7,007.51	39.87	278.30	-59.82	79.42	71.93	1,832.94	1,535.62	297.33	6.165	
7,500.00	7,126.51	7,107.51	7,107.51	39.95	282.30	-59.82	79.42	71.93	1,832.94	1,531.46	301.48	6.080	
7,600.00	7,226.51	7,207.51	7,207.51	40.04	286.30	-59.82	79.42	71.93	1,832.94	1,527.30	305.64	5.997	
7,700.00	7,326.51	7,307.51	7,307.51	40.12	290.30	-59.82	79.42	71.93	1,832.94	1,523.14	309.80	5.917	
7,800.00	7,426.51	7,407.51	7,407.51	40.20	294.30	-59.82	79.42	71.93	1,832.94	1,518.98	313.96	5.838	
7,900.00	7,526.51	7,507.51	7,507.51	40.29	298.30	-59.82	79.42	71.93	1,832.94	1,514.82	318.12	5.762	
8,000.00	7,626.51	7,607.51	7,607.51	40.38	302.30	-59.82	79.42	71.93	1,832.94	1,510.66	322.28	5.687	
8,100.00	7,726.51	7,707.51	7,707.51	40.46	306.30	-59.82	79.42	71.93	1,832.94	1,506.50	326.44	5.615	
8,200.00	7,826.51	7,807.51	7,807.51	40.55	310.30	-59.82	79.42	71.93	1,832.94	1,502.33	330.61	5.544	
8,300.00	7,926.51	7,907.51	7,907.51	40.64	314.30	-59.82	79.42	71.93	1,832.94	1,498.17	334.77	5.475	
8,400.00	8,026.51	8,007.51	8,007.51	40.73	318.30	-59.82	79.42	71.93	1,832.94	1,494.00	338.94	5.408	
8,500.00	8,126.51	8,107.51	8,107.51	40.82	322.30	-59.82	79.42	71.93	1,832.94	1,489.83	343.11	5.342	
8,600.00	8,226.51	8,207.51	8,207.51	40.92	326.30	-59.82	79.42	71.93	1,832.94	1,485.66	347.28	5.278	
8,617.49	8,244.00	8,225.00	8,225.00	40.93	327.00	-59.82	79.42	71.93	1,832.94	1,484.93	348.01	5.267	

Company:	US ROCKIES REGION PLANNING	Local Co-ordinate Reference:	Well P_NRC 40-9
Project:	COLORADO NORTHERN ZONE - 83	TVD Reference:	WELL @ 5012.00ft (Original Well Elev)
Reference Site:	WELD_NRC 17-9 PAD	MD Reference:	WELL @ 5012.00ft (Original Well Elev)
Site Error:	0.00ft	North Reference:	True
Reference Well:	P_NRC 40-9	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00ft	Output errors are at	2.00 sigma
Reference Wellbore	P_NRC 40-9	Database:	EDM 2003.21 Single User Db
Reference Design:	PLAN #1 1-5-10 RHS	Offset TVD Reference:	Offset Datum

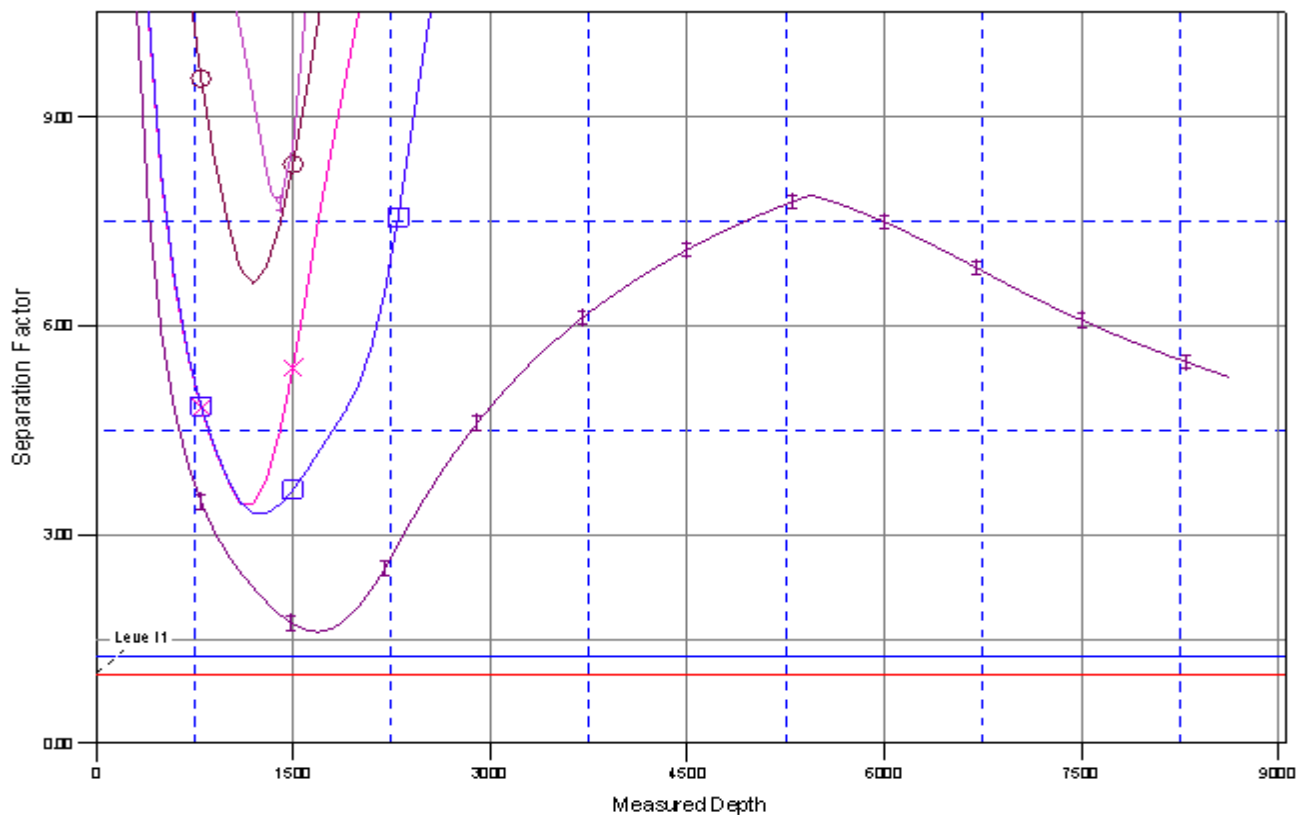
Reference Depths are relative to WELL @ 5012.00ft (Original Well Elev) Coordinates are relative to: P_NRC 40-9
Offset Depths are relative to Offset Datum Coordinate System is US State Plane 1983, Colorado Northern Zone
Central Meridian is 105° 30' 0.000 W ° Grid Convergence at Surface is: 0.39°



Company:	US ROCKIES REGION PLANNING	Local Co-ordinate Reference:	Well P_NRC 40-9
Project:	COLORADO NORTHERN ZONE - 83	TVD Reference:	WELL @ 5012.00ft (Original Well Elev)
Reference Site:	WELD_NRC 17-9 PAD	MD Reference:	WELL @ 5012.00ft (Original Well Elev)
Site Error:	0.00ft	North Reference:	True
Reference Well:	P_NRC 40-9	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00ft	Output errors are at	2.00 sigma
Reference Wellbore	P_NRC 40-9	Database:	EDM 2003.21 Single User Db
Reference Design:	PLAN #1 1-5-10 RHS	Offset TVD Reference:	Offset Datum

Reference Depths are relative to WELL @ 5012.00ft (Original Well Elev) Coordinates are relative to: P_NRC 40-9
Offset Depths are relative to Offset Datum Coordinate System is US State Plane 1983, Colorado Northern Zone
Central Meridian is 105° 30' 0.000 W ° Grid Convergence at Surface is: 0.39°

Separation Factor Plot



LEGEND

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

ROCKY