



US ROCKIES REGION PLANNING

COLORADO NORTHERN ZONE - 83

WELD_NRC 18-9 PAD

P_NRC 25-9

P_NRC 25-9

Plan: PLAN #1 1-6-10 RHS

Standard Planning Report

06 January, 2010





Azimuths to True North
Magnetic North: 9.10°
Magnetic Field
Strength: 53092.0snT
Dip Angle: 66.81°
Date: 1/6/2010
Model: IGRF2010

WELL DETAILS: P_NRC 25-9

+N/-S	+E/-W	Northing	Ground Level: Easting	5021.00 Latitude	Longitude	Slot
0.00	0.00	1268599.17	3167715.32	40° 4' 8.900 N	104° 54' 2.639 W	

FORMATION TOP DETAILS

TVDPath	MDPath	Formation
3288.00	3686.91	PARKMAN
4763.00	5236.36	SUSSEX
5233.00	5706.36	SHANNON
7403.00	7876.36	NIO A
7743.00	8216.36	CODELL
8193.00	8666.36	JSAND

SECTION DETAILS

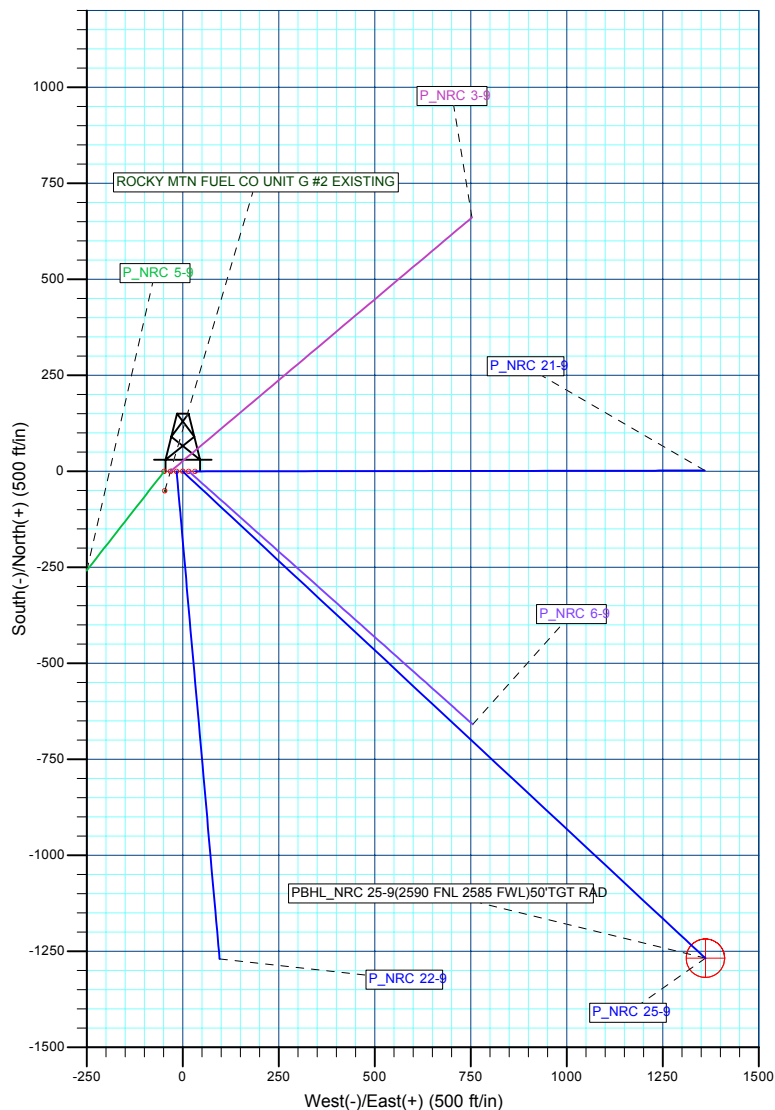
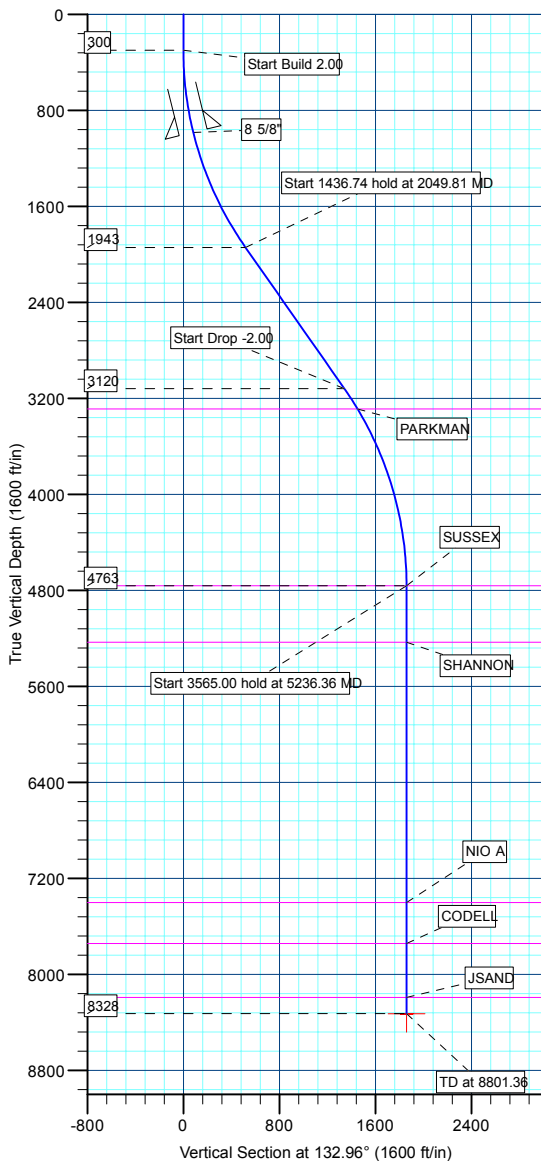
MD	Inc	Azi	TVD	+N/-S	+E/-W	DLeg	TFace	VSec	Target
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.00	0.00	
2049.81	35.00	132.96	1943.02	-353.03	379.05	2.00	132.96	517.98	
3486.55	35.00	132.96	3119.98	-914.62	982.03	0.00	0.00	1341.98	
5236.36	0.00	0.00	4763.00	-1267.65	1361.08	2.00	180.00	1859.96	
8801.36	0.00	0.00	8328.00	-1267.65	1361.08	0.00	0.00	1859.96	PBHL_NRC 25-9(2590 FNL 2585 FWL)50°TGT RAD

CASING DETAILS

TVD	MD	Name	Size
985.00	991.70	8 5/8"	8.62



B ELEV:WELL @ 5036.00ft (Original Well Elev)
GRD ELEV: 5021.00



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

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Shape
PBHL	8328.00	-1267.65	1361.08	1267340.75	3169084.93	40° 3' 56.372 N 104° 53' 45.132 W		Circle (Radius: 50.00)

Database:	EDM 2003.21 Single User Db	Local Co-ordinate Reference:	Site WELD_NRC 18-9 PAD
Company:	US ROCKIES REGION PLANNING	TVD Reference:	WELL @ 5036.00ft (Original Well Elev)
Project:	COLORADO NORTHERN ZONE - 83	MD Reference:	WELL @ 5036.00ft (Original Well Elev)
Site:	WELD_NRC 18-9 PAD	North Reference:	True
Well:	P_NRC 25-9	Survey Calculation Method:	Minimum Curvature
Wellbore:	P_NRC 25-9		
Design:	PLAN #1 1-6-10 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 18-9 PAD, SECTION 9 T1N R67W											
Site Position:						Northing:			1,268,599.17 ft			Latitude:			40° 4' 8.900 N		
From:			Lat/Long			Easting:			3,167,715.32 ft			Longitude:			104° 54' 2.639 W		
Position Uncertainty:			0.00 ft			Slot Radius:			in			Grid Convergence:			0.39 °		

Well	P_NRC 25-9					
Well Position	+N/-S	0.00 ft	Northing:	1,268,599.17 ft	Latitude:	40° 4' 8.900 N
	+E/-W	0.00 ft	Easting:	3,167,715.32 ft	Longitude:	104° 54' 2.639 W
Position Uncertainty		0.00 ft	Wellhead Elevation:	ft	Ground Level:	5,021.00 ft

Wellbore	P_NRC 25-9				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	1/6/2010	9.10	66.81	53,092

Design	PLAN #1 1-6-10 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	132.96

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	
300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.00	0.00	0.00	
2,049.81	35.00	132.96	1,943.02	-353.03	379.05	2.00	2.00	0.00	132.96	
3,486.55	35.00	132.96	3,119.98	-914.62	982.03	0.00	0.00	0.00	0.00	
5,236.36	0.00	0.00	4,763.00	-1,267.65	1,361.08	2.00	-2.00	0.00	180.00	
8,801.36	0.00	0.00	8,328.00	-1,267.65	1,361.08	0.00	0.00	0.00	0.00	PBHL_NRC 25-9(2)

Database:	EDM 2003.21 Single User Db	Local Co-ordinate Reference:	Site WELD_NRC 18-9 PAD
Company:	US ROCKIES REGION PLANNING	TVD Reference:	WELL @ 5036.00ft (Original Well Elev)
Project:	COLORADO NORTHERN ZONE - 83	MD Reference:	WELL @ 5036.00ft (Original Well Elev)
Site:	WELD_NRC 18-9 PAD	North Reference:	True
Well:	P_NRC 25-9	Survey Calculation Method:	Minimum Curvature
Wellbore:	P_NRC 25-9		
Design:	PLAN #1 1-6-10 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									
300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.00	0.00	0.00
400.00	2.00	132.96	399.98	-1.19	1.28	1.75	2.00	2.00	0.00
500.00	4.00	132.96	499.84	-4.76	5.11	6.98	2.00	2.00	0.00
600.00	6.00	132.96	599.45	-10.70	11.48	15.69	2.00	2.00	0.00
700.00	8.00	132.96	698.70	-19.00	20.40	27.88	2.00	2.00	0.00
800.00	10.00	132.96	797.47	-29.66	31.85	43.52	2.00	2.00	0.00
900.00	12.00	132.96	895.62	-42.67	45.81	62.60	2.00	2.00	0.00
8 5/8"									
991.70	13.83	132.96	985.00	-56.64	60.81	83.10	2.00	2.00	0.00
1,000.00	14.00	132.96	993.06	-58.00	62.27	85.10	2.00	2.00	0.00
1,100.00	16.00	132.96	1,089.64	-75.64	81.21	110.98	2.00	2.00	0.00
1,200.00	18.00	132.96	1,185.27	-95.56	102.60	140.21	2.00	2.00	0.00
1,300.00	20.00	132.96	1,279.82	-117.75	126.43	172.77	2.00	2.00	0.00
1,400.00	22.00	132.96	1,373.17	-142.17	152.65	208.60	2.00	2.00	0.00
1,500.00	24.00	132.96	1,465.21	-168.80	181.24	247.67	2.00	2.00	0.00
1,600.00	26.00	132.96	1,555.84	-197.60	212.17	289.93	2.00	2.00	0.00
1,700.00	28.00	132.96	1,644.94	-228.54	245.39	335.33	2.00	2.00	0.00
1,800.00	30.00	132.96	1,732.39	-261.58	280.86	383.81	2.00	2.00	0.00
1,900.00	32.00	132.96	1,818.11	-296.68	318.55	435.31	2.00	2.00	0.00
2,000.00	34.00	132.96	1,901.97	-333.80	358.40	489.77	2.00	2.00	0.00
Start 1436.74 hold at 2049.81 MD									
2,049.81	35.00	132.96	1,943.02	-353.03	379.05	517.98	2.00	2.00	0.00
2,100.00	35.00	132.96	1,984.13	-372.65	400.11	546.77	0.00	0.00	0.00
2,200.00	35.00	132.96	2,066.05	-411.73	442.08	604.12	0.00	0.00	0.00
2,300.00	35.00	132.96	2,147.97	-450.82	484.05	661.47	0.00	0.00	0.00
2,400.00	35.00	132.96	2,229.89	-489.91	526.02	718.82	0.00	0.00	0.00
2,500.00	35.00	132.96	2,311.81	-529.00	567.99	776.18	0.00	0.00	0.00
2,600.00	35.00	132.96	2,393.73	-568.09	609.96	833.53	0.00	0.00	0.00
2,700.00	35.00	132.96	2,475.65	-607.17	651.93	890.88	0.00	0.00	0.00
2,800.00	35.00	132.96	2,557.57	-646.26	693.89	948.23	0.00	0.00	0.00
2,900.00	35.00	132.96	2,639.49	-685.35	735.86	1,005.58	0.00	0.00	0.00
3,000.00	35.00	132.96	2,721.41	-724.44	777.83	1,062.94	0.00	0.00	0.00
3,100.00	35.00	132.96	2,803.33	-763.53	819.80	1,120.29	0.00	0.00	0.00
3,200.00	35.00	132.96	2,885.24	-802.61	861.77	1,177.64	0.00	0.00	0.00
3,300.00	35.00	132.96	2,967.16	-841.70	903.74	1,234.99	0.00	0.00	0.00
3,400.00	35.00	132.96	3,049.08	-880.79	945.71	1,292.35	0.00	0.00	0.00
Start Drop -2.00									
3,486.55	35.00	132.96	3,119.98	-914.62	982.03	1,341.98	0.00	0.00	0.00
3,500.00	34.73	132.96	3,131.02	-919.86	987.66	1,349.67	2.00	-2.00	0.00
3,600.00	32.73	132.96	3,214.18	-957.70	1,028.29	1,405.19	2.00	-2.00	0.00
PARKMAN									
3,686.91	30.99	132.96	3,288.00	-988.96	1,061.85	1,451.06	2.00	-2.00	0.00
3,700.00	30.73	132.96	3,299.24	-993.54	1,066.77	1,457.78	2.00	-2.00	0.00
3,800.00	28.73	132.96	3,386.07	-1,027.33	1,103.05	1,507.36	2.00	-2.00	0.00
3,900.00	26.73	132.96	3,474.58	-1,059.04	1,137.10	1,553.89	2.00	-2.00	0.00
4,000.00	24.73	132.96	3,564.67	-1,088.63	1,168.86	1,597.29	2.00	-2.00	0.00
4,100.00	22.73	132.96	3,656.21	-1,116.05	1,198.30	1,637.53	2.00	-2.00	0.00
4,200.00	20.73	132.96	3,749.10	-1,141.28	1,225.39	1,674.54	2.00	-2.00	0.00
4,300.00	18.73	132.96	3,843.23	-1,164.28	1,250.09	1,708.30	2.00	-2.00	0.00
4,400.00	16.73	132.96	3,938.47	-1,185.03	1,272.37	1,738.74	2.00	-2.00	0.00
4,500.00	14.73	132.96	4,034.73	-1,203.50	1,292.21	1,765.85	2.00	-2.00	0.00
4,600.00	12.73	132.96	4,131.86	-1,219.68	1,309.57	1,789.58	2.00	-2.00	0.00

Database:	EDM 2003.21 Single User Db	Local Co-ordinate Reference:	Site WELD_NRC 18-9 PAD
Company:	US ROCKIES REGION PLANNING	TVD Reference:	WELL @ 5036.00ft (Original Well Elev)
Project:	COLORADO NORTHERN ZONE - 83	MD Reference:	WELL @ 5036.00ft (Original Well Elev)
Site:	WELD_NRC 18-9 PAD	North Reference:	True
Well:	P_NRC 25-9	Survey Calculation Method:	Minimum Curvature
Wellbore:	P_NRC 25-9		
Design:	PLAN #1 1-6-10 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)
4,700.00	10.73	132.96	4,229.77	-1,233.53	1,324.44	1,809.90	2.00	-2.00	0.00
4,800.00	8.73	132.96	4,328.33	-1,245.04	1,336.81	1,826.80	2.00	-2.00	0.00
4,900.00	6.73	132.96	4,427.42	-1,254.21	1,346.65	1,840.24	2.00	-2.00	0.00
5,000.00	4.73	132.96	4,526.91	-1,261.01	1,353.95	1,850.22	2.00	-2.00	0.00
5,100.00	2.73	132.96	4,626.70	-1,265.44	1,358.70	1,856.72	2.00	-2.00	0.00
5,200.00	0.73	132.96	4,726.65	-1,267.49	1,360.91	1,859.73	2.00	-2.00	0.00
Start 3565.00 hold at 5236.36 MD - SUSSEX									
5,236.36	0.00	0.00	4,763.00	-1,267.65	1,361.08	1,859.96	2.00	-2.00	0.00
5,300.00	0.00	0.00	4,826.64	-1,267.65	1,361.08	1,859.96	0.00	0.00	0.00
5,400.00	0.00	0.00	4,926.64	-1,267.65	1,361.08	1,859.96	0.00	0.00	0.00
5,500.00	0.00	0.00	5,026.64	-1,267.65	1,361.08	1,859.96	0.00	0.00	0.00
5,600.00	0.00	0.00	5,126.64	-1,267.65	1,361.08	1,859.96	0.00	0.00	0.00
5,700.00	0.00	0.00	5,226.64	-1,267.65	1,361.08	1,859.96	0.00	0.00	0.00
SHANNON									
5,706.36	0.00	0.00	5,233.00	-1,267.65	1,361.08	1,859.96	0.00	0.00	0.00
5,800.00	0.00	0.00	5,326.64	-1,267.65	1,361.08	1,859.96	0.00	0.00	0.00
5,900.00	0.00	0.00	5,426.64	-1,267.65	1,361.08	1,859.96	0.00	0.00	0.00
6,000.00	0.00	0.00	5,526.64	-1,267.65	1,361.08	1,859.96	0.00	0.00	0.00
6,100.00	0.00	0.00	5,626.64	-1,267.65	1,361.08	1,859.96	0.00	0.00	0.00
6,200.00	0.00	0.00	5,726.64	-1,267.65	1,361.08	1,859.96	0.00	0.00	0.00
6,300.00	0.00	0.00	5,826.64	-1,267.65	1,361.08	1,859.96	0.00	0.00	0.00
6,400.00	0.00	0.00	5,926.64	-1,267.65	1,361.08	1,859.96	0.00	0.00	0.00
6,500.00	0.00	0.00	6,026.64	-1,267.65	1,361.08	1,859.96	0.00	0.00	0.00
6,600.00	0.00	0.00	6,126.64	-1,267.65	1,361.08	1,859.96	0.00	0.00	0.00
6,700.00	0.00	0.00	6,226.64	-1,267.65	1,361.08	1,859.96	0.00	0.00	0.00
6,800.00	0.00	0.00	6,326.64	-1,267.65	1,361.08	1,859.96	0.00	0.00	0.00
6,900.00	0.00	0.00	6,426.64	-1,267.65	1,361.08	1,859.96	0.00	0.00	0.00
7,000.00	0.00	0.00	6,526.64	-1,267.65	1,361.08	1,859.96	0.00	0.00	0.00
7,100.00	0.00	0.00	6,626.64	-1,267.65	1,361.08	1,859.96	0.00	0.00	0.00
7,200.00	0.00	0.00	6,726.64	-1,267.65	1,361.08	1,859.96	0.00	0.00	0.00
7,300.00	0.00	0.00	6,826.64	-1,267.65	1,361.08	1,859.96	0.00	0.00	0.00
7,400.00	0.00	0.00	6,926.64	-1,267.65	1,361.08	1,859.96	0.00	0.00	0.00
7,500.00	0.00	0.00	7,026.64	-1,267.65	1,361.08	1,859.96	0.00	0.00	0.00
7,600.00	0.00	0.00	7,126.64	-1,267.65	1,361.08	1,859.96	0.00	0.00	0.00
7,700.00	0.00	0.00	7,226.64	-1,267.65	1,361.08	1,859.96	0.00	0.00	0.00
7,800.00	0.00	0.00	7,326.64	-1,267.65	1,361.08	1,859.96	0.00	0.00	0.00
NIO A									
7,876.36	0.00	0.00	7,403.00	-1,267.65	1,361.08	1,859.96	0.00	0.00	0.00
7,900.00	0.00	0.00	7,426.64	-1,267.65	1,361.08	1,859.96	0.00	0.00	0.00
8,000.00	0.00	0.00	7,526.64	-1,267.65	1,361.08	1,859.96	0.00	0.00	0.00
8,100.00	0.00	0.00	7,626.64	-1,267.65	1,361.08	1,859.96	0.00	0.00	0.00
8,200.00	0.00	0.00	7,726.64	-1,267.65	1,361.08	1,859.96	0.00	0.00	0.00
CODELL									
8,216.36	0.00	0.00	7,743.00	-1,267.65	1,361.08	1,859.96	0.00	0.00	0.00
8,300.00	0.00	0.00	7,826.64	-1,267.65	1,361.08	1,859.96	0.00	0.00	0.00
8,400.00	0.00	0.00	7,926.64	-1,267.65	1,361.08	1,859.96	0.00	0.00	0.00
8,500.00	0.00	0.00	8,026.64	-1,267.65	1,361.08	1,859.96	0.00	0.00	0.00
8,600.00	0.00	0.00	8,126.64	-1,267.65	1,361.08	1,859.96	0.00	0.00	0.00
JSAND									
8,666.36	0.00	0.00	8,193.00	-1,267.65	1,361.08	1,859.96	0.00	0.00	0.00
8,700.00	0.00	0.00	8,226.64	-1,267.65	1,361.08	1,859.96	0.00	0.00	0.00
8,800.00	0.00	0.00	8,326.64	-1,267.65	1,361.08	1,859.96	0.00	0.00	0.00
TD at 8801.36 - PBHL_NRC 25-9(2590 FNL 2585 FWL)50°TGT RAD									

Database:	EDM 2003.21 Single User Db	Local Co-ordinate Reference:	Site WELD_NRC 18-9 PAD
Company:	US ROCKIES REGION PLANNING	TVD Reference:	WELL @ 5036.00ft (Original Well Elev)
Project:	COLORADO NORTHERN ZONE - 83	MD Reference:	WELL @ 5036.00ft (Original Well Elev)
Site:	WELD_NRC 18-9 PAD	North Reference:	True
Well:	P_NRC 25-9	Survey Calculation Method:	Minimum Curvature
Wellbore:	P_NRC 25-9		
Design:	PLAN #1 1-6-10 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)
8,801.36	0.00	0.00	8,328.00	-1,267.65	1,361.08	1,859.96	0.00	0.00	0.00

Design Targets									
Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (ft)	Easting (ft)	Latitude	Longitude
- hit/miss target									
- Shape									
PBHL_NRC 25-9(259)	0.00	0.00	8,328.00	-1,267.65	1,361.08	1,267,340.75	3,169,084.93	40° 3' 56.372 N	104° 53' 45.132 W
- plan hits target center									
- Circle (radius 50.00)									

Casing Points					
Measured Depth (ft)	Vertical Depth (ft)	Name	Casing Diameter (in)	Hole Diameter (in)	
991.70	985.00	8 5/8"	8.62	11.00	

Formations					
Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)
3,686.91	3,288.00	PARKMAN			
5,236.36	4,763.00	SUSSEX			
5,706.36	5,233.00	SHANNON			
7,876.36	7,403.00	NIO A			
8,216.36	7,743.00	CODELL			
8,666.36	8,193.00	JSAND			

Plan Annotations				
Measured Depth (ft)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Comment
300.00	300.00	0.00	0.00	Start Build 2.00
2,049.81	1,943.02	-353.03	379.05	Start 1436.74 hold at 2049.81 MD
3,486.55	3,119.98	-914.62	982.03	Start Drop -2.00
5,236.36	4,763.00	-1,267.65	1,361.08	Start 3565.00 hold at 5236.36 MD
8,801.36	8,328.00	-1,267.65	1,361.08	TD at 8801.36



US ROCKIES REGION PLANNING

**COLORADO NORTHERN ZONE - 83
WELD_NRC 18-9 PAD
P_NRC 25-9**

**P_NRC 25-9
PLAN #1 1-6-10 RHS**

Anticollision Report

06 January, 2010



Company:	US ROCKIES REGION PLANNING	Local Co-ordinate Reference:	Site WELD_NRC 18-9 PAD
Project:	COLORADO NORTHERN ZONE - 83	TVD Reference:	WELL @ 5036.00ft (Original Well Elev)
Reference Site:	WELD_NRC 18-9 PAD	MD Reference:	WELL @ 5036.00ft (Original Well Elev)
Site Error:	0.00ft	North Reference:	True
Reference Well:	P_NRC 25-9	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00ft	Output errors are at	2.00 sigma
Reference Wellbore	P_NRC 25-9	Database:	EDM 2003.21 Single User Db
Reference Design:	PLAN #1 1-6-10 RHS	Offset TVD Reference:	Offset Datum

Reference	PLAN #1 1-6-10 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	1/6/2010		
From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description
0.00	8,801.36	PLAN #1 1-6-10 RHS (P_NRC 25-9)	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 18-9 PAD						
P_NRC 21-9 - P_NRC 21-9 - PLAN #1 1-6-10 RHS	667.76	666.75	21.91	19.17	7.976	CC, ES
P_NRC 21-9 - P_NRC 21-9 - PLAN #1 1-6-10 RHS	700.00	698.70	22.33	19.43	7.688	SF
P_NRC 22-9 - P_NRC 22-9 - PLAN #1 1-6-10 RHS	300.00	300.00	15.95	14.86	14.634	CC, ES
P_NRC 22-9 - P_NRC 22-9 - PLAN #1 1-6-10 RHS	500.00	499.84	21.58	19.65	11.136	SF
P_NRC 3-9 - P_NRC 3-9 - PLAN #1 1-6-10 RHS	300.00	300.00	31.91	30.82	29.268	CC, ES
P_NRC 3-9 - P_NRC 3-9 - PLAN #1 1-6-10 RHS	600.00	599.45	44.69	42.31	18.818	SF
P_NRC 5-9 - P_NRC 5-9 - PLAN #1 1-6-10 RHS	300.00	300.00	48.14	47.05	44.158	CC, ES
P_NRC 5-9 - P_NRC 5-9 - PLAN #1 1-6-10 RHS	700.00	698.70	71.12	68.30	25.186	SF
P_NRC 6-9 - P_NRC 6-9 - PLAN #1 1-6-10 RHS	558.94	558.58	10.85	8.63	4.888	CC, ES
P_NRC 6-9 - P_NRC 6-9 - PLAN #1 1-6-10 RHS	600.00	599.45	11.56	9.16	4.809	SF
ROCKY MTN FUEL CO UNIT G #2 EXISTING - ROCKY	342.75	322.75	68.92	57.38	5.971	CC
ROCKY MTN FUEL CO UNIT G #2 EXISTING - ROCKY	700.00	678.70	74.23	47.64	2.792	ES
ROCKY MTN FUEL CO UNIT G #2 EXISTING - ROCKY	800.00	777.47	81.34	50.60	2.646	SF

Offset Design	WELD_NRC 18-9 PAD - P_NRC 21-9 - P_NRC 21-9 - PLAN #1 1-6-10 RHS												Offset Site Error:	0.00 ft
Survey Program:	0-MWD												Offset Well Error:	0.00 ft
Reference	Offset	Semi Major Axis		Distance		Minimum Separation		Warning						
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
0.00	0.00	0.00	0.00	0.00	0.00	90.05	-0.03	32.19	32.19					
100.00	100.00	100.00	100.00	0.10	0.10	90.05	-0.03	32.19	32.19	31.99	0.19	168.463		
200.00	200.00	200.00	200.00	0.32	0.32	90.05	-0.03	32.19	32.19	31.54	0.64	50.243		
300.00	300.00	300.00	300.00	0.55	0.55	90.05	-0.03	32.19	32.19	31.09	1.09	29.524		
400.00	399.98	399.98	399.98	0.75	0.77	-45.13	-0.03	32.19	30.93	29.41	1.52	20.379		
500.00	499.84	499.84	499.84	0.95	0.99	-52.93	-0.03	32.19	27.49	25.54	1.94	14.146		
600.00	599.45	599.45	599.45	1.19	1.22	-70.33	-0.03	32.19	23.29	20.88	2.40	9.687		
667.76	666.75	666.75	666.75	1.38	1.37	-90.00	-0.03	32.19	21.91	19.17	2.75	7.976	CC, ES	
700.00	698.70	698.70	698.70	1.47	1.44	-101.02	-0.03	32.19	22.33	19.43	2.91	7.688	SF	
800.00	797.47	797.47	797.47	1.79	1.66	-131.88	-0.03	32.19	29.64	26.28	3.36	8.829		
900.00	895.62	895.62	895.62	2.17	1.88	-150.14	-0.03	32.19	44.76	40.99	3.77	11.879		
1,000.00	993.06	993.06	993.06	2.61	2.10	-159.84	-0.03	32.19	65.31	61.12	4.19	15.601		
1,100.00	1,089.64	1,089.72	1,089.72	3.11	2.32	-165.38	-0.03	32.19	90.11	85.49	4.61	19.527		
1,200.00	1,185.27	1,187.75	1,187.72	3.68	2.52	-168.15	-0.03	34.03	117.63	112.59	5.04	23.340		
1,300.00	1,279.82	1,286.10	1,285.93	4.31	2.72	-168.99	-0.02	39.24	146.63	141.14	5.49	26.711		

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:	Site WELD_NRC 18-9 PAD
Project:	COLORADO NORTHERN ZONE - 83	TVD Reference:	WELL @ 5036.00ft (Original Well Elev)
Reference Site:	WELD_NRC 18-9 PAD	MD Reference:	WELL @ 5036.00ft (Original Well Elev)
Site Error:	0.00ft	North Reference:	True
Reference Well:	P_NRC 25-9	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00ft	Output errors are at	2.00 sigma
Reference Wellbore	P_NRC 25-9	Database:	EDM 2003.21 Single User Db
Reference Design:	PLAN #1 1-6-10 RHS	Offset TVD Reference:	Offset Datum

Offset Design WELD_NRC 18-9 PAD - P_NRC 21-9 - P_NRC 21-9 - PLAN #1 1-6-10 RHS												Offset Site Error:	0.00 ft
Survey Program: 0-MWD												Offset Well Error:	0.00 ft
Reference	Offset	Semi Major Axis		Distance									
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning
1,400.00	1,373.17	1,384.69	1,384.15	5.01	2.94	-168.83	0.00	47.85	176.96	171.00	5.97	29.649	
1,500.00	1,465.21	1,483.45	1,482.17	5.79	3.18	-168.07	0.02	59.85	208.62	202.14	6.49	32.167	
1,600.00	1,555.84	1,582.29	1,579.79	6.63	3.44	-166.97	0.04	75.24	241.63	234.58	7.05	34.263	
1,700.00	1,644.94	1,681.12	1,676.82	7.54	3.75	-165.64	0.07	93.98	276.05	268.37	7.68	35.929	
1,800.00	1,732.39	1,779.86	1,773.07	8.52	4.10	-164.17	0.11	116.04	311.94	303.54	8.39	37.162	
1,900.00	1,818.11	1,878.44	1,868.33	9.58	4.50	-162.62	0.15	141.36	349.33	340.13	9.20	37.975	
2,000.00	1,901.97	1,972.37	1,958.43	10.70	4.93	-161.16	0.20	167.93	388.62	378.55	10.07	38.580	
2,049.81	1,943.02	2,017.59	2,001.77	11.29	5.15	-160.57	0.22	180.81	409.31	398.79	10.52	38.910	
2,100.00	1,984.13	2,062.99	2,045.29	11.89	5.37	-160.18	0.24	193.75	430.55	419.53	11.02	39.069	
2,200.00	2,066.05	2,153.45	2,132.01	13.09	5.83	-159.53	0.29	219.53	472.91	460.87	12.04	39.292	
2,300.00	2,147.97	2,243.92	2,218.72	14.29	6.31	-158.97	0.33	245.31	515.31	502.24	13.07	39.420	
2,400.00	2,229.89	2,334.38	2,305.43	15.50	6.79	-158.51	0.37	271.08	557.74	543.62	14.13	39.485	
2,500.00	2,311.81	2,424.84	2,392.14	16.72	7.28	-158.11	0.42	296.86	600.20	585.01	15.19	39.507	
2,600.00	2,393.73	2,515.31	2,478.86	17.94	7.78	-157.76	0.46	322.64	642.69	626.41	16.27	39.501	
2,700.00	2,475.65	2,605.77	2,565.57	19.15	8.28	-157.45	0.50	348.41	685.18	667.83	17.36	39.476	
2,800.00	2,557.57	2,696.23	2,652.28	20.38	8.79	-157.18	0.55	374.19	727.70	709.25	18.45	39.438	
2,900.00	2,639.49	2,786.70	2,739.00	21.60	9.30	-156.94	0.59	399.97	770.22	750.67	19.55	39.392	
3,000.00	2,721.41	2,877.16	2,825.71	22.82	9.82	-156.73	0.63	425.75	812.76	792.10	20.66	39.342	
3,100.00	2,803.33	2,967.62	2,912.42	24.05	10.34	-156.53	0.68	451.52	855.30	833.53	21.77	39.289	
3,200.00	2,885.24	3,058.09	2,999.13	25.27	10.86	-156.36	0.72	477.30	897.85	874.97	22.88	39.235	
3,300.00	2,967.16	3,148.55	3,085.85	26.50	11.38	-156.20	0.76	503.08	940.41	916.41	24.00	39.180	
3,400.00	3,049.08	3,239.01	3,172.56	27.73	11.91	-156.05	0.81	528.86	982.97	957.85	25.12	39.127	
3,486.55	3,119.98	3,317.31	3,247.61	28.79	12.36	-155.94	0.85	551.17	1,019.81	993.72	26.09	39.081	
3,500.00	3,131.02	3,329.49	3,259.28	28.94	12.43	-155.97	0.85	554.64	1,025.51	999.26	26.25	39.068	
3,600.00	3,214.18	3,420.76	3,346.78	29.91	12.97	-156.16	0.90	580.65	1,066.24	1,038.87	27.37	38.955	
3,700.00	3,299.24	3,513.24	3,435.42	30.83	13.51	-156.24	0.94	607.00	1,104.05	1,075.55	28.50	38.735	
3,800.00	3,386.07	3,606.80	3,525.10	31.71	14.06	-156.24	0.98	633.66	1,138.90	1,109.26	29.64	38.425	
3,900.00	3,474.58	3,701.32	3,615.71	32.53	14.61	-156.15	1.03	660.59	1,170.78	1,140.00	30.78	38.037	
4,000.00	3,564.67	3,796.71	3,707.14	33.30	15.17	-155.99	1.08	687.77	1,199.66	1,167.74	31.92	37.583	
4,100.00	3,656.21	3,892.83	3,799.28	34.01	15.74	-155.75	1.12	715.16	1,225.55	1,192.49	33.06	37.072	
4,200.00	3,749.10	3,989.58	3,892.01	34.67	16.31	-155.43	1.17	742.73	1,248.43	1,214.23	34.19	36.511	
4,300.00	3,843.23	4,086.83	3,985.23	35.26	16.88	-155.05	1.22	770.44	1,268.31	1,232.99	35.32	35.906	
4,400.00	3,938.47	4,184.47	4,078.82	35.80	17.46	-154.59	1.26	798.26	1,285.21	1,248.76	36.45	35.262	
4,500.00	4,034.73	4,282.37	4,172.66	36.28	18.04	-154.05	1.31	826.16	1,299.15	1,261.59	37.57	34.583	
4,600.00	4,131.86	4,380.42	4,266.65	36.71	18.62	-153.44	1.36	854.10	1,310.17	1,271.49	38.68	33.873	
4,700.00	4,229.77	4,478.50	4,360.67	37.07	19.20	-152.75	1.40	882.05	1,318.30	1,278.51	39.79	33.134	
4,800.00	4,328.33	4,576.49	4,454.59	37.38	19.78	-151.98	1.45	909.97	1,323.58	1,282.69	40.89	32.369	
4,900.00	4,427.42	4,674.27	4,548.32	37.64	20.36	-151.13	1.50	937.83	1,326.10	1,284.11	41.99	31.581	
5,000.00	4,526.91	4,771.72	4,641.72	37.84	20.94	-150.18	1.54	965.60	1,325.91	1,282.82	43.09	30.771	
5,100.00	4,626.70	4,868.72	4,734.70	37.98	21.52	-149.14	1.59	993.24	1,323.10	1,278.91	44.19	29.943	
5,200.00	4,726.65	4,965.15	4,827.14	38.08	22.09	-148.00	1.64	1,020.72	1,317.77	1,272.48	45.29	29.099	
5,236.36	4,763.00	5,000.05	4,860.59	38.10	22.30	-14.59	1.65	1,030.66	1,315.23	1,269.54	45.69	28.788	
5,300.00	4,826.64	5,061.05	4,919.06	38.13	22.66	-13.85	1.68	1,048.04	1,310.62	1,264.18	46.44	28.223	
5,400.00	4,926.64	5,156.91	5,010.94	38.19	23.24	-12.69	1.73	1,075.36	1,303.86	1,256.24	47.63	27.378	
5,500.00	5,026.64	5,252.76	5,102.83	38.24	23.81	-11.51	1.78	1,102.67	1,297.70	1,248.88	48.81	26.585	
5,600.00	5,126.64	5,348.62	5,194.71	38.30	24.38	-10.32	1.82	1,129.98	1,292.13	1,242.13	50.00	25.843	
5,700.00	5,226.64	5,444.47	5,286.59	38.36	24.95	-9.12	1.87	1,157.30	1,287.16	1,235.98	51.18	25.149	
5,800.00	5,326.64	5,540.33	5,378.47	38.42	25.52	-7.91	1.91	1,184.61	1,282.81	1,230.45	52.36	24.499	
5,900.00	5,426.64	5,636.18	5,470.35	38.48	26.09	-6.70	1.96	1,211.93	1,279.09	1,225.55	53.53	23.893	
6,000.00	5,526.64	5,732.03	5,562.23	38.54	26.66	-5.48	2.01	1,239.24	1,275.98	1,221.28	54.70	23.328	
6,100.00	5,626.64	5,824.89	5,651.61	38.61	27.12	-4.35	2.05	1,264.39	1,273.62	1,217.92	55.70	22.866	
6,200.00	5,726.64	5,919.17	5,743.14	38.67	27.49	-3.34	2.09	1,286.96	1,272.00	1,215.44	56.56	22.488	

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:	Site WELD_NRC 18-9 PAD
Project:	COLORADO NORTHERN ZONE - 83	TVD Reference:	WELL @ 5036.00ft (Original Well Elev)
Reference Site:	WELD_NRC 18-9 PAD	MD Reference:	WELL @ 5036.00ft (Original Well Elev)
Site Error:	0.00ft	North Reference:	True
Reference Well:	P_NRC 25-9	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00ft	Output errors are at	2.00 sigma
Reference Wellbore	P_NRC 25-9	Database:	EDM 2003.21 Single User Db
Reference Design:	PLAN #1 1-6-10 RHS	Offset TVD Reference:	Offset Datum

Offset Design WELD_NRC 18-9 PAD - P_NRC 21-9 - P_NRC 21-9 - PLAN #1 1-6-10 RHS												Offset Site Error:	0.00 ft
Survey Program: 0-MWD												Offset Well Error:	0.00 ft
Reference	Offset	Semi Major Axis		Distance									
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning
6,300.00	5,826.64	6,014.88	5,836.78	38.74	27.83	-2.45	2.12	1,306.77	1,270.97	1,213.63	57.34	22.167	
6,400.00	5,926.64	6,111.86	5,932.27	38.80	28.14	-1.69	2.15	1,323.65	1,270.36	1,212.35	58.01	21.898	
6,500.00	6,026.64	6,209.89	6,029.32	38.87	28.40	-1.07	2.17	1,337.41	1,270.04	1,211.45	58.59	21.677	
6,600.00	6,126.64	6,308.76	6,127.63	38.94	28.61	-0.59	2.19	1,347.92	1,269.91	1,210.84	59.07	21.498	
6,700.00	6,226.64	6,408.25	6,226.86	39.01	28.79	-0.27	2.20	1,355.07	1,269.86	1,210.41	59.45	21.360	
6,800.00	6,326.64	6,508.11	6,326.65	39.08	28.92	-0.10	2.21	1,358.77	1,269.86	1,210.12	59.73	21.259	
6,818.23	6,344.88	6,526.35	6,344.88	39.10	28.94	-0.09	2.21	1,359.08	1,269.86	1,210.08	59.77	21.244	
6,900.00	6,426.64	6,608.11	6,426.64	39.16	29.02	-0.08	2.21	1,359.33	1,269.86	1,209.92	59.93	21.187	
7,000.00	6,526.64	6,708.11	6,526.64	39.23	29.13	-0.08	2.21	1,359.33	1,269.86	1,209.72	60.13	21.118	
7,100.00	6,626.64	6,808.11	6,626.64	39.31	29.23	-0.08	2.21	1,359.33	1,269.86	1,209.52	60.33	21.047	
7,200.00	6,726.64	6,908.11	6,726.64	39.38	29.34	-0.08	2.21	1,359.33	1,269.86	1,209.32	60.54	20.977	
7,300.00	6,826.64	7,008.11	6,826.64	39.46	29.45	-0.08	2.21	1,359.33	1,269.86	1,209.11	60.74	20.906	
7,400.00	6,926.64	7,108.11	6,926.64	39.54	29.56	-0.08	2.21	1,359.33	1,269.86	1,208.91	60.95	20.834	
7,500.00	7,026.64	7,208.11	7,026.64	39.62	29.67	-0.08	2.21	1,359.33	1,269.86	1,208.69	61.16	20.762	
7,600.00	7,126.64	7,308.11	7,126.64	39.70	29.79	-0.08	2.21	1,359.33	1,269.86	1,208.48	61.38	20.690	
7,700.00	7,226.64	7,408.11	7,226.64	39.78	29.90	-0.08	2.21	1,359.33	1,269.86	1,208.26	61.59	20.617	
7,800.00	7,326.64	7,508.11	7,326.64	39.87	30.01	-0.08	2.21	1,359.33	1,269.86	1,208.05	61.81	20.544	
7,900.00	7,426.64	7,608.11	7,426.64	39.95	30.13	-0.08	2.21	1,359.33	1,269.86	1,207.82	62.03	20.471	
8,000.00	7,526.64	7,708.11	7,526.64	40.03	30.25	-0.08	2.21	1,359.33	1,269.86	1,207.60	62.26	20.397	
8,100.00	7,626.64	7,808.11	7,626.64	40.12	30.37	-0.08	2.21	1,359.33	1,269.86	1,207.37	62.48	20.323	
8,200.00	7,726.64	7,908.11	7,726.64	40.21	30.49	-0.08	2.21	1,359.33	1,269.86	1,207.15	62.71	20.249	
8,300.00	7,826.64	8,008.11	7,826.64	40.30	30.61	-0.08	2.21	1,359.33	1,269.86	1,206.92	62.94	20.175	
8,400.00	7,926.64	8,108.11	7,926.64	40.39	30.73	-0.08	2.21	1,359.33	1,269.86	1,206.68	63.18	20.100	
8,500.00	8,026.64	8,208.11	8,026.64	40.48	30.86	-0.08	2.21	1,359.33	1,269.86	1,206.45	63.41	20.026	
8,600.00	8,126.64	8,308.11	8,126.64	40.57	30.98	-0.08	2.21	1,359.33	1,269.86	1,206.21	63.65	19.951	
8,700.00	8,226.64	8,408.11	8,226.64	40.66	31.11	-0.08	2.21	1,359.33	1,269.86	1,205.97	63.89	19.876	
8,759.26	8,285.91	8,467.38	8,285.91	40.72	31.18	-0.08	2.21	1,359.33	1,269.86	1,205.82	64.03	19.831	
8,801.36	8,328.00	8,489.47	8,308.00	40.76	31.21	-0.08	2.21	1,359.33	1,270.01	1,205.91	64.11	19.810	

Company:	US ROCKIES REGION PLANNING	Local Co-ordinate Reference:	Site WELD_NRC 18-9 PAD
Project:	COLORADO NORTHERN ZONE - 83	TVD Reference:	WELL @ 5036.00ft (Original Well Elev)
Reference Site:	WELD_NRC 18-9 PAD	MD Reference:	WELL @ 5036.00ft (Original Well Elev)
Site Error:	0.00ft	North Reference:	True
Reference Well:	P_NRC 25-9	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00ft	Output errors are at	2.00 sigma
Reference Wellbore	P_NRC 25-9	Database:	EDM 2003.21 Single User Db
Reference Design:	PLAN #1 1-6-10 RHS	Offset TVD Reference:	Offset Datum

Offset Design WELD_NRC 18-9 PAD - P_NRC 22-9 - P_NRC 22-9 - PLAN #1 1-6-10 RHS												Offset Site Error:	0.00 ft
Survey Program: 0-MWD												Offset Well Error:	0.00 ft
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning
0.00	0.00	0.00	0.00	0.00	0.00	-90.09	-0.03	-15.95	15.95				
100.00	100.00	100.00	100.00	0.10	0.10	-90.09	-0.03	-15.95	15.95	15.76	0.19	83.499	
200.00	200.00	200.00	200.00	0.32	0.32	-90.09	-0.03	-15.95	15.95	15.31	0.64	24.903	
300.00	300.00	300.00	300.00	0.55	0.55	-90.09	-0.03	-15.95	15.95	14.86	1.09	14.634 CC, ES	
400.00	399.98	399.98	399.98	0.75	0.77	140.88	-0.03	-15.95	17.27	15.75	1.52	11.379	
500.00	499.84	499.84	499.84	0.95	0.99	149.64	-0.03	-15.95	21.58	19.65	1.94	11.136 SF	
600.00	599.45	599.45	599.45	1.19	1.22	158.18	-0.03	-15.95	29.44	27.07	2.37	12.426	
700.00	698.70	698.70	698.70	1.47	1.44	164.46	-0.03	-15.95	41.01	38.20	2.80	14.622	
800.00	797.47	797.47	797.47	1.79	1.66	168.67	-0.03	-15.95	56.24	53.00	3.24	17.345	
900.00	895.62	895.62	895.62	2.17	1.88	171.47	-0.03	-15.95	75.05	71.37	3.68	20.378	
1,000.00	993.06	993.06	993.06	2.61	2.10	173.38	-0.03	-15.95	97.36	93.24	4.13	23.601	
1,100.00	1,089.64	1,089.78	1,089.78	3.11	2.32	174.72	-0.03	-15.95	123.11	118.54	4.57	26.944	
1,200.00	1,185.27	1,189.06	1,189.04	3.68	2.49	175.18	-1.91	-15.79	151.00	146.02	4.98	30.333	
1,300.00	1,279.82	1,288.72	1,288.54	4.31	2.67	174.75	-7.24	-15.32	179.95	174.54	5.41	33.291	
1,400.00	1,373.17	1,388.67	1,388.10	5.01	2.86	173.78	-16.04	-14.54	209.96	204.10	5.86	35.831	
1,500.00	1,465.21	1,488.83	1,487.50	5.79	3.08	172.49	-28.33	-13.46	241.11	234.76	6.35	37.961	
1,600.00	1,555.84	1,589.13	1,586.53	6.63	3.33	170.98	-44.10	-12.07	273.47	266.58	6.89	39.671	
1,700.00	1,644.94	1,689.48	1,685.00	7.54	3.62	169.33	-63.32	-10.37	307.11	299.61	7.50	40.946	
1,800.00	1,732.39	1,789.79	1,782.71	8.52	3.97	167.60	-85.95	-8.37	342.10	333.90	8.20	41.711	
1,900.00	1,818.11	1,888.86	1,878.36	9.58	4.36	165.85	-111.60	-6.11	378.54	369.53	9.00	42.042	
2,000.00	1,901.97	1,980.57	1,966.61	10.70	4.77	164.41	-136.48	-3.92	417.60	407.75	9.85	42.388	
2,049.81	1,943.02	2,025.78	2,010.11	11.29	4.97	163.81	-148.75	-2.84	438.25	427.96	10.29	42.594	
2,100.00	1,984.13	2,071.17	2,053.78	11.89	5.18	163.39	-161.06	-1.75	459.47	448.69	10.78	42.617	
2,200.00	2,066.05	2,161.60	2,140.79	13.09	5.62	162.65	-185.59	0.41	501.79	490.01	11.78	42.589	
2,300.00	2,147.97	2,252.03	2,227.81	14.29	6.06	162.03	-210.12	2.58	544.17	531.37	12.80	42.498	
2,400.00	2,229.89	2,342.46	2,314.82	15.50	6.52	161.51	-234.66	4.74	586.60	572.76	13.84	42.370	
2,500.00	2,311.81	2,432.89	2,401.83	16.72	6.98	161.05	-259.19	6.90	629.06	614.16	14.90	42.223	
2,600.00	2,393.73	2,523.32	2,488.84	17.94	7.45	160.65	-283.72	9.07	671.55	655.59	15.96	42.069	
2,700.00	2,475.65	2,613.75	2,575.86	19.15	7.93	160.29	-308.25	11.23	714.06	697.03	17.04	41.912	
2,800.00	2,557.57	2,704.18	2,662.87	20.38	8.41	159.98	-332.78	13.39	756.60	738.48	18.12	41.759	
2,900.00	2,639.49	2,794.61	2,749.88	21.60	8.89	159.70	-357.32	15.56	799.15	779.94	19.21	41.610	
3,000.00	2,721.41	2,885.04	2,836.89	22.82	9.38	159.45	-381.85	17.72	841.71	821.41	20.30	41.467	
3,100.00	2,803.33	2,975.47	2,923.91	24.05	9.87	159.22	-406.38	19.88	884.29	862.89	21.39	41.332	
3,200.00	2,885.24	3,065.91	3,010.92	25.27	10.36	159.02	-430.91	22.05	926.87	904.38	22.49	41.204	
3,300.00	2,967.16	3,156.34	3,097.93	26.50	10.85	158.83	-455.44	24.21	969.47	945.87	23.60	41.084	
3,400.00	3,049.08	3,246.77	3,184.94	27.73	11.35	158.66	-479.97	26.37	1,012.07	987.37	24.70	40.970	
3,486.55	3,119.98	3,325.03	3,260.25	28.79	11.78	158.52	-501.21	28.25	1,048.95	1,023.29	25.66	40.878	
3,500.00	3,131.02	3,337.21	3,271.97	28.94	11.84	158.54	-504.51	28.54	1,054.66	1,028.84	25.81	40.861	
3,600.00	3,214.18	3,428.47	3,359.78	29.91	12.35	158.67	-529.27	30.72	1,095.40	1,068.51	26.89	40.739	
3,700.00	3,299.24	3,520.95	3,448.76	30.83	12.86	158.72	-554.35	32.93	1,133.16	1,105.19	27.97	40.511	
3,800.00	3,386.07	3,614.54	3,538.81	31.71	13.38	158.69	-579.74	35.17	1,167.92	1,138.86	29.06	40.193	
3,900.00	3,474.58	3,709.12	3,629.82	32.53	13.90	158.59	-605.40	37.43	1,199.64	1,169.50	30.14	39.798	
4,000.00	3,564.67	3,804.58	3,721.68	33.30	14.43	158.42	-631.30	39.72	1,228.32	1,197.09	31.23	39.334	
4,100.00	3,656.21	3,900.81	3,814.27	34.01	14.97	158.18	-657.40	42.02	1,253.93	1,221.62	32.31	38.811	
4,200.00	3,749.10	3,997.68	3,907.48	34.67	15.50	157.87	-683.68	44.34	1,276.47	1,243.08	33.38	38.235	
4,300.00	3,843.23	4,095.08	4,001.20	35.26	16.05	157.50	-710.10	46.67	1,295.94	1,261.48	34.46	37.611	
4,400.00	3,938.47	4,192.89	4,095.31	35.80	16.59	157.07	-736.64	49.01	1,312.35	1,276.83	35.52	36.944	
4,500.00	4,034.73	4,290.99	4,189.70	36.28	17.14	156.57	-763.25	51.35	1,325.73	1,289.14	36.59	36.237	
4,600.00	4,131.86	4,389.26	4,284.26	36.71	17.69	155.99	-789.91	53.71	1,336.08	1,298.44	37.64	35.493	
4,700.00	4,229.77	4,487.58	4,378.86	37.07	18.24	155.35	-816.58	56.06	1,343.46	1,304.76	38.70	34.716	
4,800.00	4,328.33	4,585.83	4,473.40	37.38	18.79	154.63	-843.23	58.41	1,347.89	1,308.13	39.75	33.906	
4,900.00	4,427.42	4,683.90	4,567.75	37.64	19.34	153.83	-869.84	60.75	1,349.43	1,308.62	40.81	33.067	

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:	Site WELD_NRC 18-9 PAD
Project:	COLORADO NORTHERN ZONE - 83	TVD Reference:	WELL @ 5036.00ft (Original Well Elev)
Reference Site:	WELD_NRC 18-9 PAD	MD Reference:	WELL @ 5036.00ft (Original Well Elev)
Site Error:	0.00ft	North Reference:	True
Reference Well:	P_NRC 25-9	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00ft	Output errors are at	2.00 sigma
Reference Wellbore	P_NRC 25-9	Database:	EDM 2003.21 Single User Db
Reference Design:	PLAN #1 1-6-10 RHS	Offset TVD Reference:	Offset Datum

Offset Design WELD_NRC 18-9 PAD - P_NRC 22-9 - P_NRC 22-9 - PLAN #1 1-6-10 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	4,526.91	4,781.65	4,661.81	37.84	19.89	152.95	-896.35	63.09	1,348.14	1,306.27	41.87	32.200	
5,100.00	4,626.70	4,878.98	4,755.46	37.98	20.44	151.97	-922.76	65.42	1,344.09	1,301.16	42.93	31.307	
5,200.00	4,726.65	4,975.76	4,848.59	38.08	20.98	150.90	-949.01	67.74	1,337.38	1,293.38	44.01	30.390	
5,236.36	4,763.00	5,010.79	4,882.29	38.10	21.18	-76.55	-958.51	68.57	1,334.30	1,289.90	44.40	30.051	
5,300.00	4,826.64	5,072.03	4,941.22	38.13	21.52	-77.23	-975.13	70.04	1,328.71	1,283.56	45.15	29.427	
5,400.00	4,926.64	5,168.25	5,033.80	38.19	22.06	-78.32	-1,001.23	72.34	1,320.34	1,274.01	46.34	28.495	
5,500.00	5,026.64	5,264.47	5,126.38	38.24	22.60	-79.42	-1,027.33	74.64	1,312.48	1,264.96	47.52	27.619	
5,600.00	5,126.64	5,360.69	5,218.97	38.30	23.15	-80.53	-1,053.43	76.95	1,305.15	1,256.44	48.71	26.794	
5,700.00	5,226.64	5,456.91	5,311.55	38.36	23.69	-81.65	-1,079.54	79.25	1,298.34	1,248.44	49.90	26.018	
5,800.00	5,326.64	5,553.13	5,404.13	38.42	24.23	-82.78	-1,105.64	81.55	1,292.07	1,240.98	51.09	25.290	
5,900.00	5,426.64	5,649.35	5,496.72	38.48	24.77	-83.93	-1,131.74	83.85	1,286.35	1,234.07	52.28	24.607	
6,000.00	5,526.64	5,745.57	5,589.30	38.54	25.31	-85.08	-1,157.84	86.15	1,281.18	1,227.72	53.46	23.966	
6,100.00	5,626.64	5,836.34	5,676.91	38.61	25.72	-86.13	-1,181.48	88.24	1,276.74	1,222.30	54.45	23.449	
6,200.00	5,726.64	5,927.51	5,765.62	38.67	26.04	-87.06	-1,202.46	90.09	1,273.26	1,217.96	55.30	23.026	
6,300.00	5,826.64	6,019.99	5,856.22	38.74	26.34	-87.89	-1,220.86	91.71	1,270.57	1,214.51	56.06	22.665	
6,400.00	5,926.64	6,113.59	5,948.50	38.80	26.61	-88.59	-1,236.50	93.09	1,268.56	1,211.82	56.73	22.360	
6,500.00	6,026.64	6,208.15	6,042.17	38.87	26.85	-89.17	-1,249.25	94.21	1,267.09	1,209.78	57.32	22.107	
6,600.00	6,126.64	6,303.45	6,136.98	38.94	27.05	-89.61	-1,258.98	95.07	1,266.08	1,208.28	57.80	21.905	
6,700.00	6,226.64	6,400.00	6,233.29	39.01	27.22	-89.91	-1,265.62	95.66	1,265.44	1,207.25	58.19	21.748	
6,800.00	6,326.64	6,495.50	6,328.72	39.08	27.34	-90.06	-1,269.01	95.96	1,265.12	1,206.66	58.47	21.638	
6,876.15	6,402.79	6,569.57	6,402.79	39.14	27.42	-90.08	-1,269.52	96.00	1,265.08	1,206.45	58.63	21.578	
6,900.00	6,426.64	6,593.42	6,426.64	39.16	27.45	-90.08	-1,269.52	96.00	1,265.08	1,206.40	58.67	21.561	
7,000.00	6,526.64	6,693.42	6,526.64	39.23	27.54	-90.08	-1,269.52	96.00	1,265.08	1,206.22	58.86	21.494	
7,100.00	6,626.64	6,793.42	6,626.64	39.31	27.63	-90.08	-1,269.52	96.00	1,265.08	1,206.03	59.04	21.426	
7,200.00	6,726.64	6,893.42	6,726.64	39.38	27.72	-90.08	-1,269.52	96.00	1,265.08	1,205.85	59.23	21.358	
7,300.00	6,826.64	6,993.42	6,826.64	39.46	27.82	-90.08	-1,269.52	96.00	1,265.08	1,205.66	59.42	21.289	
7,400.00	6,926.64	7,093.42	6,926.64	39.54	27.92	-90.08	-1,269.52	96.00	1,265.08	1,205.46	59.62	21.220	
7,500.00	7,026.64	7,193.42	7,026.64	39.62	28.01	-90.08	-1,269.52	96.00	1,265.08	1,205.26	59.81	21.150	
7,600.00	7,126.64	7,293.42	7,126.64	39.70	28.11	-90.08	-1,269.52	96.00	1,265.08	1,205.06	60.01	21.080	
7,700.00	7,226.64	7,393.42	7,226.64	39.78	28.21	-90.08	-1,269.52	96.00	1,265.08	1,204.86	60.22	21.009	
7,800.00	7,326.64	7,493.42	7,326.64	39.87	28.31	-90.08	-1,269.52	96.00	1,265.08	1,204.66	60.42	20.937	
7,900.00	7,426.64	7,593.42	7,426.64	39.95	28.42	-90.08	-1,269.52	96.00	1,265.08	1,204.45	60.63	20.865	
8,000.00	7,526.64	7,693.42	7,526.64	40.03	28.52	-90.08	-1,269.52	96.00	1,265.08	1,204.24	60.84	20.793	
8,100.00	7,626.64	7,793.42	7,626.64	40.12	28.63	-90.08	-1,269.52	96.00	1,265.08	1,204.02	61.05	20.721	
8,200.00	7,726.64	7,893.42	7,726.64	40.21	28.74	-90.08	-1,269.52	96.00	1,265.08	1,203.81	61.27	20.647	
8,300.00	7,826.64	7,993.42	7,826.64	40.30	28.84	-90.08	-1,269.52	96.00	1,265.08	1,203.59	61.49	20.574	
8,400.00	7,926.64	8,093.42	7,926.64	40.39	28.96	-90.08	-1,269.52	96.00	1,265.08	1,203.37	61.71	20.500	
8,500.00	8,026.64	8,193.42	8,026.64	40.48	29.07	-90.08	-1,269.52	96.00	1,265.08	1,203.14	61.93	20.426	
8,600.00	8,126.64	8,293.42	8,126.64	40.57	29.18	-90.08	-1,269.52	96.00	1,265.08	1,202.92	62.16	20.352	
8,700.00	8,226.64	8,393.42	8,226.64	40.66	29.29	-90.08	-1,269.52	96.00	1,265.08	1,202.69	62.39	20.277	
8,759.26	8,285.91	8,452.69	8,285.91	40.72	29.36	-90.08	-1,269.52	96.00	1,265.08	1,202.55	62.53	20.233	
8,801.36	8,328.00	8,474.78	8,308.00	40.76	29.39	-90.08	-1,269.52	96.00	1,265.24	1,202.64	62.60	20.211	

Company:	US ROCKIES REGION PLANNING	Local Co-ordinate Reference:	Site WELD_NRC 18-9 PAD
Project:	COLORADO NORTHERN ZONE - 83	TVD Reference:	WELL @ 5036.00ft (Original Well Elev)
Reference Site:	WELD_NRC 18-9 PAD	MD Reference:	WELL @ 5036.00ft (Original Well Elev)
Site Error:	0.00ft	North Reference:	True
Reference Well:	P_NRC 25-9	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00ft	Output errors are at	2.00 sigma
Reference Wellbore	P_NRC 25-9	Database:	EDM 2003.21 Single User Db
Reference Design:	PLAN #1 1-6-10 RHS	Offset TVD Reference:	Offset Datum

Offset Design WELD_NRC 18-9 PAD - P_NRC 3-9 - P_NRC 3-9 - PLAN #1 1-6-10 RHS													Offset Site Error:	0.00 ft
Survey Program: 0-MWD													Offset Well Error:	0.00 ft
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning	
0.00	0.00	0.00	0.00	0.00	0.00	-90.02	-0.01	-31.91	31.91					
100.00	100.00	100.00	100.00	0.10	0.10	-90.02	-0.01	-31.91	31.91	31.71	0.19	166.998		
200.00	200.00	200.00	200.00	0.32	0.32	-90.02	-0.01	-31.91	31.91	31.26	0.64	49.806		
300.00	300.00	300.00	300.00	0.55	0.55	-90.02	-0.01	-31.91	31.91	30.82	1.09	29.268 CC, ES		
400.00	399.98	399.98	399.98	0.75	0.77	139.05	-0.01	-31.91	33.20	31.69	1.52	21.878		
500.00	499.84	499.84	499.84	0.95	0.99	144.27	-0.01	-31.91	37.31	35.38	1.94	19.239		
600.00	599.45	599.45	599.45	1.19	1.22	150.73	-0.01	-31.91	44.69	42.31	2.37	18.818 SF		
700.00	698.70	698.70	698.70	1.47	1.44	156.79	-0.01	-31.91	55.65	52.83	2.82	19.764		
800.00	797.47	797.47	797.47	1.79	1.66	161.72	-0.01	-31.91	70.31	67.05	3.26	21.581		
900.00	895.62	895.62	895.62	2.17	1.88	165.49	-0.01	-31.91	88.65	84.95	3.70	23.955		
1,000.00	993.06	993.06	993.06	2.61	2.10	168.32	-0.01	-31.91	110.60	106.45	4.15	26.679		
1,100.00	1,089.64	1,089.70	1,089.70	3.11	2.32	170.44	-0.01	-31.90	136.07	131.47	4.59	29.635		
1,200.00	1,185.27	1,186.69	1,186.67	3.68	2.53	172.70	1.15	-30.52	164.56	159.53	5.03	32.722		
1,300.00	1,279.82	1,282.63	1,282.47	4.31	2.74	175.35	4.38	-26.69	195.88	190.41	5.46	35.845		
1,400.00	1,373.17	1,377.22	1,376.72	5.01	2.96	178.14	9.58	-20.52	230.28	224.37	5.91	38.978		
1,500.00	1,465.21	1,470.22	1,469.06	5.79	3.18	-179.09	16.65	-12.13	267.95	261.58	6.37	42.056		
1,600.00	1,555.84	1,561.36	1,559.17	6.63	3.42	-176.41	25.45	-1.68	309.02	302.15	6.87	44.994		
1,700.00	1,644.94	1,650.44	1,646.78	7.54	3.69	-173.87	35.82	10.63	353.56	346.15	7.41	47.710		
1,800.00	1,732.39	1,737.29	1,731.70	8.52	3.97	-171.50	47.55	24.55	401.57	393.56	8.00	50.166		
1,900.00	1,818.11	1,822.32	1,814.71	9.58	4.27	-169.53	59.40	38.63	452.95	444.31	8.64	52.407		
2,000.00	1,901.97	1,905.61	1,896.03	10.70	4.57	-167.96	71.02	52.42	507.49	498.18	9.31	54.512		
2,049.81	1,943.02	1,946.42	1,935.87	11.29	4.73	-167.29	76.72	59.18	535.77	526.12	9.65	55.510		
2,100.00	1,984.13	1,987.32	1,975.79	11.89	4.89	-166.82	82.42	65.95	564.64	554.59	10.06	56.147		
2,200.00	2,066.05	2,068.79	2,055.33	13.09	5.21	-166.03	93.78	79.44	622.23	611.35	10.88	57.198		
2,300.00	2,147.97	2,150.26	2,134.87	14.29	5.54	-165.37	105.15	92.93	679.89	668.18	11.72	58.033		
2,400.00	2,229.89	2,231.73	2,214.41	15.50	5.87	-164.81	116.51	106.42	737.60	725.04	12.56	58.704		
2,500.00	2,311.81	2,313.21	2,293.96	16.72	6.21	-164.34	127.88	119.91	795.35	781.92	13.42	59.249		
2,600.00	2,393.73	2,394.68	2,373.50	17.94	6.55	-163.92	139.24	133.40	853.13	838.84	14.29	59.695		
2,700.00	2,475.65	2,476.15	2,453.04	19.15	6.90	-163.56	150.60	146.89	910.94	895.77	15.17	60.064		
2,800.00	2,557.57	2,557.63	2,532.58	20.38	7.25	-163.24	161.97	160.38	968.76	952.72	16.05	60.372		
2,900.00	2,639.49	2,639.10	2,612.12	21.60	7.60	-162.96	173.33	173.87	1,026.61	1,009.68	16.93	60.632		
3,000.00	2,721.41	2,720.57	2,691.66	22.82	7.96	-162.71	184.70	187.36	1,084.47	1,066.65	17.82	60.853		
3,100.00	2,803.33	2,802.05	2,771.20	24.05	8.31	-162.48	196.06	200.85	1,142.34	1,123.63	18.71	61.043		
3,200.00	2,885.24	2,883.52	2,850.74	25.27	8.67	-162.28	207.43	214.34	1,200.23	1,180.62	19.61	61.205		
3,300.00	2,967.16	2,964.99	2,930.28	26.50	9.03	-162.09	218.79	227.83	1,258.12	1,237.61	20.51	61.345		
3,400.00	3,049.08	3,046.47	3,009.82	27.73	9.39	-161.93	230.15	241.32	1,316.02	1,294.61	21.41	61.467		
3,486.55	3,119.98	3,116.98	3,078.66	28.79	9.71	-161.79	239.99	252.99	1,366.14	1,343.95	22.19	61.561		
3,500.00	3,131.02	3,127.96	3,089.38	28.94	9.76	-161.83	241.52	254.81	1,373.90	1,351.58	22.32	61.543		
3,600.00	3,214.18	3,210.60	3,170.06	29.91	10.13	-162.07	253.05	268.49	1,430.09	1,406.80	23.28	61.424		
3,700.00	3,299.24	3,295.00	3,252.47	30.83	10.50	-162.25	264.82	282.47	1,483.50	1,459.27	24.24	61.211		
3,800.00	3,386.07	3,381.07	3,336.50	31.71	10.89	-162.36	276.83	296.72	1,534.10	1,508.92	25.18	60.921		
3,900.00	3,474.58	3,468.70	3,422.05	32.53	11.29	-162.42	289.05	311.23	1,581.82	1,555.71	26.12	60.568		
4,000.00	3,564.67	3,557.78	3,509.01	33.30	11.69	-162.42	301.47	325.98	1,626.63	1,599.59	27.04	60.165		
4,100.00	3,656.21	3,648.20	3,597.29	34.01	12.10	-162.38	314.09	340.95	1,668.48	1,640.54	27.94	59.720		
4,200.00	3,749.10	3,739.86	3,686.77	34.67	12.51	-162.29	326.87	356.12	1,707.33	1,678.51	28.82	59.240		
4,300.00	3,843.23	3,832.63	3,777.34	35.26	12.93	-162.15	339.81	371.49	1,743.15	1,713.47	29.68	58.730		
4,400.00	3,938.47	3,926.41	3,868.90	35.80	13.36	-161.98	352.89	387.01	1,775.92	1,745.41	30.52	58.196		
4,500.00	4,034.73	4,021.09	3,961.33	36.28	13.79	-161.76	366.10	402.69	1,805.62	1,774.30	31.33	57.641		
4,600.00	4,131.86	4,116.55	4,054.52	36.71	14.22	-161.50	379.41	418.49	1,832.23	1,800.13	32.11	57.066		
4,700.00	4,229.77	4,212.66	4,148.36	37.07	14.66	-161.20	392.82	434.41	1,855.75	1,822.89	32.86	56.475		
4,800.00	4,328.33	4,309.32	4,242.73	37.38	15.10	-160.85	406.30	450.41	1,876.15	1,842.57	33.58	55.868		
4,900.00	4,427.42	4,406.41	4,337.51	37.64	15.55	-160.47	419.84	466.49	1,893.46	1,859.19	34.27	55.246		

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:	Site WELD_NRC 18-9 PAD
Project:	COLORADO NORTHERN ZONE - 83	TVD Reference:	WELL @ 5036.00ft (Original Well Elev)
Reference Site:	WELD_NRC 18-9 PAD	MD Reference:	WELL @ 5036.00ft (Original Well Elev)
Site Error:	0.00ft	North Reference:	True
Reference Well:	P_NRC 25-9	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00ft	Output errors are at	2.00 sigma
Reference Wellbore	P_NRC 25-9	Database:	EDM 2003.21 Single User Db
Reference Design:	PLAN #1 1-6-10 RHS	Offset TVD Reference:	Offset Datum

Offset Design WELD_NRC 18-9 PAD - P_NRC 3-9 - P_NRC 3-9 - PLAN #1 1-6-10 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	4,526.91	4,503.81	4,432.60	37.84	15.99	-160.04	433.43	482.62	1,907.68	1,872.74	34.93	54.609	
5,100.00	4,626.70	4,601.39	4,527.87	37.98	16.44	-159.56	447.04	498.77	1,918.81	1,883.25	35.56	53.957	
5,200.00	4,726.65	4,699.05	4,623.21	38.08	16.88	-159.03	460.66	514.94	1,926.88	1,890.72	36.16	53.290	
5,236.36	4,763.00	4,734.55	4,657.87	38.10	17.05	-25.86	465.61	520.82	1,929.06	1,892.69	36.37	53.043	
5,300.00	4,826.64	4,796.68	4,718.53	38.13	17.33	-25.48	474.28	531.11	1,932.58	1,895.74	36.84	52.464	
5,400.00	4,926.64	4,894.31	4,813.84	38.19	17.78	-24.87	487.90	547.27	1,938.28	1,900.71	37.57	51.587	
5,500.00	5,026.64	4,991.94	4,909.16	38.24	18.23	-24.27	501.52	563.44	1,944.21	1,905.91	38.31	50.751	
5,600.00	5,126.64	5,089.57	5,004.47	38.30	18.67	-23.67	515.13	579.60	1,950.37	1,911.33	39.04	49.955	
5,700.00	5,226.64	5,187.20	5,099.78	38.36	19.12	-23.08	528.75	595.77	1,956.74	1,916.97	39.78	49.195	
5,800.00	5,326.64	5,284.83	5,195.10	38.42	19.57	-22.48	542.37	611.93	1,963.33	1,922.83	40.51	48.470	
5,900.00	5,426.64	5,382.45	5,290.41	38.48	20.02	-21.90	555.99	628.10	1,970.14	1,928.91	41.23	47.779	
6,000.00	5,526.64	5,480.08	5,385.72	38.54	20.47	-21.31	569.60	644.26	1,977.16	1,935.20	41.96	47.120	
6,100.00	5,626.64	5,577.71	5,481.03	38.61	20.92	-20.73	583.22	660.43	1,984.40	1,941.71	42.68	46.491	
6,200.00	5,726.64	5,675.34	5,576.35	38.67	21.37	-20.16	596.84	676.59	1,991.84	1,948.43	43.40	45.891	
6,300.00	5,826.64	5,772.97	5,671.66	38.74	21.82	-19.59	610.46	692.76	1,999.49	1,955.37	44.12	45.319	
6,400.00	5,926.64	5,866.28	5,762.42	38.80	22.30	-18.95	625.85	711.03	2,007.16	1,962.28	44.89	44.717	
6,500.00	6,026.64	6,019.45	5,913.57	38.87	22.72	-18.34	640.68	728.64	2,013.58	1,968.00	45.58	44.179	
6,600.00	6,126.64	6,154.51	6,047.54	38.94	23.06	-17.88	651.69	741.71	2,018.35	1,972.20	46.15	43.734	
6,700.00	6,226.64	6,290.92	6,183.50	39.01	23.34	-17.60	658.67	749.99	2,021.38	1,974.77	46.61	43.365	
6,800.00	6,326.64	6,428.04	6,320.55	39.08	23.54	-17.49	661.48	753.32	2,022.60	1,975.65	46.96	43.074	
6,900.00	6,426.64	6,534.14	6,426.64	39.16	23.66	-17.48	661.53	753.39	2,022.63	1,975.43	47.20	42.849	
7,000.00	6,526.64	6,634.14	6,526.64	39.23	23.79	-17.48	661.53	753.39	2,022.63	1,975.17	47.45	42.622	
7,100.00	6,626.64	6,734.14	6,626.64	39.31	23.92	-17.48	661.53	753.39	2,022.63	1,974.92	47.71	42.395	
7,200.00	6,726.64	6,834.14	6,726.64	39.38	24.06	-17.48	661.53	753.39	2,022.63	1,974.66	47.97	42.168	
7,300.00	6,826.64	6,934.14	6,826.64	39.46	24.19	-17.48	661.53	753.39	2,022.63	1,974.40	48.23	41.941	
7,400.00	6,926.64	7,034.14	6,926.64	39.54	24.32	-17.48	661.53	753.39	2,022.63	1,974.14	48.49	41.714	
7,500.00	7,026.64	7,134.14	7,026.64	39.62	24.46	-17.48	661.53	753.39	2,022.63	1,973.88	48.75	41.487	
7,600.00	7,126.64	7,234.14	7,126.64	39.70	24.60	-17.48	661.53	753.39	2,022.63	1,973.61	49.02	41.260	
7,700.00	7,226.64	7,334.14	7,226.64	39.78	24.74	-17.48	661.53	753.39	2,022.63	1,973.34	49.29	41.034	
7,800.00	7,326.64	7,434.14	7,326.64	39.87	24.88	-17.48	661.53	753.39	2,022.63	1,973.06	49.56	40.808	
7,900.00	7,426.64	7,534.14	7,426.64	39.95	25.02	-17.48	661.53	753.39	2,022.63	1,972.79	49.84	40.582	
8,000.00	7,526.64	7,634.14	7,526.64	40.03	25.16	-17.48	661.53	753.39	2,022.63	1,972.51	50.12	40.357	
8,100.00	7,626.64	7,734.14	7,626.64	40.12	25.30	-17.48	661.53	753.39	2,022.63	1,972.23	50.40	40.132	
8,200.00	7,726.64	7,834.14	7,726.64	40.21	25.45	-17.48	661.53	753.39	2,022.63	1,971.95	50.68	39.908	
8,300.00	7,826.64	7,934.14	7,826.64	40.30	25.59	-17.48	661.53	753.39	2,022.63	1,971.66	50.97	39.685	
8,400.00	7,926.64	8,034.14	7,926.64	40.39	25.74	-17.48	661.53	753.39	2,022.63	1,971.37	51.26	39.462	
8,500.00	8,026.64	8,134.14	8,026.64	40.48	25.89	-17.48	661.53	753.39	2,022.63	1,971.08	51.55	39.240	
8,600.00	8,126.64	8,234.14	8,126.64	40.57	26.04	-17.48	661.53	753.39	2,022.63	1,970.79	51.84	39.018	
8,700.00	8,226.64	8,334.14	8,226.64	40.66	26.19	-17.48	661.53	753.39	2,022.63	1,970.50	52.13	38.798	
8,718.55	8,245.19	8,352.69	8,245.19	40.68	26.22	-17.48	661.53	753.39	2,022.63	1,970.44	52.19	38.757	
8,801.36	8,328.00	8,375.50	8,268.00	40.76	26.25	-17.48	661.53	753.39	2,023.52	1,971.18	52.34	38.662	

Company:	US ROCKIES REGION PLANNING	Local Co-ordinate Reference:	Site WELD_NRC 18-9 PAD
Project:	COLORADO NORTHERN ZONE - 83	TVD Reference:	WELL @ 5036.00ft (Original Well Elev)
Reference Site:	WELD_NRC 18-9 PAD	MD Reference:	WELL @ 5036.00ft (Original Well Elev)
Site Error:	0.00ft	North Reference:	True
Reference Well:	P_NRC 25-9	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00ft	Output errors are at	2.00 sigma
Reference Wellbore	P_NRC 25-9	Database:	EDM 2003.21 Single User Db
Reference Design:	PLAN #1 1-6-10 RHS	Offset TVD Reference:	Offset Datum

Offset Design WELD_NRC 18-9 PAD - P_NRC 5-9 - P_NRC 5-9 - PLAN #1 1-6-10 RHS												Offset Site Error:	0.00 ft
Survey Program: 0-MWD												Offset Well Error:	0.00 ft
Reference	Offset	Semi Major Axis		Distance		Warning							
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	
0.00	0.00	0.00	0.00	0.00	0.00	-90.02	-0.02	-48.14	48.14				
100.00	100.00	100.00	100.00	0.10	0.10	-90.02	-0.02	-48.14	48.14	47.95	0.19	251.962	
200.00	200.00	200.00	200.00	0.32	0.32	-90.02	-0.02	-48.14	48.14	47.50	0.64	75.147	
300.00	300.00	300.00	300.00	0.55	0.55	-90.02	-0.02	-48.14	48.14	47.05	1.09	44.158 CC, ES	
400.00	399.98	399.98	399.98	0.75	0.77	138.37	-0.02	-48.14	49.43	47.91	1.52	32.568	
500.00	499.84	499.84	499.84	0.95	0.99	142.05	-0.02	-48.14	53.45	51.51	1.94	27.553	
600.00	599.45	599.45	599.45	1.19	1.22	147.04	-0.02	-48.14	60.57	58.19	2.38	25.475	
700.00	698.70	698.70	698.70	1.47	1.44	152.28	-0.02	-48.14	71.12	68.30	2.82	25.186 SF	
800.00	797.47	797.47	797.47	1.79	1.66	157.06	-0.02	-48.14	85.30	82.03	3.27	26.065	
900.00	895.62	895.62	895.62	2.17	1.88	161.06	-0.02	-48.14	103.17	99.45	3.72	27.723	
1,000.00	993.06	993.06	993.06	2.61	2.10	164.30	-0.02	-48.14	124.71	120.54	4.17	29.909	
1,100.00	1,089.64	1,089.61	1,089.61	3.11	2.32	166.85	-0.02	-48.14	149.83	145.21	4.62	32.460	
1,200.00	1,185.27	1,184.62	1,184.60	3.68	2.49	168.28	-1.39	-49.20	178.65	173.62	5.03	35.526	
1,300.00	1,279.82	1,278.52	1,278.37	4.31	2.66	168.56	-5.17	-52.16	211.12	205.66	5.46	38.656	
1,400.00	1,373.17	1,371.04	1,370.57	5.01	2.85	168.14	-11.26	-56.93	247.12	241.19	5.93	41.700	
1,500.00	1,465.21	1,461.92	1,460.84	5.79	3.05	167.28	-19.53	-63.39	286.61	280.18	6.44	44.529	
1,600.00	1,555.84	1,550.92	1,548.87	6.63	3.26	166.17	-29.80	-71.42	329.59	322.59	7.00	47.091	
1,700.00	1,644.94	1,638.90	1,635.55	7.54	3.50	164.99	-41.63	-80.67	375.95	368.33	7.62	49.344	
1,800.00	1,732.39	1,725.76	1,721.12	8.52	3.76	164.09	-53.43	-89.90	425.34	417.07	8.27	51.419	
1,900.00	1,818.11	1,810.96	1,805.03	9.58	4.03	163.41	-65.01	-98.95	477.65	468.70	8.95	53.369	
2,000.00	1,901.97	1,894.37	1,887.20	10.70	4.30	162.89	-76.34	-107.81	532.79	523.14	9.65	55.218	
2,049.81	1,943.02	1,935.22	1,927.44	11.29	4.43	162.67	-81.89	-112.15	561.28	551.27	10.00	56.104	
2,100.00	1,984.13	1,976.15	1,967.76	11.89	4.57	162.67	-87.45	-116.50	590.33	579.93	10.40	56.750	
2,200.00	2,066.05	2,057.70	2,048.08	13.09	4.85	162.67	-98.53	-125.16	648.22	637.01	11.20	57.856	
2,300.00	2,147.97	2,139.24	2,128.40	14.29	5.14	162.68	-109.61	-133.83	706.10	694.09	12.01	58.774	
2,400.00	2,229.89	2,220.78	2,208.72	15.50	5.43	162.68	-120.69	-142.49	763.98	751.15	12.83	59.544	
2,500.00	2,311.81	2,302.33	2,289.04	16.72	5.72	162.69	-131.77	-151.15	821.87	808.22	13.65	60.198	
2,600.00	2,393.73	2,383.87	2,369.36	17.94	6.02	162.69	-142.86	-159.82	879.75	865.27	14.48	60.757	
2,700.00	2,475.65	2,465.41	2,449.68	19.15	6.32	162.69	-153.94	-168.48	937.64	922.33	15.31	61.242	
2,800.00	2,557.57	2,546.96	2,530.01	20.38	6.62	162.69	-165.02	-177.14	995.52	979.38	16.14	61.666	
2,900.00	2,639.49	2,628.50	2,610.33	21.60	6.93	162.70	-176.10	-185.81	1,053.41	1,036.43	16.98	62.039	
3,000.00	2,721.41	2,710.05	2,690.65	22.82	7.24	162.70	-187.18	-194.47	1,111.29	1,093.47	17.82	62.371	
3,100.00	2,803.33	2,791.59	2,770.97	24.05	7.55	162.70	-198.26	-203.13	1,169.18	1,150.52	18.66	62.668	
3,200.00	2,885.24	2,873.13	2,851.29	25.27	7.86	162.70	-209.34	-211.80	1,227.06	1,207.56	19.50	62.935	
3,300.00	2,967.16	2,954.68	2,931.61	26.50	8.17	162.70	-220.42	-220.46	1,284.95	1,264.61	20.34	63.177	
3,400.00	3,049.08	3,036.22	3,011.94	27.73	8.48	162.70	-231.50	-229.12	1,342.83	1,321.65	21.18	63.398	
3,486.55	3,119.98	3,106.79	3,081.45	28.79	8.76	162.70	-241.08	-236.62	1,392.93	1,371.02	21.91	63.574	
3,500.00	3,131.02	3,117.78	3,092.27	28.94	8.80	162.76	-242.58	-237.79	1,400.69	1,378.66	22.03	63.589	
3,600.00	3,214.18	3,200.52	3,173.78	29.91	9.12	163.13	-253.82	-246.58	1,456.83	1,433.97	22.86	63.724	
3,700.00	3,299.24	3,285.08	3,257.07	30.83	9.45	163.42	-265.31	-255.56	1,510.18	1,486.49	23.69	63.743	
3,800.00	3,386.07	3,371.35	3,342.05	31.71	9.78	163.64	-277.03	-264.73	1,560.68	1,536.16	24.51	63.665	
3,900.00	3,474.58	3,459.23	3,428.61	32.53	10.13	163.80	-288.97	-274.07	1,608.26	1,582.94	25.32	63.507	
4,000.00	3,564.67	3,548.61	3,516.65	33.30	10.48	163.90	-301.12	-283.56	1,652.88	1,626.76	26.12	63.280	
4,100.00	3,656.21	3,639.38	3,606.05	34.01	10.83	163.95	-313.45	-293.20	1,694.48	1,667.58	26.90	62.995	
4,200.00	3,749.10	3,731.43	3,696.72	34.67	11.19	163.95	-325.96	-302.98	1,733.04	1,705.38	27.66	62.658	
4,300.00	3,843.23	3,824.64	3,788.54	35.26	11.56	163.91	-338.63	-312.89	1,768.50	1,740.10	28.40	62.277	
4,400.00	3,938.47	3,918.92	3,881.40	35.80	11.93	163.83	-351.43	-322.90	1,800.84	1,771.73	29.11	61.857	
4,500.00	4,034.73	4,014.13	3,975.19	36.28	12.31	163.70	-364.37	-333.02	1,830.04	1,800.23	29.80	61.401	
4,600.00	4,131.86	4,110.16	4,069.78	36.71	12.69	163.54	-377.42	-343.22	1,856.06	1,825.59	30.47	60.911	
4,700.00	4,229.77	4,206.91	4,165.08	37.07	13.07	163.33	-390.57	-353.50	1,878.90	1,847.79	31.11	60.391	
4,800.00	4,328.33	4,304.24	4,260.95	37.38	13.45	163.08	-403.79	-363.84	1,898.54	1,866.81	31.73	59.842	
4,900.00	4,427.42	4,402.04	4,357.28	37.64	13.84	162.79	-417.08	-374.23	1,914.97	1,882.66	32.31	59.263	

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:	Site WELD_NRC 18-9 PAD
Project:	COLORADO NORTHERN ZONE - 83	TVD Reference:	WELL @ 5036.00ft (Original Well Elev)
Reference Site:	WELD_NRC 18-9 PAD	MD Reference:	WELL @ 5036.00ft (Original Well Elev)
Site Error:	0.00ft	North Reference:	True
Reference Well:	P_NRC 25-9	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00ft	Output errors are at	2.00 sigma
Reference Wellbore	P_NRC 25-9	Database:	EDM 2003.21 Single User Db
Reference Design:	PLAN #1 1-6-10 RHS	Offset TVD Reference:	Offset Datum

Offset Design WELD_NRC 18-9 PAD - P_NRC 5-9 - P_NRC 5-9 - PLAN #1 1-6-10 RHS													Offset Site Error: 0.00 ft	
Survey Program: 0-MWD													Offset Well Error: 0.00 ft	
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
5,000.00	4,526.91	4,500.19	4,453.97	37.84	14.23	162.46	-430.42	-384.66	1,928.20	1,895.32	32.87	58.656		
5,100.00	4,626.70	4,598.58	4,550.88	37.98	14.62	162.09	-443.79	-395.11	1,938.23	1,904.82	33.41	58.019		
5,200.00	4,726.65	4,697.07	4,647.90	38.08	15.01	161.67	-457.17	-405.57	1,945.07	1,911.15	33.91	57.352		
5,236.36	4,763.00	4,732.89	4,683.17	38.10	15.15	-65.53	-462.04	-409.38	1,946.77	1,912.67	34.09	57.099		
5,300.00	4,826.64	4,795.58	4,744.92	38.13	15.40	-65.84	-470.55	-416.04	1,949.41	1,914.88	34.53	56.464		
5,400.00	4,926.64	4,894.08	4,841.95	38.19	15.79	-66.33	-483.94	-426.50	1,953.67	1,918.47	35.20	55.505		
5,500.00	5,026.64	4,992.58	4,938.97	38.24	16.19	-66.81	-497.32	-436.97	1,958.08	1,922.20	35.87	54.586		
5,600.00	5,126.64	5,091.08	5,036.00	38.30	16.58	-67.29	-510.71	-447.43	1,962.62	1,926.08	36.54	53.706		
5,700.00	5,226.64	5,189.58	5,133.02	38.36	16.97	-67.77	-524.09	-457.90	1,967.31	1,930.10	37.22	52.863		
5,800.00	5,326.64	5,288.08	5,230.05	38.42	17.36	-68.24	-537.48	-468.36	1,972.14	1,934.25	37.89	52.054		
5,900.00	5,426.64	5,386.58	5,327.07	38.48	17.76	-68.72	-550.86	-478.83	1,977.11	1,938.55	38.56	51.278		
6,000.00	5,526.64	5,485.09	5,424.10	38.54	18.15	-69.19	-564.24	-489.29	1,982.21	1,942.99	39.23	50.534		
6,100.00	5,626.64	5,583.59	5,521.12	38.61	18.54	-69.65	-577.63	-499.76	1,987.45	1,947.56	39.89	49.820		
6,200.00	5,726.64	5,682.09	5,618.15	38.67	18.93	-70.12	-591.01	-510.22	1,992.83	1,952.27	40.56	49.134		
6,300.00	5,826.64	5,780.59	5,715.17	38.74	19.33	-70.58	-604.40	-520.69	1,998.34	1,957.12	41.22	48.477		
6,400.00	5,926.64	5,879.09	5,812.20	38.80	19.72	-71.05	-617.78	-531.15	2,003.99	1,962.10	41.89	47.845		
6,500.00	6,026.64	5,987.19	5,918.73	38.87	20.13	-71.54	-632.25	-542.47	2,009.69	1,967.12	42.57	47.209		
6,600.00	6,126.64	6,117.55	6,047.86	38.94	20.46	-72.02	-646.22	-553.39	2,014.34	1,971.16	43.18	46.653		
6,700.00	6,226.64	6,249.27	6,179.03	39.01	20.73	-72.34	-655.62	-560.74	2,017.48	1,973.81	43.67	46.200		
6,800.00	6,326.64	6,381.82	6,311.44	39.08	20.94	-72.49	-660.28	-564.38	2,019.04	1,974.99	44.05	45.835		
6,900.00	6,426.64	6,497.03	6,426.64	39.16	21.10	-72.51	-660.80	-564.79	2,019.22	1,974.88	44.33	45.547		
7,000.00	6,526.64	6,597.03	6,526.64	39.23	21.22	-72.51	-660.80	-564.79	2,019.22	1,974.64	44.58	45.299		
7,100.00	6,626.64	6,697.03	6,626.64	39.31	21.35	-72.51	-660.80	-564.79	2,019.22	1,974.40	44.82	45.050		
7,200.00	6,726.64	6,797.03	6,726.64	39.38	21.48	-72.51	-660.80	-564.79	2,019.22	1,974.15	45.07	44.801		
7,300.00	6,826.64	6,897.03	6,826.64	39.46	21.60	-72.51	-660.80	-564.79	2,019.22	1,973.89	45.32	44.552		
7,400.00	6,926.64	6,997.03	6,926.64	39.54	21.73	-72.51	-660.80	-564.79	2,019.22	1,973.64	45.58	44.303		
7,500.00	7,026.64	7,097.03	7,026.64	39.62	21.87	-72.51	-660.80	-564.79	2,019.22	1,973.38	45.84	44.053		
7,600.00	7,126.64	7,197.03	7,126.64	39.70	22.00	-72.51	-660.80	-564.79	2,019.22	1,973.12	46.10	43.803		
7,700.00	7,226.64	7,297.03	7,226.64	39.78	22.13	-72.51	-660.80	-564.79	2,019.22	1,972.86	46.36	43.554		
7,800.00	7,326.64	7,397.03	7,326.64	39.87	22.27	-72.51	-660.80	-564.79	2,019.22	1,972.59	46.63	43.304		
7,900.00	7,426.64	7,497.03	7,426.64	39.95	22.41	-72.51	-660.80	-564.79	2,019.22	1,972.32	46.90	43.055		
8,000.00	7,526.64	7,597.03	7,526.64	40.03	22.54	-72.51	-660.80	-564.79	2,019.22	1,972.05	47.17	42.806		
8,100.00	7,626.64	7,697.03	7,626.64	40.12	22.68	-72.51	-660.80	-564.79	2,019.22	1,971.77	47.45	42.558		
8,200.00	7,726.64	7,797.03	7,726.64	40.21	22.83	-72.51	-660.80	-564.79	2,019.22	1,971.49	47.72	42.310		
8,300.00	7,826.64	7,897.03	7,826.64	40.30	22.97	-72.51	-660.80	-564.79	2,019.22	1,971.21	48.01	42.062		
8,400.00	7,926.64	7,997.03	7,926.64	40.39	23.11	-72.51	-660.80	-564.79	2,019.22	1,970.93	48.29	41.816		
8,500.00	8,026.64	8,097.03	8,026.64	40.48	23.26	-72.51	-660.80	-564.79	2,019.22	1,970.64	48.57	41.569		
8,600.00	8,126.64	8,197.03	8,126.64	40.57	23.40	-72.51	-660.80	-564.79	2,019.22	1,970.35	48.86	41.324		
8,700.00	8,226.64	8,297.03	8,226.64	40.66	23.55	-72.51	-660.80	-564.79	2,019.22	1,970.06	49.15	41.080		
8,753.37	8,280.01	8,350.40	8,280.01	40.71	23.63	-72.51	-660.80	-564.79	2,019.22	1,969.91	49.31	40.949		
8,801.36	8,328.00	8,368.39	8,298.00	40.76	23.66	-72.51	-660.80	-564.79	2,019.44	1,970.03	49.41	40.875		

Company:	US ROCKIES REGION PLANNING	Local Co-ordinate Reference:	Site WELD_NRC 18-9 PAD
Project:	COLORADO NORTHERN ZONE - 83	TVD Reference:	WELL @ 5036.00ft (Original Well Elev)
Reference Site:	WELD_NRC 18-9 PAD	MD Reference:	WELL @ 5036.00ft (Original Well Elev)
Site Error:	0.00ft	North Reference:	True
Reference Well:	P_NRC 25-9	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00ft	Output errors are at	2.00 sigma
Reference Wellbore	P_NRC 25-9	Database:	EDM 2003.21 Single User Db
Reference Design:	PLAN #1 1-6-10 RHS	Offset TVD Reference:	Offset Datum

Offset Design WELD_NRC 18-9 PAD - P_NRC 6-9 - P_NRC 6-9 - PLAN #1 1-6-10 RHS												Offset Site Error:	0.00 ft
Survey Program: 0-MWD												Offset Well Error:	0.00 ft
Reference	Offset	Semi Major Axis		Distance									
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning
0.00	0.00	0.00	0.00	0.00	0.00	90.11	-0.03	15.95	15.95				
100.00	100.00	100.00	100.00	0.10	0.10	90.11	-0.03	15.95	15.95	15.76	0.19	83.499	
200.00	200.00	200.00	200.00	0.32	0.32	90.11	-0.03	15.95	15.95	15.31	0.64	24.903	
300.00	300.00	300.00	300.00	0.55	0.55	90.11	-0.03	15.95	15.95	14.86	1.09	14.634	
400.00	399.98	399.98	399.98	0.75	0.77	-47.50	-0.03	15.95	14.72	13.20	1.52	9.699	
500.00	499.84	499.84	499.84	0.95	0.99	-66.56	-0.03	15.95	11.83	9.89	1.95	6.080	
558.94	558.58	558.58	558.58	1.09	1.13	-90.00	-0.03	15.95	10.85	8.63	2.22	4.888 CC, ES	
600.00	599.45	599.45	599.45	1.19	1.22	-110.13	-0.03	15.95	11.56	9.16	2.40	4.809 SF	
700.00	698.70	698.70	698.70	1.47	1.44	-145.90	-0.03	15.95	19.49	16.65	2.83	6.881	
800.00	797.47	797.47	797.47	1.79	1.66	-160.91	-0.03	15.95	33.63	30.37	3.26	10.327	
900.00	895.62	895.62	895.62	2.17	1.88	-167.71	-0.03	15.95	52.05	48.36	3.69	14.111	
1,000.00	993.06	993.06	993.06	2.61	2.10	-171.34	-0.03	15.95	74.20	70.07	4.13	17.981	
1,100.00	1,089.64	1,089.81	1,089.81	3.11	2.32	-173.52	-0.03	15.96	99.87	95.30	4.57	21.865	
1,200.00	1,185.27	1,189.92	1,189.90	3.68	2.50	-174.89	-1.31	17.39	127.15	122.17	4.98	25.518	
1,300.00	1,279.82	1,291.04	1,290.87	4.31	2.70	-175.75	-4.96	21.48	154.46	149.05	5.41	28.539	
1,400.00	1,373.17	1,393.21	1,392.62	5.01	2.91	-176.32	-11.05	28.32	181.74	175.88	5.86	31.023	
1,500.00	1,465.21	1,496.45	1,495.03	5.79	3.14	-176.72	-19.65	37.97	208.95	202.63	6.32	33.055	
1,600.00	1,555.84	1,600.78	1,598.00	6.63	3.42	-177.01	-30.83	50.53	236.04	229.24	6.80	34.701	
1,700.00	1,644.94	1,703.74	1,698.96	7.54	3.74	-177.21	-44.24	65.57	263.10	255.80	7.30	36.054	
1,800.00	1,732.39	1,799.30	1,792.48	8.52	4.07	-177.37	-57.32	80.25	292.54	284.75	7.79	37.554	
1,900.00	1,818.11	1,893.77	1,884.93	9.58	4.41	-177.53	-70.26	94.77	325.29	317.00	8.29	39.238	
2,000.00	1,901.97	1,987.05	1,976.21	10.70	4.76	-177.67	-83.03	109.10	361.31	352.52	8.80	41.081	
2,049.81	1,943.02	2,033.02	2,021.20	11.29	4.94	-177.74	-89.32	116.17	380.47	371.42	9.05	42.048	
2,100.00	1,984.13	2,079.18	2,066.37	11.89	5.12	-177.82	-95.64	123.26	400.17	390.81	9.37	42.727	
2,200.00	2,066.05	2,171.15	2,156.36	13.09	5.49	-177.95	-108.23	137.40	439.43	429.43	10.00	43.925	
2,300.00	2,147.97	2,263.12	2,246.36	14.29	5.86	-178.07	-120.83	151.53	478.69	468.04	10.65	44.951	
2,400.00	2,229.89	2,355.08	2,336.36	15.50	6.25	-178.16	-133.42	165.66	517.96	506.66	11.30	45.839	
2,500.00	2,311.81	2,447.05	2,426.36	16.72	6.63	-178.25	-146.01	179.79	557.22	545.27	11.95	46.612	
2,600.00	2,393.73	2,539.01	2,516.35	17.94	7.02	-178.32	-158.60	193.93	596.48	583.87	12.61	47.291	
2,700.00	2,475.65	2,630.98	2,606.35	19.15	7.42	-178.38	-171.20	208.06	635.75	622.47	13.27	47.891	
2,800.00	2,557.57	2,722.95	2,696.35	20.38	7.81	-178.44	-183.79	222.19	675.02	661.08	13.94	48.424	
2,900.00	2,639.49	2,814.91	2,786.35	21.60	8.21	-178.49	-196.38	236.32	714.28	699.68	14.61	48.901	
3,000.00	2,721.41	2,906.88	2,876.34	22.82	8.62	-178.53	-208.97	250.46	753.55	738.27	15.28	49.329	
3,100.00	2,803.33	2,998.85	2,966.34	24.05	9.02	-178.57	-221.56	264.59	792.82	776.87	15.95	49.716	
3,200.00	2,885.24	3,090.81	3,056.34	25.27	9.43	-178.61	-234.16	278.72	832.08	815.46	16.62	50.066	
3,300.00	2,967.16	3,182.78	3,146.34	26.50	9.83	-178.64	-246.75	292.86	871.35	854.06	17.29	50.385	
3,400.00	3,049.08	3,274.75	3,236.33	27.73	10.24	-178.67	-259.34	306.99	910.62	892.65	17.97	50.676	
3,486.55	3,119.98	3,354.34	3,314.23	28.79	10.60	-178.69	-270.24	319.22	944.60	926.05	18.56	50.908	
3,500.00	3,131.02	3,366.73	3,326.34	28.94	10.65	-178.70	-271.93	321.12	949.86	931.19	18.67	50.887	
3,600.00	3,214.18	3,459.54	3,417.17	29.91	11.06	-178.74	-284.64	335.38	987.08	967.61	19.46	50.712	
3,700.00	3,299.24	3,553.59	3,509.20	30.83	11.49	-178.77	-297.52	349.84	1,021.04	1,000.80	20.23	50.461	
3,800.00	3,386.07	3,648.77	3,602.35	31.71	11.91	-178.80	-310.55	364.46	1,051.70	1,030.72	20.97	50.145	
3,900.00	3,474.58	3,744.96	3,696.48	32.53	12.34	-178.81	-323.72	379.25	1,079.01	1,057.33	21.68	49.772	
4,000.00	3,564.67	3,842.04	3,791.48	33.30	12.78	-178.83	-337.02	394.17	1,102.96	1,080.61	22.35	49.350	
4,100.00	3,656.21	3,939.90	3,887.25	34.01	13.22	-178.83	-350.41	409.20	1,123.50	1,100.52	22.98	48.886	
4,200.00	3,749.10	4,038.42	3,983.66	34.67	13.67	-178.84	-363.90	424.34	1,140.62	1,117.04	23.58	48.382	
4,300.00	3,843.23	4,137.48	4,080.60	35.26	14.11	-178.83	-377.47	439.57	1,154.28	1,130.16	24.13	47.843	
4,400.00	3,938.47	4,236.95	4,177.94	35.80	14.56	-178.82	-391.09	454.85	1,164.49	1,139.85	24.63	47.270	
4,500.00	4,034.73	4,336.72	4,275.57	36.28	15.01	-178.81	-404.75	470.18	1,171.21	1,146.12	25.10	46.667	
4,600.00	4,131.86	4,436.66	4,373.37	36.71	15.47	-178.79	-418.43	485.54	1,174.45	1,148.94	25.51	46.033	
4,700.00	4,229.77	4,536.66	4,471.23	37.07	15.92	-178.77	-432.12	500.91	1,174.21	1,148.33	25.88	45.370	
4,800.00	4,328.33	4,636.58	4,569.01	37.38	16.37	-178.74	-445.80	516.26	1,170.47	1,144.27	26.20	44.677	

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:	Site WELD_NRC 18-9 PAD
Project:	COLORADO NORTHERN ZONE - 83	TVD Reference:	WELL @ 5036.00ft (Original Well Elev)
Reference Site:	WELD_NRC 18-9 PAD	MD Reference:	WELL @ 5036.00ft (Original Well Elev)
Site Error:	0.00ft	North Reference:	True
Reference Well:	P_NRC 25-9	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00ft	Output errors are at	2.00 sigma
Reference Wellbore	P_NRC 25-9	Database:	EDM 2003.21 Single User Db
Reference Design:	PLAN #1 1-6-10 RHS	Offset TVD Reference:	Offset Datum

Offset Design WELD_NRC 18-9 PAD - P_NRC 6-9 - P_NRC 6-9 - PLAN #1 1-6-10 RHS												Offset Site Error:	0.00 ft
Survey Program: 0-MWD												Offset Well Error:	0.00 ft
Reference	Offset	Semi Major Axis		Distance									
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning
4,900.00	4,427.42	4,736.31	4,666.61	37.64	16.83	-178.71	-459.46	531.59	1,163.25	1,136.78	26.47	43.953	
5,000.00	4,526.91	4,835.73	4,763.90	37.84	17.28	-178.67	-473.07	546.87	1,152.55	1,125.87	26.68	43.198	
5,100.00	4,626.70	4,934.71	4,860.76	37.98	17.73	-178.62	-486.62	562.08	1,138.40	1,111.55	26.84	42.408	
5,200.00	4,726.65	5,033.14	4,957.08	38.08	18.18	-178.57	-500.10	577.20	1,120.79	1,093.84	26.95	41.583	
5,236.36	4,763.00	5,068.77	4,991.95	38.10	18.34	-45.58	-504.98	582.68	1,113.55	1,086.56	26.98	41.272	
5,300.00	4,826.64	5,131.05	5,052.89	38.13	18.62	-45.55	-513.51	592.25	1,100.46	1,073.24	27.22	40.424	
5,400.00	4,926.64	5,228.91	5,148.66	38.19	19.07	-45.50	-526.91	607.29	1,079.90	1,052.30	27.60	39.120	
5,500.00	5,026.64	5,326.77	5,244.42	38.24	19.51	-45.45	-540.30	622.33	1,059.34	1,031.35	27.99	37.848	
5,600.00	5,126.64	5,424.63	5,340.18	38.30	19.96	-45.39	-553.70	637.36	1,038.79	1,010.41	28.38	36.608	
5,700.00	5,226.64	5,522.49	5,435.95	38.36	20.41	-45.33	-567.10	652.40	1,018.23	989.46	28.77	35.398	
5,800.00	5,326.64	5,620.34	5,531.71	38.42	20.85	-45.27	-580.50	667.44	997.67	968.52	29.16	34.217	
5,900.00	5,426.64	5,718.20	5,627.48	38.48	21.30	-45.21	-593.90	682.48	977.12	947.57	29.55	33.065	
6,000.00	5,526.64	5,816.06	5,723.24	38.54	21.74	-45.14	-607.30	697.52	956.57	926.62	29.95	31.941	
6,100.00	5,626.64	5,900.00	5,805.38	38.61	22.12	-45.08	-618.79	710.41	936.13	905.82	30.31	30.887	
6,200.00	5,726.64	5,982.98	5,886.86	38.67	22.38	-45.02	-629.23	722.13	917.34	886.70	30.64	29.942	
6,300.00	5,826.64	6,057.92	5,960.80	38.74	22.60	-44.98	-637.31	731.19	901.16	870.21	30.94	29.122	
6,400.00	5,926.64	6,133.45	6,035.63	38.80	22.79	-44.94	-644.14	738.87	887.57	856.32	31.25	28.403	
6,500.00	6,026.64	6,200.00	6,101.77	38.87	22.95	-44.91	-649.08	744.41	876.67	845.14	31.53	27.802	
6,600.00	6,126.64	6,285.90	6,187.35	38.94	23.12	-44.88	-653.93	749.86	868.29	836.44	31.85	27.264	
6,700.00	6,226.64	6,362.61	6,263.94	39.01	23.25	-44.87	-656.83	753.10	862.63	830.49	32.14	26.840	
6,800.00	6,326.64	6,439.50	6,340.79	39.08	23.36	-44.86	-658.36	754.82	859.64	827.21	32.43	26.506	
6,886.26	6,412.90	6,511.62	6,412.90	39.15	23.45	-44.86	-658.61	755.11	859.14	826.44	32.69	26.278	
6,900.00	6,426.64	6,525.36	6,426.64	39.16	23.47	-44.86	-658.61	755.11	859.14	826.40	32.74	26.241	
7,000.00	6,526.64	6,625.36	6,526.64	39.23	23.58	-44.86	-658.61	755.11	859.14	826.07	33.07	25.980	
7,100.00	6,626.64	6,725.36	6,626.64	39.31	23.70	-44.86	-658.61	755.11	859.14	825.74	33.40	25.722	
7,200.00	6,726.64	6,825.36	6,726.64	39.38	23.82	-44.86	-658.61	755.11	859.14	825.40	33.74	25.466	
7,300.00	6,826.64	6,925.36	6,826.64	39.46	23.94	-44.86	-658.61	755.11	859.14	825.06	34.07	25.214	
7,400.00	6,926.64	7,025.36	6,926.64	39.54	24.06	-44.86	-658.61	755.11	859.14	824.72	34.41	24.965	
7,500.00	7,026.64	7,125.36	7,026.64	39.62	24.19	-44.86	-658.61	755.11	859.14	824.38	34.76	24.719	
7,600.00	7,126.64	7,225.36	7,126.64	39.70	24.31	-44.86	-658.61	755.11	859.14	824.04	35.10	24.476	
7,700.00	7,226.64	7,325.36	7,226.64	39.78	24.44	-44.86	-658.61	755.11	859.14	823.69	35.45	24.236	
7,800.00	7,326.64	7,425.36	7,326.64	39.87	24.57	-44.86	-658.61	755.11	859.14	823.34	35.80	23.999	
7,900.00	7,426.64	7,525.36	7,426.64	39.95	24.70	-44.86	-658.61	755.11	859.14	822.99	36.15	23.766	
8,000.00	7,526.64	7,625.36	7,526.64	40.03	24.83	-44.86	-658.61	755.11	859.14	822.63	36.50	23.536	
8,100.00	7,626.64	7,725.36	7,626.64	40.12	24.96	-44.86	-658.61	755.11	859.14	822.28	36.86	23.308	
8,200.00	7,726.64	7,825.36	7,726.64	40.21	25.09	-44.86	-658.61	755.11	859.14	821.92	37.22	23.084	
8,300.00	7,826.64	7,925.36	7,826.64	40.30	25.23	-44.86	-658.61	755.11	859.14	821.56	37.58	22.863	
8,400.00	7,926.64	8,025.36	7,926.64	40.39	25.36	-44.86	-658.61	755.11	859.14	821.20	37.94	22.645	
8,500.00	8,026.64	8,125.36	8,026.64	40.48	25.50	-44.86	-658.61	755.11	859.14	820.84	38.30	22.430	
8,600.00	8,126.64	8,225.36	8,126.64	40.57	25.64	-44.86	-658.61	755.11	859.14	820.47	38.67	22.218	
8,700.00	8,226.64	8,325.36	8,226.64	40.66	25.78	-44.86	-658.61	755.11	859.14	820.10	39.04	22.009	
8,761.70	8,288.35	8,387.06	8,288.35	40.72	25.87	-44.86	-658.61	755.11	859.14	819.88	39.26	21.882	
8,801.36	8,328.00	8,411.71	8,313.00	40.76	25.90	-44.86	-658.61	755.11	859.27	819.89	39.38	21.820	

Company:	US ROCKIES REGION PLANNING	Local Co-ordinate Reference:	Site WELD_NRC 18-9 PAD
Project:	COLORADO NORTHERN ZONE - 83	TVD Reference:	WELL @ 5036.00ft (Original Well Elev)
Reference Site:	WELD_NRC 18-9 PAD	MD Reference:	WELL @ 5036.00ft (Original Well Elev)
Site Error:	0.00ft	North Reference:	True
Reference Well:	P_NRC 25-9	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00ft	Output errors are at	2.00 sigma
Reference Wellbore	P_NRC 25-9	Database:	EDM 2003.21 Single User Db
Reference Design:	PLAN #1 1-6-10 RHS	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.00 ft
Survey Program: 0-UNKNOWN												Offset Well Error:	0.00 ft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	
0.00	0.00	0.00	0.00	0.00	0.00	-137.30	-50.65	-46.74	71.76				
100.00	100.00	80.00	80.00	0.10	1.60	-137.30	-50.65	-46.74	68.92	67.22	1.70	40.647	
200.00	200.00	180.00	180.00	0.32	5.20	-137.30	-50.65	-46.74	68.92	63.40	5.52	12.485	
300.00	300.00	280.00	280.00	0.55	9.20	-137.30	-50.65	-46.74	68.92	59.18	9.75	7.072	
342.75	342.75	322.75	322.75	0.63	10.91	90.00	-50.65	-46.74	68.92	57.38	11.54	5.971 CC	
400.00	399.98	379.98	379.98	0.75	13.20	91.18	-50.65	-46.74	68.93	54.99	13.95	4.942	
500.00	499.84	479.84	479.84	0.95	17.19	95.51	-50.65	-46.74	69.24	51.09	18.15	3.815	
600.00	599.45	579.45	579.45	1.19	21.18	102.51	-50.65	-46.74	70.61	48.25	22.37	3.157	
700.00	698.70	678.70	678.70	1.47	25.15	111.60	-50.65	-46.74	74.23	47.64	26.58	2.792 ES	
800.00	797.47	777.47	777.47	1.79	29.10	121.69	-50.65	-46.74	81.34	50.60	30.74	2.646 SF	
900.00	895.62	875.62	875.62	2.17	33.02	131.48	-50.65	-46.74	92.89	58.11	34.78	2.671	
1,000.00	993.06	973.06	973.06	2.61	36.92	140.04	-50.65	-46.74	109.26	70.61	38.65	2.827	
1,100.00	1,089.64	1,069.64	1,069.64	3.11	40.79	147.06	-50.65	-46.74	130.37	88.02	42.34	3.079	
1,200.00	1,185.27	1,165.27	1,165.27	3.68	44.61	152.62	-50.65	-46.74	155.95	110.09	45.86	3.401	
1,300.00	1,279.82	1,259.82	1,259.82	4.31	48.39	156.96	-50.65	-46.74	185.71	136.52	49.19	3.776	
1,400.00	1,373.17	1,353.17	1,353.17	5.01	52.13	160.36	-50.65	-46.74	219.39	167.06	52.33	4.192	
1,500.00	1,465.21	1,445.21	1,445.21	5.79	55.81	163.04	-50.65	-46.74	256.78	201.49	55.29	4.644	
1,600.00	1,555.84	1,535.84	1,535.84	6.63	59.43	165.17	-50.65	-46.74	297.70	239.66	58.04	5.129	
1,700.00	1,644.94	1,624.94	1,624.94	7.54	63.00	166.88	-50.65	-46.74	342.03	281.45	60.58	5.646	
1,800.00	1,732.39	1,712.39	1,712.39	8.52	66.50	168.28	-50.65	-46.74	389.63	326.74	62.90	6.195	
1,900.00	1,818.11	1,798.11	1,798.11	9.58	69.92	169.42	-50.65	-46.74	440.42	375.44	64.98	6.778	
2,000.00	1,901.97	1,881.97	1,881.97	10.70	73.28	170.36	-50.65	-46.74	494.28	427.46	66.82	7.397	
2,049.81	1,943.02	1,923.02	1,923.02	11.29	74.92	170.77	-50.65	-46.74	522.23	454.58	67.65	7.720	
2,100.00	1,984.13	1,964.13	1,964.13	11.89	76.57	171.25	-50.65	-46.74	550.78	481.60	69.18	7.962	
2,200.00	2,066.05	2,046.05	2,046.05	13.09	79.84	172.07	-50.65	-46.74	607.72	535.48	72.24	8.413	
2,300.00	2,147.97	2,127.97	2,127.97	14.29	83.12	172.75	-50.65	-46.74	664.74	589.42	75.31	8.826	
2,400.00	2,229.89	2,209.89	2,209.89	15.50	86.40	173.32	-50.65	-46.74	721.80	643.40	78.40	9.206	
2,500.00	2,311.81	2,291.81	2,291.81	16.72	89.67	173.81	-50.65	-46.74	778.91	697.41	81.50	9.557	
2,600.00	2,393.73	2,373.73	2,373.73	17.94	92.95	174.23	-50.65	-46.74	836.05	751.45	84.60	9.882	
2,700.00	2,475.65	2,455.65	2,455.65	19.15	96.23	174.60	-50.65	-46.74	893.22	805.51	87.71	10.183	
2,800.00	2,557.57	2,537.57	2,537.57	20.38	99.50	174.93	-50.65	-46.74	950.42	859.59	90.83	10.464	
2,900.00	2,639.49	2,619.49	2,619.49	21.60	102.78	175.22	-50.65	-46.74	1,007.63	913.68	93.95	10.725	
3,000.00	2,721.41	2,701.41	2,701.41	22.82	106.06	175.47	-50.65	-46.74	1,064.85	967.78	97.07	10.970	
3,100.00	2,803.33	2,783.33	2,783.33	24.05	109.33	175.70	-50.65	-46.74	1,122.09	1,021.89	100.20	11.199	
3,200.00	2,885.24	2,865.24	2,865.24	25.27	112.61	175.91	-50.65	-46.74	1,179.34	1,076.02	103.32	11.414	
3,300.00	2,967.16	2,947.16	2,947.16	26.50	115.89	176.10	-50.65	-46.74	1,236.60	1,130.14	106.45	11.617	
3,400.00	3,049.08	3,029.08	3,029.08	27.73	119.16	176.27	-50.65	-46.74	1,293.86	1,184.28	109.58	11.807	
3,486.55	3,119.98	3,099.98	3,099.98	28.79	122.00	176.41	-50.65	-46.74	1,343.43	1,231.14	112.29	11.964	
3,500.00	3,131.02	3,111.02	3,111.02	28.94	122.44	176.44	-50.65	-46.74	1,351.11	1,238.07	113.04	11.953	
3,600.00	3,214.18	3,194.18	3,194.18	29.91	125.77	176.66	-50.65	-46.74	1,406.56	1,287.98	118.58	11.861	
3,700.00	3,299.24	3,279.24	3,279.24	30.83	129.17	176.85	-50.65	-46.74	1,459.09	1,334.92	124.16	11.751	
3,800.00	3,386.07	3,366.07	3,366.07	31.71	132.64	177.01	-50.65	-46.74	1,508.62	1,378.85	129.76	11.626	
3,900.00	3,474.58	3,454.58	3,454.58	32.53	136.18	177.16	-50.65	-46.74	1,555.09	1,419.73	135.37	11.488	
4,000.00	3,564.67	3,544.67	3,544.67	33.30	139.79	177.28	-50.65	-46.74	1,598.46	1,457.50	140.96	11.340	
4,100.00	3,656.21	3,636.21	3,636.21	34.01	143.45	177.39	-50.65	-46.74	1,638.66	1,492.08	146.58	11.179	
4,200.00	3,749.10	3,729.10	3,729.10	34.67	147.16	177.48	-50.65	-46.74	1,675.64	1,523.47	152.17	11.012	
4,300.00	3,843.23	3,823.23	3,823.23	35.26	150.93	177.56	-50.65	-46.74	1,709.37	1,551.67	157.69	10.840	
4,400.00	3,938.47	3,918.47	3,918.47	35.80	154.74	177.63	-50.65	-46.74	1,739.79	1,576.65	163.14	10.665	
4,500.00	4,034.73	4,014.73	4,014.73	36.28	158.59	177.69	-50.65	-46.74	1,766.87	1,598.39	168.48	10.487	
4,600.00	4,131.86	4,111.86	4,111.86	36.71	162.47	177.74	-50.65	-46.74	1,790.58	1,616.88	173.70	10.308	
4,700.00	4,229.77	4,209.77	4,209.77	37.07	166.39	177.78	-50.65	-46.74	1,810.89	1,632.11	178.79	10.129	
4,800.00	4,328.33	4,308.33	4,308.33	37.38	170.33	177.81	-50.65	-46.74	1,827.78	1,644.06	183.71	9.949	

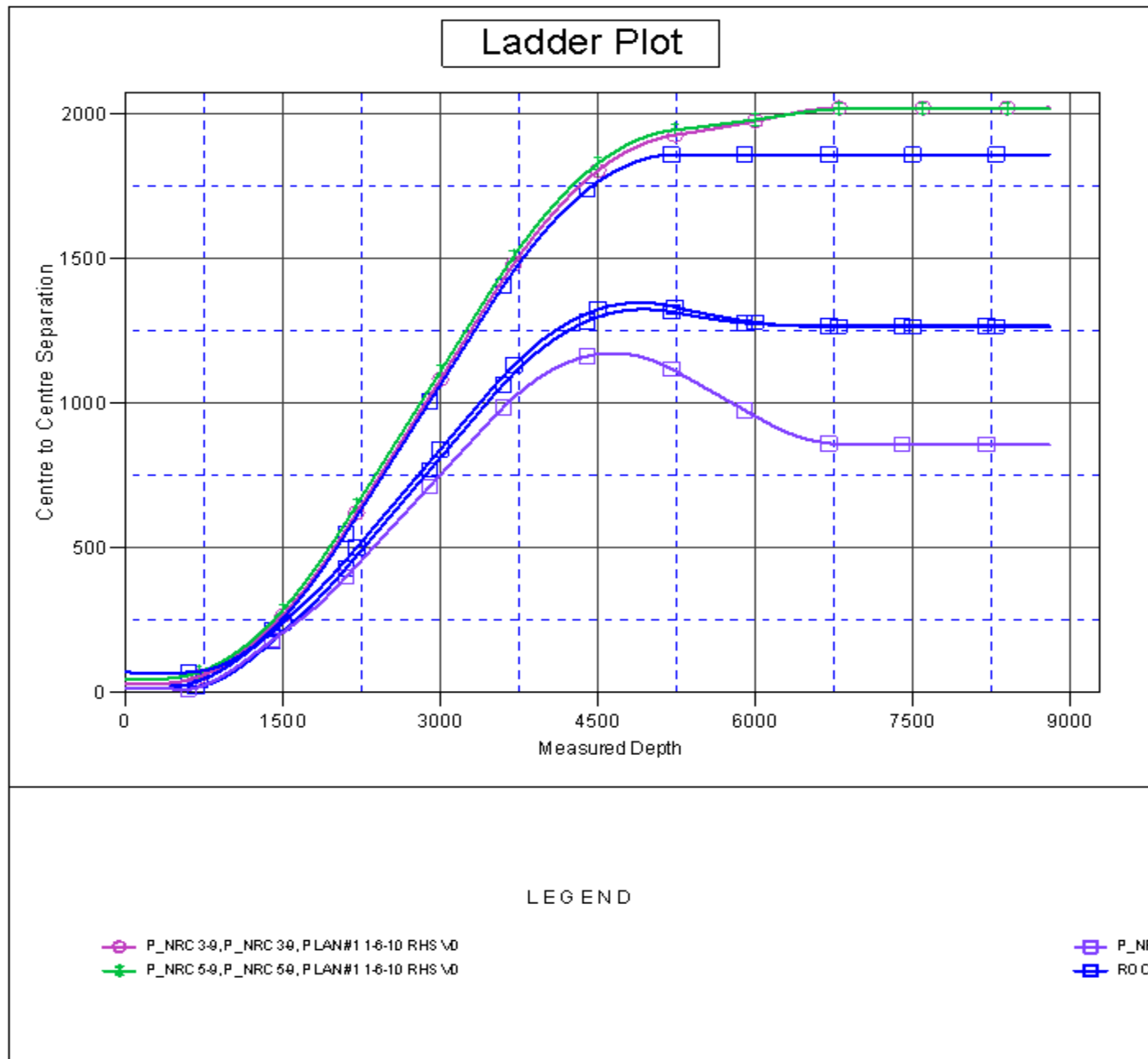
CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Company:	US ROCKIES REGION PLANNING	Local Co-ordinate Reference:	Site WELD_NRC 18-9 PAD
Project:	COLORADO NORTHERN ZONE - 83	TVD Reference:	WELL @ 5036.00ft (Original Well Elev)
Reference Site:	WELD_NRC 18-9 PAD	MD Reference:	WELL @ 5036.00ft (Original Well Elev)
Site Error:	0.00ft	North Reference:	True
Reference Well:	P_NRC 25-9	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00ft	Output errors are at	2.00 sigma
Reference Wellbore	P_NRC 25-9	Database:	EDM 2003.21 Single User Db
Reference Design:	PLAN #1 1-6-10 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
4,900.00	4,427.42	4,407.42	4,407.42	37.64	174.30	177.84	-50.65	-46.74	1,841.21	1,652.75	188.46	9.770	
5,000.00	4,526.91	4,506.91	4,506.91	37.84	178.28	177.86	-50.65	-46.74	1,851.18	1,658.18	193.01	9.591	
5,100.00	4,626.70	4,606.70	4,606.70	37.98	182.27	177.87	-50.65	-46.74	1,857.68	1,660.34	197.34	9.414	
5,200.00	4,726.65	4,706.65	4,706.65	38.08	186.27	177.88	-50.65	-46.74	1,860.69	1,659.26	201.43	9.237	
5,236.36	4,763.00	4,743.00	4,743.00	38.10	187.72	-49.16	-50.65	-46.74	1,860.92	1,658.06	202.86	9.174	
5,300.00	4,826.64	4,806.64	4,806.64	38.13	190.27	-49.16	-50.65	-46.74	1,860.92	1,655.44	205.48	9.056	
5,400.00	4,926.64	4,906.64	4,906.64	38.19	194.27	-49.16	-50.65	-46.74	1,860.92	1,651.31	209.61	8.878	
5,500.00	5,026.64	5,006.64	5,006.64	38.24	198.27	-49.16	-50.65	-46.74	1,860.92	1,647.18	213.74	8.707	
5,600.00	5,126.64	5,106.64	5,106.64	38.30	202.27	-49.16	-50.65	-46.74	1,860.92	1,643.06	217.87	8.542	
5,700.00	5,226.64	5,206.64	5,206.64	38.36	206.27	-49.16	-50.65	-46.74	1,860.92	1,638.92	222.00	8.383	
5,800.00	5,326.64	5,306.64	5,306.64	38.42	210.27	-49.16	-50.65	-46.74	1,860.92	1,634.79	226.13	8.229	
5,900.00	5,426.64	5,406.64	5,406.64	38.48	214.27	-49.16	-50.65	-46.74	1,860.92	1,630.65	230.27	8.082	
6,000.00	5,526.64	5,506.64	5,506.64	38.54	218.27	-49.16	-50.65	-46.74	1,860.92	1,626.52	234.40	7.939	
6,100.00	5,626.64	5,606.64	5,606.64	38.61	222.27	-49.16	-50.65	-46.74	1,860.92	1,622.38	238.54	7.801	
6,200.00	5,726.64	5,706.64	5,706.64	38.67	226.27	-49.16	-50.65	-46.74	1,860.92	1,618.23	242.69	7.668	
6,300.00	5,826.64	5,806.64	5,806.64	38.74	230.27	-49.16	-50.65	-46.74	1,860.92	1,614.09	246.83	7.539	
6,400.00	5,926.64	5,906.64	5,906.64	38.80	234.27	-49.16	-50.65	-46.74	1,860.92	1,609.95	250.97	7.415	
6,500.00	6,026.64	6,006.64	6,006.64	38.87	238.27	-49.16	-50.65	-46.74	1,860.92	1,605.80	255.12	7.294	
6,600.00	6,126.64	6,106.64	6,106.64	38.94	242.27	-49.16	-50.65	-46.74	1,860.92	1,601.65	259.27	7.178	
6,700.00	6,226.64	6,206.64	6,206.64	39.01	246.27	-49.16	-50.65	-46.74	1,860.92	1,597.50	263.42	7.064	
6,800.00	6,326.64	6,306.64	6,306.64	39.08	250.27	-49.16	-50.65	-46.74	1,860.92	1,593.35	267.57	6.955	
6,900.00	6,426.64	6,406.64	6,406.64	39.16	254.27	-49.16	-50.65	-46.74	1,860.92	1,589.19	271.73	6.849	
7,000.00	6,526.64	6,506.64	6,506.64	39.23	258.27	-49.16	-50.65	-46.74	1,860.92	1,585.04	275.88	6.745	
7,100.00	6,626.64	6,606.64	6,606.64	39.31	262.27	-49.16	-50.65	-46.74	1,860.92	1,580.88	280.04	6.645	
7,200.00	6,726.64	6,706.64	6,706.64	39.38	266.27	-49.16	-50.65	-46.74	1,860.92	1,576.72	284.20	6.548	
7,300.00	6,826.64	6,806.64	6,806.64	39.46	270.27	-49.16	-50.65	-46.74	1,860.92	1,572.57	288.36	6.454	
7,400.00	6,926.64	6,906.64	6,906.64	39.54	274.27	-49.16	-50.65	-46.74	1,860.92	1,568.40	292.52	6.362	
7,500.00	7,026.64	7,006.64	7,006.64	39.62	278.27	-49.16	-50.65	-46.74	1,860.92	1,564.24	296.68	6.273	
7,600.00	7,126.64	7,106.64	7,106.64	39.70	282.27	-49.16	-50.65	-46.74	1,860.92	1,560.08	300.84	6.186	
7,700.00	7,226.64	7,206.64	7,206.64	39.78	286.27	-49.16	-50.65	-46.74	1,860.92	1,555.91	305.01	6.101	
7,800.00	7,326.64	7,306.64	7,306.64	39.87	290.27	-49.16	-50.65	-46.74	1,860.92	1,551.75	309.17	6.019	
7,900.00	7,426.64	7,406.64	7,406.64	39.95	294.27	-49.16	-50.65	-46.74	1,860.92	1,547.58	313.34	5.939	
8,000.00	7,526.64	7,506.64	7,506.64	40.03	298.27	-49.16	-50.65	-46.74	1,860.92	1,543.41	317.51	5.861	
8,100.00	7,626.64	7,606.64	7,606.64	40.12	302.27	-49.16	-50.65	-46.74	1,860.92	1,539.24	321.68	5.785	
8,200.00	7,726.64	7,706.64	7,706.64	40.21	306.27	-49.16	-50.65	-46.74	1,860.92	1,535.07	325.85	5.711	
8,300.00	7,826.64	7,806.64	7,806.64	40.30	310.27	-49.16	-50.65	-46.74	1,860.92	1,530.90	330.02	5.639	
8,400.00	7,926.64	7,906.64	7,906.64	40.39	314.27	-49.16	-50.65	-46.74	1,860.92	1,526.73	334.19	5.568	
8,500.00	8,026.64	8,006.64	8,006.64	40.48	318.27	-49.16	-50.65	-46.74	1,860.92	1,522.55	338.37	5.500	
8,600.00	8,126.64	8,106.64	8,106.64	40.57	322.27	-49.16	-50.65	-46.74	1,860.92	1,518.38	342.54	5.433	
8,700.00	8,226.64	8,206.64	8,206.64	40.66	326.27	-49.16	-50.65	-46.74	1,860.92	1,514.20	346.72	5.367	
8,754.67	8,281.32	8,261.32	8,261.32	40.71	328.45	-49.16	-50.65	-46.74	1,860.92	1,511.92	349.00	5.332	
8,801.36	8,328.00	8,280.00	8,280.00	40.76	329.20	-49.16	-50.65	-46.74	1,861.13	1,511.30	349.83	5.320	

Company:	US ROCKIES REGION PLANNING	Local Co-ordinate Reference:	Site WELD_NRC 18-9 PAD
Project:	COLORADO NORTHERN ZONE - 83	TVD Reference:	WELL @ 5036.00ft (Original Well Elev)
Reference Site:	WELD_NRC 18-9 PAD	MD Reference:	WELL @ 5036.00ft (Original Well Elev)
Site Error:	0.00ft	North Reference:	True
Reference Well:	P_NRC 25-9	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00ft	Output errors are at	2.00 sigma
Reference Wellbore	P_NRC 25-9	Database:	EDM 2003.21 Single User Db
Reference Design:	PLAN #1 1-6-10 RHS	Offset TVD Reference:	Offset Datum

Reference Depths are relative to WELL @ 5036.00ft (Original Well Elev) Coordinates are relative to: WELD_NRC 18-9 PAD
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:	Site WELD_NRC 18-9 PAD
Project:	COLORADO NORTHERN ZONE - 83	TVD Reference:	WELL @ 5036.00ft (Original Well Elev)
Reference Site:	WELD_NRC 18-9 PAD	MD Reference:	WELL @ 5036.00ft (Original Well Elev)
Site Error:	0.00ft	North Reference:	True
Reference Well:	P_NRC 25-9	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00ft	Output errors are at	2.00 sigma
Reference Wellbore	P_NRC 25-9	Database:	EDM 2003.21 Single User Db
Reference Design:	PLAN #1 1-6-10 RHS	Offset TVD Reference:	Offset Datum

Reference Depths are relative to WELL @ 5036.00ft (Original Well Elev) Coordinates are relative to: WELD_NRC 18-9 PAD
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°

