



US ROCKIES REGION PLANNING

COLORADO NORTHERN ZONE - 83

WELD_NRC 18-9 PAD

P_NRC 5-9

P_NRC 5-9

Plan: PLAN #1 1-6-10 RHS

Standard Planning Report

04 February, 2010





Azimuths to True North
Magnetic North: 9.10°

Magnetic Field
Strength: 53092.0nT
Dip Angle: 66.81°
Date: 1/6/2010
Model: IGRF2010

WELL DETAILS: P_NRC 5-9

+N/-S	+E/-W	Northing	Ground Level: Easting	5021.00 Latitude	Longitude	Slot
0.00	0.00	1268598.82	3167667.18	40° 4' 8.900 N	104° 54' 3.258 W	

FORMATION TOP DETAILS

TVDPath	MDPath	Formation
3258.00	3286.03	PARKMAN
4733.00	4783.47	SUSSEX
5203.00	5260.62	SHANNON
7373.00	7443.39	NIO A
7713.00	7783.39	CODELL
8163.00	8233.39	JSAND
8333.00	8403.39	DAKOTA

SECTION DETAILS

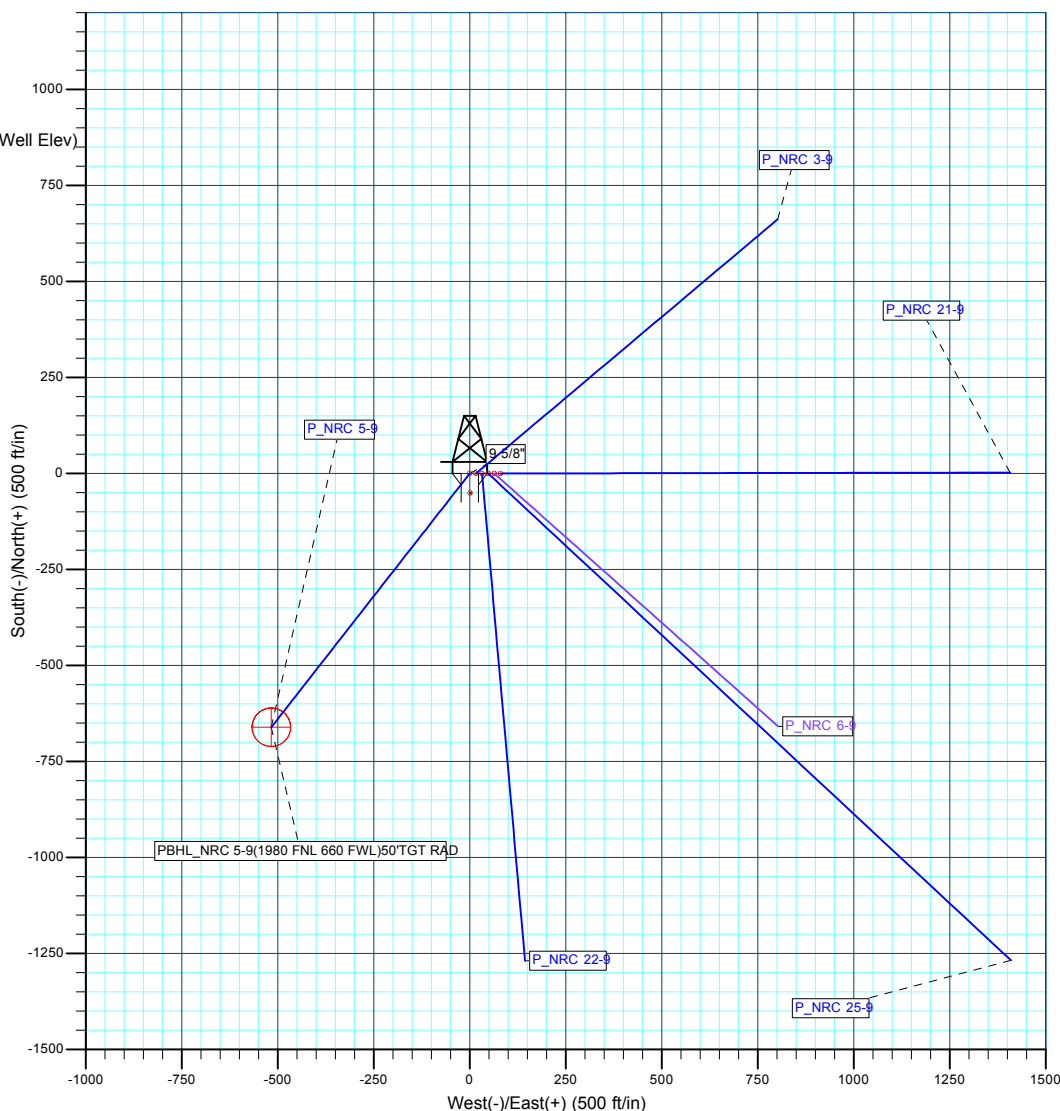
MD	Inc	Azi	TVD	+N/-S	+E/-W	DLeg	TFace	VSec	Target
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
1085.00	0.00	0.00	1085.00	0.00	0.00	0.00	0.00	0.00	
1581.61	9.93	218.02	1579.13	-33.82	-26.45	2.00	218.02	42.94	
5946.78	9.93	218.02	5878.87	-626.96	-490.21	0.00	0.00	795.85	
6443.39	0.00	0.00	6373.00	-660.78	-516.65	2.00	180.00	838.79	
8623.39	0.00	0.00	8553.00	-660.78	-516.65	0.00	0.00	838.79	PBHL_NRC 5-9(1980 FNL 660 FWL)50'TGT RAD

CASING DETAILS

TVD	MD	Name	Size
985.00	985.00	9 5/8"	9.62

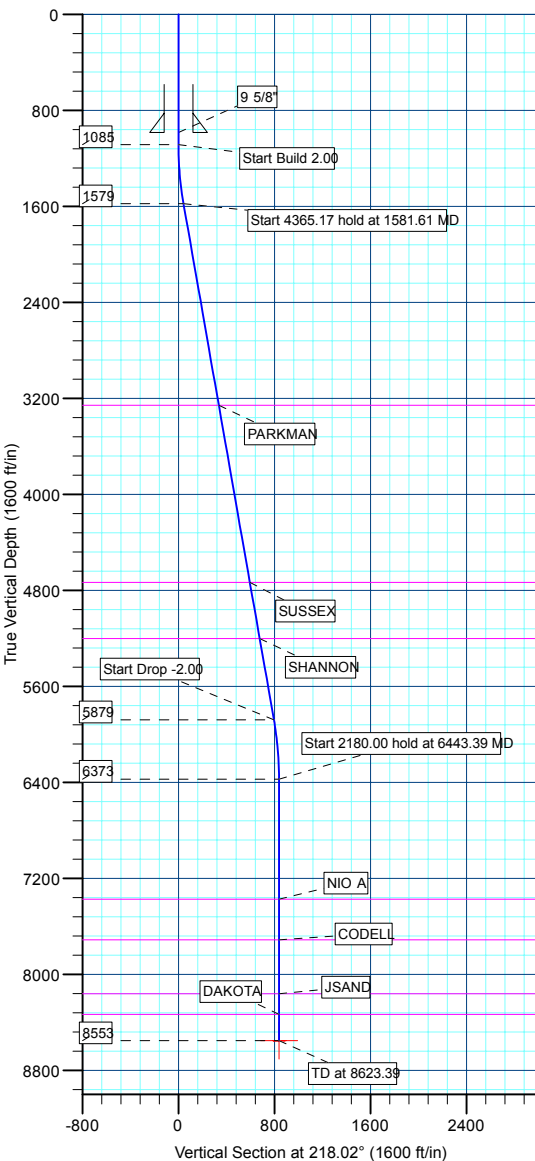


KB ELEV:WELL @ 5036.00ft (Original Well Elev)
GRD ELEV: 5021.00



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

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Shape
PBHL	8553.00	-660.77	-516.65	1267934.57	3167155.01	40° 4' 2.370 N	104° 54' 9.904 W	Circle (Radius: 50.00)



Database:	EDM 2003.21 Single User Db	Local Co-ordinate Reference:	Well P_NRC 5-9
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 5-9	Survey Calculation Method:	Minimum Curvature
Wellbore:	P_NRC 5-9		
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 5-9					
Well Position	+N/-S	-0.02 ft	Northing:	1,268,598.82 ft	Latitude:	40° 4' 8.900 N
	+E/-W	-48.14 ft	Easting:	3,167,667.18 ft	Longitude:	104° 54' 3.258 W
Position Uncertainty		0.00 ft	Wellhead Elevation:	ft	Ground Level:	5,021.00 ft

Wellbore	P_NRC 5-9				
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	218.02

Plan Sections										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	TFO (°)	Target
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
1,085.00	0.00	0.00	1,085.00	0.00	0.00	0.00	0.00	0.00	0.00	
1,581.61	9.93	218.02	1,579.13	-33.82	-26.45	2.00	2.00	0.00	218.02	
5,946.78	9.93	218.02	5,878.87	-626.96	-490.21	0.00	0.00	0.00	0.00	
6,443.39	0.00	0.00	6,373.00	-660.78	-516.65	2.00	-2.00	0.00	180.00	
8,623.39	0.00	0.00	8,553.00	-660.78	-516.65	0.00	0.00	0.00	0.00	PBHL_NRC 5-9(19)

Database:	EDM 2003.21 Single User Db	Local Co-ordinate Reference:	Well P_NRC 5-9
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 5-9	Survey Calculation Method:	Minimum Curvature
Wellbore:	P_NRC 5-9		
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									
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	218.02	1,100.00	-0.03	-0.02	0.04	2.00	2.00	0.00
1,200.00	2.30	218.02	1,199.97	-1.82	-1.42	2.31	2.00	2.00	0.00
1,300.00	4.30	218.02	1,299.80	-6.35	-4.97	8.06	2.00	2.00	0.00
1,400.00	6.30	218.02	1,399.37	-13.63	-10.66	17.30	2.00	2.00	0.00
1,500.00	8.30	218.02	1,498.55	-23.64	-18.48	30.01	2.00	2.00	0.00
Start 4365.17 hold at 1581.61 MD									
1,581.61	9.93	218.02	1,579.13	-33.82	-26.45	42.94	2.00	2.00	0.00
1,600.00	9.93	218.02	1,597.24	-36.32	-28.40	46.11	0.00	0.00	0.00
1,700.00	9.93	218.02	1,695.74	-49.91	-39.02	63.36	0.00	0.00	0.00
1,800.00	9.93	218.02	1,794.24	-63.50	-49.65	80.60	0.00	0.00	0.00
1,900.00	9.93	218.02	1,892.74	-77.09	-60.27	97.85	0.00	0.00	0.00
2,000.00	9.93	218.02	1,991.25	-90.67	-70.90	115.10	0.00	0.00	0.00
2,100.00	9.93	218.02	2,089.75	-104.26	-81.52	132.35	0.00	0.00	0.00
2,200.00	9.93	218.02	2,188.25	-117.85	-92.15	149.60	0.00	0.00	0.00
2,300.00	9.93	218.02	2,286.75	-131.44	-102.77	166.85	0.00	0.00	0.00
2,400.00	9.93	218.02	2,385.25	-145.03	-113.39	184.09	0.00	0.00	0.00
2,500.00	9.93	218.02	2,483.75	-158.61	-124.02	201.34	0.00	0.00	0.00
2,600.00	9.93	218.02	2,582.25	-172.20	-134.64	218.59	0.00	0.00	0.00
2,700.00	9.93	218.02	2,680.75	-185.79	-145.27	235.84	0.00	0.00	0.00
2,800.00	9.93	218.02	2,779.26	-199.38	-155.89	253.09	0.00	0.00	0.00
2,900.00	9.93	218.02	2,877.76	-212.97	-166.51	270.33	0.00	0.00	0.00
3,000.00	9.93	218.02	2,976.26	-226.55	-177.14	287.58	0.00	0.00	0.00
3,100.00	9.93	218.02	3,074.76	-240.14	-187.76	304.83	0.00	0.00	0.00
3,200.00	9.93	218.02	3,173.26	-253.73	-198.39	322.08	0.00	0.00	0.00
PARKMAN									
3,286.03	9.93	218.02	3,258.00	-265.42	-207.53	336.92	0.00	0.00	0.00
3,300.00	9.93	218.02	3,271.76	-267.32	-209.01	339.33	0.00	0.00	0.00
3,400.00	9.93	218.02	3,370.26	-280.90	-219.63	356.58	0.00	0.00	0.00
3,500.00	9.93	218.02	3,468.76	-294.49	-230.26	373.82	0.00	0.00	0.00
3,600.00	9.93	218.02	3,567.27	-308.08	-240.88	391.07	0.00	0.00	0.00
3,700.00	9.93	218.02	3,665.77	-321.67	-251.51	408.32	0.00	0.00	0.00
3,800.00	9.93	218.02	3,764.27	-335.26	-262.13	425.57	0.00	0.00	0.00
3,900.00	9.93	218.02	3,862.77	-348.84	-272.76	442.82	0.00	0.00	0.00
4,000.00	9.93	218.02	3,961.27	-362.43	-283.38	460.07	0.00	0.00	0.00
4,100.00	9.93	218.02	4,059.77	-376.02	-294.00	477.31	0.00	0.00	0.00
4,200.00	9.93	218.02	4,158.27	-389.61	-304.63	494.56	0.00	0.00	0.00
4,300.00	9.93	218.02	4,256.77	-403.19	-315.25	511.81	0.00	0.00	0.00
4,400.00	9.93	218.02	4,355.28	-416.78	-325.88	529.06	0.00	0.00	0.00
4,500.00	9.93	218.02	4,453.78	-430.37	-336.50	546.31	0.00	0.00	0.00
4,600.00	9.93	218.02	4,552.28	-443.96	-347.12	563.55	0.00	0.00	0.00
4,700.00	9.93	218.02	4,650.78	-457.55	-357.75	580.80	0.00	0.00	0.00
SUSSEX									
4,783.47	9.93	218.02	4,733.00	-468.89	-366.62	595.20	0.00	0.00	0.00
4,800.00	9.93	218.02	4,749.28	-471.13	-368.37	598.05	0.00	0.00	0.00
4,900.00	9.93	218.02	4,847.78	-484.72	-379.00	615.30	0.00	0.00	0.00
5,000.00	9.93	218.02	4,946.28	-498.31	-389.62	632.55	0.00	0.00	0.00
5,100.00	9.93	218.02	5,044.79	-511.90	-400.24	649.80	0.00	0.00	0.00
5,200.00	9.93	218.02	5,143.29	-525.49	-410.87	667.04	0.00	0.00	0.00
SHANNON									
5,260.62	9.93	218.02	5,203.00	-533.72	-417.31	677.50	0.00	0.00	0.00
5,300.00	9.93	218.02	5,241.79	-539.07	-421.49	684.29	0.00	0.00	0.00

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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 5-9	Survey Calculation Method:	Minimum Curvature
Wellbore:	P_NRC 5-9		
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)
5,400.00	9.93	218.02	5,340.29	-552.66	-432.12	701.54	0.00	0.00	0.00
5,500.00	9.93	218.02	5,438.79	-566.25	-442.74	718.79	0.00	0.00	0.00
5,600.00	9.93	218.02	5,537.29	-579.84	-453.37	736.04	0.00	0.00	0.00
5,700.00	9.93	218.02	5,635.79	-593.42	-463.99	753.29	0.00	0.00	0.00
5,800.00	9.93	218.02	5,734.29	-607.01	-474.61	770.53	0.00	0.00	0.00
5,900.00	9.93	218.02	5,832.80	-620.60	-485.24	787.78	0.00	0.00	0.00
Start Drop -2.00									
5,946.78	9.93	218.02	5,878.87	-626.96	-490.21	795.85	0.00	0.00	0.00
6,000.00	8.87	218.02	5,931.38	-633.80	-495.56	804.54	2.00	-2.00	0.00
6,100.00	6.87	218.02	6,030.43	-644.59	-503.99	818.23	2.00	-2.00	0.00
6,200.00	4.87	218.02	6,129.90	-652.64	-510.29	828.45	2.00	-2.00	0.00
6,300.00	2.87	218.02	6,229.67	-657.95	-514.44	835.20	2.00	-2.00	0.00
6,400.00	0.87	218.02	6,329.61	-660.52	-516.45	838.46	2.00	-2.00	0.00
Start 2180.00 hold at 6443.39 MD									
6,443.39	0.00	0.00	6,373.00	-660.78	-516.65	838.79	2.00	-2.00	327.22
6,500.00	0.00	0.00	6,429.61	-660.78	-516.65	838.79	0.00	0.00	0.00
6,600.00	0.00	0.00	6,529.61	-660.78	-516.65	838.79	0.00	0.00	0.00
6,700.00	0.00	0.00	6,629.61	-660.78	-516.65	838.79	0.00	0.00	0.00
6,800.00	0.00	0.00	6,729.61	-660.78	-516.65	838.79	0.00	0.00	0.00
6,900.00	0.00	0.00	6,829.61	-660.78	-516.65	838.79	0.00	0.00	0.00
7,000.00	0.00	0.00	6,929.61	-660.78	-516.65	838.79	0.00	0.00	0.00
7,100.00	0.00	0.00	7,029.61	-660.78	-516.65	838.79	0.00	0.00	0.00
7,200.00	0.00	0.00	7,129.61	-660.78	-516.65	838.79	0.00	0.00	0.00
7,300.00	0.00	0.00	7,229.61	-660.78	-516.65	838.79	0.00	0.00	0.00
7,400.00	0.00	0.00	7,329.61	-660.78	-516.65	838.79	0.00	0.00	0.00
NIO A									
7,443.39	0.00	0.00	7,373.00	-660.78	-516.65	838.79	0.00	0.00	0.00
7,500.00	0.00	0.00	7,429.61	-660.78	-516.65	838.79	0.00	0.00	0.00
7,600.00	0.00	0.00	7,529.61	-660.78	-516.65	838.79	0.00	0.00	0.00
7,700.00	0.00	0.00	7,629.61	-660.78	-516.65	838.79	0.00	0.00	0.00
CODELL									
7,783.39	0.00	0.00	7,713.00	-660.78	-516.65	838.79	0.00	0.00	0.00
7,800.00	0.00	0.00	7,729.61	-660.78	-516.65	838.79	0.00	0.00	0.00
7,900.00	0.00	0.00	7,829.61	-660.78	-516.65	838.79	0.00	0.00	0.00
8,000.00	0.00	0.00	7,929.61	-660.78	-516.65	838.79	0.00	0.00	0.00
8,100.00	0.00	0.00	8,029.61	-660.78	-516.65	838.79	0.00	0.00	0.00
8,200.00	0.00	0.00	8,129.61	-660.78	-516.65	838.79	0.00	0.00	0.00
JSAND									
8,233.39	0.00	0.00	8,163.00	-660.78	-516.65	838.79	0.00	0.00	0.00
8,300.00	0.00	0.00	8,229.61	-660.78	-516.65	838.79	0.00	0.00	0.00
8,400.00	0.00	0.00	8,329.61	-660.78	-516.65	838.79	0.00	0.00	0.00
DAKOTA									
8,403.39	0.00	0.00	8,333.00	-660.78	-516.65	838.79	0.00	0.00	0.00
8,500.00	0.00	0.00	8,429.61	-660.78	-516.65	838.79	0.00	0.00	0.00
8,600.00	0.00	0.00	8,529.61	-660.78	-516.65	838.79	0.00	0.00	0.00
PBHL_NRC 5-9(1980 FNL 660 FWL)50'TGT RAD									
8,623.39	0.00	0.00	8,553.00	-660.78	-516.65	838.79	0.00	0.00	0.00

Database:	EDM 2003.21 Single User Db	Local Co-ordinate Reference:	Well P_NRC 5-9
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 5-9	Survey Calculation Method:	Minimum Curvature
Wellbore:	P_NRC 5-9		
Design:	PLAN #1 1-6-10 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 5-9(1980	0.00	0.00	8,553.00	-660.77	-516.65	1,267,934.57	3,167,155.01	40° 4' 2.370 N	104° 54' 9.904 W
- plan misses target center by 0.01ft at 8623.39ft MD (8553.00 TVD, -660.78 N, -516.65 E)									
- Circle (radius 50.00)									

Casing Points					
Measured Depth	Vertical Depth		Name	Casing Diameter	Hole Diameter
(ft)	(ft)			(in)	(in)
985.00	985.00	9 5/8"		9.62	12.25

Formations						
Measured Depth	Vertical Depth		Name	Lithology	Dip	Dip Direction
(ft)	(ft)				(°)	(°)
3,286.03	3,258.00		PARKMAN			
4,783.47	4,733.00		SUSSEX			
5,260.62	5,203.00		SHANNON			
7,443.39	7,373.00		NIO A			
7,783.39	7,713.00		CODELL			
8,233.39	8,163.00		JSAND			
8,403.39	8,333.00		DAKOTA		0.00	

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
1,581.61	1,579.13	-33.82	-26.45	Start 4365.17 hold at 1581.61 MD
5,946.78	5,878.87	-626.96	-490.21	Start Drop -2.00
6,443.39	6,373.00	-660.78	-516.65	Start 2180.00 hold at 6443.39 MD
8,623.39	8,553.00	-660.78	-516.65	TD at 8623.39



US ROCKIES REGION PLANNING

**COLORADO NORTHERN ZONE - 83
WELD_NRC 18-9 PAD
P_NRC 5-9**

**P_NRC 5-9
PLAN #1 1-6-10 RHS**

Anticollision Report

04 February, 2010



Company:	US ROCKIES REGION PLANNING	Local Co-ordinate Reference:	Well P_NRC 5-9
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 5-9	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00ft	Output errors are at	2.00 sigma
Reference Wellbore	P_NRC 5-9	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 2/4/2010			
From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description
0.00	8,623.39	PLAN #1 1-6-10 RHS (P_NRC 5-9)	MWD	MWD - Standard

Summary						
Site Name Offset Well - Wellbore - Design	Reference Measured Depth (ft)	Offset Measured Depth (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Separation Factor	Warning
WELD_NRC 18-9 PAD						
P_NRC 21-9 - P_NRC 21-9 - PLAN #1 1-6-10 RHS	1,085.00	1,085.00	80.32	75.70	17.390	CC, ES
P_NRC 21-9 - P_NRC 21-9 - PLAN #1 1-6-10 RHS	1,200.00	1,196.72	84.01	78.96	16.648	SF
P_NRC 22-9 - P_NRC 22-9 - PLAN #1 1-6-10 RHS	1,085.00	1,085.00	32.19	27.57	6.968	CC
P_NRC 22-9 - P_NRC 22-9 - PLAN #1 1-6-10 RHS	1,100.00	1,099.99	32.21	27.53	6.886	ES
P_NRC 22-9 - P_NRC 22-9 - PLAN #1 1-6-10 RHS	1,200.00	1,199.86	33.81	28.79	6.732	SF
P_NRC 25-9 - P_NRC 25-9 - PLAN #1 1-6-10 RHS	300.00	300.00	48.14	47.05	44.158	CC, ES
P_NRC 25-9 - P_NRC 25-9 - PLAN #1 1-6-10 RHS	700.00	692.67	70.74	67.87	24.590	SF
P_NRC 3-9 - P_NRC 3-9 - PLAN #1 1-6-10 RHS	1,085.00	1,085.00	16.23	11.61	3.514	CC
P_NRC 3-9 - P_NRC 3-9 - PLAN #1 1-6-10 RHS	1,100.00	1,099.93	16.29	11.61	3.479	ES, SF
P_NRC 6-9 - P_NRC 6-9 - PLAN #1 1-6-10 RHS	1,085.00	1,085.00	64.09	59.47	13.876	CC
P_NRC 6-9 - P_NRC 6-9 - PLAN #1 1-6-10 RHS	1,100.00	1,099.75	64.14	59.47	13.711	ES
P_NRC 6-9 - P_NRC 6-9 - PLAN #1 1-6-10 RHS	1,200.00	1,198.03	67.21	62.18	13.363	SF
ROCKY MTN FUEL CO UNIT G #2 EXISTING - ROCKY	1,558.39	1,536.24	32.29	-30.46	0.515	Level 1, CC
ROCKY MTN FUEL CO UNIT G #2 EXISTING - ROCKY	1,581.61	1,559.13	32.52	-31.19	0.511	Level 1, SF
ROCKY MTN FUEL CO UNIT G #2 EXISTING - ROCKY	1,600.00	1,577.24	33.06	-31.40	0.513	Level 1, ES

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						Warning
Measured Depth	Vertical Depth	Measured Depth	Vertical Depth	Reference	Offset	Highside Toolface	Offset Wellbore Centre		Between Centres	Between Ellipses	Minimum Separation	Separation Factor	
(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(°)	+N/-S (ft)	+E/-W (ft)	(ft)	(ft)	(ft)		
0.00	0.00	0.00	0.00	0.00	0.00	90.01	-0.01	80.32	80.32				
100.00	100.00	100.00	100.00	0.10	0.10	90.01	-0.01	80.32	80.32	80.13	0.19	420.425	
200.00	200.00	200.00	200.00	0.32	0.32	90.01	-0.01	80.32	80.32	79.68	0.64	125.390	
300.00	300.00	300.00	300.00	0.55	0.55	90.01	-0.01	80.32	80.32	79.23	1.09	73.683	
400.00	400.00	400.00	400.00	0.77	0.77	90.01	-0.01	80.32	80.32	78.78	1.54	52.170	
500.00	500.00	500.00	500.00	0.99	0.99	90.01	-0.01	80.32	80.32	78.33	1.99	40.380	
600.00	600.00	600.00	600.00	1.22	1.22	90.01	-0.01	80.32	80.32	77.88	2.44	32.937	
700.00	700.00	700.00	700.00	1.44	1.44	90.01	-0.01	80.32	80.32	77.43	2.89	27.810	
800.00	800.00	800.00	800.00	1.67	1.67	90.01	-0.01	80.32	80.32	76.98	3.34	24.065	
900.00	900.00	900.00	900.00	1.89	1.89	90.01	-0.01	80.32	80.32	76.54	3.79	21.208	
1,000.00	1,000.00	1,000.00	1,000.00	2.12	2.12	90.01	-0.01	80.32	80.32	76.09	4.24	18.958	
1,085.00	1,085.00	1,085.00	1,085.00	2.31	2.31	90.01	-0.01	80.32	80.32	75.70	4.62	17.390	CC, ES
1,100.00	1,100.00	1,099.59	1,099.59	2.34	2.34	-128.04	-0.01	80.36	80.39	75.71	4.68	17.179	

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 5-9
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 5-9	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00ft	Output errors are at	2.00 sigma
Reference Wellbore	P_NRC 5-9	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
1,200.00	1,199.97	1,196.72	1,196.69	2.52	2.53	-129.17	0.00	82.50	84.01	78.96	5.05	16.648 SF	
1,300.00	1,299.80	1,293.22	1,293.04	2.70	2.74	-131.62	0.00	87.89	93.32	87.90	5.42	17.217	
1,400.00	1,399.37	1,388.55	1,387.98	2.91	2.95	-134.64	0.02	96.39	108.51	102.71	5.80	18.707	
1,500.00	1,498.55	1,482.19	1,480.92	3.13	3.17	-137.57	0.04	107.81	129.70	123.51	6.19	20.958	
1,581.61	1,579.13	1,557.04	1,554.91	3.34	3.37	-139.65	0.06	119.13	151.41	144.90	6.51	23.254	
1,600.00	1,597.24	1,573.70	1,571.34	3.39	3.42	-140.14	0.06	121.91	156.80	150.21	6.59	23.799	
1,700.00	1,695.74	1,663.31	1,659.39	3.68	3.69	-142.13	0.09	138.50	187.98	180.96	7.02	26.780	
1,800.00	1,794.24	1,751.17	1,745.18	3.99	3.99	-143.34	0.12	157.43	222.12	214.65	7.46	29.758	
1,900.00	1,892.74	1,837.15	1,828.54	4.31	4.33	-144.05	0.16	178.50	259.03	251.11	7.92	32.701	
2,000.00	1,991.25	1,922.01	1,910.16	4.65	4.69	-144.42	0.20	201.72	298.58	290.19	8.39	35.582	
2,100.00	2,089.75	2,013.40	1,997.76	5.00	5.13	-144.66	0.24	227.76	339.17	330.28	8.89	38.139	
2,200.00	2,188.25	2,104.78	2,085.35	5.35	5.58	-144.86	0.28	253.80	379.76	370.36	9.41	40.373	
2,300.00	2,286.75	2,196.16	2,172.95	5.71	6.05	-145.02	0.33	279.84	420.36	410.43	9.93	42.330	
2,400.00	2,385.25	2,287.55	2,260.54	6.08	6.54	-145.15	0.37	305.88	460.96	450.49	10.46	44.053	
2,500.00	2,483.75	2,378.93	2,348.14	6.45	7.03	-145.26	0.42	331.92	501.55	490.55	11.00	45.579	
2,600.00	2,582.25	2,470.32	2,435.73	6.82	7.53	-145.35	0.46	357.96	542.16	530.60	11.55	46.936	
2,700.00	2,680.75	2,561.70	2,523.33	7.20	8.04	-145.43	0.50	383.99	582.76	570.65	12.10	48.147	
2,800.00	2,779.26	2,653.08	2,610.92	7.58	8.55	-145.50	0.55	410.03	623.36	610.70	12.66	49.235	
2,900.00	2,877.76	2,744.47	2,698.52	7.96	9.06	-145.56	0.59	436.07	663.96	650.74	13.22	50.214	
3,000.00	2,976.26	2,835.85	2,786.11	8.34	9.58	-145.61	0.64	462.11	704.57	690.78	13.79	51.099	
3,100.00	3,074.76	2,927.24	2,873.71	8.73	10.11	-145.66	0.68	488.15	745.17	730.81	14.36	51.903	
3,200.00	3,173.26	3,018.62	2,961.30	9.12	10.63	-145.70	0.72	514.19	785.77	770.85	14.93	52.636	
3,300.00	3,271.76	3,110.00	3,048.90	9.51	11.16	-145.74	0.77	540.23	826.38	810.88	15.50	53.305	
3,400.00	3,370.26	3,201.39	3,136.49	9.90	11.69	-145.78	0.81	566.27	866.98	850.90	16.08	53.919	
3,500.00	3,468.76	3,292.77	3,224.09	10.29	12.22	-145.81	0.86	592.31	907.59	890.93	16.66	54.483	
3,600.00	3,567.27	3,384.15	3,311.68	10.68	12.75	-145.84	0.90	618.35	948.20	930.96	17.24	55.003	
3,700.00	3,665.77	3,475.54	3,399.28	11.07	13.29	-145.86	0.94	644.39	988.80	970.98	17.82	55.484	
3,800.00	3,764.27	3,566.92	3,486.87	11.46	13.82	-145.89	0.99	670.43	1,029.41	1,011.00	18.41	55.930	
3,900.00	3,862.77	3,658.31	3,574.47	11.86	14.36	-145.91	1.03	696.47	1,070.01	1,051.02	18.99	56.344	
4,000.00	3,961.27	3,749.69	3,662.07	12.25	14.90	-145.93	1.07	722.51	1,110.62	1,091.04	19.58	56.730	
4,100.00	4,059.77	3,841.07	3,749.66	12.64	15.43	-145.95	1.12	748.55	1,151.23	1,131.06	20.16	57.091	
4,200.00	4,158.27	3,932.46	3,837.26	13.04	15.97	-145.97	1.16	774.59	1,191.83	1,171.08	20.75	57.428	
4,300.00	4,256.77	4,023.84	3,924.85	13.44	16.51	-145.99	1.21	800.63	1,232.44	1,211.10	21.34	57.744	
4,400.00	4,355.28	4,115.22	4,012.45	13.83	17.05	-146.00	1.25	826.67	1,273.05	1,251.11	21.93	58.040	
4,500.00	4,453.78	4,206.61	4,100.04	14.23	17.59	-146.02	1.29	852.71	1,313.65	1,291.13	22.53	58.319	
4,600.00	4,552.28	4,297.99	4,187.64	14.62	18.13	-146.03	1.34	878.75	1,354.26	1,331.14	23.12	58.581	
4,700.00	4,650.78	4,389.38	4,275.23	15.02	18.67	-146.05	1.38	904.79	1,394.87	1,371.15	23.71	58.829	
4,800.00	4,749.28	4,480.76	4,362.83	15.42	19.22	-146.06	1.43	930.83	1,435.47	1,411.17	24.30	59.063	
4,900.00	4,847.78	4,572.14	4,450.42	15.82	19.76	-146.07	1.47	956.87	1,476.08	1,451.18	24.90	59.284	
5,000.00	4,946.28	4,663.53	4,538.02	16.21	20.30	-146.08	1.51	982.91	1,516.69	1,491.19	25.49	59.494	
5,100.00	5,044.79	4,754.91	4,625.61	16.61	20.84	-146.09	1.56	1,008.95	1,557.29	1,531.20	26.09	59.693	
5,200.00	5,143.29	4,846.30	4,713.21	17.01	21.39	-146.10	1.60	1,034.99	1,597.90	1,571.22	26.68	59.882	
5,300.00	5,241.79	4,937.68	4,800.80	17.41	21.93	-146.11	1.65	1,061.03	1,638.51	1,611.23	27.28	60.062	
5,400.00	5,340.29	5,029.06	4,888.40	17.81	22.47	-146.12	1.69	1,087.07	1,679.11	1,651.24	27.88	60.233	
5,500.00	5,438.79	5,120.45	4,975.99	18.21	23.02	-146.13	1.73	1,113.11	1,719.72	1,691.25	28.47	60.396	
5,600.00	5,537.29	5,211.83	5,063.59	18.61	23.56	-146.14	1.78	1,139.15	1,760.33	1,731.26	29.07	60.552	
5,700.00	5,635.79	5,303.21	5,151.19	19.01	24.11	-146.15	1.82	1,165.18	1,800.94	1,771.27	29.67	60.701	
5,800.00	5,734.29	5,394.60	5,238.78	19.41	24.65	-146.15	1.87	1,191.22	1,841.54	1,811.28	30.27	60.843	
5,900.00	5,832.80	5,485.98	5,326.38	19.80	25.20	-146.16	1.91	1,217.26	1,882.15	1,851.29	30.87	60.979	
5,946.78	5,878.87	5,528.73	5,367.35	19.99	25.45	-146.17	1.93	1,229.45	1,901.15	1,870.00	31.15	61.041	
6,000.00	5,931.38	5,577.53	5,414.13	20.17	25.74	-146.18	1.95	1,243.35	1,922.38	1,890.83	31.55	60.937	
6,100.00	6,030.43	5,670.07	5,502.83	20.42	26.29	-146.18	2.00	1,269.72	1,960.23	1,927.99	32.24	60.803	

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 5-9
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 5-9	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00ft	Output errors are at	2.00 sigma
Reference Wellbore	P_NRC 5-9	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
6,200.00	6,129.90	5,815.50	5,642.53	20.64	27.08	-147.04	2.07	1,310.12	1,995.01	1,961.98	33.02	60.409	
6,300.00	6,229.67	6,102.11	5,922.64	20.82	28.11	-147.05	2.17	1,370.24	2,020.41	1,986.42	33.99	59.450	
6,400.00	6,329.61	6,401.90	6,220.51	20.97	28.78	-147.04	2.22	1,402.86	2,033.44	1,998.65	34.79	58.455	
6,443.39	6,373.00	6,533.98	6,352.51	21.03	28.95	70.99	2.23	1,407.30	2,035.10	2,000.02	35.08	58.012	
6,500.00	6,429.61	6,611.08	6,429.61	21.11	29.03	70.99	2.23	1,407.47	2,035.15	1,999.86	35.29	57.675	
6,600.00	6,529.61	6,711.08	6,529.61	21.23	29.13	70.99	2.23	1,407.47	2,035.15	1,999.56	35.59	57.180	
6,700.00	6,629.61	6,811.08	6,629.61	21.35	29.24	70.99	2.23	1,407.47	2,035.15	1,999.25	35.90	56.688	
6,800.00	6,729.61	6,911.08	6,729.61	21.48	29.35	70.99	2.23	1,407.47	2,035.15	1,998.93	36.21	56.201	
6,900.00	6,829.61	7,011.08	6,829.61	21.61	29.45	70.99	2.23	1,407.47	2,035.15	1,998.62	36.53	55.717	
7,000.00	6,929.61	7,111.08	6,929.61	21.74	29.56	70.99	2.23	1,407.47	2,035.15	1,998.30	36.84	55.237	
7,100.00	7,029.61	7,211.08	7,029.61	21.87	29.68	70.99	2.23	1,407.47	2,035.15	1,997.98	37.16	54.761	
7,200.00	7,129.61	7,311.08	7,129.61	22.00	29.79	70.99	2.23	1,407.47	2,035.15	1,997.66	37.49	54.290	
7,300.00	7,229.61	7,411.08	7,229.61	22.14	29.90	70.99	2.23	1,407.47	2,035.15	1,997.34	37.81	53.823	
7,400.00	7,329.61	7,511.08	7,329.61	22.27	30.02	70.99	2.23	1,407.47	2,035.15	1,997.01	38.14	53.360	
7,500.00	7,429.61	7,611.08	7,429.61	22.41	30.13	70.99	2.23	1,407.47	2,035.15	1,996.68	38.47	52.902	
7,600.00	7,529.61	7,711.08	7,529.61	22.55	30.25	70.99	2.23	1,407.47	2,035.15	1,996.34	38.80	52.449	
7,700.00	7,629.61	7,811.08	7,629.61	22.69	30.37	70.99	2.23	1,407.47	2,035.15	1,996.01	39.14	52.000	
7,800.00	7,729.61	7,911.08	7,729.61	22.83	30.49	70.99	2.23	1,407.47	2,035.15	1,995.67	39.47	51.556	
7,900.00	7,829.61	8,011.08	7,829.61	22.97	30.61	70.99	2.23	1,407.47	2,035.15	1,995.33	39.81	51.116	
8,000.00	7,929.61	8,111.08	7,929.61	23.12	30.74	70.99	2.23	1,407.47	2,035.15	1,994.99	40.16	50.681	
8,100.00	8,029.61	8,211.08	8,029.61	23.26	30.86	70.99	2.23	1,407.47	2,035.15	1,994.65	40.50	50.251	
8,200.00	8,129.61	8,311.08	8,129.61	23.41	30.98	70.99	2.23	1,407.47	2,035.15	1,994.30	40.85	49.825	
8,300.00	8,229.61	8,411.08	8,229.61	23.56	31.11	70.99	2.23	1,407.47	2,035.15	1,993.95	41.19	49.405	
8,357.48	8,287.09	8,468.56	8,287.09	23.64	31.18	70.99	2.23	1,407.47	2,035.15	1,993.75	41.39	49.165	
8,400.00	8,329.61	8,489.47	8,308.00	23.71	31.21	70.99	2.23	1,407.47	2,035.26	1,993.76	41.51	49.036	
8,500.00	8,429.61	8,489.47	8,308.00	23.86	31.21	70.99	2.23	1,407.47	2,038.78	1,997.10	41.68	48.915	
8,600.00	8,529.61	8,489.47	8,308.00	24.01	31.21	70.99	2.23	1,407.47	2,047.18	2,005.32	41.86	48.910	
8,623.39	8,553.00	8,489.47	8,308.00	24.04	31.21	70.99	2.23	1,407.47	2,049.84	2,007.94	41.90	48.925	

Company:	US ROCKIES REGION PLANNING	Local Co-ordinate Reference:	Well P_NRC 5-9
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 5-9	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00ft	Output errors are at	2.00 sigma
Reference Wellbore	P_NRC 5-9	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)	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	90.01	0.00	32.19	32.19				
100.00	100.00	100.00	100.00	0.10	0.10	90.01	0.00	32.19	32.19	31.99	0.19	168.463	
200.00	200.00	200.00	200.00	0.32	0.32	90.01	0.00	32.19	32.19	31.54	0.64	50.243	
300.00	300.00	300.00	300.00	0.55	0.55	90.01	0.00	32.19	32.19	31.09	1.09	29.524	
400.00	400.00	400.00	400.00	0.77	0.77	90.01	0.00	32.19	32.19	30.65	1.54	20.904	
500.00	500.00	500.00	500.00	0.99	0.99	90.01	0.00	32.19	32.19	30.20	1.99	16.180	
600.00	600.00	600.00	600.00	1.22	1.22	90.01	0.00	32.19	32.19	29.75	2.44	13.198	
700.00	700.00	700.00	700.00	1.44	1.44	90.01	0.00	32.19	32.19	29.30	2.89	11.143	
800.00	800.00	800.00	800.00	1.67	1.67	90.01	0.00	32.19	32.19	28.85	3.34	9.643	
900.00	900.00	900.00	900.00	1.89	1.89	90.01	0.00	32.19	32.19	28.40	3.79	8.498	
1,000.00	1,000.00	1,000.00	1,000.00	2.12	2.12	90.01	0.00	32.19	32.19	27.95	4.24	7.596	
1,085.00	1,085.00	1,085.00	1,085.00	2.31	2.31	90.01	0.00	32.19	32.19	27.57	4.62	6.968	CC
1,100.00	1,100.00	1,099.99	1,099.99	2.34	2.34	-128.00	-0.04	32.19	32.21	27.53	4.68	6.886	ES
1,200.00	1,199.97	1,199.86	1,199.83	2.52	2.51	-127.18	-2.30	32.39	33.81	28.79	5.02	6.732	SF
1,300.00	1,299.80	1,299.63	1,299.42	2.70	2.69	-125.41	-8.01	32.89	37.90	32.51	5.38	7.040	
1,400.00	1,399.37	1,399.18	1,398.55	2.91	2.88	-123.23	-17.15	33.70	44.50	38.73	5.77	7.710	
1,500.00	1,498.55	1,498.43	1,497.00	3.13	3.10	-121.09	-29.67	34.80	53.65	47.44	6.20	8.649	
1,581.61	1,579.13	1,579.14	1,576.69	3.34	3.31	-119.53	-42.35	35.92	62.99	56.39	6.60	9.542	
1,600.00	1,597.24	1,597.29	1,594.56	3.39	3.35	-119.20	-45.51	36.20	65.30	58.61	6.70	9.753	
1,700.00	1,695.74	1,695.73	1,691.11	3.68	3.64	-116.33	-64.61	37.88	78.43	71.17	7.26	10.799	
1,800.00	1,794.24	1,793.59	1,786.38	3.99	3.98	-112.30	-86.85	39.84	92.82	84.93	7.89	11.758	
1,900.00	1,892.74	1,890.89	1,880.32	4.31	4.37	-107.77	-112.13	42.07	108.89	100.32	8.58	12.695	
2,000.00	1,991.25	1,989.10	1,974.82	4.65	4.80	-103.90	-138.78	44.42	126.03	116.73	9.30	13.558	
2,100.00	2,089.75	2,087.31	2,069.32	5.00	5.26	-100.96	-165.42	46.77	143.59	133.56	10.03	14.320	
2,200.00	2,188.25	2,185.52	2,163.81	5.35	5.73	-98.66	-192.06	49.12	161.43	150.66	10.77	14.990	
2,300.00	2,286.75	2,283.73	2,258.31	5.71	6.22	-96.82	-218.70	51.47	179.48	167.96	11.52	15.579	
2,400.00	2,385.25	2,381.94	2,352.81	6.08	6.72	-95.32	-245.35	53.82	197.68	185.40	12.28	16.099	
2,500.00	2,483.75	2,480.16	2,447.31	6.45	7.23	-94.07	-271.99	56.17	215.99	202.94	13.04	16.559	
2,600.00	2,582.25	2,578.37	2,541.81	6.82	7.74	-93.01	-298.63	58.52	234.38	220.56	13.81	16.969	
2,700.00	2,680.75	2,676.58	2,636.30	7.20	8.26	-92.11	-325.27	60.87	252.83	238.25	14.58	17.335	
2,800.00	2,779.26	2,774.79	2,730.80	7.58	8.78	-91.34	-351.92	63.22	271.34	255.98	15.36	17.664	
2,900.00	2,877.76	2,873.00	2,825.30	7.96	9.31	-90.66	-378.56	65.57	289.89	273.75	16.14	17.961	
3,000.00	2,976.26	2,971.21	2,919.80	8.34	9.84	-90.06	-405.20	67.92	308.47	291.55	16.92	18.230	
3,100.00	3,074.76	3,069.42	3,014.30	8.73	10.38	-89.53	-431.84	70.27	327.09	309.38	17.70	18.475	
3,200.00	3,173.26	3,167.63	3,108.80	9.12	10.91	-89.06	-458.48	72.62	345.72	327.23	18.49	18.698	
3,300.00	3,271.76	3,265.84	3,203.29	9.51	11.45	-88.63	-485.13	74.97	364.38	345.10	19.28	18.904	
3,400.00	3,370.26	3,364.05	3,297.79	9.90	11.99	-88.25	-511.77	77.32	383.05	362.99	20.06	19.092	
3,500.00	3,468.76	3,462.26	3,392.29	10.29	12.53	-87.90	-538.41	79.67	401.74	380.89	20.85	19.267	
3,600.00	3,567.27	3,560.47	3,486.79	10.68	13.08	-87.59	-565.05	82.02	420.45	398.81	21.64	19.428	
3,700.00	3,665.77	3,658.68	3,581.29	11.07	13.62	-87.30	-591.70	84.37	439.16	416.73	22.43	19.578	
3,800.00	3,764.27	3,756.89	3,675.78	11.46	14.17	-87.03	-618.34	86.71	457.88	434.66	23.22	19.718	
3,900.00	3,862.77	3,855.10	3,770.28	11.86	14.71	-86.79	-644.98	89.06	476.62	452.60	24.01	19.848	
4,000.00	3,961.27	3,953.31	3,864.78	12.25	15.26	-86.56	-671.62	91.41	495.36	470.55	24.81	19.970	
4,100.00	4,059.77	4,051.52	3,959.28	12.64	15.81	-86.35	-698.26	93.76	514.10	488.51	25.60	20.084	
4,200.00	4,158.27	4,149.73	4,053.78	13.04	16.35	-86.16	-724.91	96.11	532.86	506.47	26.39	20.192	
4,300.00	4,256.77	4,247.94	4,148.28	13.44	16.90	-85.98	-751.55	98.46	551.62	524.44	27.18	20.294	
4,400.00	4,355.28	4,346.15	4,242.77	13.83	17.45	-85.81	-778.19	100.81	570.38	542.41	27.97	20.389	
4,500.00	4,453.78	4,444.36	4,337.27	14.23	18.00	-85.65	-804.83	103.16	589.15	560.38	28.77	20.480	
4,600.00	4,552.28	4,542.57	4,431.77	14.62	18.55	-85.50	-831.48	105.51	607.92	578.36	29.56	20.566	
4,700.00	4,650.78	4,640.78	4,526.27	15.02	19.10	-85.36	-858.12	107.86	626.70	596.35	30.35	20.647	
4,800.00	4,749.28	4,738.99	4,620.77	15.42	19.65	-85.23	-884.76	110.21	645.48	614.33	31.15	20.725	
4,900.00	4,847.78	4,837.20	4,715.27	15.82	20.20	-85.10	-911.40	112.56	664.26	632.32	31.94	20.796	

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 5-9
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 5-9	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00ft	Output errors are at	2.00 sigma
Reference Wellbore	P_NRC 5-9	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	4,946.28	4,935.41	4,809.76	16.21	20.75	-84.98	-938.05	114.91	683.05	650.30	32.74	20.861	
5,100.00	5,044.79	5,033.62	4,904.26	16.61	21.31	-84.87	-964.69	117.26	701.84	668.29	33.55	20.922	
5,200.00	5,143.29	5,131.83	4,998.76	17.01	21.86	-84.77	-991.33	119.61	720.63	686.28	34.35	20.981	
5,300.00	5,241.79	5,230.04	5,093.26	17.41	22.41	-84.67	-1,017.97	121.96	739.42	704.27	35.15	21.036	
5,400.00	5,340.29	5,328.25	5,187.76	17.81	22.96	-84.57	-1,044.61	124.31	758.22	722.26	35.95	21.089	
5,500.00	5,438.79	5,426.46	5,282.25	18.21	23.52	-84.48	-1,071.26	126.66	777.01	740.26	36.76	21.140	
5,600.00	5,537.29	5,524.67	5,376.75	18.61	24.07	-84.39	-1,097.90	129.01	795.81	758.25	37.56	21.188	
5,700.00	5,635.79	5,622.88	5,471.25	19.01	24.62	-84.31	-1,124.54	131.36	814.61	776.25	38.36	21.234	
5,800.00	5,734.29	5,721.09	5,565.75	19.41	25.18	-84.23	-1,151.18	133.70	833.41	794.25	39.17	21.279	
5,900.00	5,832.80	5,836.23	5,676.80	19.80	25.72	-84.19	-1,181.43	136.37	851.63	811.64	39.98	21.301	
5,946.78	5,878.87	5,895.55	5,734.45	19.99	25.94	-84.25	-1,195.41	137.60	859.15	818.80	40.36	21.288	
6,000.00	5,931.38	5,963.36	5,800.66	20.17	26.16	-84.49	-1,209.92	138.88	866.90	826.13	40.77	21.264	
6,100.00	6,030.43	6,091.55	5,926.72	20.42	26.55	-84.86	-1,233.07	140.93	879.20	837.77	41.42	21.225	
6,200.00	6,129.90	6,220.58	6,054.53	20.64	26.88	-85.13	-1,250.68	142.48	888.50	846.53	41.98	21.167	
6,300.00	6,229.67	6,350.24	6,183.62	20.82	27.13	-85.30	-1,262.58	143.53	894.77	852.34	42.43	21.087	
6,400.00	6,329.61	6,480.28	6,313.50	20.97	27.32	-85.37	-1,268.66	144.06	897.98	855.19	42.79	20.987	
6,443.39	6,373.00	6,536.76	6,369.98	21.03	27.39	132.65	-1,269.47	144.14	898.42	855.50	42.92	20.932	
6,500.00	6,429.61	6,596.39	6,429.61	21.11	27.45	132.65	-1,269.50	144.14	898.43	855.36	43.07	20.860	
6,600.00	6,529.61	6,696.39	6,529.61	21.23	27.54	132.65	-1,269.50	144.14	898.43	855.13	43.31	20.745	
6,700.00	6,629.61	6,796.39	6,629.61	21.35	27.63	132.65	-1,269.50	144.14	898.43	854.88	43.55	20.630	
6,800.00	6,729.61	6,896.39	6,729.61	21.48	27.73	132.65	-1,269.50	144.14	898.43	854.64	43.79	20.515	
6,900.00	6,829.61	6,996.39	6,829.61	21.61	27.82	132.65	-1,269.50	144.14	898.43	854.39	44.04	20.400	
7,000.00	6,929.61	7,096.39	6,929.61	21.74	27.92	132.65	-1,269.50	144.14	898.43	854.14	44.29	20.285	
7,100.00	7,029.61	7,196.39	7,029.61	21.87	28.02	132.65	-1,269.50	144.14	898.43	853.89	44.55	20.169	
7,200.00	7,129.61	7,296.39	7,129.61	22.00	28.11	132.65	-1,269.50	144.14	898.43	853.63	44.80	20.054	
7,300.00	7,229.61	7,396.39	7,229.61	22.14	28.22	132.65	-1,269.50	144.14	898.43	853.37	45.06	19.938	
7,400.00	7,329.61	7,496.39	7,329.61	22.27	28.32	132.65	-1,269.50	144.14	898.43	853.11	45.32	19.822	
7,500.00	7,429.61	7,596.39	7,429.61	22.41	28.42	132.65	-1,269.50	144.14	898.43	852.84	45.59	19.707	
7,600.00	7,529.61	7,696.39	7,529.61	22.55	28.53	132.65	-1,269.50	144.14	898.43	852.57	45.86	19.591	
7,700.00	7,629.61	7,796.39	7,629.61	22.69	28.63	132.65	-1,269.50	144.14	898.43	852.30	46.13	19.476	
7,800.00	7,729.61	7,896.39	7,729.61	22.83	28.74	132.65	-1,269.50	144.14	898.43	852.03	46.40	19.361	
7,900.00	7,829.61	7,996.39	7,829.61	22.97	28.85	132.65	-1,269.50	144.14	898.43	851.75	46.68	19.246	
8,000.00	7,929.61	8,096.39	7,929.61	23.12	28.96	132.65	-1,269.50	144.14	898.43	851.47	46.96	19.132	
8,100.00	8,029.61	8,196.39	8,029.61	23.26	29.07	132.65	-1,269.50	144.14	898.43	851.19	47.24	19.017	
8,200.00	8,129.61	8,296.39	8,129.61	23.41	29.18	132.65	-1,269.50	144.14	898.43	850.91	47.53	18.903	
8,300.00	8,229.61	8,396.39	8,229.61	23.56	29.30	132.65	-1,269.50	144.14	898.43	850.62	47.81	18.790	
8,357.48	8,287.09	8,453.87	8,287.09	23.64	29.36	132.65	-1,269.50	144.14	898.43	850.45	47.98	18.725	
8,400.00	8,329.61	8,474.78	8,308.00	23.71	29.39	132.65	-1,269.50	144.14	898.69	850.62	48.07	18.694	
8,500.00	8,429.61	8,474.78	8,308.00	23.86	29.39	132.65	-1,269.50	144.14	906.63	858.40	48.22	18.800	
8,600.00	8,529.61	8,474.78	8,308.00	24.01	29.39	132.65	-1,269.50	144.14	925.36	876.98	48.38	19.128	
8,623.39	8,553.00	8,474.78	8,308.00	24.04	29.39	132.65	-1,269.50	144.14	931.24	882.83	48.41	19.236	

Company:	US ROCKIES REGION PLANNING	Local Co-ordinate Reference:	Well P_NRC 5-9
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 5-9	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00ft	Output errors are at	2.00 sigma
Reference Wellbore	P_NRC 5-9	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 25-9 - P_NRC 25-9 - 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	89.97	0.02	48.14	48.14				
100.00	100.00	100.00	100.00	0.10	0.10	89.97	0.02	48.14	48.14	47.95	0.19	251.962	
200.00	200.00	200.00	200.00	0.32	0.32	89.97	0.02	48.14	48.14	47.50	0.64	75.147	
300.00	300.00	300.00	300.00	0.55	0.55	89.97	0.02	48.14	48.14	47.05	1.09	44.158 CC, ES	
400.00	400.00	398.75	398.73	0.77	0.75	91.32	-1.14	49.38	49.41	47.90	1.52	32.586	
500.00	500.00	497.26	497.10	0.99	0.95	94.96	-4.61	53.11	53.38	51.44	1.94	27.482	
600.00	600.00	595.31	594.78	1.22	1.18	99.90	-10.34	59.27	60.39	57.99	2.40	25.209	
700.00	700.00	692.67	691.44	1.44	1.45	105.10	-18.29	67.80	70.74	67.87	2.88	24.590 SF	
800.00	800.00	789.12	786.75	1.67	1.76	109.84	-28.37	78.62	84.62	81.24	3.39	24.992	
900.00	900.00	884.47	880.42	1.89	2.11	113.83	-40.47	91.62	102.05	98.13	3.92	26.024	
1,000.00	1,000.00	978.52	972.20	2.12	2.51	117.06	-54.49	106.66	122.96	118.48	4.48	27.437	
1,085.00	1,085.00	1,057.32	1,048.53	2.31	2.89	119.27	-67.81	120.96	143.39	138.41	4.98	28.808	
1,100.00	1,100.00	1,071.11	1,061.83	2.34	2.96	-98.34	-70.28	123.62	147.24	142.59	4.65	31.660	
1,200.00	1,199.97	1,162.10	1,149.15	2.52	3.46	-96.46	-87.72	142.35	175.02	169.95	5.07	34.536	
1,300.00	1,299.80	1,251.31	1,233.93	2.70	4.00	-95.67	-106.64	162.66	206.15	200.65	5.50	37.456	
1,400.00	1,399.37	1,338.55	1,315.95	2.91	4.58	-95.52	-126.88	184.39	240.47	234.51	5.96	40.321	
1,500.00	1,498.55	1,423.65	1,395.06	3.13	5.20	-95.73	-148.25	207.34	277.91	271.45	6.46	43.053	
1,581.61	1,579.13	1,491.41	1,457.36	3.34	5.72	-96.05	-166.41	226.83	310.73	303.84	6.89	45.102	
1,600.00	1,597.24	1,506.47	1,471.12	3.39	5.84	-96.28	-170.58	231.31	318.40	311.41	7.00	45.509	
1,700.00	1,695.74	1,587.16	1,544.29	3.68	6.52	-97.34	-193.76	256.21	361.65	354.06	7.60	47.609	
1,800.00	1,794.24	1,665.80	1,614.65	3.99	7.23	-98.07	-217.70	281.91	407.39	399.17	8.22	49.559	
1,900.00	1,892.74	1,742.35	1,682.18	4.31	7.96	-98.57	-242.26	308.28	455.46	446.60	8.86	51.409	
2,000.00	1,991.25	1,816.79	1,746.91	4.65	8.70	-98.90	-267.31	335.17	505.76	496.25	9.51	53.186	
2,100.00	2,089.75	1,889.10	1,808.85	5.00	9.46	-99.11	-292.74	362.47	558.17	548.01	10.17	54.900	
2,200.00	2,188.25	1,959.29	1,868.06	5.35	10.24	-99.22	-318.43	390.06	612.60	601.76	10.83	56.560	
2,300.00	2,286.75	2,027.37	1,924.59	5.71	11.02	-99.26	-344.28	417.82	668.94	657.45	11.49	58.205	
2,400.00	2,385.25	2,103.91	1,987.34	6.08	11.93	-99.26	-374.15	449.89	726.72	714.52	12.20	59.555	
2,500.00	2,483.75	2,185.45	2,054.14	6.45	12.91	-99.25	-406.03	484.11	784.61	771.66	12.94	60.623	
2,600.00	2,582.25	2,267.00	2,120.94	6.82	13.89	-99.25	-437.90	518.34	842.49	828.80	13.69	61.547	
2,700.00	2,680.75	2,348.54	2,187.74	7.20	14.88	-99.25	-469.78	552.56	900.37	885.93	14.44	62.356	
2,800.00	2,779.26	2,430.09	2,254.54	7.58	15.87	-99.24	-501.65	586.78	958.26	943.06	15.19	63.067	
2,900.00	2,877.76	2,511.63	2,321.34	7.96	16.86	-99.24	-533.52	621.01	1,016.14	1,000.19	15.95	63.697	
3,000.00	2,976.26	2,593.17	2,388.14	8.34	17.85	-99.24	-565.40	655.23	1,074.03	1,057.31	16.71	64.258	
3,100.00	3,074.76	2,674.72	2,454.94	8.73	18.85	-99.24	-597.27	689.45	1,131.91	1,114.43	17.48	64.761	
3,200.00	3,173.26	2,756.26	2,521.74	9.12	19.84	-99.24	-629.14	723.67	1,189.80	1,171.55	18.24	65.215	
3,300.00	3,271.76	2,837.80	2,588.54	9.51	20.84	-99.24	-661.02	757.90	1,247.68	1,228.67	19.01	65.626	
3,400.00	3,370.26	2,919.35	2,655.34	9.90	21.84	-99.23	-692.89	792.12	1,305.57	1,285.79	19.78	66.001	
3,500.00	3,468.76	3,000.89	2,722.14	10.29	22.83	-99.23	-724.77	826.34	1,363.45	1,342.90	20.55	66.345	
3,600.00	3,567.27	3,082.44	2,788.94	10.68	23.83	-99.23	-756.64	860.57	1,421.34	1,400.01	21.32	66.660	
3,700.00	3,665.77	3,163.98	2,855.74	11.07	24.83	-99.23	-788.51	894.79	1,479.22	1,457.13	22.09	66.952	
3,800.00	3,764.27	3,245.52	2,922.54	11.46	25.83	-99.23	-820.39	929.01	1,537.10	1,514.24	22.87	67.222	
3,900.00	3,862.77	3,327.07	2,989.34	11.86	26.83	-99.23	-852.26	963.24	1,594.99	1,571.35	23.64	67.473	
4,000.00	3,961.27	3,408.61	3,056.14	12.25	27.83	-99.23	-884.13	997.46	1,652.87	1,628.46	24.41	67.707	
4,100.00	4,059.77	3,494.94	3,126.86	12.64	28.88	-99.23	-917.87	1,033.68	1,710.75	1,685.55	25.20	67.874	
4,200.00	4,158.27	3,593.61	3,293.75	13.04	30.77	-99.31	-991.29	1,112.51	1,765.70	1,739.30	26.41	66.868	
4,300.00	4,256.77	3,690.53	3,483.11	13.44	32.60	-99.55	-1,061.93	1,188.36	1,814.76	1,787.09	27.67	65.597	
4,400.00	4,355.28	4,142.29	3,695.34	13.83	34.29	-99.97	-1,126.97	1,258.19	1,857.19	1,828.22	28.96	64.123	
4,500.00	4,453.78	4,390.51	3,929.39	14.23	35.75	-100.56	-1,183.14	1,318.50	1,892.26	1,861.99	30.28	62.501	
4,600.00	4,552.28	4,651.71	4,182.41	14.62	36.90	-101.35	-1,227.11	1,365.71	1,919.36	1,887.79	31.57	60.800	
4,700.00	4,650.78	4,922.33	4,449.60	15.02	37.68	-102.35	-1,255.91	1,396.63	1,937.97	1,905.14	32.82	59.048	
4,800.00	4,749.28	5,197.87	4,724.52	15.42	38.07	-103.57	-1,267.45	1,409.03	1,947.79	1,913.78	34.01	57.268	
4,900.00	4,847.78	5,321.14	4,847.78	15.82	38.14	-104.17	-1,267.63	1,409.22	1,952.09	1,917.34	34.75	56.174	

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 5-9
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 5-9	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00ft	Output errors are at	2.00 sigma
Reference Wellbore	P_NRC 5-9	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 25-9 - P_NRC 25-9 - 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	4,946.28	5,419.64	4,946.28	16.21	38.20	-104.65	-1,267.63	1,409.22	1,956.44	1,921.02	35.42	55.238	
5,100.00	5,044.79	5,518.14	5,044.79	16.61	38.25	-105.13	-1,267.63	1,409.22	1,960.94	1,924.85	36.09	54.342	
5,200.00	5,143.29	5,616.64	5,143.29	17.01	38.31	-105.61	-1,267.63	1,409.22	1,965.57	1,928.82	36.75	53.482	
5,300.00	5,241.79	5,715.14	5,241.79	17.41	38.37	-106.09	-1,267.63	1,409.22	1,970.35	1,932.93	37.42	52.658	
5,400.00	5,340.29	5,813.64	5,340.29	17.81	38.43	-106.56	-1,267.63	1,409.22	1,975.27	1,937.18	38.08	51.867	
5,500.00	5,438.79	5,912.15	5,438.79	18.21	38.49	-107.03	-1,267.63	1,409.22	1,980.32	1,941.57	38.75	51.108	
5,600.00	5,537.29	6,010.65	5,537.29	18.61	38.55	-107.50	-1,267.63	1,409.22	1,985.51	1,946.10	39.41	50.380	
5,700.00	5,635.79	6,109.15	5,635.79	19.01	38.61	-107.97	-1,267.63	1,409.22	1,990.84	1,950.77	40.07	49.681	
5,800.00	5,734.29	6,207.65	5,734.29	19.41	38.68	-108.44	-1,267.63	1,409.22	1,996.30	1,955.57	40.73	49.010	
5,900.00	5,832.80	6,306.15	5,832.80	19.80	38.74	-108.90	-1,267.63	1,409.22	2,001.90	1,960.51	41.39	48.366	
5,946.78	5,878.87	6,352.23	5,878.87	19.99	38.77	-109.11	-1,267.63	1,409.22	2,004.56	1,962.86	41.70	48.073	
6,000.00	5,931.38	6,404.73	5,931.38	20.17	38.81	-109.40	-1,267.63	1,409.22	2,007.46	1,965.37	42.09	47.696	
6,100.00	6,030.43	6,503.79	6,030.43	20.42	38.88	-109.85	-1,267.63	1,409.22	2,012.10	1,969.39	42.71	47.114	
6,200.00	6,129.90	6,603.26	6,129.90	20.64	38.94	-110.19	-1,267.63	1,409.22	2,015.62	1,972.37	43.24	46.612	
6,300.00	6,229.67	6,703.03	6,229.67	20.82	39.01	-110.41	-1,267.63	1,409.22	2,017.96	1,974.27	43.69	46.184	
6,400.00	6,329.61	6,802.97	6,329.61	20.97	39.09	-110.52	-1,267.63	1,409.22	2,019.10	1,975.04	44.06	45.827	
6,443.39	6,373.00	6,846.36	6,373.00	21.03	39.12	107.49	-1,267.63	1,409.22	2,019.22	1,975.02	44.20	45.686	
6,500.00	6,429.61	6,902.97	6,429.61	21.11	39.16	107.49	-1,267.63	1,409.22	2,019.22	1,974.88	44.34	45.539	
6,600.00	6,529.61	7,002.97	6,529.61	21.23	39.23	107.49	-1,267.63	1,409.22	2,019.22	1,974.63	44.58	45.291	
6,700.00	6,629.61	7,102.97	6,629.61	21.35	39.31	107.49	-1,267.63	1,409.22	2,019.22	1,974.39	44.83	45.043	
6,800.00	6,729.61	7,202.97	6,729.61	21.48	39.39	107.49	-1,267.63	1,409.22	2,019.22	1,974.14	45.08	44.794	
6,900.00	6,829.61	7,302.97	6,829.61	21.61	39.46	107.49	-1,267.63	1,409.22	2,019.22	1,973.89	45.33	44.545	
7,000.00	6,929.61	7,402.97	6,929.61	21.74	39.54	107.49	-1,267.63	1,409.22	2,019.22	1,973.63	45.59	44.295	
7,100.00	7,029.61	7,502.97	7,029.61	21.87	39.62	107.49	-1,267.63	1,409.22	2,019.22	1,973.37	45.84	44.046	
7,200.00	7,129.61	7,602.97	7,129.61	22.00	39.70	107.49	-1,267.63	1,409.22	2,019.22	1,973.11	46.10	43.796	
7,300.00	7,229.61	7,702.97	7,229.61	22.14	39.78	107.49	-1,267.63	1,409.22	2,019.22	1,972.85	46.37	43.546	
7,400.00	7,329.61	7,802.97	7,329.61	22.27	39.87	107.49	-1,267.63	1,409.22	2,019.22	1,972.58	46.64	43.297	
7,500.00	7,429.61	7,902.97	7,429.61	22.41	39.95	107.49	-1,267.63	1,409.22	2,019.22	1,972.31	46.91	43.048	
7,600.00	7,529.61	8,002.97	7,529.61	22.55	40.04	107.49	-1,267.63	1,409.22	2,019.22	1,972.04	47.18	42.799	
7,700.00	7,629.61	8,102.97	7,629.61	22.69	40.12	107.49	-1,267.63	1,409.22	2,019.22	1,971.76	47.45	42.550	
7,800.00	7,729.61	8,202.97	7,729.61	22.83	40.21	107.49	-1,267.63	1,409.22	2,019.22	1,971.48	47.73	42.302	
7,900.00	7,829.61	8,302.97	7,829.61	22.97	40.30	107.49	-1,267.63	1,409.22	2,019.22	1,971.20	48.01	42.055	
8,000.00	7,929.61	8,402.97	7,929.61	23.12	40.39	107.49	-1,267.63	1,409.22	2,019.22	1,970.92	48.30	41.808	
8,100.00	8,029.61	8,502.97	8,029.61	23.26	40.48	107.49	-1,267.63	1,409.22	2,019.22	1,970.63	48.58	41.562	
8,200.00	8,129.61	8,602.97	8,129.61	23.41	40.57	107.49	-1,267.63	1,409.22	2,019.22	1,970.34	48.87	41.317	
8,300.00	8,229.61	8,702.97	8,229.61	23.56	40.66	107.49	-1,267.63	1,409.22	2,019.22	1,970.05	49.16	41.072	
8,366.12	8,295.73	8,769.09	8,295.73	23.65	40.73	107.49	-1,267.63	1,409.22	2,019.22	1,969.86	49.36	40.911	
8,400.00	8,329.61	8,801.36	8,328.00	23.71	40.76	107.49	-1,267.63	1,409.22	2,019.22	1,969.76	49.45	40.831	
8,500.00	8,429.61	8,801.36	8,328.00	23.86	40.76	107.49	-1,267.63	1,409.22	2,021.77	1,972.17	49.61	40.757	
8,600.00	8,529.61	8,801.36	8,328.00	24.01	40.76	107.49	-1,267.63	1,409.22	2,029.26	1,979.50	49.76	40.781	
8,623.39	8,553.00	8,801.36	8,328.00	24.04	40.76	107.49	-1,267.63	1,409.22	2,031.71	1,981.92	49.80	40.801	

Company:	US ROCKIES REGION PLANNING	Local Co-ordinate Reference:	Well P_NRC 5-9
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 5-9	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00ft	Output errors are at	2.00 sigma
Reference Wellbore	P_NRC 5-9	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								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	89.97	0.01	16.23	16.23				
100.00	100.00	100.00	100.00	0.10	0.10	89.97	0.01	16.23	16.23	16.04	0.19	84.964	
200.00	200.00	200.00	200.00	0.32	0.32	89.97	0.01	16.23	16.23	15.59	0.64	25.340	
300.00	300.00	300.00	300.00	0.55	0.55	89.97	0.01	16.23	16.23	15.14	1.09	14.891	
400.00	400.00	400.00	400.00	0.77	0.77	89.97	0.01	16.23	16.23	14.69	1.54	10.543	
500.00	500.00	500.00	500.00	0.99	0.99	89.97	0.01	16.23	16.23	14.24	1.99	8.160	
600.00	600.00	600.00	600.00	1.22	1.22	89.97	0.01	16.23	16.23	13.79	2.44	6.656	
700.00	700.00	700.00	700.00	1.44	1.44	89.97	0.01	16.23	16.23	13.34	2.89	5.620	
800.00	800.00	800.00	800.00	1.67	1.67	89.97	0.01	16.23	16.23	12.89	3.34	4.863	
900.00	900.00	900.00	900.00	1.89	1.89	89.97	0.01	16.23	16.23	12.45	3.79	4.286	
1,000.00	1,000.00	1,000.00	1,000.00	2.12	2.12	89.97	0.01	16.23	16.23	12.00	4.24	3.831	
1,085.00	1,085.00	1,085.00	1,085.00	2.31	2.31	89.97	0.01	16.23	16.23	11.61	4.62	3.514 CC	
1,100.00	1,100.00	1,099.93	1,099.93	2.34	2.34	-128.25	0.03	16.26	16.29	11.61	4.68	3.479 ES, SF	
1,200.00	1,199.97	1,199.32	1,199.29	2.52	2.56	-137.59	1.48	17.98	19.69	14.62	5.07	3.884	
1,300.00	1,299.80	1,297.89	1,297.70	2.70	2.77	-150.61	5.10	22.28	29.63	24.18	5.46	5.431	
1,400.00	1,399.37	1,394.96	1,394.36	2.91	3.00	-159.27	10.80	29.04	46.88	41.04	5.84	8.029	
1,500.00	1,498.55	1,489.89	1,488.54	3.13	3.23	-164.17	18.41	38.08	71.19	64.97	6.22	11.449	
1,581.61	1,579.13	1,565.36	1,563.11	3.34	3.43	-166.57	25.89	46.96	95.98	89.45	6.52	14.716	
1,600.00	1,597.24	1,582.10	1,579.61	3.39	3.48	-167.00	27.73	49.13	102.10	95.51	6.60	15.480	
1,700.00	1,695.74	1,671.93	1,667.83	3.68	3.75	-168.66	38.61	62.05	137.23	130.22	7.00	19.593	
1,800.00	1,794.24	1,762.61	1,756.41	3.99	4.06	-169.64	51.10	76.88	174.85	167.43	7.42	23.557	
1,900.00	1,892.74	1,855.12	1,846.73	4.31	4.39	-170.29	64.00	92.20	212.77	204.91	7.85	27.092	
2,000.00	1,991.25	1,947.63	1,937.05	4.65	4.73	-170.74	76.90	107.51	250.70	242.41	8.29	30.235	
2,100.00	2,089.75	2,040.14	2,027.36	5.00	5.09	-171.07	89.81	122.83	288.64	279.91	8.74	33.041	
2,200.00	2,188.25	2,132.65	2,117.68	5.35	5.46	-171.33	102.71	138.15	326.59	317.41	9.19	35.555	
2,300.00	2,286.75	2,225.16	2,208.00	5.71	5.84	-171.53	115.62	153.47	364.55	354.91	9.64	37.817	
2,400.00	2,385.25	2,317.67	2,298.31	6.08	6.23	-171.69	128.52	168.78	402.50	392.40	10.10	39.860	
2,500.00	2,483.75	2,410.18	2,388.63	6.45	6.62	-171.83	141.42	184.10	440.46	429.90	10.56	41.713	
2,600.00	2,582.25	2,502.69	2,478.95	6.82	7.01	-171.94	154.33	199.42	478.42	467.40	11.02	43.399	
2,700.00	2,680.75	2,595.20	2,569.26	7.20	7.41	-172.04	167.23	214.74	516.39	504.89	11.49	44.937	
2,800.00	2,779.26	2,687.71	2,659.58	7.58	7.81	-172.12	180.13	230.05	554.35	542.39	11.96	46.347	
2,900.00	2,877.76	2,780.22	2,749.90	7.96	8.22	-172.20	193.04	245.37	592.31	579.88	12.43	47.642	
3,000.00	2,976.26	2,872.74	2,840.21	8.34	8.62	-172.26	205.94	260.69	630.28	617.37	12.91	48.836	
3,100.00	3,074.76	2,965.25	2,930.53	8.73	9.03	-172.32	218.85	276.01	668.24	654.86	13.38	49.940	
3,200.00	3,173.26	3,057.76	3,020.85	9.12	9.44	-172.37	231.75	291.32	706.21	692.35	13.86	50.962	
3,300.00	3,271.76	3,150.27	3,111.16	9.51	9.86	-172.42	244.65	306.64	744.18	729.84	14.34	51.912	
3,400.00	3,370.26	3,242.78	3,201.48	9.90	10.27	-172.46	257.56	321.96	782.15	767.33	14.81	52.797	
3,500.00	3,468.76	3,335.29	3,291.80	10.29	10.68	-172.49	270.46	337.28	820.11	804.82	15.29	53.622	
3,600.00	3,567.27	3,427.80	3,382.11	10.68	11.10	-172.53	283.36	352.59	858.08	842.30	15.78	54.394	
3,700.00	3,665.77	3,520.31	3,472.43	11.07	11.52	-172.56	296.27	367.91	896.05	879.79	16.26	55.117	
3,800.00	3,764.27	3,612.82	3,562.75	11.46	11.94	-172.59	309.17	383.23	934.02	917.28	16.74	55.796	
3,900.00	3,862.77	3,705.33	3,653.06	11.86	12.35	-172.61	322.08	398.55	971.98	954.76	17.22	56.434	
4,000.00	3,961.27	3,797.84	3,743.38	12.25	12.77	-172.64	334.98	413.86	1,009.95	992.25	17.71	57.035	
4,100.00	4,059.77	3,890.35	3,833.70	12.64	13.19	-172.66	347.88	429.18	1,047.92	1,029.73	18.19	57.602	
4,200.00	4,158.27	3,982.86	3,924.01	13.04	13.61	-172.68	360.79	444.50	1,085.89	1,067.21	18.68	58.138	
4,300.00	4,256.77	4,075.37	4,014.33	13.44	14.04	-172.70	373.69	459.82	1,123.86	1,104.70	19.16	58.645	
4,400.00	4,355.28	4,167.89	4,104.65	13.83	14.46	-172.72	386.59	475.13	1,161.83	1,142.18	19.65	59.126	
4,500.00	4,453.78	4,260.40	4,194.96	14.23	14.88	-172.74	399.50	490.45	1,199.80	1,179.66	20.14	59.582	
4,600.00	4,552.28	4,352.91	4,285.28	14.62	15.30	-172.75	412.40	505.77	1,237.77	1,217.14	20.62	60.015	
4,700.00	4,650.78	4,445.42	4,375.60	15.02	15.72	-172.77	425.31	521.09	1,275.74	1,254.62	21.11	60.428	
4,800.00	4,749.28	4,537.93	4,465.91	15.42	16.15	-172.78	438.21	536.40	1,313.71	1,292.11	21.60	60.820	
4,900.00	4,847.78	4,630.44	4,556.23	15.82	16.57	-172.80	451.11	551.72	1,351.67	1,329.59	22.09	61.194	

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 5-9
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 5-9	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00ft	Output errors are at	2.00 sigma
Reference Wellbore	P_NRC 5-9	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	4,946.28	4,722.95	4,646.55	16.21	16.99	-172.81	464.02	567.04	1,389.64	1,367.07	22.58	61.552	
5,100.00	5,044.79	4,815.46	4,736.86	16.61	17.42	-172.82	476.92	582.36	1,427.61	1,404.55	23.07	61.893	
5,200.00	5,143.29	4,907.97	4,827.18	17.01	17.84	-172.83	489.82	597.67	1,465.58	1,442.03	23.56	62.219	
5,300.00	5,241.79	5,000.48	4,917.50	17.41	18.27	-172.85	502.73	612.99	1,503.55	1,479.51	24.04	62.531	
5,400.00	5,340.29	5,092.99	5,007.81	17.81	18.69	-172.86	515.63	628.31	1,541.52	1,516.99	24.53	62.831	
5,500.00	5,438.79	5,185.50	5,098.13	18.21	19.12	-172.87	528.54	643.63	1,579.49	1,554.47	25.02	63.118	
5,600.00	5,537.29	5,278.01	5,188.45	18.61	19.54	-172.87	541.44	658.94	1,617.46	1,591.95	25.51	63.393	
5,700.00	5,635.79	5,370.53	5,278.76	19.01	19.97	-172.88	554.34	674.26	1,655.43	1,629.43	26.01	63.657	
5,800.00	5,734.29	5,463.04	5,369.08	19.41	20.39	-172.89	567.25	689.58	1,693.40	1,666.91	26.50	63.912	
5,900.00	5,832.80	5,555.55	5,459.40	19.80	20.82	-172.90	580.15	704.90	1,731.37	1,704.38	26.99	64.156	
5,946.78	5,878.87	5,598.82	5,501.65	19.99	21.02	-172.90	586.19	712.06	1,749.13	1,721.92	27.22	64.267	
6,000.00	5,931.38	5,648.24	5,549.89	20.17	21.24	-172.96	593.08	720.24	1,768.89	1,741.33	27.55	64.197	
6,100.00	6,030.43	5,742.05	5,641.47	20.42	21.67	-173.04	606.16	735.78	1,803.52	1,775.38	28.14	64.082	
6,200.00	6,129.90	5,857.55	5,754.27	20.64	22.19	-173.09	622.16	754.76	1,834.82	1,806.08	28.75	63.830	
6,300.00	6,229.67	6,129.82	6,022.99	20.82	23.00	-173.10	650.00	787.82	1,857.24	1,827.67	29.57	62.810	
6,400.00	6,329.61	6,412.34	6,304.84	20.97	23.52	-173.11	661.39	801.33	1,866.72	1,836.43	30.29	61.628	
6,443.39	6,373.00	6,480.50	6,373.00	21.03	23.60	44.91	661.56	801.53	1,867.13	1,836.64	30.50	61.227	
6,500.00	6,429.61	6,537.11	6,429.61	21.11	23.67	44.91	661.56	801.53	1,867.13	1,836.43	30.70	60.809	
6,600.00	6,529.61	6,637.11	6,529.61	21.23	23.80	44.91	661.56	801.53	1,867.13	1,836.06	31.07	60.095	
6,700.00	6,629.61	6,737.11	6,629.61	21.35	23.93	44.91	661.56	801.53	1,867.13	1,835.69	31.44	59.393	
6,800.00	6,729.61	6,837.11	6,729.61	21.48	24.06	44.91	661.56	801.53	1,867.13	1,835.32	31.81	58.703	
6,900.00	6,829.61	6,937.11	6,829.61	21.61	24.19	44.91	661.56	801.53	1,867.13	1,834.95	32.18	58.025	
7,000.00	6,929.61	7,037.11	6,929.61	21.74	24.33	44.91	661.56	801.53	1,867.13	1,834.58	32.55	57.359	
7,100.00	7,029.61	7,137.11	7,029.61	21.87	24.46	44.91	661.56	801.53	1,867.13	1,834.20	32.93	56.705	
7,200.00	7,129.61	7,237.11	7,129.61	22.00	24.60	44.91	661.56	801.53	1,867.13	1,833.83	33.30	56.063	
7,300.00	7,229.61	7,337.11	7,229.61	22.14	24.74	44.91	661.56	801.53	1,867.13	1,833.45	33.68	55.432	
7,400.00	7,329.61	7,437.11	7,329.61	22.27	24.88	44.91	661.56	801.53	1,867.13	1,833.07	34.06	54.813	
7,500.00	7,429.61	7,537.11	7,429.61	22.41	25.02	44.91	661.56	801.53	1,867.13	1,832.68	34.45	54.204	
7,600.00	7,529.61	7,637.11	7,529.61	22.55	25.16	44.91	661.56	801.53	1,867.13	1,832.30	34.83	53.606	
7,700.00	7,629.61	7,737.11	7,629.61	22.69	25.31	44.91	661.56	801.53	1,867.13	1,831.92	35.22	53.020	
7,800.00	7,729.61	7,837.11	7,729.61	22.83	25.45	44.91	661.56	801.53	1,867.13	1,831.53	35.60	52.443	
7,900.00	7,829.61	7,937.11	7,829.61	22.97	25.60	44.91	661.56	801.53	1,867.13	1,831.14	35.99	51.877	
8,000.00	7,929.61	8,037.11	7,929.61	23.12	25.75	44.91	661.56	801.53	1,867.13	1,830.75	36.38	51.321	
8,100.00	8,029.61	8,137.11	8,029.61	23.26	25.89	44.91	661.56	801.53	1,867.13	1,830.36	36.77	50.775	
8,200.00	8,129.61	8,237.11	8,129.61	23.41	26.04	44.91	661.56	801.53	1,867.13	1,829.97	37.17	50.239	
8,300.00	8,229.61	8,337.11	8,229.61	23.56	26.19	44.91	661.56	801.53	1,867.13	1,829.57	37.56	49.712	
8,400.00	8,329.61	8,437.11	8,329.61	23.71	26.35	44.91	661.56	801.53	1,867.13	1,829.18	37.95	49.194	
8,500.00	8,429.61	8,537.11	8,429.61	23.86	26.50	44.91	661.56	801.53	1,867.13	1,828.78	38.35	48.686	
8,564.31	8,493.92	8,601.42	8,493.92	23.95	26.60	44.91	661.56	801.53	1,867.13	1,828.53	38.61	48.364	
8,600.00	8,529.61	8,630.50	8,523.00	24.01	26.64	44.91	661.56	801.53	1,867.14	1,828.41	38.73	48.204	
8,623.39	8,553.00	8,630.50	8,523.00	24.04	26.64	44.91	661.56	801.53	1,867.37	1,828.59	38.78	48.153	

Company:	US ROCKIES REGION PLANNING	Local Co-ordinate Reference:	Well P_NRC 5-9
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 5-9	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00ft	Output errors are at	2.00 sigma
Reference Wellbore	P_NRC 5-9	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
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	90.01	-0.01	64.09	64.09				
100.00	100.00	100.00	100.00	0.10	0.10	90.01	-0.01	64.09	64.09	63.90	0.19	335.461	
200.00	200.00	200.00	200.00	0.32	0.32	90.01	-0.01	64.09	64.09	63.45	0.64	100.050	
300.00	300.00	300.00	300.00	0.55	0.55	90.01	-0.01	64.09	64.09	63.00	1.09	58.792	
400.00	400.00	400.00	400.00	0.77	0.77	90.01	-0.01	64.09	64.09	62.55	1.54	41.627	
500.00	500.00	500.00	500.00	0.99	0.99	90.01	-0.01	64.09	64.09	62.10	1.99	32.219	
600.00	600.00	600.00	600.00	1.22	1.22	90.01	-0.01	64.09	64.09	61.65	2.44	26.280	
700.00	700.00	700.00	700.00	1.44	1.44	90.01	-0.01	64.09	64.09	61.20	2.89	22.190	
800.00	800.00	800.00	800.00	1.67	1.67	90.01	-0.01	64.09	64.09	60.75	3.34	19.201	
900.00	900.00	900.00	900.00	1.89	1.89	90.01	-0.01	64.09	64.09	60.30	3.79	16.922	
1,000.00	1,000.00	1,000.00	1,000.00	2.12	2.12	90.01	-0.01	64.09	64.09	59.85	4.24	15.127	
1,085.00	1,085.00	1,085.00	1,085.00	2.31	2.31	90.01	-0.01	64.09	64.09	59.47	4.62	13.876 CC	
1,100.00	1,100.00	1,099.75	1,099.75	2.34	2.34	-128.02	-0.03	64.12	64.14	59.47	4.68	13.711 ES	
1,200.00	1,199.97	1,198.03	1,198.00	2.52	2.52	-128.22	-1.49	65.75	67.21	62.18	5.03	13.363 SF	
1,300.00	1,299.80	1,295.92	1,295.73	2.70	2.70	-128.66	-5.17	69.89	74.97	69.58	5.39	13.902	
1,400.00	1,399.37	1,393.12	1,392.53	2.91	2.91	-129.18	-11.02	76.45	87.41	81.64	5.77	15.141	
1,500.00	1,498.55	1,489.32	1,487.98	3.13	3.13	-129.65	-18.96	85.36	104.48	98.30	6.18	16.908	
1,581.61	1,579.13	1,566.87	1,564.60	3.34	3.33	-129.96	-26.90	94.28	121.79	115.25	6.54	18.628	
1,600.00	1,597.24	1,584.22	1,581.70	3.39	3.38	-130.06	-28.87	96.48	126.07	119.44	6.62	19.032	
1,700.00	1,695.74	1,678.88	1,674.63	3.68	3.66	-130.01	-40.81	109.89	150.67	143.55	7.12	21.158	
1,800.00	1,794.24	1,774.52	1,768.23	3.99	3.98	-129.60	-53.91	124.58	176.42	168.76	7.66	23.031	
1,900.00	1,892.74	1,871.14	1,862.78	4.31	4.33	-129.29	-67.14	139.43	202.18	193.96	8.23	24.580	
2,000.00	1,991.25	1,967.76	1,957.33	4.65	4.69	-129.05	-80.37	154.28	227.95	219.14	8.81	25.870	
2,100.00	2,089.75	2,064.38	2,051.88	5.00	5.06	-128.86	-93.59	169.13	253.72	244.30	9.41	26.952	
2,200.00	2,188.25	2,161.00	2,146.43	5.35	5.45	-128.71	-106.82	183.97	279.49	269.46	10.03	27.867	
2,300.00	2,286.75	2,257.62	2,240.98	5.71	5.84	-128.58	-120.05	198.82	305.26	294.60	10.66	28.647	
2,400.00	2,385.25	2,354.24	2,335.53	6.08	6.24	-128.47	-133.28	213.67	331.03	319.74	11.29	29.317	
2,500.00	2,483.75	2,450.86	2,430.09	6.45	6.65	-128.38	-146.51	228.52	356.80	344.87	11.93	29.896	
2,600.00	2,582.25	2,547.48	2,524.64	6.82	7.06	-128.30	-159.74	243.37	382.58	369.99	12.58	30.401	
2,700.00	2,680.75	2,644.10	2,619.19	7.20	7.47	-128.22	-172.97	258.21	408.35	395.11	13.24	30.844	
2,800.00	2,779.26	2,740.72	2,713.74	7.58	7.89	-128.16	-186.20	273.06	434.12	420.23	13.90	31.236	
2,900.00	2,877.76	2,837.34	2,808.29	7.96	8.31	-128.11	-199.43	287.91	459.90	445.34	14.56	31.584	
3,000.00	2,976.26	2,933.96	2,902.84	8.34	8.74	-128.06	-212.66	302.76	485.68	470.45	15.23	31.895	
3,100.00	3,074.76	3,030.58	2,997.39	8.73	9.16	-128.01	-225.89	317.60	511.45	495.56	15.90	32.175	
3,200.00	3,173.26	3,127.20	3,091.95	9.12	9.59	-127.97	-239.12	332.45	537.23	520.66	16.57	32.427	
3,300.00	3,271.76	3,223.82	3,186.50	9.51	10.01	-127.94	-252.35	347.30	563.01	545.77	17.24	32.657	
3,400.00	3,370.26	3,320.44	3,281.05	9.90	10.44	-127.90	-265.58	362.15	588.78	570.87	17.91	32.866	
3,500.00	3,468.76	3,417.06	3,375.60	10.29	10.88	-127.87	-278.80	377.00	614.56	595.97	18.59	33.057	
3,600.00	3,567.27	3,513.68	3,470.15	10.68	11.31	-127.85	-292.03	391.84	640.34	621.07	19.27	33.233	
3,700.00	3,665.77	3,610.30	3,564.70	11.07	11.74	-127.82	-305.26	406.69	666.11	646.17	19.95	33.395	
3,800.00	3,764.27	3,706.92	3,659.25	11.46	12.17	-127.80	-318.49	421.54	691.89	671.27	20.63	33.545	
3,900.00	3,862.77	3,803.54	3,753.81	11.86	12.61	-127.77	-331.72	436.39	717.67	696.36	21.31	33.685	
4,000.00	3,961.27	3,900.16	3,848.36	12.25	13.04	-127.75	-344.95	451.23	743.45	721.46	21.99	33.815	
4,100.00	4,059.77	3,996.78	3,942.91	12.64	13.48	-127.73	-358.18	466.08	769.22	746.56	22.67	33.937	
4,200.00	4,158.27	4,093.40	4,037.46	13.04	13.91	-127.72	-371.41	480.93	795.00	771.65	23.35	34.050	
4,300.00	4,256.77	4,190.02	4,132.01	13.44	14.35	-127.70	-384.64	495.78	820.78	796.75	24.03	34.158	
4,400.00	4,355.28	4,286.64	4,226.56	13.83	14.79	-127.68	-397.87	510.63	846.56	821.85	24.71	34.259	
4,500.00	4,453.78	4,383.26	4,321.11	14.23	15.23	-127.67	-411.10	525.47	872.34	846.94	25.39	34.354	
4,600.00	4,552.28	4,479.88	4,415.67	14.62	15.66	-127.65	-424.33	540.32	898.11	872.03	26.08	34.434	
4,700.00	4,650.78	4,576.50	4,510.22	15.02	16.10	-127.64	-437.56	555.17	923.89	897.12	26.77	34.506	
4,800.00	4,749.28	4,673.12	4,604.77	15.42	16.54	-127.63	-450.79	570.02	949.67	922.20	27.47	34.575	
4,900.00	4,847.78	4,769.74	4,699.32	15.82	16.98	-127.62	-464.02	584.86	975.45	947.29	28.16	34.639	

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 5-9
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 5-9	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00ft	Output errors are at	2.00 sigma
Reference Wellbore	P_NRC 5-9	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
5,000.00	4,946.28	4,866.36	4,793.87	16.21	17.42	-127.60	-477.24	599.71	1,001.23	972.37	28.85	34.699	
5,100.00	5,044.79	4,962.98	4,888.42	16.61	17.86	-127.59	-490.47	614.56	1,027.00	997.45	29.55	34.756	
5,200.00	5,143.29	5,059.60	4,982.98	17.01	18.30	-127.58	-503.70	629.41	1,052.78	1,022.54	30.24	34.810	
5,300.00	5,241.79	5,156.22	5,077.53	17.41	18.74	-127.57	-516.93	644.26	1,078.56	1,047.62	30.94	34.861	
5,400.00	5,340.29	5,252.84	5,172.08	17.81	19.18	-127.56	-530.16	659.10	1,104.34	1,072.70	31.63	34.910	
5,500.00	5,438.79	5,349.46	5,266.63	18.21	19.62	-127.56	-543.39	673.95	1,130.12	1,097.79	32.33	34.955	
5,600.00	5,537.29	5,446.08	5,361.18	18.61	20.06	-127.55	-556.62	688.80	1,155.89	1,122.87	33.03	34.999	
5,700.00	5,635.79	5,542.70	5,455.73	19.01	20.50	-127.54	-569.85	703.65	1,181.67	1,147.95	33.72	35.041	
5,800.00	5,734.29	5,639.32	5,550.28	19.41	20.94	-127.53	-583.08	718.49	1,207.45	1,173.03	34.42	35.080	
5,900.00	5,832.80	5,735.94	5,644.84	19.80	21.38	-127.52	-596.31	733.34	1,233.23	1,198.11	35.12	35.118	
5,946.78	5,878.87	5,781.14	5,689.07	19.99	21.59	-127.52	-602.50	740.29	1,245.29	1,209.85	35.44	35.135	
6,000.00	5,931.38	5,832.64	5,739.46	20.17	21.82	-127.72	-609.55	748.20	1,258.72	1,222.88	35.84	35.119	
6,100.00	6,030.43	5,948.12	5,852.57	20.42	22.28	-127.94	-625.01	765.56	1,282.10	1,245.57	36.52	35.104	
6,200.00	6,129.90	6,095.88	5,998.38	20.64	22.70	-128.05	-640.89	783.37	1,300.38	1,263.23	37.15	35.000	
6,300.00	6,229.67	6,246.08	6,147.65	20.82	23.04	-128.11	-651.87	795.71	1,312.73	1,275.04	37.69	34.832	
6,400.00	6,329.61	6,397.80	6,299.11	20.97	23.30	-128.13	-657.68	802.22	1,319.02	1,280.90	38.13	34.597	
6,443.39	6,373.00	6,463.86	6,365.15	21.03	23.39	89.90	-658.53	803.18	1,319.86	1,281.56	38.29	34.466	
6,500.00	6,429.61	6,528.32	6,429.61	21.11	23.47	89.91	-658.59	803.25	1,319.90	1,281.43	38.47	34.311	
6,600.00	6,529.61	6,628.32	6,529.61	21.23	23.59	89.91	-658.59	803.25	1,319.90	1,281.17	38.74	34.073	
6,700.00	6,629.61	6,728.32	6,629.61	21.35	23.70	89.91	-658.59	803.25	1,319.90	1,280.89	39.01	33.835	
6,800.00	6,729.61	6,828.32	6,729.61	21.48	23.82	89.91	-658.59	803.25	1,319.90	1,280.62	39.29	33.597	
6,900.00	6,829.61	6,928.32	6,829.61	21.61	23.94	89.91	-658.59	803.25	1,319.90	1,280.34	39.57	33.360	
7,000.00	6,929.61	7,028.32	6,929.61	21.74	24.07	89.91	-658.59	803.25	1,319.90	1,280.06	39.85	33.124	
7,100.00	7,029.61	7,128.32	7,029.61	21.87	24.19	89.91	-658.59	803.25	1,319.90	1,279.77	40.13	32.889	
7,200.00	7,129.61	7,228.32	7,129.61	22.00	24.32	89.91	-658.59	803.25	1,319.90	1,279.48	40.42	32.654	
7,300.00	7,229.61	7,328.32	7,229.61	22.14	24.44	89.91	-658.59	803.25	1,319.90	1,279.19	40.71	32.421	
7,400.00	7,329.61	7,428.32	7,329.61	22.27	24.57	89.91	-658.59	803.25	1,319.90	1,278.90	41.01	32.188	
7,500.00	7,429.61	7,528.32	7,429.61	22.41	24.70	89.91	-658.59	803.25	1,319.90	1,278.60	41.30	31.957	
7,600.00	7,529.61	7,628.32	7,529.61	22.55	24.83	89.91	-658.59	803.25	1,319.90	1,278.30	41.60	31.727	
7,700.00	7,629.61	7,728.32	7,629.61	22.69	24.96	89.91	-658.59	803.25	1,319.90	1,278.00	41.90	31.498	
7,800.00	7,729.61	7,828.32	7,729.61	22.83	25.10	89.91	-658.59	803.25	1,319.90	1,277.69	42.21	31.271	
7,900.00	7,829.61	7,928.32	7,829.61	22.97	25.23	89.91	-658.59	803.25	1,319.90	1,277.39	42.52	31.044	
8,000.00	7,929.61	8,028.32	7,929.61	23.12	25.37	89.91	-658.59	803.25	1,319.90	1,277.08	42.83	30.820	
8,100.00	8,029.61	8,128.32	8,029.61	23.26	25.51	89.91	-658.59	803.25	1,319.90	1,276.76	43.14	30.597	
8,200.00	8,129.61	8,228.32	8,129.61	23.41	25.64	89.91	-658.59	803.25	1,319.90	1,276.45	43.45	30.375	
8,300.00	8,229.61	8,328.32	8,229.61	23.56	25.78	89.91	-658.59	803.25	1,319.90	1,276.13	43.77	30.155	
8,400.00	8,329.61	8,428.32	8,329.61	23.71	25.93	89.91	-658.59	803.25	1,319.90	1,275.81	44.09	29.936	
8,500.00	8,429.61	8,528.32	8,429.61	23.86	26.07	89.91	-658.59	803.25	1,319.90	1,275.49	44.41	29.720	
8,600.00	8,529.61	8,628.32	8,529.61	24.01	26.21	89.91	-658.59	803.25	1,319.90	1,275.17	44.74	29.505	
8,623.39	8,553.00	8,651.71	8,553.00	24.04	26.24	89.91	-658.59	803.25	1,319.90	1,275.09	44.81	29.454	

Company:	US ROCKIES REGION PLANNING	Local Co-ordinate Reference:	Well P_NRC 5-9
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 5-9	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00ft	Output errors are at	2.00 sigma
Reference Wellbore	P_NRC 5-9	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 - ROCKY MTN FUEL CO UNIT G #2 EXISTING - ROCKY MTN FUEL CO UNIT												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	178.42	-50.63	1.40	54.46				
100.00	100.00	80.00	80.00	0.10	1.60	178.42	-50.63	1.40	50.65	48.95	1.70	29.872	
200.00	200.00	180.00	180.00	0.32	5.20	178.42	-50.63	1.40	50.65	45.13	5.52	9.175	
300.00	300.00	280.00	280.00	0.55	9.20	178.42	-50.63	1.40	50.65	40.90	9.75	5.197	
400.00	400.00	380.00	380.00	0.77	13.20	178.42	-50.63	1.40	50.65	36.68	13.97	3.626	
500.00	500.00	480.00	480.00	0.99	17.20	178.42	-50.63	1.40	50.65	32.46	18.19	2.784	
600.00	600.00	580.00	580.00	1.22	21.20	178.42	-50.63	1.40	50.65	28.23	22.42	2.259	
700.00	700.00	680.00	680.00	1.44	25.20	178.42	-50.63	1.40	50.65	24.01	26.64	1.901	
800.00	800.00	780.00	780.00	1.67	29.20	178.42	-50.63	1.40	50.65	19.78	30.87	1.641	
900.00	900.00	880.00	880.00	1.89	33.20	178.42	-50.63	1.40	50.65	15.56	35.09	1.443 Level 3	
1,000.00	1,000.00	980.00	980.00	2.12	37.20	178.42	-50.63	1.40	50.65	11.33	39.32	1.288 Level 3	
1,085.00	1,085.00	1,065.00	1,065.00	2.31	40.60	178.42	-50.63	1.40	50.65	7.74	42.91	1.180 Level 2	
1,100.00	1,100.00	1,080.00	1,080.00	2.34	41.20	-39.63	-50.63	1.40	50.62	7.08	43.54	1.163 Level 2	
1,200.00	1,199.97	1,179.97	1,179.97	2.52	45.20	-41.35	-50.63	1.40	48.89	1.20	47.69	1.025 Level 2	
1,300.00	1,299.80	1,279.80	1,279.80	2.70	49.19	-46.28	-50.63	1.40	44.73	-7.09	51.83	0.863 Level 1	
1,400.00	1,399.37	1,379.37	1,379.37	2.91	53.17	-56.23	-50.63	1.40	38.92	-17.06	55.98	0.695 Level 1	
1,500.00	1,498.55	1,478.55	1,478.55	3.13	57.14	-74.55	-50.63	1.40	33.52	-26.71	60.23	0.557 Level 1	
1,558.39	1,556.24	1,536.24	1,536.24	3.28	59.45	-90.00	-50.63	1.40	32.29	-30.46	62.75	0.515 Level 1, CC	
1,581.61	1,579.13	1,559.13	1,559.13	3.34	60.37	-96.81	-50.63	1.40	32.52	-31.19	63.71	0.511 Level 1, SF	
1,600.00	1,597.24	1,577.24	1,577.24	3.39	61.09	-102.19	-50.63	1.40	33.06	-31.40	64.46	0.513 Level 1, ES	
1,700.00	1,695.74	1,675.74	1,675.74	3.68	65.03	-126.59	-50.63	1.40	40.43	-27.90	68.33	0.592 Level 1	
1,800.00	1,794.24	1,774.24	1,774.24	3.99	68.97	-141.75	-50.63	1.40	52.64	-19.54	72.18	0.729 Level 1	
1,900.00	1,892.74	1,872.74	1,872.74	4.31	72.91	-150.87	-50.63	1.40	67.11	-9.03	76.14	0.881 Level 1	
2,000.00	1,991.25	1,971.25	1,971.25	4.65	76.85	-156.69	-50.63	1.40	82.65	2.49	80.15	1.031 Level 2	
2,100.00	2,089.75	2,069.75	2,069.75	5.00	80.79	-160.65	-50.63	1.40	98.75	14.55	84.21	1.173 Level 2	
2,200.00	2,188.25	2,168.25	2,168.25	5.35	84.73	-163.49	-50.63	1.40	115.19	26.91	88.28	1.305 Level 3	
2,300.00	2,286.75	2,266.75	2,266.75	5.71	88.67	-165.62	-50.63	1.40	131.84	39.46	92.37	1.427 Level 3	
2,400.00	2,385.25	2,365.25	2,365.25	6.08	92.61	-167.27	-50.63	1.40	148.62	52.15	96.47	1.541	
2,500.00	2,483.75	2,463.75	2,463.75	6.45	96.55	-168.58	-50.63	1.40	165.50	64.92	100.58	1.646	
2,600.00	2,582.25	2,562.25	2,562.25	6.82	100.49	-169.65	-50.63	1.40	182.45	77.76	104.69	1.743	
2,700.00	2,680.75	2,660.75	2,660.75	7.20	104.43	-170.54	-50.63	1.40	199.45	90.65	108.80	1.833	
2,800.00	2,779.26	2,759.26	2,759.26	7.58	108.37	-171.29	-50.63	1.40	216.48	103.57	112.92	1.917	
2,900.00	2,877.76	2,857.76	2,857.76	7.96	112.31	-171.93	-50.63	1.40	233.55	116.52	117.04	1.996	
3,000.00	2,976.26	2,956.26	2,956.26	8.34	116.25	-172.49	-50.63	1.40	250.65	129.49	121.16	2.069	
3,100.00	3,074.76	3,054.76	3,054.76	8.73	120.19	-172.97	-50.63	1.40	267.76	142.48	125.28	2.137	
3,200.00	3,173.26	3,153.26	3,153.26	9.12	124.13	-173.39	-50.63	1.40	284.89	155.49	129.40	2.202	
3,300.00	3,271.76	3,251.76	3,251.76	9.51	128.07	-173.77	-50.63	1.40	302.03	168.51	133.53	2.262	
3,400.00	3,370.26	3,350.26	3,350.26	9.90	132.01	-174.11	-50.63	1.40	319.19	181.54	137.65	2.319	
3,500.00	3,468.76	3,448.76	3,448.76	10.29	135.95	-174.41	-50.63	1.40	336.35	194.57	141.78	2.372	
3,600.00	3,567.27	3,547.27	3,547.27	10.68	139.89	-174.68	-50.63	1.40	353.53	207.62	145.91	2.423	
3,700.00	3,665.77	3,645.77	3,645.77	11.07	143.83	-174.93	-50.63	1.40	370.71	220.67	150.04	2.471	
3,800.00	3,764.27	3,744.27	3,744.27	11.46	147.77	-175.15	-50.63	1.40	387.89	233.73	154.17	2.516	
3,900.00	3,862.77	3,842.77	3,842.77	11.86	151.71	-175.36	-50.63	1.40	405.08	246.79	158.29	2.559	
4,000.00	3,961.27	3,941.27	3,941.27	12.25	155.65	-175.55	-50.63	1.40	422.28	259.85	162.42	2.600	
4,100.00	4,059.77	4,039.77	4,039.77	12.64	159.59	-175.72	-50.63	1.40	439.48	272.92	166.55	2.639	
4,200.00	4,158.27	4,138.27	4,138.27	13.04	163.53	-175.88	-50.63	1.40	456.68	286.00	170.69	2.676	
4,300.00	4,256.77	4,236.77	4,236.77	13.44	167.47	-176.03	-50.63	1.40	473.89	299.07	174.82	2.711	
4,400.00	4,355.28	4,335.28	4,335.28	13.83	171.41	-176.17	-50.63	1.40	491.10	312.15	178.95	2.744	
4,500.00	4,453.78	4,433.78	4,433.78	14.23	175.35	-176.30	-50.63	1.40	508.31	325.23	183.08	2.776	
4,600.00	4,552.28	4,532.28	4,532.28	14.62	179.29	-176.42	-50.63	1.40	525.52	338.31	187.21	2.807	
4,700.00	4,650.78	4,630.78	4,630.78	15.02	183.23	-176.54	-50.63	1.40	542.74	351.40	191.34	2.836	
4,800.00	4,749.28	4,729.28	4,729.28	15.42	187.17	-176.64	-50.63	1.40	559.96	364.48	195.48	2.865	

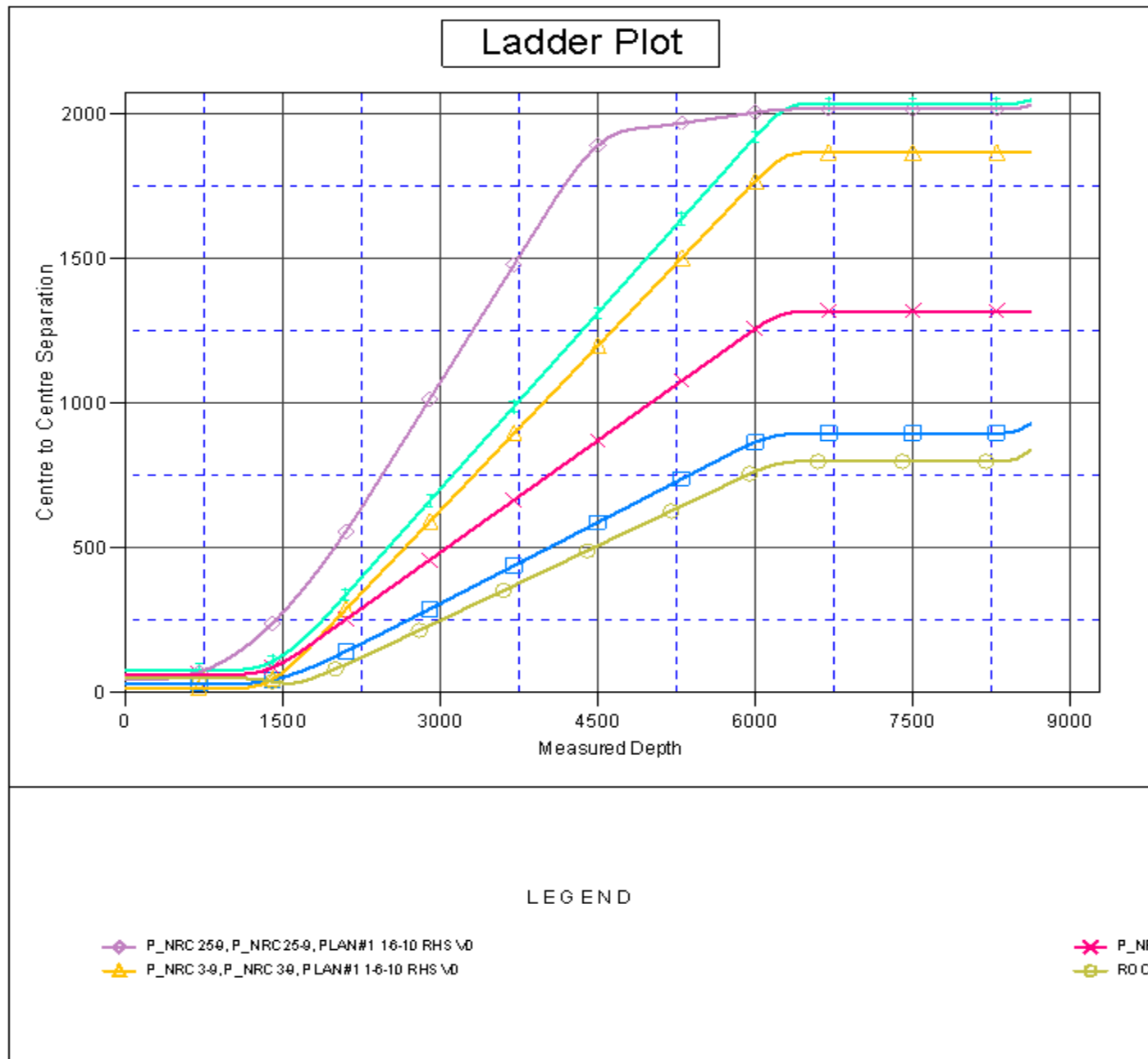
CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Company:	US ROCKIES REGION PLANNING	Local Co-ordinate Reference:	Well P_NRC 5-9
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 5-9	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00ft	Output errors are at	2.00 sigma
Reference Wellbore	P_NRC 5-9	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
WELD_NRC 18-9 PAD - ROCKY MTN FUEL CO UNIT G #2 EXISTING - ROCKY MTN FUEL CO UNIT												Offset Well Error:	0.00 ft
Survey Program: 0-UNKNOWN													
Reference		Offset		Semi Major Axis			Distance						
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning
4,900.00	4,847.78	4,827.78	4,827.78	15.82	191.11	-176.74	-50.63	1.40	577.18	377.57	199.61	2.892	
5,000.00	4,946.28	4,926.28	4,926.28	16.21	195.05	-176.84	-50.63	1.40	594.40	390.66	203.74	2.917	
5,100.00	5,044.79	5,024.79	5,024.79	16.61	198.99	-176.93	-50.63	1.40	611.63	403.75	207.88	2.942	
5,200.00	5,143.29	5,123.29	5,123.29	17.01	202.93	-177.01	-50.63	1.40	628.85	416.84	212.01	2.966	
5,300.00	5,241.79	5,221.79	5,221.79	17.41	206.87	-177.09	-50.63	1.40	646.08	429.93	216.14	2.989	
5,400.00	5,340.29	5,320.29	5,320.29	17.81	210.81	-177.17	-50.63	1.40	663.30	443.03	220.28	3.011	
5,500.00	5,438.79	5,418.79	5,418.79	18.21	214.75	-177.24	-50.63	1.40	680.53	456.12	224.41	3.033	
5,600.00	5,537.29	5,517.29	5,517.29	18.61	218.69	-177.31	-50.63	1.40	697.76	469.22	228.54	3.053	
5,700.00	5,635.79	5,615.79	5,615.79	19.01	222.63	-177.37	-50.63	1.40	714.99	482.31	232.68	3.073	
5,800.00	5,734.29	5,714.29	5,714.29	19.41	226.57	-177.43	-50.63	1.40	732.22	495.41	236.81	3.092	
5,900.00	5,832.80	5,812.80	5,812.80	19.80	230.51	-177.49	-50.63	1.40	749.45	508.51	240.95	3.110	
5,946.78	5,878.87	5,858.87	5,858.87	19.99	232.35	-177.52	-50.63	1.40	757.52	514.64	242.88	3.119	
6,000.00	5,931.38	5,911.38	5,911.38	20.17	234.46	-177.56	-50.63	1.40	766.20	520.47	245.73	3.118	
6,100.00	6,030.43	6,010.43	6,010.43	20.42	238.42	-177.61	-50.63	1.40	779.88	528.89	250.98	3.107	
6,200.00	6,129.90	6,109.90	6,109.90	20.64	242.40	-177.65	-50.63	1.40	790.09	534.12	255.97	3.087	
6,300.00	6,229.67	6,209.67	6,209.67	20.82	246.39	-177.67	-50.63	1.40	796.83	536.15	260.68	3.057	
6,400.00	6,329.61	6,309.61	6,309.61	20.97	250.38	-177.69	-50.63	1.40	800.09	535.01	265.08	3.018	
6,443.39	6,373.00	6,353.00	6,353.00	21.03	252.12	40.33	-50.63	1.40	800.41	533.52	266.90	2.999	
6,500.00	6,429.61	6,409.61	6,409.61	21.11	254.38	40.33	-50.63	1.40	800.41	531.15	269.26	2.973	
6,600.00	6,529.61	6,509.61	6,509.61	21.23	258.38	40.33	-50.63	1.40	800.41	526.97	273.44	2.927	
6,700.00	6,629.61	6,609.61	6,609.61	21.35	262.38	40.33	-50.63	1.40	800.41	522.80	277.62	2.883	
6,800.00	6,729.61	6,709.61	6,709.61	21.48	266.38	40.33	-50.63	1.40	800.41	518.62	281.80	2.840	
6,900.00	6,829.61	6,809.61	6,809.61	21.61	270.38	40.33	-50.63	1.40	800.41	514.44	285.97	2.799	
7,000.00	6,929.61	6,909.61	6,909.61	21.74	274.38	40.33	-50.63	1.40	800.41	510.26	290.16	2.759	
7,100.00	7,029.61	7,009.61	7,009.61	21.87	278.38	40.33	-50.63	1.40	800.41	506.08	294.34	2.719	
7,200.00	7,129.61	7,109.61	7,109.61	22.00	282.38	40.33	-50.63	1.40	800.41	501.90	298.52	2.681	
7,300.00	7,229.61	7,209.61	7,209.61	22.14	286.38	40.33	-50.63	1.40	800.41	497.71	302.70	2.644	
7,400.00	7,329.61	7,309.61	7,309.61	22.27	290.38	40.33	-50.63	1.40	800.41	493.53	306.89	2.608	
7,500.00	7,429.61	7,409.61	7,409.61	22.41	294.38	40.33	-50.63	1.40	800.41	489.34	311.07	2.573	
7,600.00	7,529.61	7,509.61	7,509.61	22.55	298.38	40.33	-50.63	1.40	800.41	485.15	315.26	2.539	
7,700.00	7,629.61	7,609.61	7,609.61	22.69	302.38	40.33	-50.63	1.40	800.41	480.97	319.45	2.506	
7,800.00	7,729.61	7,709.61	7,709.61	22.83	306.38	40.33	-50.63	1.40	800.41	476.78	323.64	2.473	
7,900.00	7,829.61	7,809.61	7,809.61	22.97	310.38	40.33	-50.63	1.40	800.41	472.59	327.83	2.442	
8,000.00	7,929.61	7,909.61	7,909.61	23.12	314.38	40.33	-50.63	1.40	800.41	468.40	332.02	2.411	
8,100.00	8,029.61	8,009.61	8,009.61	23.26	318.38	40.33	-50.63	1.40	800.41	464.21	336.21	2.381	
8,200.00	8,129.61	8,109.61	8,109.61	23.41	322.38	40.33	-50.63	1.40	800.41	460.02	340.40	2.351	
8,300.00	8,229.61	8,209.61	8,209.61	23.56	326.38	40.33	-50.63	1.40	800.41	455.82	344.59	2.323	
8,352.64	8,282.25	8,262.25	8,262.25	23.63	328.49	40.33	-50.63	1.40	800.41	453.62	346.80	2.308	
8,400.00	8,329.61	8,280.00	8,280.00	23.71	329.20	40.33	-50.63	1.40	800.96	453.36	347.60	2.304	
8,500.00	8,429.61	8,280.00	8,280.00	23.86	329.20	40.33	-50.63	1.40	810.84	463.05	347.79	2.331	
8,600.00	8,529.61	8,280.00	8,280.00	24.01	329.20	40.33	-50.63	1.40	832.70	484.71	347.99	2.393	
8,623.39	8,553.00	8,280.00	8,280.00	24.04	329.20	40.33	-50.63	1.40	839.45	491.41	348.03	2.412	

Company:	US ROCKIES REGION PLANNING	Local Co-ordinate Reference:	Well P_NRC 5-9
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 5-9	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00ft	Output errors are at	2.00 sigma
Reference Wellbore	P_NRC 5-9	Database:	EDM 2003.21 Single User Db
Reference Design:	PLAN #1 1-6-10 RHS	Offset TVD Reference:	Offset Datum

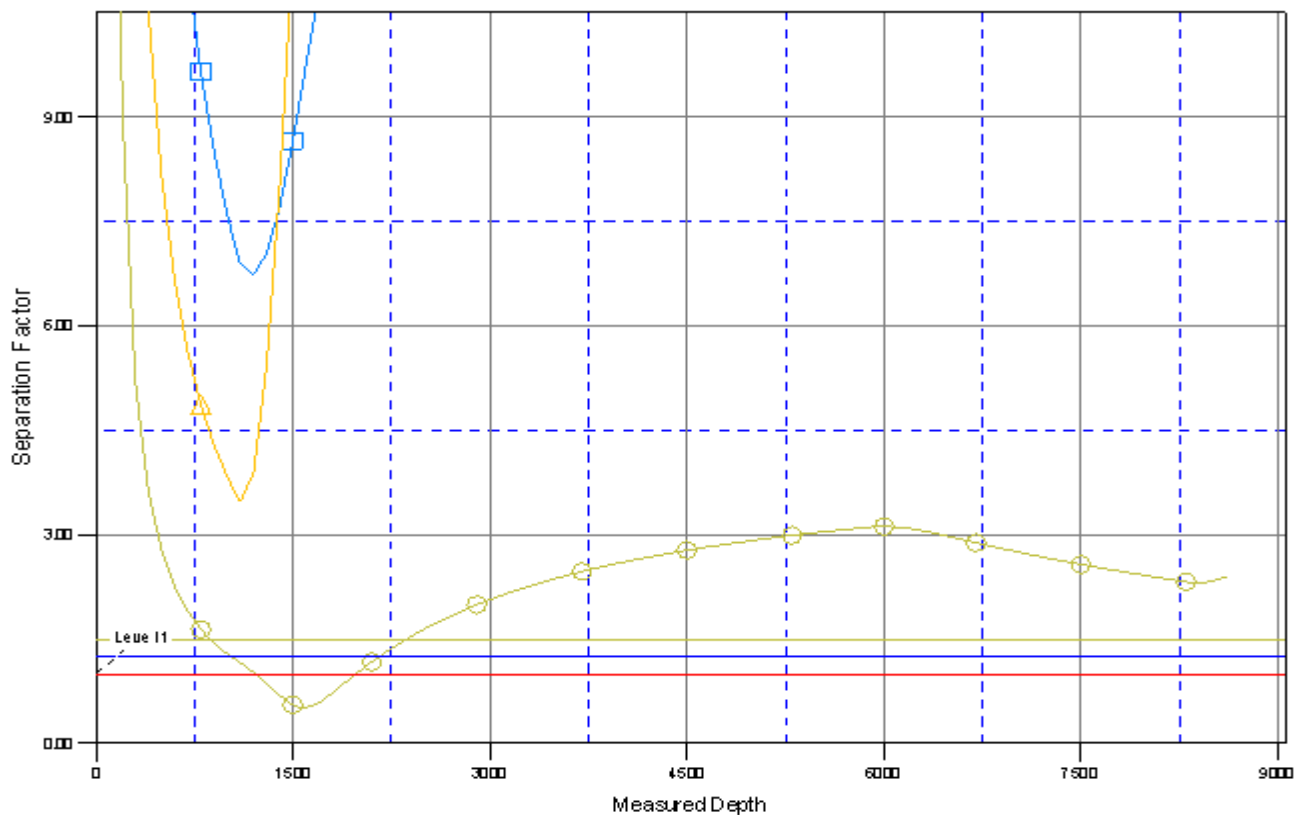
Reference Depths are relative to WELL @ 5036.00ft (Original Well Elev) Coordinates are relative to: P_NRC 5-9
Offset Depths are relative to Offset Datum Coordinate System is US State Plane 1983, Colorado Northern Zone
Central Meridian is 105° 30' 0.000 W ° Grid Convergence at Surface is: 0.39°





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Site Error:	0.00ft	North Reference:	True
Reference Well:	P_NRC 5-9	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00ft	Output errors are at	2.00 sigma
Reference Wellbore	P_NRC 5-9	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: P_NRC 5-9
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 25-9, P_NRC 25-9, PLAN #1 1-6-10 RHS V0
 P_NRC 3-9, P_NRC 3-9, PLAN #1 1-6-10 RHS V0

 P_NRC 1
 ROCKY