



US ROCKIES REGION PLANNING

COLORADO NORTHERN ZONE - 83

WELD_NRC 20-8 PAD

P_NRC 15-8

P_NRC 15-8

Plan: PLAN #1 1-5-10 RHS

Standard Planning Report

04 February, 2010





Azimuths to True North
Magnetic North: 9.07°

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

WELL DETAILS: P_NRC 15-8

+N/-S	+E/-W	Northing	Ground Level: Easting	5056.00 Latitude	Longitude	Slot
0.00	0.00	1265676.19	3165116.25	40° 3' 40.187 N	104° 54' 36.320 W	

FORMATION TOP DETAILS

TVDPath	MDPath	Formation
3273.00	3356.11	PARKMAN
4748.00	4876.80	SUSSEX
5218.00	5346.80	SHANNON
7388.00	7516.80	NIO A
7728.00	7856.80	CODELL
8178.00	8306.80	JSAND
8348.00	8476.80	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	
1993.59	18.17	234.31	1978.44	-83.36	-116.04	2.00	234.31	142.88	
3968.20	18.17	234.31	3854.56	-442.63	-616.20	0.00	0.00	758.70	
4876.80	0.00	0.00	4748.00	-525.99	-732.24	2.00	180.00	901.58	
8696.80	0.00	0.00	8568.00	-525.99	-732.24	0.00	0.00	901.58	PBHL_NRC 15-8(510 FSL 2130 FEL)50°TGT RAD

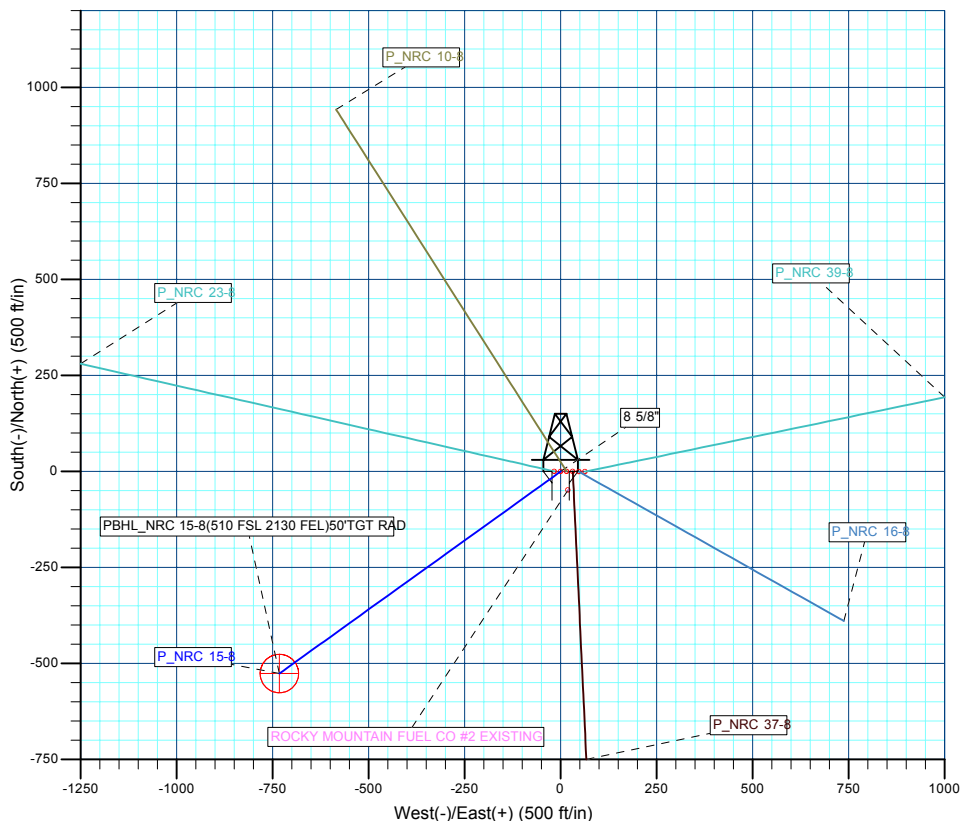
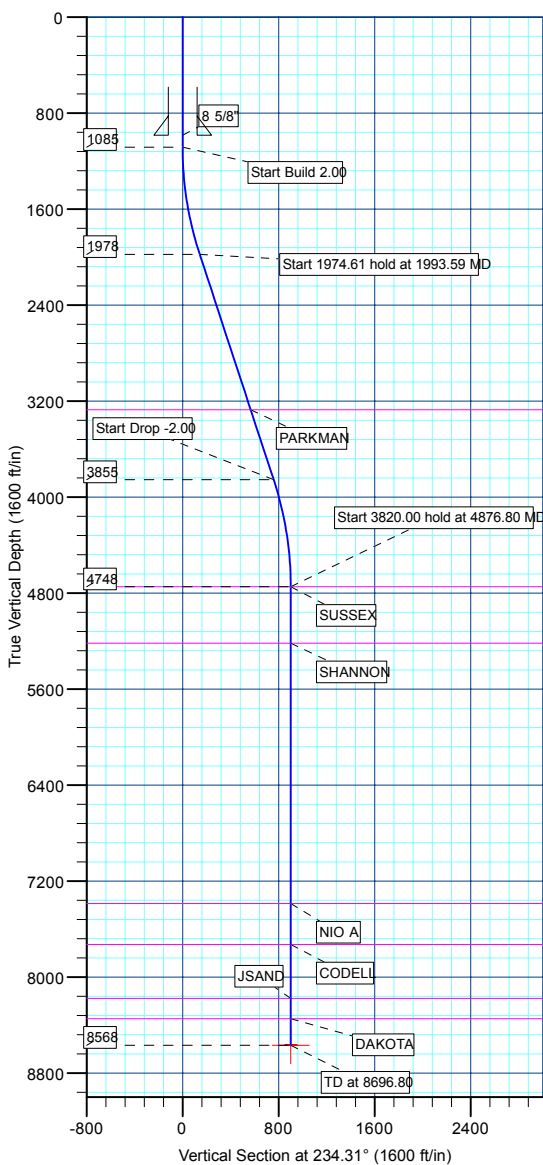
CASING DETAILS

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



B ELEV: WELL @ 5071.00ft (Original Well Elev)

GRD ELEV: 5056.00



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

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Shape
PBHL	8568.00	-525.99	-732.24	1265145.34	3164387.52	40° 3' 34.988 N	104° 54' 45.738 W	Circle (Radius: 50.00)

Plan: PLAN #1 1-5-10 RHS (P_NRC 15-8/P_NRC 15-8)

Created By: Robert H. Scott

Database:	EDM 2003.21 Single User Db	Local Co-ordinate Reference:	Well P_NRC 15-8
Company:	US ROCKIES REGION PLANNING	TVD Reference:	WELL @ 5071.00ft (Original Well Elev)
Project:	COLORADO NORTHERN ZONE - 83	MD Reference:	WELL @ 5071.00ft (Original Well Elev)
Site:	WELD_NRC 20-8 PAD	North Reference:	True
Well:	P_NRC 15-8	Survey Calculation Method:	Minimum Curvature
Wellbore:	P_NRC 15-8		
Design:	PLAN #1 1-5-10 RHS		

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

Site		WELD_NRC 20-8 PAD, SECTION 8 T1N R67W			
Site Position:		Northing:	1,265,676.31 ft	Latitude:	40° 3' 40.187 N
From:	Lat/Long	Easting:	3,165,132.20 ft	Longitude:	104° 54' 36.115 W
Position Uncertainty:	0.00 ft	Slot Radius:	in	Grid Convergence:	0.38 °

Well	P_NRC 15-8,					
Well Position	+N/-S	-0.01 ft	Northing:	1,265,676.19 ft	Latitude:	40° 3' 40.187 N
	+E/-W	-15.95 ft	Easting:	3,165,116.25 ft	Longitude:	104° 54' 36.320 W
Position Uncertainty		0.00 ft	Wellhead Elevation:	ft	Ground Level:	5,056.00 ft

Wellbore	P_NRC 15-8				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF200510	1/5/2010	9.07	66.81	53,107

Design	PLAN #1 1-5-10 RHS			
Audit Notes:				
Version:	Phase:	PLAN	Tie On Depth:	0.00
Vertical Section:	Depth From (TVD) (ft)	+N/-S (ft)	+E/-W (ft)	Direction (°)
	0.00	0.00	0.00	234.31

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	
1,993.59	18.17	234.31	1,978.44	-83.36	-116.04	2.00	2.00	0.00	234.31	
3,968.20	18.17	234.31	3,854.56	-442.63	-616.20	0.00	0.00	0.00	0.00	
4,876.80	0.00	0.00	4,748.00	-525.99	-732.24	2.00	-2.00	0.00	180.00	
8,696.80	0.00	0.00	8,568.00	-525.99	-732.24	0.00	0.00	0.00	0.00	PBHL_NRC 15-8(5

Database:	EDM 2003.21 Single User Db	Local Co-ordinate Reference:	Well P_NRC 15-8
Company:	US ROCKIES REGION PLANNING	TVD Reference:	WELL @ 5071.00ft (Original Well Elev)
Project:	COLORADO NORTHERN ZONE - 83	MD Reference:	WELL @ 5071.00ft (Original Well Elev)
Site:	WELD_NRC 20-8 PAD	North Reference:	True
Well:	P_NRC 15-8	Survey Calculation Method:	Minimum Curvature
Wellbore:	P_NRC 15-8		
Design:	PLAN #1 1-5-10 RHS		

Planned Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
Start Build 2.00									
1,085.00	0.00	0.00	1,085.00	0.00	0.00	0.00	0.00	0.00	0.00
1,100.00	0.30	234.31	1,100.00	-0.02	-0.03	0.04	2.00	2.00	0.00
1,200.00	2.30	234.31	1,199.97	-1.35	-1.87	2.31	2.00	2.00	0.00
1,300.00	4.30	234.31	1,299.80	-4.70	-6.55	8.06	2.00	2.00	0.00
1,400.00	6.30	234.31	1,399.37	-10.09	-14.05	17.30	2.00	2.00	0.00
1,500.00	8.30	234.31	1,498.55	-17.51	-24.37	30.01	2.00	2.00	0.00
1,600.00	10.30	234.31	1,597.23	-26.93	-37.49	46.17	2.00	2.00	0.00
1,700.00	12.30	234.31	1,695.29	-38.36	-53.41	65.76	2.00	2.00	0.00
1,800.00	14.30	234.31	1,792.60	-51.79	-72.09	88.76	2.00	2.00	0.00
1,900.00	16.30	234.31	1,889.05	-67.18	-93.52	115.15	2.00	2.00	0.00
Start 1974.61 hold at 1993.59 MD									
1,993.59	18.17	234.31	1,978.44	-83.36	-116.04	142.88	2.00	2.00	0.00
2,000.00	18.17	234.31	1,984.52	-84.52	-117.67	144.88	0.00	0.00	0.00
2,100.00	18.17	234.31	2,079.54	-102.72	-143.00	176.07	0.00	0.00	0.00
2,200.00	18.17	234.31	2,174.55	-120.91	-168.33	207.25	0.00	0.00	0.00
2,300.00	18.17	234.31	2,269.56	-139.11	-193.65	238.44	0.00	0.00	0.00
2,400.00	18.17	234.31	2,364.57	-157.30	-218.98	269.63	0.00	0.00	0.00
2,500.00	18.17	234.31	2,459.59	-175.50	-244.31	300.81	0.00	0.00	0.00
2,600.00	18.17	234.31	2,554.60	-193.69	-269.64	332.00	0.00	0.00	0.00
2,700.00	18.17	234.31	2,649.61	-211.89	-294.97	363.19	0.00	0.00	0.00
2,800.00	18.17	234.31	2,744.62	-230.08	-320.30	394.37	0.00	0.00	0.00
2,900.00	18.17	234.31	2,839.64	-248.28	-345.63	425.56	0.00	0.00	0.00
3,000.00	18.17	234.31	2,934.65	-266.47	-370.96	456.75	0.00	0.00	0.00
3,100.00	18.17	234.31	3,029.66	-284.67	-396.29	487.93	0.00	0.00	0.00
3,200.00	18.17	234.31	3,124.67	-302.86	-421.62	519.12	0.00	0.00	0.00
3,300.00	18.17	234.31	3,219.69	-321.06	-446.95	550.31	0.00	0.00	0.00
PARKMAN									
3,356.11	18.17	234.31	3,273.00	-331.27	-461.16	567.81	0.00	0.00	0.00
3,400.00	18.17	234.31	3,314.70	-339.25	-472.28	581.49	0.00	0.00	0.00
3,500.00	18.17	234.31	3,409.71	-357.45	-497.61	612.68	0.00	0.00	0.00
3,600.00	18.17	234.31	3,504.72	-375.64	-522.93	643.87	0.00	0.00	0.00
3,700.00	18.17	234.31	3,599.74	-393.84	-548.26	675.06	0.00	0.00	0.00
3,800.00	18.17	234.31	3,694.75	-412.03	-573.59	706.24	0.00	0.00	0.00
3,900.00	18.17	234.31	3,789.76	-430.23	-598.92	737.43	0.00	0.00	0.00
Start Drop -2.00									
3,968.20	18.17	234.31	3,854.56	-442.63	-616.20	758.70	0.00	0.00	0.00
4,000.00	17.54	234.31	3,884.83	-448.32	-624.12	768.45	2.00	-2.00	0.00
4,100.00	15.54	234.31	3,980.69	-464.93	-647.23	796.91	2.00	-2.00	0.00
4,200.00	13.54	234.31	4,077.48	-479.57	-667.61	822.01	2.00	-2.00	0.00
4,300.00	11.54	234.31	4,175.09	-492.23	-685.24	843.71	2.00	-2.00	0.00
4,400.00	9.54	234.31	4,273.40	-502.90	-700.09	861.99	2.00	-2.00	0.00
4,500.00	7.54	234.31	4,372.29	-511.56	-712.15	876.84	2.00	-2.00	0.00
4,600.00	5.54	234.31	4,471.64	-518.20	-721.39	888.22	2.00	-2.00	0.00
4,700.00	3.54	234.31	4,571.32	-522.81	-727.81	896.13	2.00	-2.00	0.00
4,800.00	1.54	234.31	4,671.21	-525.39	-731.41	900.55	2.00	-2.00	0.00
Start 3820.00 hold at 4876.80 MD - SUSSEX									
4,876.80	0.00	0.00	4,748.00	-525.99	-732.24	901.58	2.00	-2.00	0.00
4,900.00	0.00	0.00	4,771.20	-525.99	-732.24	901.58	0.00	0.00	0.00
5,000.00	0.00	0.00	4,871.20	-525.99	-732.24	901.58	0.00	0.00	0.00
5,100.00	0.00	0.00	4,971.20	-525.99	-732.24	901.58	0.00	0.00	0.00
5,200.00	0.00	0.00	5,071.20	-525.99	-732.24	901.58	0.00	0.00	0.00
5,300.00	0.00	0.00	5,171.20	-525.99	-732.24	901.58	0.00	0.00	0.00

Database:	EDM 2003.21 Single User Db	Local Co-ordinate Reference:	Well P_NRC 15-8
Company:	US ROCKIES REGION PLANNING	TVD Reference:	WELL @ 5071.00ft (Original Well Elev)
Project:	COLORADO NORTHERN ZONE - 83	MD Reference:	WELL @ 5071.00ft (Original Well Elev)
Site:	WELD_NRC 20-8 PAD	North Reference:	True
Well:	P_NRC 15-8	Survey Calculation Method:	Minimum Curvature
Wellbore:	P_NRC 15-8		
Design:	PLAN #1 1-5-10 RHS		

Planned Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
SHANNON									
5,346.80	0.00	0.00	5,218.00	-525.99	-732.24	901.58	0.00	0.00	0.00
5,400.00	0.00	0.00	5,271.20	-525.99	-732.24	901.58	0.00	0.00	0.00
5,500.00	0.00	0.00	5,371.20	-525.99	-732.24	901.58	0.00	0.00	0.00
5,600.00	0.00	0.00	5,471.20	-525.99	-732.24	901.58	0.00	0.00	0.00
5,700.00	0.00	0.00	5,571.20	-525.99	-732.24	901.58	0.00	0.00	0.00
5,800.00	0.00	0.00	5,671.20	-525.99	-732.24	901.58	0.00	0.00	0.00
5,900.00	0.00	0.00	5,771.20	-525.99	-732.24	901.58	0.00	0.00	0.00
6,000.00	0.00	0.00	5,871.20	-525.99	-732.24	901.58	0.00	0.00	0.00
6,100.00	0.00	0.00	5,971.20	-525.99	-732.24	901.58	0.00	0.00	0.00
6,200.00	0.00	0.00	6,071.20	-525.99	-732.24	901.58	0.00	0.00	0.00
6,300.00	0.00	0.00	6,171.20	-525.99	-732.24	901.58	0.00	0.00	0.00
6,400.00	0.00	0.00	6,271.20	-525.99	-732.24	901.58	0.00	0.00	0.00
6,500.00	0.00	0.00	6,371.20	-525.99	-732.24	901.58	0.00	0.00	0.00
6,600.00	0.00	0.00	6,471.20	-525.99	-732.24	901.58	0.00	0.00	0.00
6,700.00	0.00	0.00	6,571.20	-525.99	-732.24	901.58	0.00	0.00	0.00
6,800.00	0.00	0.00	6,671.20	-525.99	-732.24	901.58	0.00	0.00	0.00
6,900.00	0.00	0.00	6,771.20	-525.99	-732.24	901.58	0.00	0.00	0.00
7,000.00	0.00	0.00	6,871.20	-525.99	-732.24	901.58	0.00	0.00	0.00
7,100.00	0.00	0.00	6,971.20	-525.99	-732.24	901.58	0.00	0.00	0.00
7,200.00	0.00	0.00	7,071.20	-525.99	-732.24	901.58	0.00	0.00	0.00
7,300.00	0.00	0.00	7,171.20	-525.99	-732.24	901.58	0.00	0.00	0.00
7,400.00	0.00	0.00	7,271.20	-525.99	-732.24	901.58	0.00	0.00	0.00
7,500.00	0.00	0.00	7,371.20	-525.99	-732.24	901.58	0.00	0.00	0.00
NIO A									
7,516.80	0.00	0.00	7,388.00	-525.99	-732.24	901.58	0.00	0.00	0.00
7,600.00	0.00	0.00	7,471.20	-525.99	-732.24	901.58	0.00	0.00	0.00
7,700.00	0.00	0.00	7,571.20	-525.99	-732.24	901.58	0.00	0.00	0.00
7,800.00	0.00	0.00	7,671.20	-525.99	-732.24	901.58	0.00	0.00	0.00
CODELL									
7,856.80	0.00	0.00	7,728.00	-525.99	-732.24	901.58	0.00	0.00	0.00
7,900.00	0.00	0.00	7,771.20	-525.99	-732.24	901.58	0.00	0.00	0.00
8,000.00	0.00	0.00	7,871.20	-525.99	-732.24	901.58	0.00	0.00	0.00
8,100.00	0.00	0.00	7,971.20	-525.99	-732.24	901.58	0.00	0.00	0.00
8,200.00	0.00	0.00	8,071.20	-525.99	-732.24	901.58	0.00	0.00	0.00
8,300.00	0.00	0.00	8,171.20	-525.99	-732.24	901.58	0.00	0.00	0.00
JSAND									
8,306.80	0.00	0.00	8,178.00	-525.99	-732.24	901.58	0.00	0.00	0.00
8,400.00	0.00	0.00	8,271.20	-525.99	-732.24	901.58	0.00	0.00	0.00
DAKOTA									
8,476.80	0.00	0.00	8,348.00	-525.99	-732.24	901.58	0.00	0.00	0.00
8,500.00	0.00	0.00	8,371.20	-525.99	-732.24	901.58	0.00	0.00	0.00
8,600.00	0.00	0.00	8,471.20	-525.99	-732.24	901.58	0.00	0.00	0.00
PBHL_NRC 15-8(510 FSL 2130 FEL)50'TGT RAD									
8,696.80	0.00	0.00	8,568.00	-525.99	-732.24	901.58	0.00	0.00	0.00

Database:	EDM 2003.21 Single User Db	Local Co-ordinate Reference:	Well P_NRC 15-8
Company:	US ROCKIES REGION PLANNING	TVD Reference:	WELL @ 5071.00ft (Original Well Elev)
Project:	COLORADO NORTHERN ZONE - 83	MD Reference:	WELL @ 5071.00ft (Original Well Elev)
Site:	WELD_NRC 20-8 PAD	North Reference:	True
Well:	P_NRC 15-8	Survey Calculation Method:	Minimum Curvature
Wellbore:	P_NRC 15-8		
Design:	PLAN #1 1-5-10 RHS		

Design Targets									
Target Name									
- hit/miss target	Dip Angle	Dip Dir.	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
- Shape	(°)	(°)	(ft)	(ft)	(ft)	(ft)	(ft)		
PBHL_NRC 15-8(510)	0.00	0.00	8,568.00	-525.99	-732.24	1,265,145.34	3,164,387.52	40° 3' 34.988 N	104° 54' 45.738 W
- plan hits target center									
- Circle (radius 50.00)									

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

Formations						
	Measured Depth	Vertical Depth			Dip	Dip Direction
	(ft)	(ft)	Name	Lithology	(°)	(°)
	3,356.11	3,273.00	PARKMAN			
	4,876.80	4,748.00	SUSSEX			
	5,346.80	5,218.00	SHANNON			
	7,516.80	7,388.00	NIO A			
	7,856.80	7,728.00	CODELL			
	8,306.80	8,178.00	JSAND			
	8,476.80	8,348.00	DAKOTA		0.00	

Plan Annotations					
	Measured Depth	Vertical Depth	Local Coordinates		
	(ft)	(ft)	+N/-S	+E/-W	Comment
	(ft)	(ft)	(ft)	(ft)	
	1,085.00	1,085.00	0.00	0.00	Start Build 2.00
	1,993.59	1,978.44	-83.36	-116.04	Start 1974.61 hold at 1993.59 MD
	3,968.20	3,854.56	-442.63	-616.20	Start Drop -2.00
	4,876.80	4,748.00	-525.99	-732.24	Start 3820.00 hold at 4876.80 MD
	8,696.80	8,568.00	-525.99	-732.24	TD at 8696.80



US ROCKIES REGION PLANNING

**COLORADO NORTHERN ZONE - 83
WELD_NRC 20-8 PAD
P_NRC 15-8**

**P_NRC 15-8
PLAN #1 1-5-10 RHS**

Anticollision Report

04 February, 2010



Company:	US ROCKIES REGION PLANNING	Local Co-ordinate Reference:	Well P_NRC 15-8
Project:	COLORADO NORTHERN ZONE - 83	TVD Reference:	WELL @ 5071.00ft (Original Well Elev)
Reference Site:	WELD_NRC 20-8 PAD	MD Reference:	WELL @ 5071.00ft (Original Well Elev)
Site Error:	0.00ft	North Reference:	True
Reference Well:	P_NRC 15-8	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00ft	Output errors are at	2.00 sigma
Reference Wellbore	P_NRC 15-8	Database:	EDM 2003.21 Single User Db
Reference Design:	PLAN #1 1-5-10 RHS	Offset TVD Reference:	Offset Datum

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

Survey Tool Program	Date 2/4/2010			
From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description
0.00	8,696.80	PLAN #1 1-5-10 RHS (P_NRC 15-8)	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 20-8 PAD						
P_NRC 10-8 - P_NRC 10-8 - PLAN #1 1-5-10 RHS	1,085.00	1,085.00	15.95	11.34	3.454	CC
P_NRC 10-8 - P_NRC 10-8 - PLAN #1 1-5-10 RHS	1,100.00	1,100.04	15.97	11.28	3.410	ES
P_NRC 10-8 - P_NRC 10-8 - PLAN #1 1-5-10 RHS	1,200.00	1,200.25	16.91	11.83	3.328	SF
P_NRC 16-8 - P_NRC 16-8 - PLAN #1 1-5-10 RHS	1,085.00	1,085.00	47.86	43.25	10.363	CC, ES
P_NRC 16-8 - P_NRC 16-8 - PLAN #1 1-5-10 RHS	1,100.00	1,099.78	47.93	43.25	10.244	SF
P_NRC 23-8 - P_NRC 23-8 - PLAN #1 1-5-10 RHS	1,085.00	1,085.00	16.24	11.62	3.516	CC
P_NRC 23-8 - P_NRC 23-8 - PLAN #1 1-5-10 RHS	1,100.00	1,099.92	16.25	11.56	3.471	ES
P_NRC 23-8 - P_NRC 23-8 - PLAN #1 1-5-10 RHS	1,200.00	1,199.33	16.75	11.68	3.307	SF
P_NRC 37-8 - P_NRC 37-8 - PLAN #1 1-5-10 RHS	1,085.00	1,085.00	31.91	27.29	6.908	CC
P_NRC 37-8 - P_NRC 37-8 - PLAN #1 1-5-10 RHS	1,100.00	1,099.99	31.94	27.26	6.828	ES
P_NRC 37-8 - P_NRC 37-8 - PLAN #1 1-5-10 RHS	1,200.00	1,199.90	33.91	28.88	6.744	SF
P_NRC 39-8 - P_NRC 39-8 - PLAN #1 1-5-10 RHS	1,085.00	1,085.00	63.82	59.20	13.817	CC, ES
P_NRC 39-8 - P_NRC 39-8 - PLAN #1 1-5-10 RHS	1,200.00	1,197.38	67.92	62.86	13.427	SF
ROCKY MOUNTAIN FUEL CO #2 EXISTING - ROCKY M	1,353.59	1,335.20	50.62	-3.62	0.933	Level 1, CC
ROCKY MOUNTAIN FUEL CO #2 EXISTING - ROCKY M	1,500.00	1,480.55	53.53	-6.79	0.887	Level 1, ES, SF

Offset Design WELD_NRC 20-8 PAD - P_NRC 10-8 - P_NRC 10-8 - PLAN #1 1-5-10 RHS												Offset Site Error:	0.00 ft
Survey Program: 0-MWVD												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	89.95	0.01	15.95	15.95				
100.00	100.00	100.00	100.00	0.10	0.10	89.95	0.01	15.95	15.95	15.76	0.19	83.509	
200.00	200.00	200.00	200.00	0.32	0.32	89.95	0.01	15.95	15.95	15.31	0.64	24.906	
300.00	300.00	300.00	300.00	0.55	0.55	89.95	0.01	15.95	15.95	14.86	1.09	14.636	
400.00	400.00	400.00	400.00	0.77	0.77	89.95	0.01	15.95	15.95	14.41	1.54	10.362	
500.00	500.00	500.00	500.00	0.99	0.99	89.95	0.01	15.95	15.95	13.97	1.99	8.021	
600.00	600.00	600.00	600.00	1.22	1.22	89.95	0.01	15.95	15.95	13.52	2.44	6.542	
700.00	700.00	700.00	700.00	1.44	1.44	89.95	0.01	15.95	15.95	13.07	2.89	5.524	
800.00	800.00	800.00	800.00	1.67	1.67	89.95	0.01	15.95	15.95	12.62	3.34	4.780	
900.00	900.00	900.00	900.00	1.89	1.89	89.95	0.01	15.95	15.95	12.17	3.79	4.213	
1,000.00	1,000.00	1,000.00	1,000.00	2.12	2.12	89.95	0.01	15.95	15.95	11.72	4.24	3.766	
1,085.00	1,085.00	1,085.00	1,085.00	2.31	2.31	89.95	0.01	15.95	15.95	11.34	4.62	3.454	CC
1,100.00	1,100.00	1,100.04	1,100.04	2.34	2.34	-144.56	0.05	15.93	15.97	11.28	4.68	3.410	ES

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

Company:	US ROCKIES REGION PLANNING	Local Co-ordinate Reference:	Well P_NRC 15-8
Project:	COLORADO NORTHERN ZONE - 83	TVD Reference:	WELL @ 5071.00ft (Original Well Elev)
Reference Site:	WELD_NRC 20-8 PAD	MD Reference:	WELL @ 5071.00ft (Original Well Elev)
Site Error:	0.00ft	North Reference:	True
Reference Well:	P_NRC 15-8	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00ft	Output errors are at	2.00 sigma
Reference Wellbore	P_NRC 15-8	Database:	EDM 2003.21 Single User Db
Reference Design:	PLAN #1 1-5-10 RHS	Offset TVD Reference:	Offset Datum

Offset Design WELD_NRC 20-8 PAD - P_NRC 10-8 - P_NRC 10-8 - PLAN #1 1-5-10 RHS												Offset Site Error:	0.00 ft
Survey Program: 0-MWD												Offset Well Error:	0.00 ft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	
1,200.00	1,199.97	1,200.25	1,200.22	2.52	2.56	-155.61	1.97	14.71	16.91	11.83	5.08	3.328 SF	
1,300.00	1,299.80	1,300.00	1,299.80	2.72	2.79	-176.67	6.81	11.62	21.52	16.03	5.48	3.924	
1,400.00	1,399.37	1,398.94	1,398.31	2.93	3.02	165.74	14.51	6.72	32.22	26.32	5.90	5.465	
1,500.00	1,498.55	1,496.69	1,495.27	3.16	3.26	155.20	24.92	0.09	49.08	42.76	6.33	7.759	
1,600.00	1,597.23	1,592.91	1,590.26	3.43	3.52	149.11	37.89	-8.17	71.49	64.71	6.78	10.543	
1,700.00	1,695.29	1,687.30	1,682.87	3.73	3.81	145.36	53.22	-17.93	99.00	91.73	7.27	13.625	
1,800.00	1,792.60	1,779.55	1,772.77	4.10	4.14	142.87	70.68	-29.05	131.32	123.53	7.79	16.864	
1,900.00	1,889.05	1,869.44	1,859.67	4.52	4.49	141.08	90.04	-41.37	168.22	159.87	8.35	20.146	
1,993.59	1,978.44	1,951.22	1,938.08	4.97	4.85	139.77	109.63	-53.86	206.74	197.82	8.92	23.180	
2,000.00	1,984.52	1,956.73	1,943.34	5.00	4.88	139.72	111.02	-54.74	209.51	200.55	8.96	23.376	
2,100.00	2,079.54	2,041.85	2,024.16	5.53	5.31	138.93	133.55	-69.09	253.68	244.01	9.67	26.246	
2,200.00	2,174.55	2,125.15	2,102.45	6.09	5.76	137.98	157.55	-84.37	299.65	289.24	10.41	28.791	
2,300.00	2,269.56	2,206.55	2,178.12	6.66	6.26	136.97	182.84	-100.47	347.41	336.23	11.18	31.066	
2,400.00	2,364.57	2,286.00	2,251.12	7.25	6.79	135.93	209.26	-117.30	396.97	384.97	11.99	33.105	
2,500.00	2,459.59	2,366.20	2,323.97	7.84	7.36	134.88	237.56	-135.32	448.21	435.37	12.83	34.924	
2,600.00	2,554.60	2,451.52	2,401.25	8.45	8.00	133.94	268.06	-154.74	499.93	486.21	13.72	36.430	
2,700.00	2,649.61	2,536.84	2,478.54	9.06	8.66	133.17	298.56	-174.17	551.74	537.11	14.62	37.729	
2,800.00	2,744.62	2,622.16	2,555.82	9.68	9.32	132.54	329.05	-193.59	603.60	588.07	15.54	38.854	
2,900.00	2,839.64	2,707.48	2,633.10	10.30	9.99	132.00	359.55	-213.01	655.52	639.06	16.46	39.835	
3,000.00	2,934.65	2,792.81	2,710.38	10.93	10.67	131.54	390.05	-232.43	707.47	690.08	17.38	40.695	
3,100.00	3,029.66	2,878.13	2,787.66	11.56	11.36	131.15	420.55	-251.85	759.44	741.12	18.32	41.454	
3,200.00	3,124.67	2,963.45	2,864.94	12.19	12.05	130.81	451.04	-271.27	811.44	792.18	19.26	42.128	
3,300.00	3,219.69	3,048.77	2,942.23	12.82	12.75	130.50	481.54	-290.69	863.46	843.25	20.21	42.731	
3,400.00	3,314.70	3,134.09	3,019.51	13.46	13.45	130.24	512.04	-310.12	915.50	894.34	21.16	43.271	
3,500.00	3,409.71	3,219.41	3,096.79	14.09	14.15	130.00	542.54	-329.54	967.54	945.43	22.11	43.759	
3,600.00	3,504.72	3,304.74	3,174.07	14.73	14.86	129.78	573.04	-348.96	1,019.60	996.53	23.07	44.200	
3,700.00	3,599.74	3,390.06	3,251.35	15.37	15.56	129.59	603.53	-368.38	1,071.67	1,047.64	24.03	44.601	
3,800.00	3,694.75	3,475.38	3,328.63	16.01	16.27	129.41	634.03	-387.80	1,123.75	1,098.75	24.99	44.967	
3,900.00	3,789.76	3,560.70	3,405.92	16.66	16.99	129.25	664.53	-407.22	1,175.83	1,149.87	25.96	45.302	
3,968.20	3,854.56	3,618.89	3,458.62	17.09	17.47	129.15	685.33	-420.47	1,211.35	1,184.74	26.61	45.515	
4,000.00	3,884.83	3,646.07	3,483.24	17.27	17.70	129.39	695.05	-426.66	1,227.82	1,200.87	26.95	45.557	
4,100.00	3,980.69	3,748.13	3,575.84	17.72	18.50	130.00	731.24	-449.71	1,278.18	1,250.18	28.00	45.656	
4,200.00	4,077.48	3,885.06	3,702.07	18.13	19.39	130.40	775.96	-478.19	1,324.07	1,295.00	29.08	45.539	
4,300.00	4,175.09	4,028.88	3,837.22	18.50	20.20	130.72	817.40	-504.58	1,364.52	1,334.45	30.08	45.366	
4,400.00	4,273.40	4,179.09	3,980.83	18.82	20.94	130.97	854.51	-528.21	1,399.18	1,368.17	31.01	45.114	
4,500.00	4,372.29	4,334.99	4,132.10	19.11	21.60	131.15	886.26	-548.43	1,427.72	1,395.86	31.86	44.810	
4,600.00	4,471.64	4,495.67	4,289.90	19.35	22.17	131.29	911.68	-564.61	1,449.88	1,417.27	32.61	44.465	
4,700.00	4,571.32	4,660.03	4,452.82	19.54	22.60	131.38	929.91	-576.22	1,465.40	1,432.18	33.23	44.105	
4,800.00	4,671.21	4,826.84	4,619.14	19.69	22.92	131.43	940.32	-582.86	1,474.14	1,440.43	33.72	43.721	
4,876.80	4,748.00	4,955.74	4,748.00	19.78	23.07	5.75	942.77	-584.41	1,476.18	1,442.18	34.00	43.411	
4,900.00	4,771.20	4,978.94	4,771.20	19.81	23.09	5.75	942.77	-584.41	1,476.18	1,442.12	34.06	43.341	
5,000.00	4,871.20	5,078.94	4,871.20	19.91	23.19	5.75	942.77	-584.41	1,476.18	1,441.87	34.31	43.024	
5,100.00	4,971.20	5,178.94	4,971.20	20.02	23.28	5.75	942.77	-584.41	1,476.18	1,441.61	34.57	42.704	
5,200.00	5,071.20	5,278.94	5,071.20	20.13	23.38	5.75	942.77	-584.41	1,476.18	1,441.35	34.83	42.384	
5,300.00	5,171.20	5,378.94	5,171.20	20.24	23.48	5.75	942.77	-584.41	1,476.18	1,441.09	35.09	42.064	
5,400.00	5,271.20	5,478.94	5,271.20	20.35	23.58	5.75	942.77	-584.41	1,476.18	1,440.82	35.36	41.745	
5,500.00	5,371.20	5,578.94	5,371.20	20.47	23.69	5.75	942.77	-584.41	1,476.18	1,440.55	35.63	41.426	
5,600.00	5,471.20	5,678.94	5,471.20	20.59	23.79	5.75	942.77	-584.41	1,476.18	1,440.27	35.91	41.108	
5,700.00	5,571.20	5,778.94	5,571.20	20.70	23.90	5.75	942.77	-584.41	1,476.18	1,439.99	36.19	40.791	
5,800.00	5,671.20	5,878.94	5,671.20	20.83	24.01	5.75	942.77	-584.41	1,476.18	1,439.71	36.47	40.474	
5,900.00	5,771.20	5,978.94	5,771.20	20.95	24.12	5.75	942.77	-584.41	1,476.18	1,439.42	36.76	40.160	
6,000.00	5,871.20	6,078.94	5,871.20	21.07	24.23	5.75	942.77	-584.41	1,476.18	1,439.13	37.05	39.846	

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 15-8
Project:	COLORADO NORTHERN ZONE - 83	TVD Reference:	WELL @ 5071.00ft (Original Well Elev)
Reference Site:	WELD_NRC 20-8 PAD	MD Reference:	WELL @ 5071.00ft (Original Well Elev)
Site Error:	0.00ft	North Reference:	True
Reference Well:	P_NRC 15-8	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00ft	Output errors are at	2.00 sigma
Reference Wellbore	P_NRC 15-8	Database:	EDM 2003.21 Single User Db
Reference Design:	PLAN #1 1-5-10 RHS	Offset TVD Reference:	Offset Datum

Offset Design WELD_NRC 20-8 PAD - P_NRC 10-8 - P_NRC 10-8 - PLAN #1 1-5-10 RHS												Offset Site Error:	0.00 ft
Survey Program: 0-MWD												Offset Well Error:	0.00 ft
Reference		Offset		Semi Major Axis			Distance						
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning
6,100.00	5,971.20	6,178.94	5,971.20	21.20	24.35	5.75	942.77	-584.41	1,476.18	1,438.84	37.34	39.534	
6,200.00	6,071.20	6,278.94	6,071.20	21.32	24.46	5.75	942.77	-584.41	1,476.18	1,438.55	37.63	39.224	
6,300.00	6,171.20	6,378.94	6,171.20	21.45	24.58	5.75	942.77	-584.41	1,476.18	1,438.25	37.93	38.915	
6,400.00	6,271.20	6,478.94	6,271.20	21.58	24.70	5.75	942.77	-584.41	1,476.18	1,437.95	38.23	38.608	
6,500.00	6,371.20	6,578.94	6,371.20	21.72	24.82	5.75	942.77	-584.41	1,476.18	1,437.64	38.54	38.304	
6,600.00	6,471.20	6,678.94	6,471.20	21.85	24.94	5.75	942.77	-584.41	1,476.18	1,437.34	38.85	38.001	
6,700.00	6,571.20	6,778.94	6,571.20	21.98	25.06	5.75	942.77	-584.41	1,476.18	1,437.03	39.16	37.700	
6,800.00	6,671.20	6,878.94	6,671.20	22.12	25.18	5.75	942.77	-584.41	1,476.18	1,436.71	39.47	37.401	
6,900.00	6,771.20	6,978.94	6,771.20	22.26	25.31	5.75	942.77	-584.41	1,476.18	1,436.40	39.78	37.105	
7,000.00	6,871.20	7,078.94	6,871.20	22.40	25.44	5.75	942.77	-584.41	1,476.18	1,436.08	40.10	36.811	
7,100.00	6,971.20	7,178.94	6,971.20	22.54	25.56	5.75	942.77	-584.41	1,476.18	1,435.76	40.42	36.519	
7,200.00	7,071.20	7,278.94	7,071.20	22.68	25.69	5.75	942.77	-584.41	1,476.18	1,435.44	40.74	36.230	
7,300.00	7,171.20	7,378.94	7,171.20	22.82	25.82	5.75	942.77	-584.41	1,476.18	1,435.11	41.07	35.943	
7,400.00	7,271.20	7,478.94	7,271.20	22.97	25.96	5.75	942.77	-584.41	1,476.18	1,434.78	41.40	35.659	
7,500.00	7,371.20	7,578.94	7,371.20	23.11	26.09	5.75	942.77	-584.41	1,476.18	1,434.45	41.73	35.377	
7,600.00	7,471.20	7,678.94	7,471.20	23.26	26.22	5.75	942.77	-584.41	1,476.18	1,434.12	42.06	35.098	
7,700.00	7,571.20	7,778.94	7,571.20	23.41	26.36	5.75	942.77	-584.41	1,476.18	1,433.79	42.39	34.821	
7,800.00	7,671.20	7,878.94	7,671.20	23.56	26.50	5.75	942.77	-584.41	1,476.18	1,433.45	42.73	34.547	
7,900.00	7,771.20	7,978.94	7,771.20	23.71	26.64	5.75	942.77	-584.41	1,476.18	1,433.11	43.07	34.276	
8,000.00	7,871.20	8,078.94	7,871.20	23.86	26.77	5.75	942.77	-584.41	1,476.18	1,432.77	43.41	34.007	
8,100.00	7,971.20	8,178.94	7,971.20	24.01	26.92	5.75	942.77	-584.41	1,476.18	1,432.43	43.75	33.741	
8,200.00	8,071.20	8,278.94	8,071.20	24.17	27.06	5.75	942.77	-584.41	1,476.18	1,432.09	44.09	33.478	
8,300.00	8,171.20	8,378.94	8,171.20	24.32	27.20	5.75	942.77	-584.41	1,476.18	1,431.74	44.44	33.217	
8,400.00	8,271.20	8,478.94	8,271.20	24.48	27.34	5.75	942.77	-584.41	1,476.18	1,431.39	44.79	32.959	
8,500.00	8,371.20	8,578.94	8,371.20	24.64	27.49	5.75	942.77	-584.41	1,476.18	1,431.04	45.14	32.704	
8,600.00	8,471.20	8,678.94	8,471.20	24.80	27.63	5.75	942.77	-584.41	1,476.18	1,430.69	45.49	32.451	
8,696.80	8,568.00	8,775.74	8,568.00	24.95	27.78	5.75	942.77	-584.41	1,476.18	1,430.35	45.83	32.209	

Company:	US ROCKIES REGION PLANNING	Local Co-ordinate Reference:	Well P_NRC 15-8
Project:	COLORADO NORTHERN ZONE - 83	TVD Reference:	WELL @ 5071.00ft (Original Well Elev)
Reference Site:	WELD_NRC 20-8 PAD	MD Reference:	WELL @ 5071.00ft (Original Well Elev)
Site Error:	0.00ft	North Reference:	True
Reference Well:	P_NRC 15-8	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00ft	Output errors are at	2.00 sigma
Reference Wellbore	P_NRC 15-8	Database:	EDM 2003.21 Single User Db
Reference Design:	PLAN #1 1-5-10 RHS	Offset TVD Reference:	Offset Datum

Offset Design WELD_NRC 20-8 PAD - P_NRC 16-8 - P_NRC 16-8 - PLAN #1 1-5-10 RHS												Offset Site Error:	0.00 ft
Survey Program: 0-MWD												Offset Well Error:	0.00 ft
Reference	Offset	Semi Major Axis		Distance									
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning
0.00	0.00	0.00	0.00	0.00	0.00	90.44	-0.37	47.86	47.86				
100.00	100.00	100.00	100.00	0.10	0.10	90.44	-0.37	47.86	47.86	47.67	0.19	250.534	
200.00	200.00	200.00	200.00	0.32	0.32	90.44	-0.37	47.86	47.86	47.22	0.64	74.721	
300.00	300.00	300.00	300.00	0.55	0.55	90.44	-0.37	47.86	47.86	46.77	1.09	43.908	
400.00	400.00	400.00	400.00	0.77	0.77	90.44	-0.37	47.86	47.86	46.33	1.54	31.088	
500.00	500.00	500.00	500.00	0.99	0.99	90.44	-0.37	47.86	47.86	45.88	1.99	24.063	
600.00	600.00	600.00	600.00	1.22	1.22	90.44	-0.37	47.86	47.86	45.43	2.44	19.627	
700.00	700.00	700.00	700.00	1.44	1.44	90.44	-0.37	47.86	47.86	44.98	2.89	16.572	
800.00	800.00	800.00	800.00	1.67	1.67	90.44	-0.37	47.86	47.86	44.53	3.34	14.340	
900.00	900.00	900.00	900.00	1.89	1.89	90.44	-0.37	47.86	47.86	44.08	3.79	12.638	
1,000.00	1,000.00	1,000.00	1,000.00	2.12	2.12	90.44	-0.37	47.86	47.86	43.63	4.24	11.297	
1,085.00	1,085.00	1,085.00	1,085.00	2.31	2.31	90.44	-0.37	47.86	47.86	43.25	4.62	10.363 CC, ES	
1,100.00	1,100.00	1,099.78	1,099.78	2.34	2.34	-143.87	-0.39	47.90	47.93	43.25	4.68	10.244 SF	
1,200.00	1,199.97	1,198.22	1,198.19	2.52	2.52	-144.11	-1.47	49.81	51.72	46.68	5.04	10.261	
1,300.00	1,299.80	1,296.07	1,295.88	2.72	2.72	-144.56	-4.18	54.63	61.31	55.90	5.41	11.335	
1,400.00	1,399.37	1,392.87	1,392.28	2.93	2.92	-145.02	-8.48	62.26	76.66	70.87	5.79	13.248	
1,500.00	1,498.55	1,488.14	1,486.82	3.16	3.14	-145.37	-14.27	72.54	97.67	91.49	6.18	15.816	
1,600.00	1,597.23	1,581.47	1,578.98	3.43	3.39	-145.58	-21.44	85.25	124.21	117.63	6.58	18.880	
1,700.00	1,695.29	1,672.44	1,668.33	3.73	3.67	-145.66	-29.83	100.15	156.14	149.13	7.01	22.284	
1,800.00	1,792.60	1,760.73	1,754.48	4.10	3.97	-145.62	-39.31	116.97	193.27	185.81	7.46	25.903	
1,900.00	1,889.05	1,846.13	1,837.20	4.52	4.30	-145.50	-49.72	135.43	235.40	227.46	7.94	29.636	
1,993.59	1,978.44	1,929.33	1,917.50	4.97	4.66	-145.49	-60.42	154.43	278.20	269.76	8.44	32.966	
2,000.00	1,984.52	1,934.98	1,922.95	5.00	4.69	-145.54	-61.15	155.72	281.21	272.73	8.48	33.172	
2,100.00	2,079.54	2,023.23	2,008.11	5.53	5.09	-146.12	-72.50	175.87	328.16	319.08	9.09	36.115	
2,200.00	2,174.55	2,111.48	2,093.28	6.09	5.51	-146.56	-83.86	196.02	375.14	365.42	9.72	38.602	
2,300.00	2,269.56	2,199.73	2,178.44	6.66	5.94	-146.91	-95.22	216.18	422.13	411.76	10.37	40.714	
2,400.00	2,364.57	2,287.97	2,263.60	7.25	6.38	-147.18	-106.57	236.33	469.12	458.09	11.03	42.520	
2,500.00	2,459.59	2,376.22	2,348.77	7.84	6.82	-147.40	-117.93	256.48	516.13	504.42	11.71	44.077	
2,600.00	2,554.60	2,464.47	2,433.93	8.45	7.28	-147.59	-129.28	276.63	563.14	550.74	12.40	45.428	
2,700.00	2,649.61	2,552.72	2,519.09	9.06	7.73	-147.75	-140.64	296.78	610.15	597.06	13.09	46.609	
2,800.00	2,744.62	2,640.97	2,604.25	9.68	8.20	-147.88	-151.99	316.93	657.17	643.37	13.79	47.649	
2,900.00	2,839.64	2,729.21	2,689.42	10.30	8.66	-148.00	-163.35	337.08	704.18	689.69	14.50	48.569	
3,000.00	2,934.65	2,817.46	2,774.58	10.93	9.13	-148.10	-174.71	357.23	751.21	736.00	15.21	49.388	
3,100.00	3,029.66	2,905.71	2,859.74	11.56	9.61	-148.19	-186.06	377.39	798.23	782.30	15.93	50.122	
3,200.00	3,124.67	2,993.96	2,944.91	12.19	10.08	-148.27	-197.42	397.54	845.25	828.61	16.64	50.782	
3,300.00	3,219.69	3,082.21	3,030.07	12.82	10.56	-148.35	-208.77	417.69	892.28	874.91	17.37	51.380	
3,400.00	3,314.70	3,170.45	3,115.23	13.46	11.03	-148.41	-220.13	437.84	939.30	921.21	18.09	51.923	
3,500.00	3,409.71	3,258.70	3,200.39	14.09	11.51	-148.47	-231.49	457.99	986.33	967.51	18.82	52.419	
3,600.00	3,504.72	3,346.95	3,285.56	14.73	12.00	-148.52	-242.84	478.14	1,033.36	1,013.81	19.54	52.874	
3,700.00	3,599.74	3,435.20	3,370.72	15.37	12.48	-148.57	-254.20	498.29	1,080.38	1,060.11	20.27	53.293	
3,800.00	3,694.75	3,523.45	3,455.88	16.01	12.96	-148.62	-265.55	518.45	1,127.41	1,106.41	21.00	53.680	
3,900.00	3,789.76	3,611.70	3,541.04	16.66	13.44	-148.66	-276.91	538.60	1,174.44	1,152.71	21.73	54.038	
3,968.20	3,854.56	3,671.88	3,599.13	17.09	13.78	-148.68	-284.65	552.34	1,206.52	1,184.29	22.23	54.268	
4,000.00	3,884.83	3,700.01	3,628.28	17.27	13.93	-148.66	-288.27	558.76	1,221.34	1,198.85	22.49	54.309	
4,100.00	3,980.69	3,789.38	3,712.52	17.72	14.42	-149.34	-299.77	579.17	1,266.19	1,242.95	23.24	54.483	
4,200.00	4,077.48	3,880.02	3,799.99	18.13	14.92	-149.69	-311.44	599.87	1,308.35	1,284.38	23.97	54.577	
4,300.00	4,175.09	3,971.82	3,888.58	18.50	15.43	-149.92	-323.25	620.83	1,347.76	1,323.08	24.68	54.608	
4,400.00	4,273.40	4,064.68	3,978.19	18.82	15.94	-150.05	-335.20	642.03	1,384.40	1,359.04	25.36	54.587	
4,500.00	4,372.29	4,157.53	4,106.81	19.11	16.59	-149.98	-351.52	671.00	1,417.45	1,391.35	26.10	54.298	
4,600.00	4,471.64	4,250.36	4,266.27	19.35	17.15	-149.84	-367.64	699.60	1,443.62	1,416.85	26.77	53.924	
4,700.00	4,571.32	4,348.36	4,432.48	19.54	17.62	-149.74	-379.58	720.79	1,462.27	1,434.92	27.35	53.462	
4,800.00	4,671.21	4,446.89	4,603.35	19.69	17.97	-149.67	-386.81	733.63	1,473.14	1,445.30	27.84	52.916	

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 15-8
Project:	COLORADO NORTHERN ZONE - 83	TVD Reference:	WELL @ 5071.00ft (Original Well Elev)
Reference Site:	WELD_NRC 20-8 PAD	MD Reference:	WELL @ 5071.00ft (Original Well Elev)
Site Error:	0.00ft	North Reference:	True
Reference Well:	P_NRC 15-8	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00ft	Output errors are at	2.00 sigma
Reference Wellbore	P_NRC 15-8	Database:	EDM 2003.21 Single User Db
Reference Design:	PLAN #1 1-5-10 RHS	Offset TVD Reference:	Offset Datum

Offset Design WELD_NRC 20-8 PAD - P_NRC 16-8 - P_NRC 16-8 - PLAN #1 1-5-10 RHS												Offset Site Error:	0.00 ft
Survey Program: 0-MWD												Offset Well Error:	0.00 ft
Reference		Offset		Semi Major Axis			Distance						
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning
4,876.80	4,748.00	4,832.87	4,736.25	19.78	18.16	84.67	-388.96	737.44	1,476.10	1,447.95	28.15	52.430	
4,900.00	4,771.20	4,867.83	4,771.20	19.81	18.20	84.68	-389.03	737.55	1,476.16	1,447.93	28.24	52.275	
5,000.00	4,871.20	4,967.83	4,871.20	19.91	18.32	84.68	-389.03	737.55	1,476.16	1,447.64	28.52	51.751	
5,100.00	4,971.20	5,067.83	4,971.20	20.02	18.44	84.68	-389.03	737.55	1,476.16	1,447.35	28.81	51.231	
5,200.00	5,071.20	5,167.83	5,071.20	20.13	18.56	84.68	-389.03	737.55	1,476.16	1,447.06	29.11	50.715	
5,300.00	5,171.20	5,267.83	5,171.20	20.24	18.68	84.68	-389.03	737.55	1,476.16	1,446.76	29.40	50.202	
5,400.00	5,271.20	5,367.83	5,271.20	20.35	18.81	84.68	-389.03	737.55	1,476.16	1,446.46	29.71	49.693	
5,500.00	5,371.20	5,467.83	5,371.20	20.47	18.94	84.68	-389.03	737.55	1,476.16	1,446.15	30.01	49.188	
5,600.00	5,471.20	5,567.83	5,471.20	20.59	19.06	84.68	-389.03	737.55	1,476.16	1,445.85	30.32	48.687	
5,700.00	5,571.20	5,667.83	5,571.20	20.70	19.19	84.68	-389.03	737.55	1,476.16	1,445.53	30.63	48.192	
5,800.00	5,671.20	5,767.83	5,671.20	20.83	19.33	84.68	-389.03	737.55	1,476.16	1,445.22	30.95	47.700	
5,900.00	5,771.20	5,867.83	5,771.20	20.95	19.46	84.68	-389.03	737.55	1,476.16	1,444.90	31.27	47.214	
6,000.00	5,871.20	5,967.83	5,871.20	21.07	19.60	84.68	-389.03	737.55	1,476.16	1,444.58	31.59	46.733	
6,100.00	5,971.20	6,067.83	5,971.20	21.20	19.73	84.68	-389.03	737.55	1,476.16	1,444.25	31.91	46.257	
6,200.00	6,071.20	6,167.83	6,071.20	21.32	19.87	84.68	-389.03	737.55	1,476.16	1,443.92	32.24	45.787	
6,300.00	6,171.20	6,267.83	6,171.20	21.45	20.01	84.68	-389.03	737.55	1,476.16	1,443.59	32.57	45.322	
6,400.00	6,271.20	6,367.83	6,271.20	21.58	20.15	84.68	-389.03	737.55	1,476.16	1,443.26	32.90	44.862	
6,500.00	6,371.20	6,467.83	6,371.20	21.72	20.30	84.68	-389.03	737.55	1,476.16	1,442.92	33.24	44.408	
6,600.00	6,471.20	6,567.83	6,471.20	21.85	20.44	84.68	-389.03	737.55	1,476.16	1,442.58	33.58	43.960	
6,700.00	6,571.20	6,667.83	6,571.20	21.98	20.59	84.68	-389.03	737.55	1,476.16	1,442.24	33.92	43.517	
6,800.00	6,671.20	6,767.83	6,671.20	22.12	20.74	84.68	-389.03	737.55	1,476.16	1,441.90	34.27	43.080	
6,900.00	6,771.20	6,867.83	6,771.20	22.26	20.89	84.68	-389.03	737.55	1,476.16	1,441.55	34.61	42.649	
7,000.00	6,871.20	6,967.83	6,871.20	22.40	21.04	84.68	-389.03	737.55	1,476.16	1,441.20	34.96	42.223	
7,100.00	6,971.20	7,067.83	6,971.20	22.54	21.19	84.68	-389.03	737.55	1,476.16	1,440.85	35.31	41.803	
7,200.00	7,071.20	7,167.83	7,071.20	22.68	21.34	84.68	-389.03	737.55	1,476.16	1,440.50	35.67	41.389	
7,300.00	7,171.20	7,267.83	7,171.20	22.82	21.49	84.68	-389.03	737.55	1,476.16	1,440.14	36.02	40.981	
7,400.00	7,271.20	7,367.83	7,271.20	22.97	21.65	84.68	-389.03	737.55	1,476.16	1,439.79	36.38	40.578	
7,500.00	7,371.20	7,467.83	7,371.20	23.11	21.81	84.68	-389.03	737.55	1,476.16	1,439.43	36.74	40.181	
7,600.00	7,471.20	7,567.83	7,471.20	23.26	21.96	84.68	-389.03	737.55	1,476.16	1,439.06	37.10	39.789	
7,700.00	7,571.20	7,667.83	7,571.20	23.41	22.12	84.68	-389.03	737.55	1,476.16	1,438.70	37.46	39.403	
7,800.00	7,671.20	7,767.83	7,671.20	23.56	22.28	84.68	-389.03	737.55	1,476.16	1,438.34	37.83	39.023	
7,900.00	7,771.20	7,867.83	7,771.20	23.71	22.45	84.68	-389.03	737.55	1,476.16	1,437.97	38.20	38.648	
8,000.00	7,871.20	7,967.83	7,871.20	23.86	22.61	84.68	-389.03	737.55	1,476.16	1,437.60	38.56	38.278	
8,100.00	7,971.20	8,067.83	7,971.20	24.01	22.77	84.68	-389.03	737.55	1,476.16	1,437.23	38.93	37.914	
8,200.00	8,071.20	8,167.83	8,071.20	24.17	22.94	84.68	-389.03	737.55	1,476.16	1,436.86	39.31	37.555	
8,300.00	8,171.20	8,267.83	8,171.20	24.32	23.10	84.68	-389.03	737.55	1,476.16	1,436.48	39.68	37.201	
8,400.00	8,271.20	8,367.83	8,271.20	24.48	23.27	84.68	-389.03	737.55	1,476.16	1,436.11	40.06	36.852	
8,500.00	8,371.20	8,467.83	8,371.20	24.64	23.43	84.68	-389.03	737.55	1,476.16	1,435.73	40.43	36.509	
8,600.00	8,471.20	8,567.83	8,471.20	24.80	23.60	84.68	-389.03	737.55	1,476.16	1,435.35	40.81	36.170	
8,663.14	8,534.34	8,630.97	8,534.34	24.90	23.71	84.68	-389.03	737.55	1,476.16	1,435.11	41.05	35.959	
8,696.80	8,568.00	8,660.63	8,564.00	24.95	23.76	84.68	-389.03	737.55	1,476.17	1,435.00	41.17	35.854	

Company:	US ROCKIES REGION PLANNING	Local Co-ordinate Reference:	Well P_NRC 15-8
Project:	COLORADO NORTHERN ZONE - 83	TVD Reference:	WELL @ 5071.00ft (Original Well Elev)
Reference Site:	WELD_NRC 20-8 PAD	MD Reference:	WELL @ 5071.00ft (Original Well Elev)
Site Error:	0.00ft	North Reference:	True
Reference Well:	P_NRC 15-8	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00ft	Output errors are at	2.00 sigma
Reference Wellbore	P_NRC 15-8	Database:	EDM 2003.21 Single User Db
Reference Design:	PLAN #1 1-5-10 RHS	Offset TVD Reference:	Offset Datum

Offset Design WELD_NRC 20-8 PAD - P_NRC 23-8 - P_NRC 23-8 - PLAN #1 1-5-10 RHS												Offset Site Error:	0.00 ft
Survey Program: 0-MWD												Offset Well Error:	0.00 ft
Reference	Offset	Semi Major Axis		Distance									
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning
0.00	0.00	0.00	0.00	0.00	0.00	-88.71	0.36	-16.23	16.24				
100.00	100.00	100.00	100.00	0.10	0.10	-88.71	0.36	-16.23	16.24	16.05	0.19	84.995	
200.00	200.00	200.00	200.00	0.32	0.32	-88.71	0.36	-16.23	16.24	15.60	0.64	25.349	
300.00	300.00	300.00	300.00	0.55	0.55	-88.71	0.36	-16.23	16.24	15.15	1.09	14.896	
400.00	400.00	400.00	400.00	0.77	0.77	-88.71	0.36	-16.23	16.24	14.70	1.54	10.547	
500.00	500.00	500.00	500.00	0.99	0.99	-88.71	0.36	-16.23	16.24	14.25	1.99	8.163	
600.00	600.00	600.00	600.00	1.22	1.22	-88.71	0.36	-16.23	16.24	13.80	2.44	6.659	
700.00	700.00	700.00	700.00	1.44	1.44	-88.71	0.36	-16.23	16.24	13.35	2.89	5.622	
800.00	800.00	800.00	800.00	1.67	1.67	-88.71	0.36	-16.23	16.24	12.90	3.34	4.865	
900.00	900.00	900.00	900.00	1.89	1.89	-88.71	0.36	-16.23	16.24	12.45	3.79	4.288	
1,000.00	1,000.00	1,000.00	1,000.00	2.12	2.12	-88.71	0.36	-16.23	16.24	12.00	4.24	3.833	
1,085.00	1,085.00	1,085.00	1,085.00	2.31	2.31	-88.71	0.36	-16.23	16.24	11.62	4.62	3.516 CC	
1,100.00	1,100.00	1,099.92	1,099.92	2.34	2.34	37.09	0.37	-16.27	16.25	11.56	4.68	3.471 ES	
1,200.00	1,199.97	1,199.33	1,199.30	2.52	2.55	43.26	0.87	-18.46	16.75	11.68	5.06	3.307 SF	
1,300.00	1,299.80	1,298.61	1,298.41	2.72	2.76	56.88	2.13	-24.00	18.79	13.33	5.46	3.442	
1,400.00	1,399.37	1,397.63	1,397.01	2.93	2.98	72.32	4.14	-32.85	23.70	17.82	5.88	4.028	
1,500.00	1,498.55	1,496.28	1,494.86	3.16	3.23	84.61	6.89	-44.97	32.15	25.80	6.35	5.062	
1,600.00	1,597.23	1,594.43	1,591.75	3.43	3.50	92.92	10.37	-60.29	44.06	37.19	6.87	6.412	
1,700.00	1,695.29	1,691.99	1,687.46	3.73	3.81	98.30	14.56	-78.71	59.18	51.72	7.46	7.935	
1,800.00	1,792.60	1,788.85	1,781.79	4.10	4.16	101.82	19.42	-100.13	77.29	69.17	8.12	9.515	
1,900.00	1,889.05	1,884.91	1,874.56	4.52	4.55	104.16	24.94	-124.43	98.24	89.37	8.88	11.068	
1,993.59	1,978.44	1,975.71	1,961.76	4.97	4.97	106.18	30.55	-149.09	119.77	110.10	9.67	12.385	
2,000.00	1,984.52	1,981.92	1,967.73	5.00	5.00	106.36	30.93	-150.78	121.28	111.55	9.73	12.467	
2,100.00	2,079.54	2,078.93	2,060.90	5.53	5.47	108.74	36.92	-177.15	144.96	134.31	10.65	13.614	
2,200.00	2,174.55	2,175.94	2,154.06	6.09	5.96	110.45	42.91	-203.51	168.81	157.20	11.60	14.548	
2,300.00	2,269.56	2,272.95	2,247.22	6.66	6.46	111.74	48.90	-229.88	192.76	180.17	12.59	15.313	
2,400.00	2,364.57	2,369.96	2,340.39	7.25	6.98	112.74	54.89	-256.24	216.79	203.20	13.59	15.947	
2,500.00	2,459.59	2,466.97	2,433.55	7.84	7.50	113.54	60.88	-282.61	240.87	226.25	14.62	16.477	
2,600.00	2,554.60	2,563.97	2,526.72	8.45	8.03	114.19	66.87	-308.97	264.98	249.33	15.66	16.926	
2,700.00	2,649.61	2,660.98	2,619.88	9.06	8.56	114.74	72.86	-335.34	289.12	272.42	16.70	17.309	
2,800.00	2,744.62	2,757.99	2,713.05	9.68	9.10	115.20	78.84	-361.70	313.28	295.52	17.76	17.639	
2,900.00	2,839.64	2,855.00	2,806.21	10.30	9.64	115.60	84.83	-388.06	337.46	318.64	18.83	17.925	
3,000.00	2,934.65	2,952.01	2,899.38	10.93	10.19	115.94	90.82	-414.43	361.65	341.76	19.90	18.175	
3,100.00	3,029.66	3,049.02	2,992.54	11.56	10.73	116.24	96.81	-440.79	385.86	364.88	20.98	18.396	
3,200.00	3,124.67	3,146.03	3,085.71	12.19	11.29	116.51	102.80	-467.16	410.07	388.01	22.06	18.591	
3,300.00	3,219.69	3,243.03	3,178.87	12.82	11.84	116.74	108.79	-493.52	434.29	411.14	23.14	18.766	
3,400.00	3,314.70	3,340.04	3,272.04	13.46	12.39	116.95	114.78	-519.89	458.51	434.28	24.23	18.922	
3,500.00	3,409.71	3,437.05	3,365.20	14.09	12.95	117.14	120.77	-546.25	482.74	457.42	25.32	19.063	
3,600.00	3,504.72	3,534.06	3,458.37	14.73	13.51	117.31	126.76	-572.62	506.98	480.56	26.42	19.190	
3,700.00	3,599.74	3,631.07	3,551.53	15.37	14.06	117.47	132.75	-598.98	531.21	503.70	27.52	19.306	
3,800.00	3,694.75	3,728.08	3,644.70	16.01	14.62	117.61	138.74	-625.35	555.45	526.84	28.61	19.412	
3,900.00	3,789.76	3,825.08	3,737.86	16.66	15.19	117.74	144.73	-651.71	579.70	549.98	29.72	19.509	
3,968.20	3,854.56	3,891.25	3,801.40	17.09	15.57	117.82	148.81	-669.69	596.24	565.77	30.47	19.570	
4,000.00	3,884.83	3,922.11	3,831.05	17.27	15.75	117.98	150.72	-678.08	603.87	573.06	30.81	19.601	
4,100.00	3,980.69	4,019.43	3,924.51	17.72	16.31	118.27	156.73	-704.53	626.81	595.01	31.80	19.711	
4,200.00	4,077.48	4,117.03	4,018.24	18.13	16.88	118.26	162.75	-731.06	648.16	615.39	32.77	19.778	
4,300.00	4,175.09	4,214.78	4,112.12	18.50	17.44	117.98	168.79	-757.62	667.95	634.23	33.71	19.812	
4,400.00	4,273.40	4,312.57	4,206.03	18.82	18.01	117.45	174.83	-784.20	686.24	651.62	34.62	19.821	
4,500.00	4,372.29	4,410.28	4,299.87	19.11	18.58	116.69	180.86	-810.75	703.14	667.65	35.49	19.814	
4,600.00	4,471.64	4,507.79	4,393.52	19.35	19.15	115.71	186.88	-837.26	718.79	682.49	36.30	19.800	
4,700.00	4,571.32	4,604.99	4,486.86	19.54	19.72	114.53	192.88	-863.67	733.35	696.29	37.06	19.789	
4,800.00	4,671.21	4,701.74	4,579.78	19.69	20.28	113.16	198.85	-889.97	747.02	709.27	37.75	19.788	

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 15-8
Project:	COLORADO NORTHERN ZONE - 83	TVD Reference:	WELL @ 5071.00ft (Original Well Elev)
Reference Site:	WELD_NRC 20-8 PAD	MD Reference:	WELL @ 5071.00ft (Original Well Elev)
Site Error:	0.00ft	North Reference:	True
Reference Well:	P_NRC 15-8	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00ft	Output errors are at	2.00 sigma
Reference Wellbore	P_NRC 15-8	Database:	EDM 2003.21 Single User Db
Reference Design:	PLAN #1 1-5-10 RHS	Offset TVD Reference:	Offset Datum

Offset Design WELD_NRC 20-8 PAD - P_NRC 23-8 - P_NRC 23-8 - PLAN #1 1-5-10 RHS												Offset Site Error:	0.00 ft
Survey Program: 0-MWD												Offset Well Error:	0.00 ft
Reference		Offset		Semi Major Axis			Distance						
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning
4,876.80	4,748.00	4,775.68	4,650.79	19.78	20.71	-13.70	203.42	-910.06	757.04	718.81	38.23	19.800	
4,900.00	4,771.20	4,797.96	4,672.19	19.81	20.84	-14.12	204.79	-916.12	760.04	721.67	38.37	19.807	
5,000.00	4,871.20	4,894.00	4,764.42	19.91	21.40	-15.91	210.72	-942.22	773.46	734.51	38.95	19.858	
5,100.00	4,971.20	4,990.04	4,856.65	20.02	21.96	-17.63	216.65	-968.32	787.64	748.15	39.49	19.943	
5,200.00	5,071.20	5,086.07	4,948.89	20.13	22.52	-19.30	222.58	-994.42	802.54	762.52	40.01	20.057	
5,300.00	5,171.20	5,182.11	5,041.12	20.24	23.09	-20.91	228.51	-1,020.52	818.11	777.60	40.51	20.198	
5,400.00	5,271.20	5,278.15	5,133.35	20.35	23.65	-22.46	234.44	-1,046.62	834.32	793.35	40.97	20.362	
5,500.00	5,371.20	5,374.19	5,225.58	20.47	24.21	-23.95	240.37	-1,072.72	851.14	809.72	41.42	20.548	
5,600.00	5,471.20	5,470.22	5,317.82	20.59	24.77	-25.39	246.30	-1,098.82	868.53	826.68	41.85	20.753	
5,700.00	5,571.20	5,566.26	5,410.05	20.70	25.33	-26.78	252.23	-1,124.92	886.45	844.19	42.26	20.975	
5,800.00	5,671.20	5,662.30	5,502.28	20.83	25.90	-28.10	258.16	-1,151.03	904.88	862.22	42.66	21.213	
5,900.00	5,771.20	5,759.80	5,595.92	20.95	26.46	-29.40	264.18	-1,177.52	923.78	880.74	43.04	21.463	
6,000.00	5,871.20	5,884.68	5,716.65	21.07	27.01	-30.86	271.24	-1,208.63	941.50	898.14	43.36	21.715	
6,100.00	5,971.20	6,012.24	5,841.28	21.20	27.47	-32.05	277.25	-1,235.08	956.52	912.88	43.64	21.919	
6,200.00	6,071.20	6,142.05	5,969.22	21.32	27.86	-32.97	282.10	-1,256.41	968.59	924.68	43.91	22.057	
6,300.00	6,171.20	6,273.62	6,099.77	21.45	28.18	-33.64	285.70	-1,272.24	977.52	933.33	44.19	22.123	
6,400.00	6,271.20	6,406.42	6,232.16	21.58	28.42	-34.05	287.98	-1,282.28	983.17	938.71	44.46	22.114	
6,500.00	6,371.20	6,539.89	6,365.56	21.72	28.59	-34.21	288.90	-1,286.33	985.44	940.71	44.73	22.030	
6,600.00	6,471.20	6,645.54	6,471.20	21.85	28.70	-34.22	288.92	-1,286.42	985.49	940.49	44.99	21.902	
6,700.00	6,571.20	6,745.54	6,571.20	21.98	28.81	-34.22	288.92	-1,286.42	985.49	940.23	45.26	21.774	
6,800.00	6,671.20	6,845.54	6,671.20	22.12	28.92	-34.22	288.92	-1,286.42	985.49	939.96	45.53	21.646	
6,900.00	6,771.20	6,945.54	6,771.20	22.26	29.03	-34.22	288.92	-1,286.42	985.49	939.69	45.80	21.518	
7,000.00	6,871.20	7,045.54	6,871.20	22.40	29.14	-34.22	288.92	-1,286.42	985.49	939.42	46.07	21.391	
7,100.00	6,971.20	7,145.54	6,971.20	22.54	29.25	-34.22	288.92	-1,286.42	985.49	939.14	46.35	21.263	
7,200.00	7,071.20	7,245.54	7,071.20	22.68	29.37	-34.22	288.92	-1,286.42	985.49	938.86	46.63	21.136	
7,300.00	7,171.20	7,345.54	7,171.20	22.82	29.48	-34.22	288.92	-1,286.42	985.49	938.58	46.91	21.009	
7,400.00	7,271.20	7,445.54	7,271.20	22.97	29.60	-34.22	288.92	-1,286.42	985.49	938.30	47.19	20.883	
7,500.00	7,371.20	7,545.54	7,371.20	23.11	29.72	-34.22	288.92	-1,286.42	985.49	938.01	47.48	20.757	
7,600.00	7,471.20	7,645.54	7,471.20	23.26	29.84	-34.22	288.92	-1,286.42	985.49	937.72	47.77	20.631	
7,700.00	7,571.20	7,745.54	7,571.20	23.41	29.96	-34.22	288.92	-1,286.42	985.49	937.43	48.06	20.506	
7,800.00	7,671.20	7,845.54	7,671.20	23.56	30.08	-34.22	288.92	-1,286.42	985.49	937.14	48.35	20.381	
7,900.00	7,771.20	7,945.54	7,771.20	23.71	30.21	-34.22	288.92	-1,286.42	985.49	936.84	48.65	20.257	
8,000.00	7,871.20	8,045.54	7,871.20	23.86	30.33	-34.22	288.92	-1,286.42	985.49	936.54	48.95	20.133	
8,100.00	7,971.20	8,145.54	7,971.20	24.01	30.46	-34.22	288.92	-1,286.42	985.49	936.24	49.25	20.010	
8,200.00	8,071.20	8,245.54	8,071.20	24.17	30.59	-34.22	288.92	-1,286.42	985.49	935.94	49.55	19.888	
8,300.00	8,171.20	8,345.54	8,171.20	24.32	30.71	-34.22	288.92	-1,286.42	985.49	935.63	49.86	19.766	
8,400.00	8,271.20	8,445.54	8,271.20	24.48	30.84	-34.22	288.92	-1,286.42	985.49	935.32	50.17	19.645	
8,420.21	8,291.42	8,465.75	8,291.42	24.51	30.87	-34.22	288.92	-1,286.42	985.49	935.26	50.23	19.620	
8,500.00	8,371.20	8,487.34	8,313.00	24.64	30.90	-34.22	288.92	-1,286.42	987.21	936.82	50.39	19.592	
8,600.00	8,471.20	8,487.34	8,313.00	24.80	30.90	-34.22	288.92	-1,286.42	998.11	947.56	50.55	19.747	
8,696.80	8,568.00	8,487.34	8,313.00	24.95	30.90	-34.22	288.92	-1,286.42	1,017.95	967.25	50.70	20.078	

Company:	US ROCKIES REGION PLANNING	Local Co-ordinate Reference:	Well P_NRC 15-8
Project:	COLORADO NORTHERN ZONE - 83	TVD Reference:	WELL @ 5071.00ft (Original Well Elev)
Reference Site:	WELD_NRC 20-8 PAD	MD Reference:	WELL @ 5071.00ft (Original Well Elev)
Site Error:	0.00ft	North Reference:	True
Reference Well:	P_NRC 15-8	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00ft	Output errors are at	2.00 sigma
Reference Wellbore	P_NRC 15-8	Database:	EDM 2003.21 Single User Db
Reference Design:	PLAN #1 1-5-10 RHS	Offset TVD Reference:	Offset Datum

Offset Design WELD_NRC 20-8 PAD - P_NRC 37-8 - P_NRC 37-8 - PLAN #1 1-5-10 RHS												Offset Site Error: 0.00 ft	
Survey Program: 0-MWD												Offset Well Error: 0.00 ft	
Reference		Offset		Semi Major Axis		Distance							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	90.00	0.00	31.91	31.91				
100.00	100.00	100.00	100.00	0.10	0.10	90.00	0.00	31.91	31.91	31.72	0.19	167.018	
200.00	200.00	200.00	200.00	0.32	0.32	90.00	0.00	31.91	31.91	31.27	0.64	49.812	
300.00	300.00	300.00	300.00	0.55	0.55	90.00	0.00	31.91	31.91	30.82	1.09	29.271	
400.00	400.00	400.00	400.00	0.77	0.77	90.00	0.00	31.91	31.91	30.37	1.54	20.725	
500.00	500.00	500.00	500.00	0.99	0.99	90.00	0.00	31.91	31.91	29.92	1.99	16.041	
600.00	600.00	600.00	600.00	1.22	1.22	90.00	0.00	31.91	31.91	29.47	2.44	13.084	
700.00	700.00	700.00	700.00	1.44	1.44	90.00	0.00	31.91	31.91	29.02	2.89	11.048	
800.00	800.00	800.00	800.00	1.67	1.67	90.00	0.00	31.91	31.91	28.57	3.34	9.560	
900.00	900.00	900.00	900.00	1.89	1.89	90.00	0.00	31.91	31.91	28.12	3.79	8.425	
1,000.00	1,000.00	1,000.00	1,000.00	2.12	2.12	90.00	0.00	31.91	31.91	27.67	4.24	7.531	
1,085.00	1,085.00	1,085.00	1,085.00	2.31	2.31	90.00	0.00	31.91	31.91	27.29	4.62	6.908 CC	
1,100.00	1,100.00	1,099.99	1,099.99	2.34	2.34	-144.28	-0.04	31.91	31.94	27.26	4.68	6.828 ES	
1,200.00	1,199.97	1,199.90	1,199.87	2.52	2.51	-142.67	-2.30	32.02	33.91	28.88	5.03	6.744 SF	
1,300.00	1,299.80	1,299.61	1,299.41	2.72	2.69	-139.31	-8.03	32.29	38.98	33.59	5.39	7.231	
1,400.00	1,399.37	1,398.97	1,398.35	2.93	2.88	-135.44	-17.17	32.72	47.31	41.53	5.78	8.189	
1,500.00	1,498.55	1,497.82	1,496.39	3.16	3.10	-131.88	-29.66	33.30	58.98	52.78	6.20	9.508	
1,600.00	1,597.23	1,596.00	1,593.30	3.43	3.35	-128.95	-45.40	34.05	73.99	67.31	6.68	11.071	
1,700.00	1,695.29	1,693.53	1,688.97	3.73	3.63	-126.64	-64.28	34.93	92.28	85.05	7.23	12.761	
1,800.00	1,792.60	1,791.33	1,784.68	4.10	3.96	-125.82	-84.40	35.88	113.07	105.22	7.85	14.407	
1,900.00	1,889.05	1,888.68	1,879.94	4.52	4.30	-126.34	-104.41	36.82	135.86	127.35	8.52	15.950	
1,993.59	1,978.44	1,979.26	1,968.58	4.97	4.63	-127.50	-123.04	37.70	159.09	149.90	9.19	17.311	
2,000.00	1,984.52	1,985.44	1,974.63	5.00	4.65	-127.62	-124.31	37.76	160.74	151.50	9.24	17.399	
2,100.00	2,079.54	2,081.91	2,069.03	5.53	5.02	-129.22	-144.15	38.69	186.65	176.63	10.02	18.629	
2,200.00	2,174.55	2,178.38	2,163.44	6.09	5.40	-130.42	-163.99	39.63	212.66	201.83	10.82	19.647	
2,300.00	2,269.56	2,274.86	2,257.85	6.66	5.79	-131.36	-183.83	40.56	238.73	227.09	11.65	20.497	
2,400.00	2,364.57	2,371.33	2,352.25	7.25	6.18	-132.12	-203.67	41.49	264.86	252.37	12.49	21.212	
2,500.00	2,459.59	2,467.81	2,446.66	7.84	6.58	-132.74	-223.51	42.43	291.02	277.68	13.34	21.821	
2,600.00	2,554.60	2,564.28	2,541.07	8.45	6.98	-133.26	-243.36	43.36	317.21	303.01	14.20	22.343	
2,700.00	2,649.61	2,660.75	2,635.47	9.06	7.39	-133.70	-263.20	44.29	343.41	328.35	15.07	22.795	
2,800.00	2,744.62	2,757.23	2,729.88	9.68	7.80	-134.07	-283.04	45.23	369.64	353.70	15.94	23.190	
2,900.00	2,839.64	2,853.70	2,824.29	10.30	8.22	-134.40	-302.88	46.16	395.88	379.06	16.82	23.537	
3,000.00	2,934.65	2,950.17	2,918.70	10.93	8.63	-134.69	-322.72	47.10	422.12	404.42	17.70	23.844	
3,100.00	3,029.66	3,046.65	3,013.10	11.56	9.05	-134.94	-342.56	48.03	448.38	429.79	18.59	24.118	
3,200.00	3,124.67	3,143.12	3,107.51	12.19	9.47	-135.17	-362.40	48.96	474.64	455.16	19.48	24.363	
3,300.00	3,219.69	3,239.60	3,201.92	12.82	9.89	-135.37	-382.24	49.90	500.91	480.54	20.38	24.585	
3,400.00	3,314.70	3,336.07	3,296.32	13.46	10.32	-135.55	-402.08	50.83	527.19	505.92	21.27	24.785	
3,500.00	3,409.71	3,432.54	3,390.73	14.09	10.74	-135.71	-421.92	51.76	553.46	531.30	22.17	24.967	
3,600.00	3,504.72	3,529.02	3,485.14	14.73	11.17	-135.86	-441.76	52.70	579.75	556.68	23.07	25.134	
3,700.00	3,599.74	3,625.49	3,579.54	15.37	11.59	-136.00	-461.60	53.63	606.03	582.07	23.97	25.286	
3,800.00	3,694.75	3,721.96	3,673.95	16.01	12.02	-136.12	-481.44	54.56	632.32	607.45	24.87	25.427	
3,900.00	3,789.76	3,818.44	3,768.36	16.66	12.45	-136.24	-501.28	55.50	658.61	632.84	25.77	25.557	
3,968.20	3,854.56	3,884.24	3,832.74	17.09	12.74	-136.31	-514.81	56.13	676.55	650.16	26.39	25.641	
4,000.00	3,884.83	3,914.95	3,862.80	17.27	12.88	-136.45	-521.13	56.43	684.78	658.12	26.67	25.678	
4,100.00	3,980.69	4,011.94	3,957.72	17.72	13.31	-136.73	-541.07	57.37	709.08	681.58	27.49	25.790	
4,200.00	4,077.48	4,109.48	4,053.16	18.13	13.74	-136.78	-561.13	58.31	730.90	702.59	28.31	25.815	
4,300.00	4,175.09	4,207.43	4,149.02	18.50	14.18	-136.63	-581.28	59.26	750.26	721.14	29.12	25.765	
4,400.00	4,273.40	4,305.68	4,245.17	18.82	14.62	-136.28	-601.48	60.21	767.19	737.28	29.91	25.649	
4,500.00	4,372.29	4,404.12	4,341.49	19.11	15.06	-135.74	-621.73	61.17	781.73	751.04	30.68	25.477	
4,600.00	4,471.64	4,502.61	4,437.87	19.35	15.50	-135.03	-641.98	62.12	793.94	762.51	31.43	25.258	
4,700.00	4,571.32	4,601.04	4,534.20	19.54	15.94	-134.14	-662.23	63.07	803.94	771.78	32.16	25.000	
4,800.00	4,671.21	4,699.30	4,630.34	19.69	16.38	-133.07	-682.43	64.02	811.81	778.96	32.85	24.711	

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:	Well P_NRC 15-8
Project:	COLORADO NORTHERN ZONE - 83	TVD Reference:	WELL @ 5071.00ft (Original Well Elev)
Reference Site:	WELD_NRC 20-8 PAD	MD Reference:	WELL @ 5071.00ft (Original Well Elev)
Site Error:	0.00ft	North Reference:	True
Reference Well:	P_NRC 15-8	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00ft	Output errors are at	2.00 sigma
Reference Wellbore	P_NRC 15-8	Database:	EDM 2003.21 Single User Db
Reference Design:	PLAN #1 1-5-10 RHS	Offset TVD Reference:	Offset Datum

Offset Design WELD_NRC 20-8 PAD - P_NRC 37-8 - P_NRC 37-8 - PLAN #1 1-5-10 RHS												Offset Site Error:	0.00 ft
Survey Program: 0-MWD												Offset Well Error:	0.00 ft
Reference		Offset		Semi Major Axis			Distance						
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning
4,876.80	4,748.00	4,774.55	4,703.99	19.78	16.72	102.17	-697.91	64.75	816.51	783.14	33.37	24.470	
4,900.00	4,771.20	4,797.26	4,726.21	19.81	16.82	102.49	-702.58	64.97	817.77	784.25	33.53	24.391	
5,000.00	4,871.20	4,895.12	4,821.97	19.91	17.26	103.84	-722.70	65.92	823.51	789.31	34.21	24.075	
5,100.00	4,971.20	4,992.98	4,917.73	20.02	17.70	105.18	-742.83	66.86	829.73	794.86	34.87	23.796	
5,200.00	5,071.20	5,090.83	5,013.49	20.13	18.14	106.50	-762.95	67.81	836.40	800.88	35.52	23.550	
5,300.00	5,171.20	5,188.69	5,109.25	20.24	18.58	107.79	-783.08	68.76	843.52	807.37	36.15	23.335	
5,400.00	5,271.20	5,286.55	5,205.02	20.35	19.02	109.07	-803.20	69.71	851.08	814.32	36.77	23.149	
5,500.00	5,371.20	5,384.41	5,300.78	20.47	19.46	110.32	-823.33	70.65	859.07	821.71	37.37	22.990	
5,600.00	5,471.20	5,482.26	5,396.54	20.59	19.90	111.55	-843.45	71.60	867.48	829.52	37.95	22.856	
5,700.00	5,571.20	5,580.12	5,492.30	20.70	20.34	112.76	-863.58	72.55	876.28	837.76	38.53	22.745	
5,800.00	5,671.20	5,677.98	5,588.06	20.83	20.78	113.94	-883.70	73.49	885.48	846.40	39.08	22.656	
5,900.00	5,771.20	5,775.84	5,683.82	20.95	21.23	115.10	-903.83	74.44	895.06	855.43	39.63	22.586	
6,000.00	5,871.20	5,873.69	5,779.58	21.07	21.67	116.23	-923.95	75.39	905.00	864.84	40.16	22.535	
6,100.00	5,971.20	5,982.87	5,886.59	21.20	22.10	117.42	-945.57	76.41	914.94	874.27	40.67	22.495	
6,200.00	6,071.20	6,101.08	6,003.24	21.32	22.44	118.45	-964.66	77.30	923.26	882.17	41.09	22.467	
6,300.00	6,171.20	6,220.70	6,121.97	21.45	22.72	119.21	-979.07	77.98	929.61	888.14	41.47	22.419	
6,400.00	6,271.20	6,341.32	6,242.21	21.58	22.95	119.71	-988.57	78.43	933.81	892.01	41.80	22.338	
6,500.00	6,371.20	6,462.54	6,363.34	21.72	23.13	119.94	-993.02	78.64	935.79	893.67	42.12	22.218	
6,600.00	6,471.20	6,570.41	6,471.20	21.85	23.27	119.96	-993.37	78.65	935.95	893.54	42.40	22.072	
6,700.00	6,571.20	6,670.41	6,571.20	21.98	23.38	119.96	-993.37	78.65	935.95	893.28	42.66	21.937	
6,800.00	6,671.20	6,770.41	6,671.20	22.12	23.49	119.96	-993.37	78.65	935.95	893.02	42.92	21.805	
6,900.00	6,771.20	6,870.41	6,771.20	22.26	23.60	119.96	-993.37	78.65	935.95	892.76	43.19	21.672	
7,000.00	6,871.20	6,970.41	6,871.20	22.40	23.71	119.96	-993.37	78.65	935.95	892.49	43.45	21.540	
7,100.00	6,971.20	7,070.41	6,971.20	22.54	23.82	119.96	-993.37	78.65	935.95	892.23	43.72	21.407	
7,200.00	7,071.20	7,170.41	7,071.20	22.68	23.94	119.96	-993.37	78.65	935.95	891.95	43.99	21.275	
7,300.00	7,171.20	7,270.41	7,171.20	22.82	24.05	119.96	-993.37	78.65	935.95	891.68	44.27	21.143	
7,400.00	7,271.20	7,370.41	7,271.20	22.97	24.17	119.96	-993.37	78.65	935.95	891.40	44.54	21.012	
7,500.00	7,371.20	7,470.41	7,371.20	23.11	24.29	119.96	-993.37	78.65	935.95	891.12	44.82	20.880	
7,600.00	7,471.20	7,570.41	7,471.20	23.26	24.41	119.96	-993.37	78.65	935.95	890.84	45.11	20.749	
7,700.00	7,571.20	7,670.41	7,571.20	23.41	24.53	119.96	-993.37	78.65	935.95	890.55	45.39	20.619	
7,800.00	7,671.20	7,770.41	7,671.20	23.56	24.66	119.96	-993.37	78.65	935.95	890.26	45.68	20.489	
7,900.00	7,771.20	7,870.41	7,771.20	23.71	24.78	119.96	-993.37	78.65	935.95	889.97	45.97	20.359	
8,000.00	7,871.20	7,970.41	7,871.20	23.86	24.91	119.96	-993.37	78.65	935.95	889.68	46.27	20.230	
8,100.00	7,971.20	8,070.41	7,971.20	24.01	25.04	119.96	-993.37	78.65	935.95	889.38	46.56	20.101	
8,200.00	8,071.20	8,170.41	8,071.20	24.17	25.16	119.96	-993.37	78.65	935.95	889.09	46.86	19.973	
8,300.00	8,171.20	8,270.41	8,171.20	24.32	25.30	119.96	-993.37	78.65	935.95	888.79	47.16	19.846	
8,400.00	8,271.20	8,370.41	8,271.20	24.48	25.43	119.96	-993.37	78.65	935.95	888.48	47.46	19.719	
8,446.05	8,317.26	8,416.46	8,317.26	24.55	25.49	119.96	-993.37	78.65	935.95	888.34	47.60	19.661	
8,500.00	8,371.20	8,432.20	8,333.00	24.64	25.51	119.96	-993.37	78.65	936.73	889.01	47.71	19.632	
8,600.00	8,471.20	8,432.20	8,333.00	24.80	25.51	119.96	-993.37	78.65	946.09	898.22	47.88	19.761	
8,696.80	8,568.00	8,432.20	8,333.00	24.95	25.51	119.96	-993.37	78.65	965.00	916.96	48.03	20.090	

Company:	US ROCKIES REGION PLANNING	Local Co-ordinate Reference:	Well P_NRC 15-8
Project:	COLORADO NORTHERN ZONE - 83	TVD Reference:	WELL @ 5071.00ft (Original Well Elev)
Reference Site:	WELD_NRC 20-8 PAD	MD Reference:	WELL @ 5071.00ft (Original Well Elev)
Site Error:	0.00ft	North Reference:	True
Reference Well:	P_NRC 15-8	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00ft	Output errors are at	2.00 sigma
Reference Wellbore	P_NRC 15-8	Database:	EDM 2003.21 Single User Db
Reference Design:	PLAN #1 1-5-10 RHS	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.00 ft
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	90.32	-0.36	63.82	63.82				
100.00	100.00	100.00	100.00	0.10	0.10	90.32	-0.36	63.82	63.82	63.63	0.19	334.040	
200.00	200.00	200.00	200.00	0.32	0.32	90.32	-0.36	63.82	63.82	63.18	0.64	99.626	
300.00	300.00	300.00	300.00	0.55	0.55	90.32	-0.36	63.82	63.82	62.73	1.09	58.543	
400.00	400.00	400.00	400.00	0.77	0.77	90.32	-0.36	63.82	63.82	62.28	1.54	41.450	
500.00	500.00	500.00	500.00	0.99	0.99	90.32	-0.36	63.82	63.82	61.83	1.99	32.083	
600.00	600.00	600.00	600.00	1.22	1.22	90.32	-0.36	63.82	63.82	61.38	2.44	26.169	
700.00	700.00	700.00	700.00	1.44	1.44	90.32	-0.36	63.82	63.82	60.93	2.89	22.096	
800.00	800.00	800.00	800.00	1.67	1.67	90.32	-0.36	63.82	63.82	60.48	3.34	19.120	
900.00	900.00	900.00	900.00	1.89	1.89	90.32	-0.36	63.82	63.82	60.03	3.79	16.851	
1,000.00	1,000.00	1,000.00	1,000.00	2.12	2.12	90.32	-0.36	63.82	63.82	59.58	4.24	15.063	
1,085.00	1,085.00	1,085.00	1,085.00	2.31	2.31	90.32	-0.36	63.82	63.82	59.20	4.62	13.817 CC, ES	
1,100.00	1,100.00	1,099.68	1,099.68	2.34	2.34	-144.01	-0.35	63.85	63.89	59.21	4.68	13.650	
1,200.00	1,199.97	1,197.38	1,197.35	2.52	2.54	-145.45	0.09	65.98	67.92	62.86	5.06	13.427 SF	
1,300.00	1,299.80	1,294.32	1,294.13	2.72	2.75	-148.40	1.19	71.30	78.28	72.84	5.44	14.393	
1,400.00	1,399.37	1,389.85	1,389.28	2.93	2.96	-151.75	2.93	79.69	95.17	89.35	5.82	16.355	
1,500.00	1,498.55	1,483.39	1,482.11	3.16	3.19	-154.75	5.25	90.90	118.64	112.44	6.20	19.143	
1,600.00	1,597.23	1,574.37	1,571.99	3.43	3.44	-157.13	8.09	104.65	148.55	141.98	6.57	22.603	
1,700.00	1,695.29	1,662.32	1,658.42	3.73	3.70	-158.93	11.39	120.59	184.69	177.75	6.94	26.598	
1,800.00	1,792.60	1,746.81	1,740.94	4.10	3.99	-160.24	15.07	138.34	226.76	219.45	7.31	31.016	
1,900.00	1,889.05	1,827.52	1,819.23	4.52	4.30	-161.19	19.04	157.52	274.46	266.79	7.67	35.762	
1,993.59	1,978.44	1,899.75	1,888.82	4.97	4.60	-161.82	22.97	176.51	323.92	315.91	8.01	40.424	
2,000.00	1,984.52	1,905.09	1,893.94	5.00	4.63	-161.89	23.27	177.97	327.45	319.41	8.04	40.718	
2,100.00	2,079.54	1,988.36	1,973.89	5.53	5.01	-162.79	27.99	200.74	382.63	374.13	8.50	45.023	
2,200.00	2,174.55	2,071.63	2,053.85	6.09	5.41	-163.47	32.71	223.52	437.85	428.88	8.97	48.823	
2,300.00	2,269.56	2,154.90	2,133.80	6.66	5.83	-164.00	37.42	246.30	493.11	483.66	9.45	52.190	
2,400.00	2,364.57	2,238.17	2,213.75	7.25	6.25	-164.42	42.14	269.08	548.39	538.46	9.94	55.184	
2,500.00	2,459.59	2,321.44	2,293.71	7.84	6.68	-164.76	46.86	291.86	603.69	593.26	10.43	57.856	
2,600.00	2,554.60	2,404.71	2,373.66	8.45	7.12	-165.04	51.57	314.64	659.00	648.06	10.94	60.250	
2,700.00	2,649.61	2,487.98	2,453.62	9.06	7.57	-165.29	56.29	337.42	714.32	702.87	11.45	62.399	
2,800.00	2,744.62	2,571.25	2,533.57	9.68	8.02	-165.49	61.01	360.20	769.65	757.69	11.96	64.339	
2,900.00	2,839.64	2,654.52	2,613.53	10.30	8.47	-165.67	65.72	382.98	824.98	812.50	12.48	66.097	
3,000.00	2,934.65	2,737.78	2,693.48	10.93	8.93	-165.83	70.44	405.76	880.32	867.32	13.00	67.695	
3,100.00	3,029.66	2,821.05	2,773.43	11.56	9.39	-165.97	75.16	428.54	935.67	922.14	13.53	69.153	
3,200.00	3,124.67	2,904.32	2,853.39	12.19	9.86	-166.09	79.87	451.32	991.01	976.95	14.06	70.486	
3,300.00	3,219.69	2,987.59	2,933.34	12.82	10.32	-166.20	84.59	474.10	1,046.36	1,031.77	14.59	71.709	
3,400.00	3,314.70	3,070.86	3,013.30	13.46	10.79	-166.30	89.31	496.88	1,101.71	1,086.59	15.13	72.834	
3,500.00	3,409.71	3,154.13	3,093.25	14.09	11.26	-166.39	94.02	519.66	1,157.07	1,141.40	15.66	73.873	
3,600.00	3,504.72	3,237.40	3,173.20	14.73	11.73	-166.47	98.74	542.44	1,212.42	1,196.22	16.20	74.834	
3,700.00	3,599.74	3,320.67	3,253.16	15.37	12.21	-166.54	103.46	565.22	1,267.78	1,251.04	16.74	75.725	
3,800.00	3,694.75	3,403.94	3,333.11	16.01	12.68	-166.61	108.17	588.00	1,323.14	1,305.85	17.28	76.554	
3,900.00	3,789.76	3,487.21	3,413.07	16.66	13.15	-166.67	112.89	610.78	1,378.50	1,360.67	17.83	77.325	
3,968.20	3,854.56	3,544.00	3,467.60	17.09	13.48	-166.71	116.11	626.32	1,416.25	1,398.05	18.20	77.822	
4,000.00	3,884.83	3,570.58	3,493.11	17.27	13.63	-166.82	117.61	633.59	1,433.71	1,415.30	18.41	77.863	
4,100.00	3,980.69	3,655.36	3,574.52	17.72	14.12	-167.13	122.41	656.78	1,486.73	1,467.68	19.06	78.016	
4,200.00	4,077.48	3,741.89	3,657.61	18.13	14.61	-167.37	127.31	680.45	1,536.84	1,517.16	19.68	78.073	
4,300.00	4,175.09	3,830.08	3,742.28	18.50	15.12	-167.56	132.31	704.58	1,583.97	1,563.68	20.29	78.052	
4,400.00	4,273.40	3,919.80	3,828.44	18.82	15.63	-167.70	137.39	729.12	1,628.07	1,607.19	20.88	77.967	
4,500.00	4,372.29	4,010.97	3,915.97	19.11	16.16	-167.80	142.55	754.06	1,669.09	1,647.64	21.45	77.830	
4,600.00	4,471.64	4,103.45	4,004.77	19.35	16.69	-167.85	147.79	779.36	1,706.97	1,684.99	21.98	77.649	
4,700.00	4,571.32	4,197.14	4,094.73	19.54	17.23	-167.87	153.10	804.99	1,741.69	1,719.20	22.49	77.432	
4,800.00	4,671.21	4,291.93	4,185.75	19.69	17.78	-167.85	158.47	830.92	1,773.19	1,750.22	22.97	77.185	

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 15-8
Project:	COLORADO NORTHERN ZONE - 83	TVD Reference:	WELL @ 5071.00ft (Original Well Elev)
Reference Site:	WELD_NRC 20-8 PAD	MD Reference:	WELL @ 5071.00ft (Original Well Elev)
Site Error:	0.00ft	North Reference:	True
Reference Well:	P_NRC 15-8	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00ft	Output errors are at	2.00 sigma
Reference Wellbore	P_NRC 15-8	Database:	EDM 2003.21 Single User Db
Reference Design:	PLAN #1 1-5-10 RHS	Offset TVD Reference:	Offset Datum

Offset Design WELD_NRC 20-8 PAD - P_NRC 39-8 - P_NRC 39-8 - PLAN #1 1-5-10 RHS												Offset Site Error:	0.00 ft
Survey Program: 0-MWD												Offset Well Error:	0.00 ft
Reference		Offset		Semi Major Axis			Distance						
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning
4,876.80	4,748.00	4,365.40	4,256.29	19.78	18.20	66.49	162.63	851.02	1,795.19	1,771.86	23.32	76.964	
4,900.00	4,771.20	4,387.68	4,277.68	19.81	18.33	66.54	163.89	857.12	1,801.55	1,778.11	23.43	76.888	
5,000.00	4,871.20	4,483.70	4,369.88	19.91	18.89	66.71	169.33	883.39	1,828.95	1,805.06	23.89	76.569	
5,100.00	4,971.20	4,579.72	4,462.07	20.02	19.44	66.89	174.77	909.65	1,856.37	1,832.02	24.34	76.260	
5,200.00	5,071.20	4,675.74	4,554.27	20.13	20.00	67.06	180.21	935.92	1,883.80	1,859.00	24.80	75.960	
5,300.00	5,171.20	4,771.76	4,646.47	20.24	20.56	67.22	185.65	962.19	1,911.25	1,885.99	25.26	75.668	
5,400.00	5,271.20	4,867.77	4,738.66	20.35	21.11	67.38	191.09	988.45	1,938.71	1,912.99	25.72	75.384	
5,500.00	5,371.20	4,963.79	4,830.86	20.47	21.67	67.53	196.52	1,014.72	1,966.19	1,940.01	26.18	75.108	
5,600.00	5,471.20	5,059.81	4,923.05	20.59	22.23	67.68	201.96	1,040.99	1,993.67	1,967.04	26.64	74.839	
5,700.00	5,571.20	5,155.83	5,015.25	20.70	22.79	67.83	207.40	1,067.26	2,021.18	1,994.07	27.10	74.578	
5,800.00	5,671.20	5,251.85	5,107.44	20.83	23.34	67.97	212.84	1,093.52	2,048.69	2,021.12	27.56	74.324	
5,900.00	5,771.20	5,347.87	5,199.64	20.95	23.90	68.11	218.28	1,119.79	2,076.21	2,048.18	28.03	74.076	
6,000.00	5,871.20	5,443.88	5,291.83	21.07	24.46	68.24	223.72	1,146.06	2,103.75	2,075.25	28.49	73.835	
6,100.00	5,971.20	5,539.90	5,384.03	21.20	25.02	68.37	229.16	1,172.33	2,131.29	2,102.33	28.96	73.599	
6,200.00	6,071.20	5,635.92	5,476.22	21.32	25.58	68.50	234.59	1,198.59	2,158.85	2,129.42	29.42	73.370	
6,300.00	6,171.20	5,731.94	5,568.42	21.45	26.14	68.62	240.03	1,224.86	2,186.41	2,156.52	29.89	73.147	
6,400.00	6,271.20	5,827.96	5,660.62	21.58	26.70	68.75	245.47	1,251.17	2,214.03	2,184.14	30.36	72.924	
6,500.00	6,371.20	5,924.00	5,752.82	21.72	27.26	68.88	250.91	1,277.48	2,241.65	2,211.76	30.83	72.701	
6,600.00	6,471.20	6,020.04	5,845.02	21.85	27.82	69.01	256.35	1,303.79	2,269.27	2,239.38	31.30	72.478	
6,700.00	6,571.20	6,116.08	5,937.22	21.98	28.38	69.16	261.79	1,330.10	2,296.89	2,266.90	31.76	72.255	
6,800.00	6,671.20	6,212.12	6,029.42	22.12	28.94	69.16	267.23	1,356.41	2,324.51	2,294.52	32.23	72.032	
6,900.00	6,771.20	6,308.16	6,121.62	22.26	29.50	69.16	272.67	1,382.72	2,352.13	2,322.14	32.69	71.809	
7,000.00	6,871.20	6,404.20	6,213.82	22.40	30.06	69.16	278.11	1,409.03	2,379.75	2,349.76	33.16	71.586	
7,100.00	6,971.20	6,500.24	6,306.02	22.54	30.62	69.16	283.55	1,435.34	2,407.37	2,377.38	33.62	71.363	
7,200.00	7,071.20	6,596.28	6,398.22	22.68	31.18	69.16	289.00	1,461.65	2,434.99	2,404.90	34.09	71.140	
7,300.00	7,171.20	6,692.32	6,490.42	22.82	31.74	69.16	294.44	1,487.96	2,462.61	2,432.52	34.55	70.917	
7,400.00	7,271.20	6,788.36	6,582.62	22.97	32.30	69.16	299.88	1,514.27	2,490.23	2,460.14	35.01	70.694	
7,500.00	7,371.20	6,884.40	6,674.82	23.11	32.86	69.16	305.32	1,540.58	2,517.85	2,487.76	35.48	70.471	
7,600.00	7,471.20	6,980.44	6,767.02	23.26	33.42	69.16	310.76	1,566.89	2,545.47	2,515.38	35.94	70.248	
7,700.00	7,571.20	7,076.48	6,859.22	23.41	33.98	69.16	316.20	1,593.20	2,573.09	2,543.00	36.40	70.025	
7,800.00	7,671.20	7,172.52	6,951.42	23.56	34.54	69.16	321.64	1,619.51	2,600.71	2,570.62	36.86	69.802	
7,900.00	7,771.20	7,268.56	7,043.62	23.71	35.10	69.16	327.08	1,645.82	2,628.33	2,598.24	37.32	69.579	
8,000.00	7,871.20	7,364.60	7,135.82	23.86	35.66	69.16	332.52	1,672.13	2,655.95	2,625.86	37.78	69.356	
8,100.00	7,971.20	7,460.64	7,228.02	24.01	36.22	69.16	337.96	1,698.44	2,683.57	2,653.48	38.24	69.133	
8,200.00	8,071.20	7,556.68	7,320.22	24.17	36.78	69.16	343.40	1,724.75	2,711.19	2,681.10	38.70	68.910	
8,300.00	8,171.20	7,652.72	7,412.42	24.32	37.34	69.16	348.84	1,751.06	2,738.81	2,708.72	39.16	68.687	
8,400.00	8,271.20	7,748.76	7,504.62	24.48	37.90	69.16	354.28	1,777.37	2,766.43	2,736.34	39.62	68.464	
8,442.32	8,313.53	7,790.80	7,546.82	24.55	38.46	69.16	359.72	1,803.68	2,794.05	2,763.96	40.08	68.241	
8,500.00	8,371.20	7,886.84	7,639.02	24.64	39.02	69.16	365.16	1,829.99	2,821.67	2,791.58	40.54	68.018	
8,600.00	8,471.20	7,982.88	7,731.22	24.80	39.58	69.16	370.60	1,856.30	2,849.29	2,819.20	41.00	67.795	
8,696.80	8,568.00	8,078.92	7,823.42	24.95	40.14	69.16	376.04	1,882.61	2,876.91	2,846.82	41.46	67.572	

Company:	US ROCKIES REGION PLANNING	Local Co-ordinate Reference:	Well P_NRC 15-8
Project:	COLORADO NORTHERN ZONE - 83	TVD Reference:	WELL @ 5071.00ft (Original Well Elev)
Reference Site:	WELD_NRC 20-8 PAD	MD Reference:	WELL @ 5071.00ft (Original Well Elev)
Site Error:	0.00ft	North Reference:	True
Reference Well:	P_NRC 15-8	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00ft	Output errors are at	2.00 sigma
Reference Wellbore	P_NRC 15-8	Database:	EDM 2003.21 Single User Db
Reference Design:	PLAN #1 1-5-10 RHS	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.00 ft
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	158.27	-48.45	19.31	55.18				
100.00	100.00	82.00	82.00	0.10	1.64	158.27	-48.45	19.31	52.16	50.42	1.74	30.054	
200.00	200.00	182.00	182.00	0.32	5.28	158.27	-48.45	19.31	52.16	46.56	5.60	9.314	
300.00	300.00	282.00	282.00	0.55	9.28	158.27	-48.45	19.31	52.16	42.34	9.83	5.309	
400.00	400.00	382.00	382.00	0.77	13.28	158.27	-48.45	19.31	52.16	38.11	14.05	3.713	
500.00	500.00	482.00	482.00	0.99	17.28	158.27	-48.45	19.31	52.16	33.89	18.27	2.854	
600.00	600.00	582.00	582.00	1.22	21.28	158.27	-48.45	19.31	52.16	29.66	22.50	2.318	
700.00	700.00	682.00	682.00	1.44	25.28	158.27	-48.45	19.31	52.16	25.44	26.72	1.952	
800.00	800.00	782.00	782.00	1.67	29.28	158.27	-48.45	19.31	52.16	21.21	30.95	1.685	
900.00	900.00	882.00	882.00	1.89	33.28	158.27	-48.45	19.31	52.16	16.99	35.17	1.483 Level 3	
1,000.00	1,000.00	982.00	982.00	2.12	37.28	158.27	-48.45	19.31	52.16	12.76	39.40	1.324 Level 3	
1,085.00	1,085.00	1,067.00	1,067.00	2.31	40.68	158.27	-48.45	19.31	52.16	9.17	42.99	1.213 Level 2	
1,100.00	1,100.00	1,082.00	1,082.00	2.34	41.28	-76.08	-48.45	19.31	52.15	8.53	43.62	1.196 Level 2	
1,200.00	1,199.97	1,181.97	1,181.97	2.52	45.28	-78.54	-48.45	19.31	51.65	3.85	47.80	1.081 Level 2	
1,300.00	1,299.80	1,281.80	1,281.80	2.72	49.27	-84.91	-48.45	19.31	50.82	-1.17	51.99	0.978 Level 1	
1,353.59	1,353.20	1,335.20	1,335.20	2.83	51.41	-90.00	-48.45	19.31	50.62	-3.62	54.24	0.933 Level 1, CC	
1,400.00	1,399.37	1,381.37	1,381.37	2.93	53.25	-95.29	-48.45	19.31	50.84	-5.34	56.18	0.905 Level 1	
1,500.00	1,498.55	1,480.55	1,480.55	3.16	57.22	-108.81	-48.45	19.31	53.53	-6.79	60.33	0.887 Level 1, ES, SF	
1,600.00	1,597.23	1,579.23	1,579.23	3.43	61.17	-123.13	-48.45	19.31	60.75	-3.55	64.30	0.945 Level 1	
1,700.00	1,695.29	1,677.29	1,677.29	3.73	65.09	-135.75	-48.45	19.31	73.42	5.43	67.99	1.080 Level 2	
1,800.00	1,792.60	1,774.60	1,774.60	4.10	68.98	-145.56	-48.45	19.31	91.47	20.03	71.44	1.280 Level 3	
1,900.00	1,889.05	1,871.05	1,871.05	4.52	72.84	-152.79	-48.45	19.31	114.38	39.70	74.68	1.532	
1,993.59	1,978.44	1,960.44	1,960.44	4.97	76.42	-157.76	-48.45	19.31	139.79	62.26	77.53	1.803	
2,000.00	1,984.52	1,966.52	1,966.52	5.00	76.66	-158.06	-48.45	19.31	141.65	63.89	77.76	1.822	
2,100.00	2,079.54	2,061.54	2,061.54	5.53	80.46	-161.95	-48.45	19.31	171.14	89.66	81.48	2.100	
2,200.00	2,174.55	2,156.55	2,156.55	6.09	84.26	-164.69	-48.45	19.31	201.14	115.88	85.26	2.359	
2,300.00	2,269.56	2,251.56	2,251.56	6.66	88.06	-166.73	-48.45	19.31	231.46	142.39	89.07	2.598	
2,400.00	2,364.57	2,346.57	2,346.57	7.25	91.86	-168.29	-48.45	19.31	261.98	169.07	92.92	2.820	
2,500.00	2,459.59	2,441.59	2,441.59	7.84	95.66	-169.53	-48.45	19.31	292.64	195.87	96.77	3.024	
2,600.00	2,554.60	2,536.60	2,536.60	8.45	99.46	-170.53	-48.45	19.31	323.40	222.76	100.64	3.213	
2,700.00	2,649.61	2,631.61	2,631.61	9.06	103.26	-171.36	-48.45	19.31	354.24	249.72	104.52	3.389	
2,800.00	2,744.62	2,726.62	2,726.62	9.68	107.06	-172.06	-48.45	19.31	385.13	276.73	108.40	3.553	
2,900.00	2,839.64	2,821.64	2,821.64	10.30	110.87	-172.65	-48.45	19.31	416.07	303.78	112.29	3.705	
3,000.00	2,934.65	2,916.65	2,916.65	10.93	114.67	-173.16	-48.45	19.31	447.04	330.86	116.18	3.848	
3,100.00	3,029.66	3,011.66	3,011.66	11.56	118.47	-173.61	-48.45	19.31	478.04	357.96	120.08	3.981	
3,200.00	3,124.67	3,106.67	3,106.67	12.19	122.27	-174.00	-48.45	19.31	509.06	385.08	123.98	4.106	
3,300.00	3,219.69	3,201.69	3,201.69	12.82	126.07	-174.34	-48.45	19.31	540.10	412.22	127.88	4.223	
3,400.00	3,314.70	3,296.70	3,296.70	13.46	129.87	-174.65	-48.45	19.31	571.16	439.37	131.79	4.334	
3,500.00	3,409.71	3,391.71	3,391.71	14.09	133.67	-174.93	-48.45	19.31	602.23	466.54	135.70	4.438	
3,600.00	3,504.72	3,486.72	3,486.72	14.73	137.47	-175.18	-48.45	19.31	633.31	493.71	139.60	4.537	
3,700.00	3,599.74	3,581.74	3,581.74	15.37	141.27	-175.40	-48.45	19.31	664.40	520.89	143.51	4.630	
3,800.00	3,694.75	3,676.75	3,676.75	16.01	145.07	-175.61	-48.45	19.31	695.50	548.08	147.42	4.718	
3,900.00	3,789.76	3,771.76	3,771.76	16.66	148.87	-175.80	-48.45	19.31	726.61	575.28	151.34	4.801	
3,968.20	3,854.56	3,836.56	3,836.56	17.09	151.46	-175.92	-48.45	19.31	747.83	593.83	154.01	4.856	
4,000.00	3,884.83	3,866.83	3,866.83	17.27	152.67	-175.98	-48.45	19.31	757.56	601.81	155.75	4.864	
4,100.00	3,980.69	3,962.69	3,962.69	17.72	156.51	-176.17	-48.45	19.31	785.96	624.80	161.16	4.877	
4,200.00	4,077.48	4,059.48	4,059.48	18.13	160.38	-176.32	-48.45	19.31	811.00	644.53	166.47	4.872	
4,300.00	4,175.09	4,157.09	4,157.09	18.50	164.28	-176.44	-48.45	19.31	832.67	660.92	171.75	4.848	
4,400.00	4,273.40	4,255.40	4,255.40	18.82	168.22	-176.54	-48.45	19.31	850.92	674.04	176.88	4.811	
4,500.00	4,372.29	4,354.29	4,354.29	19.11	172.17	-176.62	-48.45	19.31	865.73	683.88	181.86	4.761	
4,600.00	4,471.64	4,453.64	4,453.64	19.35	176.15	-176.68	-48.45	19.31	877.10	690.44	186.66	4.699	
4,700.00	4,571.32	4,553.32	4,553.32	19.54	180.13	-176.71	-48.45	19.31	884.99	693.74	191.26	4.627	

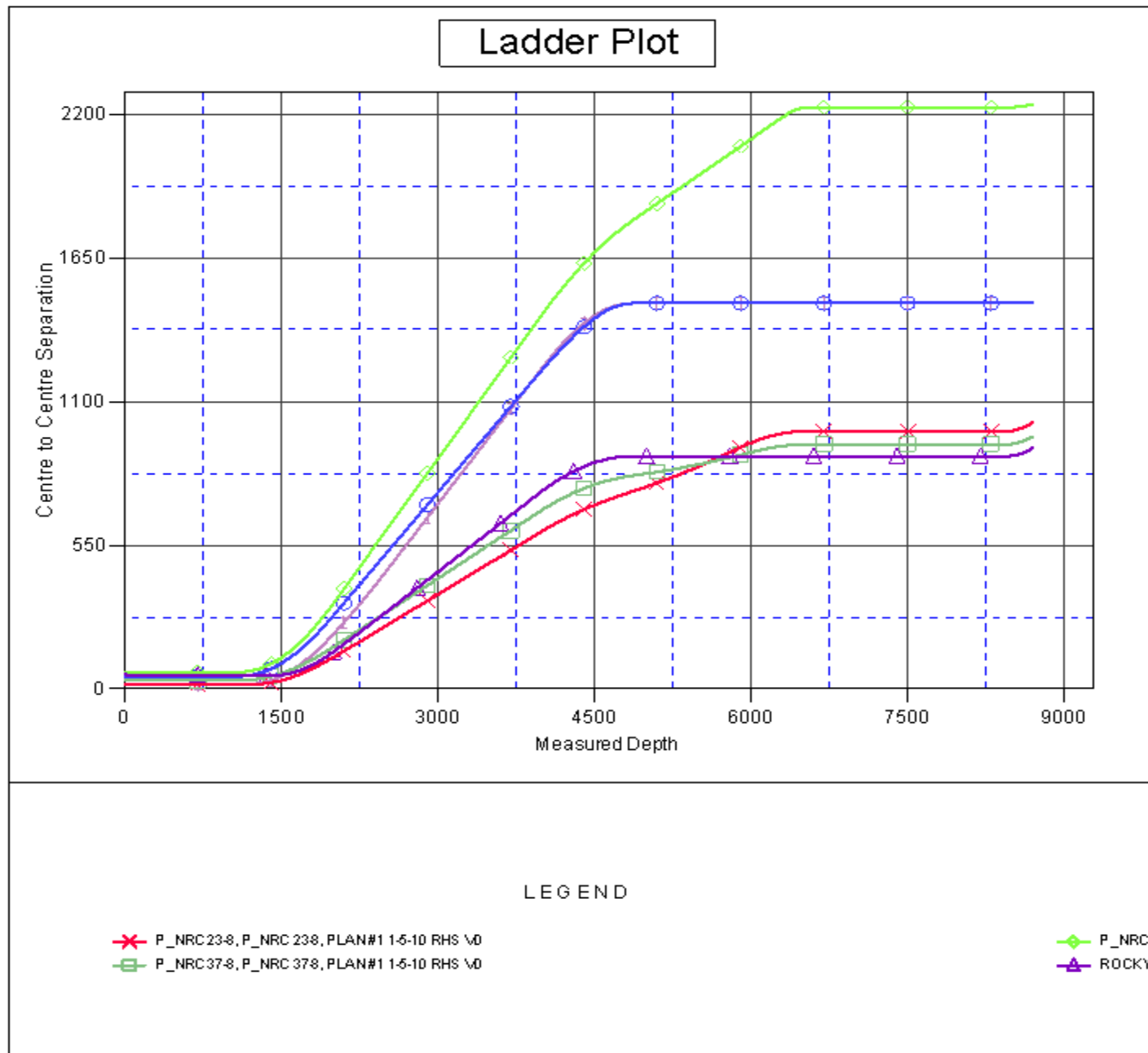
CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Company:	US ROCKIES REGION PLANNING	Local Co-ordinate Reference:	Well P_NRC 15-8
Project:	COLORADO NORTHERN ZONE - 83	TVD Reference:	WELL @ 5071.00ft (Original Well Elev)
Reference Site:	WELD_NRC 20-8 PAD	MD Reference:	WELL @ 5071.00ft (Original Well Elev)
Site Error:	0.00ft	North Reference:	True
Reference Well:	P_NRC 15-8	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00ft	Output errors are at	2.00 sigma
Reference Wellbore	P_NRC 15-8	Database:	EDM 2003.21 Single User Db
Reference Design:	PLAN #1 1-5-10 RHS	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.00 ft
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
4,800.00	4,671.21	4,653.21	4,653.21	19.69	184.13	-176.74	-48.45	19.31	889.41	693.77	195.64	4.546	
4,876.80	4,748.00	4,730.00	4,730.00	19.78	187.20	57.57	-48.45	19.31	890.44	691.59	198.85	4.478	
4,900.00	4,771.20	4,753.20	4,753.20	19.81	188.13	57.57	-48.45	19.31	890.44	690.62	199.81	4.456	
5,000.00	4,871.20	4,853.20	4,853.20	19.91	192.13	57.57	-48.45	19.31	890.44	686.45	203.99	4.365	
5,100.00	4,971.20	4,953.20	4,953.20	20.02	196.13	57.57	-48.45	19.31	890.44	682.28	208.16	4.278	
5,200.00	5,071.20	5,053.20	5,053.20	20.13	200.13	57.57	-48.45	19.31	890.44	678.10	212.34	4.194	
5,300.00	5,171.20	5,153.20	5,153.20	20.24	204.13	57.57	-48.45	19.31	890.44	673.92	216.51	4.113	
5,400.00	5,271.20	5,253.20	5,253.20	20.35	208.13	57.57	-48.45	19.31	890.44	669.75	220.69	4.035	
5,500.00	5,371.20	5,353.20	5,353.20	20.47	212.13	57.57	-48.45	19.31	890.44	665.56	224.87	3.960	
5,600.00	5,471.20	5,453.20	5,453.20	20.59	216.13	57.57	-48.45	19.31	890.44	661.38	229.05	3.887	
5,700.00	5,571.20	5,553.20	5,553.20	20.70	220.13	57.57	-48.45	19.31	890.44	657.20	233.24	3.818	
5,800.00	5,671.20	5,653.20	5,653.20	20.83	224.13	57.57	-48.45	19.31	890.44	653.02	237.42	3.750	
5,900.00	5,771.20	5,753.20	5,753.20	20.95	228.13	57.57	-48.45	19.31	890.44	648.83	241.61	3.685	
6,000.00	5,871.20	5,853.20	5,853.20	21.07	232.13	57.57	-48.45	19.31	890.44	644.64	245.79	3.623	
6,100.00	5,971.20	5,953.20	5,953.20	21.20	236.13	57.57	-48.45	19.31	890.44	640.46	249.98	3.562	
6,200.00	6,071.20	6,053.20	6,053.20	21.32	240.13	57.57	-48.45	19.31	890.44	636.27	254.17	3.503	
6,300.00	6,171.20	6,153.20	6,153.20	21.45	244.13	57.57	-48.45	19.31	890.44	632.08	258.36	3.446	
6,400.00	6,271.20	6,253.20	6,253.20	21.58	248.13	57.57	-48.45	19.31	890.44	627.89	262.55	3.391	
6,500.00	6,371.20	6,353.20	6,353.20	21.72	252.13	57.57	-48.45	19.31	890.44	623.69	266.74	3.338	
6,600.00	6,471.20	6,453.20	6,453.20	21.85	256.13	57.57	-48.45	19.31	890.44	619.50	270.94	3.287	
6,700.00	6,571.20	6,553.20	6,553.20	21.98	260.13	57.57	-48.45	19.31	890.44	615.31	275.13	3.236	
6,800.00	6,671.20	6,653.20	6,653.20	22.12	264.13	57.57	-48.45	19.31	890.44	611.11	279.32	3.188	
6,900.00	6,771.20	6,753.20	6,753.20	22.26	268.13	57.57	-48.45	19.31	890.44	606.92	283.52	3.141	
7,000.00	6,871.20	6,853.20	6,853.20	22.40	272.13	57.57	-48.45	19.31	890.44	602.72	287.72	3.095	
7,100.00	6,971.20	6,953.20	6,953.20	22.54	276.13	57.57	-48.45	19.31	890.44	598.52	291.91	3.050	
7,200.00	7,071.20	7,053.20	7,053.20	22.68	280.13	57.57	-48.45	19.31	890.44	594.33	296.11	3.007	
7,300.00	7,171.20	7,153.20	7,153.20	22.82	284.13	57.57	-48.45	19.31	890.44	590.13	300.31	2.965	
7,400.00	7,271.20	7,253.20	7,253.20	22.97	288.13	57.57	-48.45	19.31	890.44	585.93	304.51	2.924	
7,500.00	7,371.20	7,353.20	7,353.20	23.11	292.13	57.57	-48.45	19.31	890.44	581.73	308.71	2.884	
7,600.00	7,471.20	7,453.20	7,453.20	23.26	296.13	57.57	-48.45	19.31	890.44	577.53	312.91	2.846	
7,700.00	7,571.20	7,553.20	7,553.20	23.41	300.13	57.57	-48.45	19.31	890.44	573.33	317.11	2.808	
7,800.00	7,671.20	7,653.20	7,653.20	23.56	304.13	57.57	-48.45	19.31	890.44	569.13	321.31	2.771	
7,900.00	7,771.20	7,753.20	7,753.20	23.71	308.13	57.57	-48.45	19.31	890.44	564.93	325.51	2.735	
8,000.00	7,871.20	7,853.20	7,853.20	23.86	312.13	57.57	-48.45	19.31	890.44	560.72	329.71	2.701	
8,100.00	7,971.20	7,953.20	7,953.20	24.01	316.13	57.57	-48.45	19.31	890.44	556.52	333.92	2.667	
8,200.00	8,071.20	8,053.20	8,053.20	24.17	320.13	57.57	-48.45	19.31	890.44	552.32	338.12	2.633	
8,300.00	8,171.20	8,153.20	8,153.20	24.32	324.13	57.57	-48.45	19.31	890.44	548.11	342.33	2.601	
8,400.00	8,271.20	8,253.20	8,253.20	24.48	328.13	57.57	-48.45	19.31	890.44	543.91	346.53	2.570	
8,448.55	8,319.76	8,301.76	8,301.76	24.56	330.07	57.57	-48.45	19.31	890.44	541.86	348.57	2.555	
8,500.00	8,371.20	8,318.00	8,318.00	24.64	330.72	57.57	-48.45	19.31	891.13	541.81	349.33	2.551	
8,600.00	8,471.20	8,318.00	8,318.00	24.80	330.72	57.57	-48.45	19.31	900.64	551.11	349.53	2.577	
8,696.80	8,568.00	8,318.00	8,318.00	24.95	330.72	57.57	-48.45	19.31	920.16	570.43	349.73	2.631	

Company:	US ROCKIES REGION PLANNING	Local Co-ordinate Reference:	Well P_NRC 15-8
Project:	COLORADO NORTHERN ZONE - 83	TVD Reference:	WELL @ 5071.00ft (Original Well Elev)
Reference Site:	WELD_NRC 20-8 PAD	MD Reference:	WELL @ 5071.00ft (Original Well Elev)
Site Error:	0.00ft	North Reference:	True
Reference Well:	P_NRC 15-8	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00ft	Output errors are at	2.00 sigma
Reference Wellbore	P_NRC 15-8	Database:	EDM 2003.21 Single User Db
Reference Design:	PLAN #1 1-5-10 RHS	Offset TVD Reference:	Offset Datum

Reference Depths are relative to WELL @ 5071.00ft (Original Well Elev) Coordinates are relative to: P_NRC 15-8
Offset Depths are relative to Offset Datum Coordinate System is US State Plane 1983, Colorado Northern Zone
Central Meridian is 105° 30' 0.000 W ° Grid Convergence at Surface is: 0.38°



Company:	US ROCKIES REGION PLANNING	Local Co-ordinate Reference:	Well P_NRC 15-8
Project:	COLORADO NORTHERN ZONE - 83	TVD Reference:	WELL @ 5071.00ft (Original Well Elev)
Reference Site:	WELD_NRC 20-8 PAD	MD Reference:	WELL @ 5071.00ft (Original Well Elev)
Site Error:	0.00ft	North Reference:	True
Reference Well:	P_NRC 15-8	Survey Calculation Method:	Minimum Curvature
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