



US ROCKIES REGION PLANNING

COLORADO NORTHERN ZONE - 83

WELD_Riverbend 25-12 PAD

P_Riverbend 9-12

P_Riverbend 9-12

Plan: PLAN #1 6-22-10 RHS

Standard Planning Report

22 June, 2010





Project: COLORADO NORTHERN ZONE - 83
 Site: WELD_Riverbend 25-12 PAD
 Well: P_Riverbend 9-12
 Wellbore: P_Riverbend 9-12
 Section: PLAN #1 6-22-10 RHS
 SHL: 2419 FSL 2059 FEL
 Design: PLAN #1 6-22-10 RHS
 Latitude: 40° 3' 53.881 N
 Longitude: 104° 50' 13.801 W
 GL: 4913.00
 KB: WELL @ 4928.00ft (Original Well Elev)



Weatherford®



Azimuths to True North
 Magnetic North: 9.00°
 Magnetic Field
 Strength: 53049.6snT
 Dip Angle: 66.80°
 Date: 6/22/2010
 Model: IGRF2010

FORMATION TOP DETAILS		
TVDPath	MDPath	Formation
3254.00	3473.51	PARKMAN
4584.00	4891.94	SUSSEX
7116.00	7424.94	NIO
7463.00	7771.94	CODELL
7548.00	7856.94	GREENHORN
7898.00	8206.94	JSAND

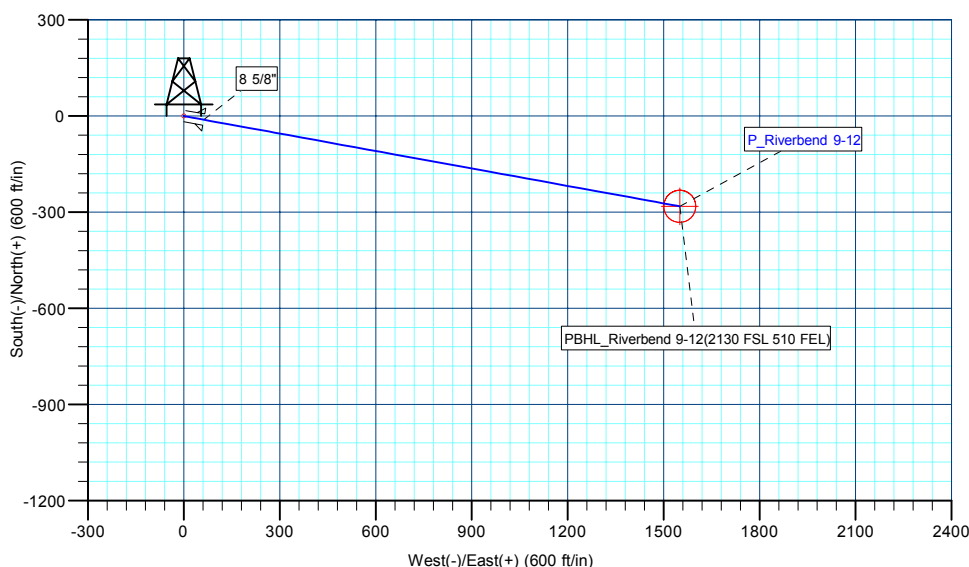
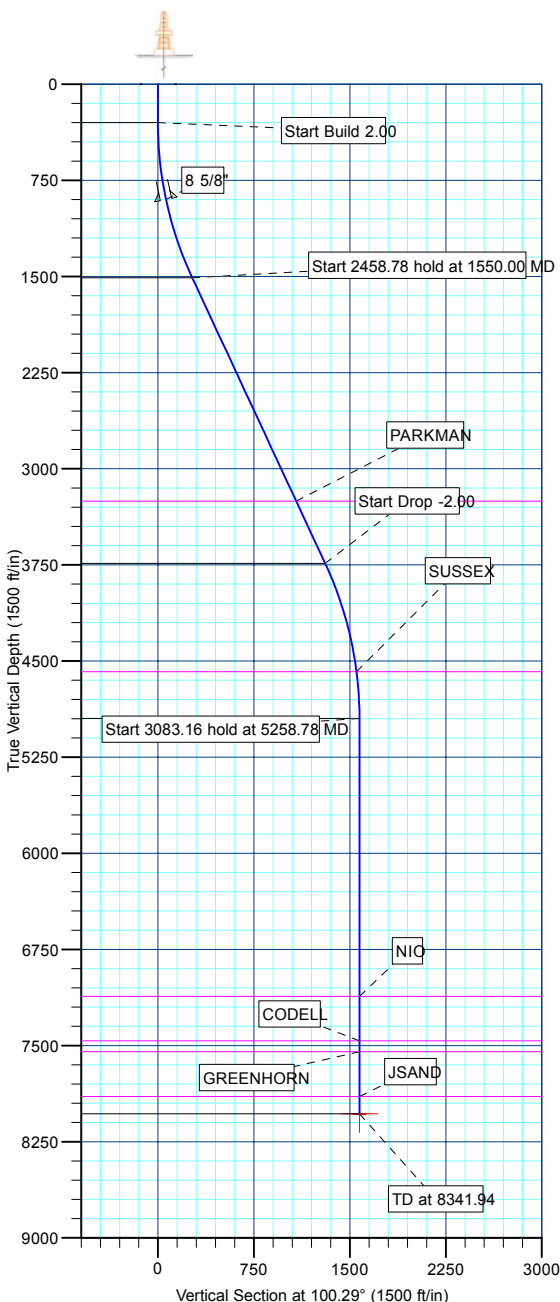
CASING DETAILS			
TVD	MD	Name	Size
900.00	904.48	8 5/8"	8.62

SECTION DETAILS									
MD	Inc	Azi	TVD	+N/-S	+E/-W	DLeg	TFace	VSec	Annotation
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.00	0.00	Start Build 2.00
1550.00	25.00	100.29	1510.71	-47.95	264.09	2.00	100.29	268.41	Start 2458.78 hold at 1550.00 MD
4008.78	25.00	100.29	3739.12	-233.58	1286.50	0.00	0.00	1307.53	Start Drop -2.00
5258.78	0.00	0.00	4949.84	-281.53	1550.59	2.00	180.00	1575.94	Start 3083.16 hold at 5258.78 MD
8341.94	0.00	0.00	8033.00	-281.53	1550.59	0.00	0.00	1575.94	TD at 8341.94

WELLBORE TARGET DETAILS (MAP CO-ORDINATES AND LAT/LONG)						
Name	TVD	+N/-S	+E/-W	Latitude	Longitude	Shape
PBHL	8033.00	-281.53	1550.59	40° 3' 51.098 N	104° 49' 53.857 W	Circle (Radius: 50.00)

WELL DETAILS: P_Riverbend 9-12					
+N/-S	+E/-W	Northing	Ground Level: Easting	4913.00 Latitude	Longitude
0.00	0.00	1267206.04	3185516.42	40° 3' 53.881 N	104° 50' 13.801 W

LEGEND	
—	JAMES N. MATHISEN UNIT B #2 EXISTING, JAMES N. MATHISEN UNIT B #2 EXISTING, JAMES N. MATHISEN UNIT B #2 EXISTING V0
—	P_Riverbend 10-12, P_Riverbend 10-12, PLAN #1 6-22-10 RHS V0
—	P_Riverbend 22-12, P_Riverbend 22-12, PLAN #1 6-22-10 RHS V0
—	P_Riverbend 23-12, P_Riverbend 23-12, PLAN #1 6-22-10 RHS V0
—	P_Riverbend 25-12, P_Riverbend 25-12, PLAN #1 6-22-10 RHS V0
—	P_Riverbend 39-12, P_Riverbend 39-12, PLAN #1 6-22-10 RHS V0
—	PLAN #1 6-22-10 RHS



Plan: PLAN #1 6-22-10 RHS (P_Riverbend 9-12/P_Riverbend 9-12)

Created By: Robert H. Scott Date: 10:06, June 22 2010

Database:	EDM 2003.21 Single User Db	Local Co-ordinate Reference:	Well P_Riverbend 9-12
Company:	US ROCKIES REGION PLANNING	TVD Reference:	WELL @ 4928.00ft (Original Well Elev)
Project:	COLORADO NORTHERN ZONE - 83	MD Reference:	WELL @ 4928.00ft (Original Well Elev)
Site:	WELD_Riverbend 25-12 PAD	North Reference:	True
Well:	P_Riverbend 9-12	Survey Calculation Method:	Minimum Curvature
Wellbore:	P_Riverbend 9-12		
Design:	PLAN #1 6-22-10 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_Riverbend 25-12 PAD, PLAN #1 6-22-10 RHS											
Site Position:						Northing:			1,267,205.81 ft			Latitude:			40° 3' 53.881 N		
From:			Lat/Long			Easting:			3,185,484.23 ft			Longitude:			104° 50' 14.215 W		
Position Uncertainty:			0.00 ft			Slot Radius:			in			Grid Convergence:			0.43 °		

Well	P_Riverbend 9-12					
Well Position	+N/-S	-0.01 ft	Northing:	1,267,206.04 ft	Latitude:	40° 3' 53.881 N
	+E/-W	32.19 ft	Easting:	3,185,516.42 ft	Longitude:	104° 50' 13.801 W
Position Uncertainty		0.00 ft	Wellhead Elevation:	ft	Ground Level:	4,913.00 ft

Wellbore	P_Riverbend 9-12				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	6/22/2010	9.00	66.80	53,050

Design	PLAN #1 6-22-10 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	100.29

Plan Sections										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	TFO (°)	Target
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.00	0.00	0.00	
1,550.00	25.00	100.29	1,510.71	-47.95	264.09	2.00	2.00	0.00	100.29	
4,008.78	25.00	100.29	3,739.12	-233.58	1,286.50	0.00	0.00	0.00	0.00	
5,258.78	0.00	0.00	4,949.84	-281.53	1,550.59	2.00	-2.00	0.00	180.00	
8,341.94	0.00	0.00	8,033.00	-281.53	1,550.59	0.00	0.00	0.00	0.00	PBHL_Riverbend 9

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Project:	COLORADO NORTHERN ZONE - 83	MD Reference:	WELL @ 4928.00ft (Original Well Elev)
Site:	WELD_Riverbend 25-12 PAD	North Reference:	True
Well:	P_Riverbend 9-12	Survey Calculation Method:	Minimum Curvature
Wellbore:	P_Riverbend 9-12		
Design:	PLAN #1 6-22-10 RHS		

Planned Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
Start Build 2.00									
300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.00	0.00	0.00
400.00	2.00	100.29	399.98	-0.31	1.72	1.75	2.00	2.00	0.00
500.00	4.00	100.29	499.84	-1.25	6.87	6.98	2.00	2.00	0.00
600.00	6.00	100.29	599.45	-2.80	15.44	15.69	2.00	2.00	0.00
700.00	8.00	100.29	698.70	-4.98	27.43	27.88	2.00	2.00	0.00
800.00	10.00	100.29	797.47	-7.77	42.82	43.52	2.00	2.00	0.00
900.00	12.00	100.29	895.62	-11.18	61.60	62.60	2.00	2.00	0.00
8 5/8"									
904.48	12.09	100.29	900.00	-11.35	62.51	63.54	2.00	2.00	0.00
1,000.00	14.00	100.29	993.06	-15.20	83.73	85.10	2.00	2.00	0.00
1,100.00	16.00	100.29	1,089.64	-19.82	109.19	110.98	2.00	2.00	0.00
1,200.00	18.00	100.29	1,185.27	-25.05	137.96	140.21	2.00	2.00	0.00
1,300.00	20.00	100.29	1,279.82	-30.86	169.99	172.77	2.00	2.00	0.00
1,400.00	22.00	100.29	1,373.17	-37.26	205.25	208.60	2.00	2.00	0.00
1,500.00	24.00	100.29	1,465.21	-44.24	243.69	247.67	2.00	2.00	0.00
Start 2458.78 hold at 1550.00 MD									
1,550.00	25.00	100.29	1,510.71	-47.95	264.09	268.41	2.00	2.00	0.00
1,600.00	25.00	100.29	1,556.03	-51.72	284.88	289.54	0.00	0.00	0.00
1,700.00	25.00	100.29	1,646.66	-59.27	326.46	331.80	0.00	0.00	0.00
1,800.00	25.00	100.29	1,737.29	-66.82	368.05	374.06	0.00	0.00	0.00
1,900.00	25.00	100.29	1,827.92	-74.37	409.63	416.32	0.00	0.00	0.00
2,000.00	25.00	100.29	1,918.55	-81.92	451.21	458.59	0.00	0.00	0.00
2,100.00	25.00	100.29	2,009.18	-89.47	492.79	500.85	0.00	0.00	0.00
2,200.00	25.00	100.29	2,099.81	-97.02	534.37	543.11	0.00	0.00	0.00
2,300.00	25.00	100.29	2,190.44	-104.57	575.96	585.37	0.00	0.00	0.00
2,400.00	25.00	100.29	2,281.07	-112.12	617.54	627.63	0.00	0.00	0.00
2,500.00	25.00	100.29	2,371.70	-119.67	659.12	669.90	0.00	0.00	0.00
2,600.00	25.00	100.29	2,462.34	-127.22	700.70	712.16	0.00	0.00	0.00
2,700.00	25.00	100.29	2,552.97	-134.77	742.28	754.42	0.00	0.00	0.00
2,800.00	25.00	100.29	2,643.60	-142.32	783.87	796.68	0.00	0.00	0.00
2,900.00	25.00	100.29	2,734.23	-149.87	825.45	838.94	0.00	0.00	0.00
3,000.00	25.00	100.29	2,824.86	-157.42	867.03	881.20	0.00	0.00	0.00
3,100.00	25.00	100.29	2,915.49	-164.97	908.61	923.47	0.00	0.00	0.00
3,200.00	25.00	100.29	3,006.12	-172.52	950.19	965.73	0.00	0.00	0.00
3,300.00	25.00	100.29	3,096.75	-180.07	991.78	1,007.99	0.00	0.00	0.00
3,400.00	25.00	100.29	3,187.38	-187.62	1,033.36	1,050.25	0.00	0.00	0.00
PARKMAN									
3,473.51	25.00	100.29	3,254.00	-193.17	1,063.92	1,081.32	0.00	0.00	0.00
3,500.00	25.00	100.29	3,278.01	-195.17	1,074.94	1,092.51	0.00	0.00	0.00
3,600.00	25.00	100.29	3,368.64	-202.72	1,116.52	1,134.78	0.00	0.00	0.00
3,700.00	25.00	100.29	3,459.27	-210.27	1,158.10	1,177.04	0.00	0.00	0.00
3,800.00	25.00	100.29	3,549.90	-217.81	1,199.69	1,219.30	0.00	0.00	0.00
3,900.00	25.00	100.29	3,640.54	-225.36	1,241.27	1,261.56	0.00	0.00	0.00
4,000.00	25.00	100.29	3,731.17	-232.91	1,282.85	1,303.82	0.00	0.00	0.00
Start Drop -2.00									
4,008.78	25.00	100.29	3,739.12	-233.58	1,286.50	1,307.53	0.00	0.00	0.00
4,100.00	23.18	100.29	3,822.40	-240.23	1,323.13	1,344.76	2.00	-2.00	0.00
4,200.00	21.18	100.29	3,915.00	-246.97	1,360.27	1,382.51	2.00	-2.00	0.00
4,300.00	19.18	100.29	4,008.85	-253.13	1,394.20	1,416.99	2.00	-2.00	0.00
4,400.00	17.18	100.29	4,103.86	-258.70	1,424.89	1,448.18	2.00	-2.00	0.00
4,500.00	15.18	100.29	4,199.90	-263.68	1,452.30	1,476.04	2.00	-2.00	0.00
4,600.00	13.18	100.29	4,296.85	-268.05	1,476.39	1,500.53	2.00	-2.00	0.00

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Project:	COLORADO NORTHERN ZONE - 83	MD Reference:	WELL @ 4928.00ft (Original Well Elev)
Site:	WELD_Riverbend 25-12 PAD	North Reference:	True
Well:	P_Riverbend 9-12	Survey Calculation Method:	Minimum Curvature
Wellbore:	P_Riverbend 9-12		
Design:	PLAN #1 6-22-10 RHS		

Planned Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
4,700.00	11.18	100.29	4,394.59	-271.82	1,497.14	1,521.62	2.00	-2.00	0.00
4,800.00	9.18	100.29	4,493.01	-274.98	1,514.53	1,539.29	2.00	-2.00	0.00
SUSSEX									
4,891.94	7.34	100.29	4,584.00	-277.34	1,527.52	1,552.49	2.00	-2.00	0.00
4,900.00	7.18	100.29	4,591.99	-277.52	1,528.52	1,553.51	2.00	-2.00	0.00
5,000.00	5.18	100.29	4,691.41	-279.44	1,539.10	1,564.26	2.00	-2.00	0.00
5,100.00	3.18	100.29	4,791.14	-280.74	1,546.26	1,571.54	2.00	-2.00	0.00
5,200.00	1.18	100.29	4,891.06	-281.42	1,550.00	1,575.34	2.00	-2.00	0.00
Start 3083.16 hold at 5258.78 MD									
5,258.78	0.00	0.00	4,949.84	-281.53	1,550.59	1,575.94	2.00	-2.00	0.00
5,300.00	0.00	0.00	4,991.06	-281.53	1,550.59	1,575.94	0.00	0.00	0.00
5,400.00	0.00	0.00	5,091.06	-281.53	1,550.59	1,575.94	0.00	0.00	0.00
5,500.00	0.00	0.00	5,191.06	-281.53	1,550.59	1,575.94	0.00	0.00	0.00
5,600.00	0.00	0.00	5,291.06	-281.53	1,550.59	1,575.94	0.00	0.00	0.00
5,700.00	0.00	0.00	5,391.06	-281.53	1,550.59	1,575.94	0.00	0.00	0.00
5,800.00	0.00	0.00	5,491.06	-281.53	1,550.59	1,575.94	0.00	0.00	0.00
5,900.00	0.00	0.00	5,591.06	-281.53	1,550.59	1,575.94	0.00	0.00	0.00
6,000.00	0.00	0.00	5,691.06	-281.53	1,550.59	1,575.94	0.00	0.00	0.00
6,100.00	0.00	0.00	5,791.06	-281.53	1,550.59	1,575.94	0.00	0.00	0.00
6,200.00	0.00	0.00	5,891.06	-281.53	1,550.59	1,575.94	0.00	0.00	0.00
6,300.00	0.00	0.00	5,991.06	-281.53	1,550.59	1,575.94	0.00	0.00	0.00
6,400.00	0.00	0.00	6,091.06	-281.53	1,550.59	1,575.94	0.00	0.00	0.00
6,500.00	0.00	0.00	6,191.06	-281.53	1,550.59	1,575.94	0.00	0.00	0.00
6,600.00	0.00	0.00	6,291.06	-281.53	1,550.59	1,575.94	0.00	0.00	0.00
6,700.00	0.00	0.00	6,391.06	-281.53	1,550.59	1,575.94	0.00	0.00	0.00
6,800.00	0.00	0.00	6,491.06	-281.53	1,550.59	1,575.94	0.00	0.00	0.00
6,900.00	0.00	0.00	6,591.06	-281.53	1,550.59	1,575.94	0.00	0.00	0.00
7,000.00	0.00	0.00	6,691.06	-281.53	1,550.59	1,575.94	0.00	0.00	0.00
7,100.00	0.00	0.00	6,791.06	-281.53	1,550.59	1,575.94	0.00	0.00	0.00
7,200.00	0.00	0.00	6,891.06	-281.53	1,550.59	1,575.94	0.00	0.00	0.00
7,300.00	0.00	0.00	6,991.06	-281.53	1,550.59	1,575.94	0.00	0.00	0.00
7,400.00	0.00	0.00	7,091.06	-281.53	1,550.59	1,575.94	0.00	0.00	0.00
NIO									
7,424.94	0.00	0.00	7,116.00	-281.53	1,550.59	1,575.94	0.00	0.00	0.00
7,500.00	0.00	0.00	7,191.06	-281.53	1,550.59	1,575.94	0.00	0.00	0.00
7,600.00	0.00	0.00	7,291.06	-281.53	1,550.59	1,575.94	0.00	0.00	0.00
7,700.00	0.00	0.00	7,391.06	-281.53	1,550.59	1,575.94	0.00	0.00	0.00
CODELL									
7,771.94	0.00	0.00	7,463.00	-281.53	1,550.59	1,575.94	0.00	0.00	0.00
7,800.00	0.00	0.00	7,491.06	-281.53	1,550.59	1,575.94	0.00	0.00	0.00
GREENHORN									
7,856.94	0.00	0.00	7,548.00	-281.53	1,550.59	1,575.94	0.00	0.00	0.00
7,900.00	0.00	0.00	7,591.06	-281.53	1,550.59	1,575.94	0.00	0.00	0.00
8,000.00	0.00	0.00	7,691.06	-281.53	1,550.59	1,575.94	0.00	0.00	0.00
8,100.00	0.00	0.00	7,791.06	-281.53	1,550.59	1,575.94	0.00	0.00	0.00
8,200.00	0.00	0.00	7,891.06	-281.53	1,550.59	1,575.94	0.00	0.00	0.00
JSAND									
8,206.94	0.00	0.00	7,898.00	-281.53	1,550.59	1,575.94	0.00	0.00	0.00
8,300.00	0.00	0.00	7,991.06	-281.53	1,550.59	1,575.94	0.00	0.00	0.00
TD at 8341.94 - PBHL_Riverbend 9-12(2130 FSL 510 FEL)									
8,341.94	0.00	0.00	8,033.00	-281.53	1,550.59	1,575.94	0.00	0.00	0.00

Database:	EDM 2003.21 Single User Db	Local Co-ordinate Reference:	Well P_Riverbend 9-12
Company:	US ROCKIES REGION PLANNING	TVD Reference:	WELL @ 4928.00ft (Original Well Elev)
Project:	COLORADO NORTHERN ZONE - 83	MD Reference:	WELL @ 4928.00ft (Original Well Elev)
Site:	WELD_Riverbend 25-12 PAD	North Reference:	True
Well:	P_Riverbend 9-12	Survey Calculation Method:	Minimum Curvature
Wellbore:	P_Riverbend 9-12		
Design:	PLAN #1 6-22-10 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_Riverbend 9-12	0.00	0.00	8,033.00	-281.53	1,550.59	1,266,936.11	3,187,069.07	40° 3' 51.098 N	104° 49' 53.857 W
- plan hits target center									
- Circle (radius 50.00)									

Casing Points					
Measured Depth	Vertical Depth			Casing Diameter	Hole Diameter
(ft)	(ft)		Name	(in)	(in)
904.48	900.00	8 5/8"		8.62	11.00

Formations						
Measured Depth	Vertical Depth				Dip	Dip Direction
(ft)	(ft)		Name	Lithology	(°)	(°)
3,473.51	3,254.00		PARKMAN			
4,891.94	4,584.00		SUSSEX			
7,424.94	7,116.00		NIO			
7,771.94	7,463.00		CODELL			
7,856.94	7,548.00		GREENHORN			
8,206.94	7,898.00		JSAND			

Plan Annotations				
Measured Depth	Vertical Depth	Local Coordinates		Comment
(ft)	(ft)	+N/-S (ft)	+E/-W (ft)	
300.00	300.00	0.00	0.00	Start Build 2.00
1,550.00	1,510.71	-47.95	264.09	Start 2458.78 hold at 1550.00 MD
4,008.78	3,739.12	-233.58	1,286.50	Start Drop -2.00
5,258.78	4,949.84	-281.53	1,550.59	Start 3083.16 hold at 5258.78 MD
8,341.94	8,033.00	-281.53	1,550.59	TD at 8341.94



US ROCKIES REGION PLANNING

**COLORADO NORTHERN ZONE - 83
WELD_Riverbend 25-12 PAD
P_Riverbend 9-12**

**P_Riverbend 9-12
PLAN #1 6-22-10 RHS**

Anticollision Report

22 June, 2010



Company:	US ROCKIES REGION PLANNING	Local Co-ordinate Reference:	Well P_Riverbend 9-12
Project:	COLORADO NORTHERN ZONE - 83	TVD Reference:	WELL @ 4928.00ft (Original Well Elev)
Reference Site:	WELD_Riverbend 25-12 PAD	MD Reference:	WELL @ 4928.00ft (Original Well Elev)
Site Error:	0.00ft	North Reference:	True
Reference Well:	P_Riverbend 9-12	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00ft	Output errors are at	2.00 sigma
Reference Wellbore	P_Riverbend 9-12	Database:	EDM 2003.21 Single User Db
Reference Design:	PLAN #1 6-22-10 RHS	Offset TVD Reference:	Offset Datum

Reference	PLAN #1 6-22-10 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 6/22/2010			
From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description
0.00	8,341.94	PLAN #1 6-22-10 RHS (P_Riverbend 9-12	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_Riverbend 25-12 PAD						
JAMES N. MATHISEN UNIT B #2 EXISTING - JAMES N	3,730.62	3,488.03	590.48	424.67	3.561	CC
JAMES N. MATHISEN UNIT B #2 EXISTING - JAMES N	8,341.94	8,028.82	629.49	279.46	1.798	ES, SF
P_Riverbend 10-12 - P_Riverbend 10-12 - PLAN #1 6-22	300.00	300.00	32.19	21.94	3.142	CC
P_Riverbend 10-12 - P_Riverbend 10-12 - PLAN #1 6-22	400.00	399.98	33.91	19.46	2.347	ES
P_Riverbend 10-12 - P_Riverbend 10-12 - PLAN #1 6-22	600.00	599.45	47.71	24.97	2.098	SF
P_Riverbend 22-12 - P_Riverbend 22-12 - PLAN #1 6-22	300.00	300.00	80.05	78.96	73.431	CC, ES
P_Riverbend 22-12 - P_Riverbend 22-12 - PLAN #1 6-22	800.00	797.47	123.09	119.83	37.702	SF
P_Riverbend 23-12 - P_Riverbend 23-12 - PLAN #1 6-22	300.00	300.00	64.09	63.00	58.796	CC, ES
P_Riverbend 23-12 - P_Riverbend 23-12 - PLAN #1 6-22	700.00	698.70	91.66	88.84	32.463	SF
P_Riverbend 25-12 - P_Riverbend 25-12 - PLAN #1 6-22	300.00	300.00	48.14	47.05	44.161	CC, ES
P_Riverbend 25-12 - P_Riverbend 25-12 - PLAN #1 6-22	600.00	599.45	63.64	61.26	26.681	SF
P_Riverbend 39-12 - P_Riverbend 39-12 - PLAN #1 6-22	300.00	300.00	16.23	15.14	14.892	CC
P_Riverbend 39-12 - P_Riverbend 39-12 - PLAN #1 6-22	400.00	400.50	16.41	14.91	10.896	ES
P_Riverbend 39-12 - P_Riverbend 39-12 - PLAN #1 6-22	900.00	902.36	29.07	24.86	6.902	SF

WELD_Riverbend 25-12 PAD - JAMES N. MATHISEN UNIT B #2 EXISTING - JAMES N. MATHISEN U										Offset Site Error:		0.00 ft	
Survey Program: 0-UNKNOWN										Offset Well Error:		0.00 ft	
Reference		Offset		Semi Major Axis			Distance						
Measured Depth	Vertical Depth	Measured Depth	Vertical Depth	Reference	Offset	Highside Toolface	Offset Wellbore Centre		Between Centres	Between Ellipses	Minimum Separation	Separation Factor	Warning
(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	131.40	-902.29	1,023.58	1,364.66				
100.00	100.00	93.76	93.75	0.10	1.88	131.37	-901.53	1,023.58	1,364.07	1,362.10	1.97	692.068	
200.00	200.00	210.42	210.37	0.32	6.43	131.27	-898.44	1,023.58	1,362.32	1,355.58	6.74	202.154	
300.00	300.00	310.36	310.25	0.55	10.44	131.16	-894.95	1,023.58	1,360.02	1,349.05	10.96	124.048	
400.00	399.98	410.27	410.10	0.76	14.46	30.84	-891.46	1,023.58	1,356.22	1,341.05	15.17	89.384	
500.00	499.84	510.03	509.80	0.97	18.46	30.91	-887.98	1,023.58	1,349.44	1,330.10	19.34	69.783	
600.00	599.45	609.53	609.24	1.21	22.46	31.09	-884.51	1,023.58	1,339.67	1,316.20	23.47	57.081	
700.00	698.70	708.65	708.29	1.49	26.44	31.38	-881.05	1,023.58	1,326.94	1,299.38	27.56	48.153	
800.00	797.47	807.25	806.84	1.81	30.40	31.79	-877.61	1,023.58	1,311.27	1,279.68	31.59	41.509	
900.00	895.62	905.23	904.76	2.19	34.34	32.32	-874.19	1,023.58	1,292.72	1,257.15	35.56	36.351	
1,000.00	993.06	1,002.46	1,001.93	2.62	38.24	32.99	-870.80	1,023.58	1,271.33	1,231.85	39.47	32.209	
1,100.00	1,089.64	1,098.83	1,098.24	3.12	42.11	33.79	-867.43	1,023.58	1,247.17	1,203.85	43.32	28.792	
1,200.00	1,185.27	1,194.22	1,193.57	3.68	45.94	34.74	-864.11	1,023.58	1,220.33	1,173.23	47.10	25.907	
1,300.00	1,279.82	1,288.50	1,287.80	4.31	49.73	35.86	-860.81	1,023.58	1,190.92	1,140.07	50.84	23.423	

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_Riverbend 9-12
Project:	COLORADO NORTHERN ZONE - 83	TVD Reference:	WELL @ 4928.00ft (Original Well Elev)
Reference Site:	WELD_Riverbend 25-12 PAD	MD Reference:	WELL @ 4928.00ft (Original Well Elev)
Site Error:	0.00ft	North Reference:	True
Reference Well:	P_Riverbend 9-12	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00ft	Output errors are at	2.00 sigma
Reference Wellbore	P_Riverbend 9-12	Database:	EDM 2003.21 Single User Db
Reference Design:	PLAN #1 6-22-10 RHS	Offset TVD Reference:	Offset Datum

Offset Design WELD_Riverbend 25-12 PAD - JAMES N. MATHISEN UNIT B #2 EXISTING - JAMES N. MATHISEN U												Offset Site Error:	0.00 ft
Survey Program: 0-UNKNOWN												Offset Well Error:	0.00 ft
Reference	Offset	Semi Major Axis					Distance						Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	
1,400.00	1,373.17	1,381.57	1,380.81	5.01	53.47	37.17	-857.57	1,023.58	1,159.05	1,104.50	54.55	21.247	
1,500.00	1,465.21	1,473.32	1,472.50	5.79	57.15	38.68	-854.36	1,023.58	1,124.87	1,066.62	58.25	19.311	
1,550.00	1,510.71	1,518.66	1,517.82	6.20	58.97	39.51	-852.78	1,023.58	1,106.97	1,046.86	60.11	18.416	
1,600.00	1,556.03	1,563.82	1,562.95	6.63	60.79	40.14	-851.21	1,023.58	1,088.87	1,026.65	62.22	17.500	
1,700.00	1,646.66	1,654.13	1,653.20	7.49	64.42	41.45	-848.05	1,023.58	1,053.05	986.55	66.50	15.836	
1,800.00	1,737.29	1,744.44	1,743.46	8.36	68.04	42.85	-844.90	1,023.58	1,017.78	946.94	70.84	14.367	
1,900.00	1,827.92	1,834.75	1,833.72	9.23	71.67	44.34	-841.75	1,023.58	983.12	907.87	75.25	13.064	
2,000.00	1,918.55	1,925.07	1,923.97	10.11	75.30	45.93	-838.60	1,023.58	949.14	869.41	79.74	11.903	
2,100.00	2,009.18	2,015.38	2,014.23	10.99	78.93	47.63	-835.45	1,023.58	915.91	831.62	84.30	10.865	
2,200.00	2,099.81	2,105.69	2,104.49	11.88	82.55	49.44	-832.30	1,023.58	883.52	794.59	88.94	9.934	
2,300.00	2,190.44	2,196.00	2,194.75	12.77	86.18	51.37	-829.14	1,023.58	852.07	758.41	93.66	9.098	
2,400.00	2,281.07	2,286.31	2,285.00	13.65	89.81	53.44	-825.99	1,023.58	821.65	723.19	98.46	8.345	
2,500.00	2,371.70	2,376.63	2,375.26	14.54	93.44	55.64	-822.84	1,023.58	792.39	689.04	103.36	7.667	
2,600.00	2,462.34	2,466.94	2,465.52	15.43	97.06	57.99	-819.69	1,023.58	764.43	656.10	108.33	7.056	
2,700.00	2,552.97	2,557.25	2,555.77	16.33	100.69	60.49	-816.54	1,023.58	737.90	624.52	113.39	6.508	
2,800.00	2,643.60	2,647.56	2,646.03	17.22	104.32	63.15	-813.38	1,023.58	712.98	594.47	118.51	6.016	
2,900.00	2,734.23	2,737.87	2,736.29	18.11	107.95	65.97	-810.23	1,023.58	689.83	566.13	123.70	5.577	
3,000.00	2,824.86	2,828.19	2,826.55	19.00	111.57	68.95	-807.08	1,023.58	668.64	539.71	128.93	5.186	
3,100.00	2,915.49	2,918.50	2,916.80	19.90	115.20	72.09	-803.93	1,023.58	649.61	515.42	134.18	4.841	
3,200.00	3,006.12	3,008.81	3,007.06	20.79	118.83	75.37	-800.78	1,023.58	632.91	493.49	139.43	4.539	
3,300.00	3,096.75	3,099.12	3,097.32	21.69	122.46	78.80	-797.62	1,023.58	618.75	474.12	144.63	4.278	
3,400.00	3,187.38	3,189.44	3,187.57	22.58	126.08	82.34	-794.47	1,023.58	607.31	457.54	149.76	4.055	
3,500.00	3,278.01	3,279.75	3,277.83	23.48	129.71	85.97	-791.32	1,023.58	598.73	443.94	154.78	3.868	
3,600.00	3,368.64	3,370.06	3,368.09	24.38	133.34	89.68	-788.17	1,023.58	593.14	433.49	159.65	3.715	
3,700.00	3,459.27	3,460.37	3,458.34	25.27	136.97	93.43	-785.02	1,023.58	590.63	426.28	164.34	3.594	
3,730.62	3,487.03	3,488.03	3,485.98	25.55	138.08	94.59	-784.05	1,023.58	590.48	424.67	165.81	3.561CC	
3,800.00	3,549.90	3,550.68	3,548.60	26.17	140.59	97.20	-781.87	1,023.58	591.23	422.40	168.83	3.502	
3,900.00	3,640.54	3,641.00	3,638.86	27.06	144.22	100.93	-778.71	1,023.58	594.94	421.85	173.10	3.437	
4,008.78	3,739.12	3,739.24	3,737.04	28.04	148.17	104.94	-775.29	1,023.58	602.44	424.96	177.48	3.394	
4,100.00	3,822.40	3,822.23	3,819.98	28.75	151.50	108.30	-772.39	1,023.58	610.96	429.99	180.97	3.376	
4,200.00	3,915.00	3,914.53	3,912.23	29.40	155.21	111.71	-769.17	1,023.58	621.59	436.94	184.66	3.366	
4,300.00	4,008.85	4,008.12	4,005.76	29.99	158.97	114.81	-765.90	1,023.58	632.94	444.58	188.35	3.360	
4,400.00	4,103.86	4,102.87	4,100.46	30.52	162.77	117.58	-762.59	1,023.58	644.41	452.32	192.09	3.355	
4,500.00	4,199.90	4,198.68	4,196.20	31.00	166.62	120.04	-759.25	1,023.58	655.51	459.61	195.89	3.346	
4,600.00	4,296.85	4,295.42	4,292.88	31.42	170.51	122.17	-755.87	1,023.58	665.80	466.06	199.75	3.333	
4,700.00	4,394.59	4,392.97	4,390.38	31.79	174.43	124.01	-752.47	1,023.58	674.95	471.30	203.66	3.314	
4,800.00	4,493.01	4,491.22	4,488.57	32.10	178.37	125.54	-749.04	1,023.58	682.67	475.07	207.60	3.288	
4,900.00	4,591.99	4,590.05	4,587.34	32.36	182.34	126.80	-745.59	1,023.58	688.71	477.16	211.55	3.255	
5,000.00	4,691.41	4,689.34	4,686.56	32.57	186.33	127.78	-742.13	1,023.58	692.89	477.39	215.50	3.215	
5,100.00	4,791.14	4,788.96	4,786.13	32.73	190.33	128.50	-738.65	1,023.58	695.08	475.66	219.42	3.168	
5,200.00	4,891.06	4,888.80	4,885.91	32.84	194.34	128.96	-735.17	1,023.58	695.16	471.88	223.29	3.113	
5,258.78	4,949.84	4,947.54	4,944.61	32.89	196.70	-130.59	-733.12	1,023.58	694.21	468.67	225.54	3.078	
5,300.00	4,991.06	4,988.73	4,985.78	32.91	198.36	-130.50	-731.68	1,023.58	693.27	466.08	227.19	3.051	
5,400.00	5,091.06	5,088.67	5,085.65	32.98	202.37	-130.28	-728.19	1,023.58	691.01	459.79	231.21	2.989	
5,500.00	5,191.06	5,188.61	5,185.53	33.06	206.38	-130.06	-724.70	1,023.58	688.76	453.52	235.23	2.928	
5,600.00	5,291.06	5,288.55	5,285.41	33.13	210.40	-129.84	-721.22	1,023.58	686.51	447.26	239.25	2.869	
5,700.00	5,391.06	5,388.49	5,385.29	33.20	214.41	-129.61	-717.73	1,023.58	684.28	441.00	243.28	2.813	
5,800.00	5,491.06	5,488.43	5,485.17	33.28	218.43	-129.39	-714.24	1,023.58	682.06	434.76	247.30	2.758	
5,900.00	5,591.06	5,588.37	5,585.04	33.36	222.44	-129.16	-710.75	1,023.58	679.85	428.52	251.33	2.705	
6,000.00	5,691.06	5,688.31	5,684.92	33.44	226.46	-128.93	-707.26	1,023.58	677.65	422.30	255.35	2.654	
6,100.00	5,791.06	5,788.25	5,784.80	33.52	230.47	-128.70	-703.78	1,023.58	675.46	416.08	259.38	2.604	
6,200.00	5,891.06	5,888.18	5,884.68	33.60	234.48	-128.47	-700.29	1,023.58	673.29	409.87	263.41	2.556	

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_Riverbend 9-12
Project:	COLORADO NORTHERN ZONE - 83	TVD Reference:	WELL @ 4928.00ft (Original Well Elev)
Reference Site:	WELD_Riverbend 25-12 PAD	MD Reference:	WELL @ 4928.00ft (Original Well Elev)
Site Error:	0.00ft	North Reference:	True
Reference Well:	P_Riverbend 9-12	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00ft	Output errors are at	2.00 sigma
Reference Wellbore	P_Riverbend 9-12	Database:	EDM 2003.21 Single User Db
Reference Design:	PLAN #1 6-22-10 RHS	Offset TVD Reference:	Offset Datum

Offset Design WELD_Riverbend 25-12 PAD - JAMES N. MATHISEN UNIT B #2 EXISTING - JAMES N. MATHISEN U												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
6,300.00	5,991.06	5,988.12	5,984.56	33.68	238.50	-128.24	-696.80	1,023.58	671.12	403.68	267.44	2.509	
6,400.00	6,091.06	6,088.06	6,084.44	33.77	242.51	-128.00	-693.31	1,023.58	668.96	397.49	271.48	2.464	
6,500.00	6,191.06	6,188.00	6,184.31	33.85	246.53	-127.77	-689.82	1,023.58	666.82	391.31	275.51	2.420	
6,600.00	6,291.06	6,287.94	6,284.19	33.94	250.54	-127.53	-686.34	1,023.58	664.69	385.14	279.54	2.378	
6,700.00	6,391.06	6,387.88	6,384.07	34.02	254.55	-127.29	-682.85	1,023.58	662.57	378.99	283.58	2.336	
6,800.00	6,491.06	6,487.82	6,483.95	34.11	258.57	-127.05	-679.36	1,023.58	660.46	372.84	287.62	2.296	
6,900.00	6,591.06	6,587.76	6,583.83	34.20	262.58	-126.81	-675.87	1,023.58	658.36	366.70	291.66	2.257	
7,000.00	6,691.06	6,687.70	6,683.70	34.30	266.60	-126.56	-672.39	1,023.58	656.27	360.58	295.70	2.219	
7,100.00	6,791.06	6,787.64	6,783.58	34.39	270.61	-126.32	-668.90	1,023.58	654.20	354.46	299.74	2.183	
7,200.00	6,891.06	6,887.58	6,883.46	34.48	274.63	-126.07	-665.41	1,023.58	652.14	348.36	303.78	2.147	
7,300.00	6,991.06	6,987.51	6,983.34	34.58	278.64	-125.82	-661.92	1,023.58	650.09	342.27	307.82	2.112	
7,400.00	7,091.06	7,087.45	7,083.22	34.67	282.65	-125.57	-658.43	1,023.58	648.05	336.18	311.87	2.078	
7,500.00	7,191.06	7,187.39	7,183.10	34.77	286.67	-125.32	-654.95	1,023.58	646.03	330.11	315.91	2.045	
7,600.00	7,291.06	7,287.33	7,282.97	34.87	290.68	-125.07	-651.46	1,023.58	644.01	324.05	319.96	2.013	
7,700.00	7,391.06	7,387.27	7,382.85	34.97	294.70	-124.81	-647.97	1,023.58	642.02	318.01	324.01	1.981	
7,800.00	7,491.06	7,487.21	7,482.73	35.07	298.71	-124.56	-644.48	1,023.58	640.03	311.97	328.06	1.951	
7,900.00	7,591.06	7,587.15	7,582.61	35.17	302.73	-124.30	-641.00	1,023.58	638.05	305.95	332.11	1.921	
8,000.00	7,691.06	7,687.09	7,682.49	35.28	306.74	-124.04	-637.51	1,023.58	636.09	299.93	336.16	1.892	
8,100.00	7,791.06	7,787.03	7,782.37	35.38	310.75	-123.78	-634.02	1,023.58	634.15	293.93	340.22	1.864	
8,200.00	7,891.06	7,886.97	7,882.24	35.49	314.77	-123.51	-630.53	1,023.58	632.21	287.94	344.27	1.836	
8,300.00	7,991.06	7,986.91	7,982.12	35.59	318.78	-123.25	-627.04	1,023.58	630.29	281.96	348.33	1.809	
8,341.94	8,033.00	8,028.82	8,024.01	35.64	320.47	-123.14	-625.58	1,023.58	629.49	279.46	350.03	1.798 ES, SF	

Company:	US ROCKIES REGION PLANNING	Local Co-ordinate Reference:	Well P_Riverbend 9-12
Project:	COLORADO NORTHERN ZONE - 83	TVD Reference:	WELL @ 4928.00ft (Original Well Elev)
Reference Site:	WELD_Riverbend 25-12 PAD	MD Reference:	WELL @ 4928.00ft (Original Well Elev)
Site Error:	0.00ft	North Reference:	True
Reference Well:	P_Riverbend 9-12	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00ft	Output errors are at	2.00 sigma
Reference Wellbore	P_Riverbend 9-12	Database:	EDM 2003.21 Single User Db
Reference Design:	PLAN #1 6-22-10 RHS	Offset TVD Reference:	Offset Datum

Offset Design WELD_Riverbend 25-12 PAD - P_Riverbend 10-12 - P_Riverbend 10-12 - PLAN #1 6-22-10 RHS												Offset Site Error:	0.00 ft
Survey Program: 0-UNKNOWN												Offset Well Error:	0.00 ft
Reference	Offset	Semi Major Axis					Distance						Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	
0.00	0.00	0.00	0.00	0.00	0.00	-89.98	0.01	-32.19	32.19				
100.00	100.00	100.00	100.00	0.10	1.70	-89.98	0.01	-32.19	32.19	30.39	1.80	17.926	
200.00	200.00	200.00	200.00	0.32	5.70	-89.98	0.01	-32.19	32.19	26.17	6.02	5.346	
300.00	300.00	300.00	300.00	0.55	9.70	-89.98	0.01	-32.19	32.19	21.94	10.25	3.142 CC	
400.00	399.98	399.98	399.98	0.76	13.70	170.25	0.01	-32.19	33.91	19.46	14.45	2.347 ES	
500.00	499.84	499.84	499.84	0.97	17.69	171.54	0.01	-32.19	39.07	20.46	18.61	2.099	
600.00	599.45	599.45	599.45	1.21	21.68	173.06	0.01	-32.19	47.71	24.97	22.74	2.098 SF	
700.00	698.70	698.70	698.70	1.49	25.65	174.44	0.01	-32.19	59.83	33.03	26.80	2.232	
800.00	797.47	797.47	797.47	1.81	29.60	175.57	0.01	-32.19	75.41	44.63	30.78	2.450	
900.00	895.62	895.62	895.62	2.19	33.52	176.44	0.01	-32.19	94.45	59.78	34.67	2.724	
1,000.00	993.06	993.06	993.06	2.62	37.42	177.10	0.01	-32.19	116.91	78.47	38.44	3.042	
1,100.00	1,089.64	1,091.36	1,091.34	3.12	37.76	177.05	-1.40	-31.82	142.22	103.54	38.69	3.676	
1,200.00	1,185.27	1,189.43	1,189.29	3.68	34.34	175.97	-6.05	-30.61	169.69	134.36	35.33	4.803	
1,300.00	1,279.82	1,286.96	1,286.48	4.31	30.66	174.32	-13.89	-28.58	199.40	167.60	31.80	6.270	
1,400.00	1,373.17	1,383.76	1,382.61	5.01	27.14	172.36	-24.83	-25.74	231.51	202.97	28.54	8.112	
1,500.00	1,465.21	1,477.66	1,475.60	5.79	23.91	170.50	-37.50	-22.45	266.43	240.73	25.70	10.368	
1,550.00	1,510.71	1,523.93	1,521.41	6.20	22.42	169.77	-43.77	-20.82	285.15	260.70	24.44	11.665	
1,600.00	1,556.03	1,570.04	1,567.07	6.63	21.00	169.20	-50.03	-19.20	304.29	280.85	23.44	12.981	
1,700.00	1,646.66	1,662.26	1,658.38	7.49	18.49	168.26	-62.53	-15.96	342.64	320.88	21.76	15.746	
1,800.00	1,737.29	1,754.49	1,749.70	8.36	16.55	167.51	-75.03	-12.71	381.05	360.41	20.64	18.459	
1,900.00	1,827.92	1,846.71	1,841.01	9.23	15.38	166.89	-87.54	-9.47	419.51	399.25	20.25	20.711	
2,000.00	1,918.55	1,938.94	1,932.32	10.11	15.14	166.38	-100.04	-6.22	458.00	437.29	20.71	22.119	
2,100.00	2,009.18	2,031.16	2,023.64	10.99	15.87	165.95	-112.54	-2.98	496.52	474.53	21.99	22.580	
2,200.00	2,099.81	2,123.38	2,114.95	11.88	17.47	165.58	-125.05	0.27	535.06	511.03	24.03	22.268	
2,300.00	2,190.44	2,215.61	2,206.27	12.77	19.73	165.25	-137.55	3.51	573.61	546.99	26.62	21.551	
2,400.00	2,281.07	2,307.83	2,297.58	13.65	22.47	164.97	-150.05	6.76	612.18	582.57	29.61	20.673	
2,500.00	2,371.70	2,400.06	2,388.90	14.54	25.52	164.73	-162.56	10.00	650.76	617.87	32.89	19.786	
2,600.00	2,462.34	2,492.28	2,480.21	15.43	28.81	164.51	-175.06	13.25	689.35	652.98	36.37	18.952	
2,700.00	2,552.97	2,584.50	2,571.53	16.33	32.23	164.31	-187.56	16.49	727.95	687.96	39.99	18.203	
2,800.00	2,643.60	2,676.73	2,662.84	17.22	35.76	164.13	-200.07	19.74	766.55	722.85	43.70	17.540	
2,900.00	2,734.23	2,768.95	2,754.16	18.11	39.36	163.97	-212.57	22.98	805.16	757.67	47.49	16.955	
3,000.00	2,824.86	2,861.18	2,845.47	19.00	43.02	163.83	-225.07	26.23	843.77	792.44	51.33	16.439	
3,100.00	2,915.49	2,953.40	2,936.79	19.90	46.72	163.70	-237.58	29.47	882.39	827.18	55.21	15.982	
3,200.00	3,006.12	3,045.62	3,028.10	20.79	50.46	163.58	-250.08	32.72	921.01	861.88	59.13	15.576	
3,300.00	3,096.75	3,137.85	3,119.42	21.69	54.22	163.46	-262.58	35.96	959.64	896.56	63.08	15.214	
3,400.00	3,187.38	3,230.07	3,210.73	22.58	58.01	163.36	-275.09	39.21	998.27	931.22	67.04	14.890	
3,500.00	3,278.01	3,322.29	3,302.05	23.48	61.81	163.27	-287.59	42.45	1,036.90	965.87	71.03	14.598	
3,600.00	3,368.64	3,414.52	3,393.36	24.38	65.63	163.18	-300.10	45.70	1,075.53	1,000.50	75.03	14.335	
3,700.00	3,459.27	3,506.74	3,484.68	25.27	69.46	163.09	-312.60	48.94	1,114.16	1,035.12	79.04	14.096	
3,800.00	3,549.90	3,598.97	3,575.99	26.17	73.30	163.02	-325.10	52.19	1,152.80	1,069.73	83.07	13.878	
3,900.00	3,640.54	3,691.19	3,667.31	27.06	77.15	162.95	-337.61	55.43	1,191.44	1,104.34	87.10	13.678	
4,008.78	3,739.12	3,791.51	3,766.64	28.04	81.35	162.87	-351.21	58.96	1,233.47	1,141.97	91.50	13.480	
4,100.00	3,822.40	3,876.15	3,850.45	28.75	84.90	163.01	-362.68	61.94	1,267.43	1,171.48	95.96	13.208	
4,200.00	3,915.00	3,970.06	3,943.43	29.40	88.84	163.10	-375.41	65.24	1,301.69	1,200.85	100.84	12.908	
4,300.00	4,008.85	4,065.02	4,037.45	29.99	92.83	163.12	-388.29	68.58	1,332.80	1,227.05	105.75	12.604	
4,400.00	4,103.86	4,160.93	4,132.41	30.52	96.86	163.08	-401.29	71.96	1,360.72	1,250.07	110.65	12.297	
4,500.00	4,199.90	4,256.30	4,226.85	31.00	100.87	163.00	-414.16	75.30	1,385.46	1,269.99	115.47	11.999	
4,600.00	4,296.85	4,347.38	4,317.30	31.42	104.60	162.96	-424.53	77.99	1,407.28	1,287.36	119.92	11.735	
4,700.00	4,394.59	4,439.09	4,408.67	31.79	108.25	162.98	-432.15	79.97	1,426.29	1,302.13	124.16	11.488	
4,800.00	4,493.01	4,531.27	4,500.70	32.10	111.79	163.07	-436.96	81.21	1,442.46	1,314.30	128.15	11.256	
4,900.00	4,591.99	4,623.73	4,593.14	32.36	114.40	163.22	-438.90	81.72	1,455.77	1,324.69	131.08	11.106	
5,000.00	4,691.41	4,722.00	4,691.41	32.57	111.62	163.40	-438.94	81.73	1,466.07	1,337.59	128.49	11.410	

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_Riverbend 9-12
Project:	COLORADO NORTHERN ZONE - 83	TVD Reference:	WELL @ 4928.00ft (Original Well Elev)
Reference Site:	WELD_Riverbend 25-12 PAD	MD Reference:	WELL @ 4928.00ft (Original Well Elev)
Site Error:	0.00ft	North Reference:	True
Reference Well:	P_Riverbend 9-12	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00ft	Output errors are at	2.00 sigma
Reference Wellbore	P_Riverbend 9-12	Database:	EDM 2003.21 Single User Db
Reference Design:	PLAN #1 6-22-10 RHS	Offset TVD Reference:	Offset Datum

Offset Design WELD_Riverbend 25-12 PAD - P_Riverbend 10-12 - P_Riverbend 10-12 - PLAN #1 6-22-10 RHS												Offset Site Error:	0.00 ft
Survey Program: 0-UNKNOWN												Offset Well Error:	0.00 ft
Reference	Offset	Semi Major Axis		Distance									
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning
5,100.00	4,791.14	4,821.73	4,791.14	32.73	108.27	163.52	-438.94	81.73	1,473.06	1,347.91	125.15	11.771	
5,200.00	4,891.06	4,921.65	4,891.06	32.84	104.95	163.58	-438.94	81.73	1,476.70	1,354.99	121.71	12.133	
5,258.78	4,949.84	4,980.43	4,949.84	32.89	103.02	-96.12	-438.94	81.73	1,477.27	1,357.59	119.69	12.343	
5,300.00	4,991.06	5,021.65	4,991.06	32.91	101.68	-96.12	-438.94	81.73	1,477.27	1,358.88	118.39	12.478	
5,400.00	5,091.06	5,121.65	5,091.06	32.98	98.47	-96.12	-438.94	81.73	1,477.27	1,361.99	115.29	12.814	
5,500.00	5,191.06	5,221.65	5,191.06	33.06	95.31	-96.12	-438.94	81.73	1,477.27	1,365.03	112.24	13.161	
5,600.00	5,291.06	5,321.65	5,291.06	33.13	92.22	-96.12	-438.94	81.73	1,477.27	1,368.01	109.27	13.520	
5,700.00	5,391.06	5,421.65	5,391.06	33.20	89.20	-96.12	-438.94	81.73	1,477.27	1,370.91	106.37	13.889	
5,800.00	5,491.06	5,521.65	5,491.06	33.28	86.27	-96.12	-438.94	81.73	1,477.27	1,373.73	103.55	14.267	
5,900.00	5,591.06	5,621.65	5,591.06	33.36	83.42	-96.12	-438.94	81.73	1,477.27	1,376.46	100.82	14.653	
6,000.00	5,691.06	5,721.65	5,691.06	33.44	80.67	-96.12	-438.94	81.73	1,477.27	1,379.09	98.18	15.046	
6,100.00	5,791.06	5,821.65	5,791.06	33.52	78.02	-96.12	-438.94	81.73	1,477.27	1,381.61	95.66	15.443	
6,200.00	5,891.06	5,921.65	5,891.06	33.60	75.50	-96.12	-438.94	81.73	1,477.27	1,384.01	93.26	15.840	
6,300.00	5,991.06	6,021.65	5,991.06	33.68	73.11	-96.12	-438.94	81.73	1,477.27	1,386.28	90.99	16.235	
6,400.00	6,091.06	6,121.65	6,091.06	33.77	70.86	-96.12	-438.94	81.73	1,477.27	1,388.40	88.87	16.622	
6,500.00	6,191.06	6,221.65	6,191.06	33.85	68.78	-96.12	-438.94	81.73	1,477.27	1,390.36	86.91	16.997	
6,600.00	6,291.06	6,321.65	6,291.06	33.94	66.87	-96.12	-438.94	81.73	1,477.27	1,392.14	85.13	17.353	
6,700.00	6,391.06	6,421.65	6,391.06	34.02	65.14	-96.12	-438.94	81.73	1,477.27	1,393.73	83.54	17.683	
6,800.00	6,491.06	6,521.65	6,491.06	34.11	63.63	-96.12	-438.94	81.73	1,477.27	1,395.12	82.16	17.981	
6,900.00	6,591.06	6,621.65	6,591.06	34.20	62.33	-96.12	-438.94	81.73	1,477.27	1,396.28	81.00	18.239	
7,000.00	6,691.06	6,721.65	6,691.06	34.30	61.27	-96.12	-438.94	81.73	1,477.27	1,397.20	80.07	18.449	
7,100.00	6,791.06	6,821.65	6,791.06	34.39	60.45	-96.12	-438.94	81.73	1,477.27	1,397.88	79.40	18.606	
7,200.00	6,891.06	6,921.65	6,891.06	34.48	59.89	-96.12	-438.94	81.73	1,477.27	1,398.29	78.98	18.703	
7,300.00	6,991.06	7,021.65	6,991.06	34.58	59.59	-96.12	-438.94	81.73	1,477.27	1,398.44	78.84	18.738	
7,400.00	7,091.06	7,121.65	7,091.06	34.67	59.56	-96.12	-438.94	81.73	1,477.27	1,398.31	78.96	18.709	
7,500.00	7,191.06	7,221.65	7,191.06	34.77	59.80	-96.12	-438.94	81.73	1,477.27	1,397.92	79.36	18.616	
7,600.00	7,291.06	7,321.65	7,291.06	34.87	60.31	-96.12	-438.94	81.73	1,477.27	1,397.25	80.02	18.461	
7,700.00	7,391.06	7,421.65	7,391.06	34.97	61.07	-96.12	-438.94	81.73	1,477.27	1,396.33	80.95	18.250	
7,800.00	7,491.06	7,521.65	7,491.06	35.07	62.08	-96.12	-438.94	81.73	1,477.27	1,395.15	82.12	17.988	
7,900.00	7,591.06	7,621.65	7,591.06	35.17	63.33	-96.12	-438.94	81.73	1,477.27	1,393.73	83.54	17.683	
8,000.00	7,691.06	7,721.65	7,691.06	35.28	64.80	-96.12	-438.94	81.73	1,477.27	1,392.09	85.18	17.342	
8,100.00	7,791.06	7,821.65	7,791.06	35.38	66.48	-96.12	-438.94	81.73	1,477.27	1,390.24	87.04	16.973	
8,200.00	7,891.06	7,921.65	7,891.06	35.49	68.35	-96.12	-438.94	81.73	1,477.27	1,388.19	89.09	16.582	
8,300.00	7,991.06	8,021.65	7,991.06	35.59	70.40	-96.12	-438.94	81.73	1,477.27	1,385.96	91.31	16.178	
8,341.94	8,033.00	8,063.59	8,033.00	35.64	71.31	-96.12	-438.94	81.73	1,477.27	1,384.98	92.30	16.005	

Company:	US ROCKIES REGION PLANNING	Local Co-ordinate Reference:	Well P_Riverbend 9-12
Project:	COLORADO NORTHERN ZONE - 83	TVD Reference:	WELL @ 4928.00ft (Original Well Elev)
Reference Site:	WELD_Riverbend 25-12 PAD	MD Reference:	WELL @ 4928.00ft (Original Well Elev)
Site Error:	0.00ft	North Reference:	True
Reference Well:	P_Riverbend 9-12	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00ft	Output errors are at	2.00 sigma
Reference Wellbore	P_Riverbend 9-12	Database:	EDM 2003.21 Single User Db
Reference Design:	PLAN #1 6-22-10 RHS	Offset TVD Reference:	Offset Datum

Offset Design WELD_Riverbend 25-12 PAD - P_Riverbend 22-12 - P_Riverbend 22-12 - PLAN #1 6-22-10 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	-90.26	-0.36	-80.05	80.05				
100.00	100.00	100.00	100.00	0.10	0.10	-90.26	-0.36	-80.05	80.05	79.86	0.19	418.990	
200.00	200.00	200.00	200.00	0.32	0.32	-90.26	-0.36	-80.05	80.05	79.41	0.64	124.962	
300.00	300.00	300.00	300.00	0.55	0.55	-90.26	-0.36	-80.05	80.05	78.96	1.09	73.431 CC, ES	
400.00	399.98	399.98	399.98	0.76	0.77	169.67	-0.36	-80.05	81.76	80.24	1.52	53.656	
500.00	499.84	499.84	499.84	0.97	0.99	170.27	-0.36	-80.05	86.92	84.97	1.95	44.543	
600.00	599.45	599.45	599.45	1.21	1.22	171.12	-0.36	-80.05	95.52	93.13	2.39	40.039	
700.00	698.70	698.70	698.70	1.49	1.44	172.09	-0.36	-80.05	107.58	104.75	2.82	38.095	
800.00	797.47	797.47	797.47	1.81	1.66	173.06	-0.36	-80.05	123.09	119.83	3.26	37.702 SF	
900.00	895.62	895.62	895.62	2.19	1.88	173.95	-0.36	-80.05	142.06	138.35	3.71	38.312	
1,000.00	993.06	993.06	993.06	2.62	2.10	174.73	-0.36	-80.05	164.45	160.29	4.15	39.601	
1,100.00	1,089.64	1,084.04	1,084.02	3.12	2.30	175.36	-0.25	-81.28	191.55	186.98	4.58	41.859	
1,200.00	1,185.27	1,171.89	1,171.78	3.68	2.48	175.86	0.11	-85.18	224.96	219.97	4.99	45.095	
1,300.00	1,279.82	1,256.52	1,256.18	4.31	2.67	176.25	0.69	-91.48	264.42	259.02	5.40	48.982	
1,400.00	1,373.17	1,337.57	1,336.78	5.01	2.85	176.54	1.47	-99.83	309.67	303.86	5.81	53.329	
1,500.00	1,465.21	1,414.71	1,413.26	5.79	3.05	176.75	2.40	-109.88	360.40	354.19	6.21	58.010	
1,550.00	1,510.71	1,451.74	1,449.87	6.20	3.15	176.83	2.91	-115.44	387.73	381.31	6.42	60.440	
1,600.00	1,556.03	1,487.94	1,485.59	6.63	3.25	176.94	3.46	-121.32	415.95	409.29	6.65	62.524	
1,700.00	1,646.66	1,558.48	1,554.95	7.49	3.46	177.10	4.64	-134.08	473.92	466.79	7.13	66.473	
1,800.00	1,737.29	1,626.57	1,621.58	8.36	3.69	177.21	5.93	-148.00	533.84	526.24	7.61	70.178	
1,900.00	1,827.92	1,700.00	1,693.06	9.23	3.96	177.30	7.48	-164.78	595.68	587.58	8.10	73.556	
2,000.00	1,918.55	1,755.63	1,746.90	10.11	4.19	177.35	8.77	-178.70	659.15	650.59	8.56	76.989	
2,100.00	2,009.18	1,816.73	1,805.71	10.99	4.46	177.39	10.30	-195.19	724.34	715.31	9.04	80.150	
2,200.00	2,099.81	1,875.63	1,862.05	11.88	4.75	177.42	11.88	-212.26	791.11	781.60	9.51	83.170	
2,300.00	2,190.44	1,932.39	1,916.01	12.77	5.05	177.44	13.50	-229.80	859.36	849.37	9.98	86.066	
2,400.00	2,281.07	1,987.09	1,967.67	13.65	5.35	177.45	15.16	-247.71	929.02	918.56	10.46	88.853	
2,500.00	2,371.70	2,039.80	2,017.12	14.54	5.67	177.46	16.85	-265.89	1,000.01	989.08	10.93	91.534	
2,600.00	2,462.34	2,100.00	2,073.17	15.43	6.05	177.46	18.87	-287.76	1,072.31	1,060.90	11.41	93.985	
2,700.00	2,552.97	2,139.54	2,109.73	16.33	6.33	177.46	20.26	-302.76	1,145.70	1,133.84	11.86	96.630	
2,800.00	2,643.60	2,200.00	2,165.21	17.22	6.76	177.45	22.47	-326.67	1,220.36	1,208.02	12.34	98.862	
2,900.00	2,734.23	2,232.20	2,194.56	18.11	7.01	177.45	23.70	-339.87	1,295.89	1,283.12	12.78	101.413	
3,000.00	2,824.86	2,292.76	2,249.53	19.00	7.48	177.44	26.04	-365.17	1,372.22	1,358.95	13.27	103.411	
3,100.00	2,915.49	2,357.34	2,308.15	19.90	8.00	177.43	28.54	-392.17	1,448.57	1,434.80	13.77	105.184	
3,200.00	3,006.12	2,421.93	2,366.76	20.79	8.52	177.42	31.04	-419.17	1,524.92	1,510.64	14.28	106.824	
3,300.00	3,096.75	2,486.51	2,425.38	21.69	9.05	177.41	33.54	-446.17	1,601.26	1,586.48	14.78	108.335	
3,400.00	3,187.38	2,551.10	2,484.00	22.58	9.58	177.40	36.04	-473.16	1,677.61	1,662.32	15.29	109.729	
3,500.00	3,278.01	2,615.68	2,542.62	23.48	10.12	177.40	38.54	-500.16	1,753.96	1,738.16	15.80	111.026	
3,600.00	3,368.64	2,680.26	2,601.23	24.38	10.66	177.39	41.04	-527.16	1,830.30	1,814.00	16.31	112.228	
3,700.00	3,459.27	2,744.85	2,659.85	25.27	11.21	177.39	43.54	-554.15	1,906.65	1,889.83	16.82	113.346	
3,800.00	3,549.90	2,809.43	2,718.47	26.17	11.76	177.38	46.04	-581.15	1,983.00	1,965.66	17.34	114.392	
3,900.00	3,640.54	2,874.02	2,777.09	27.06	12.31	177.38	48.54	-608.15	2,059.35	2,041.50	17.85	115.366	
4,008.78	3,739.12	2,944.27	2,840.85	28.04	12.92	177.37	51.26	-637.51	2,142.40	2,123.99	18.41	116.357	
4,100.00	3,822.40	3,004.28	2,895.32	28.75	13.43	177.46	53.58	-662.60	2,211.09	2,192.08	19.02	116.268	
4,200.00	3,915.00	3,072.54	2,957.27	29.40	14.02	177.54	56.22	-691.13	2,284.16	2,264.52	19.65	116.261	
4,300.00	4,008.85	3,143.31	3,021.50	29.99	14.64	177.61	58.96	-720.71	2,354.81	2,334.55	20.26	116.243	
4,400.00	4,103.86	3,216.49	3,087.92	30.52	15.27	177.67	61.80	-751.31	2,422.95	2,402.10	20.85	116.218	
4,500.00	4,199.90	3,292.00	3,156.46	31.00	15.93	177.71	64.72	-782.87	2,488.49	2,467.07	21.42	116.188	
4,600.00	4,296.85	3,369.76	3,227.03	31.42	16.61	177.75	67.73	-815.37	2,551.36	2,529.40	21.97	116.155	
4,700.00	4,394.59	3,449.65	3,299.54	31.79	17.31	177.78	70.82	-848.77	2,611.48	2,589.00	22.49	116.123	
4,800.00	4,493.01	3,531.59	3,373.91	32.10	18.02	177.80	73.99	-883.02	2,668.78	2,645.80	22.99	116.096	
4,900.00	4,591.99	3,615.48	3,450.05	32.36	18.76	177.82	77.24	-918.09	2,723.19	2,699.73	23.46	116.074	
5,000.00	4,691.41	3,701.21	3,527.86	32.57	19.51	177.83	80.56	-953.93	2,774.64	2,750.73	23.91	116.060	

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_Riverbend 9-12
Project:	COLORADO NORTHERN ZONE - 83	TVD Reference:	WELL @ 4928.00ft (Original Well Elev)
Reference Site:	WELD_Riverbend 25-12 PAD	MD Reference:	WELL @ 4928.00ft (Original Well Elev)
Site Error:	0.00ft	North Reference:	True
Reference Well:	P_Riverbend 9-12	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00ft	Output errors are at	2.00 sigma
Reference Wellbore	P_Riverbend 9-12	Database:	EDM 2003.21 Single User Db
Reference Design:	PLAN #1 6-22-10 RHS	Offset TVD Reference:	Offset Datum

Offset Design WELD_Riverbend 25-12 PAD - P_Riverbend 22-12 - P_Riverbend 22-12 - PLAN #1 6-22-10 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
5,100.00	4,791.14	3,788.69	3,607.25	32.73	20.28	177.83	83.95	-990.49	2,823.07	2,798.74	24.33	116.055	
5,200.00	4,891.06	3,877.79	3,688.13	32.84	21.07	177.83	87.40	-1,027.74	2,868.41	2,843.70	24.71	116.061	
5,258.78	4,949.84	3,930.88	3,736.32	32.89	21.53	-81.88	89.45	-1,049.93	2,893.61	2,868.68	24.93	116.057	
5,300.00	4,991.06	3,968.29	3,770.27	32.91	21.86	-81.90	90.90	-1,065.57	2,910.90	2,885.78	25.11	115.913	
5,400.00	5,091.06	4,059.06	3,852.65	32.98	22.66	-81.94	94.41	-1,103.51	2,952.84	2,927.28	25.55	115.567	
5,500.00	5,191.06	4,149.82	3,935.02	33.06	23.47	-81.98	97.93	-1,141.45	2,994.78	2,968.78	25.99	115.221	
5,600.00	5,291.06	4,240.58	4,017.40	33.13	24.27	-82.01	101.44	-1,179.39	3,036.72	3,010.28	26.43	114.875	
5,700.00	5,391.06	4,331.34	4,099.78	33.20	25.07	-82.05	104.95	-1,217.33	3,078.66	3,051.78	26.88	114.531	
5,800.00	5,491.06	4,422.10	4,182.15	33.28	25.87	-82.09	108.47	-1,255.27	3,120.60	3,093.27	27.33	114.188	
5,900.00	5,591.06	4,512.86	4,264.53	33.36	26.68	-82.12	111.98	-1,293.21	3,162.55	3,134.77	27.78	113.848	
6,000.00	5,691.06	4,603.63	4,346.91	33.44	27.48	-82.16	115.49	-1,331.15	3,204.49	3,176.26	28.23	113.509	
6,100.00	5,791.06	4,694.39	4,429.28	33.52	28.29	-82.19	119.01	-1,369.08	3,246.44	3,217.75	28.69	113.173	
6,200.00	5,891.06	4,785.15	4,511.66	33.60	29.09	-82.22	122.52	-1,407.02	3,288.39	3,259.24	29.14	112.840	
6,300.00	5,991.06	4,875.91	4,594.04	33.68	29.90	-82.25	126.03	-1,444.96	3,330.33	3,300.73	29.60	112.510	
6,400.00	6,091.06	4,966.67	4,676.41	33.77	30.70	-82.28	129.55	-1,482.90	3,372.28	3,342.22	30.06	112.183	
6,500.00	6,191.06	5,057.43	4,758.79	33.85	31.51	-82.31	133.06	-1,520.84	3,414.23	3,383.71	30.52	111.860	
6,600.00	6,291.06	5,148.20	4,841.17	33.94	32.31	-82.34	136.57	-1,558.78	3,456.18	3,425.20	30.99	111.540	
6,700.00	6,391.06	5,238.96	4,923.55	34.02	33.11	-82.37	140.08	-1,596.72	3,498.13	3,467.15	31.45	111.221	
6,800.00	6,491.06	5,329.72	5,005.93	34.11	33.91	-82.40	143.59	-1,634.66	3,540.08	3,509.10	31.91	110.902	
6,900.00	6,591.06	5,420.48	5,088.31	34.20	34.71	-82.43	147.10	-1,672.60	3,582.03	3,551.05	32.37	110.583	
7,000.00	6,691.06	5,511.24	5,170.69	34.30	35.51	-82.46	150.61	-1,710.54	3,623.98	3,593.00	32.83	110.264	
7,100.00	6,791.06	5,601.99	5,253.07	34.39	36.31	-82.49	154.12	-1,748.48	3,665.93	3,635.05	33.29	109.945	
7,200.00	6,891.06	5,692.75	5,335.45	34.48	37.11	-82.52	157.63	-1,786.42	3,707.88	3,677.00	33.75	109.626	
7,300.00	6,991.06	5,783.51	5,417.83	34.58	37.91	-82.55	161.14	-1,824.36	3,749.83	3,719.05	34.21	109.307	
7,400.00	7,091.06	5,874.27	5,500.21	34.67	38.71	-82.58	164.65	-1,862.30	3,791.78	3,761.00	34.67	108.988	
7,500.00	7,191.06	5,965.02	5,582.59	34.77	39.51	-82.61	168.16	-1,900.24	3,833.73	3,803.05	35.13	108.669	
7,600.00	7,291.06	6,055.78	5,664.97	34.87	40.31	-82.64	171.67	-1,938.18	3,875.68	3,845.00	35.59	108.350	
7,700.00	7,391.06	6,146.54	5,747.35	34.97	41.11	-82.67	175.18	-1,976.12	3,917.63	3,887.05	36.05	108.031	
7,800.00	7,491.06	6,237.30	5,829.73	35.07	41.91	-82.70	178.69	-2,014.06	3,959.58	3,929.00	36.51	107.712	
7,900.00	7,591.06	6,328.06	5,912.11	35.17	42.71	-82.73	182.20	-2,052.00	4,001.53	3,971.05	36.97	107.393	
8,000.00	7,691.06	6,418.82	5,994.49	35.28	43.51	-82.76	185.71	-2,089.94	4,043.48	4,013.00	37.43	107.074	
8,100.00	7,791.06	6,509.58	6,076.87	35.38	44.31	-82.79	189.22	-2,127.88	4,085.43	4,055.05	37.89	106.755	
8,200.00	7,891.06	6,600.34	6,159.25	35.49	45.11	-82.82	192.73	-2,165.82	4,127.38	4,097.00	38.35	106.436	
8,300.00	7,991.06	6,691.10	6,241.63	35.59	45.91	-82.85	196.24	-2,203.76	4,169.33	4,139.05	38.81	106.117	
8,341.94	8,033.00	8,390.93	8,033.00	35.64	46.71	-82.88	199.75	-2,241.70	4,211.28	4,181.00	40.29	85.837	

Company:	US ROCKIES REGION PLANNING	Local Co-ordinate Reference:	Well P_Riverbend 9-12
Project:	COLORADO NORTHERN ZONE - 83	TVD Reference:	WELL @ 4928.00ft (Original Well Elev)
Reference Site:	WELD_Riverbend 25-12 PAD	MD Reference:	WELL @ 4928.00ft (Original Well Elev)
Site Error:	0.00ft	North Reference:	True
Reference Well:	P_Riverbend 9-12	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00ft	Output errors are at	2.00 sigma
Reference Wellbore	P_Riverbend 9-12	Database:	EDM 2003.21 Single User Db
Reference Design:	PLAN #1 6-22-10 RHS	Offset TVD Reference:	Offset Datum

Offset Design WELD_Riverbend 25-12 PAD - P_Riverbend 23-12 - P_Riverbend 23-12 - PLAN #1 6-22-10 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	-90.00	0.00	-64.09	64.09				
100.00	100.00	100.00	100.00	0.10	0.10	-90.00	0.00	-64.09	64.09	63.90	0.19	335.481	
200.00	200.00	200.00	200.00	0.32	0.32	-90.00	0.00	-64.09	64.09	63.45	0.64	100.056	
300.00	300.00	300.00	300.00	0.55	0.55	-90.00	0.00	-64.09	64.09	63.00	1.09	58.796 CC, ES	
400.00	399.98	399.98	399.98	0.76	0.77	169.97	0.00	-64.09	65.81	64.29	1.52	43.188	
500.00	499.84	499.84	499.84	0.97	0.99	170.69	0.00	-64.09	70.97	69.02	1.95	36.371	
600.00	599.45	599.45	599.45	1.21	1.22	171.68	0.00	-64.09	79.58	77.20	2.39	33.362	
700.00	698.70	698.70	698.70	1.49	1.44	172.75	0.00	-64.09	91.66	88.84	2.82	32.463 SF	
800.00	797.47	797.47	797.47	1.81	1.66	173.77	0.00	-64.09	107.20	103.93	3.26	32.843	
900.00	895.62	895.62	895.62	2.19	1.88	174.68	0.00	-64.09	126.19	122.48	3.71	34.045	
1,000.00	993.06	993.06	993.06	2.62	2.10	175.45	0.00	-64.09	148.60	144.45	4.15	35.801	
1,100.00	1,089.64	1,087.84	1,087.82	3.12	2.29	175.64	-1.21	-64.68	174.88	170.31	4.57	38.260	
1,200.00	1,185.27	1,180.86	1,180.74	3.68	2.46	174.99	-5.13	-66.59	205.57	200.59	4.98	41.284	
1,300.00	1,279.82	1,271.89	1,271.48	4.31	2.63	173.87	-11.59	-69.73	240.64	235.24	5.40	44.531	
1,400.00	1,373.17	1,360.58	1,359.63	5.01	2.82	172.49	-20.38	-74.01	280.09	274.24	5.85	47.845	
1,500.00	1,465.21	1,446.65	1,444.84	5.79	3.03	171.02	-31.25	-79.29	323.89	317.55	6.34	51.119	
1,550.00	1,510.71	1,488.62	1,486.25	6.20	3.13	170.27	-37.38	-82.28	347.39	340.80	6.60	52.674	
1,600.00	1,556.03	1,530.03	1,527.01	6.63	3.25	169.61	-43.97	-85.48	371.58	364.68	6.90	53.840	
1,700.00	1,646.66	1,611.70	1,607.07	7.49	3.50	168.28	-58.50	-92.55	420.88	413.34	7.54	55.799	
1,800.00	1,737.29	1,691.77	1,685.06	8.36	3.78	166.94	-74.74	-100.45	471.47	463.23	8.23	57.278	
1,900.00	1,827.92	1,770.15	1,760.91	9.23	4.09	165.63	-92.53	-109.10	523.36	514.39	8.97	58.370	
2,000.00	1,918.55	1,852.83	1,840.50	10.11	4.45	164.32	-112.65	-118.89	576.24	566.48	9.76	59.037	
2,100.00	2,009.18	1,936.98	1,921.49	10.99	4.83	163.20	-133.17	-128.87	629.34	618.76	10.58	59.478	
2,200.00	2,099.81	2,021.12	2,002.48	11.88	5.23	162.25	-153.69	-138.86	682.58	671.17	11.42	59.789	
2,300.00	2,190.44	2,105.26	2,083.47	12.77	5.64	161.44	-174.21	-148.84	735.95	723.68	12.26	60.010	
2,400.00	2,281.07	2,189.41	2,164.47	13.65	6.06	160.74	-194.73	-158.82	789.40	776.28	13.12	60.164	
2,500.00	2,371.70	2,273.55	2,245.46	14.54	6.49	160.13	-215.25	-168.80	842.93	828.94	13.99	60.273	
2,600.00	2,462.34	2,357.69	2,326.45	15.43	6.93	159.59	-235.77	-178.78	896.51	881.66	14.85	60.352	
2,700.00	2,552.97	2,441.84	2,407.44	16.33	7.37	159.11	-256.29	-188.76	950.15	934.43	15.73	60.409	
2,800.00	2,643.60	2,525.98	2,488.43	17.22	7.81	158.68	-276.81	-198.74	1,003.84	987.23	16.61	60.450	
2,900.00	2,734.23	2,610.12	2,569.42	18.11	8.26	158.30	-297.33	-208.72	1,057.55	1,040.07	17.49	60.480	
3,000.00	2,824.86	2,694.26	2,650.41	19.00	8.71	157.95	-317.85	-218.71	1,111.30	1,092.93	18.37	60.500	
3,100.00	2,915.49	2,778.41	2,731.40	19.90	9.17	157.63	-338.37	-228.69	1,165.08	1,145.83	19.25	60.514	
3,200.00	3,006.12	2,862.55	2,812.39	20.79	9.62	157.34	-358.89	-238.67	1,218.88	1,198.74	20.14	60.524	
3,300.00	3,096.75	2,946.69	2,893.38	21.69	10.08	157.08	-379.41	-248.65	1,272.70	1,251.67	21.03	60.532	
3,400.00	3,187.38	3,030.84	2,974.37	22.58	10.54	156.84	-399.93	-258.63	1,326.53	1,304.62	21.91	60.537	
3,500.00	3,278.01	3,114.98	3,055.36	23.48	11.00	156.61	-420.44	-268.61	1,380.38	1,357.58	22.80	60.541	
3,600.00	3,368.64	3,199.12	3,136.35	24.38	11.46	156.41	-440.96	-278.59	1,434.25	1,410.56	23.69	60.544	
3,700.00	3,459.27	3,283.27	3,217.34	25.27	11.93	156.21	-461.48	-288.57	1,488.13	1,463.55	24.58	60.547	
3,800.00	3,549.90	3,367.41	3,298.33	26.17	12.39	156.04	-482.00	-298.56	1,542.02	1,516.55	25.47	60.550	
3,900.00	3,640.54	3,451.55	3,379.32	27.06	12.86	155.87	-502.52	-308.54	1,595.92	1,569.56	26.36	60.553	
4,008.78	3,739.12	3,543.08	3,467.42	28.04	13.36	155.70	-524.84	-319.39	1,654.56	1,627.24	27.32	60.557	
4,100.00	3,822.40	3,620.51	3,541.95	28.75	13.79	156.01	-543.73	-328.58	1,702.62	1,674.47	28.15	60.489	
4,200.00	3,915.00	3,706.88	3,625.08	29.40	14.27	156.26	-564.79	-338.82	1,752.70	1,723.71	28.99	60.450	
4,300.00	4,008.85	3,794.70	3,709.61	29.99	14.76	156.44	-586.20	-349.24	1,800.02	1,770.20	29.82	60.355	
4,400.00	4,103.86	3,883.86	3,795.43	30.52	15.26	156.55	-607.95	-359.82	1,844.53	1,813.90	30.63	60.215	
4,500.00	4,199.90	3,974.26	3,882.44	31.00	15.76	156.59	-629.99	-370.54	1,886.19	1,854.77	31.42	60.037	
4,600.00	4,296.85	4,065.79	3,970.54	31.42	16.27	156.57	-652.31	-381.40	1,924.97	1,892.80	32.18	59.826	
4,700.00	4,394.59	4,158.33	4,059.61	31.79	16.79	156.50	-674.88	-392.38	1,960.86	1,927.95	32.91	59.589	
4,800.00	4,493.01	4,251.77	4,149.55	32.10	17.31	156.37	-697.67	-403.46	1,993.82	1,960.21	33.61	59.330	
4,900.00	4,591.99	4,346.00	4,240.25	32.36	17.84	156.19	-720.64	-414.64	2,023.84	1,989.57	34.27	59.051	
5,000.00	4,691.41	4,440.90	4,331.59	32.57	18.37	155.95	-743.79	-425.90	2,050.93	2,016.02	34.91	58.757	

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_Riverbend 9-12
Project:	COLORADO NORTHERN ZONE - 83	TVD Reference:	WELL @ 4928.00ft (Original Well Elev)
Reference Site:	WELD_Riverbend 25-12 PAD	MD Reference:	WELL @ 4928.00ft (Original Well Elev)
Site Error:	0.00ft	North Reference:	True
Reference Well:	P_Riverbend 9-12	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00ft	Output errors are at	2.00 sigma
Reference Wellbore	P_Riverbend 9-12	Database:	EDM 2003.21 Single User Db
Reference Design:	PLAN #1 6-22-10 RHS	Offset TVD Reference:	Offset Datum

Offset Design WELD_Riverbend 25-12 PAD - P_Riverbend 23-12 - P_Riverbend 23-12 - PLAN #1 6-22-10 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
5,100.00	4,791.14	4,536.36	4,423.48	32.73	18.91	155.66	-767.07	-437.22	2,075.07	2,039.56	35.50	58.448	
5,200.00	4,891.06	4,632.26	4,515.78	32.84	19.44	155.33	-790.45	-448.60	2,096.27	2,060.20	36.06	58.127	
5,258.78	4,949.84	4,688.79	4,570.20	32.89	19.76	-104.61	-804.24	-455.30	2,107.36	2,070.98	36.38	57.928	
5,300.00	4,991.06	4,728.47	4,608.38	32.91	19.98	-104.83	-813.91	-460.01	2,114.80	2,078.15	36.65	57.701	
5,400.00	5,091.06	4,824.72	4,701.03	32.98	20.52	-105.37	-837.39	-471.43	2,132.99	2,095.69	37.31	57.176	
5,500.00	5,191.06	4,920.97	4,793.68	33.06	21.06	-105.90	-860.86	-482.84	2,151.37	2,113.42	37.95	56.683	
5,600.00	5,291.06	5,017.23	4,886.32	33.13	21.60	-106.43	-884.33	-494.26	2,169.93	2,131.34	38.60	56.221	
5,700.00	5,391.06	5,113.48	4,978.97	33.20	22.14	-106.94	-907.80	-505.68	2,188.67	2,149.44	39.23	55.788	
5,800.00	5,491.06	5,209.73	5,071.61	33.28	22.68	-107.44	-931.28	-517.10	2,207.59	2,167.73	39.86	55.382	
5,900.00	5,591.06	5,305.99	5,164.26	33.36	23.23	-107.94	-954.75	-528.51	2,226.67	2,186.19	40.48	55.001	
6,000.00	5,691.06	5,402.24	5,256.91	33.44	23.77	-108.43	-978.22	-539.93	2,245.92	2,204.82	41.10	54.643	
6,100.00	5,791.06	5,498.49	5,349.55	33.52	24.31	-108.91	-1,001.69	-551.35	2,265.33	2,223.62	41.71	54.309	
6,200.00	5,891.06	5,705.46	5,550.37	33.60	25.16	-109.81	-1,046.57	-573.18	2,282.93	2,240.29	42.64	53.538	
6,300.00	5,991.06	5,940.16	5,781.75	33.68	25.82	-110.49	-1,081.58	-590.21	2,294.98	2,251.57	43.41	52.867	
6,400.00	6,091.06	6,179.82	6,020.49	33.77	26.28	-110.84	-1,099.64	-598.99	2,301.09	2,257.10	43.99	52.306	
6,500.00	6,191.06	6,350.41	6,191.06	33.85	26.48	-110.88	-1,101.92	-600.10	2,301.86	2,257.51	44.35	51.906	
6,600.00	6,291.06	6,450.41	6,291.06	33.94	26.58	-110.88	-1,101.92	-600.10	2,301.86	2,257.27	44.58	51.628	
6,700.00	6,391.06	6,550.41	6,391.06	34.02	26.67	-110.88	-1,101.92	-600.10	2,301.86	2,257.03	44.82	51.357	
6,800.00	6,491.06	6,650.41	6,491.06	34.11	26.76	-110.88	-1,101.92	-600.10	2,301.86	2,256.80	45.06	51.085	
6,900.00	6,591.06	6,750.41	6,591.06	34.20	26.86	-110.88	-1,101.92	-600.10	2,301.86	2,256.55	45.30	50.812	
7,000.00	6,691.06	6,850.41	6,691.06	34.30	26.96	-110.88	-1,101.92	-600.10	2,301.86	2,256.31	45.55	50.538	
7,100.00	6,791.06	6,950.41	6,791.06	34.39	27.06	-110.88	-1,101.92	-600.10	2,301.86	2,256.06	45.80	50.264	
7,200.00	6,891.06	7,050.41	6,891.06	34.48	27.16	-110.88	-1,101.92	-600.10	2,301.86	2,255.81	46.05	49.990	
7,300.00	6,991.06	7,150.41	6,991.06	34.58	27.26	-110.88	-1,101.92	-600.10	2,301.86	2,255.55	46.30	49.715	
7,400.00	7,091.06	7,250.41	7,091.06	34.67	27.37	-110.88	-1,101.92	-600.10	2,301.86	2,255.30	46.56	49.440	
7,500.00	7,191.06	7,350.41	7,191.06	34.77	27.47	-110.88	-1,101.92	-600.10	2,301.86	2,255.04	46.82	49.165	
7,600.00	7,291.06	7,450.41	7,291.06	34.87	27.58	-110.88	-1,101.92	-600.10	2,301.86	2,254.77	47.08	48.890	
7,700.00	7,391.06	7,550.41	7,391.06	34.97	27.69	-110.88	-1,101.92	-600.10	2,301.86	2,254.51	47.35	48.615	
7,800.00	7,491.06	7,650.41	7,491.06	35.07	27.80	-110.88	-1,101.92	-600.10	2,301.86	2,254.24	47.62	48.341	
7,900.00	7,591.06	7,750.41	7,591.06	35.17	27.91	-110.88	-1,101.92	-600.10	2,301.86	2,253.97	47.89	48.067	
8,000.00	7,691.06	7,850.41	7,691.06	35.28	28.02	-110.88	-1,101.92	-600.10	2,301.86	2,253.69	48.16	47.793	
8,100.00	7,791.06	7,950.41	7,791.06	35.38	28.13	-110.88	-1,101.92	-600.10	2,301.86	2,253.41	48.44	47.520	
8,200.00	7,891.06	8,050.41	7,891.06	35.49	28.25	-110.88	-1,101.92	-600.10	2,301.86	2,253.14	48.72	47.247	
8,300.00	7,991.06	8,150.41	7,991.06	35.59	28.37	-110.88	-1,101.92	-600.10	2,301.86	2,252.85	49.00	46.975	
8,341.94	8,033.00	8,192.36	8,033.00	35.64	28.41	-110.88	-1,101.92	-600.10	2,301.86	2,252.73	49.12	46.861	

Company:	US ROCKIES REGION PLANNING	Local Co-ordinate Reference:	Well P_Riverbend 9-12
Project:	COLORADO NORTHERN ZONE - 83	TVD Reference:	WELL @ 4928.00ft (Original Well Elev)
Reference Site:	WELD_Riverbend 25-12 PAD	MD Reference:	WELL @ 4928.00ft (Original Well Elev)
Site Error:	0.00ft	North Reference:	True
Reference Well:	P_Riverbend 9-12	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00ft	Output errors are at	2.00 sigma
Reference Wellbore	P_Riverbend 9-12	Database:	EDM 2003.21 Single User Db
Reference Design:	PLAN #1 6-22-10 RHS	Offset TVD Reference:	Offset Datum

Offset Design WELD_Riverbend 25-12 PAD - P_Riverbend 25-12 - P_Riverbend 25-12 - PLAN #1 6-22-10 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	-48.14	48.14				
100.00	100.00	100.00	100.00	0.10	0.10	-90.00	0.00	-48.14	48.14	47.95	0.19	251.977	
200.00	200.00	200.00	200.00	0.32	0.32	-90.00	0.00	-48.14	48.14	47.50	0.64	75.151	
300.00	300.00	300.00	300.00	0.55	0.55	-90.00	0.00	-48.14	48.14	47.05	1.09	44.161 CC, ES	
400.00	399.98	399.98	399.98	0.76	0.77	170.06	0.00	-48.14	49.86	48.33	1.52	32.719	
500.00	499.84	499.84	499.84	0.97	0.99	170.99	0.00	-48.14	55.02	53.07	1.95	28.197	
600.00	599.45	599.45	599.45	1.21	1.22	172.19	0.00	-48.14	63.64	61.26	2.39	26.681 SF	
700.00	698.70	698.70	698.70	1.49	1.44	173.42	0.00	-48.14	75.74	72.91	2.82	26.827	
800.00	797.47	797.47	797.47	1.81	1.66	174.51	0.00	-48.14	91.29	88.03	3.26	27.977	
900.00	895.62	895.62	895.62	2.19	1.88	175.43	0.00	-48.14	110.30	106.60	3.71	29.770	
1,000.00	993.06	993.06	993.06	2.62	2.10	176.17	0.00	-48.14	132.74	128.59	4.15	31.993	
1,100.00	1,089.64	1,085.16	1,085.15	3.12	2.30	176.90	0.56	-49.28	159.84	155.26	4.58	34.919	
1,200.00	1,185.27	1,174.21	1,174.11	3.68	2.50	177.72	2.34	-52.89	193.13	188.13	5.00	38.655	
1,300.00	1,279.82	1,260.05	1,259.69	4.31	2.69	178.54	5.21	-58.72	232.41	227.00	5.41	42.950	
1,400.00	1,373.17	1,344.19	1,343.37	5.01	2.89	179.31	9.08	-66.59	277.36	271.54	5.83	47.601	
1,500.00	1,465.21	1,431.45	1,430.08	5.79	3.10	179.94	13.40	-75.36	326.11	319.86	6.25	52.141	
1,550.00	1,510.71	1,474.42	1,472.79	6.20	3.21	-179.80	15.53	-79.68	351.63	345.16	6.47	54.357	
1,600.00	1,556.03	1,517.18	1,515.27	6.63	3.32	-179.58	17.64	-83.97	377.53	370.80	6.72	56.169	
1,700.00	1,646.66	1,602.69	1,600.24	7.49	3.55	-179.22	21.88	-92.56	429.33	422.10	7.23	59.367	
1,800.00	1,737.29	1,688.19	1,685.21	8.36	3.78	-178.94	26.11	-101.16	481.14	473.40	7.75	62.091	
1,900.00	1,827.92	1,773.70	1,770.18	9.23	4.01	-178.71	30.34	-109.75	532.96	524.69	8.27	64.438	
2,000.00	1,918.55	1,859.21	1,855.15	10.11	4.25	-178.53	34.57	-118.34	584.79	575.99	8.80	66.476	
2,100.00	2,009.18	1,944.72	1,940.12	10.99	4.49	-178.37	38.80	-126.94	636.62	627.29	9.33	68.261	
2,200.00	2,099.81	2,030.23	2,025.09	11.88	4.73	-178.24	43.03	-135.53	688.45	678.59	9.86	69.835	
2,300.00	2,190.44	2,115.74	2,110.06	12.77	4.98	-178.12	47.26	-144.12	740.29	729.90	10.39	71.232	
2,400.00	2,281.07	2,201.24	2,195.03	13.65	5.23	-178.02	51.49	-152.71	792.12	781.20	10.93	72.480	
2,500.00	2,371.70	2,286.75	2,280.00	14.54	5.47	-177.93	55.73	-161.31	843.96	832.50	11.47	73.600	
2,600.00	2,462.34	2,372.26	2,364.97	15.43	5.72	-177.86	59.96	-169.90	895.80	883.80	12.01	74.611	
2,700.00	2,552.97	2,457.77	2,449.94	16.33	5.97	-177.79	64.19	-178.49	947.64	935.10	12.55	75.527	
2,800.00	2,643.60	2,543.28	2,534.91	17.22	6.22	-177.73	68.42	-187.09	999.49	986.40	13.09	76.361	
2,900.00	2,734.23	2,628.78	2,619.88	18.11	6.48	-177.67	72.65	-195.68	1,051.33	1,037.70	13.63	77.124	
3,000.00	2,824.86	2,714.29	2,704.85	19.00	6.73	-177.62	76.88	-204.27	1,103.17	1,089.00	14.18	77.824	
3,100.00	2,915.49	2,799.80	2,789.82	19.90	6.98	-177.58	81.11	-212.86	1,155.01	1,140.29	14.72	78.468	
3,200.00	3,006.12	2,885.31	2,874.79	20.79	7.24	-177.53	85.35	-221.46	1,206.86	1,191.59	15.26	79.062	
3,300.00	3,096.75	2,970.82	2,959.76	21.69	7.49	-177.50	89.58	-230.05	1,258.70	1,242.89	15.81	79.612	
3,400.00	3,187.38	3,056.33	3,044.73	22.58	7.75	-177.46	93.81	-238.64	1,310.55	1,294.19	16.36	80.123	
3,500.00	3,278.01	3,141.83	3,129.70	23.48	8.01	-177.43	98.04	-247.24	1,362.39	1,345.49	16.90	80.599	
3,600.00	3,368.64	3,227.34	3,214.67	24.38	8.26	-177.40	102.27	-255.83	1,414.24	1,396.79	17.45	81.043	
3,700.00	3,459.27	3,312.85	3,299.64	25.27	8.52	-177.37	106.50	-264.42	1,466.08	1,448.09	18.00	81.458	
3,800.00	3,549.90	3,398.36	3,384.61	26.17	8.78	-177.34	110.73	-273.01	1,517.93	1,499.38	18.55	81.847	
3,900.00	3,640.54	3,483.87	3,469.58	27.06	9.03	-177.32	114.96	-281.61	1,569.78	1,550.68	19.09	82.212	
4,008.78	3,739.12	3,576.88	3,562.01	28.04	9.31	-177.29	119.57	-290.95	1,626.18	1,606.48	19.69	82.585	
4,100.00	3,822.40	3,655.62	3,640.26	28.75	9.55	-177.32	123.46	-298.87	1,672.22	1,651.91	20.31	82.350	
4,200.00	3,915.00	3,743.57	3,727.65	29.40	9.82	-177.34	127.82	-307.70	1,719.79	1,698.86	20.94	82.136	
4,300.00	4,008.85	3,833.13	3,816.64	29.99	10.09	-177.35	132.25	-316.70	1,764.27	1,742.73	21.54	81.906	
4,400.00	4,103.86	3,924.17	3,907.12	30.52	10.36	-177.36	136.75	-325.85	1,805.60	1,783.49	22.11	81.664	
4,500.00	4,199.90	4,016.60	3,998.97	31.00	10.64	-177.36	141.33	-335.14	1,843.73	1,821.09	22.65	81.415	
4,600.00	4,296.85	4,110.31	4,092.08	31.42	10.93	-177.35	145.96	-344.56	1,878.62	1,855.47	23.15	81.160	
4,700.00	4,394.59	4,205.17	4,186.34	31.79	11.21	-177.33	150.66	-354.09	1,910.22	1,886.60	23.61	80.903	
4,800.00	4,493.01	4,301.07	4,281.64	32.10	11.50	-177.30	155.40	-363.73	1,938.49	1,914.45	24.04	80.645	
4,900.00	4,591.99	4,397.89	4,377.85	32.36	11.80	-177.27	160.19	-373.46	1,963.40	1,938.98	24.42	80.387	
5,000.00	4,691.41	4,495.52	4,474.87	32.57	12.10	-177.23	165.03	-383.27	1,984.93	1,960.16	24.77	80.132	

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_Riverbend 9-12
Project:	COLORADO NORTHERN ZONE - 83	TVD Reference:	WELL @ 4928.00ft (Original Well Elev)
Reference Site:	WELD_Riverbend 25-12 PAD	MD Reference:	WELL @ 4928.00ft (Original Well Elev)
Site Error:	0.00ft	North Reference:	True
Reference Well:	P_Riverbend 9-12	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00ft	Output errors are at	2.00 sigma
Reference Wellbore	P_Riverbend 9-12	Database:	EDM 2003.21 Single User Db
Reference Design:	PLAN #1 6-22-10 RHS	Offset TVD Reference:	Offset Datum

Offset Design WELD_Riverbend 25-12 PAD - P_Riverbend 25-12 - P_Riverbend 25-12 - PLAN #1 6-22-10 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
5,100.00	4,791.14	4,593.84	4,572.57	32.73	12.39	-177.19	169.89	-393.15	2,003.04	1,977.96	25.08	79.878	
5,200.00	4,891.06	4,692.72	4,670.83	32.84	12.70	-177.14	174.78	-403.09	2,017.71	1,992.37	25.34	79.628	
5,258.78	4,949.84	4,751.06	4,728.81	32.89	12.87	-76.81	177.67	-408.95	2,024.73	1,999.25	25.48	79.474	
5,300.00	4,991.06	4,792.02	4,769.51	32.91	13.00	-76.78	179.70	-413.06	2,029.23	2,003.59	25.63	79.168	
5,400.00	5,091.06	4,891.39	4,868.25	32.98	13.30	-76.71	184.61	-423.05	2,040.15	2,014.14	26.01	78.438	
5,500.00	5,191.06	4,990.77	4,967.00	33.06	13.60	-76.64	189.53	-433.04	2,051.07	2,024.68	26.39	77.722	
5,600.00	5,291.06	5,090.14	5,065.74	33.13	13.90	-76.57	194.45	-443.02	2,061.99	2,035.22	26.77	77.021	
5,700.00	5,391.06	5,189.51	5,164.49	33.20	14.21	-76.50	199.37	-453.01	2,072.92	2,045.77	27.16	76.335	
5,800.00	5,491.06	5,288.88	5,263.23	33.28	14.51	-76.44	204.28	-462.99	2,083.85	2,056.31	27.54	75.662	
5,900.00	5,591.06	5,388.25	5,361.98	33.36	14.81	-76.37	209.20	-472.98	2,094.79	2,066.86	27.93	75.003	
6,000.00	5,691.06	5,487.62	5,460.73	33.44	15.12	-76.30	214.12	-482.97	2,105.72	2,077.41	28.32	74.358	
6,100.00	5,791.06	5,586.99	5,559.47	33.52	15.42	-76.24	219.04	-492.95	2,116.66	2,087.95	28.71	73.725	
6,200.00	5,891.06	5,686.36	5,658.22	33.60	15.72	-76.17	223.95	-502.94	2,127.61	2,098.50	29.10	73.106	
6,300.00	5,991.06	5,785.73	5,756.96	33.68	16.03	-76.11	228.87	-512.92	2,138.55	2,109.05	29.50	72.499	
6,400.00	6,091.06	6,038.66	6,008.98	33.77	16.60	-75.99	238.02	-531.49	2,147.50	2,117.34	30.16	71.198	
6,500.00	6,191.06	6,220.77	6,191.06	33.85	16.90	-75.98	238.98	-533.46	2,148.07	2,117.42	30.65	70.077	
6,600.00	6,291.06	6,320.77	6,291.06	33.94	17.07	-75.98	238.98	-533.46	2,148.07	2,117.05	31.02	69.255	
6,700.00	6,391.06	6,420.77	6,391.06	34.02	17.25	-75.98	238.98	-533.46	2,148.07	2,116.69	31.38	68.446	
6,800.00	6,491.06	6,520.77	6,491.06	34.11	17.43	-75.98	238.98	-533.46	2,148.07	2,116.32	31.75	67.653	
6,900.00	6,591.06	6,620.77	6,591.06	34.20	17.60	-75.98	238.98	-533.46	2,148.07	2,115.95	32.12	66.873	
7,000.00	6,691.06	6,720.77	6,691.06	34.30	17.78	-75.98	238.98	-533.46	2,148.07	2,115.58	32.49	66.107	
7,100.00	6,791.06	6,820.77	6,791.06	34.39	17.96	-75.98	238.98	-533.46	2,148.07	2,115.20	32.87	65.355	
7,200.00	6,891.06	6,920.77	6,891.06	34.48	18.15	-75.98	238.98	-533.46	2,148.07	2,114.83	33.24	64.616	
7,300.00	6,991.06	7,020.77	6,991.06	34.58	18.33	-75.98	238.98	-533.46	2,148.07	2,114.45	33.62	63.891	
7,400.00	7,091.06	7,120.77	7,091.06	34.67	18.51	-75.98	238.98	-533.46	2,148.07	2,114.07	34.00	63.179	
7,500.00	7,191.06	7,220.77	7,191.06	34.77	18.70	-75.98	238.98	-533.46	2,148.07	2,113.69	34.38	62.479	
7,600.00	7,291.06	7,320.77	7,291.06	34.87	18.88	-75.98	238.98	-533.46	2,148.07	2,113.31	34.76	61.792	
7,700.00	7,391.06	7,420.77	7,391.06	34.97	19.07	-75.98	238.98	-533.46	2,148.07	2,112.92	35.15	61.117	
7,800.00	7,491.06	7,520.77	7,491.06	35.07	19.25	-75.98	238.98	-533.46	2,148.07	2,112.54	35.53	60.454	
7,900.00	7,591.06	7,620.77	7,591.06	35.17	19.44	-75.98	238.98	-533.46	2,148.07	2,112.15	35.92	59.804	
8,000.00	7,691.06	7,720.77	7,691.06	35.28	19.63	-75.98	238.98	-533.46	2,148.07	2,111.76	36.31	59.164	
8,100.00	7,791.06	7,820.77	7,791.06	35.38	19.82	-75.98	238.98	-533.46	2,148.07	2,111.37	36.70	58.536	
8,200.00	7,891.06	7,920.77	7,891.06	35.49	20.01	-75.98	238.98	-533.46	2,148.07	2,110.98	37.09	57.920	
8,300.00	7,991.06	8,020.77	7,991.06	35.59	20.20	-75.98	238.98	-533.46	2,148.07	2,110.59	37.48	57.314	
8,341.94	8,033.00	8,062.72	8,033.00	35.64	20.28	-75.98	238.98	-533.46	2,148.07	2,110.43	37.64	57.063	

Company:	US ROCKIES REGION PLANNING	Local Co-ordinate Reference:	Well P_Riverbend 9-12
Project:	COLORADO NORTHERN ZONE - 83	TVD Reference:	WELL @ 4928.00ft (Original Well Elev)
Reference Site:	WELD_Riverbend 25-12 PAD	MD Reference:	WELL @ 4928.00ft (Original Well Elev)
Site Error:	0.00ft	North Reference:	True
Reference Well:	P_Riverbend 9-12	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00ft	Output errors are at	2.00 sigma
Reference Wellbore	P_Riverbend 9-12	Database:	EDM 2003.21 Single User Db
Reference Design:	PLAN #1 6-22-10 RHS	Offset TVD Reference:	Offset Datum

Offset Design WELD_Riverbend 25-12 PAD - P_Riverbend 39-12 - P_Riverbend 39-12 - PLAN #1 6-22-10 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	-89.99	0.00	-16.23	16.23				
100.00	100.00	100.00	100.00	0.10	0.10	-89.99	0.00	-16.23	16.23	16.04	0.19	84.969	
200.00	200.00	200.00	200.00	0.32	0.32	-89.99	0.00	-16.23	16.23	15.59	0.64	25.342	
300.00	300.00	300.00	300.00	0.55	0.55	-89.99	0.00	-16.23	16.23	15.14	1.09	14.892 CC	
400.00	399.98	400.50	400.48	0.76	0.75	167.91	-0.83	-14.68	16.41	14.91	1.51	10.896 ES	
500.00	499.84	500.98	500.81	0.97	0.96	162.73	-3.32	-10.02	17.04	15.13	1.92	8.898	
600.00	599.45	601.42	600.87	1.21	1.21	155.00	-7.48	-2.27	18.37	16.01	2.36	7.774	
700.00	698.70	701.81	700.50	1.49	1.48	146.09	-13.28	8.56	20.69	17.82	2.87	7.200	
800.00	797.47	802.13	799.56	1.81	1.81	137.41	-20.72	22.46	24.22	20.74	3.48	6.958	
900.00	895.62	902.36	897.93	2.19	2.19	129.87	-29.79	39.38	29.07	24.86	4.21	6.902 SF	
1,000.00	993.06	1,002.48	995.46	2.62	2.63	123.74	-40.46	59.31	35.22	30.15	5.07	6.942	
1,100.00	1,089.64	1,102.47	1,092.02	3.12	3.13	118.91	-52.73	82.19	42.63	36.56	6.07	7.024	
1,200.00	1,185.27	1,202.33	1,187.49	3.68	3.70	115.14	-66.55	108.00	51.23	44.04	7.20	7.118	
1,300.00	1,279.82	1,302.04	1,281.73	4.31	4.33	112.17	-81.91	136.67	60.99	52.53	8.46	7.207	
1,400.00	1,373.17	1,401.59	1,374.64	5.01	5.04	109.81	-98.79	168.17	71.85	61.98	9.86	7.284	
1,500.00	1,465.21	1,500.95	1,466.08	5.79	5.81	107.90	-117.14	202.43	83.77	72.37	11.40	7.348	
1,550.00	1,510.71	1,550.56	1,511.22	6.20	6.22	107.08	-126.86	220.57	90.12	77.90	12.22	7.374	
1,600.00	1,556.03	1,600.13	1,556.15	6.63	6.65	106.48	-136.75	239.04	96.60	83.54	13.06	7.394	
1,700.00	1,646.66	1,699.27	1,646.00	7.49	7.50	105.48	-156.54	275.97	109.59	94.83	14.77	7.422	
1,800.00	1,737.29	1,798.41	1,735.84	8.36	8.36	104.69	-176.32	312.90	122.61	106.13	16.48	7.440	
1,900.00	1,827.92	1,897.54	1,825.69	9.23	9.23	104.06	-196.11	349.83	135.65	117.44	18.21	7.451	
2,000.00	1,918.55	1,996.68	1,915.54	10.11	10.10	103.54	-215.89	386.76	148.70	128.76	19.94	7.458	
2,100.00	2,009.18	2,095.81	2,005.39	10.99	10.97	103.10	-235.68	423.69	161.76	140.08	21.68	7.462	
2,200.00	2,099.81	2,194.95	2,095.24	11.88	11.85	102.73	-255.46	460.62	174.83	151.41	23.42	7.465	
2,300.00	2,190.44	2,294.09	2,185.08	12.77	12.73	102.40	-275.25	497.55	187.90	162.73	25.17	7.467	
2,400.00	2,281.07	2,393.22	2,274.93	13.65	13.61	102.12	-295.03	534.48	200.98	174.07	26.91	7.467	
2,500.00	2,371.70	2,492.36	2,364.78	14.54	14.49	101.88	-314.82	571.42	214.06	185.40	28.67	7.467	
2,600.00	2,462.34	2,591.50	2,454.63	15.43	15.37	101.66	-334.60	608.35	227.15	196.73	30.42	7.467	
2,700.00	2,552.97	2,690.63	2,544.48	16.33	16.25	101.47	-354.39	645.28	240.24	208.07	32.17	7.467	
2,800.00	2,643.60	2,789.77	2,634.33	17.22	17.14	101.30	-374.17	682.21	253.33	219.40	33.93	7.466	
2,900.00	2,734.23	2,888.91	2,724.17	18.11	18.02	101.14	-393.96	719.14	266.43	230.74	35.69	7.465	
3,000.00	2,824.86	2,988.04	2,814.02	19.00	18.91	101.00	-413.74	756.07	279.52	242.08	37.45	7.465	
3,100.00	2,915.49	3,087.18	2,903.87	19.90	19.79	100.87	-433.53	793.00	292.62	253.41	39.21	7.464	
3,200.00	3,006.12	3,186.32	2,993.72	20.79	20.68	100.75	-453.31	829.93	305.72	264.75	40.96	7.463	
3,300.00	3,096.75	3,285.45	3,083.57	21.69	21.57	100.64	-473.10	866.86	318.82	276.09	42.73	7.462	
3,400.00	3,187.38	3,384.59	3,173.41	22.58	22.45	100.54	-492.89	903.79	331.92	287.43	44.49	7.461	
3,500.00	3,278.01	3,483.73	3,263.26	23.48	23.34	100.45	-512.67	940.73	345.02	298.77	46.25	7.460	
3,600.00	3,368.64	3,582.86	3,353.11	24.38	24.23	100.37	-532.46	977.66	358.12	310.12	48.01	7.459	
3,700.00	3,459.27	3,682.00	3,442.96	25.27	25.12	100.29	-552.24	1,014.59	371.23	321.46	49.77	7.459	
3,800.00	3,549.90	3,781.14	3,532.81	26.17	26.00	100.21	-572.03	1,051.52	384.33	332.80	51.53	7.458	
3,900.00	3,640.54	3,880.27	3,622.66	27.06	26.89	100.14	-591.81	1,088.45	397.44	344.14	53.30	7.457	
4,008.78	3,739.12	3,988.11	3,720.39	28.04	27.86	100.07	-613.33	1,128.62	411.69	356.48	55.22	7.456	
4,100.00	3,822.40	4,078.56	3,802.36	28.75	28.67	100.06	-631.38	1,162.32	423.40	366.66	56.74	7.462	
4,200.00	3,915.00	4,177.66	3,892.18	29.40	29.56	99.61	-651.16	1,199.23	435.69	377.41	58.27	7.477	
4,300.00	4,008.85	4,276.60	3,981.85	29.99	30.44	98.74	-670.91	1,236.09	447.51	387.77	59.74	7.490	
4,400.00	4,103.86	4,375.24	4,071.25	30.52	31.33	97.51	-690.59	1,272.84	459.04	397.90	61.13	7.509	
4,500.00	4,199.90	4,473.49	4,160.29	31.00	32.21	95.93	-710.20	1,309.44	470.49	408.08	62.41	7.538	
4,600.00	4,296.85	4,571.20	4,248.85	31.42	33.09	94.05	-729.70	1,345.84	482.15	418.59	63.56	7.586	
4,700.00	4,394.59	4,668.27	4,336.83	31.79	33.96	91.91	-749.08	1,382.00	494.33	429.79	64.54	7.659	
4,800.00	4,493.01	4,764.58	4,424.11	32.10	34.82	89.53	-768.30	1,417.88	507.40	442.06	65.34	7.766	
4,900.00	4,591.99	4,860.00	4,510.59	32.36	35.68	86.97	-787.34	1,453.43	521.71	455.79	65.92	7.915	
5,000.00	4,691.41	4,954.43	4,596.17	32.57	36.52	84.28	-806.19	1,488.60	537.66	471.39	66.27	8.113	

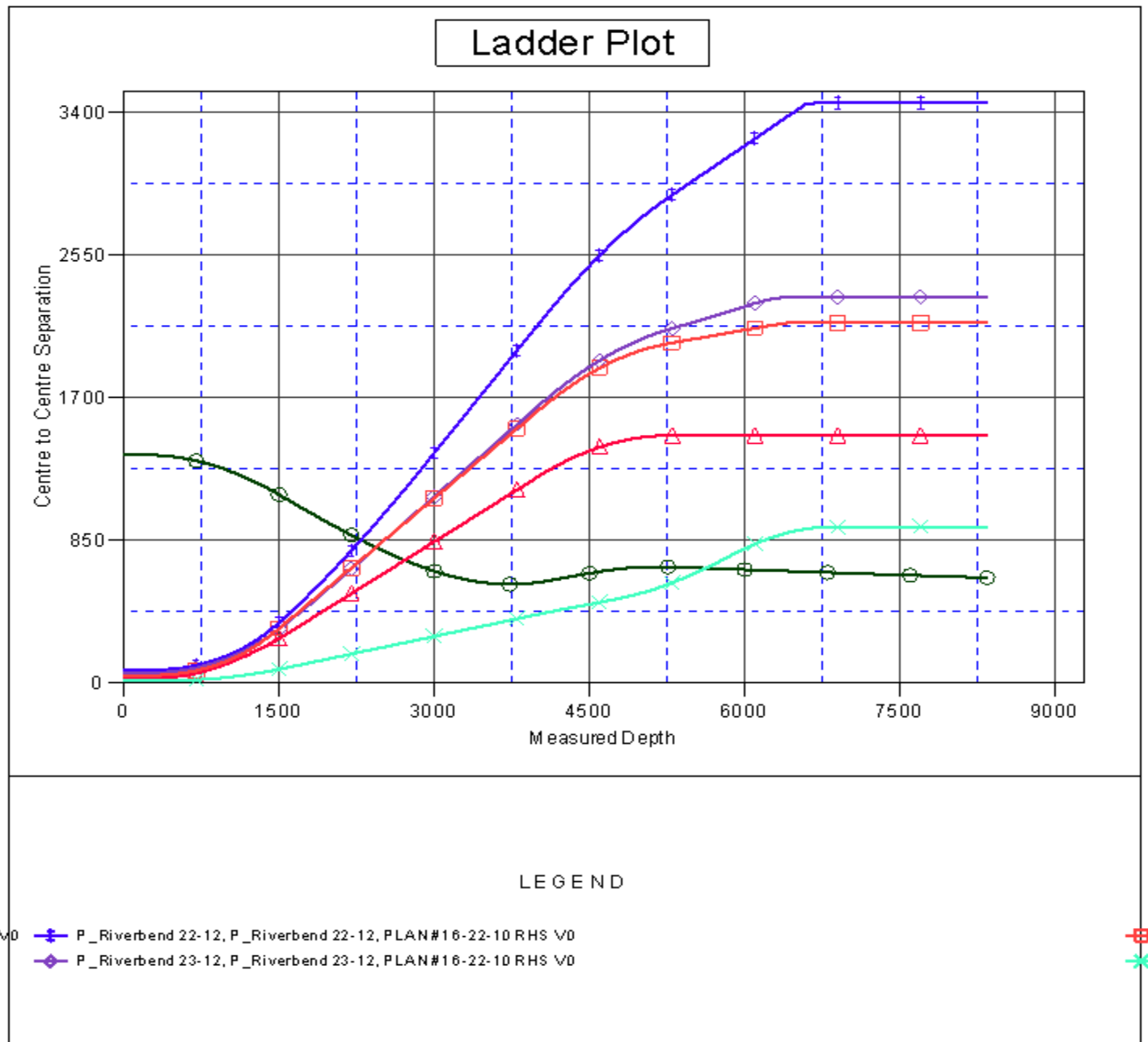
CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Company:	US ROCKIES REGION PLANNING	Local Co-ordinate Reference:	Well P_Riverbend 9-12
Project:	COLORADO NORTHERN ZONE - 83	TVD Reference:	WELL @ 4928.00ft (Original Well Elev)
Reference Site:	WELD_Riverbend 25-12 PAD	MD Reference:	WELL @ 4928.00ft (Original Well Elev)
Site Error:	0.00ft	North Reference:	True
Reference Well:	P_Riverbend 9-12	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00ft	Output errors are at	2.00 sigma
Reference Wellbore	P_Riverbend 9-12	Database:	EDM 2003.21 Single User Db
Reference Design:	PLAN #1 6-22-10 RHS	Offset TVD Reference:	Offset Datum

Offset Design WELD_Riverbend 25-12 PAD - P_Riverbend 39-12 - P_Riverbend 39-12 - PLAN #1 6-22-10 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
5,100.00	4,791.14	5,047.74	4,680.74	32.73	37.36	81.50	-824.81	1,523.36	555.63	489.24	66.39	8.369	
5,200.00	4,891.06	5,139.83	4,764.20	32.84	38.19	78.67	-843.19	1,557.67	575.97	509.69	66.28	8.690	
5,258.78	4,949.84	5,193.34	4,812.70	32.89	38.67	177.30	-853.87	1,577.60	589.16	523.05	66.11	8.912	
5,300.00	4,991.06	5,230.70	4,846.56	32.91	39.00	175.96	-861.32	1,591.52	598.93	533.04	65.89	9.090	
5,400.00	5,091.06	5,321.33	4,928.70	32.98	39.81	172.88	-879.41	1,625.28	624.02	558.73	65.29	9.557	
5,500.00	5,191.06	5,411.96	5,010.84	33.06	40.63	170.01	-897.50	1,659.04	650.89	586.26	64.63	10.070	
5,600.00	5,291.06	5,502.59	5,092.98	33.13	41.44	167.36	-915.58	1,692.81	679.33	615.39	63.94	10.624	
5,700.00	5,391.06	5,593.22	5,175.12	33.20	42.25	164.90	-933.67	1,726.57	709.15	645.91	63.24	11.214	
5,800.00	5,491.06	5,683.85	5,257.26	33.28	43.07	162.62	-951.76	1,760.33	740.18	677.64	62.54	11.834	
5,900.00	5,591.06	5,784.35	5,348.50	33.36	43.92	160.32	-971.65	1,797.45	772.04	710.27	61.77	12.498	
6,000.00	5,691.06	5,901.66	5,456.57	33.44	44.70	158.03	-993.18	1,837.65	802.40	741.49	60.90	13.175	
6,100.00	5,791.06	6,022.91	5,570.15	33.52	45.40	156.09	-1,013.23	1,875.07	830.34	770.19	60.15	13.803	
6,200.00	5,891.06	6,147.87	5,688.96	33.60	46.05	154.45	-1,031.49	1,909.15	855.48	795.94	59.55	14.366	
6,300.00	5,991.06	6,276.20	5,812.61	33.68	46.63	153.09	-1,047.68	1,939.37	877.49	818.41	59.08	14.852	
6,400.00	6,091.06	6,407.51	5,940.59	33.77	47.13	152.01	-1,061.52	1,965.21	896.07	837.32	58.75	15.252	
6,500.00	6,191.06	6,541.33	6,072.27	33.85	47.53	151.17	-1,072.76	1,986.20	911.00	852.46	58.54	15.562	
6,600.00	6,291.06	6,677.13	6,206.88	33.94	47.85	150.56	-1,081.19	2,001.93	922.10	863.64	58.45	15.775	
6,700.00	6,391.06	6,814.35	6,343.60	34.02	48.08	150.18	-1,086.64	2,012.10	929.22	870.74	58.48	15.889	
6,800.00	6,491.06	6,952.37	6,481.52	34.11	48.22	150.02	-1,088.99	2,016.49	932.29	873.67	58.62	15.904	
6,900.00	6,591.06	7,061.91	6,591.06	34.20	48.29	150.01	-1,089.09	2,016.68	932.42	873.59	58.82	15.851	
7,000.00	6,691.06	7,161.91	6,691.06	34.30	48.35	150.01	-1,089.09	2,016.68	932.42	873.39	59.02	15.798	
7,100.00	6,791.06	7,261.91	6,791.06	34.39	48.42	150.01	-1,089.09	2,016.68	932.42	873.19	59.22	15.744	
7,200.00	6,891.06	7,361.91	6,891.06	34.48	48.48	150.01	-1,089.09	2,016.68	932.42	872.99	59.43	15.690	
7,300.00	6,991.06	7,461.91	6,991.06	34.58	48.54	150.01	-1,089.09	2,016.68	932.42	872.78	59.64	15.635	
7,400.00	7,091.06	7,561.91	7,091.06	34.67	48.61	150.01	-1,089.09	2,016.68	932.42	872.57	59.85	15.580	
7,500.00	7,191.06	7,661.91	7,191.06	34.77	48.67	150.01	-1,089.09	2,016.68	932.42	872.36	60.06	15.525	
7,600.00	7,291.06	7,761.91	7,291.06	34.87	48.74	150.01	-1,089.09	2,016.68	932.42	872.14	60.27	15.470	
7,700.00	7,391.06	7,861.91	7,391.06	34.97	48.81	150.01	-1,089.09	2,016.68	932.42	871.92	60.49	15.414	
7,800.00	7,491.06	7,961.91	7,491.06	35.07	48.88	150.01	-1,089.09	2,016.68	932.42	871.70	60.71	15.358	
7,900.00	7,591.06	8,061.91	7,591.06	35.17	48.95	150.01	-1,089.09	2,016.68	932.42	871.48	60.94	15.302	
8,000.00	7,691.06	8,161.91	7,691.06	35.28	49.02	150.01	-1,089.09	2,016.68	932.42	871.26	61.16	15.245	
8,100.00	7,791.06	8,261.91	7,791.06	35.38	49.09	150.01	-1,089.09	2,016.68	932.42	871.03	61.39	15.189	
8,200.00	7,891.06	8,361.91	7,891.06	35.49	49.16	150.01	-1,089.09	2,016.68	932.42	870.80	61.62	15.132	
8,300.00	7,991.06	8,461.91	7,991.06	35.59	49.24	150.01	-1,089.09	2,016.68	932.42	870.56	61.85	15.075	
8,341.94	8,033.00	8,503.85	8,033.00	35.64	49.27	150.01	-1,089.09	2,016.68	932.42	870.47	61.95	15.051	

Company:	US ROCKIES REGION PLANNING	Local Co-ordinate Reference:	Well P_Riverbend 9-12
Project:	COLORADO NORTHERN ZONE - 83	TVD Reference:	WELL @ 4928.00ft (Original Well Elev)
Reference Site:	WELD_Riverbend 25-12 PAD	MD Reference:	WELL @ 4928.00ft (Original Well Elev)
Site Error:	0.00ft	North Reference:	True
Reference Well:	P_Riverbend 9-12	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00ft	Output errors are at	2.00 sigma
Reference Wellbore	P_Riverbend 9-12	Database:	EDM 2003.21 Single User Db
Reference Design:	PLAN #1 6-22-10 RHS	Offset TVD Reference:	Offset Datum

Reference Depths are relative to WELL @ 4928.00ft (Original Well Elev) Coordinates are relative to: P_Riverbend 9-12
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: 0.43°



Company:	US ROCKIES REGION PLANNING	Local Co-ordinate Reference:	Well P_Riverbend 9-12
Project:	COLORADO NORTHERN ZONE - 83	TVD Reference:	WELL @ 4928.00ft (Original Well Elev)
Reference Site:	WELD_Riverbend 25-12 PAD	MD Reference:	WELL @ 4928.00ft (Original Well Elev)
Site Error:	0.00ft	North Reference:	True
Reference Well:	P_Riverbend 9-12	Survey Calculation Method:	Minimum Curvature
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