



US ROCKIES REGION PLANNING

COLORADO NORTHERN ZONE - 83

Riverbend 7-13 PAD

P_Riverbend 25-13

P_Riverbend 25-13

Plan: PLAN #1 6-21-10 RHS

Standard Planning Report

21 June, 2010

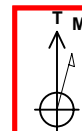




Project: COLORADO NORTHERN ZONE - 83
 Site: Riverbend 7-13 PAD
 Well: P_Riverbend 25-13
 Wellbore: P_Riverbend 25-13
 Section: SECTION 13 T1N R67W
 SHL: 2045 FNL 1771 FWL
 Design: PLAN #1 6-21-10 RHS
 Latitude: 40° 3' 9.774 N
 Longitude: 104° 50' 9.784 W
 GL: 4917.00
 KB: WELL @ 4932.00ft (Original Well Elev)



Weatherford®



Azimuths to True North
 Magnetic North: 9.00°

Magnetic Field
 Strength: 53043.5snT
 Dip Angle: 66.79°
 Date: 6/21/2010
 Model: IGRF2010

FORMATION TOP DETAILS

TVDPath	MDPath	Formation
3273.00	3316.66	PARKMAN
4603.00	4677.82	SUSSEX
7135.00	7236.12	NIO
7482.00	7583.12	CODELL
7567.00	7668.12	GREENHORN
7917.00	8018.12	JSAND

CASING DETAILS

TVD	MD	Name	Size
900.00	900.00	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	
1000.00	0.00	0.00	1000.00	0.00	0.00	0.00	0.00	0.00	Start Build 2.00
1614.13	12.28	236.11	1609.43	-36.57	-54.43	2.00	236.11	65.57	Start 4007.87 hold at 1614.13 MD
5622.00	12.28	236.11	5525.57	-512.01	-762.16	0.00	0.00	918.18	Start Drop -2.00
6236.12	0.00	0.00	6135.00	-548.57	-816.60	2.00	180.00	983.75	Start 1917.00 hold at 6236.12 MD
8153.12	0.00	0.00	8052.00	-548.57	-816.60	0.00	0.00	983.75	TD at 8153.12

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

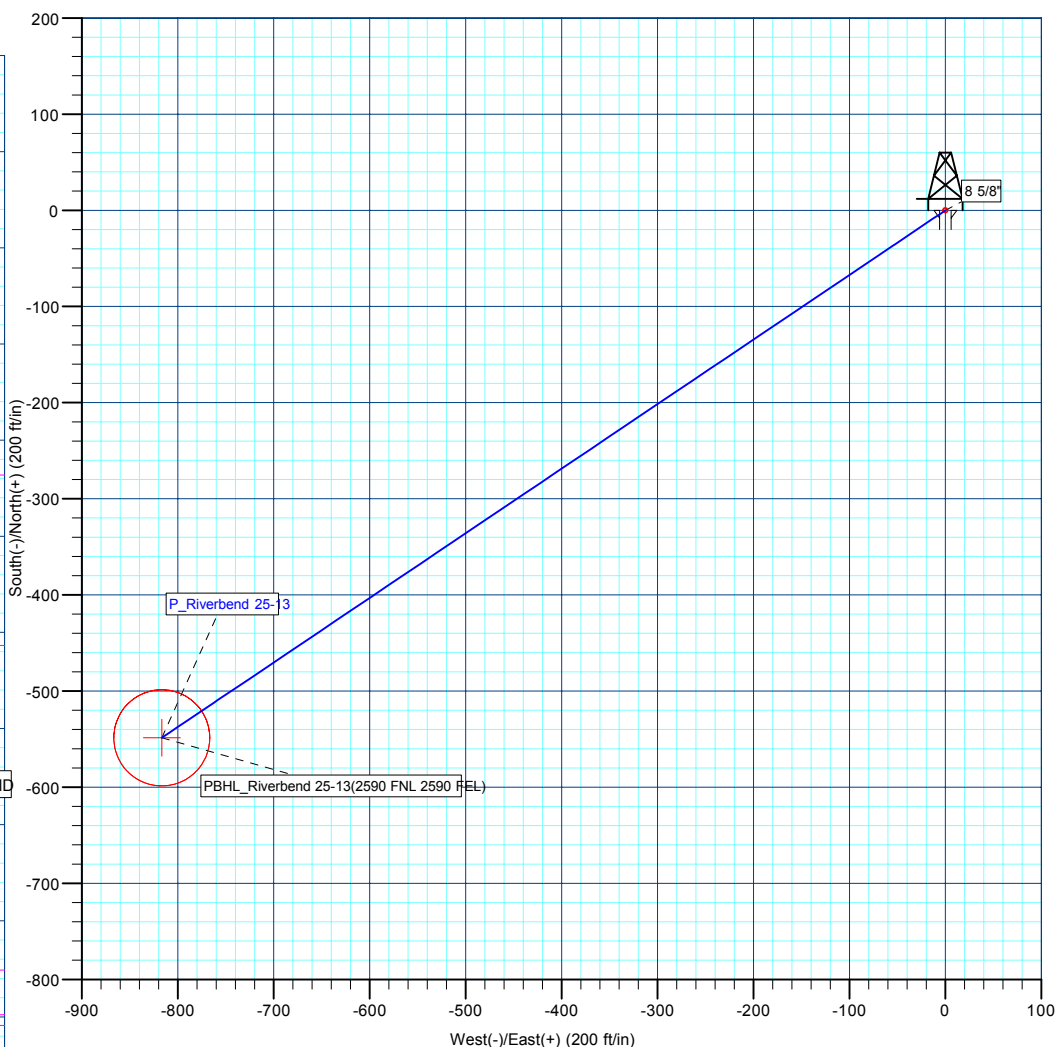
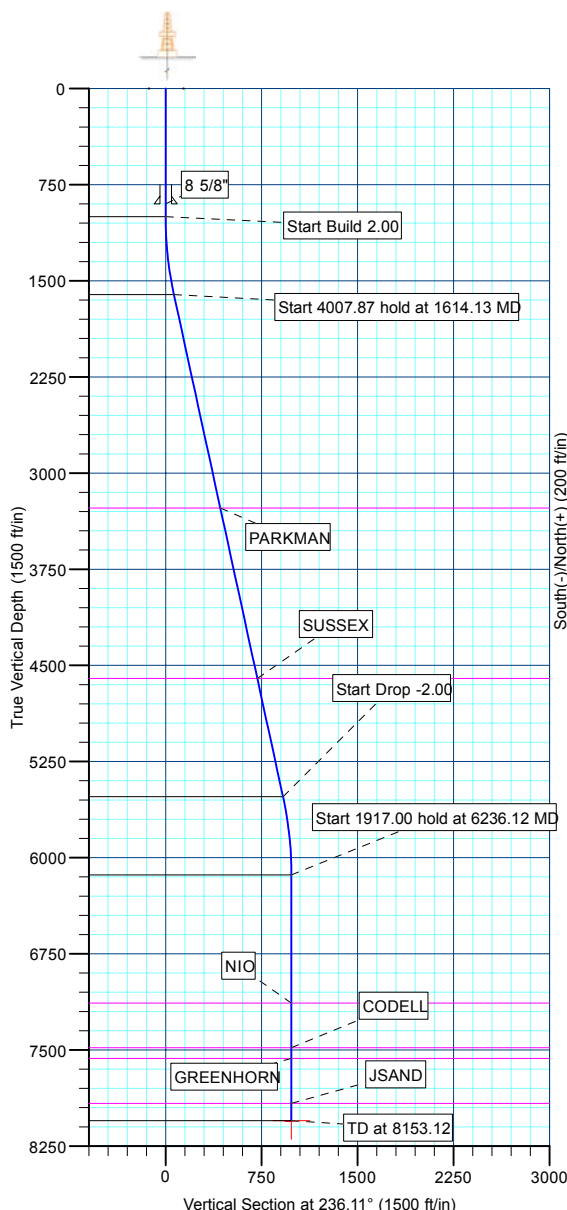
Name	TVD	+N/-S	+E/-W	Latitude	Longitude	Shape
PBHL	8052.00	-548.57	-816.60	40° 3' 4.352 N	104° 50' 20.285 W	Circle (Radius: 50.00)

WELL DETAILS: P_Riverbend 25-13

+N/-S	+E/-W	Northing	Ground Level:	4917.00	Latitude	Longitude	Slot
0.00	0.00	1262745.39	Easting	3185862.18	40° 3' 9.774 N	104° 50' 9.784 W	

LEGEND

CHIKUMA UNIT #2 EXISTING, CHIKUMA UNIT #2 EXISTING, CHIKUMA UNIT #2 EXISTING V0
 HARRY S CHIKUMA #5 EXISTING, HARRY S CHIKUMA #5 EXISTING, HARRY S CHIKUMA #5 EXISTING V0
 HARRY S. CHIKUMA G.U. B #1 EXISTING, HARRY S. CHIKUMA G.U. B #1 EXISTING, HARRY S. CHIKUMA G.U. B #1 EXISTING V0
 P_Riverbend 21-13, P_Riverbend 21-13, PLAN #1 6-21-10 RHS V0
 P_Riverbend 24-13, P_Riverbend 24-13, PLAN #1 6-21-10 RHS V0
 P_Riverbend 5-18, P_Riverbend 5-1, PLAN #1 6-21-10 RHS V0
 P_Riverbend 6-13, P_Riverbend 6-13, PLAN #1 6-21-10 RH V0
 P_Riverbend 7-13, P_Riverbend 7-13, PLAN #1 6-21-10 RH V0
 P_Riverbend 8-13, P_Riverbend 8-13, PLAN #1 6-21-10 RHS V0
 PLAN #1 6-21-10 RHS



Plan: PLAN #1 6-21-10 RHS (P_Riverbend 25-13/P_Riverbend 25-13)

Created By: Robert H. Scott Date: 15:35, June 21 2010

Database:	EDM 2003.21 Single User Db	Local Co-ordinate Reference:	Well P_Riverbend 25-13
Company:	US ROCKIES REGION PLANNING	TVD Reference:	WELL @ 4932.00ft (Original Well Elev)
Project:	COLORADO NORTHERN ZONE - 83	MD Reference:	WELL @ 4932.00ft (Original Well Elev)
Site:	Riverbend 7-13 PAD	North Reference:	True
Well:	P_Riverbend 25-13	Survey Calculation Method:	Minimum Curvature
Wellbore:	P_Riverbend 25-13		
Design:	PLAN #1 6-21-10 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 Riverbend 7-13 PAD, SECTION 13 T1N R67W					
Site Position:		Northing:	1,262,745.52 ft	Latitude:	40° 3' 9.774 N
From:	Lat/Long	Easting:	3,185,878.14 ft	Longitude:	104° 50' 9.578 W
Position Uncertainty:	0.00 ft	Slot Radius:	in	Grid Convergence:	0.43 °

Well	P_Riverbend 25-13					
Well Position	+N/-S	-0.01 ft	Northing:	1,262,745.39 ft	Latitude:	40° 3' 9.774 N
	+E/-W	-15.96 ft	Easting:	3,185,862.18 ft	Longitude:	104° 50' 9.784 W
Position Uncertainty		0.00 ft	Wellhead Elevation:	ft	Ground Level:	4,917.00 ft

Wellbore	P_Riverbend 25-13				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	6/21/2010	9.00	66.79	53,043

Design	PLAN #1 6-21-10 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	236.11

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	
1,000.00	0.00	0.00	1,000.00	0.00	0.00	0.00	0.00	0.00	0.00	
1,614.13	12.28	236.11	1,609.43	-36.57	-54.43	2.00	2.00	0.00	236.11	
5,622.00	12.28	236.11	5,525.57	-512.01	-762.16	0.00	0.00	0.00	0.00	
6,236.12	0.00	0.00	6,135.00	-548.57	-816.60	2.00	-2.00	0.00	180.00	
8,153.12	0.00	0.00	8,052.00	-548.57	-816.60	0.00	0.00	0.00	0.00	PBHL_Riverbend 2

Database:	EDM 2003.21 Single User Db	Local Co-ordinate Reference:	Well P_Riverbend 25-13
Company:	US ROCKIES REGION PLANNING	TVD Reference:	WELL @ 4932.00ft (Original Well Elev)
Project:	COLORADO NORTHERN ZONE - 83	MD Reference:	WELL @ 4932.00ft (Original Well Elev)
Site:	Riverbend 7-13 PAD	North Reference:	True
Well:	P_Riverbend 25-13	Survey Calculation Method:	Minimum Curvature
Wellbore:	P_Riverbend 25-13		
Design:	PLAN #1 6-21-10 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									
1,000.00	0.00	0.00	1,000.00	0.00	0.00	0.00	0.00	0.00	0.00
1,100.00	2.00	236.11	1,099.98	-0.97	-1.45	1.75	2.00	2.00	0.00
1,200.00	4.00	236.11	1,199.84	-3.89	-5.79	6.98	2.00	2.00	0.00
1,300.00	6.00	236.11	1,299.45	-8.75	-13.03	15.69	2.00	2.00	0.00
1,400.00	8.00	236.11	1,398.70	-15.55	-23.14	27.88	2.00	2.00	0.00
1,500.00	10.00	236.11	1,497.47	-24.27	-36.13	43.52	2.00	2.00	0.00
1,600.00	12.00	236.11	1,595.62	-34.91	-51.97	62.60	2.00	2.00	0.00
Start 4007.87 hold at 1614.13 MD									
1,614.13	12.28	236.11	1,609.43	-36.57	-54.43	65.57	2.00	2.00	0.00
1,700.00	12.28	236.11	1,693.34	-46.75	-69.60	83.84	0.00	0.00	0.00
1,800.00	12.28	236.11	1,791.05	-58.62	-87.25	105.11	0.00	0.00	0.00
1,900.00	12.28	236.11	1,888.76	-70.48	-104.91	126.39	0.00	0.00	0.00
2,000.00	12.28	236.11	1,986.47	-82.34	-122.57	147.66	0.00	0.00	0.00
2,100.00	12.28	236.11	2,084.19	-94.20	-140.23	168.93	0.00	0.00	0.00
2,200.00	12.28	236.11	2,181.90	-106.07	-157.89	190.21	0.00	0.00	0.00
2,300.00	12.28	236.11	2,279.61	-117.93	-175.55	211.48	0.00	0.00	0.00
2,400.00	12.28	236.11	2,377.32	-129.79	-193.21	232.75	0.00	0.00	0.00
2,500.00	12.28	236.11	2,475.03	-141.65	-210.86	254.03	0.00	0.00	0.00
2,600.00	12.28	236.11	2,572.74	-153.52	-228.52	275.30	0.00	0.00	0.00
2,700.00	12.28	236.11	2,670.45	-165.38	-246.18	296.57	0.00	0.00	0.00
2,800.00	12.28	236.11	2,768.16	-177.24	-263.84	317.85	0.00	0.00	0.00
2,900.00	12.28	236.11	2,865.87	-189.11	-281.50	339.12	0.00	0.00	0.00
3,000.00	12.28	236.11	2,963.59	-200.97	-299.16	360.39	0.00	0.00	0.00
3,100.00	12.28	236.11	3,061.30	-212.83	-316.82	381.67	0.00	0.00	0.00
3,200.00	12.28	236.11	3,159.01	-224.69	-334.47	402.94	0.00	0.00	0.00
3,300.00	12.28	236.11	3,256.72	-236.56	-352.13	424.21	0.00	0.00	0.00
PARKMAN									
3,316.66	12.28	236.11	3,273.00	-238.53	-355.08	427.76	0.00	0.00	0.00
3,400.00	12.28	236.11	3,354.43	-248.42	-369.79	445.49	0.00	0.00	0.00
3,500.00	12.28	236.11	3,452.14	-260.28	-387.45	466.76	0.00	0.00	0.00
3,600.00	12.28	236.11	3,549.85	-272.14	-405.11	488.03	0.00	0.00	0.00
3,700.00	12.28	236.11	3,647.56	-284.01	-422.77	509.31	0.00	0.00	0.00
3,800.00	12.28	236.11	3,745.27	-295.87	-440.43	530.58	0.00	0.00	0.00
3,900.00	12.28	236.11	3,842.98	-307.73	-458.08	551.85	0.00	0.00	0.00
4,000.00	12.28	236.11	3,940.70	-319.60	-475.74	573.13	0.00	0.00	0.00
4,100.00	12.28	236.11	4,038.41	-331.46	-493.40	594.40	0.00	0.00	0.00
4,200.00	12.28	236.11	4,136.12	-343.32	-511.06	615.67	0.00	0.00	0.00
4,300.00	12.28	236.11	4,233.83	-355.18	-528.72	636.94	0.00	0.00	0.00
4,400.00	12.28	236.11	4,331.54	-367.05	-546.38	658.22	0.00	0.00	0.00
4,500.00	12.28	236.11	4,429.25	-378.91	-564.04	679.49	0.00	0.00	0.00
4,600.00	12.28	236.11	4,526.96	-390.77	-581.69	700.76	0.00	0.00	0.00
SUSSEX									
4,677.82	12.28	236.11	4,603.00	-400.00	-595.44	717.32	0.00	0.00	0.00
4,700.00	12.28	236.11	4,624.67	-402.63	-599.35	722.04	0.00	0.00	0.00
4,800.00	12.28	236.11	4,722.38	-414.50	-617.01	743.31	0.00	0.00	0.00
4,900.00	12.28	236.11	4,820.10	-426.36	-634.67	764.58	0.00	0.00	0.00
5,000.00	12.28	236.11	4,917.81	-438.22	-652.33	785.86	0.00	0.00	0.00
5,100.00	12.28	236.11	5,015.52	-450.09	-669.99	807.13	0.00	0.00	0.00
5,200.00	12.28	236.11	5,113.23	-461.95	-687.65	828.40	0.00	0.00	0.00
5,300.00	12.28	236.11	5,210.94	-473.81	-705.30	849.68	0.00	0.00	0.00
5,400.00	12.28	236.11	5,308.65	-485.67	-722.96	870.95	0.00	0.00	0.00
5,500.00	12.28	236.11	5,406.36	-497.54	-740.62	892.22	0.00	0.00	0.00
5,600.00	12.28	236.11	5,504.07	-509.40	-758.28	913.50	0.00	0.00	0.00

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Company:	US ROCKIES REGION PLANNING	TVD Reference:	WELL @ 4932.00ft (Original Well Elev)
Project:	COLORADO NORTHERN ZONE - 83	MD Reference:	WELL @ 4932.00ft (Original Well Elev)
Site:	Riverbend 7-13 PAD	North Reference:	True
Well:	P_Riverbend 25-13	Survey Calculation Method:	Minimum Curvature
Wellbore:	P_Riverbend 25-13		
Design:	PLAN #1 6-21-10 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 Drop -2.00									
5,622.00	12.28	236.11	5,525.57	-512.01	-762.16	918.18	0.00	0.00	0.00
5,700.00	10.72	236.11	5,602.00	-520.68	-775.08	933.73	2.00	-2.00	0.00
5,800.00	8.72	236.11	5,700.56	-530.10	-789.09	950.62	2.00	-2.00	0.00
5,900.00	6.72	236.11	5,799.65	-537.59	-800.25	964.05	2.00	-2.00	0.00
6,000.00	4.72	236.11	5,899.14	-543.15	-808.52	974.02	2.00	-2.00	0.00
6,100.00	2.72	236.11	5,998.93	-546.77	-813.91	980.52	2.00	-2.00	0.00
6,200.00	0.72	236.11	6,098.88	-548.45	-816.41	983.52	2.00	-2.00	0.00
Start 1917.00 hold at 6236.12 MD									
6,236.12	0.00	0.00	6,135.00	-548.57	-816.60	983.75	2.00	-2.00	342.97
6,300.00	0.00	0.00	6,198.88	-548.57	-816.60	983.75	0.00	0.00	0.00
6,400.00	0.00	0.00	6,298.88	-548.57	-816.60	983.75	0.00	0.00	0.00
6,500.00	0.00	0.00	6,398.88	-548.57	-816.60	983.75	0.00	0.00	0.00
6,600.00	0.00	0.00	6,498.88	-548.57	-816.60	983.75	0.00	0.00	0.00
6,700.00	0.00	0.00	6,598.88	-548.57	-816.60	983.75	0.00	0.00	0.00
6,800.00	0.00	0.00	6,698.88	-548.57	-816.60	983.75	0.00	0.00	0.00
6,900.00	0.00	0.00	6,798.88	-548.57	-816.60	983.75	0.00	0.00	0.00
7,000.00	0.00	0.00	6,898.88	-548.57	-816.60	983.75	0.00	0.00	0.00
7,100.00	0.00	0.00	6,998.88	-548.57	-816.60	983.75	0.00	0.00	0.00
7,200.00	0.00	0.00	7,098.88	-548.57	-816.60	983.75	0.00	0.00	0.00
NIO									
7,236.12	0.00	0.00	7,135.00	-548.57	-816.60	983.75	0.00	0.00	0.00
7,300.00	0.00	0.00	7,198.88	-548.57	-816.60	983.75	0.00	0.00	0.00
7,400.00	0.00	0.00	7,298.88	-548.57	-816.60	983.75	0.00	0.00	0.00
7,500.00	0.00	0.00	7,398.88	-548.57	-816.60	983.75	0.00	0.00	0.00
CODELL									
7,583.12	0.00	0.00	7,482.00	-548.57	-816.60	983.75	0.00	0.00	0.00
7,600.00	0.00	0.00	7,498.88	-548.57	-816.60	983.75	0.00	0.00	0.00
GREENHORN									
7,668.12	0.00	0.00	7,567.00	-548.57	-816.60	983.75	0.00	0.00	0.00
7,700.00	0.00	0.00	7,598.88	-548.57	-816.60	983.75	0.00	0.00	0.00
7,800.00	0.00	0.00	7,698.88	-548.57	-816.60	983.75	0.00	0.00	0.00
7,900.00	0.00	0.00	7,798.88	-548.57	-816.60	983.75	0.00	0.00	0.00
8,000.00	0.00	0.00	7,898.88	-548.57	-816.60	983.75	0.00	0.00	0.00
JSAND									
8,018.12	0.00	0.00	7,917.00	-548.57	-816.60	983.75	0.00	0.00	0.00
8,100.00	0.00	0.00	7,998.88	-548.57	-816.60	983.75	0.00	0.00	0.00
PBHL_Riverbend 25-13(2590 FNL 2590 FEL)									
8,153.12	0.00	0.00	8,052.00	-548.57	-816.60	983.75	0.00	0.00	0.00

Design Targets									
Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (ft)	Easting (ft)	Latitude	Longitude
- hit/miss target									
- Shape									
PBHL_Riverbend 25- - plan hits target center - Circle (radius 50.00)	0.00	0.00	8,052.00	-548.57	-816.60	1,262,190.72	3,185,049.72	40° 3' 4.352 N	104° 50' 20.285 W

Database:	EDM 2003.21 Single User Db	Local Co-ordinate Reference:	Well P_Riverbend 25-13
Company:	US ROCKIES REGION PLANNING	TVD Reference:	WELL @ 4932.00ft (Original Well Elev)
Project:	COLORADO NORTHERN ZONE - 83	MD Reference:	WELL @ 4932.00ft (Original Well Elev)
Site:	Riverbend 7-13 PAD	North Reference:	True
Well:	P_Riverbend 25-13	Survey Calculation Method:	Minimum Curvature
Wellbore:	P_Riverbend 25-13		
Design:	PLAN #1 6-21-10 RHS		

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

Formations						
Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)	
3,316.66	3,273.00	PARKMAN				
4,677.82	4,603.00	SUSSEX				
7,236.12	7,135.00	NIO				
7,583.12	7,482.00	CODELL				
7,668.12	7,567.00	GREENHORN				
8,018.12	7,917.00	JSAND				

Plan Annotations					
Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates			
		+N/-S (ft)	+E/-W (ft)	Comment	
1,000.00	1,000.00	0.00	0.00	Start Build 2.00	
1,614.13	1,609.43	-36.57	-54.43	Start 4007.87 hold at 1614.13 MD	
5,622.00	5,525.57	-512.01	-762.16	Start Drop -2.00	
6,236.12	6,135.00	-548.57	-816.60	Start 1917.00 hold at 6236.12 MD	
8,153.12	8,052.00	-548.57	-816.60	TD at 8153.12	



US ROCKIES REGION PLANNING

**COLORADO NORTHERN ZONE - 83
Riverbend 7-13 PAD
P_Riverbend 25-13**

**P_Riverbend 25-13
PLAN #1 6-21-10 RHS**

Anticollision Report

21 June, 2010



Company:	US ROCKIES REGION PLANNING	Local Co-ordinate Reference:	Well P_Riverbend 25-13
Project:	COLORADO NORTHERN ZONE - 83	TVD Reference:	WELL @ 4932.00ft (Original Well Elev)
Reference Site:	Riverbend 7-13 PAD	MD Reference:	WELL @ 4932.00ft (Original Well Elev)
Site Error:	0.00ft	North Reference:	True
Reference Well:	P_Riverbend 25-13	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00ft	Output errors are at	2.00 sigma
Reference Wellbore	P_Riverbend 25-13	Database:	EDM 2003.21 Single User Db
Reference Design:	PLAN #1 6-21-10 RHS	Offset TVD Reference:	Offset Datum

Reference	PLAN #1 6-21-10 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 6/21/2010			
From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description
0.00	8,153.12	PLAN #1 6-21-10 RHS (P_Riverbend 25-1	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						
Riverbend 7-13 PAD						
CHIKUMA UNIT #2 EXISTING - CHIKUMA UNIT #2 EXI	100.00	82.35	168.59	166.85	96.699	CC
CHIKUMA UNIT #2 EXISTING - CHIKUMA UNIT #2 EXI	1,700.00	1,672.17	173.41	104.62	2.521	ES
CHIKUMA UNIT #2 EXISTING - CHIKUMA UNIT #2 EXI	1,900.00	1,866.64	186.13	109.12	2.417	SF
HARRY S CHIKUMA #5 EXISTING - HARRY S CHIKUM	5,084.15	4,892.00	984.83	773.37	4.657	CC, ES
HARRY S CHIKUMA #5 EXISTING - HARRY S CHIKUM	5,100.00	4,892.00	984.96	773.42	4.656	SF
HARRY S. CHIKUMA G.U. B #1 EXISTING - HARRY S.	0.00	0.00	554.19			
HARRY S. CHIKUMA G.U. B #1 EXISTING - HARRY S.	1,000.00	963.25	582.66	543.97	15.061	ES
HARRY S. CHIKUMA G.U. B #1 EXISTING - HARRY S.	8,153.12	7,991.81	1,679.20	1,342.04	4.980	SF
P_Riverbend 21-13 - P_Riverbend 21-13 - PLAN #1 6-21	1,000.00	1,000.00	15.96	11.72	3.766	CC
P_Riverbend 21-13 - P_Riverbend 21-13 - PLAN #1 6-21	1,100.00	1,100.38	16.22	11.56	3.482	ES, SF
P_Riverbend 24-13 - P_Riverbend 24-13 - PLAN #1 6-21	1,000.00	1,000.00	32.19	27.96	7.598	CC, ES
P_Riverbend 24-13 - P_Riverbend 24-13 - PLAN #1 6-21	1,100.00	1,099.25	34.71	30.07	7.488	SF
P_Riverbend 5-18 - P_Riverbend 5-1 - PLAN #1 6-21-10	300.00	300.00	64.11	63.02	58.807	CC, ES
P_Riverbend 5-18 - P_Riverbend 5-1 - PLAN #1 6-21-10	800.00	784.39	106.47	103.08	31.371	SF
P_Riverbend 6-13 - P_Riverbend 6-13 - PLAN #1 6-21-1	300.00	300.00	31.91	30.82	29.277	CC, ES
P_Riverbend 6-13 - P_Riverbend 6-13 - PLAN #1 6-21-1	8,153.12	8,235.00	921.85	870.49	17.951	SF
P_Riverbend 7-13 - P_Riverbend 7-13 - PLAN #1 6-21-1	1,000.00	1,000.00	15.96	11.72	3.766	CC
P_Riverbend 7-13 - P_Riverbend 7-13 - PLAN #1 6-21-1	1,400.00	1,398.63	16.90	11.02	2.876	ES, SF
P_Riverbend 8-13 - P_Riverbend 8-13 - PLAN #1 6-21-1	1,000.00	1,000.00	48.15	43.91	11.365	CC, ES
P_Riverbend 8-13 - P_Riverbend 8-13 - PLAN #1 6-21-1	1,100.00	1,098.24	51.33	46.68	11.050	SF

Offset Design	Riverbend 7-13 PAD - CHIKUMA UNIT #2 EXISTING - CHIKUMA UNIT #2 EXISTING - CHIKUMA UNIT											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)	Offset Wellbore Centre +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	-74.57	44.80	-162.36	169.29				
100.00	100.00	82.35	82.35	0.10	1.65	-74.38	45.39	-162.36	168.59	166.85	1.74	96.699	CC
200.00	200.00	181.52	181.49	0.32	5.27	-73.64	47.68	-162.36	169.23	163.64	5.59	30.294	
300.00	300.00	281.30	281.21	0.55	9.28	-72.52	51.13	-162.36	170.23	160.42	9.81	17.353	
400.00	400.00	381.24	381.09	0.77	13.29	-71.41	54.62	-162.36	171.31	157.27	14.04	12.200	
500.00	500.00	481.18	480.97	0.99	17.30	-70.31	58.11	-162.36	172.46	154.18	18.28	9.437	
600.00	600.00	581.12	580.85	1.22	21.32	-69.23	61.59	-162.36	173.67	151.16	22.51	7.715	
700.00	700.00	681.06	680.73	1.44	25.33	-68.16	65.08	-162.36	174.94	148.19	26.74	6.541	

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 25-13
Project:	COLORADO NORTHERN ZONE - 83	TVD Reference:	WELL @ 4932.00ft (Original Well Elev)
Reference Site:	Riverbend 7-13 PAD	MD Reference:	WELL @ 4932.00ft (Original Well Elev)
Site Error:	0.00ft	North Reference:	True
Reference Well:	P_Riverbend 25-13	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00ft	Output errors are at	2.00 sigma
Reference Wellbore	P_Riverbend 25-13	Database:	EDM 2003.21 Single User Db
Reference Design:	PLAN #1 6-21-10 RHS	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.00 ft
Survey Program: 0-UNKNOWN												Offset Well Error:	0.00 ft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	
800.00	800.00	781.00	780.61	1.67	29.35	-67.10	68.57	-162.36	176.27	145.29	30.98	5.690	
900.00	900.00	880.94	880.48	1.89	33.36	-66.07	72.06	-162.36	177.65	142.44	35.21	5.045	
1,000.00	1,000.00	980.88	980.36	2.12	37.37	-65.05	75.54	-162.36	179.10	139.65	39.45	4.540	
1,100.00	1,099.98	1,080.76	1,080.19	2.32	41.39	60.32	79.03	-162.36	179.73	136.05	43.68	4.115	
1,200.00	1,199.84	1,180.46	1,179.82	2.51	45.39	62.78	82.51	-162.36	178.85	131.00	47.85	3.738	
1,300.00	1,299.45	1,279.84	1,279.14	2.72	49.38	66.29	85.98	-162.36	176.88	124.85	52.02	3.400	
1,400.00	1,398.70	1,378.79	1,378.04	2.95	53.36	70.92	89.43	-162.36	174.40	118.20	56.20	3.103	
1,500.00	1,497.47	1,477.19	1,476.37	3.21	57.31	76.72	92.87	-162.36	172.26	111.86	60.40	2.852	
1,585.50	1,581.43	1,560.80	1,559.93	3.47	60.67	82.56	95.78	-162.36	171.49	107.49	64.00	2.679	
1,600.00	1,595.62	1,574.92	1,574.04	3.52	61.23	83.63	96.28	-162.36	171.52	106.91	64.61	2.655	
1,614.13	1,609.43	1,588.66	1,587.78	3.57	61.79	84.69	96.76	-162.36	171.60	106.39	65.20	2.632	
1,700.00	1,693.34	1,672.17	1,671.23	3.87	65.14	91.14	99.67	-162.36	173.41	104.62	68.79	2.521 ES	
1,800.00	1,791.05	1,769.40	1,768.41	4.24	69.05	98.39	103.06	-162.36	178.36	105.44	72.93	2.446	
1,900.00	1,888.76	1,866.64	1,865.58	4.63	72.95	105.17	106.46	-162.36	186.13	109.12	77.01	2.417 SF	
2,000.00	1,986.47	1,963.88	1,962.76	5.04	76.86	111.35	109.85	-162.36	196.38	115.34	81.04	2.423	
2,100.00	2,084.19	2,061.12	2,059.94	5.45	80.76	116.88	113.24	-162.36	208.75	123.72	85.03	2.455	
2,200.00	2,181.90	2,158.35	2,157.12	5.88	84.67	121.78	116.64	-162.36	222.89	133.88	89.01	2.504	
2,300.00	2,279.61	2,255.59	2,254.30	6.31	88.57	126.08	120.03	-162.36	238.47	145.50	92.97	2.565	
2,400.00	2,377.32	2,352.83	2,351.48	6.74	92.48	129.85	123.43	-162.36	255.24	158.32	96.92	2.633	
2,500.00	2,475.03	2,450.07	2,448.65	7.18	96.39	133.16	126.82	-162.36	272.98	172.10	100.88	2.706	
2,600.00	2,572.74	2,547.30	2,545.83	7.63	100.29	136.06	130.21	-162.36	291.51	186.66	104.85	2.780	
2,700.00	2,670.45	2,644.54	2,643.01	8.08	104.20	138.62	133.61	-162.36	310.69	201.87	108.82	2.855	
2,800.00	2,768.16	2,741.78	2,740.19	8.53	108.10	140.88	137.00	-162.36	330.40	217.61	112.79	2.929	
2,900.00	2,865.87	2,839.02	2,837.37	8.98	112.01	142.89	140.39	-162.36	350.56	233.79	116.77	3.002	
3,000.00	2,963.59	2,936.25	2,934.55	9.43	115.91	144.68	143.79	-162.36	371.10	250.33	120.76	3.073	
3,100.00	3,061.30	3,033.49	3,031.72	9.89	119.82	146.28	147.18	-162.36	391.95	267.19	124.76	3.142	
3,200.00	3,159.01	3,130.73	3,128.90	10.34	123.73	147.73	150.57	-162.36	413.06	284.30	128.76	3.208	
3,300.00	3,256.72	3,227.97	3,226.08	10.80	127.63	149.03	153.97	-162.36	434.40	301.64	132.77	3.272	
3,400.00	3,354.43	3,325.20	3,323.26	11.26	131.54	150.21	157.36	-162.36	455.94	319.17	136.78	3.333	
3,500.00	3,452.14	3,422.44	3,420.44	11.72	135.44	151.28	160.75	-162.36	477.65	336.86	140.79	3.393	
3,600.00	3,549.85	3,519.68	3,517.62	12.18	139.35	152.27	164.15	-162.36	499.51	354.70	144.81	3.449	
3,700.00	3,647.56	3,616.92	3,614.79	12.65	143.25	153.17	167.54	-162.36	521.49	372.66	148.83	3.504	
3,800.00	3,745.27	3,714.15	3,711.97	13.11	147.16	153.99	170.93	-162.36	543.59	390.73	152.86	3.556	
3,900.00	3,842.98	3,811.39	3,809.15	13.57	151.07	154.76	174.33	-162.36	565.79	408.90	156.89	3.606	
4,000.00	3,940.70	3,908.63	3,906.33	14.04	154.97	155.46	177.72	-162.36	588.08	427.16	160.92	3.655	
4,100.00	4,038.41	4,005.87	4,003.51	14.50	158.88	156.12	181.12	-162.36	610.44	445.49	164.95	3.701	
4,200.00	4,136.12	4,103.10	4,100.69	14.97	162.78	156.72	184.51	-162.36	632.88	463.89	168.98	3.745	
4,300.00	4,233.83	4,200.34	4,197.86	15.43	166.69	157.29	187.90	-162.36	655.38	482.35	173.02	3.788	
4,400.00	4,331.54	4,297.58	4,295.04	15.90	170.59	157.82	191.30	-162.36	677.93	500.87	177.06	3.829	
4,500.00	4,429.25	4,394.82	4,392.22	16.36	174.50	158.31	194.69	-162.36	700.54	519.44	181.10	3.868	
4,600.00	4,526.96	4,492.05	4,489.40	16.83	178.41	158.78	198.08	-162.36	723.20	538.05	185.14	3.906	
4,700.00	4,624.67	4,589.29	4,586.58	17.30	182.31	159.21	201.48	-162.36	745.89	556.71	189.18	3.943	
4,800.00	4,722.38	4,686.53	4,683.76	17.76	186.22	159.62	204.87	-162.36	768.63	575.40	193.23	3.978	
4,900.00	4,820.10	4,765.00	4,762.18	18.23	189.37	159.94	207.61	-162.36	791.62	595.07	196.55	4.028	
5,000.00	4,917.81	4,765.00	4,762.18	18.70	189.37	159.94	207.61	-162.36	822.42	625.58	196.85	4.178	
5,100.00	5,015.52	4,765.00	4,762.18	19.16	189.37	159.94	207.61	-162.36	863.77	666.63	197.14	4.381	
5,200.00	5,113.23	4,765.00	4,762.18	19.63	189.37	159.94	207.61	-162.36	914.23	716.79	197.44	4.631	
5,300.00	5,210.94	4,765.00	4,762.18	20.10	189.37	159.94	207.61	-162.36	972.39	774.66	197.73	4.918	
5,400.00	5,308.65	4,765.00	4,762.18	20.57	189.37	159.94	207.61	-162.36	1,036.94	838.92	198.03	5.236	
5,500.00	5,406.36	4,765.00	4,762.18	21.04	189.37	159.94	207.61	-162.36	1,106.78	908.46	198.32	5.581	
5,600.00	5,504.07	4,765.00	4,762.18	21.50	189.37	159.94	207.61	-162.36	1,180.97	982.35	198.62	5.946	
5,622.00	5,525.57	4,765.00	4,762.18	21.61	189.37	159.94	207.61	-162.36	1,197.79	999.11	198.68	6.029	

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 25-13
Project:	COLORADO NORTHERN ZONE - 83	TVD Reference:	WELL @ 4932.00ft (Original Well Elev)
Reference Site:	Riverbend 7-13 PAD	MD Reference:	WELL @ 4932.00ft (Original Well Elev)
Site Error:	0.00ft	North Reference:	True
Reference Well:	P_Riverbend 25-13	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00ft	Output errors are at	2.00 sigma
Reference Wellbore	P_Riverbend 25-13	Database:	EDM 2003.21 Single User Db
Reference Design:	PLAN #1 6-21-10 RHS	Offset TVD Reference:	Offset Datum

Offset Design													Offset Site Error:	0.00 ft
Survey Program: 0-UNKNOWN													Offset Well Error:	0.00 ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
5,700.00	5,602.00	4,765.00	4,762.18	21.91	189.37	160.58	207.61	-162.36	1,258.12	1,058.26	199.86	6.295		
5,800.00	5,700.56	4,765.00	4,762.18	22.20	189.37	161.40	207.61	-162.36	1,336.39	1,135.23	201.16	6.643		
5,900.00	5,799.65	4,765.00	4,762.18	22.46	189.37	162.21	207.61	-162.36	1,415.48	1,213.23	202.25	6.999		
6,000.00	5,899.14	4,765.00	4,762.18	22.67	189.37	163.00	207.61	-162.36	1,495.15	1,292.04	203.11	7.361		
6,100.00	5,998.93	4,765.00	4,762.18	22.84	189.37	163.76	207.61	-162.36	1,575.24	1,371.49	203.75	7.731		
6,200.00	6,098.88	4,765.00	4,762.18	22.98	189.37	164.50	207.61	-162.36	1,655.60	1,451.44	204.15	8.110		
6,236.12	6,135.00	4,765.00	4,762.18	23.02	189.37	40.87	207.61	-162.36	1,684.66	1,480.42	204.24	8.248		
6,300.00	6,198.88	4,765.00	4,762.18	23.10	189.37	40.87	207.61	-162.36	1,736.48	1,532.13	204.35	8.498		
6,400.00	6,298.88	4,765.00	4,762.18	23.21	189.37	40.87	207.61	-162.36	1,819.15	1,614.63	204.52	8.895		
6,500.00	6,398.88	4,765.00	4,762.18	23.33	189.37	40.87	207.61	-162.36	1,903.48	1,698.79	204.69	9.299		
6,600.00	6,498.88	4,765.00	4,762.18	23.45	189.37	40.87	207.61	-162.36	1,989.27	1,784.41	204.86	9.710		
6,700.00	6,598.88	4,765.00	4,762.18	23.56	189.37	40.87	207.61	-162.36	2,076.33	1,871.29	205.04	10.127		
6,800.00	6,698.88	4,765.00	4,762.18	23.69	189.37	40.87	207.61	-162.36	2,164.50	1,959.29	205.21	10.548		
6,900.00	6,798.88	4,765.00	4,762.18	23.81	189.37	40.87	207.61	-162.36	2,253.67	2,048.28	205.39	10.973		
7,000.00	6,898.88	4,765.00	4,762.18	23.93	189.37	40.87	207.61	-162.36	2,343.70	2,138.14	205.56	11.401		
7,100.00	6,998.88	4,765.00	4,762.18	24.06	189.37	40.87	207.61	-162.36	2,434.52	2,228.78	205.74	11.833		
7,200.00	7,098.88	4,765.00	4,762.18	24.19	189.37	40.87	207.61	-162.36	2,526.03	2,320.11	205.92	12.267		
7,300.00	7,198.88	4,765.00	4,762.18	24.32	189.37	40.87	207.61	-162.36	2,618.16	2,412.06	206.10	12.703		
7,400.00	7,298.88	4,765.00	4,762.18	24.45	189.37	40.87	207.61	-162.36	2,710.85	2,504.57	206.28	13.141		
7,500.00	7,398.88	4,765.00	4,762.18	24.58	189.37	40.87	207.61	-162.36	2,804.04	2,597.58	206.46	13.581		
7,600.00	7,498.88	4,765.00	4,762.18	24.71	189.37	40.87	207.61	-162.36	2,897.69	2,691.04	206.65	14.022		
7,700.00	7,598.88	4,765.00	4,762.18	24.84	189.37	40.87	207.61	-162.36	2,991.74	2,784.91	206.83	14.465		
7,800.00	7,698.88	4,765.00	4,762.18	24.98	189.37	40.87	207.61	-162.36	3,086.17	2,879.16	207.02	14.908		
7,900.00	7,798.88	4,765.00	4,762.18	25.12	189.37	40.87	207.61	-162.36	3,180.94	2,973.74	207.20	15.352		
8,000.00	7,898.88	4,765.00	4,762.18	25.25	189.37	40.87	207.61	-162.36	3,276.03	3,068.64	207.39	15.796		
8,100.00	7,998.88	4,765.00	4,762.18	25.39	189.37	40.87	207.61	-162.36	3,371.39	3,163.82	207.58	16.242		
8,153.12	8,052.00	4,765.00	4,762.18	25.47	189.37	40.87	207.61	-162.36	3,422.16	3,214.48	207.68	16.478		

Company:	US ROCKIES REGION PLANNING	Local Co-ordinate Reference:	Well P_Riverbend 25-13
Project:	COLORADO NORTHERN ZONE - 83	TVD Reference:	WELL @ 4932.00ft (Original Well Elev)
Reference Site:	Riverbend 7-13 PAD	MD Reference:	WELL @ 4932.00ft (Original Well Elev)
Site Error:	0.00ft	North Reference:	True
Reference Well:	P_Riverbend 25-13	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00ft	Output errors are at	2.00 sigma
Reference Wellbore	P_Riverbend 25-13	Database:	EDM 2003.21 Single User Db
Reference Design:	PLAN #1 6-21-10 RHS	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.00 ft
Survey Program: 0-UNKNOWN												Offset Well Error:	0.00 ft
Reference	Offset	Semi Major Axis					Distance						Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	
0.00	0.00	0.00	0.00	0.00	0.00	-95.54	-148.21	-1,528.47	1,535.68				
100.00	100.00	90.33	90.33	0.10	1.81	-95.51	-147.50	-1,528.47	1,535.57	1,533.67	1.90	807.199	
200.00	200.00	192.92	192.88	0.32	5.73	-95.42	-144.97	-1,528.47	1,535.34	1,529.30	6.04	254.274	
300.00	300.00	293.04	292.94	0.55	9.75	-95.29	-141.48	-1,528.47	1,535.01	1,524.74	10.27	149.476	
400.00	400.00	392.98	392.82	0.77	13.76	-95.16	-137.99	-1,528.47	1,534.69	1,520.20	14.49	105.888	
500.00	500.00	492.92	492.70	0.99	17.77	-95.03	-134.50	-1,528.47	1,534.38	1,515.66	18.72	81.974	
600.00	600.00	592.85	592.58	1.22	21.79	-94.90	-131.01	-1,528.47	1,534.08	1,511.14	22.94	66.867	
700.00	700.00	692.79	692.45	1.44	25.80	-94.77	-127.52	-1,528.47	1,533.79	1,506.62	27.17	56.458	
800.00	800.00	792.73	792.33	1.67	29.82	-94.64	-124.04	-1,528.47	1,533.50	1,502.11	31.39	48.851	
900.00	900.00	892.67	892.21	1.89	33.83	-94.51	-120.55	-1,528.47	1,533.22	1,497.60	35.62	43.048	
1,000.00	1,000.00	992.61	992.09	2.12	37.85	-94.38	-117.06	-1,528.47	1,532.95	1,493.11	39.84	38.477	
1,100.00	1,099.98	1,092.50	1,091.91	2.32	41.86	29.69	-113.58	-1,528.47	1,531.17	1,487.02	44.15	34.678	
1,200.00	1,199.84	1,192.19	1,191.55	2.51	45.86	29.97	-110.10	-1,528.47	1,526.38	1,478.11	48.27	31.619	
1,300.00	1,299.45	1,291.58	1,290.87	2.72	49.85	30.34	-106.63	-1,528.47	1,518.60	1,466.27	52.33	29.018	
1,400.00	1,398.70	1,390.53	1,389.76	2.95	53.83	30.82	-103.17	-1,528.47	1,507.88	1,451.55	56.32	26.771	
1,500.00	1,497.47	1,488.93	1,488.10	3.21	57.78	31.40	-99.74	-1,528.47	1,494.25	1,434.01	60.24	24.806	
1,600.00	1,595.62	1,586.65	1,585.77	3.52	61.71	32.09	-96.33	-1,528.47	1,477.78	1,413.71	64.07	23.064	
1,614.13	1,609.43	1,600.40	1,599.50	3.57	62.26	32.19	-95.85	-1,528.47	1,475.23	1,410.62	64.61	22.834	
1,700.00	1,693.34	1,683.90	1,682.95	3.87	65.61	32.69	-92.94	-1,528.47	1,459.60	1,391.45	68.15	21.418	
1,800.00	1,791.05	1,781.14	1,780.13	4.24	69.52	33.27	-89.54	-1,528.47	1,441.55	1,369.25	72.29	19.941	
1,900.00	1,888.76	1,878.37	1,877.31	4.63	73.42	33.88	-86.15	-1,528.47	1,423.64	1,347.19	76.45	18.622	
2,000.00	1,986.47	1,975.61	1,974.49	5.04	77.33	34.49	-82.76	-1,528.47	1,405.90	1,325.27	80.62	17.438	
2,100.00	2,084.19	2,072.85	2,071.67	5.45	81.23	35.12	-79.36	-1,528.47	1,388.32	1,303.51	84.81	16.369	
2,200.00	2,181.90	2,170.09	2,168.85	5.88	85.14	35.77	-75.97	-1,528.47	1,370.91	1,281.90	89.01	15.401	
2,300.00	2,279.61	2,267.32	2,266.02	6.31	89.05	36.44	-72.57	-1,528.47	1,353.68	1,260.46	93.22	14.521	
2,400.00	2,377.32	2,364.56	2,363.20	6.74	92.95	37.12	-69.18	-1,528.47	1,336.64	1,239.19	97.45	13.716	
2,500.00	2,475.03	2,461.80	2,460.38	7.18	96.86	37.81	-65.79	-1,528.47	1,319.79	1,218.10	101.69	12.979	
2,600.00	2,572.74	2,559.04	2,557.56	7.63	100.76	38.53	-62.39	-1,528.47	1,303.14	1,197.20	105.93	12.301	
2,700.00	2,670.45	2,656.27	2,654.74	8.08	104.67	39.26	-59.00	-1,528.47	1,286.70	1,176.50	110.19	11.677	
2,800.00	2,768.16	2,753.51	2,751.92	8.53	108.57	40.01	-55.61	-1,528.47	1,270.47	1,156.01	114.46	11.099	
2,900.00	2,865.87	2,850.75	2,849.09	8.98	112.48	40.78	-52.21	-1,528.47	1,254.47	1,135.72	118.75	10.564	
3,000.00	2,963.59	2,947.99	2,946.27	9.43	116.39	41.57	-48.82	-1,528.47	1,238.70	1,115.66	123.04	10.067	
3,100.00	3,061.30	3,045.22	3,043.45	9.89	120.29	42.38	-45.43	-1,528.47	1,223.18	1,095.83	127.34	9.605	
3,200.00	3,159.01	3,142.46	3,140.63	10.34	124.20	43.21	-42.03	-1,528.47	1,207.90	1,076.24	131.66	9.174	
3,300.00	3,256.72	3,239.70	3,237.81	10.80	128.10	44.06	-38.64	-1,528.47	1,192.89	1,056.90	135.99	8.772	
3,400.00	3,354.43	3,336.94	3,334.99	11.26	132.01	44.93	-35.25	-1,528.47	1,178.15	1,037.82	140.33	8.396	
3,500.00	3,452.14	3,434.17	3,432.16	11.72	135.91	45.82	-31.85	-1,528.47	1,163.69	1,019.01	144.68	8.043	
3,600.00	3,549.85	3,531.41	3,529.34	12.18	139.82	46.73	-28.46	-1,528.47	1,149.52	1,000.48	149.04	7.713	
3,700.00	3,647.56	3,628.65	3,626.52	12.65	143.73	47.66	-25.07	-1,528.47	1,135.65	982.24	153.41	7.403	
3,800.00	3,745.27	3,725.89	3,723.70	13.11	147.63	48.62	-21.67	-1,528.47	1,122.10	964.31	157.79	7.111	
3,900.00	3,842.98	3,823.12	3,820.88	13.57	151.54	49.59	-18.28	-1,528.47	1,108.88	946.69	162.19	6.837	
4,000.00	3,940.70	3,920.36	3,918.06	14.04	155.44	50.60	-14.88	-1,528.47	1,095.99	929.40	166.59	6.579	
4,100.00	4,038.41	4,017.60	4,015.23	14.50	159.35	51.62	-11.49	-1,528.47	1,083.45	912.45	171.01	6.336	
4,200.00	4,136.12	4,114.84	4,112.41	14.97	163.25	52.66	-8.10	-1,528.47	1,071.28	895.84	175.43	6.107	
4,300.00	4,233.83	4,212.07	4,209.59	15.43	167.16	53.73	-4.70	-1,528.47	1,059.47	879.61	179.87	5.890	
4,400.00	4,331.54	4,309.31	4,306.77	15.90	171.07	54.82	-1.31	-1,528.47	1,048.06	863.75	184.31	5.686	
4,500.00	4,429.25	4,406.55	4,403.95	16.36	174.97	55.94	2.08	-1,528.47	1,037.05	848.28	188.76	5.494	
4,600.00	4,526.96	4,503.79	4,501.12	16.83	178.88	57.07	5.48	-1,528.47	1,026.44	833.22	193.22	5.312	
4,700.00	4,624.67	4,601.02	4,598.30	17.30	182.78	58.23	8.87	-1,528.47	1,016.27	818.57	197.69	5.141	
4,800.00	4,722.38	4,698.26	4,695.48	17.76	186.69	59.41	12.26	-1,528.47	1,006.53	804.36	202.17	4.979	
4,900.00	4,820.10	4,795.50	4,792.66	18.23	190.59	60.61	15.66	-1,528.47	997.24	790.60	206.65	4.826	
5,000.00	4,917.81	4,892.00	4,889.10	18.70	194.47	61.82	19.03	-1,528.47	988.42	777.32	211.10	4.682	

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 25-13
Project:	COLORADO NORTHERN ZONE - 83	TVD Reference:	WELL @ 4932.00ft (Original Well Elev)
Reference Site:	Riverbend 7-13 PAD	MD Reference:	WELL @ 4932.00ft (Original Well Elev)
Site Error:	0.00ft	North Reference:	True
Reference Well:	P_Riverbend 25-13	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00ft	Output errors are at	2.00 sigma
Reference Wellbore	P_Riverbend 25-13	Database:	EDM 2003.21 Single User Db
Reference Design:	PLAN #1 6-21-10 RHS	Offset TVD Reference:	Offset Datum

Offset Design Riverbend 7-13 PAD - HARRY S CHIKUMA #5 EXISTING - HARRY S CHIKUMA #5 EXISTING - HARR													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		
5,084.15	5,000.03	4,892.00	4,889.10	19.09	194.47	61.82	19.03	-1,528.47	984.83	773.37	211.47	4.657	CC, ES	
5,100.00	5,015.52	4,892.00	4,889.10	19.16	194.47	61.82	19.03	-1,528.47	984.96	773.42	211.53	4.656	SF	
5,200.00	5,113.23	4,892.00	4,889.10	19.63	194.47	61.82	19.03	-1,528.47	991.62	779.65	211.97	4.678		
5,300.00	5,210.94	4,892.00	4,889.10	20.10	194.47	61.82	19.03	-1,528.47	1,008.21	795.81	212.40	4.747		
5,400.00	5,308.65	4,892.00	4,889.10	20.57	194.47	61.82	19.03	-1,528.47	1,034.24	821.41	212.84	4.859		
5,500.00	5,406.36	4,892.00	4,889.10	21.04	194.47	61.82	19.03	-1,528.47	1,069.03	855.76	213.27	5.013		
5,600.00	5,504.07	4,892.00	4,889.10	21.50	194.47	61.82	19.03	-1,528.47	1,111.75	898.05	213.70	5.202		
5,622.00	5,525.57	4,892.00	4,889.10	21.61	194.47	61.82	19.03	-1,528.47	1,122.13	908.33	213.80	5.249		
5,700.00	5,602.00	4,892.00	4,889.10	21.91	194.47	62.64	19.03	-1,528.47	1,161.96	947.57	214.38	5.420		
5,800.00	5,700.56	4,892.00	4,889.10	22.20	194.47	63.90	19.03	-1,528.47	1,219.57	1,004.58	214.99	5.673		
5,900.00	5,799.65	4,892.00	4,889.10	22.46	194.47	65.41	19.03	-1,528.47	1,283.56	1,068.06	215.49	5.956		
6,000.00	5,899.14	4,892.00	4,889.10	22.67	194.47	67.18	19.03	-1,528.47	1,352.94	1,137.04	215.91	6.266		
6,100.00	5,998.93	4,892.00	4,889.10	22.84	194.47	69.22	19.03	-1,528.47	1,426.86	1,210.63	216.23	6.599		
6,200.00	6,098.88	4,892.00	4,889.10	22.98	194.47	71.55	19.03	-1,528.47	1,504.57	1,288.09	216.48	6.950		
6,236.12	6,135.00	4,892.00	4,889.10	23.02	194.47	-51.43	19.03	-1,528.47	1,533.44	1,316.89	216.55	7.081		
6,300.00	6,198.88	4,892.00	4,889.10	23.10	194.47	-51.43	19.03	-1,528.47	1,585.29	1,368.66	216.63	7.318		
6,400.00	6,298.88	4,892.00	4,889.10	23.21	194.47	-51.43	19.03	-1,528.47	1,668.14	1,451.40	216.75	7.696		
6,500.00	6,398.88	4,892.00	4,889.10	23.33	194.47	-51.43	19.03	-1,528.47	1,752.79	1,535.92	216.86	8.082		
6,600.00	6,498.88	4,892.00	4,889.10	23.45	194.47	-51.43	19.03	-1,528.47	1,838.97	1,621.99	216.98	8.475		
6,700.00	6,598.88	4,892.00	4,889.10	23.56	194.47	-51.43	19.03	-1,528.47	1,926.49	1,709.39	217.10	8.874		
6,800.00	6,698.88	4,892.00	4,889.10	23.69	194.47	-51.43	19.03	-1,528.47	2,015.17	1,797.95	217.23	9.277		
6,900.00	6,798.88	4,892.00	4,889.10	23.81	194.47	-51.43	19.03	-1,528.47	2,104.87	1,887.52	217.35	9.684		
7,000.00	6,898.88	4,892.00	4,889.10	23.93	194.47	-51.43	19.03	-1,528.47	2,195.46	1,977.98	217.48	10.095		
7,100.00	6,998.88	4,892.00	4,889.10	24.06	194.47	-51.43	19.03	-1,528.47	2,286.83	2,069.23	217.60	10.509		
7,200.00	7,098.88	4,892.00	4,889.10	24.19	194.47	-51.43	19.03	-1,528.47	2,378.90	2,161.17	217.73	10.926		
7,300.00	7,198.88	4,892.00	4,889.10	24.32	194.47	-51.43	19.03	-1,528.47	2,471.58	2,253.72	217.86	11.345		
7,400.00	7,298.88	4,892.00	4,889.10	24.45	194.47	-51.43	19.03	-1,528.47	2,564.81	2,346.82	217.99	11.766		
7,500.00	7,398.88	4,892.00	4,889.10	24.58	194.47	-51.43	19.03	-1,528.47	2,658.54	2,440.41	218.13	12.188		
7,600.00	7,498.88	4,892.00	4,889.10	24.71	194.47	-51.43	19.03	-1,528.47	2,752.70	2,534.44	218.26	12.612		
7,700.00	7,598.88	4,892.00	4,889.10	24.84	194.47	-51.43	19.03	-1,528.47	2,847.27	2,628.87	218.39	13.037		
7,800.00	7,698.88	4,892.00	4,889.10	24.98	194.47	-51.43	19.03	-1,528.47	2,942.19	2,723.66	218.53	13.463		
7,900.00	7,798.88	4,892.00	4,889.10	25.12	194.47	-51.43	19.03	-1,528.47	3,037.44	2,818.77	218.67	13.891		
8,000.00	7,898.88	4,892.00	4,889.10	25.25	194.47	-51.43	19.03	-1,528.47	3,132.98	2,914.18	218.81	14.318		
8,100.00	7,998.88	4,892.00	4,889.10	25.39	194.47	-51.43	19.03	-1,528.47	3,228.80	3,009.85	218.95	14.747		
8,153.12	8,052.00	4,892.00	4,889.10	25.47	194.47	-51.43	19.03	-1,528.47	3,279.80	3,060.78	219.02	14.975		

Company:	US ROCKIES REGION PLANNING	Local Co-ordinate Reference:	Well P_Riverbend 25-13
Project:	COLORADO NORTHERN ZONE - 83	TVD Reference:	WELL @ 4932.00ft (Original Well Elev)
Reference Site:	Riverbend 7-13 PAD	MD Reference:	WELL @ 4932.00ft (Original Well Elev)
Site Error:	0.00ft	North Reference:	True
Reference Well:	P_Riverbend 25-13	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00ft	Output errors are at	2.00 sigma
Reference Wellbore	P_Riverbend 25-13	Database:	EDM 2003.21 Single User Db
Reference Design:	PLAN #1 6-21-10 RHS	Offset TVD Reference:	Offset Datum

Offset Design		Riverbend 7-13 PAD - HARRY S. CHIKUMA G.U. B #1 EXISTING - HARRY S. CHIKUMA G.U. B #1 EX										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	19.76	521.28	187.27	554.19				
100.00	100.00	75.16	75.16	0.10	1.50	19.74	521.77	187.27	554.41	552.81	1.60	346.693	
200.00	200.00	166.78	166.75	0.32	4.68	19.68	523.71	187.27	556.39	551.40	4.99	111.428	
300.00	300.00	263.68	263.60	0.55	8.57	19.56	526.99	187.27	559.58	550.48	9.10	61.510	
400.00	400.00	363.62	363.48	0.77	12.58	19.44	530.48	187.27	562.87	549.55	13.32	42.245	
500.00	500.00	463.55	463.35	0.99	16.60	19.33	533.97	187.27	566.16	548.61	17.55	32.259	
600.00	600.00	563.49	563.23	1.22	20.61	19.21	537.46	187.27	569.46	547.68	21.78	26.149	
700.00	700.00	663.43	663.11	1.44	24.62	19.10	540.94	187.27	572.76	546.75	26.00	22.025	
800.00	800.00	763.37	762.99	1.67	28.64	18.98	544.43	187.27	576.06	545.82	30.23	19.055	
900.00	900.00	863.31	862.87	1.89	32.65	18.87	547.92	187.27	579.36	544.90	34.46	16.813	
1,000.00	1,000.00	963.25	962.74	2.12	36.67	18.76	551.41	187.27	582.66	543.97	38.69	15.061 ES	
1,100.00	1,099.98	1,063.13	1,062.57	2.32	40.68	142.59	554.89	187.27	587.35	544.56	42.79	13.725	
1,200.00	1,199.84	1,162.83	1,162.20	2.51	44.68	142.70	558.37	187.27	594.81	547.94	46.88	12.689	
1,300.00	1,299.45	1,262.21	1,261.53	2.72	48.67	142.97	561.84	187.27	605.06	554.16	50.90	11.887	
1,400.00	1,398.70	1,361.17	1,360.42	2.95	52.65	143.38	565.30	187.27	618.11	563.26	54.85	11.269	
1,500.00	1,497.47	1,459.57	1,458.76	3.21	56.60	143.93	568.73	187.27	634.02	575.31	58.71	10.798	
1,600.00	1,595.62	1,557.29	1,556.42	3.52	60.53	144.58	572.14	187.27	652.84	590.36	62.47	10.450	
1,614.13	1,609.43	1,571.03	1,570.16	3.57	61.08	144.68	572.62	187.27	655.73	592.73	63.00	10.409	
1,700.00	1,693.34	1,654.54	1,653.61	3.87	64.43	145.48	575.53	187.27	673.57	607.10	66.47	10.134	
1,800.00	1,791.05	1,751.78	1,750.79	4.24	68.34	146.36	578.93	187.27	694.49	623.98	70.52	9.849	
1,900.00	1,888.76	1,849.01	1,847.97	4.63	72.24	147.19	582.32	187.27	715.57	640.99	74.58	9.595	
2,000.00	1,986.47	1,946.25	1,945.15	5.04	76.15	147.97	585.71	187.27	736.78	658.14	78.65	9.368	
2,100.00	2,084.19	2,043.49	2,042.32	5.45	80.06	148.71	589.11	187.27	758.12	675.40	82.71	9.166	
2,200.00	2,181.90	2,140.73	2,139.50	5.88	83.96	149.41	592.50	187.27	779.57	692.79	86.78	8.983	
2,300.00	2,279.61	2,237.96	2,236.68	6.31	87.87	150.08	595.89	187.27	801.13	710.27	90.86	8.818	
2,400.00	2,377.32	2,335.20	2,333.86	6.74	91.77	150.70	599.29	187.27	822.78	727.86	94.93	8.668	
2,500.00	2,475.03	2,432.44	2,431.04	7.18	95.68	151.30	602.68	187.27	844.53	745.53	99.00	8.531	
2,600.00	2,572.74	2,529.68	2,528.22	7.63	99.58	151.86	606.08	187.27	866.36	763.29	103.07	8.406	
2,700.00	2,670.45	2,626.91	2,625.39	8.08	103.49	152.40	609.47	187.27	888.26	781.12	107.14	8.291	
2,800.00	2,768.16	2,724.15	2,722.57	8.53	107.40	152.91	612.86	187.27	910.24	799.03	111.21	8.185	
2,900.00	2,865.87	2,821.39	2,819.75	8.98	111.30	153.40	616.26	187.27	932.28	817.00	115.28	8.087	
3,000.00	2,963.59	2,918.63	2,916.93	9.43	115.21	153.87	619.65	187.27	954.38	835.03	119.35	7.996	
3,100.00	3,061.30	3,015.86	3,014.11	9.89	119.11	154.31	623.04	187.27	976.55	853.13	123.42	7.912	
3,200.00	3,159.01	3,113.10	3,111.29	10.34	123.02	154.74	626.44	187.27	998.76	871.27	127.49	7.834	
3,300.00	3,256.72	3,210.34	3,208.46	10.80	126.92	155.14	629.83	187.27	1,021.03	889.47	131.56	7.761	
3,400.00	3,354.43	3,307.58	3,305.64	11.26	130.83	155.53	633.22	187.27	1,043.34	907.72	135.63	7.693	
3,500.00	3,452.14	3,404.81	3,402.82	11.72	134.73	155.91	636.62	187.27	1,065.70	926.01	139.69	7.629	
3,600.00	3,549.85	3,502.05	3,500.00	12.18	138.64	156.26	640.01	187.27	1,088.10	944.34	143.76	7.569	
3,700.00	3,647.56	3,599.29	3,597.18	12.65	142.55	156.61	643.40	187.27	1,110.54	962.71	147.83	7.512	
3,800.00	3,745.27	3,696.53	3,694.36	13.11	146.45	156.94	646.80	187.27	1,133.01	981.12	151.89	7.459	
3,900.00	3,842.98	3,793.76	3,791.53	13.57	150.36	157.25	650.19	187.27	1,155.52	999.56	155.96	7.409	
4,000.00	3,940.70	3,891.00	3,888.71	14.04	154.26	157.56	653.58	187.27	1,178.06	1,018.04	160.02	7.362	
4,100.00	4,038.41	3,988.24	3,985.89	14.50	158.17	157.85	656.98	187.27	1,200.63	1,036.54	164.09	7.317	
4,200.00	4,136.12	4,085.48	4,083.07	14.97	162.07	158.14	660.37	187.27	1,223.23	1,055.08	168.15	7.274	
4,300.00	4,233.83	4,182.71	4,180.25	15.43	165.98	158.41	663.77	187.27	1,245.86	1,073.64	172.22	7.234	
4,400.00	4,331.54	4,279.95	4,277.42	15.90	169.89	158.67	667.16	187.27	1,268.51	1,092.23	176.28	7.196	
4,500.00	4,429.25	4,377.19	4,374.60	16.36	173.79	158.93	670.55	187.27	1,291.19	1,110.85	180.35	7.159	
4,600.00	4,526.96	4,474.43	4,471.78	16.83	177.70	159.17	673.95	187.27	1,313.89	1,129.48	184.41	7.125	
4,700.00	4,624.67	4,571.66	4,568.96	17.30	181.60	159.41	677.34	187.27	1,336.62	1,148.14	188.48	7.092	
4,800.00	4,722.38	4,668.90	4,666.14	17.76	185.51	159.64	680.73	187.27	1,359.36	1,166.82	192.54	7.060	
4,900.00	4,820.10	4,766.14	4,763.32	18.23	189.41	159.86	684.13	187.27	1,382.13	1,185.52	196.60	7.030	
5,000.00	4,917.81	4,863.38	4,860.49	18.70	193.32	160.07	687.52	187.27	1,404.91	1,204.24	200.67	7.001	

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 25-13
Project:	COLORADO NORTHERN ZONE - 83	TVD Reference:	WELL @ 4932.00ft (Original Well Elev)
Reference Site:	Riverbend 7-13 PAD	MD Reference:	WELL @ 4932.00ft (Original Well Elev)
Site Error:	0.00ft	North Reference:	True
Reference Well:	P_Riverbend 25-13	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00ft	Output errors are at	2.00 sigma
Reference Wellbore	P_Riverbend 25-13	Database:	EDM 2003.21 Single User Db
Reference Design:	PLAN #1 6-21-10 RHS	Offset TVD Reference:	Offset Datum

Offset Design		Riverbend 7-13 PAD - HARRY S. CHIKUMA G.U. B #1 EXISTING - HARRY S. CHIKUMA G.U. B #1 EX										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	5,015.52	4,960.61	4,957.67	19.16	197.23	160.28	690.91	187.27	1,427.71	1,222.98	204.73	6.974	
5,200.00	5,113.23	5,057.85	5,054.85	19.63	201.13	160.48	694.31	187.27	1,450.53	1,241.74	208.79	6.947	
5,300.00	5,210.94	5,155.09	5,152.03	20.10	205.04	160.67	697.70	187.27	1,473.37	1,260.51	212.86	6.922	
5,400.00	5,308.65	5,252.33	5,249.21	20.57	208.94	160.86	701.09	187.27	1,496.22	1,279.30	216.92	6.898	
5,500.00	5,406.36	5,349.56	5,346.39	21.04	212.85	161.05	704.49	187.27	1,519.08	1,298.10	220.98	6.874	
5,600.00	5,504.07	5,446.80	5,443.56	21.50	216.75	161.22	707.88	187.27	1,541.96	1,316.92	225.05	6.852	
5,622.00	5,525.57	5,468.19	5,464.94	21.61	217.61	161.26	708.63	187.27	1,547.00	1,321.06	225.94	6.847	
5,700.00	5,602.00	5,544.28	5,540.98	21.91	220.67	161.49	711.28	187.27	1,563.88	1,333.56	230.32	6.790	
5,800.00	5,700.56	5,642.45	5,639.09	22.20	224.61	161.73	714.71	187.27	1,582.63	1,346.87	235.76	6.713	
5,900.00	5,799.65	5,741.21	5,737.80	22.46	228.58	161.90	718.16	187.27	1,598.13	1,357.12	241.01	6.631	
6,000.00	5,899.14	5,840.45	5,836.98	22.67	232.57	162.01	721.62	187.27	1,610.34	1,364.30	246.04	6.545	
6,100.00	5,998.93	5,940.05	5,936.51	22.84	236.57	162.06	725.10	187.27	1,619.26	1,368.42	250.84	6.455	
6,200.00	6,098.88	6,039.88	6,036.28	22.98	240.58	162.05	728.58	187.27	1,624.86	1,369.48	255.38	6.362	
6,236.12	6,135.00	6,075.98	6,072.36	23.02	242.03	38.14	729.84	187.27	1,626.07	1,369.11	256.96	6.328	
6,300.00	6,198.88	6,139.81	6,136.16	23.10	244.59	38.09	732.07	187.27	1,627.82	1,368.19	259.63	6.270	
6,400.00	6,298.88	6,239.75	6,236.03	23.21	248.60	38.02	735.56	187.27	1,630.57	1,366.77	263.80	6.181	
6,500.00	6,398.88	6,339.69	6,335.91	23.33	252.62	37.94	739.04	187.27	1,633.32	1,365.34	267.98	6.095	
6,600.00	6,498.88	6,439.63	6,435.79	23.45	256.63	37.87	742.53	187.27	1,636.08	1,363.92	272.16	6.012	
6,700.00	6,598.88	6,539.57	6,535.67	23.56	260.65	37.79	746.02	187.27	1,638.83	1,362.50	276.33	5.931	
6,800.00	6,698.88	6,639.51	6,635.55	23.69	264.66	37.72	749.51	187.27	1,641.59	1,361.08	280.51	5.852	
6,900.00	6,798.88	6,739.45	6,735.42	23.81	268.68	37.64	752.99	187.27	1,644.35	1,359.66	284.70	5.776	
7,000.00	6,898.88	6,839.39	6,835.30	23.93	272.69	37.57	756.48	187.27	1,647.12	1,358.24	288.88	5.702	
7,100.00	6,998.88	6,939.33	6,935.18	24.06	276.70	37.49	759.97	187.27	1,649.89	1,356.83	293.06	5.630	
7,200.00	7,098.88	7,039.27	7,035.06	24.19	280.72	37.42	763.46	187.27	1,652.66	1,355.41	297.25	5.560	
7,300.00	7,198.88	7,139.21	7,134.94	24.32	284.73	37.35	766.95	187.27	1,655.43	1,354.00	301.43	5.492	
7,400.00	7,298.88	7,239.14	7,234.82	24.45	288.75	37.27	770.43	187.27	1,658.21	1,352.59	305.62	5.426	
7,500.00	7,398.88	7,339.08	7,334.69	24.58	292.76	37.20	773.92	187.27	1,660.99	1,351.19	309.80	5.361	
7,600.00	7,498.88	7,439.02	7,434.57	24.71	296.78	37.13	777.41	187.27	1,663.77	1,349.78	313.99	5.299	
7,700.00	7,598.88	7,538.96	7,534.45	24.84	300.79	37.06	780.90	187.27	1,666.55	1,348.38	318.18	5.238	
7,800.00	7,698.88	7,638.90	7,634.33	24.98	304.80	36.98	784.38	187.27	1,669.34	1,346.97	322.37	5.178	
7,900.00	7,798.88	7,738.84	7,734.21	25.12	308.82	36.91	787.87	187.27	1,672.13	1,345.57	326.56	5.120	
8,000.00	7,898.88	7,838.78	7,834.08	25.25	312.83	36.84	791.36	187.27	1,674.92	1,344.17	330.75	5.064	
8,100.00	7,998.88	7,938.72	7,933.96	25.39	316.85	36.77	794.85	187.27	1,677.72	1,342.78	334.94	5.009	
8,153.12	8,052.00	7,991.81	7,987.02	25.47	318.98	36.73	796.70	187.27	1,679.20	1,342.04	337.17	4.980 SF	

Company:	US ROCKIES REGION PLANNING	Local Co-ordinate Reference:	Well P_Riverbend 25-13
Project:	COLORADO NORTHERN ZONE - 83	TVD Reference:	WELL @ 4932.00ft (Original Well Elev)
Reference Site:	Riverbend 7-13 PAD	MD Reference:	WELL @ 4932.00ft (Original Well Elev)
Site Error:	0.00ft	North Reference:	True
Reference Well:	P_Riverbend 25-13	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00ft	Output errors are at	2.00 sigma
Reference Wellbore	P_Riverbend 25-13	Database:	EDM 2003.21 Single User Db
Reference Design:	PLAN #1 6-21-10 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	89.95	0.01	15.96	15.96				
100.00	100.00	100.00	100.00	0.10	0.10	89.95	0.01	15.96	15.96	15.77	0.19	83.519	
200.00	200.00	200.00	200.00	0.32	0.32	89.95	0.01	15.96	15.96	15.32	0.64	24.909	
300.00	300.00	300.00	300.00	0.55	0.55	89.95	0.01	15.96	15.96	14.87	1.09	14.637	
400.00	400.00	400.00	400.00	0.77	0.77	89.95	0.01	15.96	15.96	14.42	1.54	10.364	
500.00	500.00	500.00	500.00	0.99	0.99	89.95	0.01	15.96	15.96	13.97	1.99	8.022	
600.00	600.00	600.00	600.00	1.22	1.22	89.95	0.01	15.96	15.96	13.52	2.44	6.543	
700.00	700.00	700.00	700.00	1.44	1.44	89.95	0.01	15.96	15.96	13.07	2.89	5.525	
800.00	800.00	800.00	800.00	1.67	1.67	89.95	0.01	15.96	15.96	12.62	3.34	4.781	
900.00	900.00	900.00	900.00	1.89	1.89	89.95	0.01	15.96	15.96	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	15.96	15.96	11.72	4.24	3.766 CC	
1,000.35	1,000.35	1,000.35	1,000.35	2.12	2.12	-146.15	0.01	15.96	15.96	11.72	4.24	3.765	
1,100.00	1,099.98	1,100.38	1,100.36	2.32	2.34	-153.68	1.16	14.62	16.22	11.56	4.66	3.482 ES, SF	
1,200.00	1,199.84	1,200.49	1,200.32	2.51	2.56	-173.40	4.59	10.64	18.50	13.45	5.05	3.661	
1,300.00	1,299.45	1,300.06	1,299.51	2.72	2.79	165.77	10.26	4.06	25.57	20.10	5.47	4.677	
1,400.00	1,398.70	1,398.83	1,397.54	2.95	3.03	151.82	18.11	-5.04	38.23	32.32	5.91	6.470	
1,500.00	1,497.47	1,496.56	1,494.08	3.21	3.30	143.62	28.04	-16.56	55.95	49.56	6.39	8.755	
1,600.00	1,595.62	1,593.02	1,588.80	3.52	3.60	138.66	39.94	-30.37	78.20	71.28	6.92	11.302	
1,614.13	1,609.43	1,606.53	1,602.01	3.57	3.65	138.12	41.77	-32.50	81.69	74.69	7.00	11.673	
1,700.00	1,693.34	1,688.19	1,681.59	3.87	3.94	135.26	53.71	-46.36	103.79	96.26	7.52	13.796	
1,800.00	1,791.05	1,784.11	1,774.66	4.24	4.32	132.43	68.88	-63.96	130.64	122.46	8.18	15.974	
1,900.00	1,888.76	1,880.27	1,867.95	4.63	4.72	130.55	84.11	-81.63	157.71	148.85	8.86	17.796	
2,000.00	1,986.47	1,976.43	1,961.23	5.04	5.14	129.22	99.33	-99.29	184.89	175.32	9.57	19.325	
2,100.00	2,084.19	2,072.59	2,054.52	5.45	5.57	128.23	114.55	-116.96	212.14	201.85	10.29	20.617	
2,200.00	2,181.90	2,168.75	2,147.81	5.88	6.00	127.47	129.78	-134.63	239.43	228.40	11.03	21.716	
2,300.00	2,279.61	2,264.91	2,241.10	6.31	6.45	126.86	145.00	-152.29	266.75	254.98	11.77	22.658	
2,400.00	2,377.32	2,361.07	2,334.39	6.74	6.91	126.37	160.23	-169.96	294.10	281.57	12.53	23.472	
2,500.00	2,475.03	2,457.23	2,427.68	7.18	7.36	125.96	175.45	-187.63	321.46	308.17	13.29	24.181	
2,600.00	2,572.74	2,553.39	2,520.97	7.63	7.83	125.61	190.68	-205.29	348.84	334.78	14.07	24.801	
2,700.00	2,670.45	2,649.55	2,614.26	8.08	8.29	125.32	205.90	-222.96	376.23	361.39	14.84	25.349	
2,800.00	2,768.16	2,745.71	2,707.55	8.53	8.76	125.06	221.13	-240.63	403.62	388.00	15.62	25.834	
2,900.00	2,865.87	2,841.87	2,800.83	8.98	9.24	124.84	236.35	-258.30	431.02	414.62	16.41	26.268	
3,000.00	2,963.59	2,938.03	2,894.12	9.43	9.71	124.64	251.58	-275.96	458.43	441.23	17.20	26.656	
3,100.00	3,061.30	3,034.19	2,987.41	9.89	10.19	124.47	266.80	-293.63	485.84	467.85	17.99	27.006	
3,200.00	3,159.01	3,130.35	3,080.70	10.34	10.67	124.31	282.02	-311.30	513.26	494.47	18.78	27.323	
3,300.00	3,256.72	3,226.51	3,173.99	10.80	11.15	124.17	297.25	-328.96	540.68	521.09	19.58	27.612	
3,400.00	3,354.43	3,322.67	3,267.28	11.26	11.63	124.05	312.47	-346.63	568.10	547.72	20.38	27.874	
3,500.00	3,452.14	3,418.83	3,360.57	11.72	12.11	123.93	327.70	-364.30	595.52	574.34	21.18	28.115	
3,600.00	3,549.85	3,514.99	3,453.86	12.18	12.59	123.83	342.92	-381.96	622.94	600.96	21.98	28.336	
3,700.00	3,647.56	3,611.15	3,547.15	12.65	13.07	123.73	358.15	-399.63	650.37	627.58	22.79	28.540	
3,800.00	3,745.27	3,707.31	3,640.43	13.11	13.56	123.64	373.37	-417.30	677.80	654.21	23.59	28.729	
3,900.00	3,842.98	3,803.47	3,733.72	13.57	14.04	123.56	388.60	-434.96	705.23	680.83	24.40	28.904	
4,000.00	3,940.70	3,899.63	3,827.01	14.04	14.53	123.49	403.82	-452.63	732.66	707.45	25.21	29.066	
4,100.00	4,038.41	3,995.79	3,920.30	14.50	15.02	123.42	419.05	-470.30	760.09	734.08	26.02	29.217	
4,200.00	4,136.12	4,091.95	4,013.59	14.97	15.50	123.35	434.27	-487.96	787.52	760.70	26.82	29.358	
4,300.00	4,233.83	4,188.11	4,106.88	15.43	15.99	123.29	449.50	-505.63	814.96	787.32	27.63	29.490	
4,400.00	4,331.54	4,284.27	4,200.17	15.90	16.48	123.23	464.72	-523.30	842.39	813.95	28.45	29.614	
4,500.00	4,429.25	4,380.43	4,293.46	16.36	16.97	123.18	479.94	-540.97	869.83	840.57	29.26	29.730	
4,600.00	4,526.96	4,476.59	4,386.75	16.83	17.45	123.13	495.17	-558.63	897.26	867.20	30.07	29.840	
4,700.00	4,624.67	4,572.75	4,480.03	17.30	17.94	123.09	510.39	-576.30	924.70	893.82	30.88	29.943	
4,800.00	4,722.38	4,668.91	4,573.32	17.76	18.43	123.04	525.62	-593.97	952.14	920.44	31.70	30.040	
4,900.00	4,820.10	4,765.07	4,666.61	18.23	18.92	123.00	540.84	-611.63	979.58	947.07	32.51	30.132	

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 25-13
Project:	COLORADO NORTHERN ZONE - 83	TVD Reference:	WELL @ 4932.00ft (Original Well Elev)
Reference Site:	Riverbend 7-13 PAD	MD Reference:	WELL @ 4932.00ft (Original Well Elev)
Site Error:	0.00ft	North Reference:	True
Reference Well:	P_Riverbend 25-13	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00ft	Output errors are at	2.00 sigma
Reference Wellbore	P_Riverbend 25-13	Database:	EDM 2003.21 Single User Db
Reference Design:	PLAN #1 6-21-10 RHS	Offset TVD Reference:	Offset Datum

Offset Design Riverbend 7-13 PAD - P_Riverbend 21-13 - P_Riverbend 21-13 - PLAN #1 6-21-10 RHS												Offset Site Error:	0.00 ft
Survey Program: 0-MWD												Offset Well Error:	0.00 ft
Reference	Offset	Semi Major Axis		Distance									
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning
5,000.00	4,917.81	4,861.23	4,759.90	18.70	19.41	122.96	556.07	-629.30	1,007.01	973.69	33.32	30.220	
5,100.00	5,015.52	4,957.39	4,853.19	19.16	19.90	122.92	571.29	-646.97	1,034.45	1,000.31	34.14	30.302	
5,200.00	5,113.23	5,053.55	4,946.48	19.63	20.39	122.89	586.52	-664.63	1,061.89	1,026.94	34.95	30.381	
5,300.00	5,210.94	5,149.71	5,039.77	20.10	20.88	122.85	601.74	-682.30	1,089.33	1,053.56	35.77	30.455	
5,400.00	5,308.65	5,245.87	5,133.06	20.57	21.37	122.82	616.97	-699.97	1,116.77	1,080.19	36.58	30.526	
5,500.00	5,406.36	5,342.03	5,226.35	21.04	21.86	122.79	632.19	-717.63	1,144.21	1,106.81	37.40	30.594	
5,600.00	5,504.07	5,438.19	5,319.63	21.50	22.35	122.76	647.41	-735.30	1,171.65	1,133.43	38.22	30.658	
5,622.00	5,525.57	5,459.34	5,340.16	21.61	22.46	122.76	650.76	-739.19	1,177.69	1,139.29	38.40	30.672	
5,700.00	5,602.00	5,534.49	5,413.06	21.91	22.84	123.05	662.66	-752.99	1,198.54	1,159.47	39.06	30.681	
5,800.00	5,700.56	5,661.69	5,536.94	22.20	23.36	123.27	681.47	-774.82	1,222.65	1,182.80	39.85	30.679	
5,900.00	5,799.65	5,798.07	5,671.04	22.46	23.80	123.43	697.67	-793.61	1,241.95	1,201.41	40.54	30.636	
6,000.00	5,899.14	5,936.51	5,808.20	22.67	24.16	123.55	709.82	-807.72	1,256.27	1,215.15	41.12	30.552	
6,100.00	5,998.93	6,076.41	5,947.56	22.84	24.45	123.64	717.70	-816.87	1,265.52	1,223.92	41.60	30.423	
6,200.00	6,098.88	6,217.14	6,088.18	22.98	24.65	123.68	721.14	-820.85	1,269.64	1,227.67	41.97	30.252	
6,236.12	6,135.00	6,263.95	6,135.00	23.02	24.70	-0.20	721.29	-821.03	1,269.88	1,227.80	42.07	30.181	
6,300.00	6,198.88	6,327.83	6,198.88	23.10	24.78	-0.20	721.29	-821.03	1,269.88	1,227.64	42.24	30.063	
6,400.00	6,298.88	6,427.83	6,298.88	23.21	24.90	-0.20	721.29	-821.03	1,269.88	1,227.37	42.51	29.872	
6,500.00	6,398.88	6,527.83	6,398.88	23.33	25.02	-0.20	721.29	-821.03	1,269.88	1,227.09	42.78	29.682	
6,600.00	6,498.88	6,627.83	6,498.88	23.45	25.14	-0.20	721.29	-821.03	1,269.88	1,226.82	43.06	29.492	
6,700.00	6,598.88	6,727.83	6,598.88	23.56	25.27	-0.20	721.29	-821.03	1,269.88	1,226.54	43.34	29.302	
6,800.00	6,698.88	6,827.83	6,698.88	23.69	25.39	-0.20	721.29	-821.03	1,269.88	1,226.26	43.62	29.113	
6,900.00	6,798.88	6,927.83	6,798.88	23.81	25.52	-0.20	721.29	-821.03	1,269.88	1,225.97	43.90	28.924	
7,000.00	6,898.88	7,027.83	6,898.88	23.93	25.65	-0.20	721.29	-821.03	1,269.88	1,225.69	44.19	28.737	
7,100.00	6,998.88	7,127.83	6,998.88	24.06	25.78	-0.20	721.29	-821.03	1,269.88	1,225.40	44.48	28.549	
7,200.00	7,098.88	7,227.83	7,098.88	24.19	25.91	-0.20	721.29	-821.03	1,269.88	1,225.10	44.77	28.363	
7,300.00	7,198.88	7,327.83	7,198.88	24.32	26.04	-0.20	721.29	-821.03	1,269.88	1,224.81	45.07	28.177	
7,400.00	7,298.88	7,427.83	7,298.88	24.45	26.18	-0.20	721.29	-821.03	1,269.88	1,224.51	45.36	27.993	
7,500.00	7,398.88	7,527.83	7,398.88	24.58	26.31	-0.20	721.29	-821.03	1,269.88	1,224.21	45.66	27.809	
7,600.00	7,498.88	7,627.83	7,498.88	24.71	26.45	-0.20	721.29	-821.03	1,269.88	1,223.91	45.97	27.626	
7,700.00	7,598.88	7,727.83	7,598.88	24.84	26.59	-0.20	721.29	-821.03	1,269.88	1,223.60	46.27	27.444	
7,800.00	7,698.88	7,827.83	7,698.88	24.98	26.72	-0.20	721.29	-821.03	1,269.88	1,223.30	46.58	27.263	
7,900.00	7,798.88	7,927.83	7,798.88	25.12	26.86	-0.20	721.29	-821.03	1,269.88	1,222.99	46.89	27.083	
8,000.00	7,898.88	8,027.83	7,898.88	25.25	27.01	-0.20	721.29	-821.03	1,269.88	1,222.68	47.20	26.904	
8,100.00	7,998.88	8,127.83	7,998.88	25.39	27.15	-0.20	721.29	-821.03	1,269.88	1,222.36	47.51	26.726	
8,131.31	8,030.19	8,159.14	8,030.19	25.44	27.19	-0.20	721.29	-821.03	1,269.88	1,222.26	47.61	26.671	
8,153.12	8,052.00	8,170.95	8,042.00	25.47	27.21	-0.20	721.29	-821.03	1,269.92	1,222.25	47.67	26.642	

Company:	US ROCKIES REGION PLANNING	Local Co-ordinate Reference:	Well P_Riverbend 25-13
Project:	COLORADO NORTHERN ZONE - 83	TVD Reference:	WELL @ 4932.00ft (Original Well Elev)
Reference Site:	Riverbend 7-13 PAD	MD Reference:	WELL @ 4932.00ft (Original Well Elev)
Site Error:	0.00ft	North Reference:	True
Reference Well:	P_Riverbend 25-13	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00ft	Output errors are at	2.00 sigma
Reference Wellbore	P_Riverbend 25-13	Database:	EDM 2003.21 Single User Db
Reference Design:	PLAN #1 6-21-10 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	90.00	0.00	32.19	32.19				
100.00	100.00	100.00	100.00	0.10	0.10	90.00	0.00	32.19	32.19	32.00	0.19	168.504	
200.00	200.00	200.00	200.00	0.32	0.32	90.00	0.00	32.19	32.19	31.55	0.64	50.255	
300.00	300.00	300.00	300.00	0.55	0.55	90.00	0.00	32.19	32.19	31.10	1.09	29.532	
400.00	400.00	400.00	400.00	0.77	0.77	90.00	0.00	32.19	32.19	30.65	1.54	20.909	
500.00	500.00	500.00	500.00	0.99	0.99	90.00	0.00	32.19	32.19	30.20	1.99	16.184	
600.00	600.00	600.00	600.00	1.22	1.22	90.00	0.00	32.19	32.19	29.75	2.44	13.201	
700.00	700.00	700.00	700.00	1.44	1.44	90.00	0.00	32.19	32.19	29.30	2.89	11.146	
800.00	800.00	800.00	800.00	1.67	1.67	90.00	0.00	32.19	32.19	28.86	3.34	9.645	
900.00	900.00	900.00	900.00	1.89	1.89	90.00	0.00	32.19	32.19	28.41	3.79	8.500	
1,000.00	1,000.00	1,000.00	1,000.00	2.12	2.12	90.00	0.00	32.19	32.19	27.96	4.24	7.598 CC, ES	
1,100.00	1,099.98	1,099.25	1,099.23	2.32	2.32	-145.43	-1.36	33.25	34.71	30.07	4.63	7.488 SF	
1,200.00	1,199.84	1,198.12	1,197.96	2.51	2.50	-143.88	-5.41	36.39	42.26	37.26	4.99	8.461	
1,300.00	1,299.45	1,296.23	1,295.70	2.72	2.69	-142.21	-12.08	41.58	54.84	49.47	5.37	10.214	
1,400.00	1,398.70	1,393.22	1,391.99	2.95	2.91	-140.80	-21.28	48.72	72.40	66.64	5.77	12.553	
1,500.00	1,497.47	1,490.40	1,488.16	3.21	3.15	-140.12	-32.31	57.29	94.22	88.02	6.20	15.198	
1,600.00	1,595.62	1,587.34	1,584.08	3.52	3.42	-140.63	-43.38	65.89	118.72	112.06	6.66	17.824	
1,614.13	1,609.43	1,600.97	1,597.57	3.57	3.45	-140.76	-44.94	67.10	122.40	115.67	6.73	18.193	
1,700.00	1,693.34	1,683.82	1,679.54	3.87	3.69	-141.69	-54.40	74.45	144.91	137.74	7.17	20.207	
1,800.00	1,791.05	1,780.29	1,775.00	4.24	3.98	-142.47	-65.42	83.01	171.16	163.45	7.71	22.208	
1,900.00	1,888.76	1,876.76	1,870.46	4.63	4.27	-143.05	-76.44	91.57	197.43	189.17	8.26	23.902	
2,000.00	1,986.47	1,973.23	1,965.91	5.04	4.58	-143.48	-87.46	100.13	223.71	214.88	8.83	25.345	
2,100.00	2,084.19	2,069.71	2,061.37	5.45	4.88	-143.83	-98.48	108.69	250.00	240.60	9.40	26.583	
2,200.00	2,181.90	2,166.18	2,156.83	5.88	5.20	-144.11	-109.50	117.25	276.30	266.31	9.99	27.654	
2,300.00	2,279.61	2,262.65	2,252.29	6.31	5.51	-144.34	-120.52	125.81	302.60	292.02	10.59	28.586	
2,400.00	2,377.32	2,359.12	2,347.74	6.74	5.84	-144.53	-131.54	134.37	328.91	317.73	11.19	29.403	
2,500.00	2,475.03	2,455.59	2,443.20	7.18	6.16	-144.70	-142.56	142.93	355.22	343.43	11.79	30.125	
2,600.00	2,572.74	2,552.06	2,538.66	7.63	6.49	-144.84	-153.58	151.49	381.54	369.14	12.40	30.765	
2,700.00	2,670.45	2,648.54	2,634.12	8.08	6.81	-144.97	-164.60	160.05	407.85	394.84	13.01	31.337	
2,800.00	2,768.16	2,745.01	2,729.57	8.53	7.14	-145.08	-175.62	168.61	434.17	420.54	13.63	31.851	
2,900.00	2,865.87	2,841.48	2,825.03	8.98	7.48	-145.17	-186.64	177.17	460.49	446.24	14.25	32.315	
3,000.00	2,963.59	2,937.95	2,920.49	9.43	7.81	-145.26	-197.66	185.73	486.81	471.94	14.87	32.736	
3,100.00	3,061.30	3,034.42	3,015.94	9.89	8.14	-145.34	-208.68	194.29	513.13	497.64	15.49	33.119	
3,200.00	3,159.01	3,130.90	3,111.40	10.34	8.48	-145.41	-219.70	202.85	539.45	523.33	16.12	33.470	
3,300.00	3,256.72	3,227.37	3,206.86	10.80	8.81	-145.47	-230.72	211.41	565.77	549.03	16.74	33.792	
3,400.00	3,354.43	3,323.84	3,302.32	11.26	9.15	-145.53	-241.74	219.97	592.09	574.73	17.37	34.089	
3,500.00	3,452.14	3,420.31	3,397.77	11.72	9.49	-145.58	-252.76	228.53	618.42	600.42	18.00	34.363	
3,600.00	3,549.85	3,516.78	3,493.23	12.18	9.83	-145.63	-263.78	237.09	644.74	626.12	18.62	34.618	
3,700.00	3,647.56	3,613.25	3,588.69	12.65	10.17	-145.67	-274.80	245.65	671.07	651.81	19.25	34.855	
3,800.00	3,745.27	3,709.73	3,684.15	13.11	10.51	-145.71	-285.82	254.21	697.39	677.51	19.88	35.072	
3,900.00	3,842.98	3,806.20	3,779.60	13.57	10.85	-145.75	-296.84	262.77	723.71	703.19	20.52	35.265	
4,000.00	3,940.70	3,902.67	3,875.06	14.04	11.19	-145.79	-307.86	271.33	750.04	728.88	21.16	35.445	
4,100.00	4,038.41	3,999.14	3,970.52	14.50	11.53	-145.82	-318.87	279.89	776.36	754.56	21.80	35.613	
4,200.00	4,136.12	4,095.61	4,065.98	14.97	11.87	-145.85	-329.89	288.45	802.69	780.25	22.44	35.771	
4,300.00	4,233.83	4,192.09	4,161.43	15.43	12.21	-145.88	-340.91	297.01	829.01	805.93	23.08	35.918	
4,400.00	4,331.54	4,288.56	4,256.89	15.90	12.55	-145.91	-351.93	305.57	855.34	831.62	23.72	36.057	
4,500.00	4,429.25	4,385.03	4,352.35	16.36	12.90	-145.93	-362.95	314.13	881.67	857.30	24.36	36.187	
4,600.00	4,526.96	4,481.50	4,447.80	16.83	13.24	-145.96	-373.97	322.69	907.99	882.99	25.01	36.310	
4,700.00	4,624.67	4,577.97	4,543.26	17.30	13.58	-145.98	-384.99	331.24	934.32	908.67	25.65	36.426	
4,800.00	4,722.38	4,674.44	4,638.72	17.76	13.92	-146.00	-396.01	339.80	960.64	934.35	26.29	36.536	
4,900.00	4,820.10	4,770.92	4,734.18	18.23	14.27	-146.02	-407.03	348.36	986.97	960.03	26.94	36.640	
5,000.00	4,917.81	4,867.39	4,829.63	18.70	14.61	-146.04	-418.05	356.92	1,013.30	985.72	27.58	36.738	

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 25-13
Project:	COLORADO NORTHERN ZONE - 83	TVD Reference:	WELL @ 4932.00ft (Original Well Elev)
Reference Site:	Riverbend 7-13 PAD	MD Reference:	WELL @ 4932.00ft (Original Well Elev)
Site Error:	0.00ft	North Reference:	True
Reference Well:	P_Riverbend 25-13	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00ft	Output errors are at	2.00 sigma
Reference Wellbore	P_Riverbend 25-13	Database:	EDM 2003.21 Single User Db
Reference Design:	PLAN #1 6-21-10 RHS	Offset TVD Reference:	Offset Datum

Offset Design Riverbend 7-13 PAD - P_Riverbend 24-13 - P_Riverbend 24-13 - PLAN #1 6-21-10 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	5,015.52	4,963.86	4,925.09	19.16	14.96	-146.06	-429.07	365.48	1,039.62	1,011.40	28.23	36.832	
5,200.00	5,113.23	5,060.33	5,020.55	19.63	15.30	-146.08	-440.09	374.04	1,065.95	1,037.08	28.87	36.921	
5,300.00	5,210.94	5,156.80	5,116.01	20.10	15.64	-146.09	-451.11	382.60	1,092.28	1,062.76	29.52	37.005	
5,400.00	5,308.65	5,253.27	5,211.46	20.57	15.99	-146.11	-462.13	391.16	1,118.60	1,088.44	30.16	37.086	
5,500.00	5,406.36	5,349.75	5,306.92	21.04	16.33	-146.12	-473.15	399.72	1,144.93	1,114.12	30.81	37.163	
5,600.00	5,504.07	5,446.22	5,402.38	21.50	16.68	-146.14	-484.17	408.28	1,171.26	1,139.80	31.45	37.236	
5,622.00	5,525.57	5,467.44	5,423.38	21.61	16.75	-146.14	-486.59	410.17	1,177.05	1,145.45	31.60	37.252	
5,700.00	5,602.00	5,542.91	5,498.06	21.91	17.02	-146.35	-495.21	416.86	1,196.73	1,164.60	32.14	37.239	
5,800.00	5,700.56	5,640.27	5,594.39	22.20	17.37	-146.50	-506.34	425.50	1,219.46	1,186.70	32.76	37.223	
5,900.00	5,799.65	5,738.18	5,691.27	22.46	17.72	-146.53	-517.52	434.19	1,239.35	1,205.99	33.35	37.157	
6,000.00	5,899.14	5,868.80	5,820.86	22.67	18.07	-146.44	-530.43	444.22	1,255.25	1,221.33	33.92	37.009	
6,100.00	5,998.93	6,004.59	5,956.20	22.84	18.34	-146.38	-538.91	450.81	1,265.46	1,231.09	34.38	36.812	
6,200.00	6,098.88	6,141.38	6,092.91	22.98	18.56	-146.38	-542.32	453.46	1,269.89	1,235.15	34.75	36.548	
6,236.12	6,135.00	6,183.47	6,135.00	23.02	18.62	89.72	-542.39	453.51	1,270.12	1,235.26	34.86	36.438	
6,300.00	6,198.88	6,247.34	6,198.88	23.10	18.71	89.72	-542.39	453.51	1,270.12	1,235.07	35.05	36.242	
6,400.00	6,298.88	6,347.34	6,298.88	23.21	18.85	89.72	-542.39	453.51	1,270.12	1,234.79	35.33	35.947	
6,500.00	6,398.88	6,447.34	6,398.88	23.33	18.98	89.72	-542.39	453.51	1,270.12	1,234.50	35.62	35.654	
6,600.00	6,498.88	6,547.34	6,498.88	23.45	19.12	89.72	-542.39	453.51	1,270.12	1,234.20	35.92	35.362	
6,700.00	6,598.88	6,647.34	6,598.88	23.56	19.26	89.72	-542.39	453.51	1,270.12	1,233.90	36.21	35.072	
6,800.00	6,698.88	6,747.34	6,698.88	23.69	19.40	89.72	-542.39	453.51	1,270.12	1,233.60	36.51	34.784	
6,900.00	6,798.88	6,847.34	6,798.88	23.81	19.55	89.72	-542.39	453.51	1,270.12	1,233.30	36.82	34.497	
7,000.00	6,898.88	6,947.34	6,898.88	23.93	19.69	89.72	-542.39	453.51	1,270.12	1,232.99	37.12	34.213	
7,100.00	6,998.88	7,047.34	6,998.88	24.06	19.84	89.72	-542.39	453.51	1,270.12	1,232.69	37.43	33.930	
7,200.00	7,098.88	7,147.34	7,098.88	24.19	19.99	89.72	-542.39	453.51	1,270.12	1,232.37	37.75	33.650	
7,300.00	7,198.88	7,247.34	7,198.88	24.32	20.14	89.72	-542.39	453.51	1,270.12	1,232.06	38.06	33.371	
7,400.00	7,298.88	7,347.34	7,298.88	24.45	20.29	89.72	-542.39	453.51	1,270.12	1,231.74	38.38	33.095	
7,500.00	7,398.88	7,447.34	7,398.88	24.58	20.44	89.72	-542.39	453.51	1,270.12	1,231.42	38.70	32.822	
7,600.00	7,498.88	7,547.34	7,498.88	24.71	20.60	89.72	-542.39	453.51	1,270.12	1,231.10	39.02	32.550	
7,700.00	7,598.88	7,647.34	7,598.88	24.84	20.75	89.72	-542.39	453.51	1,270.12	1,230.77	39.35	32.281	
7,800.00	7,698.88	7,747.34	7,698.88	24.98	20.91	89.72	-542.39	453.51	1,270.12	1,230.45	39.67	32.015	
7,900.00	7,798.88	7,847.34	7,798.88	25.12	21.06	89.72	-542.39	453.51	1,270.12	1,230.12	40.00	31.751	
8,000.00	7,898.88	7,947.34	7,898.88	25.25	21.22	89.72	-542.39	453.51	1,270.12	1,229.78	40.33	31.489	
8,100.00	7,998.88	8,047.34	7,998.88	25.39	21.38	89.72	-542.39	453.51	1,270.12	1,229.45	40.67	31.231	
8,124.72	8,023.60	8,072.07	8,023.60	25.43	21.42	89.72	-542.39	453.51	1,270.12	1,229.37	40.75	31.167	
8,153.12	8,052.00	8,080.47	8,032.00	25.47	21.44	89.72	-542.39	453.51	1,270.28	1,229.46	40.81	31.124	

Company:	US ROCKIES REGION PLANNING	Local Co-ordinate Reference:	Well P_Riverbend 25-13
Project:	COLORADO NORTHERN ZONE - 83	TVD Reference:	WELL @ 4932.00ft (Original Well Elev)
Reference Site:	Riverbend 7-13 PAD	MD Reference:	WELL @ 4932.00ft (Original Well Elev)
Site Error:	0.00ft	North Reference:	True
Reference Well:	P_Riverbend 25-13	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00ft	Output errors are at	2.00 sigma
Reference Wellbore	P_Riverbend 25-13	Database:	EDM 2003.21 Single User Db
Reference Design:	PLAN #1 6-21-10 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	89.67	0.36	64.11	64.11				
100.00	100.00	100.00	100.00	0.10	0.10	89.67	0.36	64.11	64.11	63.92	0.19	335.547	
200.00	200.00	200.00	200.00	0.32	0.32	89.67	0.36	64.11	64.11	63.47	0.64	100.076	
300.00	300.00	300.00	300.00	0.55	0.55	89.67	0.36	64.11	64.11	63.02	1.09	58.807 CC, ES	
400.00	400.00	397.77	397.76	0.77	0.75	89.63	0.42	65.77	65.81	64.29	1.52	43.189	
500.00	500.00	495.32	495.17	0.99	0.97	89.52	0.59	70.76	70.92	68.97	1.96	36.201	
600.00	600.00	592.42	591.91	1.22	1.20	89.37	0.87	79.01	79.43	77.01	2.41	32.920	
700.00	700.00	688.84	687.65	1.44	1.47	89.21	1.25	90.44	91.29	88.40	2.89	31.596	
800.00	800.00	784.39	782.09	1.67	1.77	89.05	1.74	104.94	106.47	103.08	3.39	31.371 SF	
900.00	900.00	878.86	874.93	1.89	2.11	88.91	2.32	122.36	124.92	120.99	3.93	31.781	
1,000.00	1,000.00	972.08	965.93	2.12	2.50	88.79	3.00	142.53	146.58	142.08	4.50	32.558	
1,100.00	1,099.98	1,063.48	1,054.47	2.32	2.94	-147.42	3.76	165.18	172.80	168.20	4.60	37.586	
1,200.00	1,199.84	1,152.30	1,139.79	2.51	3.41	-147.87	4.59	189.89	204.86	199.86	5.00	40.980	
1,300.00	1,299.45	1,238.12	1,221.45	2.72	3.91	-148.45	5.48	216.25	242.61	237.21	5.40	44.929	
1,400.00	1,398.70	1,320.57	1,299.12	2.95	4.44	-149.03	6.40	243.88	285.83	280.03	5.80	49.296	
1,500.00	1,497.47	1,400.00	1,373.17	3.21	5.00	-149.55	7.37	272.59	334.30	328.11	6.20	53.953	
1,600.00	1,595.62	1,474.21	1,441.61	3.52	5.57	-149.94	8.33	301.26	387.76	381.17	6.59	58.836	
1,614.13	1,609.43	1,484.46	1,451.00	3.57	5.65	-149.99	8.47	305.36	395.70	389.06	6.65	59.538	
1,700.00	1,693.34	1,545.62	1,506.74	3.87	6.14	-150.76	9.32	330.52	445.03	438.00	7.03	63.278	
1,800.00	1,791.05	1,625.87	1,579.48	4.24	6.82	-151.55	10.45	364.41	503.52	496.00	7.52	66.930	
1,900.00	1,888.76	1,706.80	1,652.82	4.63	7.51	-152.18	11.60	398.59	562.07	554.04	8.03	70.024	
2,000.00	1,986.47	1,787.73	1,726.17	5.04	8.21	-152.69	12.75	432.78	620.65	612.11	8.54	72.666	
2,100.00	2,084.19	1,868.66	1,799.52	5.45	8.91	-153.11	13.90	466.96	679.27	670.20	9.06	74.941	
2,200.00	2,181.90	1,949.59	1,872.86	5.88	9.62	-153.47	15.05	501.14	737.90	728.30	9.59	76.917	
2,300.00	2,279.61	2,030.52	1,946.21	6.31	10.33	-153.78	16.20	535.32	796.54	786.42	10.13	78.643	
2,400.00	2,377.32	2,111.45	2,019.56	6.74	11.04	-154.04	17.35	569.51	855.20	844.54	10.67	80.161	
2,500.00	2,475.03	2,192.38	2,092.90	7.18	11.75	-154.27	18.49	603.69	913.87	902.66	11.21	81.502	
2,600.00	2,572.74	2,273.31	2,166.25	7.63	12.46	-154.47	19.64	637.87	972.55	960.79	11.76	82.695	
2,700.00	2,670.45	2,354.24	2,239.60	8.08	13.17	-154.65	20.79	672.06	1,031.24	1,018.93	12.31	83.761	
2,800.00	2,768.16	2,435.17	2,312.94	8.53	13.89	-154.81	21.94	706.24	1,089.93	1,077.07	12.87	84.719	
2,900.00	2,865.87	2,516.09	2,386.29	8.98	14.60	-154.95	23.09	740.42	1,148.63	1,135.21	13.42	85.583	
3,000.00	2,963.59	2,597.02	2,459.64	9.43	15.32	-155.08	24.24	774.60	1,207.33	1,193.35	13.98	86.367	
3,100.00	3,061.30	2,677.95	2,532.98	9.89	16.04	-155.20	25.39	808.79	1,266.03	1,251.50	14.54	87.079	
3,200.00	3,159.01	2,758.88	2,606.33	10.34	16.75	-155.30	26.53	842.97	1,324.74	1,309.64	15.10	87.729	
3,300.00	3,256.72	2,839.81	2,679.68	10.80	17.47	-155.40	27.68	877.15	1,383.45	1,367.79	15.66	88.325	
3,400.00	3,354.43	2,920.74	2,753.03	11.26	18.19	-155.49	28.83	911.34	1,442.17	1,425.94	16.23	88.872	
3,500.00	3,452.14	3,001.67	2,826.37	11.72	18.91	-155.58	29.98	945.52	1,500.88	1,484.09	16.79	89.377	
3,600.00	3,549.85	3,082.60	2,899.72	12.18	19.63	-155.65	31.13	979.70	1,559.60	1,542.24	17.36	89.844	
3,700.00	3,647.56	3,163.53	2,973.07	12.65	20.34	-155.72	32.28	1,013.88	1,618.32	1,600.39	17.93	90.276	
3,800.00	3,745.27	3,244.46	3,046.41	13.11	21.06	-155.79	33.43	1,048.07	1,677.04	1,658.54	18.49	90.678	
3,900.00	3,842.98	3,325.39	3,119.76	13.57	21.78	-155.85	34.57	1,082.25	1,735.76	1,716.70	19.06	91.052	
4,000.00	3,940.70	3,406.32	3,193.11	14.04	22.50	-155.91	35.72	1,116.43	1,794.48	1,774.85	19.63	91.402	
4,100.00	4,038.41	3,487.25	3,266.45	14.50	23.22	-155.96	36.87	1,150.62	1,853.21	1,833.00	20.20	91.729	
4,200.00	4,136.12	3,568.18	3,339.80	14.97	23.94	-156.01	38.02	1,184.80	1,911.93	1,891.16	20.77	92.035	
4,300.00	4,233.83	3,649.10	3,413.15	15.43	24.66	-156.06	39.17	1,218.98	1,970.66	1,949.31	21.35	92.322	
4,400.00	4,331.54	3,730.03	3,486.49	15.90	25.38	-156.10	40.32	1,253.17	2,029.38	2,007.47	21.92	92.593	
4,500.00	4,429.25	3,810.96	3,559.84	16.36	26.11	-156.15	41.47	1,287.35	2,088.11	2,065.62	22.49	92.847	
4,600.00	4,526.96	3,891.89	3,633.19	16.83	26.83	-156.19	42.61	1,321.53	2,146.84	2,123.78	23.06	93.088	
4,700.00	4,624.67	3,972.82	3,706.53	17.30	27.55	-156.23	43.76	1,355.71	2,205.57	2,181.93	23.64	93.315	
4,800.00	4,722.38	4,053.75	3,779.88	17.76	28.27	-156.26	44.91	1,389.90	2,264.30	2,240.09	24.21	93.530	
4,900.00	4,820.10	4,134.68	3,853.23	18.23	28.99	-156.30	46.06	1,424.08	2,323.03	2,298.25	24.78	93.734	
5,000.00	4,917.81	4,215.61	3,926.58	18.70	29.71	-156.33	47.21	1,458.26	2,381.76	2,356.40	25.36	93.927	

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 25-13
Project:	COLORADO NORTHERN ZONE - 83	TVD Reference:	WELL @ 4932.00ft (Original Well Elev)
Reference Site:	Riverbend 7-13 PAD	MD Reference:	WELL @ 4932.00ft (Original Well Elev)
Site Error:	0.00ft	North Reference:	True
Reference Well:	P_Riverbend 25-13	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00ft	Output errors are at	2.00 sigma
Reference Wellbore	P_Riverbend 25-13	Database:	EDM 2003.21 Single User Db
Reference Design:	PLAN #1 6-21-10 RHS	Offset TVD Reference:	Offset Datum

Offset Design Riverbend 7-13 PAD - P_Riverbend 5-18 - P_Riverbend 5-1 - PLAN #1 6-21-10 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	5,015.52	4,296.54	3,999.92	19.16	30.43	-156.36	48.36	1,492.45	2,440.49	2,414.56	25.93	94.111	
5,200.00	5,113.23	4,377.47	4,073.27	19.63	31.15	-156.39	49.51	1,526.63	2,499.22	2,472.72	26.51	94.286	
5,300.00	5,210.94	4,458.40	4,146.62	20.10	31.87	-156.42	50.65	1,560.81	2,557.95	2,530.87	27.08	94.453	
5,400.00	5,308.65	4,539.33	4,219.96	20.57	32.60	-156.44	51.80	1,594.99	2,616.69	2,589.03	27.66	94.611	
5,500.00	5,406.36	4,620.26	4,293.31	21.04	33.32	-156.47	52.95	1,629.18	2,675.42	2,647.19	28.23	94.763	
5,600.00	5,504.07	4,701.19	4,366.66	21.50	34.04	-156.49	54.10	1,663.36	2,734.15	2,705.34	28.81	94.908	
5,622.00	5,525.57	4,718.99	4,382.79	21.61	34.20	-156.50	54.35	1,670.88	2,747.07	2,718.14	28.94	94.939	
5,700.00	5,602.00	4,782.68	4,440.52	21.91	34.77	-156.94	55.26	1,697.78	2,792.09	2,762.48	29.61	94.300	
5,800.00	5,700.56	4,865.95	4,515.99	22.20	35.51	-157.44	56.44	1,732.96	2,847.45	2,817.03	30.42	93.608	
5,900.00	5,799.65	4,950.94	4,593.01	22.46	36.27	-157.86	57.65	1,768.85	2,900.09	2,868.89	31.20	92.948	
6,000.00	5,899.14	5,037.54	4,671.50	22.67	37.04	-158.21	58.87	1,805.43	2,949.97	2,918.02	31.95	92.329	
6,100.00	5,998.93	5,125.65	4,751.35	22.84	37.83	-158.50	60.12	1,842.64	2,997.01	2,964.35	32.66	91.756	
6,200.00	6,098.88	5,215.16	4,832.47	22.98	38.62	-158.73	61.39	1,880.45	3,041.17	3,007.84	33.33	91.233	
6,236.12	6,135.00	5,247.81	4,862.07	23.02	38.92	77.31	61.86	1,894.24	3,056.41	3,022.84	33.57	91.045	
6,300.00	6,198.88	5,305.70	4,914.54	23.10	39.43	77.40	62.68	1,918.70	3,083.02	3,049.14	33.88	90.998	
6,400.00	6,298.88	5,396.33	4,996.68	23.21	40.24	77.55	63.97	1,956.98	3,124.68	3,090.33	34.36	90.946	
6,500.00	6,398.88	5,486.97	5,078.81	23.33	41.05	77.69	65.25	1,995.26	3,166.37	3,131.53	34.84	90.894	
6,600.00	6,498.88	5,577.60	5,160.95	23.45	41.86	77.82	66.54	2,033.54	3,208.06	3,172.75	35.31	90.842	
6,700.00	6,598.88	5,668.23	5,243.09	23.56	42.67	77.95	67.82	2,071.82	3,249.78	3,213.98	35.79	90.790	
6,800.00	6,698.88	5,758.86	5,325.23	23.69	43.48	78.08	69.11	2,110.10	3,291.50	3,255.23	36.27	90.738	
6,900.00	6,798.88	5,849.49	5,407.36	23.81	44.29	78.21	70.40	2,148.38	3,333.22	3,296.95	36.75	90.686	
7,000.00	6,898.88	5,940.12	5,489.49	23.93	45.10	78.34	71.69	2,186.66	3,374.94	3,338.67	37.23	90.634	
7,100.00	6,998.88	6,030.75	5,571.62	24.06	45.91	78.47	72.98	2,224.94	3,416.66	3,380.39	37.71	90.582	
7,200.00	7,098.88	6,121.38	5,653.75	24.19	46.72	78.60	74.27	2,263.22	3,458.38	3,422.11	38.19	90.530	
7,300.00	7,198.88	6,212.01	5,735.88	24.32	47.53	78.73	75.56	2,301.50	3,500.10	3,463.83	38.67	90.478	
7,400.00	7,298.88	6,302.64	5,818.01	24.45	48.34	78.86	76.85	2,339.78	3,541.82	3,505.55	39.15	90.426	
7,500.00	7,398.88	6,393.27	5,900.14	24.58	49.15	78.99	78.14	2,378.06	3,583.54	3,547.27	39.63	90.374	
7,600.00	7,498.88	6,483.90	5,982.27	24.71	49.96	79.12	79.43	2,416.34	3,625.26	3,588.99	40.11	90.322	
7,700.00	7,598.88	6,574.53	6,064.40	24.84	50.77	79.25	80.72	2,454.62	3,666.98	3,630.71	40.59	90.270	
7,800.00	7,698.88	6,665.16	6,146.53	24.98	51.58	79.38	82.01	2,492.90	3,708.70	3,672.43	41.07	90.218	
7,900.00	7,798.88	6,755.79	6,228.66	25.12	52.39	79.51	83.30	2,531.18	3,750.42	3,714.15	41.55	90.166	
8,000.00	7,898.88	6,846.42	6,310.79	25.25	53.20	79.64	84.59	2,569.46	3,792.14	3,755.87	42.03	90.114	
8,100.00	7,998.88	6,937.05	6,392.92	25.39	54.01	79.77	85.88	2,607.74	3,833.86	3,797.59	42.51	90.062	
8,119.67	8,018.55	6,957.68	6,413.05	25.42	54.27	79.79	86.14	2,614.25	3,841.37	3,805.10	42.62	90.053	
8,153.12	8,052.00	6,981.13	6,437.50	25.47	54.77	79.84	86.64	2,625.00	3,858.12	3,821.85	42.85	90.039	

Company:	US ROCKIES REGION PLANNING	Local Co-ordinate Reference:	Well P_Riverbend 25-13
Project:	COLORADO NORTHERN ZONE - 83	TVD Reference:	WELL @ 4932.00ft (Original Well Elev)
Reference Site:	Riverbend 7-13 PAD	MD Reference:	WELL @ 4932.00ft (Original Well Elev)
Site Error:	0.00ft	North Reference:	True
Reference Well:	P_Riverbend 25-13	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00ft	Output errors are at	2.00 sigma
Reference Wellbore	P_Riverbend 25-13	Database:	EDM 2003.21 Single User Db
Reference Design:	PLAN #1 6-21-10 RHS	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.00 ft
Riverbend 7-13 PAD - P_Riverbend 6-13 - P_Riverbend 6-13 - PLAN #1 6-21-10 RHS												Offset Well Error:	0.00 ft
Survey Program: 0-MWD													
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	-90.65	-0.36	-31.91	31.91				
100.00	100.00	100.00	100.00	0.10	0.10	-90.65	-0.36	-31.91	31.91	31.72	0.19	167.049	
200.00	200.00	200.00	200.00	0.32	0.32	-90.65	-0.36	-31.91	31.91	31.27	0.64	49.822	
300.00	300.00	300.00	300.00	0.55	0.55	-90.65	-0.36	-31.91	31.91	30.82	1.09	29.277 CC, ES	
400.00	400.00	398.86	398.84	0.77	0.76	-90.50	-0.29	-33.62	33.64	32.11	1.53	22.035	
500.00	500.00	497.49	497.33	0.99	0.97	-90.13	-0.09	-38.71	38.80	36.84	1.97	19.740	
600.00	600.00	595.65	595.12	1.22	1.21	-89.68	0.26	-47.14	47.39	44.97	2.43	19.540	
700.00	700.00	693.11	691.88	1.44	1.48	-89.28	0.74	-58.82	59.38	56.47	2.91	20.392	
800.00	800.00	789.67	787.29	1.67	1.79	-88.95	1.35	-73.63	74.73	71.29	3.43	21.775	
900.00	900.00	885.12	881.06	1.89	2.15	-88.70	2.07	-91.41	93.37	89.38	3.99	23.406	
1,000.00	1,000.00	979.28	972.93	2.12	2.55	-88.51	2.92	-112.00	115.26	110.67	4.59	25.119	
1,100.00	1,099.98	1,072.29	1,062.97	2.32	3.00	35.66	3.87	-135.30	138.95	134.32	4.63	29.980	
1,200.00	1,199.84	1,166.63	1,153.56	2.51	3.50	36.50	4.95	-161.61	162.79	157.71	5.07	32.080	
1,300.00	1,299.45	1,264.13	1,247.03	2.72	4.05	37.77	6.09	-189.31	184.51	178.97	5.54	33.297	
1,400.00	1,398.70	1,362.08	1,340.94	2.95	4.61	39.36	7.23	-217.14	203.69	197.66	6.03	33.764	
1,500.00	1,497.47	1,460.35	1,435.16	3.21	5.17	41.26	8.37	-245.06	220.45	213.90	6.56	33.611	
1,600.00	1,595.62	1,558.84	1,529.57	3.52	5.75	43.46	9.52	-273.04	234.97	227.83	7.13	32.932	
1,614.13	1,609.43	1,572.76	1,542.92	3.57	5.83	43.80	9.68	-276.99	236.85	229.62	7.22	32.799	
1,700.00	1,693.34	1,657.39	1,624.06	3.87	6.33	45.91	10.67	-301.04	248.32	240.54	7.77	31.939	
1,800.00	1,791.05	1,755.95	1,718.55	4.24	6.91	48.15	11.81	-329.04	262.06	253.60	8.46	30.979	
1,900.00	1,888.76	1,854.51	1,813.04	4.63	7.49	50.15	12.96	-357.03	276.16	266.97	9.18	30.076	
2,000.00	1,986.47	1,953.06	1,907.53	5.04	8.08	51.97	14.11	-385.03	290.55	280.62	9.94	29.238	
2,100.00	2,084.19	2,051.62	2,002.02	5.45	8.66	53.61	15.26	-413.03	305.21	294.49	10.72	28.469	
2,200.00	2,181.90	2,150.18	2,096.51	5.88	9.25	55.10	16.40	-441.03	320.10	308.57	11.53	27.768	
2,300.00	2,279.61	2,248.73	2,191.00	6.31	9.84	56.46	17.55	-469.03	335.17	322.82	12.35	27.130	
2,400.00	2,377.32	2,347.29	2,285.48	6.74	10.43	57.70	18.70	-497.03	350.42	337.22	13.20	26.551	
2,500.00	2,475.03	2,445.85	2,379.97	7.18	11.02	58.83	19.85	-525.03	365.81	351.76	14.06	26.027	
2,600.00	2,572.74	2,544.40	2,474.46	7.63	11.61	59.88	21.00	-553.03	381.34	366.41	14.92	25.550	
2,700.00	2,670.45	2,642.96	2,568.95	8.08	12.20	60.84	22.14	-581.03	396.98	381.17	15.80	25.118	
2,800.00	2,768.16	2,741.52	2,663.44	8.53	12.79	61.74	23.29	-609.03	412.72	396.02	16.69	24.724	
2,900.00	2,865.87	2,840.07	2,757.93	8.98	13.38	62.56	24.44	-637.03	428.55	410.96	17.59	24.364	
3,000.00	2,963.59	2,938.63	2,852.42	9.43	13.97	63.33	25.59	-665.03	444.46	425.97	18.49	24.036	
3,100.00	3,061.30	3,037.19	2,946.91	9.89	14.56	64.04	26.73	-693.03	460.45	441.05	19.40	23.735	
3,200.00	3,159.01	3,135.74	3,041.40	10.34	15.16	64.71	27.88	-721.03	476.50	456.18	20.31	23.459	
3,300.00	3,256.72	3,234.30	3,135.88	10.80	15.75	65.33	29.03	-749.02	492.61	471.38	21.23	23.205	
3,400.00	3,354.43	3,332.86	3,230.37	11.26	16.34	65.91	30.18	-777.02	508.77	486.62	22.15	22.970	
3,500.00	3,452.14	3,431.41	3,324.86	11.72	16.93	66.46	31.32	-805.02	524.98	501.91	23.07	22.754	
3,600.00	3,549.85	3,529.97	3,419.35	12.18	17.53	66.98	32.47	-833.02	541.23	517.23	24.00	22.553	
3,700.00	3,647.56	3,628.53	3,513.84	12.65	18.12	67.46	33.62	-861.02	557.53	532.60	24.93	22.366	
3,800.00	3,745.27	3,727.08	3,608.33	13.11	18.71	67.92	34.77	-889.02	573.86	548.00	25.86	22.193	
3,900.00	3,842.98	3,825.64	3,702.82	13.57	19.30	68.35	35.92	-917.02	590.22	563.43	26.79	22.031	
4,000.00	3,940.70	3,924.20	3,797.31	14.04	19.90	68.76	37.06	-945.02	606.62	578.89	27.73	21.879	
4,100.00	4,038.41	4,022.75	3,891.79	14.50	20.49	69.15	38.21	-973.02	623.04	594.38	28.66	21.738	
4,200.00	4,136.12	4,121.31	3,986.28	14.97	21.08	69.51	39.36	-1,001.02	639.49	609.90	29.60	21.605	
4,300.00	4,233.83	4,219.87	4,080.77	15.43	21.68	69.86	40.51	-1,029.02	655.97	625.43	30.54	21.481	
4,400.00	4,331.54	4,318.42	4,175.26	15.90	22.27	70.19	41.65	-1,057.02	672.47	640.99	31.48	21.363	
4,500.00	4,429.25	4,416.98	4,269.75	16.36	22.86	70.51	42.80	-1,085.02	688.99	656.57	32.42	21.253	
4,600.00	4,526.96	4,515.54	4,364.24	16.83	23.46	70.81	43.95	-1,113.02	705.52	672.16	33.36	21.149	
4,700.00	4,624.67	4,614.09	4,458.73	17.30	24.05	71.10	45.10	-1,141.02	722.08	687.78	34.30	21.050	
4,800.00	4,722.38	4,712.65	4,553.22	17.76	24.64	71.37	46.24	-1,169.01	738.65	703.41	35.25	20.957	
4,900.00	4,820.10	4,811.21	4,647.71	18.23	25.24	71.64	47.39	-1,197.01	755.24	719.05	36.19	20.869	
5,000.00	4,917.81	4,909.76	4,742.19	18.70	25.83	71.89	48.54	-1,225.01	771.84	734.71	37.13	20.785	

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 25-13
Project:	COLORADO NORTHERN ZONE - 83	TVD Reference:	WELL @ 4932.00ft (Original Well Elev)
Reference Site:	Riverbend 7-13 PAD	MD Reference:	WELL @ 4932.00ft (Original Well Elev)
Site Error:	0.00ft	North Reference:	True
Reference Well:	P_Riverbend 25-13	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00ft	Output errors are at	2.00 sigma
Reference Wellbore	P_Riverbend 25-13	Database:	EDM 2003.21 Single User Db
Reference Design:	PLAN #1 6-21-10 RHS	Offset TVD Reference:	Offset Datum

Offset Design Riverbend 7-13 PAD - P_Riverbend 6-13 - P_Riverbend 6-13 - PLAN #1 6-21-10 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	5,015.52	5,008.32	4,836.68	19.16	26.43	72.13	49.69	-1,253.01	788.46	750.38	38.08	20.706	
5,200.00	5,113.23	5,106.88	4,931.17	19.63	27.02	72.36	50.83	-1,281.01	805.09	766.07	39.02	20.630	
5,300.00	5,210.94	5,205.43	5,025.66	20.10	27.61	72.58	51.98	-1,309.01	821.74	781.76	39.97	20.558	
5,400.00	5,308.65	5,303.99	5,120.15	20.57	28.21	72.79	53.13	-1,337.01	838.39	797.47	40.92	20.490	
5,500.00	5,406.36	5,402.55	5,214.64	21.04	28.80	73.00	54.28	-1,365.01	855.05	813.19	41.86	20.425	
5,600.00	5,504.07	5,503.95	5,311.86	21.50	29.40	73.20	55.46	-1,393.79	871.71	828.90	42.82	20.359	
5,622.00	5,525.57	5,532.50	5,339.31	21.61	29.52	73.27	55.78	-1,401.65	875.23	832.20	43.03	20.341	
5,700.00	5,602.00	5,634.16	5,437.63	21.91	29.94	73.72	56.84	-1,427.42	886.62	842.87	43.75	20.268	
5,800.00	5,700.56	5,765.37	5,565.80	22.20	30.42	74.21	57.99	-1,455.49	898.94	854.43	44.51	20.198	
5,900.00	5,799.65	5,897.42	5,695.93	22.46	30.81	74.61	58.90	-1,477.79	908.64	863.48	45.16	20.122	
6,000.00	5,899.14	6,030.09	5,827.58	22.67	31.12	74.90	59.57	-1,494.14	915.68	869.99	45.69	20.042	
6,100.00	5,998.93	6,163.19	5,960.27	22.84	31.35	75.10	59.99	-1,504.40	920.02	873.91	46.11	19.955	
6,200.00	6,098.88	6,296.50	6,093.50	22.98	31.51	75.22	60.16	-1,508.50	921.64	875.23	46.41	19.858	
6,236.12	6,135.00	6,338.00	6,135.00	23.02	31.54	-48.66	60.16	-1,508.58	921.63	875.14	46.49	19.823	
6,300.00	6,198.88	6,401.87	6,198.88	23.10	31.60	-48.66	60.16	-1,508.58	921.63	874.99	46.64	19.761	
6,400.00	6,298.88	6,501.87	6,298.88	23.21	31.69	-48.66	60.16	-1,508.58	921.63	874.76	46.87	19.664	
6,500.00	6,398.88	6,601.87	6,398.88	23.33	31.78	-48.66	60.16	-1,508.58	921.63	874.53	47.10	19.566	
6,600.00	6,498.88	6,701.87	6,498.88	23.45	31.88	-48.66	60.16	-1,508.58	921.63	874.29	47.34	19.469	
6,700.00	6,598.88	6,801.87	6,598.88	23.56	31.97	-48.66	60.16	-1,508.58	921.63	874.05	47.58	19.370	
6,800.00	6,698.88	6,901.87	6,698.88	23.69	32.07	-48.66	60.16	-1,508.58	921.63	873.81	47.82	19.272	
6,900.00	6,798.88	7,001.87	6,798.88	23.81	32.17	-48.66	60.16	-1,508.58	921.63	873.56	48.07	19.174	
7,000.00	6,898.88	7,101.87	6,898.88	23.93	32.27	-48.66	60.16	-1,508.58	921.63	873.31	48.32	19.075	
7,100.00	6,998.88	7,201.87	6,998.88	24.06	32.37	-48.66	60.16	-1,508.58	921.63	873.06	48.57	18.976	
7,200.00	7,098.88	7,301.87	7,098.88	24.19	32.48	-48.66	60.16	-1,508.58	921.63	872.81	48.82	18.877	
7,300.00	7,198.88	7,401.87	7,198.88	24.32	32.58	-48.66	60.16	-1,508.58	921.63	872.55	49.08	18.778	
7,400.00	7,298.88	7,501.87	7,298.88	24.45	32.69	-48.66	60.16	-1,508.58	921.63	872.29	49.34	18.679	
7,500.00	7,398.88	7,601.87	7,398.88	24.58	32.79	-48.66	60.16	-1,508.58	921.63	872.03	49.60	18.580	
7,600.00	7,498.88	7,701.87	7,498.88	24.71	32.90	-48.66	60.16	-1,508.58	921.63	871.76	49.87	18.481	
7,700.00	7,598.88	7,801.87	7,598.88	24.84	33.01	-48.66	60.16	-1,508.58	921.63	871.49	50.14	18.383	
7,800.00	7,698.88	7,901.87	7,698.88	24.98	33.12	-48.66	60.16	-1,508.58	921.63	871.22	50.41	18.284	
7,900.00	7,798.88	8,001.87	7,798.88	25.12	33.23	-48.66	60.16	-1,508.58	921.63	870.95	50.68	18.185	
8,000.00	7,898.88	8,101.87	7,898.88	25.25	33.34	-48.66	60.16	-1,508.58	921.63	870.68	50.96	18.087	
8,100.00	7,998.88	8,201.87	7,998.88	25.39	33.46	-48.66	60.16	-1,508.58	921.63	870.40	51.23	17.989	
8,124.72	8,023.60	8,226.60	8,023.60	25.43	33.48	-48.66	60.16	-1,508.58	921.63	870.33	51.30	17.965	
8,153.12	8,052.00	8,235.00	8,032.00	25.47	33.49	-48.66	60.16	-1,508.58	921.85	870.49	51.35	17.951 SF	

Company:	US ROCKIES REGION PLANNING	Local Co-ordinate Reference:	Well P_Riverbend 25-13
Project:	COLORADO NORTHERN ZONE - 83	TVD Reference:	WELL @ 4932.00ft (Original Well Elev)
Reference Site:	Riverbend 7-13 PAD	MD Reference:	WELL @ 4932.00ft (Original Well Elev)
Site Error:	0.00ft	North Reference:	True
Reference Well:	P_Riverbend 25-13	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00ft	Output errors are at	2.00 sigma
Reference Wellbore	P_Riverbend 25-13	Database:	EDM 2003.21 Single User Db
Reference Design:	PLAN #1 6-21-10 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	-90.00	0.00	-15.96	15.96				
100.00	100.00	100.00	100.00	0.10	0.10	-90.00	0.00	-15.96	15.96	15.77	0.19	83.519	
200.00	200.00	200.00	200.00	0.32	0.32	-90.00	0.00	-15.96	15.96	15.32	0.64	24.909	
300.00	300.00	300.00	300.00	0.55	0.55	-90.00	0.00	-15.96	15.96	14.87	1.09	14.637	
400.00	400.00	400.00	400.00	0.77	0.77	-90.00	0.00	-15.96	15.96	14.42	1.54	10.364	
500.00	500.00	500.00	500.00	0.99	0.99	-90.00	0.00	-15.96	15.96	13.97	1.99	8.022	
600.00	600.00	600.00	600.00	1.22	1.22	-90.00	0.00	-15.96	15.96	13.52	2.44	6.543	
700.00	700.00	700.00	700.00	1.44	1.44	-90.00	0.00	-15.96	15.96	13.07	2.89	5.525	
800.00	800.00	800.00	800.00	1.67	1.67	-90.00	0.00	-15.96	15.96	12.62	3.34	4.781	
900.00	900.00	900.00	900.00	1.89	1.89	-90.00	0.00	-15.96	15.96	12.17	3.79	4.213	
1,000.00	1,000.00	1,000.00	1,000.00	2.12	2.12	-90.00	0.00	-15.96	15.96	11.72	4.24	3.766 CC	
1,100.00	1,099.98	1,099.46	1,099.44	2.32	2.33	35.82	-0.42	-17.63	16.20	11.56	4.64	3.489	
1,200.00	1,199.84	1,198.90	1,198.74	2.51	2.52	41.24	-1.69	-22.65	17.04	12.02	5.02	3.394	
1,300.00	1,299.45	1,298.81	1,298.40	2.72	2.74	51.61	-3.43	-29.56	17.40	11.98	5.42	3.210	
1,399.55	1,398.25	1,398.18	1,397.51	2.95	2.95	71.53	-5.16	-36.43	16.90	11.03	5.87	2.877	
1,400.00	1,398.70	1,398.63	1,397.96	2.95	2.95	71.64	-5.17	-36.46	16.90	11.02	5.88	2.876 ES, SF	
1,500.00	1,497.47	1,498.19	1,497.27	3.21	3.18	101.03	-6.91	-43.35	18.81	12.42	6.39	2.945	
1,600.00	1,595.62	1,597.38	1,596.20	3.52	3.41	127.30	-8.64	-50.22	26.34	19.52	6.82	3.863	
1,614.13	1,609.43	1,611.35	1,610.14	3.57	3.44	130.17	-8.88	-51.18	27.88	21.01	6.87	4.058	
1,700.00	1,693.34	1,696.28	1,694.85	3.87	3.64	142.56	-10.36	-57.06	38.52	31.30	7.22	5.338	
1,800.00	1,791.05	1,795.17	1,793.49	4.24	3.88	150.26	-12.09	-63.90	52.12	44.48	7.64	6.821	
1,900.00	1,888.76	1,894.06	1,892.13	4.63	4.12	154.74	-13.81	-70.74	66.26	58.17	8.08	8.197	
2,000.00	1,986.47	1,992.95	1,990.76	5.04	4.36	157.63	-15.54	-77.59	80.65	72.11	8.54	9.448	
2,100.00	2,084.19	2,091.84	2,089.40	5.45	4.61	159.65	-17.26	-84.43	95.19	86.19	9.00	10.578	
2,200.00	2,181.90	2,190.73	2,188.04	5.88	4.85	161.13	-18.99	-91.27	109.81	100.34	9.47	11.599	
2,300.00	2,279.61	2,289.62	2,286.68	6.31	5.10	162.26	-20.71	-98.11	124.49	114.55	9.94	12.523	
2,400.00	2,377.32	2,388.51	2,385.32	6.74	5.35	163.15	-22.44	-104.96	139.20	128.78	10.42	13.362	
2,500.00	2,475.03	2,487.40	2,483.96	7.18	5.60	163.88	-24.16	-111.80	153.94	143.04	10.90	14.125	
2,600.00	2,572.74	2,586.29	2,582.60	7.63	5.85	164.47	-25.89	-118.64	168.70	157.32	11.38	14.822	
2,700.00	2,670.45	2,685.18	2,681.23	8.08	6.10	164.97	-27.61	-125.48	183.48	171.61	11.87	15.461	
2,800.00	2,768.16	2,784.07	2,779.87	8.53	6.35	165.40	-29.34	-132.33	198.26	185.91	12.35	16.048	
2,900.00	2,865.87	2,882.96	2,878.51	8.98	6.61	165.76	-31.07	-139.17	213.06	200.21	12.84	16.588	
3,000.00	2,963.59	2,981.86	2,977.15	9.43	6.86	166.08	-32.79	-146.01	227.86	214.53	13.33	17.088	
3,100.00	3,061.30	3,080.75	3,075.79	9.89	7.11	166.36	-34.52	-152.86	242.67	228.84	13.83	17.551	
3,200.00	3,159.01	3,179.64	3,174.43	10.34	7.37	166.61	-36.24	-159.70	257.49	243.17	14.32	17.980	
3,300.00	3,256.72	3,278.53	3,273.07	10.80	7.62	166.83	-37.97	-166.54	272.31	257.49	14.81	18.381	
3,400.00	3,354.43	3,377.42	3,371.71	11.26	7.88	167.03	-39.69	-173.38	287.13	271.82	15.31	18.754	
3,500.00	3,452.14	3,476.31	3,470.34	11.72	8.14	167.21	-41.42	-180.23	301.95	286.15	15.81	19.103	
3,600.00	3,549.85	3,575.20	3,568.98	12.18	8.39	167.37	-43.14	-187.07	316.78	300.48	16.30	19.430	
3,700.00	3,647.56	3,674.09	3,667.62	12.65	8.65	167.52	-44.87	-193.91	331.61	314.81	16.80	19.737	
3,800.00	3,745.27	3,772.98	3,766.26	13.11	8.91	167.65	-46.59	-200.75	346.44	329.14	17.30	20.026	
3,900.00	3,842.98	3,871.87	3,864.90	13.57	9.16	167.77	-48.32	-207.60	361.28	343.48	17.80	20.298	
4,000.00	3,940.70	3,970.76	3,963.54	14.04	9.42	167.89	-50.04	-214.44	376.11	357.81	18.30	20.555	
4,100.00	4,038.41	4,069.65	4,062.18	14.50	9.68	167.99	-51.77	-221.28	390.95	372.15	18.80	20.797	
4,200.00	4,136.12	4,168.54	4,160.81	14.97	9.93	168.09	-53.49	-228.12	405.79	386.49	19.30	21.027	
4,300.00	4,233.83	4,267.44	4,259.45	15.43	10.19	168.18	-55.22	-234.97	420.63	400.83	19.80	21.245	
4,400.00	4,331.54	4,366.33	4,358.09	15.90	10.45	168.27	-56.94	-241.81	435.47	415.17	20.30	21.451	
4,500.00	4,429.25	4,465.22	4,456.73	16.36	10.71	168.35	-58.67	-248.65	450.31	429.50	20.80	21.647	
4,600.00	4,526.96	4,564.11	4,555.37	16.83	10.97	168.42	-60.39	-255.49	465.15	443.84	21.30	21.834	
4,700.00	4,624.67	4,663.00	4,654.01	17.30	11.22	168.49	-62.12	-262.34	479.99	458.18	21.81	22.012	
4,800.00	4,722.38	4,761.89	4,752.65	17.76	11.48	168.55	-63.84	-269.18	494.83	472.53	22.31	22.181	
4,900.00	4,820.10	4,860.78	4,851.29	18.23	11.74	168.62	-65.57	-276.02	509.68	486.87	22.81	22.343	

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 25-13
Project:	COLORADO NORTHERN ZONE - 83	TVD Reference:	WELL @ 4932.00ft (Original Well Elev)
Reference Site:	Riverbend 7-13 PAD	MD Reference:	WELL @ 4932.00ft (Original Well Elev)
Site Error:	0.00ft	North Reference:	True
Reference Well:	P_Riverbend 25-13	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00ft	Output errors are at	2.00 sigma
Reference Wellbore	P_Riverbend 25-13	Database:	EDM 2003.21 Single User Db
Reference Design:	PLAN #1 6-21-10 RHS	Offset TVD Reference:	Offset Datum

Offset Design Riverbend 7-13 PAD - P_Riverbend 7-13 - P_Riverbend 7-13 - PLAN #1 6-21-10 RH												Offset Site Error:	0.00 ft
Survey Program: 0-MWD												Offset Well Error:	0.00 ft
Reference	Offset	Semi Major Axis		Distance									
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning
5,000.00	4,917.81	4,959.67	4,949.92	18.70	12.00	168.67	-67.29	-282.86	524.52	501.21	23.31	22.498	
5,100.00	5,015.52	5,058.56	5,048.56	19.16	12.26	168.73	-69.02	-289.71	539.37	515.55	23.82	22.646	
5,200.00	5,113.23	5,157.45	5,147.20	19.63	12.52	168.78	-70.74	-296.55	554.21	529.89	24.32	22.787	
5,300.00	5,210.94	5,256.34	5,245.84	20.10	12.78	168.83	-72.47	-303.39	569.06	544.23	24.82	22.923	
5,400.00	5,308.65	5,355.23	5,344.48	20.57	13.04	168.88	-74.19	-310.24	583.90	558.57	25.33	23.053	
5,500.00	5,406.36	5,454.12	5,443.12	21.04	13.29	168.92	-75.92	-317.08	598.75	572.92	25.83	23.178	
5,600.00	5,504.07	5,553.02	5,541.76	21.50	13.55	168.96	-77.65	-323.92	613.60	587.26	26.34	23.298	
5,622.00	5,525.57	5,574.77	5,563.45	21.61	13.61	168.97	-78.02	-325.43	616.86	590.41	26.45	23.324	
5,700.00	5,602.00	5,652.05	5,640.54	21.91	13.81	169.02	-79.37	-330.77	627.41	600.53	26.88	23.345	
5,800.00	5,700.56	5,751.49	5,739.73	22.20	14.07	169.03	-81.11	-337.65	637.91	610.53	27.38	23.302	
5,900.00	5,799.65	5,851.23	5,839.21	22.46	14.34	168.96	-82.85	-344.56	644.99	617.15	27.84	23.166	
6,000.00	5,899.14	5,947.84	5,935.57	22.67	14.59	168.82	-84.53	-351.24	648.66	620.40	28.26	22.950	
6,100.00	5,998.93	6,034.31	6,021.90	22.84	14.77	168.71	-85.72	-355.96	650.24	621.65	28.59	22.746	
6,200.00	6,098.88	6,118.01	6,105.58	22.98	14.91	168.65	-86.27	-358.12	650.91	622.07	28.84	22.570	
6,236.12	6,135.00	6,152.44	6,140.00	23.02	14.97	44.75	-86.32	-358.32	650.94	622.01	28.93	22.500	
6,259.22	6,158.10	6,170.54	6,158.10	23.05	15.00	44.75	-86.32	-358.32	650.92	621.91	29.01	22.441	
6,300.00	6,198.88	6,211.32	6,198.88	23.10	15.08	44.75	-86.32	-358.32	650.92	621.76	29.16	22.326	
6,400.00	6,298.88	6,311.32	6,298.88	23.21	15.26	44.75	-86.32	-358.32	650.92	621.40	29.52	22.049	
6,500.00	6,398.88	6,411.32	6,398.88	23.33	15.44	44.75	-86.32	-358.32	650.92	621.03	29.89	21.777	
6,600.00	6,498.88	6,511.32	6,498.88	23.45	15.62	44.75	-86.32	-358.32	650.92	620.66	30.26	21.511	
6,700.00	6,598.88	6,611.32	6,598.88	23.56	15.81	44.75	-86.32	-358.32	650.92	620.29	30.63	21.249	
6,800.00	6,698.88	6,711.32	6,698.88	23.69	15.99	44.75	-86.32	-358.32	650.92	619.91	31.01	20.993	
6,900.00	6,798.88	6,811.32	6,798.88	23.81	16.18	44.75	-86.32	-358.32	650.92	619.54	31.38	20.741	
7,000.00	6,898.88	6,911.32	6,898.88	23.93	16.37	44.75	-86.32	-358.32	650.92	619.16	31.76	20.494	
7,100.00	6,998.88	7,011.32	6,998.88	24.06	16.56	44.75	-86.32	-358.32	650.92	618.78	32.14	20.252	
7,200.00	7,098.88	7,111.32	7,098.88	24.19	16.75	44.75	-86.32	-358.32	650.92	618.40	32.52	20.014	
7,300.00	7,198.88	7,211.32	7,198.88	24.32	16.94	44.75	-86.32	-358.32	650.92	618.01	32.91	19.781	
7,400.00	7,298.88	7,311.32	7,298.88	24.45	17.13	44.75	-86.32	-358.32	650.92	617.63	33.29	19.552	
7,500.00	7,398.88	7,411.32	7,398.88	24.58	17.32	44.75	-86.32	-358.32	650.92	617.24	33.68	19.327	
7,600.00	7,498.88	7,511.32	7,498.88	24.71	17.51	44.75	-86.32	-358.32	650.92	616.85	34.07	19.107	
7,700.00	7,598.88	7,611.32	7,598.88	24.84	17.70	44.75	-86.32	-358.32	650.92	616.46	34.46	18.891	
7,800.00	7,698.88	7,711.32	7,698.88	24.98	17.90	44.75	-86.32	-358.32	650.92	616.07	34.85	18.679	
7,900.00	7,798.88	7,811.32	7,798.88	25.12	18.09	44.75	-86.32	-358.32	650.92	615.68	35.24	18.471	
8,000.00	7,898.88	7,911.32	7,898.88	25.25	18.29	44.75	-86.32	-358.32	650.92	615.29	35.63	18.267	
8,100.00	7,998.88	8,011.32	7,998.88	25.39	18.49	44.75	-86.32	-358.32	650.92	614.89	36.03	18.066	
8,153.12	8,052.00	8,064.44	8,052.00	25.47	18.59	44.75	-86.32	-358.32	650.92	614.68	36.24	17.962	

Company:	US ROCKIES REGION PLANNING	Local Co-ordinate Reference:	Well P_Riverbend 25-13
Project:	COLORADO NORTHERN ZONE - 83	TVD Reference:	WELL @ 4932.00ft (Original Well Elev)
Reference Site:	Riverbend 7-13 PAD	MD Reference:	WELL @ 4932.00ft (Original Well Elev)
Site Error:	0.00ft	North Reference:	True
Reference Well:	P_Riverbend 25-13	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00ft	Output errors are at	2.00 sigma
Reference Wellbore	P_Riverbend 25-13	Database:	EDM 2003.21 Single User Db
Reference Design:	PLAN #1 6-21-10 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	89.57	0.36	48.15	48.15				
100.00	100.00	100.00	100.00	0.10	0.10	89.57	0.36	48.15	48.15	47.96	0.19	252.030	
200.00	200.00	200.00	200.00	0.32	0.32	89.57	0.36	48.15	48.15	47.51	0.64	75.167	
300.00	300.00	300.00	300.00	0.55	0.55	89.57	0.36	48.15	48.15	47.06	1.09	44.170	
400.00	400.00	400.00	400.00	0.77	0.77	89.57	0.36	48.15	48.15	46.61	1.54	31.274	
500.00	500.00	500.00	500.00	0.99	0.99	89.57	0.36	48.15	48.15	46.16	1.99	24.206	
600.00	600.00	600.00	600.00	1.22	1.22	89.57	0.36	48.15	48.15	45.71	2.44	19.744	
700.00	700.00	700.00	700.00	1.44	1.44	89.57	0.36	48.15	48.15	45.26	2.89	16.671	
800.00	800.00	800.00	800.00	1.67	1.67	89.57	0.36	48.15	48.15	44.81	3.34	14.426	
900.00	900.00	900.00	900.00	1.89	1.89	89.57	0.36	48.15	48.15	44.36	3.79	12.714	
1,000.00	1,000.00	1,000.00	1,000.00	2.12	2.12	89.57	0.36	48.15	48.15	43.91	4.24	11.365 CC, ES	
1,100.00	1,099.98	1,098.24	1,098.22	2.32	2.33	-147.67	0.48	49.83	51.33	46.68	4.64	11.050 SF	
1,200.00	1,199.84	1,195.83	1,195.68	2.51	2.53	-150.35	0.81	54.82	60.94	55.92	5.02	12.138	
1,300.00	1,299.45	1,292.13	1,291.62	2.72	2.74	-153.28	1.35	63.00	77.09	71.69	5.40	14.279	
1,400.00	1,398.70	1,386.54	1,385.37	2.95	2.97	-155.73	2.09	74.13	99.75	93.98	5.78	17.266	
1,500.00	1,497.47	1,478.51	1,476.29	3.21	3.22	-157.57	3.01	87.93	128.78	122.62	6.16	20.918	
1,600.00	1,595.62	1,567.56	1,563.85	3.52	3.49	-158.87	4.08	104.06	163.93	157.40	6.53	25.086	
1,614.13	1,609.43	1,579.87	1,575.92	3.57	3.52	-159.01	4.25	106.51	169.38	162.79	6.59	25.710	
1,700.00	1,693.34	1,653.74	1,648.08	3.87	3.78	-159.91	5.29	122.25	203.87	196.92	6.95	29.328	
1,800.00	1,791.05	1,737.69	1,729.57	4.24	4.11	-160.50	6.63	142.40	246.53	239.15	7.38	33.393	
1,900.00	1,888.76	1,819.37	1,808.24	4.63	4.46	-160.82	8.09	164.27	291.75	283.93	7.82	37.302	
2,000.00	1,986.47	1,900.00	1,885.27	5.04	4.85	-160.96	9.67	188.05	339.41	331.14	8.27	41.046	
2,100.00	2,084.19	1,975.77	1,957.01	5.45	5.27	-160.98	11.28	212.36	389.39	380.67	8.72	44.667	
2,200.00	2,181.90	2,050.47	2,027.09	5.88	5.71	-160.94	13.00	238.18	441.60	432.43	9.17	48.143	
2,300.00	2,279.61	2,122.84	2,094.31	6.31	6.18	-160.85	14.78	264.91	495.94	486.31	9.63	51.498	
2,400.00	2,377.32	2,200.00	2,165.21	6.74	6.72	-160.72	16.80	295.28	552.35	542.24	10.11	54.645	
2,500.00	2,475.03	2,268.29	2,227.40	7.18	7.24	-160.60	18.67	323.42	610.32	599.75	10.57	57.731	
2,600.00	2,572.74	2,349.58	2,301.39	7.63	7.87	-160.47	20.91	357.04	668.54	657.46	11.08	60.355	
2,700.00	2,670.45	2,430.88	2,375.37	8.08	8.51	-160.36	23.14	390.66	726.76	715.17	11.59	62.719	
2,800.00	2,768.16	2,512.17	2,449.36	8.53	9.17	-160.26	25.38	424.28	784.98	772.88	12.10	64.854	
2,900.00	2,865.87	2,593.47	2,523.34	8.98	9.83	-160.18	27.61	457.90	843.21	830.58	12.63	66.788	
3,000.00	2,963.59	2,674.77	2,597.33	9.43	10.50	-160.11	29.85	491.52	901.44	888.29	13.15	68.544	
3,100.00	3,061.30	2,756.06	2,671.31	9.89	11.17	-160.05	32.08	525.14	959.66	945.98	13.68	70.146	
3,200.00	3,159.01	2,837.36	2,745.30	10.34	11.85	-160.00	34.32	558.75	1,017.89	1,003.68	14.21	71.613	
3,300.00	3,256.72	2,918.65	2,819.28	10.80	12.53	-159.95	36.56	592.37	1,076.12	1,061.37	14.75	72.959	
3,400.00	3,354.43	2,999.95	2,893.27	11.26	13.21	-159.90	38.79	625.99	1,134.35	1,119.06	15.29	74.198	
3,500.00	3,452.14	3,081.24	2,967.25	11.72	13.90	-159.86	41.03	659.61	1,192.58	1,176.75	15.83	75.339	
3,600.00	3,549.85	3,162.54	3,041.24	12.18	14.59	-159.83	43.26	693.23	1,250.81	1,234.43	16.37	76.395	
3,700.00	3,647.56	3,243.83	3,115.22	12.65	15.28	-159.80	45.50	726.85	1,309.04	1,292.12	16.92	77.375	
3,800.00	3,745.27	3,325.13	3,189.20	13.11	15.97	-159.77	47.73	760.47	1,367.27	1,349.80	17.47	78.285	
3,900.00	3,842.98	3,406.42	3,263.19	13.57	16.66	-159.74	49.97	794.09	1,425.50	1,407.48	18.01	79.133	
4,000.00	3,940.70	3,487.72	3,337.17	14.04	17.36	-159.71	52.21	827.70	1,483.73	1,465.16	18.56	79.924	
4,100.00	4,038.41	3,568.05	3,428.58	14.50	18.18	-159.69	54.95	868.99	1,541.85	1,522.69	19.17	80.441	
4,200.00	4,136.12	3,649.20	3,509.56	14.97	19.33	-159.71	59.44	936.55	1,596.53	1,576.58	19.95	80.015	
4,300.00	4,233.83	3,730.10	3,590.64	15.43	20.38	-159.82	63.50	997.53	1,645.69	1,624.94	20.75	79.293	
4,400.00	4,331.54	3,811.57	3,671.71	15.90	21.30	-160.03	66.91	1,048.74	1,688.68	1,667.12	21.56	78.335	
4,500.00	4,429.25	3,892.78	3,752.62	16.36	22.02	-160.35	69.43	1,086.70	1,724.84	1,702.50	22.34	77.210	
4,600.00	4,526.96	3,973.13	3,833.42	16.83	22.51	-160.79	70.84	1,107.93	1,753.56	1,730.49	23.08	75.992	
4,700.00	4,624.67	4,053.92	3,914.67	17.30	22.71	-161.18	71.07	1,111.35	1,775.08	1,751.41	23.67	75.006	
4,800.00	4,722.38	4,134.63	4,005.38	17.76	22.81	-161.40	71.07	1,111.35	1,795.27	1,771.15	24.12	74.422	
4,900.00	4,820.10	4,215.35	4,086.10	18.23	22.90	-161.62	71.07	1,111.35	1,815.49	1,790.91	24.58	73.858	
5,000.00	4,917.81	4,296.06	4,166.81	18.70	23.00	-161.82	71.07	1,111.35	1,835.74	1,810.70	25.04	73.314	

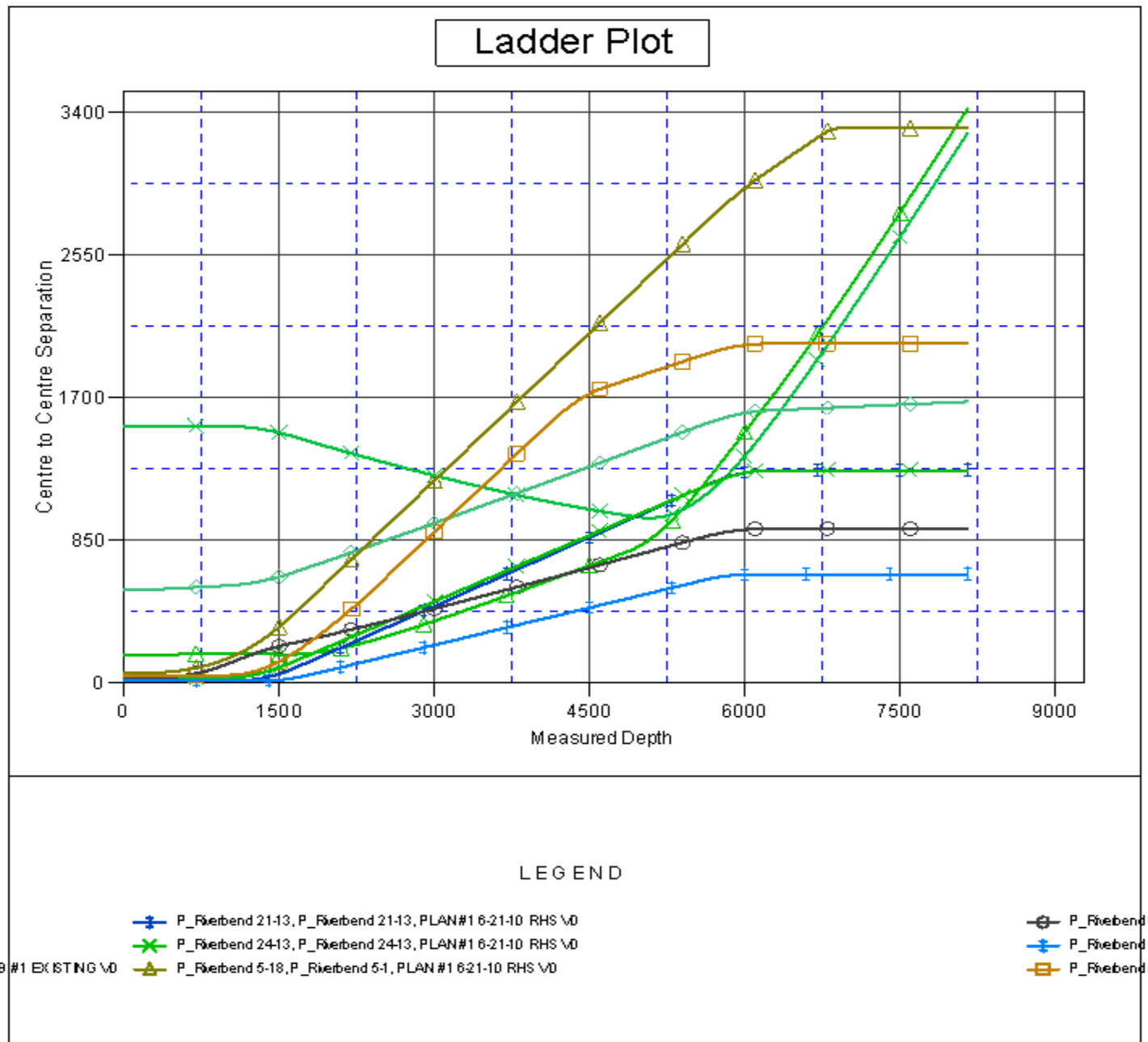
CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Company:	US ROCKIES REGION PLANNING	Local Co-ordinate Reference:	Well P_Riverbend 25-13
Project:	COLORADO NORTHERN ZONE - 83	TVD Reference:	WELL @ 4932.00ft (Original Well Elev)
Reference Site:	Riverbend 7-13 PAD	MD Reference:	WELL @ 4932.00ft (Original Well Elev)
Site Error:	0.00ft	North Reference:	True
Reference Well:	P_Riverbend 25-13	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00ft	Output errors are at	2.00 sigma
Reference Wellbore	P_Riverbend 25-13	Database:	EDM 2003.21 Single User Db
Reference Design:	PLAN #1 6-21-10 RHS	Offset TVD Reference:	Offset Datum

Offset Design Riverbend 7-13 PAD - P_Riverbend 8-13 - P_Riverbend 8-13 - PLAN #1 6-21-10 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	5,015.52	5,208.77	5,015.52	19.16	23.10	-162.03	71.07	1,111.35	1,856.01	1,830.51	25.50	72.789	
5,200.00	5,113.23	5,306.48	5,113.23	19.63	23.20	-162.23	71.07	1,111.35	1,876.30	1,850.34	25.96	72.282	
5,300.00	5,210.94	5,404.19	5,210.94	20.10	23.30	-162.43	71.07	1,111.35	1,896.61	1,870.19	26.42	71.791	
5,400.00	5,308.65	5,501.90	5,308.65	20.57	23.40	-162.62	71.07	1,111.35	1,916.94	1,890.06	26.88	71.317	
5,500.00	5,406.36	5,599.61	5,406.36	21.04	23.51	-162.80	71.07	1,111.35	1,937.29	1,909.95	27.34	70.858	
5,600.00	5,504.07	5,697.32	5,504.07	21.50	23.61	-162.99	71.07	1,111.35	1,957.67	1,929.86	27.80	70.413	
5,622.00	5,525.57	5,718.82	5,525.57	21.61	23.64	-163.03	71.07	1,111.35	1,962.15	1,934.25	27.90	70.317	
5,700.00	5,602.00	5,795.25	5,602.00	21.91	23.72	-163.25	71.07	1,111.35	1,977.06	1,948.66	28.40	69.620	
5,800.00	5,700.56	5,893.81	5,700.56	22.20	23.83	-163.48	71.07	1,111.35	1,993.26	1,964.29	28.97	68.810	
5,900.00	5,799.65	5,992.90	5,799.65	22.46	23.94	-163.66	71.07	1,111.35	2,006.16	1,976.66	29.49	68.017	
6,000.00	5,899.14	6,092.39	5,899.14	22.67	24.06	-163.80	71.07	1,111.35	2,015.73	1,985.75	29.98	67.239	
6,100.00	5,998.93	6,192.18	5,998.93	22.84	24.18	-163.88	71.07	1,111.35	2,021.97	1,991.55	30.42	66.474	
6,200.00	6,098.88	6,292.13	6,098.88	22.98	24.29	-163.92	71.07	1,111.35	2,024.86	1,994.05	30.81	65.720	
6,236.12	6,135.00	6,328.25	6,135.00	23.02	24.34	72.18	71.07	1,111.35	2,025.08	1,994.13	30.94	65.441	
6,300.00	6,198.88	6,392.13	6,198.88	23.10	24.41	72.18	71.07	1,111.35	2,025.08	1,993.91	31.17	64.973	
6,400.00	6,298.88	6,492.13	6,298.88	23.21	24.54	72.18	71.07	1,111.35	2,025.08	1,993.56	31.51	64.263	
6,500.00	6,398.88	6,592.13	6,398.88	23.33	24.66	72.18	71.07	1,111.35	2,025.08	1,993.22	31.86	63.563	
6,600.00	6,498.88	6,692.13	6,498.88	23.45	24.78	72.18	71.07	1,111.35	2,025.08	1,992.87	32.21	62.873	
6,700.00	6,598.88	6,792.13	6,598.88	23.56	24.91	72.18	71.07	1,111.35	2,025.08	1,992.51	32.56	62.194	
6,800.00	6,698.88	6,892.13	6,698.88	23.69	25.04	72.18	71.07	1,111.35	2,025.08	1,992.16	32.92	61.524	
6,900.00	6,798.88	6,992.13	6,798.88	23.81	25.16	72.18	71.07	1,111.35	2,025.08	1,991.80	33.27	60.865	
7,000.00	6,898.88	7,092.13	6,898.88	23.93	25.29	72.18	71.07	1,111.35	2,025.08	1,991.45	33.63	60.215	
7,100.00	6,998.88	7,192.13	6,998.88	24.06	25.42	72.18	71.07	1,111.35	2,025.08	1,991.08	33.99	59.576	
7,200.00	7,098.88	7,292.13	7,098.88	24.19	25.56	72.18	71.07	1,111.35	2,025.08	1,990.72	34.35	58.946	
7,300.00	7,198.88	7,392.13	7,198.88	24.32	25.69	72.18	71.07	1,111.35	2,025.08	1,990.36	34.72	58.326	
7,400.00	7,298.88	7,492.13	7,298.88	24.45	25.83	72.18	71.07	1,111.35	2,025.08	1,989.99	35.09	57.716	
7,500.00	7,398.88	7,592.13	7,398.88	24.58	25.96	72.18	71.07	1,111.35	2,025.08	1,989.62	35.46	57.116	
7,600.00	7,498.88	7,692.13	7,498.88	24.71	26.10	72.18	71.07	1,111.35	2,025.08	1,989.25	35.83	56.525	
7,700.00	7,598.88	7,792.13	7,598.88	24.84	26.24	72.18	71.07	1,111.35	2,025.08	1,988.88	36.20	55.943	
7,800.00	7,698.88	7,892.13	7,698.88	24.98	26.38	72.18	71.07	1,111.35	2,025.08	1,988.50	36.57	55.371	
7,900.00	7,798.88	7,992.13	7,798.88	25.12	26.52	72.18	71.07	1,111.35	2,025.08	1,988.13	36.95	54.807	
8,000.00	7,898.88	8,092.13	7,898.88	25.25	26.66	72.18	71.07	1,111.35	2,025.08	1,987.75	37.33	54.253	
8,100.00	7,998.88	8,192.13	7,998.88	25.39	26.80	72.18	71.07	1,111.35	2,025.08	1,987.37	37.71	53.707	
8,124.72	8,023.60	8,216.85	8,023.60	25.43	26.84	72.18	71.07	1,111.35	2,025.08	1,987.28	37.80	53.574	
8,153.12	8,052.00	8,225.25	8,052.00	25.47	26.85	72.18	71.07	1,111.35	2,025.17	1,987.31	37.87	53.479	

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Reference Site:	Riverbend 7-13 PAD	MD Reference:	WELL @ 4932.00ft (Original Well Elev)
Site Error:	0.00ft	North Reference:	True
Reference Well:	P_Riverbend 25-13	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00ft	Output errors are at	2.00 sigma
Reference Wellbore	P_Riverbend 25-13	Database:	EDM 2003.21 Single User Db
Reference Design:	PLAN #1 6-21-10 RHS	Offset TVD Reference:	Offset Datum

Reference Depths are relative to WELL @ 4932.00ft (Original Well Elev) Coordinates are relative to: P_Riverbend 25-13
Offset Depths are relative to Offset Datum
Central Meridian is 105° 30' 0.000 W °
Coordinate System is US State Plane 1983, Colorado Northern Zone
Grid Convergence at Surface is: 0.43°



Company:	US ROCKIES REGION PLANNING	Local Co-ordinate Reference:	Well P_Riverbend 25-13
Project:	COLORADO NORTHERN ZONE - 83	TVD Reference:	WELL @ 4932.00ft (Original Well Elev)
Reference Site:	Riverbend 7-13 PAD	MD Reference:	WELL @ 4932.00ft (Original Well Elev)
Site Error:	0.00ft	North Reference:	True
Reference Well:	P_Riverbend 25-13	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00ft	Output errors are at	2.00 sigma
Reference Wellbore	P_Riverbend 25-13	Database:	EDM 2003.21 Single User Db
Reference Design:	PLAN #1 6-21-10 RHS	Offset TVD Reference:	Offset Datum

Reference Depths are relative to WELL @ 4932.00ft (Original Well Elev) Coordinates are relative to: P_Riverbend 25-13
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°

