



US ROCKIES REGION PLANNING

COLORADO NORTHERN ZONE - 83

Riverbend 7-13 PAD

P_Riverbend 6-13

P_Riverbend 6-13

Plan: PLAN #1 6-21-10 RHS

Standard Planning Report

21 June, 2010

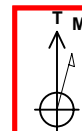




Project: COLORADO NORTHERN ZONE - 83
 Site: Riverbend 7-13 PAD
 Well: P_Riverbend 6-13
 Wellbore: P_Riverbend 6-13
 Section: SECTION 13 T1N R67W
 SHL: 2045 FNL 1803 FWL
 Design: PLAN #1 6-21-10 RHS
 Latitude: 40° 3' 9.770 N
 Longitude: 104° 50' 10.194 W
 GL: 4917.00
 KB: WELL @ 4932.00ft (Original Well Elev)



Weatherford®



Azimuths to True North
 Magnetic North: 9.00°
 Magnetic Field
 Strength: 53043.4nT
 Dip Angle: 66.79°
 Date: 6/21/2010
 Model: IGRF2010

FORMATION TOP DETAILS

TVDPath	MDPath	Formation
3253.00	3356.46	PARKMAN
4583.00	4743.72	SUSSEX
7115.00	7318.00	NIO
7462.00	7665.00	CODELL
7547.00	7750.00	GREENHORN
7897.00	8100.00	JSAND

CASING DETAILS

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

SECTION DETAILS

MD	Inc	Azi	TVD	+N/-S	+E/-W	DLeg	TFace	VSec	Annotation
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.00	0.00	Start Build 2.00
1125.95	16.52	272.35	1114.55	4.84	-118.14	2.00	272.35	118.24	Start 4366.10 hold at 1125.95 MD
5492.05	16.52	272.35	5300.45	55.68	-1358.52	0.00	0.00	1359.67	Start Drop -2.00
6318.00	0.00	0.00	6115.00	60.53	-1476.67	2.00	180.00	1477.91	Start 1917.00 hold at 6318.00 MD
8235.00	0.00	0.00	8032.00	60.53	-1476.67	0.00	0.00	1477.91	TD at 8235.00

LEGEND

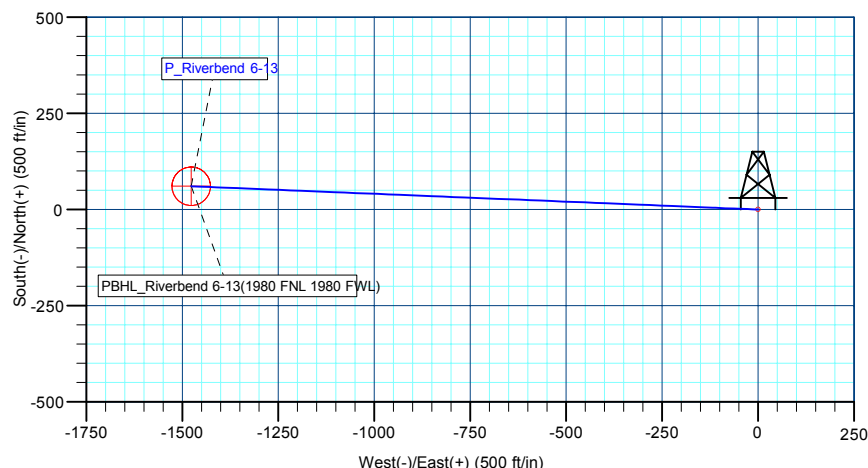
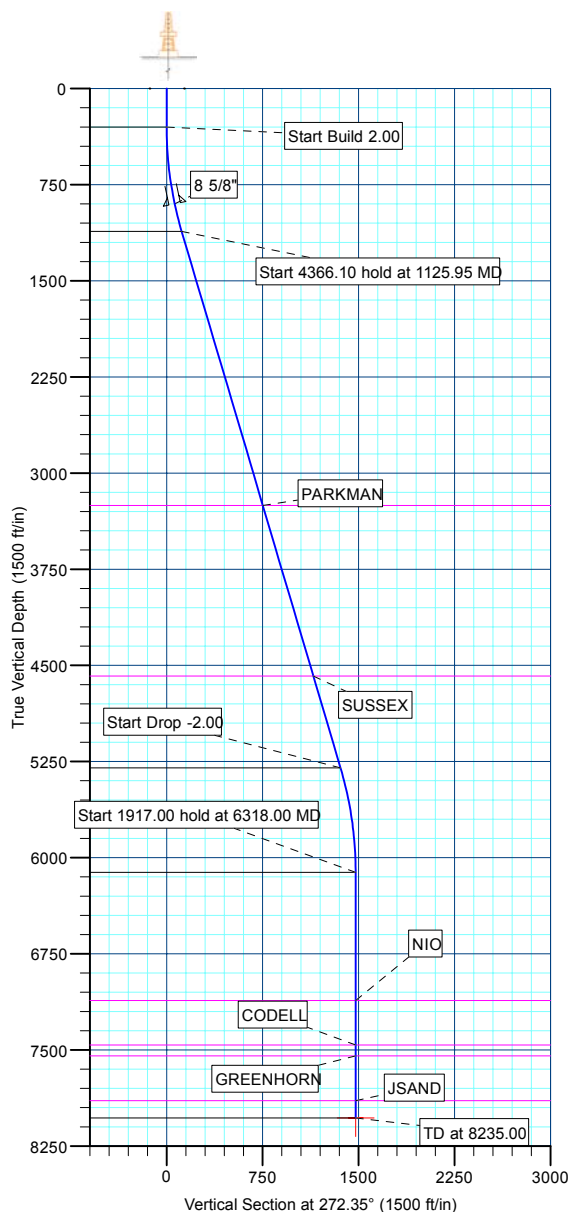
CHIKUMA UNIT #2 EXISTING, CHIKUMA UNIT #2 EXISTING, CHIKUMA UNIT #2 EXISTING V0
 HARRY S CHIKUMA #5 EXISTING, HARRY S CHIKUMA #5 EXISTING, HARRY S CHIKUMA #5 EXISTING V0
 HARRY S. CHIKUMA G.U. B #1 EXISTING, HARRY S. CHIKUMA G.U. B #1 EXISTING, HARRY S. CHIKUMA G.U. B #1 EXISTING V0
 P_Riverbend 21-13, 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 25-13, P_Riverbend 25-13, PLAN #1 6-21-10 RHS V0
 P_Riverbend 5-18, P_Riverbend 5-18, PLAN #1 6-21-10 RH V0
 P_Riverbend 7-13, P_Riverbend 7-13, PLAN #1 6-21-10 RHS V0
 P_Riverbend 8-13, P_Riverbend 8-13, PLAN #1 6-21-10 RHS V0
 PLAN #1 6-21-10 RHS

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

Name	TVD	+N/-S	+E/-W	Latitude	Longitude	Shape
PBHL	8032.00	60.53	-1476.67	40° 3' 10.368 N	104° 50' 29.184 W	Circle (Radius: 50.00)

WELL DETAILS: P_Riverbend 6-13

+N/-S	+E/-W	Northing	Ground Level:	4917.00	Latitude	Longitude	Slot
0.00	0.00	1262744.78	Easting	3185830.27	40° 3' 9.770 N	104° 50' 10.194 W	



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

Created By: Robert H. Scott Date: 15:52, June 21 2010

Database:	EDM 2003.21 Single User Db	Local Co-ordinate Reference:	Well P_Riverbend 6-13
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 6-13	Survey Calculation Method:	Minimum Curvature
Wellbore:	P_Riverbend 6-13		
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 6-13					
Well Position	+N/-S	-0.38 ft	Northing:	1,262,744.78 ft	Latitude:	40° 3' 9.770 N
	+E/-W	-47.87 ft	Easting:	3,185,830.27 ft	Longitude:	104° 50' 10.194 W
Position Uncertainty		0.00 ft	Wellhead Elevation:	ft	Ground Level:	4,917.00 ft

Wellbore	P_Riverbend 6-13				
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	272.35

Plan Sections										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	TFO (°)	Target
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.00	0.00	0.00	
1,125.95	16.52	272.35	1,114.55	4.84	-118.14	2.00	2.00	0.00	272.35	
5,492.05	16.52	272.35	5,300.45	55.68	-1,358.52	0.00	0.00	0.00	0.00	
6,318.00	0.00	0.00	6,115.00	60.53	-1,476.67	2.00	-2.00	0.00	180.00	
8,235.00	0.00	0.00	8,032.00	60.53	-1,476.67	0.00	0.00	0.00	0.00	PBHL_Riverbend 6

Database:	EDM 2003.21 Single User Db	Local Co-ordinate Reference:	Well P_Riverbend 6-13
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 6-13	Survey Calculation Method:	Minimum Curvature
Wellbore:	P_Riverbend 6-13		
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									
300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.00	0.00	0.00
400.00	2.00	272.35	399.98	0.07	-1.74	1.75	2.00	2.00	0.00
500.00	4.00	272.35	499.84	0.29	-6.97	6.98	2.00	2.00	0.00
600.00	6.00	272.35	599.45	0.64	-15.68	15.69	2.00	2.00	0.00
700.00	8.00	272.35	698.70	1.14	-27.86	27.88	2.00	2.00	0.00
800.00	10.00	272.35	797.47	1.78	-43.49	43.52	2.00	2.00	0.00
900.00	12.00	272.35	895.62	2.56	-62.55	62.60	2.00	2.00	0.00
8 5/8"									
904.48	12.09	272.35	900.00	2.60	-63.48	63.54	2.00	2.00	0.00
1,000.00	14.00	272.35	993.06	3.49	-85.03	85.10	2.00	2.00	0.00
1,100.00	16.00	272.35	1,089.64	4.54	-110.88	110.98	2.00	2.00	0.00
Start 4366.10 hold at 1125.95 MD									
1,125.95	16.52	272.35	1,114.55	4.84	-118.14	118.24	2.00	2.00	0.00
1,200.00	16.52	272.35	1,185.55	5.70	-139.18	139.30	0.00	0.00	0.00
1,300.00	16.52	272.35	1,281.42	6.87	-167.59	167.73	0.00	0.00	0.00
1,400.00	16.52	272.35	1,377.29	8.03	-196.00	196.16	0.00	0.00	0.00
1,500.00	16.52	272.35	1,473.17	9.20	-224.41	224.60	0.00	0.00	0.00
1,600.00	16.52	272.35	1,569.04	10.36	-252.82	253.03	0.00	0.00	0.00
1,700.00	16.52	272.35	1,664.91	11.53	-281.23	281.46	0.00	0.00	0.00
1,800.00	16.52	272.35	1,760.78	12.69	-309.64	309.90	0.00	0.00	0.00
1,900.00	16.52	272.35	1,856.66	13.86	-338.05	338.33	0.00	0.00	0.00
2,000.00	16.52	272.35	1,952.53	15.02	-366.46	366.76	0.00	0.00	0.00
2,100.00	16.52	272.35	2,048.40	16.18	-394.86	395.20	0.00	0.00	0.00
2,200.00	16.52	272.35	2,144.27	17.35	-423.27	423.63	0.00	0.00	0.00
2,300.00	16.52	272.35	2,240.15	18.51	-451.68	452.06	0.00	0.00	0.00
2,400.00	16.52	272.35	2,336.02	19.68	-480.09	480.50	0.00	0.00	0.00
2,500.00	16.52	272.35	2,431.89	20.84	-508.50	508.93	0.00	0.00	0.00
2,600.00	16.52	272.35	2,527.76	22.01	-536.91	537.36	0.00	0.00	0.00
2,700.00	16.52	272.35	2,623.64	23.17	-565.32	565.80	0.00	0.00	0.00
2,800.00	16.52	272.35	2,719.51	24.34	-593.73	594.23	0.00	0.00	0.00
2,900.00	16.52	272.35	2,815.38	25.50	-622.14	622.66	0.00	0.00	0.00
3,000.00	16.52	272.35	2,911.26	26.67	-650.55	651.10	0.00	0.00	0.00
3,100.00	16.52	272.35	3,007.13	27.83	-678.96	679.53	0.00	0.00	0.00
3,200.00	16.52	272.35	3,103.00	28.99	-707.37	707.96	0.00	0.00	0.00
3,300.00	16.52	272.35	3,198.87	30.16	-735.78	736.39	0.00	0.00	0.00
PARKMAN									
3,356.46	16.52	272.35	3,253.00	30.82	-751.82	752.45	0.00	0.00	0.00
3,400.00	16.52	272.35	3,294.75	31.32	-764.19	764.83	0.00	0.00	0.00
3,500.00	16.52	272.35	3,390.62	32.49	-792.60	793.26	0.00	0.00	0.00
3,600.00	16.52	272.35	3,486.49	33.65	-821.01	821.69	0.00	0.00	0.00
3,700.00	16.52	272.35	3,582.36	34.82	-849.41	850.13	0.00	0.00	0.00
3,800.00	16.52	272.35	3,678.24	35.98	-877.82	878.56	0.00	0.00	0.00
3,900.00	16.52	272.35	3,774.11	37.15	-906.23	906.99	0.00	0.00	0.00
4,000.00	16.52	272.35	3,869.98	38.31	-934.64	935.43	0.00	0.00	0.00
4,100.00	16.52	272.35	3,965.85	39.47	-963.05	963.86	0.00	0.00	0.00
4,200.00	16.52	272.35	4,061.73	40.64	-991.46	992.29	0.00	0.00	0.00
4,300.00	16.52	272.35	4,157.60	41.80	-1,019.87	1,020.73	0.00	0.00	0.00
4,400.00	16.52	272.35	4,253.47	42.97	-1,048.28	1,049.16	0.00	0.00	0.00
4,500.00	16.52	272.35	4,349.34	44.13	-1,076.69	1,077.59	0.00	0.00	0.00
4,600.00	16.52	272.35	4,445.22	45.30	-1,105.10	1,106.03	0.00	0.00	0.00
4,700.00	16.52	272.35	4,541.09	46.46	-1,133.51	1,134.46	0.00	0.00	0.00
SUSSEX									

Database:	EDM 2003.21 Single User Db	Local Co-ordinate Reference:	Well P_Riverbend 6-13
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 6-13	Survey Calculation Method:	Minimum Curvature
Wellbore:	P_Riverbend 6-13		
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)
4,743.72	16.52	272.35	4,583.00	46.97	-1,145.93	1,146.89	0.00	0.00	0.00
4,800.00	16.52	272.35	4,636.96	47.63	-1,161.92	1,162.89	0.00	0.00	0.00
4,900.00	16.52	272.35	4,732.83	48.79	-1,190.33	1,191.33	0.00	0.00	0.00
5,000.00	16.52	272.35	4,828.71	49.95	-1,218.74	1,219.76	0.00	0.00	0.00
5,100.00	16.52	272.35	4,924.58	51.12	-1,247.15	1,248.19	0.00	0.00	0.00
5,200.00	16.52	272.35	5,020.45	52.28	-1,275.55	1,276.63	0.00	0.00	0.00
5,300.00	16.52	272.35	5,116.32	53.45	-1,303.96	1,305.06	0.00	0.00	0.00
5,400.00	16.52	272.35	5,212.20	54.61	-1,332.37	1,333.49	0.00	0.00	0.00
Start Drop -2.00									
5,492.05	16.52	272.35	5,300.45	55.68	-1,358.52	1,359.67	0.00	0.00	0.00
5,500.00	16.36	272.35	5,308.07	55.78	-1,360.77	1,361.92	2.00	-2.00	0.00
5,600.00	14.36	272.35	5,404.50	56.86	-1,387.24	1,388.40	2.00	-2.00	0.00
5,700.00	12.36	272.35	5,501.78	57.81	-1,410.32	1,411.51	2.00	-2.00	0.00
5,800.00	10.36	272.35	5,599.82	58.61	-1,430.00	1,431.20	2.00	-2.00	0.00
5,900.00	8.36	272.35	5,698.48	59.28	-1,446.25	1,447.47	2.00	-2.00	0.00
6,000.00	6.36	272.35	5,797.66	59.80	-1,459.05	1,460.28	2.00	-2.00	0.00
6,100.00	4.36	272.35	5,897.21	60.19	-1,468.38	1,469.62	2.00	-2.00	0.00
6,200.00	2.36	272.35	5,997.04	60.43	-1,474.24	1,475.48	2.00	-2.00	0.00
6,300.00	0.36	272.35	6,097.00	60.52	-1,476.61	1,477.85	2.00	-2.00	0.00
Start 1917.00 hold at 6318.00 MD									
6,318.00	0.00	0.00	6,115.00	60.53	-1,476.67	1,477.91	2.00	-2.00	0.00
6,400.00	0.00	0.00	6,197.00	60.53	-1,476.67	1,477.91	0.00	0.00	0.00
6,500.00	0.00	0.00	6,297.00	60.53	-1,476.67	1,477.91	0.00	0.00	0.00
6,600.00	0.00	0.00	6,397.00	60.53	-1,476.67	1,477.91	0.00	0.00	0.00
6,700.00	0.00	0.00	6,497.00	60.53	-1,476.67	1,477.91	0.00	0.00	0.00
6,800.00	0.00	0.00	6,597.00	60.53	-1,476.67	1,477.91	0.00	0.00	0.00
6,900.00	0.00	0.00	6,697.00	60.53	-1,476.67	1,477.91	0.00	0.00	0.00
7,000.00	0.00	0.00	6,797.00	60.53	-1,476.67	1,477.91	0.00	0.00	0.00
7,100.00	0.00	0.00	6,897.00	60.53	-1,476.67	1,477.91	0.00	0.00	0.00
7,200.00	0.00	0.00	6,997.00	60.53	-1,476.67	1,477.91	0.00	0.00	0.00
7,300.00	0.00	0.00	7,097.00	60.53	-1,476.67	1,477.91	0.00	0.00	0.00
NIO									
7,318.00	0.00	0.00	7,115.00	60.53	-1,476.67	1,477.91	0.00	0.00	0.00
7,400.00	0.00	0.00	7,197.00	60.53	-1,476.67	1,477.91	0.00	0.00	0.00
7,500.00	0.00	0.00	7,297.00	60.53	-1,476.67	1,477.91	0.00	0.00	0.00
7,600.00	0.00	0.00	7,397.00	60.53	-1,476.67	1,477.91	0.00	0.00	0.00
CODELL									
7,665.00	0.00	0.00	7,462.00	60.53	-1,476.67	1,477.91	0.00	0.00	0.00
7,700.00	0.00	0.00	7,497.00	60.53	-1,476.67	1,477.91	0.00	0.00	0.00
GREENHORN									
7,750.00	0.00	0.00	7,547.00	60.53	-1,476.67	1,477.91	0.00	0.00	0.00
7,800.00	0.00	0.00	7,597.00	60.53	-1,476.67	1,477.91	0.00	0.00	0.00
7,900.00	0.00	0.00	7,697.00	60.53	-1,476.67	1,477.91	0.00	0.00	0.00
8,000.00	0.00	0.00	7,797.00	60.53	-1,476.67	1,477.91	0.00	0.00	0.00
JSAND									
8,100.00	0.00	0.00	7,897.00	60.53	-1,476.67	1,477.91	0.00	0.00	0.00
8,200.00	0.00	0.00	7,997.00	60.53	-1,476.67	1,477.91	0.00	0.00	0.00
PBHL_Riverbend 6-13(1980 FNL 1980 FWL)									
8,235.00	0.00	0.00	8,032.00	60.53	-1,476.67	1,477.91	0.00	0.00	0.00

Database:	EDM 2003.21 Single User Db	Local Co-ordinate Reference:	Well P_Riverbend 6-13
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 6-13	Survey Calculation Method:	Minimum Curvature
Wellbore:	P_Riverbend 6-13		
Design:	PLAN #1 6-21-10 RHS		

Design Targets									
Target Name									
- hit/miss target	Dip Angle	Dip Dir.	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
- Shape	(°)	(°)	(ft)	(ft)	(ft)	(ft)	(ft)		
PBHL_Riverbend 6-13	0.00	0.00	8,032.00	60.53	-1,476.67	1,262,794.26	3,184,353.20	40° 3' 10.368 N	104° 50' 29.184 W
- plan hits target center									
- Circle (radius 50.00)									

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

Formations						
Measured Depth	Vertical Depth				Dip	Dip Direction
(ft)	(ft)		Name	Lithology	(°)	(°)
3,356.46	3,253.00		PARKMAN			
4,743.72	4,583.00		SUSSEX			
7,318.00	7,115.00		NIO			
7,665.00	7,462.00		CODELL			
7,750.00	7,547.00		GREENHORN			
8,100.00	7,897.00		JSAND			

Plan Annotations					
Measured Depth	Vertical Depth	Local Coordinates			
(ft)	(ft)	+N/-S	+E/-W	Comment	
(ft)	(ft)	(ft)	(ft)		
300.00	300.00	0.00	0.00	Start Build 2.00	
1,125.95	1,114.55	4.84	-118.14	Start 4366.10 hold at 1125.95 MD	
5,492.05	5,300.45	55.68	-1,358.52	Start Drop -2.00	
6,318.00	6,115.00	60.53	-1,476.67	Start 1917.00 hold at 6318.00 MD	
8,235.00	8,032.00	60.53	-1,476.67	TD at 8235.00	



US ROCKIES REGION PLANNING

**COLORADO NORTHERN ZONE - 83
Riverbend 7-13 PAD
P_Riverbend 6-13**

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

Anticollision Report

21 June, 2010



Company:	US ROCKIES REGION PLANNING	Local Co-ordinate Reference:	Well P_Riverbend 6-13
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 6-13	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00ft	Output errors are at	2.00 sigma
Reference Wellbore	P_Riverbend 6-13	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	8,235.00	PLAN #1 6-21-10 RHS (P_Riverbend 6-13	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	1,148.82	1,117.44	75.84	29.74	1.645	CC
CHIKUMA UNIT #2 EXISTING - CHIKUMA UNIT #2 EXI	1,200.00	1,166.50	77.22	28.94	1.599	ES, SF
HARRY S CHIKUMA #5 EXISTING - HARRY S CHIKUM	5,147.98	4,892.00	247.91	46.37	1.230	Level 2, CC, ES, SF
HARRY S. CHIKUMA G.U. B #1 EXISTING - HARRY S.	0.00	0.00	566.11			
HARRY S. CHIKUMA G.U. B #1 EXISTING - HARRY S.	400.00	363.58	575.22	561.92	43.256	ES
HARRY S. CHIKUMA G.U. B #1 EXISTING - HARRY S.	8,235.00	7,993.07	1,849.09	1,507.43	5.412	SF
P_Riverbend 21-13 - P_Riverbend 21-13 - PLAN #1 6-21	300.00	300.00	47.87	46.78	43.914	CC, ES
P_Riverbend 21-13 - P_Riverbend 21-13 - PLAN #1 6-21	8,235.00	8,160.95	953.84	899.13	17.434	SF
P_Riverbend 24-13 - P_Riverbend 24-13 - PLAN #1 6-21	300.00	300.00	64.11	63.02	58.807	CC, ES
P_Riverbend 24-13 - P_Riverbend 24-13 - PLAN #1 6-21	700.00	698.70	91.97	89.13	32.487	SF
P_Riverbend 25-13 - P_Riverbend 25-13 - PLAN #1 6-21	300.00	300.00	31.91	30.82	29.277	CC, ES
P_Riverbend 25-13 - P_Riverbend 25-13 - PLAN #1 6-21	8,235.00	8,133.12	921.63	870.30	17.956	SF
P_Riverbend 5-18 - P_Riverbend 5-18 - PLAN #1 6-21-1	300.00	300.00	96.02	94.93	88.084	CC, ES
P_Riverbend 5-18 - P_Riverbend 5-18 - PLAN #1 6-21-1	600.00	587.25	126.72	124.39	54.443	SF
P_Riverbend 7-13 - P_Riverbend 7-13 - PLAN #1 6-21-1	300.00	300.00	15.96	14.87	14.641	CC, ES
P_Riverbend 7-13 - P_Riverbend 7-13 - PLAN #1 6-21-1	400.00	399.98	17.70	16.18	11.596	SF
P_Riverbend 8-13 - P_Riverbend 8-13 - PLAN #1 6-21-1	300.00	300.00	80.07	78.98	73.447	CC, ES
P_Riverbend 8-13 - P_Riverbend 8-13 - PLAN #1 6-21-1	800.00	797.47	123.55	120.28	37.776	SF

Offset Design Riverbend 7-13 PAD - CHIKUMA UNIT #2 EXISTING - CHIKUMA UNIT #2 EXISTING - CHIKUMA UNIT												
Survey Program: 0-UNKNOWN												
Reference												
Offset												
Semi Major Axis												
Distance												
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor
0.00	0.00	0.00	0.00	0.00	0.00	-70.90	45.17	-130.45	139.09			
100.00	100.00	82.35	82.34	0.10	1.65	-70.67	45.76	-130.45	138.24	136.50	1.74	79.342
200.00	200.00	181.51	181.48	0.32	5.27	-69.78	48.04	-130.45	139.02	133.44	5.58	24.914
300.00	300.00	281.29	281.20	0.55	9.28	-68.46	51.49	-130.45	140.26	130.46	9.80	14.318
400.00	399.98	381.21	381.06	0.76	13.29	20.76	54.98	-130.45	139.94	125.91	14.04	9.970
500.00	499.84	481.02	480.81	0.98	17.30	22.91	58.46	-130.45	136.51	118.28	18.23	7.488
600.00	599.45	580.58	580.31	1.22	21.30	25.84	61.94	-130.45	130.13	107.73	22.40	5.808
700.00	698.70	679.79	679.46	1.50	25.28	29.88	65.40	-130.45	121.08	94.53	26.55	4.560
800.00	797.47	778.52	778.12	1.83	29.25	35.58	68.85	-130.45	109.85	79.15	30.70	3.578
900.00	895.62	876.64	876.19	2.20	33.19	43.83	72.27	-130.45	97.34	62.44	34.90	2.789

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 6-13
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 6-13	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00ft	Output errors are at	2.00 sigma
Reference Wellbore	P_Riverbend 6-13	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	
1,000.00	993.06	974.05	973.53	2.64	37.10	55.93	75.67	-130.45	85.33	46.04	39.28	2.172	
1,100.00	1,089.64	1,070.61	1,070.04	3.13	40.98	73.05	79.04	-130.45	77.07	33.19	43.87	1.757	
1,125.95	1,114.55	1,095.52	1,094.93	3.27	41.98	78.26	79.91	-130.45	76.11	31.05	45.06	1.689	
1,148.82	1,136.48	1,117.44	1,116.84	3.40	42.86	82.97	80.68	-130.45	75.84	29.74	46.09	1.645 CC	
1,200.00	1,185.55	1,166.50	1,165.87	3.68	44.83	93.41	82.39	-130.45	77.22	28.94	48.28	1.599 ES, SF	
1,300.00	1,281.42	1,262.35	1,261.67	4.25	48.68	111.54	85.73	-130.45	87.21	35.06	52.15	1.672	
1,400.00	1,377.29	1,358.21	1,357.46	4.82	52.53	125.10	89.08	-130.45	104.27	48.51	55.76	1.870	
1,500.00	1,473.17	1,454.06	1,453.26	5.40	56.38	134.64	92.42	-130.45	125.55	66.17	59.38	2.115	
1,600.00	1,569.04	1,549.92	1,549.06	5.99	60.23	141.36	95.77	-130.45	149.25	86.19	63.07	2.367	
1,700.00	1,664.91	1,645.77	1,644.85	6.58	64.08	146.23	99.11	-130.45	174.40	107.56	66.84	2.609	
1,800.00	1,760.78	1,741.63	1,740.65	7.17	67.93	149.88	102.46	-130.45	200.44	129.78	70.66	2.837	
1,900.00	1,856.66	1,837.48	1,836.45	7.76	71.78	152.68	105.80	-130.45	227.07	152.55	74.52	3.047	
2,000.00	1,952.53	1,933.34	1,932.24	8.36	75.63	154.90	109.15	-130.45	254.10	175.69	78.42	3.240	
2,100.00	2,048.40	2,029.19	2,028.04	8.95	79.48	156.70	112.49	-130.45	281.43	199.10	82.33	3.418	
2,200.00	2,144.27	2,125.05	2,123.83	9.55	83.33	158.17	115.84	-130.45	308.96	222.70	86.26	3.582	
2,300.00	2,240.15	2,220.90	2,219.63	10.15	87.18	159.41	119.19	-130.45	336.66	246.45	90.20	3.732	
2,400.00	2,336.02	2,316.76	2,315.43	10.74	91.03	160.46	122.53	-130.45	364.47	270.32	94.15	3.871	
2,500.00	2,431.89	2,412.61	2,411.22	11.34	94.88	161.36	125.88	-130.45	392.39	294.28	98.11	3.999	
2,600.00	2,527.76	2,508.47	2,507.02	11.94	98.73	162.14	129.22	-130.45	420.38	318.31	102.07	4.118	
2,700.00	2,623.64	2,604.32	2,602.82	12.54	102.58	162.82	132.57	-130.45	448.44	342.40	106.04	4.229	
2,800.00	2,719.51	2,700.18	2,698.61	13.14	106.43	163.42	135.91	-130.45	476.54	366.53	110.01	4.332	
2,900.00	2,815.38	2,796.03	2,794.41	13.74	110.28	163.96	139.26	-130.45	504.69	390.71	113.99	4.428	
3,000.00	2,911.26	2,891.89	2,890.21	14.34	114.13	164.44	142.60	-130.45	532.88	414.92	117.96	4.517	
3,100.00	3,007.13	2,987.74	2,986.00	14.94	117.98	164.87	145.95	-130.45	561.10	439.16	121.94	4.601	
3,200.00	3,103.00	3,083.60	3,081.80	15.54	121.83	165.26	149.29	-130.45	589.34	463.42	125.92	4.680	
3,300.00	3,198.87	3,179.45	3,177.60	16.14	125.68	165.62	152.64	-130.45	617.61	487.70	129.90	4.754	
3,400.00	3,294.75	3,275.31	3,273.39	16.74	129.53	165.94	155.98	-130.45	645.89	512.01	133.89	4.824	
3,500.00	3,390.62	3,371.16	3,369.19	17.35	133.38	166.24	159.33	-130.45	674.20	536.33	137.87	4.890	
3,600.00	3,486.49	3,467.02	3,464.98	17.95	137.23	166.51	162.67	-130.45	702.52	560.66	141.86	4.952	
3,700.00	3,582.36	3,562.87	3,560.78	18.55	141.08	166.76	166.02	-130.45	730.85	585.01	145.85	5.011	
3,800.00	3,678.24	3,658.73	3,656.58	19.15	144.93	166.99	169.36	-130.45	759.20	609.36	149.83	5.067	
3,900.00	3,774.11	3,754.58	3,752.37	19.75	148.78	167.21	172.71	-130.45	787.55	633.73	153.82	5.120	
4,000.00	3,869.98	3,850.44	3,848.17	20.35	152.63	167.41	176.06	-130.45	815.92	658.11	157.81	5.170	
4,100.00	3,965.85	3,946.29	3,943.97	20.96	156.48	167.60	179.40	-130.45	844.29	682.49	161.80	5.218	
4,200.00	4,061.73	4,042.14	4,039.76	21.56	160.33	167.77	182.75	-130.45	872.67	706.88	165.79	5.264	
4,300.00	4,157.60	4,138.00	4,135.56	22.16	164.18	167.93	186.09	-130.45	901.06	731.28	169.78	5.307	
4,400.00	4,253.47	4,233.85	4,231.36	22.76	168.03	168.09	189.44	-130.45	929.46	755.68	173.77	5.349	
4,500.00	4,349.34	4,329.71	4,327.15	23.36	171.88	168.23	192.78	-130.45	957.86	780.09	177.76	5.388	
4,600.00	4,445.22	4,425.56	4,422.95	23.97	175.74	168.37	196.13	-130.45	986.26	804.51	181.76	5.426	
4,700.00	4,541.09	4,521.42	4,518.75	24.57	179.59	168.50	199.47	-130.45	1,014.67	828.93	185.75	5.463	
4,800.00	4,636.96	4,617.27	4,614.54	25.17	183.44	168.62	202.82	-130.45	1,043.09	853.35	189.74	5.497	
4,900.00	4,732.83	4,713.13	4,710.34	25.77	187.29	168.74	206.16	-130.45	1,071.51	877.78	193.73	5.531	
5,000.00	4,828.71	4,765.00	4,762.18	26.38	189.37	168.80	207.97	-130.45	1,100.81	904.78	196.04	5.615	
5,100.00	4,924.58	4,765.00	4,762.18	26.98	189.37	168.80	207.97	-130.45	1,136.99	940.64	196.35	5.791	
5,200.00	5,020.45	4,765.00	4,762.18	27.58	189.37	168.80	207.97	-130.45	1,180.56	983.89	196.67	6.003	
5,300.00	5,116.32	4,765.00	4,762.18	28.18	189.37	168.80	207.97	-130.45	1,230.72	1,033.74	196.98	6.248	
5,400.00	5,212.20	4,765.00	4,762.18	28.79	189.37	168.80	207.97	-130.45	1,286.72	1,089.42	197.30	6.522	
5,492.05	5,300.45	4,765.00	4,762.18	29.34	189.37	168.80	207.97	-130.45	1,342.79	1,145.20	197.59	6.796	
5,500.00	5,308.07	4,765.00	4,762.18	29.38	189.37	168.82	207.97	-130.45	1,347.81	1,150.05	197.75	6.816	
5,600.00	5,404.50	4,765.00	4,762.18	29.81	189.37	169.14	207.97	-130.45	1,411.87	1,212.17	199.70	7.070	
5,700.00	5,501.78	4,765.00	4,762.18	30.20	189.37	169.46	207.97	-130.45	1,477.42	1,276.02	201.40	7.336	
5,800.00	5,599.82	4,765.00	4,762.18	30.53	189.37	169.79	207.97	-130.45	1,544.21	1,341.36	202.86	7.612	

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 6-13
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 6-13	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00ft	Output errors are at	2.00 sigma
Reference Wellbore	P_Riverbend 6-13	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	
5,900.00	5,698.48	4,765.00	4,762.18	30.82	189.37	170.11	207.97	-130.45	1,612.01	1,407.95	204.06	7.900	
6,000.00	5,797.66	4,765.00	4,762.18	31.06	189.37	170.43	207.97	-130.45	1,680.60	1,475.60	205.01	8.198	
6,100.00	5,897.21	4,765.00	4,762.18	31.26	189.37	170.74	207.97	-130.45	1,749.83	1,544.13	205.70	8.507	
6,200.00	5,997.04	4,765.00	4,762.18	31.41	189.37	171.05	207.97	-130.45	1,819.54	1,613.41	206.13	8.827	
6,300.00	6,097.00	4,765.00	4,762.18	31.51	189.37	171.35	207.97	-130.45	1,889.59	1,683.28	206.30	9.159	
6,318.00	6,115.00	4,765.00	4,762.18	31.52	189.37	83.75	207.97	-130.45	1,902.22	1,695.92	206.31	9.220	
6,400.00	6,197.00	4,765.00	4,762.18	31.59	189.37	83.75	207.97	-130.45	1,960.68	1,754.25	206.43	9.498	
6,500.00	6,297.00	4,765.00	4,762.18	31.69	189.37	83.75	207.97	-130.45	2,034.17	1,827.58	206.59	9.846	
6,600.00	6,397.00	4,765.00	4,762.18	31.78	189.37	83.75	207.97	-130.45	2,109.83	1,903.09	206.75	10.205	
6,700.00	6,497.00	4,765.00	4,762.18	31.88	189.37	83.75	207.97	-130.45	2,187.46	1,980.55	206.91	10.572	
6,800.00	6,597.00	4,765.00	4,762.18	31.97	189.37	83.75	207.97	-130.45	2,266.83	2,059.77	207.07	10.947	
6,900.00	6,697.00	4,765.00	4,762.18	32.07	189.37	83.75	207.97	-130.45	2,347.78	2,140.56	207.23	11.329	
7,000.00	6,797.00	4,765.00	4,762.18	32.17	189.37	83.75	207.97	-130.45	2,430.16	2,222.76	207.39	11.718	
7,100.00	6,897.00	4,765.00	4,762.18	32.27	189.37	83.75	207.97	-130.45	2,513.81	2,306.25	207.55	12.112	
7,200.00	6,997.00	4,765.00	4,762.18	32.37	189.37	83.75	207.97	-130.45	2,598.61	2,390.89	207.72	12.510	
7,300.00	7,097.00	4,765.00	4,762.18	32.47	189.37	83.75	207.97	-130.45	2,684.46	2,476.58	207.89	12.913	
7,400.00	7,197.00	4,765.00	4,762.18	32.58	189.37	83.75	207.97	-130.45	2,771.27	2,563.21	208.06	13.320	
7,500.00	7,297.00	4,765.00	4,762.18	32.68	189.37	83.75	207.97	-130.45	2,858.93	2,650.71	208.22	13.730	
7,600.00	7,397.00	4,765.00	4,762.18	32.79	189.37	83.75	207.97	-130.45	2,947.38	2,738.98	208.39	14.143	
7,700.00	7,497.00	4,765.00	4,762.18	32.90	189.37	83.75	207.97	-130.45	3,036.55	2,827.98	208.57	14.559	
7,800.00	7,597.00	4,765.00	4,762.18	33.01	189.37	83.75	207.97	-130.45	3,126.37	2,917.63	208.74	14.977	
7,900.00	7,697.00	4,765.00	4,762.18	33.12	189.37	83.75	207.97	-130.45	3,216.79	3,007.88	208.91	15.398	
8,000.00	7,797.00	4,765.00	4,762.18	33.23	189.37	83.75	207.97	-130.45	3,307.76	3,098.68	209.09	15.820	
8,100.00	7,897.00	4,765.00	4,762.18	33.34	189.37	83.75	207.97	-130.45	3,399.25	3,189.98	209.26	16.244	
8,200.00	7,997.00	4,765.00	4,762.18	33.45	189.37	83.75	207.97	-130.45	3,491.19	3,281.75	209.44	16.669	
8,235.00	8,032.00	4,765.00	4,762.18	33.49	189.37	83.75	207.97	-130.45	3,523.48	3,313.98	209.50	16.818	

Company:	US ROCKIES REGION PLANNING	Local Co-ordinate Reference:	Well P_Riverbend 6-13
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 6-13	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00ft	Output errors are at	2.00 sigma
Reference Wellbore	P_Riverbend 6-13	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	-95.64	-147.85	-1,496.56	1,503.89					
100.00	100.00	90.32	90.32	0.10	1.81	-95.62	-147.14	-1,496.56	1,503.77	1,501.87	1.90	790.718		
200.00	200.00	192.91	192.87	0.32	5.73	-95.52	-144.60	-1,496.56	1,503.53	1,497.50	6.04	249.132		
300.00	300.00	293.03	292.93	0.55	9.75	-95.39	-141.11	-1,496.56	1,503.20	1,492.94	10.26	146.475		
400.00	399.98	392.95	392.79	0.76	13.76	-7.62	-137.63	-1,496.56	1,501.15	1,486.64	14.51	103.478		
500.00	499.84	492.75	492.53	0.98	17.77	-7.52	-134.14	-1,496.56	1,495.64	1,476.96	18.69	80.036		
600.00	599.45	592.32	592.04	1.22	21.77	-7.46	-130.67	-1,496.56	1,486.69	1,463.87	22.82	65.137		
700.00	698.70	691.52	691.18	1.50	25.75	-7.42	-127.21	-1,496.56	1,474.30	1,447.40	26.90	54.811		
800.00	797.47	790.25	789.85	1.83	29.72	-7.40	-123.76	-1,496.56	1,458.49	1,427.60	30.89	47.215		
900.00	895.62	888.37	887.91	2.20	33.66	-7.41	-120.34	-1,496.56	1,439.27	1,404.48	34.78	41.377		
1,000.00	993.06	985.78	985.26	2.64	37.57	-7.45	-116.94	-1,496.56	1,416.66	1,378.10	38.56	36.736		
1,100.00	1,089.64	1,082.35	1,081.77	3.13	41.45	-7.51	-113.57	-1,496.56	1,390.70	1,348.49	42.21	32.947		
1,125.95	1,114.55	1,107.25	1,106.66	3.27	42.45	-7.54	-112.70	-1,496.56	1,383.42	1,340.29	43.13	32.073		
1,200.00	1,185.55	1,178.23	1,177.60	3.68	45.30	-7.54	-110.22	-1,496.56	1,362.32	1,316.25	46.08	29.567		
1,300.00	1,281.42	1,274.09	1,273.39	4.25	49.15	-7.55	-106.88	-1,496.56	1,333.83	1,283.77	50.06	26.646		
1,400.00	1,377.29	1,369.94	1,369.19	4.82	53.00	-7.57	-103.53	-1,496.56	1,305.34	1,251.29	54.04	24.153		
1,500.00	1,473.17	1,465.80	1,464.99	5.40	56.85	-7.58	-100.19	-1,496.56	1,276.85	1,218.81	58.03	22.001		
1,600.00	1,569.04	1,561.65	1,560.78	5.99	60.70	-7.59	-96.84	-1,496.56	1,248.35	1,186.33	62.03	20.126		
1,700.00	1,664.91	1,657.51	1,656.58	6.58	64.55	-7.60	-93.49	-1,496.56	1,219.86	1,153.84	66.02	18.477		
1,800.00	1,760.78	1,753.36	1,752.38	7.17	68.40	-7.62	-90.15	-1,496.56	1,191.37	1,121.35	70.02	17.016		
1,900.00	1,856.66	1,849.22	1,848.17	7.76	72.25	-7.63	-86.80	-1,496.56	1,162.88	1,088.87	74.01	15.712		
2,000.00	1,952.53	1,945.07	1,943.97	8.36	76.10	-7.65	-83.46	-1,496.56	1,134.39	1,056.38	78.01	14.541		
2,100.00	2,048.40	2,040.93	2,039.76	8.95	79.95	-7.66	-80.11	-1,496.56	1,105.90	1,023.89	82.01	13.485		
2,200.00	2,144.27	2,136.78	2,135.56	9.55	83.80	-7.68	-76.77	-1,496.56	1,077.40	991.40	86.01	12.527		
2,300.00	2,240.15	2,232.64	2,231.36	10.15	87.65	-7.70	-73.42	-1,496.56	1,048.91	958.90	90.01	11.653		
2,400.00	2,336.02	2,328.49	2,327.15	10.74	91.50	-7.71	-70.08	-1,496.56	1,020.42	926.41	94.01	10.854		
2,500.00	2,431.89	2,424.35	2,422.95	11.34	95.35	-7.73	-66.73	-1,496.56	991.93	893.92	98.01	10.120		
2,600.00	2,527.76	2,520.20	2,518.75	11.94	99.20	-7.76	-63.39	-1,496.56	963.44	861.43	102.01	9.444		
2,700.00	2,623.64	2,616.06	2,614.54	12.54	103.05	-7.78	-60.04	-1,496.56	934.95	828.93	106.02	8.819		
2,800.00	2,719.51	2,711.91	2,710.34	13.14	106.90	-7.80	-56.70	-1,496.56	906.46	796.44	110.02	8.239		
2,900.00	2,815.38	2,807.77	2,806.14	13.74	110.75	-7.83	-53.35	-1,496.56	877.97	763.94	114.02	7.700		
3,000.00	2,911.26	2,903.62	2,901.93	14.34	114.60	-7.85	-50.01	-1,496.56	849.48	731.45	118.03	7.197		
3,100.00	3,007.13	2,999.47	2,997.73	14.94	118.45	-7.88	-46.66	-1,496.56	820.99	698.96	122.03	6.728		
3,200.00	3,103.00	3,095.33	3,093.53	15.54	122.30	-7.91	-43.32	-1,496.56	792.50	666.46	126.04	6.288		
3,300.00	3,198.87	3,191.18	3,189.32	16.14	126.15	-7.95	-39.97	-1,496.56	764.01	633.97	130.04	5.875		
3,400.00	3,294.75	3,287.04	3,285.12	16.74	130.00	-7.98	-36.62	-1,496.56	735.52	601.47	134.05	5.487		
3,500.00	3,390.62	3,382.89	3,380.91	17.35	133.85	-8.02	-33.28	-1,496.56	707.03	568.98	138.05	5.121		
3,600.00	3,486.49	3,478.75	3,476.71	17.95	137.70	-8.06	-29.93	-1,496.56	678.54	536.48	142.06	4.776		
3,700.00	3,582.36	3,574.60	3,572.51	18.55	141.55	-8.11	-26.59	-1,496.56	650.05	503.98	146.07	4.450		
3,800.00	3,678.24	3,670.46	3,668.30	19.15	145.41	-8.15	-23.24	-1,496.56	621.56	471.49	150.08	4.142		
3,900.00	3,774.11	3,766.31	3,764.10	19.75	149.26	-8.21	-19.90	-1,496.56	593.08	438.99	154.08	3.849		
4,000.00	3,869.98	3,862.17	3,859.90	20.35	153.11	-8.27	-16.55	-1,496.56	564.59	406.49	158.09	3.571		
4,100.00	3,965.85	3,958.02	3,955.69	20.96	156.96	-8.33	-13.21	-1,496.56	536.10	374.00	162.10	3.307		
4,200.00	4,061.73	4,053.88	4,051.49	21.56	160.81	-8.41	-9.86	-1,496.56	507.62	341.50	166.12	3.056		
4,300.00	4,157.60	4,149.73	4,147.29	22.16	164.66	-8.49	-6.52	-1,496.56	479.13	309.00	170.13	2.816		
4,400.00	4,253.47	4,245.59	4,243.08	22.76	168.51	-8.58	-3.17	-1,496.56	450.65	276.50	174.14	2.588		
4,500.00	4,349.34	4,341.44	4,338.88	23.36	172.36	-8.69	0.17	-1,496.56	422.16	244.00	178.16	2.370		
4,600.00	4,445.22	4,437.30	4,434.68	23.97	176.21	-8.81	3.52	-1,496.56	393.68	211.50	182.18	2.161		
4,700.00	4,541.09	4,533.15	4,530.47	24.57	180.06	-8.94	6.86	-1,496.56	365.20	179.00	186.20	1.961		
4,800.00	4,636.96	4,629.01	4,626.27	25.17	183.91	-9.11	10.21	-1,496.56	336.73	146.50	190.23	1.770		
4,900.00	4,732.83	4,724.86	4,722.06	25.77	187.76	-9.30	13.55	-1,496.56	308.25	113.99	194.26	1.587		
5,000.00	4,828.71	4,820.72	4,817.86	26.38	191.61	-9.53	16.90	-1,496.56	279.78	81.48	198.30	1.411 Level 3		

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 6-13
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 6-13	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00ft	Output errors are at	2.00 sigma
Reference Wellbore	P_Riverbend 6-13	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	
5,100.00	4,924.58	4,892.00	4,889.10	26.98	194.47	-9.73	19.39	-1,496.56	252.51	51.13	201.39	1.254	Level 3
5,147.98	4,970.58	4,892.00	4,889.10	27.27	194.47	-9.73	19.39	-1,496.56	247.91	46.37	201.55	1.230	Level 2, CC, ES, SF
5,200.00	5,020.45	4,892.00	4,889.10	27.58	194.47	-9.73	19.39	-1,496.56	253.31	51.61	201.71	1.256	Level 3
5,300.00	5,116.32	4,892.00	4,889.10	28.18	194.47	-9.73	19.39	-1,496.56	290.81	88.79	202.03	1.439	Level 3
5,400.00	5,212.20	4,892.00	4,889.10	28.79	194.47	-9.73	19.39	-1,496.56	353.52	151.17	202.35	1.747	
5,492.05	5,300.45	4,892.00	4,889.10	29.34	194.47	-9.73	19.39	-1,496.56	424.09	221.44	202.64	2.093	
5,500.00	5,308.07	4,892.00	4,889.10	29.38	194.47	-9.77	19.39	-1,496.56	430.57	227.73	202.83	2.123	
5,600.00	5,404.50	4,892.00	4,889.10	29.81	194.47	-10.37	19.39	-1,496.56	516.49	311.38	205.10	2.518	
5,700.00	5,501.78	4,892.00	4,889.10	30.20	194.47	-11.23	19.39	-1,496.56	608.06	400.89	207.17	2.935	
5,800.00	5,599.82	4,892.00	4,889.10	30.53	194.47	-12.47	19.39	-1,496.56	702.98	493.94	209.04	3.363	
5,900.00	5,698.48	4,892.00	4,889.10	30.82	194.47	-14.33	19.39	-1,496.56	799.96	589.18	210.78	3.795	
6,000.00	5,797.66	4,892.00	4,889.10	31.06	194.47	-17.26	19.39	-1,496.56	898.25	685.74	212.51	4.227	
6,100.00	5,897.21	4,892.00	4,889.10	31.26	194.47	-22.32	19.39	-1,496.56	997.35	782.80	214.54	4.649	
6,200.00	5,997.04	4,892.00	4,889.10	31.41	194.47	-32.53	19.39	-1,496.56	1,096.93	879.12	217.81	5.036	
6,300.00	6,097.00	4,892.00	4,889.10	31.51	194.47	-58.43	19.39	-1,496.56	1,196.78	972.32	224.46	5.332	
6,318.00	6,115.00	4,892.00	4,889.10	31.52	194.47	-154.20	19.39	-1,496.56	1,214.76	988.90	225.86	5.378	
6,400.00	6,197.00	4,892.00	4,889.10	31.59	194.47	-154.20	19.39	-1,496.56	1,296.71	1,070.77	225.93	5.739	
6,500.00	6,297.00	4,892.00	4,889.10	31.69	194.47	-154.20	19.39	-1,496.56	1,396.65	1,170.62	226.03	6.179	
6,600.00	6,397.00	4,892.00	4,889.10	31.78	194.47	-154.20	19.39	-1,496.56	1,496.60	1,270.47	226.13	6.618	
6,700.00	6,497.00	4,892.00	4,889.10	31.88	194.47	-154.20	19.39	-1,496.56	1,596.56	1,370.32	226.23	7.057	
6,800.00	6,597.00	4,892.00	4,889.10	31.97	194.47	-154.20	19.39	-1,496.56	1,696.52	1,470.18	226.33	7.496	
6,900.00	6,697.00	4,892.00	4,889.10	32.07	194.47	-154.20	19.39	-1,496.56	1,796.48	1,570.05	226.44	7.934	
7,000.00	6,797.00	4,892.00	4,889.10	32.17	194.47	-154.20	19.39	-1,496.56	1,896.45	1,669.91	226.54	8.371	
7,100.00	6,897.00	4,892.00	4,889.10	32.27	194.47	-154.20	19.39	-1,496.56	1,996.42	1,769.78	226.65	8.809	
7,200.00	6,997.00	4,892.00	4,889.10	32.37	194.47	-154.20	19.39	-1,496.56	2,096.40	1,869.65	226.75	9.245	
7,300.00	7,097.00	4,892.00	4,889.10	32.47	194.47	-154.20	19.39	-1,496.56	2,196.38	1,969.52	226.86	9.682	
7,400.00	7,197.00	4,892.00	4,889.10	32.58	194.47	-154.20	19.39	-1,496.56	2,296.36	2,069.38	226.97	10.117	
7,500.00	7,297.00	4,892.00	4,889.10	32.68	194.47	-154.20	19.39	-1,496.56	2,396.34	2,169.25	227.08	10.553	
7,600.00	7,397.00	4,892.00	4,889.10	32.79	194.47	-154.20	19.39	-1,496.56	2,496.32	2,269.13	227.19	10.988	
7,700.00	7,497.00	4,892.00	4,889.10	32.90	194.47	-154.20	19.39	-1,496.56	2,596.30	2,369.00	227.31	11.422	
7,800.00	7,597.00	4,892.00	4,889.10	33.01	194.47	-154.20	19.39	-1,496.56	2,696.29	2,468.87	227.42	11.856	
7,900.00	7,697.00	4,892.00	4,889.10	33.12	194.47	-154.20	19.39	-1,496.56	2,796.27	2,568.74	227.54	12.289	
8,000.00	7,797.00	4,892.00	4,889.10	33.23	194.47	-154.20	19.39	-1,496.56	2,896.26	2,668.61	227.66	12.722	
8,100.00	7,897.00	4,892.00	4,889.10	33.34	194.47	-154.20	19.39	-1,496.56	2,996.25	2,768.48	227.77	13.155	
8,200.00	7,997.00	4,892.00	4,889.10	33.45	194.47	-154.20	19.39	-1,496.56	3,096.24	2,868.35	227.89	13.586	
8,235.00	8,032.00	4,892.00	4,889.10	33.49	194.47	-154.20	19.39	-1,496.56	3,131.23	2,903.30	227.93	13.737	

Company:	US ROCKIES REGION PLANNING	Local Co-ordinate Reference:	Well P_Riverbend 6-13
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 6-13	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00ft	Output errors are at	2.00 sigma
Reference Wellbore	P_Riverbend 6-13	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	22.79	521.65	219.19	566.11				
100.00	100.00	75.15	75.15	0.10	1.50	22.77	522.14	219.19	566.32	564.72	1.60	353.953	
200.00	200.00	166.77	166.74	0.32	4.68	22.70	524.07	219.19	568.27	563.27	5.00	113.701	
300.00	300.00	263.66	263.58	0.55	8.57	22.57	527.36	219.19	571.39	562.28	9.11	62.723	
400.00	399.98	363.58	363.44	0.76	12.58	110.18	530.84	219.19	575.22	561.92	13.30	43.256 ES	
500.00	499.84	463.39	463.19	0.98	16.59	110.44	534.33	219.19	580.26	562.76	17.50	33.165	
600.00	599.45	562.96	562.69	1.22	20.59	110.98	537.80	219.19	586.56	564.86	21.70	27.032	
700.00	698.70	662.16	661.84	1.50	24.57	111.80	541.26	219.19	594.24	568.33	25.91	22.939	
800.00	797.47	760.89	760.51	1.83	28.54	112.86	544.71	219.19	603.43	573.32	30.11	20.040	
900.00	895.62	859.01	858.57	2.20	32.48	114.15	548.13	219.19	614.32	580.01	34.31	17.905	
1,000.00	993.06	956.42	955.92	2.64	36.39	115.62	551.53	219.19	627.11	588.62	38.49	16.292	
1,100.00	1,089.64	1,052.98	1,052.42	3.13	40.27	117.24	554.90	219.19	642.04	599.40	42.64	15.058	
1,125.95	1,114.55	1,077.89	1,077.31	3.27	41.27	117.68	555.77	219.19	646.29	602.58	43.71	14.787	
1,200.00	1,185.55	1,148.87	1,148.25	3.68	44.12	119.15	558.25	219.19	658.87	612.05	46.82	14.072	
1,300.00	1,281.42	1,244.73	1,244.05	4.25	47.97	121.05	561.60	219.19	676.53	625.51	51.02	13.261	
1,400.00	1,377.29	1,340.58	1,339.85	4.82	51.82	122.85	564.94	219.19	694.91	639.71	55.20	12.589	
1,500.00	1,473.17	1,436.44	1,435.64	5.40	55.67	124.57	568.29	219.19	713.96	654.59	59.37	12.026	
1,600.00	1,569.04	1,532.29	1,531.44	5.99	59.52	126.20	571.63	219.19	733.62	670.10	63.52	11.549	
1,700.00	1,664.91	1,628.15	1,627.24	6.58	63.37	127.74	574.98	219.19	753.84	686.18	67.66	11.141	
1,800.00	1,760.78	1,724.00	1,723.03	7.17	67.22	129.21	578.32	219.19	774.59	702.80	71.79	10.790	
1,900.00	1,856.66	1,819.86	1,818.83	7.76	71.07	130.60	581.67	219.19	795.81	719.91	75.90	10.485	
2,000.00	1,952.53	1,915.71	1,914.62	8.36	74.92	131.92	585.01	219.19	817.47	737.47	80.00	10.218	
2,100.00	2,048.40	2,011.57	2,010.42	8.95	78.77	133.18	588.36	219.19	839.55	755.46	84.09	9.984	
2,200.00	2,144.27	2,107.42	2,106.22	9.55	82.62	134.37	591.70	219.19	862.00	773.83	88.17	9.777	
2,300.00	2,240.15	2,203.27	2,202.01	10.15	86.47	135.51	595.05	219.19	884.80	792.56	92.24	9.593	
2,400.00	2,336.02	2,299.13	2,297.81	10.74	90.32	136.58	598.39	219.19	907.92	811.62	96.30	9.428	
2,500.00	2,431.89	2,394.98	2,393.61	11.34	94.17	137.61	601.74	219.19	931.33	830.98	100.35	9.281	
2,600.00	2,527.76	2,490.84	2,489.40	11.94	98.02	138.59	605.08	219.19	955.03	850.63	104.39	9.148	
2,700.00	2,623.64	2,586.69	2,585.20	12.54	101.87	139.52	608.43	219.19	978.98	870.54	108.43	9.028	
2,800.00	2,719.51	2,682.55	2,681.00	13.14	105.72	140.40	611.78	219.19	1,003.16	890.70	112.47	8.920	
2,900.00	2,815.38	2,778.40	2,776.79	13.74	109.57	141.25	615.12	219.19	1,027.57	911.08	116.49	8.821	
3,000.00	2,911.26	2,874.26	2,872.59	14.34	113.42	142.06	618.47	219.19	1,052.19	931.67	120.51	8.731	
3,100.00	3,007.13	2,970.11	2,968.39	14.94	117.27	142.83	621.81	219.19	1,076.99	952.46	124.53	8.648	
3,200.00	3,103.00	3,065.97	3,064.18	15.54	121.12	143.56	625.16	219.19	1,101.97	973.43	128.55	8.573	
3,300.00	3,198.87	3,161.82	3,159.98	16.14	124.97	144.27	628.50	219.19	1,127.12	994.57	132.56	8.503	
3,400.00	3,294.75	3,257.68	3,255.77	16.74	128.83	144.94	631.85	219.19	1,152.43	1,015.86	136.56	8.439	
3,500.00	3,390.62	3,353.53	3,351.57	17.35	132.68	145.59	635.19	219.19	1,177.88	1,037.31	140.57	8.379	
3,600.00	3,486.49	3,449.39	3,447.37	17.95	136.53	146.21	638.54	219.19	1,203.47	1,058.90	144.57	8.324	
3,700.00	3,582.36	3,545.24	3,543.16	18.55	140.38	146.80	641.88	219.19	1,229.18	1,080.61	148.57	8.273	
3,800.00	3,678.24	3,641.10	3,638.96	19.15	144.23	147.37	645.23	219.19	1,255.02	1,102.45	152.57	8.226	
3,900.00	3,774.11	3,736.95	3,734.76	19.75	148.08	147.92	648.57	219.19	1,280.96	1,124.40	156.56	8.182	
4,000.00	3,869.98	3,832.81	3,830.55	20.35	151.93	148.44	651.92	219.19	1,307.02	1,146.46	160.56	8.140	
4,100.00	3,965.85	3,928.66	3,926.35	20.96	155.78	148.95	655.26	219.19	1,333.17	1,168.62	164.55	8.102	
4,200.00	4,061.73	4,024.52	4,022.15	21.56	159.63	149.43	658.61	219.19	1,359.42	1,190.88	168.54	8.066	
4,300.00	4,157.60	4,120.37	4,117.94	22.16	163.48	149.90	661.95	219.19	1,385.76	1,213.22	172.53	8.032	
4,400.00	4,253.47	4,216.23	4,213.74	22.76	167.33	150.35	665.30	219.19	1,412.18	1,235.65	176.52	8.000	
4,500.00	4,349.34	4,312.08	4,309.54	23.36	171.18	150.78	668.64	219.19	1,438.68	1,258.16	180.51	7.970	
4,600.00	4,445.22	4,407.94	4,405.33	23.97	175.03	151.20	671.99	219.19	1,465.25	1,280.75	184.50	7.942	
4,700.00	4,541.09	4,503.79	4,501.13	24.57	178.88	151.61	675.34	219.19	1,491.89	1,303.41	188.49	7.915	
4,800.00	4,636.96	4,599.65	4,596.92	25.17	182.73	151.99	678.68	219.19	1,518.61	1,326.13	192.47	7.890	
4,900.00	4,732.83	4,695.50	4,692.72	25.77	186.58	152.37	682.03	219.19	1,545.38	1,348.92	196.46	7.866	
5,000.00	4,828.71	4,791.36	4,788.52	26.38	190.43	152.73	685.37	219.19	1,572.22	1,371.78	200.44	7.844	

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 6-13
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 6-13	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00ft	Output errors are at	2.00 sigma
Reference Wellbore	P_Riverbend 6-13	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	4,924.58	4,887.21	4,884.31	26.98	194.28	153.09	688.72	219.19	1,599.11	1,394.68	204.43	7.822	
5,200.00	5,020.45	4,983.06	4,980.11	27.58	198.13	153.43	692.06	219.19	1,626.06	1,417.65	208.41	7.802	
5,300.00	5,116.32	5,078.92	5,075.91	28.18	201.98	153.75	695.41	219.19	1,653.06	1,440.66	212.40	7.783	
5,400.00	5,212.20	5,174.77	5,171.70	28.79	205.83	154.07	698.75	219.19	1,680.11	1,463.73	216.38	7.765	
5,492.05	5,300.45	5,263.01	5,259.88	29.34	209.37	154.36	701.83	219.19	1,705.05	1,485.00	220.05	7.749	
5,500.00	5,308.07	5,270.63	5,267.50	29.38	209.68	154.40	702.10	219.19	1,707.19	1,486.70	220.50	7.743	
5,600.00	5,404.50	5,367.03	5,363.85	29.81	213.55	154.90	705.46	219.19	1,732.57	1,506.49	226.08	7.663	
5,700.00	5,501.78	5,464.30	5,461.05	30.20	217.46	155.30	708.86	219.19	1,754.90	1,523.34	231.56	7.579	
5,800.00	5,599.82	5,562.30	5,558.99	30.53	221.39	155.62	712.28	219.19	1,774.15	1,537.25	236.91	7.489	
5,900.00	5,698.48	5,660.93	5,657.56	30.82	225.36	155.87	715.72	219.19	1,790.29	1,548.19	242.09	7.395	
6,000.00	5,797.66	5,760.06	5,756.63	31.06	229.34	156.04	719.18	219.19	1,803.27	1,556.17	247.10	7.298	
6,100.00	5,897.21	5,859.57	5,856.08	31.26	233.33	156.14	722.65	219.19	1,813.09	1,561.20	251.89	7.198	
6,200.00	5,997.04	5,959.34	5,955.79	31.41	237.34	156.16	726.13	219.19	1,819.72	1,563.27	256.46	7.096	
6,300.00	6,097.00	6,059.25	6,055.64	31.51	241.35	156.12	729.62	219.19	1,823.17	1,562.39	260.78	6.991	
6,318.00	6,115.00	6,077.23	6,073.61	31.52	242.08	68.45	730.25	219.19	1,823.46	1,561.92	261.54	6.972	
6,400.00	6,197.00	6,159.19	6,155.52	31.59	245.37	68.37	733.11	219.19	1,824.51	1,559.56	264.95	6.886	
6,500.00	6,297.00	6,259.13	6,255.39	31.69	249.38	68.26	736.60	219.19	1,825.80	1,556.68	269.12	6.784	
6,600.00	6,397.00	6,359.06	6,355.27	31.78	253.40	68.16	740.08	219.19	1,827.10	1,553.80	273.29	6.685	
6,700.00	6,497.00	6,459.00	6,455.15	31.88	257.41	68.06	743.57	219.19	1,828.40	1,550.93	277.47	6.590	
6,800.00	6,597.00	6,558.94	6,555.03	31.97	261.43	67.96	747.06	219.19	1,829.71	1,548.06	281.64	6.497	
6,900.00	6,697.00	6,658.88	6,654.91	32.07	265.44	67.86	750.55	219.19	1,831.02	1,545.20	285.82	6.406	
7,000.00	6,797.00	6,758.82	6,754.78	32.17	269.45	67.76	754.03	219.19	1,832.34	1,542.34	289.99	6.319	
7,100.00	6,897.00	6,858.76	6,854.66	32.27	273.47	67.66	757.52	219.19	1,833.66	1,539.49	294.17	6.233	
7,200.00	6,997.00	6,958.70	6,954.54	32.37	277.48	67.56	761.01	219.19	1,834.99	1,536.64	298.35	6.150	
7,300.00	7,097.00	7,058.64	7,054.42	32.47	281.50	67.46	764.50	219.19	1,836.33	1,533.80	302.53	6.070	
7,400.00	7,197.00	7,158.58	7,154.30	32.58	285.51	67.36	767.99	219.19	1,837.67	1,530.96	306.71	5.992	
7,500.00	7,297.00	7,258.52	7,254.18	32.68	289.53	67.26	771.47	219.19	1,839.02	1,528.12	310.89	5.915	
7,600.00	7,397.00	7,358.46	7,354.05	32.79	293.54	67.16	774.96	219.19	1,840.37	1,525.29	315.08	5.841	
7,700.00	7,497.00	7,458.39	7,453.93	32.90	297.55	67.06	778.45	219.19	1,841.73	1,522.47	319.26	5.769	
7,800.00	7,597.00	7,558.33	7,553.81	33.01	301.57	66.96	781.94	219.19	1,843.09	1,519.65	323.45	5.698	
7,900.00	7,697.00	7,658.27	7,653.69	33.12	305.58	66.86	785.43	219.19	1,844.46	1,516.83	327.63	5.630	
8,000.00	7,797.00	7,758.21	7,753.57	33.23	309.60	66.76	788.91	219.19	1,845.84	1,514.02	331.82	5.563	
8,100.00	7,897.00	7,858.15	7,853.45	33.34	313.61	66.66	792.40	219.19	1,847.22	1,511.21	336.01	5.498	
8,200.00	7,997.00	7,958.09	7,953.32	33.45	317.62	66.56	795.89	219.19	1,848.60	1,508.41	340.19	5.434	
8,235.00	8,032.00	7,993.07	7,988.28	33.49	319.03	66.52	797.11	219.19	1,849.09	1,507.43	341.66	5.412 SF	

Company:	US ROCKIES REGION PLANNING	Local Co-ordinate Reference:	Well P_Riverbend 6-13
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 6-13	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00ft	Output errors are at	2.00 sigma
Reference Wellbore	P_Riverbend 6-13	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	89.55	0.38	47.87	47.87				
100.00	100.00	100.00	100.00	0.10	0.10	89.55	0.38	47.87	47.87	47.68	0.19	250.565	
200.00	200.00	200.00	200.00	0.32	0.32	89.55	0.38	47.87	47.87	47.23	0.64	74.730	
300.00	300.00	300.00	300.00	0.55	0.55	89.55	0.38	47.87	47.87	46.78	1.09	43.914 CC, ES	
400.00	399.98	399.98	399.98	0.76	0.77	177.30	0.38	47.87	49.61	48.09	1.53	32.499	
500.00	499.84	499.84	499.84	0.98	0.99	177.55	0.38	47.87	54.84	52.88	1.96	28.019	
600.00	599.45	599.45	599.45	1.22	1.22	177.88	0.38	47.87	63.55	61.16	2.39	26.559	
700.00	698.70	698.70	698.70	1.50	1.44	178.21	0.38	47.87	75.73	72.90	2.83	26.752	
800.00	797.47	797.47	797.47	1.83	1.66	178.51	0.38	47.87	91.37	88.10	3.27	27.935	
900.00	895.62	895.62	895.62	2.20	1.88	178.76	0.38	47.87	110.44	106.73	3.71	29.751	
1,000.00	993.06	993.06	993.06	2.64	2.10	178.96	0.38	47.87	132.93	128.78	4.16	31.989	
1,100.00	1,089.64	1,093.63	1,093.61	3.13	2.33	178.77	1.38	46.71	157.68	153.07	4.60	34.241	
1,125.95	1,114.55	1,119.87	1,119.83	3.27	2.38	178.60	2.01	45.97	164.22	159.50	4.72	34.779	
1,200.00	1,185.55	1,195.15	1,195.00	3.68	2.55	177.91	4.71	42.84	182.26	177.18	5.09	35.842	
1,300.00	1,281.42	1,297.81	1,297.28	4.25	2.78	176.57	10.47	36.15	204.39	198.80	5.59	36.567	
1,400.00	1,377.29	1,401.41	1,400.09	4.82	3.04	174.85	18.71	26.60	224.02	217.90	6.12	36.630	
1,500.00	1,473.17	1,505.67	1,503.04	5.40	3.33	172.76	29.43	14.15	241.27	234.60	6.68	36.142	
1,600.00	1,569.04	1,610.32	1,605.71	5.99	3.66	170.34	42.66	-1.19	256.33	249.04	7.29	35.180	
1,700.00	1,664.91	1,714.29	1,706.92	6.58	4.04	167.61	58.19	-19.22	269.43	261.46	7.96	33.831	
1,800.00	1,760.78	1,812.70	1,802.39	7.17	4.43	165.05	73.77	-37.30	282.19	273.50	8.69	32.486	
1,900.00	1,856.66	1,911.11	1,897.87	7.76	4.85	162.71	89.35	-55.38	295.46	286.01	9.46	31.243	
2,000.00	1,952.53	2,009.53	1,993.34	8.36	5.28	160.57	104.93	-73.46	309.19	298.92	10.27	30.108	
2,100.00	2,048.40	2,107.94	2,088.82	8.95	5.73	158.62	120.52	-91.54	323.30	312.18	11.12	29.082	
2,200.00	2,144.27	2,206.36	2,184.29	9.55	6.18	156.83	136.10	-109.62	337.76	325.76	11.99	28.159	
2,300.00	2,240.15	2,304.77	2,279.77	10.15	6.64	155.18	151.68	-127.70	352.51	339.62	12.90	27.332	
2,400.00	2,336.02	2,403.18	2,375.25	10.74	7.11	153.67	167.26	-145.78	367.53	353.71	13.82	26.593	
2,500.00	2,431.89	2,501.60	2,470.72	11.34	7.58	152.27	182.84	-163.87	382.79	368.02	14.76	25.931	
2,600.00	2,527.76	2,600.01	2,566.20	11.94	8.05	150.99	198.42	-181.95	398.25	382.53	15.72	25.338	
2,700.00	2,623.64	2,698.43	2,661.67	12.54	8.53	149.80	214.00	-200.03	413.89	397.20	16.68	24.806	
2,800.00	2,719.51	2,796.84	2,757.15	13.14	9.02	148.69	229.59	-218.11	429.69	412.03	17.66	24.328	
2,900.00	2,815.38	2,895.25	2,852.62	13.74	9.50	147.66	245.17	-236.19	445.64	426.99	18.65	23.897	
3,000.00	2,911.26	2,993.67	2,948.10	14.34	9.99	146.71	260.75	-254.27	461.72	442.08	19.64	23.508	
3,100.00	3,007.13	3,092.08	3,043.58	14.94	10.48	145.82	276.33	-272.35	477.92	457.28	20.64	23.155	
3,200.00	3,103.00	3,190.50	3,139.05	15.54	10.97	144.98	291.91	-290.43	494.23	472.58	21.64	22.834	
3,300.00	3,198.87	3,288.91	3,234.53	16.14	11.46	144.20	307.49	-308.51	510.63	487.97	22.65	22.542	
3,400.00	3,294.75	3,387.32	3,330.00	16.74	11.95	143.47	323.07	-326.60	527.11	503.45	23.66	22.275	
3,500.00	3,390.62	3,485.74	3,425.48	17.35	12.44	142.79	338.66	-344.68	543.68	519.00	24.68	22.031	
3,600.00	3,486.49	3,584.15	3,520.95	17.95	12.94	142.14	354.24	-362.76	560.32	534.62	25.70	21.806	
3,700.00	3,582.36	3,682.57	3,616.43	18.55	13.43	141.53	369.82	-380.84	577.02	550.30	26.72	21.599	
3,800.00	3,678.24	3,780.98	3,711.91	19.15	13.93	140.95	385.40	-398.92	593.78	566.05	27.74	21.408	
3,900.00	3,774.11	3,879.39	3,807.38	19.75	14.43	140.41	400.98	-417.00	610.60	581.84	28.76	21.231	
4,000.00	3,869.98	3,977.81	3,902.86	20.35	14.92	139.90	416.56	-435.08	627.47	597.69	29.78	21.067	
4,100.00	3,965.85	4,076.22	3,998.33	20.96	15.42	139.41	432.14	-453.16	644.39	613.58	30.81	20.915	
4,200.00	4,061.73	4,174.64	4,093.81	21.56	15.92	138.95	447.73	-471.24	661.34	629.51	31.84	20.774	
4,300.00	4,157.60	4,273.05	4,189.28	22.16	16.42	138.51	463.31	-489.32	678.34	645.48	32.86	20.641	
4,400.00	4,253.47	4,371.46	4,284.76	22.76	16.92	138.09	478.89	-507.41	695.38	661.49	33.89	20.518	
4,500.00	4,349.34	4,469.88	4,380.24	23.36	17.42	137.69	494.47	-525.49	712.45	677.53	34.92	20.402	
4,600.00	4,445.22	4,568.29	4,475.71	23.97	17.92	137.31	510.05	-543.57	729.55	693.60	35.95	20.294	
4,700.00	4,541.09	4,666.71	4,571.19	24.57	18.42	136.95	525.63	-561.65	746.68	709.70	36.98	20.192	
4,800.00	4,636.96	4,765.12	4,666.66	25.17	18.92	136.60	541.22	-579.73	763.84	725.83	38.01	20.096	
4,900.00	4,732.83	4,863.53	4,762.14	25.77	19.42	136.27	556.80	-597.81	781.03	741.99	39.04	20.006	
5,000.00	4,828.71	4,961.95	4,857.61	26.38	19.92	135.95	572.38	-615.89	798.24	758.17	40.07	19.921	

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 6-13
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 6-13	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00ft	Output errors are at	2.00 sigma
Reference Wellbore	P_Riverbend 6-13	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
5,100.00	4,924.58	5,060.36	4,953.09	26.98	20.42	135.65	587.96	-633.97	815.47	774.37	41.10	19.840	
5,200.00	5,020.45	5,158.78	5,048.57	27.58	20.93	135.36	603.54	-652.05	832.72	790.59	42.13	19.764	
5,300.00	5,116.32	5,257.19	5,144.04	28.18	21.43	135.08	619.12	-670.13	850.00	806.83	43.16	19.692	
5,400.00	5,212.20	5,355.60	5,239.52	28.79	21.93	134.81	634.70	-688.22	867.29	823.09	44.20	19.623	
5,492.05	5,300.45	5,446.20	5,327.40	29.34	22.39	134.58	649.05	-704.86	883.22	838.08	45.15	19.564	
5,500.00	5,308.07	5,454.02	5,334.99	29.38	22.43	134.57	650.29	-706.30	884.59	839.37	45.23	19.559	
5,600.00	5,404.50	5,552.15	5,430.20	29.81	22.93	134.47	665.82	-724.33	900.53	854.32	46.20	19.491	
5,700.00	5,501.78	5,647.94	5,523.49	30.20	23.31	134.29	679.97	-740.74	914.27	867.24	47.03	19.440	
5,800.00	5,599.82	5,743.72	5,617.46	30.53	23.64	134.15	692.07	-754.79	926.01	878.27	47.74	19.397	
5,900.00	5,698.48	5,839.87	5,712.35	30.82	23.92	134.03	702.16	-766.49	935.71	887.36	48.35	19.351	
6,000.00	5,797.66	5,936.32	5,808.01	31.06	24.16	133.94	710.18	-775.79	943.36	894.49	48.87	19.304	
6,100.00	5,897.21	6,033.00	5,904.27	31.26	24.37	133.87	716.10	-782.67	948.93	899.65	49.29	19.254	
6,200.00	5,997.04	6,129.85	6,000.94	31.41	24.53	133.81	719.90	-787.08	952.42	902.82	49.61	19.200	
6,300.00	6,097.00	6,226.80	6,097.85	31.51	24.66	133.78	721.57	-789.02	953.82	903.99	49.83	19.141	
6,318.00	6,115.00	6,244.26	6,115.30	31.52	24.68	46.12	721.65	-789.11	953.85	903.98	49.86	19.130	
6,349.13	6,146.13	6,275.09	6,146.13	31.55	24.72	46.12	721.66	-789.12	953.84	903.92	49.93	19.105	
6,400.00	6,197.00	6,325.96	6,197.00	31.59	24.77	46.12	721.66	-789.12	953.84	903.81	50.04	19.063	
6,500.00	6,297.00	6,425.96	6,297.00	31.69	24.89	46.12	721.66	-789.12	953.84	903.57	50.27	18.975	
6,600.00	6,397.00	6,525.96	6,397.00	31.78	25.02	46.12	721.66	-789.12	953.84	903.34	50.50	18.887	
6,700.00	6,497.00	6,625.96	6,497.00	31.88	25.14	46.12	721.66	-789.12	953.84	903.10	50.74	18.799	
6,800.00	6,597.00	6,725.96	6,597.00	31.97	25.26	46.12	721.66	-789.12	953.84	902.86	50.98	18.710	
6,900.00	6,697.00	6,825.96	6,697.00	32.07	25.39	46.12	721.66	-789.12	953.84	902.62	51.22	18.622	
7,000.00	6,797.00	6,925.96	6,797.00	32.17	25.52	46.12	721.66	-789.12	953.84	902.38	51.47	18.533	
7,100.00	6,897.00	7,025.96	6,897.00	32.27	25.65	46.12	721.66	-789.12	953.84	902.13	51.72	18.444	
7,200.00	6,997.00	7,125.96	6,997.00	32.37	25.78	46.12	721.66	-789.12	953.84	901.88	51.97	18.355	
7,300.00	7,097.00	7,225.96	7,097.00	32.47	25.91	46.12	721.66	-789.12	953.84	901.62	52.22	18.266	
7,400.00	7,197.00	7,325.96	7,197.00	32.58	26.04	46.12	721.66	-789.12	953.84	901.37	52.48	18.177	
7,500.00	7,297.00	7,425.96	7,297.00	32.68	26.17	46.12	721.66	-789.12	953.84	901.11	52.73	18.088	
7,600.00	7,397.00	7,525.96	7,397.00	32.79	26.31	46.12	721.66	-789.12	953.84	900.85	53.00	17.998	
7,700.00	7,497.00	7,625.96	7,497.00	32.90	26.45	46.12	721.66	-789.12	953.84	900.58	53.26	17.909	
7,800.00	7,597.00	7,725.96	7,597.00	33.01	26.58	46.12	721.66	-789.12	953.84	900.32	53.53	17.820	
7,900.00	7,697.00	7,825.96	7,697.00	33.12	26.72	46.12	721.66	-789.12	953.84	900.05	53.79	17.731	
8,000.00	7,797.00	7,925.96	7,797.00	33.23	26.86	46.12	721.66	-789.12	953.84	899.78	54.07	17.642	
8,100.00	7,897.00	8,025.96	7,897.00	33.34	27.00	46.12	721.66	-789.12	953.84	899.50	54.34	17.553	
8,200.00	7,997.00	8,125.96	7,997.00	33.45	27.15	46.12	721.66	-789.12	953.84	899.23	54.62	17.465	
8,235.00	8,032.00	8,160.95	8,032.00	33.49	27.20	46.12	721.66	-789.12	953.84	899.13	54.71	17.434 SF	

Company:	US ROCKIES REGION PLANNING	Local Co-ordinate Reference:	Well P_Riverbend 6-13
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 6-13	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00ft	Output errors are at	2.00 sigma
Reference Wellbore	P_Riverbend 6-13	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						
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning
0.00	0.00	0.00	0.00	0.00	0.00	89.67	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	399.98	399.98	399.98	0.76	0.77	177.40	0.36	64.11	65.85	64.32	1.53	43.135	
500.00	499.84	499.84	499.84	0.98	0.99	177.58	0.36	64.11	71.08	69.12	1.96	36.314	
600.00	599.45	599.45	599.45	1.22	1.22	177.84	0.36	64.11	79.79	77.39	2.39	33.345	
700.00	698.70	698.70	698.70	1.50	1.44	178.12	0.36	64.11	91.97	89.13	2.83	32.487 SF	
800.00	797.47	797.47	797.47	1.83	1.66	178.38	0.36	64.11	107.60	104.33	3.27	32.899	
900.00	895.62	895.62	895.62	2.20	1.88	178.62	0.36	64.11	126.67	122.96	3.71	34.124	
1,000.00	993.06	993.06	993.06	2.64	2.10	178.82	0.36	64.11	149.16	145.01	4.16	35.896	
1,100.00	1,089.64	1,086.28	1,086.27	3.13	2.29	179.32	-0.66	64.90	175.90	171.32	4.57	38.477	
1,125.95	1,114.55	1,110.06	1,110.04	3.27	2.34	179.55	-1.31	65.40	183.70	179.03	4.68	39.277	
1,200.00	1,185.55	1,177.33	1,177.22	3.68	2.46	-179.65	-3.97	67.47	207.05	202.05	5.00	41.416	
1,300.00	1,281.42	1,266.89	1,266.50	4.25	2.64	-178.35	-9.45	71.73	240.34	234.89	5.45	44.138	
1,400.00	1,377.29	1,354.85	1,353.94	4.82	2.82	-176.92	-16.97	77.57	275.70	269.79	5.91	46.686	
1,500.00	1,473.17	1,443.04	1,441.30	5.40	3.03	-175.44	-26.54	85.00	313.09	306.71	6.38	49.038	
1,600.00	1,569.04	1,535.25	1,532.54	5.99	3.27	-174.13	-37.07	93.18	351.14	344.25	6.89	50.954	
1,700.00	1,664.91	1,627.46	1,623.78	6.58	3.53	-173.07	-47.60	101.36	389.31	381.90	7.41	52.537	
1,800.00	1,760.78	1,719.67	1,715.02	7.17	3.80	-172.20	-58.13	109.55	427.58	419.64	7.94	53.855	
1,900.00	1,856.66	1,811.88	1,806.26	7.76	4.07	-171.47	-68.67	117.73	465.92	457.44	8.48	54.963	
2,000.00	1,952.53	1,904.09	1,897.50	8.36	4.36	-170.86	-79.20	125.91	504.31	495.29	9.02	55.903	
2,100.00	2,048.40	1,996.31	1,988.74	8.95	4.65	-170.33	-89.73	134.09	542.75	533.17	9.57	56.707	
2,200.00	2,144.27	2,088.52	2,079.98	9.55	4.94	-169.87	-100.27	142.27	581.21	571.09	10.13	57.400	
2,300.00	2,240.15	2,180.73	2,171.22	10.15	5.24	-169.47	-110.80	150.45	619.71	609.03	10.68	58.004	
2,400.00	2,336.02	2,272.94	2,262.47	10.74	5.55	-169.11	-121.33	158.64	658.23	646.99	11.25	58.533	
2,500.00	2,431.89	2,365.15	2,353.71	11.34	5.86	-168.80	-131.86	166.82	696.77	684.96	11.81	59.000	
2,600.00	2,527.76	2,457.36	2,444.95	11.94	6.17	-168.51	-142.40	175.00	735.33	722.95	12.38	59.414	
2,700.00	2,623.64	2,549.57	2,536.19	12.54	6.48	-168.26	-152.93	183.18	773.90	760.95	12.94	59.784	
2,800.00	2,719.51	2,641.78	2,627.43	13.14	6.79	-168.03	-163.46	191.36	812.48	798.96	13.52	60.115	
2,900.00	2,815.38	2,733.99	2,718.67	13.74	7.11	-167.82	-174.00	199.54	851.07	836.98	14.09	60.414	
3,000.00	2,911.26	2,826.20	2,809.91	14.34	7.42	-167.63	-184.53	207.73	889.67	875.01	14.66	60.685	
3,100.00	3,007.13	2,918.41	2,901.15	14.94	7.74	-167.45	-195.06	215.91	928.28	913.04	15.24	60.930	
3,200.00	3,103.00	3,010.62	2,992.39	15.54	8.06	-167.29	-205.60	224.09	966.89	951.08	15.81	61.155	
3,300.00	3,198.87	3,102.83	3,083.64	16.14	8.38	-167.14	-216.13	232.27	1,005.51	989.13	16.39	61.360	
3,400.00	3,294.75	3,195.04	3,174.88	16.74	8.70	-167.00	-226.66	240.45	1,044.14	1,027.17	16.96	61.548	
3,500.00	3,390.62	3,287.26	3,266.12	17.35	9.02	-166.87	-237.19	248.63	1,082.77	1,065.23	17.54	61.721	
3,600.00	3,486.49	3,379.47	3,357.36	17.95	9.35	-166.75	-247.73	256.82	1,121.40	1,103.28	18.12	61.882	
3,700.00	3,582.36	3,471.68	3,448.60	18.55	9.67	-166.64	-258.26	265.00	1,160.04	1,141.34	18.70	62.030	
3,800.00	3,678.24	3,563.89	3,539.84	19.15	9.99	-166.54	-268.79	273.18	1,198.69	1,179.41	19.28	62.168	
3,900.00	3,774.11	3,656.10	3,631.08	19.75	10.32	-166.44	-279.33	281.36	1,237.33	1,217.47	19.86	62.296	
4,000.00	3,869.98	3,748.31	3,722.32	20.35	10.64	-166.35	-289.86	289.54	1,275.98	1,255.54	20.44	62.416	
4,100.00	3,965.85	3,840.52	3,813.56	20.96	10.97	-166.26	-300.39	297.72	1,314.63	1,293.61	21.02	62.528	
4,200.00	4,061.73	3,932.73	3,904.80	21.56	11.29	-166.18	-310.92	305.91	1,353.29	1,331.68	21.61	62.632	
4,300.00	4,157.60	4,024.94	3,996.05	22.16	11.62	-166.10	-321.46	314.09	1,391.94	1,369.75	22.19	62.731	
4,400.00	4,253.47	4,117.15	4,087.29	22.76	11.95	-166.03	-331.99	322.27	1,430.60	1,407.83	22.77	62.823	
4,500.00	4,349.34	4,209.36	4,178.53	23.36	12.27	-165.96	-342.52	330.45	1,469.26	1,445.91	23.35	62.910	
4,600.00	4,445.22	4,301.57	4,269.77	23.97	12.60	-165.90	-353.06	338.63	1,507.92	1,483.98	23.94	62.993	
4,700.00	4,541.09	4,393.78	4,361.01	24.57	12.93	-165.83	-363.59	346.82	1,546.59	1,522.06	24.52	63.070	
4,800.00	4,636.96	4,485.99	4,452.25	25.17	13.25	-165.77	-374.12	355.00	1,585.25	1,560.14	25.11	63.143	
4,900.00	4,732.83	4,578.21	4,543.49	25.77	13.58	-165.72	-384.65	363.18	1,623.92	1,598.23	25.69	63.213	
5,000.00	4,828.71	4,670.42	4,634.73	26.38	13.91	-165.66	-395.19	371.36	1,662.58	1,636.31	26.27	63.279	

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 6-13
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 6-13	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00ft	Output errors are at	2.00 sigma
Reference Wellbore	P_Riverbend 6-13	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	4,924.58	4,762.63	4,725.97	26.98	14.24	-165.61	-405.72	379.54	1,701.25	1,674.39	26.86	63.342	
5,200.00	5,020.45	4,854.84	4,817.22	27.58	14.57	-165.56	-416.25	387.72	1,739.92	1,712.48	27.44	63.401	
5,300.00	5,116.32	4,947.05	4,908.46	28.18	14.90	-165.52	-426.79	395.91	1,778.59	1,750.56	28.03	63.458	
5,400.00	5,212.20	5,039.26	4,999.70	28.79	15.22	-165.47	-437.32	404.09	1,817.26	1,788.65	28.61	63.512	
5,492.05	5,300.45	5,124.14	5,083.69	29.34	15.53	-165.43	-447.02	411.62	1,852.86	1,823.71	29.15	63.560	
5,500.00	5,308.07	5,131.47	5,090.94	29.38	15.55	-165.45	-447.85	412.27	1,855.93	1,826.72	29.21	63.544	
5,600.00	5,404.50	5,224.41	5,182.90	29.81	15.88	-165.59	-458.47	420.52	1,892.79	1,862.93	29.86	63.392	
5,700.00	5,501.78	5,318.52	5,276.02	30.20	16.22	-165.68	-469.22	428.87	1,926.48	1,896.01	30.48	63.214	
5,800.00	5,599.82	5,413.69	5,370.19	30.53	16.56	-165.73	-480.09	437.31	1,956.98	1,925.93	31.06	63.013	
5,900.00	5,698.48	5,509.79	5,465.29	30.82	16.90	-165.74	-491.07	445.84	1,984.25	1,952.65	31.60	62.795	
6,000.00	5,797.66	5,606.73	5,561.20	31.06	17.25	-165.71	-502.14	454.44	2,008.27	1,976.16	32.10	62.561	
6,100.00	5,897.21	5,704.37	5,657.81	31.26	17.60	-165.64	-513.29	463.10	2,029.00	1,996.44	32.56	62.314	
6,200.00	5,997.04	5,879.67	5,831.66	31.41	18.09	-165.43	-530.93	476.80	2,045.39	2,012.27	33.12	61.755	
6,300.00	6,097.00	6,119.98	6,071.51	31.51	18.53	-165.28	-541.77	485.22	2,052.36	2,018.72	33.64	61.009	
6,318.00	6,115.00	6,163.47	6,115.00	31.52	18.59	107.07	-542.03	485.42	2,052.53	2,018.80	33.72	60.861	
6,400.00	6,197.00	6,245.47	6,197.00	31.59	18.71	107.07	-542.03	485.42	2,052.53	2,018.55	33.98	60.413	
6,500.00	6,297.00	6,345.47	6,297.00	31.69	18.84	107.07	-542.03	485.42	2,052.53	2,018.25	34.28	59.878	
6,600.00	6,397.00	6,445.47	6,397.00	31.78	18.98	107.07	-542.03	485.42	2,052.53	2,017.94	34.59	59.346	
6,700.00	6,497.00	6,545.47	6,497.00	31.88	19.12	107.07	-542.03	485.42	2,052.53	2,017.63	34.90	58.819	
6,800.00	6,597.00	6,645.47	6,597.00	31.97	19.26	107.07	-542.03	485.42	2,052.53	2,017.32	35.21	58.296	
6,900.00	6,697.00	6,745.47	6,697.00	32.07	19.40	107.07	-542.03	485.42	2,052.53	2,017.00	35.52	57.778	
7,000.00	6,797.00	6,845.47	6,797.00	32.17	19.55	107.07	-542.03	485.42	2,052.53	2,016.68	35.84	57.264	
7,100.00	6,897.00	6,945.47	6,897.00	32.27	19.69	107.07	-542.03	485.42	2,052.53	2,016.36	36.16	56.755	
7,200.00	6,997.00	7,045.47	6,997.00	32.37	19.84	107.07	-542.03	485.42	2,052.53	2,016.04	36.49	56.251	
7,300.00	7,097.00	7,145.47	7,097.00	32.47	19.99	107.07	-542.03	485.42	2,052.53	2,015.71	36.82	55.751	
7,400.00	7,197.00	7,245.47	7,197.00	32.58	20.14	107.07	-542.03	485.42	2,052.53	2,015.38	37.15	55.257	
7,500.00	7,297.00	7,345.47	7,297.00	32.68	20.29	107.07	-542.03	485.42	2,052.53	2,015.05	37.48	54.768	
7,600.00	7,397.00	7,445.47	7,397.00	32.79	20.44	107.07	-542.03	485.42	2,052.53	2,014.71	37.81	54.283	
7,700.00	7,497.00	7,545.47	7,497.00	32.90	20.59	107.07	-542.03	485.42	2,052.53	2,014.38	38.15	53.804	
7,800.00	7,597.00	7,645.47	7,597.00	33.01	20.75	107.07	-542.03	485.42	2,052.53	2,014.04	38.49	53.330	
7,900.00	7,697.00	7,745.47	7,697.00	33.12	20.90	107.07	-542.03	485.42	2,052.53	2,013.70	38.83	52.862	
8,000.00	7,797.00	7,845.47	7,797.00	33.23	21.06	107.07	-542.03	485.42	2,052.53	2,013.35	39.17	52.398	
8,100.00	7,897.00	7,945.47	7,897.00	33.34	21.22	107.07	-542.03	485.42	2,052.53	2,013.01	39.52	51.940	
8,200.00	7,997.00	8,045.47	7,997.00	33.45	21.38	107.07	-542.03	485.42	2,052.53	2,012.66	39.86	51.487	
8,235.00	8,032.00	8,080.47	8,032.00	33.49	21.44	107.07	-542.03	485.42	2,052.53	2,012.54	39.99	51.330	

Company:	US ROCKIES REGION PLANNING	Local Co-ordinate Reference:	Well P_Riverbend 6-13
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 6-13	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00ft	Output errors are at	2.00 sigma
Reference Wellbore	P_Riverbend 6-13	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						
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning
0.00	0.00	0.00	0.00	0.00	0.00	89.35	0.36	31.91	31.91				
100.00	100.00	100.00	100.00	0.10	0.10	89.35	0.36	31.91	31.91	31.72	0.19	167.049	
200.00	200.00	200.00	200.00	0.32	0.32	89.35	0.36	31.91	31.91	31.27	0.64	49.822	
300.00	300.00	300.00	300.00	0.55	0.55	89.35	0.36	31.91	31.91	30.82	1.09	29.277 CC, ES	
400.00	399.98	399.98	399.98	0.76	0.77	177.15	0.36	31.91	33.66	32.13	1.53	22.047	
500.00	499.84	499.84	499.84	0.98	0.99	177.53	0.36	31.91	38.89	36.93	1.96	19.867	
600.00	599.45	599.45	599.45	1.22	1.22	177.98	0.36	31.91	47.59	45.20	2.39	19.891	
700.00	698.70	698.70	698.70	1.50	1.44	178.38	0.36	31.91	59.77	56.94	2.83	21.116	
800.00	797.47	797.47	797.47	1.83	1.66	178.71	0.36	31.91	75.41	72.14	3.27	23.057	
900.00	895.62	895.62	895.62	2.20	1.88	178.96	0.36	31.91	94.49	90.78	3.71	25.453	
1,000.00	993.06	993.06	993.06	2.64	2.10	179.16	0.36	31.91	116.98	112.82	4.16	28.150	
1,100.00	1,089.64	1,093.40	1,093.38	3.13	2.31	179.68	-0.48	30.65	141.67	137.08	4.59	30.868	
1,125.95	1,114.55	1,119.58	1,119.55	3.27	2.36	179.92	-1.03	29.84	148.18	143.48	4.70	31.528	
1,200.00	1,185.55	1,194.71	1,194.56	3.68	2.50	-179.21	-3.32	26.42	166.09	161.05	5.04	32.933	
1,300.00	1,281.42	1,297.22	1,296.68	4.25	2.71	-177.68	-8.23	19.13	187.95	182.42	5.53	34.003	
1,400.00	1,377.29	1,400.69	1,399.39	4.82	2.95	-175.82	-15.24	8.69	207.19	201.15	6.04	34.299	
1,500.00	1,473.17	1,504.89	1,502.28	5.40	3.23	-173.63	-24.38	-4.92	223.94	217.34	6.60	33.950	
1,600.00	1,569.04	1,609.53	1,604.94	5.99	3.55	-171.11	-35.66	-21.71	238.36	231.16	7.21	33.061	
1,700.00	1,664.91	1,708.36	1,701.51	6.58	3.90	-168.68	-47.38	-39.16	251.81	243.94	7.87	32.013	
1,800.00	1,760.78	1,806.91	1,797.81	7.17	4.27	-166.51	-59.07	-56.56	265.65	257.08	8.56	31.022	
1,900.00	1,856.66	1,905.47	1,894.11	7.76	4.65	-164.56	-70.76	-73.97	279.82	270.53	9.30	30.096	
2,000.00	1,952.53	2,004.03	1,990.41	8.36	5.05	-162.79	-82.45	-91.37	294.29	284.23	10.06	29.243	
2,100.00	2,048.40	2,102.58	2,086.71	8.95	5.46	-161.19	-94.15	-108.77	309.01	298.16	10.86	28.462	
2,200.00	2,144.27	2,201.14	2,183.01	9.55	5.88	-159.74	-105.84	-126.18	323.95	312.28	11.67	27.753	
2,300.00	2,240.15	2,299.70	2,279.31	10.15	6.31	-158.41	-117.53	-143.58	339.07	326.56	12.51	27.111	
2,400.00	2,336.02	2,398.25	2,375.61	10.74	6.74	-157.20	-129.22	-160.98	354.36	341.00	13.36	26.529	
2,500.00	2,431.89	2,496.81	2,471.91	11.34	7.17	-156.08	-140.91	-178.39	369.79	355.56	14.22	26.000	
2,600.00	2,527.76	2,595.37	2,568.21	11.94	7.61	-155.06	-152.60	-195.79	385.34	370.24	15.10	25.517	
2,700.00	2,623.64	2,693.92	2,664.51	12.54	8.05	-154.12	-164.30	-213.20	401.01	385.02	15.99	25.080	
2,800.00	2,719.51	2,792.48	2,760.82	13.14	8.49	-153.24	-175.99	-230.60	416.77	399.89	16.89	24.683	
2,900.00	2,815.38	2,891.04	2,857.12	13.74	8.94	-152.43	-187.68	-248.00	432.63	414.84	17.79	24.321	
3,000.00	2,911.26	2,989.59	2,953.42	14.34	9.38	-151.68	-199.37	-265.41	448.56	429.86	18.70	23.992	
3,100.00	3,007.13	3,088.15	3,049.72	14.94	9.83	-150.98	-211.06	-282.81	464.56	444.95	19.61	23.691	
3,200.00	3,103.00	3,186.71	3,146.02	15.54	10.28	-150.32	-222.75	-300.21	480.63	460.10	20.53	23.415	
3,300.00	3,198.87	3,285.26	3,242.32	16.14	10.74	-149.71	-234.44	-317.62	496.75	475.30	21.45	23.161	
3,400.00	3,294.75	3,383.82	3,338.62	16.74	11.19	-149.14	-246.14	-335.02	512.92	490.55	22.37	22.927	
3,500.00	3,390.62	3,482.38	3,434.92	17.35	11.64	-148.60	-257.83	-352.43	529.15	505.85	23.30	22.712	
3,600.00	3,486.49	3,580.93	3,531.22	17.95	12.10	-148.09	-269.52	-369.83	545.41	521.18	24.23	22.512	
3,700.00	3,582.36	3,679.49	3,627.52	18.55	12.55	-147.61	-281.21	-387.23	561.72	536.56	25.16	22.328	
3,800.00	3,678.24	3,778.05	3,723.82	19.15	13.01	-147.16	-292.90	-404.64	578.06	551.97	26.09	22.156	
3,900.00	3,774.11	3,876.60	3,820.12	19.75	13.46	-146.74	-304.59	-422.04	594.43	567.40	27.02	21.996	
4,000.00	3,869.98	3,975.16	3,916.42	20.35	13.92	-146.33	-316.28	-439.44	610.83	582.87	27.96	21.847	
4,100.00	3,965.85	4,073.72	4,012.73	20.96	14.38	-145.95	-327.98	-456.85	627.26	598.37	28.90	21.708	
4,200.00	4,061.73	4,172.27	4,109.03	21.56	14.84	-145.59	-339.67	-474.25	643.72	613.89	29.83	21.578	
4,300.00	4,157.60	4,270.83	4,205.33	22.16	15.30	-145.25	-351.36	-491.65	660.20	629.43	30.77	21.456	
4,400.00	4,253.47	4,369.39	4,301.63	22.76	15.75	-144.92	-363.05	-509.06	676.71	645.00	31.71	21.342	
4,500.00	4,349.34	4,467.94	4,397.93	23.36	16.21	-144.61	-374.74	-526.46	693.23	660.58	32.65	21.234	
4,600.00	4,445.22	4,566.50	4,494.23	23.97	16.67	-144.31	-386.43	-543.87	709.77	676.18	33.59	21.132	
4,700.00	4,541.09	4,665.06	4,590.53	24.57	17.13	-144.02	-398.12	-561.27	726.33	691.80	34.53	21.034	
4,800.00	4,636.96	4,763.61	4,686.83	25.17	17.59	-143.75	-409.82	-578.67	742.91	707.43	35.48	20.941	
4,900.00	4,732.83	4,862.17	4,783.13	25.77	18.05	-143.49	-421.51	-596.08	759.50	723.08	36.42	20.853	
5,000.00	4,828.71	4,960.73	4,879.43	26.38	18.51	-143.25	-433.20	-613.48	776.11	738.74	37.37	20.769	

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 6-13
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 6-13	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00ft	Output errors are at	2.00 sigma
Reference Wellbore	P_Riverbend 6-13	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 25-13 - P_Riverbend 25-13 - 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	4,924.58	5,059.28	4,975.73	26.98	18.97	-143.01	-444.89	-630.88	792.73	754.41	38.31	20.690	
5,200.00	5,020.45	5,157.84	5,072.03	27.58	19.44	-142.78	-456.58	-648.29	809.36	770.10	39.26	20.615	
5,300.00	5,116.32	5,256.40	5,168.33	28.18	19.90	-142.56	-468.27	-665.69	826.01	785.80	40.21	20.543	
5,400.00	5,212.20	5,354.95	5,264.64	28.79	20.36	-142.35	-479.97	-683.10	842.67	801.51	41.16	20.474	
5,492.05	5,300.45	5,445.68	5,353.28	29.34	20.78	-142.16	-490.73	-699.12	858.01	815.98	42.03	20.414	
5,500.00	5,308.07	5,453.51	5,360.94	29.38	20.82	-142.16	-491.66	-700.50	859.32	817.22	42.10	20.410	
5,600.00	5,404.50	5,552.27	5,457.44	29.81	21.28	-142.07	-503.37	-717.94	874.43	831.44	42.99	20.342	
5,700.00	5,501.78	5,648.98	5,551.96	30.20	21.71	-141.84	-514.78	-734.91	886.88	843.04	43.84	20.231	
5,800.00	5,599.82	5,740.43	5,641.78	30.53	22.03	-141.62	-524.36	-749.17	897.30	852.77	44.52	20.154	
5,900.00	5,698.48	5,832.17	5,732.39	30.82	22.28	-141.43	-532.36	-761.08	905.89	860.80	45.09	20.092	
6,000.00	5,797.66	5,924.15	5,823.64	31.06	22.51	-141.28	-538.75	-770.60	912.64	867.08	45.56	20.032	
6,100.00	5,897.21	6,016.32	5,915.41	31.26	22.70	-141.17	-543.51	-777.69	917.52	871.58	45.94	19.973	
6,200.00	5,997.04	6,108.62	6,007.54	31.41	22.85	-141.08	-546.63	-782.33	920.53	874.30	46.23	19.914	
6,300.00	6,097.00	6,200.00	6,098.88	31.51	22.98	-141.02	-548.08	-784.49	921.65	875.23	46.42	19.855	
6,318.00	6,115.00	6,217.64	6,116.52	31.52	23.00	-131.33	-548.18	-784.63	921.65	875.20	46.45	19.843	
6,354.15	6,151.15	6,252.27	6,151.15	31.55	23.04	131.34	-548.21	-784.68	921.63	875.10	46.53	19.807	
6,400.00	6,197.00	6,298.13	6,197.00	31.59	23.09	131.34	-548.21	-784.68	921.63	875.00	46.63	19.763	
6,500.00	6,297.00	6,398.13	6,297.00	31.69	23.21	131.34	-548.21	-784.68	921.63	874.77	46.86	19.666	
6,600.00	6,397.00	6,498.13	6,397.00	31.78	23.32	131.34	-548.21	-784.68	921.63	874.53	47.10	19.568	
6,700.00	6,497.00	6,598.13	6,497.00	31.88	23.44	131.34	-548.21	-784.68	921.63	874.30	47.34	19.470	
6,800.00	6,597.00	6,698.13	6,597.00	31.97	23.56	131.34	-548.21	-784.68	921.63	874.06	47.57	19.372	
6,900.00	6,697.00	6,798.13	6,697.00	32.07	23.68	131.34	-548.21	-784.68	921.63	873.81	47.82	19.274	
7,000.00	6,797.00	6,898.13	6,797.00	32.17	23.81	131.34	-548.21	-784.68	921.63	873.57	48.06	19.175	
7,100.00	6,897.00	6,998.13	6,897.00	32.27	23.93	131.34	-548.21	-784.68	921.63	873.32	48.31	19.077	
7,200.00	6,997.00	7,098.13	6,997.00	32.37	24.06	131.34	-548.21	-784.68	921.63	873.07	48.56	18.978	
7,300.00	7,097.00	7,198.13	7,097.00	32.47	24.18	131.34	-548.21	-784.68	921.63	872.81	48.82	18.879	
7,400.00	7,197.00	7,298.13	7,197.00	32.58	24.31	131.34	-548.21	-784.68	921.63	872.56	49.07	18.780	
7,500.00	7,297.00	7,398.13	7,297.00	32.68	24.44	131.34	-548.21	-784.68	921.63	872.30	49.33	18.681	
7,600.00	7,397.00	7,498.13	7,397.00	32.79	24.57	131.34	-548.21	-784.68	921.63	872.03	49.60	18.582	
7,700.00	7,497.00	7,598.13	7,497.00	32.90	24.71	131.34	-548.21	-784.68	921.63	871.77	49.86	18.483	
7,800.00	7,597.00	7,698.13	7,597.00	33.01	24.84	131.34	-548.21	-784.68	921.63	871.50	50.13	18.385	
7,900.00	7,697.00	7,798.13	7,697.00	33.12	24.98	131.34	-548.21	-784.68	921.63	871.23	50.40	18.286	
8,000.00	7,797.00	7,898.13	7,797.00	33.23	25.11	131.34	-548.21	-784.68	921.63	870.96	50.67	18.187	
8,100.00	7,897.00	7,998.13	7,897.00	33.34	25.25	131.34	-548.21	-784.68	921.63	870.68	50.95	18.089	
8,200.00	7,997.00	8,098.13	7,997.00	33.45	25.39	131.34	-548.21	-784.68	921.63	870.40	51.23	17.991	
8,235.00	8,032.00	8,133.12	8,032.00	33.49	25.44	131.34	-548.21	-784.68	921.63	870.30	51.33	17.956 SF	

Company:	US ROCKIES REGION PLANNING	Local Co-ordinate Reference:	Well P_Riverbend 6-13
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 6-13	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00ft	Output errors are at	2.00 sigma
Reference Wellbore	P_Riverbend 6-13	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 5-18 - 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		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	0.73	96.02	96.02				
100.00	100.00	100.00	100.00	0.10	0.10	89.57	0.73	96.02	96.02	95.83	0.19	502.595	
200.00	200.00	200.00	200.00	0.32	0.32	89.57	0.73	96.02	96.02	95.38	0.64	149.897	
300.00	300.00	300.00	300.00	0.55	0.55	89.57	0.73	96.02	96.02	94.93	1.09	88.084 CC, ES	
400.00	399.98	396.64	396.63	0.76	0.75	177.24	0.78	97.65	99.45	97.94	1.51	65.988	
500.00	499.84	492.61	492.47	0.98	0.96	177.29	0.95	102.49	109.71	107.80	1.91	57.342	
600.00	599.45	587.25	586.77	1.22	1.19	177.35	1.21	110.40	126.72	124.39	2.33	54.443 SF	
700.00	698.70	679.94	678.83	1.50	1.44	177.41	1.57	121.16	150.34	147.59	2.75	54.767	
800.00	797.47	770.12	768.01	1.83	1.72	177.46	2.02	134.48	180.39	177.23	3.16	57.031	
900.00	895.62	857.27	853.77	2.20	2.03	177.50	2.54	150.02	216.65	213.07	3.58	60.522	
1,000.00	993.06	940.99	935.65	2.64	2.37	177.52	3.13	167.39	258.86	254.87	3.99	64.817	
1,100.00	1,089.64	1,020.90	1,013.32	3.13	2.73	177.53	3.76	186.19	306.73	302.32	4.40	69.651	
1,125.95	1,114.55	1,040.98	1,032.75	3.27	2.82	177.54	3.93	191.26	320.04	315.53	4.51	70.965	
1,200.00	1,185.55	1,100.00	1,089.64	3.68	3.12	177.57	4.46	206.93	359.16	354.31	4.85	74.075	
1,300.00	1,281.42	1,170.96	1,157.61	4.25	3.51	177.59	5.14	227.32	413.87	408.58	5.29	78.164	
1,400.00	1,377.29	1,242.25	1,225.35	4.82	3.94	177.60	5.89	249.50	470.70	464.95	5.75	81.889	
1,500.00	1,473.17	1,311.11	1,290.25	5.40	4.38	177.59	6.66	272.51	529.52	523.32	6.20	85.402	
1,600.00	1,569.04	1,377.59	1,352.36	5.99	4.84	177.59	7.45	296.20	590.23	583.58	6.65	88.726	
1,700.00	1,664.91	1,441.75	1,411.76	6.58	5.32	177.57	8.27	320.42	652.74	645.64	7.10	91.903	
1,800.00	1,760.78	1,500.00	1,465.21	7.17	5.77	177.56	9.05	343.55	716.96	709.42	7.54	95.083	
1,900.00	1,856.66	1,566.94	1,526.07	7.76	6.32	177.54	9.98	371.43	782.73	774.72	8.00	97.795	
2,000.00	1,952.53	1,641.85	1,593.96	8.36	6.96	177.52	11.05	403.07	848.98	840.49	8.49	99.987	
2,100.00	2,048.40	1,716.76	1,661.85	8.95	7.60	177.50	12.11	434.71	915.23	906.25	8.98	101.916	
2,200.00	2,144.27	1,791.67	1,729.74	9.55	8.25	177.49	13.17	466.35	981.47	972.00	9.47	103.615	
2,300.00	2,240.15	1,866.57	1,797.62	10.15	8.90	177.47	14.24	497.99	1,047.72	1,037.76	9.97	105.119	
2,400.00	2,336.02	1,941.48	1,865.51	10.74	9.55	177.46	15.30	529.63	1,113.97	1,103.51	10.46	106.465	
2,500.00	2,431.89	2,016.39	1,933.40	11.34	10.20	177.45	16.36	561.27	1,180.22	1,169.26	10.96	107.674	
2,600.00	2,527.76	2,091.29	2,001.29	11.94	10.86	177.44	17.42	592.91	1,246.47	1,235.01	11.46	108.763	
2,700.00	2,623.64	2,166.20	2,069.18	12.54	11.52	177.43	18.49	624.55	1,312.72	1,300.76	11.96	109.748	
2,800.00	2,719.51	2,241.11	2,137.07	13.14	12.18	177.42	19.55	656.19	1,378.97	1,366.50	12.46	110.646	
2,900.00	2,815.38	2,316.01	2,204.96	13.74	12.84	177.42	20.61	687.82	1,445.22	1,432.25	12.97	111.466	
3,000.00	2,911.26	2,390.92	2,272.85	14.34	13.50	177.41	21.68	719.46	1,511.47	1,498.00	13.47	112.217	
3,100.00	3,007.13	2,465.83	2,340.73	14.94	14.16	177.41	22.74	751.10	1,577.71	1,563.74	13.97	112.907	
3,200.00	3,103.00	2,540.74	2,408.62	15.54	14.82	177.40	23.80	782.74	1,643.96	1,629.48	14.48	113.545	
3,300.00	3,198.87	2,615.64	2,476.51	16.14	15.48	177.40	24.87	814.38	1,710.21	1,695.23	14.98	114.134	
3,400.00	3,294.75	2,690.55	2,544.40	16.74	16.15	177.39	25.93	846.02	1,776.46	1,760.97	15.49	114.681	
3,500.00	3,390.62	2,765.46	2,612.29	17.35	16.81	177.39	26.99	877.66	1,842.71	1,826.71	16.00	115.189	
3,600.00	3,486.49	2,840.36	2,680.18	17.95	17.48	177.38	28.06	909.30	1,908.96	1,892.45	16.50	115.663	
3,700.00	3,582.36	2,915.27	2,748.07	18.55	18.14	177.38	29.12	940.94	1,975.21	1,958.20	17.01	116.106	
3,800.00	3,678.24	2,990.18	2,815.96	19.15	18.80	177.38	30.18	972.58	2,041.46	2,023.94	17.52	116.521	
3,900.00	3,774.11	3,065.09	2,883.85	19.75	19.47	177.37	31.24	1,004.22	2,107.71	2,089.68	18.03	116.910	
4,000.00	3,869.98	3,139.99	2,951.73	20.35	20.14	177.37	32.31	1,035.86	2,173.95	2,155.42	18.54	117.275	
4,100.00	3,965.85	3,214.90	3,019.62	20.96	20.80	177.37	33.37	1,067.50	2,240.20	2,221.16	19.05	117.620	
4,200.00	4,061.73	3,289.81	3,087.51	21.56	21.47	177.37	34.43	1,099.13	2,306.45	2,286.90	19.56	117.944	
4,300.00	4,157.60	3,364.71	3,155.40	22.16	22.13	177.36	35.50	1,130.77	2,372.70	2,352.64	20.06	118.251	
4,400.00	4,253.47	3,439.62	3,223.29	22.76	22.80	177.36	36.56	1,162.41	2,438.95	2,418.38	20.57	118.541	
4,500.00	4,349.34	3,514.53	3,291.18	23.36	23.47	177.36	37.62	1,194.05	2,505.20	2,484.11	21.08	118.816	
4,600.00	4,445.22	3,589.43	3,359.07	23.97	24.13	177.36	38.69	1,225.69	2,571.45	2,549.85	21.59	119.077	
4,700.00	4,541.09	3,664.34	3,426.96	24.57	24.80	177.35	39.75	1,257.33	2,637.70	2,615.59	22.11	119.324	
4,800.00	4,636.96	3,739.25	3,494.85	25.17	25.47	177.35	40.81	1,288.97	2,703.95	2,681.33	22.62	119.560	
4,900.00	4,732.83	3,814.16	3,562.73	25.77	26.13	177.35	41.88	1,320.61	2,770.20	2,747.07	23.13	119.784	
5,000.00	4,828.71	3,889.06	3,630.62	26.38	26.80	177.35	42.94	1,352.25	2,836.44	2,812.81	23.64	119.998	

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 6-13
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 6-13	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00ft	Output errors are at	2.00 sigma
Reference Wellbore	P_Riverbend 6-13	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 5-18 - 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	4,924.58	3,963.97	3,698.51	26.98	27.47	177.35	44.00	1,383.89	2,902.69	2,878.55	24.15	120.202	
5,200.00	5,020.45	4,038.88	3,766.40	27.58	28.14	177.35	45.07	1,415.53	2,968.94	2,944.28	24.66	120.397	
5,300.00	5,116.32	4,113.78	3,834.29	28.18	28.80	177.34	46.13	1,447.17	3,035.19	3,010.02	25.17	120.584	
5,400.00	5,212.20	4,188.69	3,902.18	28.79	29.47	177.34	47.19	1,478.81	3,101.44	3,075.76	25.68	120.762	
5,492.05	5,300.45	4,257.64	3,964.67	29.34	30.09	177.34	48.17	1,507.93	3,162.42	3,136.27	26.15	120.920	
5,500.00	5,308.07	4,263.61	3,970.07	29.38	30.14	177.35	48.25	1,510.45	3,167.68	3,141.47	26.22	120.832	
5,600.00	5,404.50	4,339.83	4,039.16	29.81	30.82	177.42	49.34	1,542.64	3,232.40	3,205.43	26.97	119.850	
5,700.00	5,501.78	4,418.27	4,110.25	30.20	31.52	177.48	50.45	1,575.77	3,294.42	3,266.72	27.70	118.940	
5,800.00	5,599.82	4,498.82	4,183.25	30.53	32.24	177.54	51.59	1,609.80	3,353.67	3,325.27	28.40	118.096	
5,900.00	5,698.48	4,581.38	4,258.08	30.82	32.97	177.58	52.76	1,644.67	3,410.08	3,381.01	29.07	117.315	
6,000.00	5,797.66	4,665.86	4,334.64	31.06	33.72	177.62	53.96	1,680.35	3,463.57	3,433.86	29.71	116.595	
6,100.00	5,897.21	4,752.16	4,412.85	31.26	34.49	177.65	55.19	1,716.80	3,514.08	3,483.77	30.31	115.933	
6,200.00	5,997.04	4,840.16	4,492.61	31.41	35.28	177.68	56.44	1,753.97	3,561.55	3,530.67	30.88	115.326	
6,300.00	6,097.00	4,929.76	4,573.81	31.51	36.08	177.70	57.71	1,791.82	3,605.93	3,574.51	31.42	114.772	
6,318.00	6,115.00	4,946.05	4,588.57	31.52	36.22	90.05	57.94	1,798.70	3,613.58	3,582.07	31.51	114.673	
6,400.00	6,197.00	5,020.37	4,655.93	31.59	36.89	90.03	58.99	1,830.09	3,648.22	3,616.33	31.89	114.396	
6,500.00	6,297.00	5,111.00	4,738.07	31.69	37.69	90.00	60.28	1,868.37	3,690.47	3,658.11	32.36	114.055	
6,600.00	6,397.00	5,201.63	4,820.21	31.78	38.50	89.98	61.57	1,906.65	3,732.71	3,699.88	32.82	113.719	
6,700.00	6,497.00	5,292.26	4,902.35	31.88	39.31	89.96	62.85	1,944.93	3,774.95	3,741.66	33.29	113.387	
6,800.00	6,597.00	5,382.89	4,984.49	31.97	40.12	89.94	64.14	1,983.21	3,817.19	3,783.43	33.76	113.059	
6,900.00	6,697.00	5,473.52	5,066.63	32.07	40.93	89.92	65.43	2,021.49	3,859.44	3,825.20	34.23	112.736	
7,000.00	6,797.00	5,564.15	5,148.77	32.17	41.74	89.90	66.71	2,059.77	3,901.68	3,866.97	34.71	112.417	
7,100.00	6,897.00	5,654.78	5,230.91	32.27	42.55	89.87	68.00	2,100.00	3,943.91	3,909.20	35.19	112.100	
7,200.00	6,997.00	5,745.41	5,313.05	32.37	43.36	89.84	69.29	2,140.23	3,986.14	3,954.43	35.67	111.783	
7,300.00	7,097.00	5,836.04	5,395.19	32.47	44.17	89.81	70.58	2,180.46	4,028.37	3,996.66	36.15	111.466	
7,400.00	7,197.00	5,926.67	5,477.33	32.58	44.98	89.77	71.87	2,220.69	4,070.60	4,038.89	36.63	111.149	
7,500.00	7,297.00	6,017.30	5,559.47	32.68	45.79	89.74	73.16	2,260.92	4,112.83	4,081.12	37.11	110.832	
7,600.00	7,397.00	6,107.93	5,641.61	32.79	46.60	89.71	74.45	2,301.15	4,155.06	4,123.35	37.59	110.515	
7,700.00	7,497.00	6,198.56	5,723.85	32.90	47.41	89.67	75.74	2,341.38	4,197.29	4,165.58	38.07	110.198	
7,800.00	7,597.00	6,289.19	5,806.09	33.01	48.22	89.64	77.03	2,381.61	4,239.52	4,207.81	38.55	109.881	
7,900.00	7,697.00	6,379.82	5,888.33	33.12	49.03	89.61	78.32	2,421.84	4,281.75	4,250.04	39.03	109.564	
8,000.00	7,797.00	6,470.45	5,970.57	33.23	49.84	89.57	79.61	2,462.07	4,323.98	4,292.27	39.51	109.247	
8,100.00	7,897.00	6,561.08	6,052.81	33.34	50.65	89.54	80.90	2,502.30	4,366.21	4,334.50	40.00	108.930	
8,200.00	7,997.00	6,651.71	6,135.05	33.45	51.46	89.51	82.19	2,542.53	4,408.44	4,376.73	40.48	108.613	
8,221.39	8,018.39	6,666.04	6,150.38	33.48	51.61	89.50	82.44	2,548.00	4,413.91	4,382.20	40.53	108.568	
8,235.00	8,032.00	6,670.34	6,164.68	33.49	51.76	89.49	82.69	2,553.47	4,419.38	4,387.67	40.58	108.523	

Company:	US ROCKIES REGION PLANNING	Local Co-ordinate Reference:	Well P_Riverbend 6-13
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 6-13	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00ft	Output errors are at	2.00 sigma
Reference Wellbore	P_Riverbend 6-13	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
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Semi Major Axis Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning
0.00	0.00	0.00	0.00	0.00	0.00	88.69	0.36	15.96	15.96				
100.00	100.00	100.00	100.00	0.10	0.10	88.69	0.36	15.96	15.96	15.77	0.19	83.541	
200.00	200.00	200.00	200.00	0.32	0.32	88.69	0.36	15.96	15.96	15.32	0.64	24.916	
300.00	300.00	300.00	300.00	0.55	0.55	88.69	0.36	15.96	15.96	14.87	1.09	14.641 CC, ES	
400.00	399.98	399.98	399.98	0.76	0.77	176.70	0.36	15.96	17.70	16.18	1.53	11.596 SF	
500.00	499.84	499.84	499.84	0.98	0.99	177.45	0.36	15.96	22.93	20.97	1.96	11.714	
600.00	599.45	599.45	599.45	1.22	1.22	178.15	0.36	15.96	31.64	29.25	2.39	13.222	
700.00	698.70	698.70	698.70	1.50	1.44	178.66	0.36	15.96	43.82	40.99	2.83	15.479	
800.00	797.47	797.47	797.47	1.83	1.66	179.00	0.36	15.96	59.46	56.19	3.27	18.179	
900.00	895.62	895.62	895.62	2.20	1.88	179.24	0.36	15.96	78.54	74.82	3.71	21.156	
1,000.00	993.06	993.06	993.06	2.64	2.10	179.41	0.36	15.96	101.03	96.87	4.16	24.311	
1,100.00	1,089.64	1,093.60	1,093.58	3.13	2.31	179.73	-0.01	14.47	125.50	120.91	4.59	27.317	
1,125.95	1,114.55	1,119.88	1,119.85	3.27	2.37	179.86	-0.25	13.52	131.87	127.17	4.71	28.017	
1,200.00	1,185.55	1,195.43	1,195.28	3.68	2.52	-179.66	-1.26	9.50	149.16	144.10	5.06	29.500	
1,300.00	1,281.42	1,293.46	1,293.06	4.25	2.72	-179.02	-2.97	2.73	171.00	165.47	5.53	30.914	
1,400.00	1,377.29	1,391.04	1,390.39	4.82	2.94	-178.53	-4.67	-4.03	192.84	186.82	6.02	32.059	
1,500.00	1,473.17	1,488.61	1,487.71	5.40	3.16	-178.14	-6.38	-10.78	214.69	208.19	6.51	32.999	
1,600.00	1,569.04	1,586.19	1,585.04	5.99	3.38	-177.82	-8.08	-17.53	236.55	229.55	7.00	33.779	
1,700.00	1,664.91	1,683.76	1,682.36	6.58	3.61	-177.55	-9.78	-24.28	258.42	250.91	7.50	34.434	
1,800.00	1,760.78	1,781.33	1,779.69	7.17	3.85	-177.33	-11.48	-31.03	280.29	272.28	8.01	34.991	
1,900.00	1,856.66	1,878.91	1,877.01	7.76	4.08	-177.14	-13.18	-37.78	302.17	293.65	8.52	35.469	
2,000.00	1,952.53	1,976.48	1,974.34	8.36	4.32	-176.97	-14.89	-44.53	324.04	315.01	9.03	35.882	
2,100.00	2,048.40	2,074.05	2,071.66	8.95	4.56	-176.83	-16.59	-51.29	345.92	336.38	9.54	36.243	
2,200.00	2,144.27	2,171.63	2,168.99	9.55	4.80	-176.70	-18.29	-58.04	367.80	357.74	10.06	36.560	
2,300.00	2,240.15	2,269.20	2,266.31	10.15	5.05	-176.59	-19.99	-64.79	389.69	379.11	10.58	36.840	
2,400.00	2,336.02	2,366.77	2,363.64	10.74	5.29	-176.49	-21.70	-71.54	411.57	400.47	11.10	37.089	
2,500.00	2,431.89	2,464.35	2,460.96	11.34	5.54	-176.40	-23.40	-78.29	433.46	421.84	11.62	37.312	
2,600.00	2,527.76	2,561.92	2,558.29	11.94	5.79	-176.31	-25.10	-85.04	455.34	443.20	12.14	37.512	
2,700.00	2,623.64	2,659.49	2,655.61	12.54	6.04	-176.24	-26.80	-91.79	477.23	464.57	12.66	37.693	
2,800.00	2,719.51	2,757.07	2,752.94	13.14	6.28	-176.17	-28.50	-98.55	499.12	485.93	13.18	37.858	
2,900.00	2,815.38	2,854.64	2,850.26	13.74	6.53	-176.11	-30.21	-105.30	521.00	507.30	13.71	38.007	
3,000.00	2,911.26	2,952.22	2,947.59	14.34	6.78	-176.05	-31.91	-112.05	542.89	528.66	14.23	38.144	
3,100.00	3,007.13	3,049.79	3,044.91	14.94	7.04	-176.00	-33.61	-118.80	564.78	550.02	14.76	38.270	
3,200.00	3,103.00	3,147.36	3,142.24	15.54	7.29	-175.95	-35.31	-125.55	586.67	571.39	15.28	38.385	
3,300.00	3,198.87	3,244.94	3,239.56	16.14	7.54	-175.91	-37.02	-132.30	608.56	592.75	15.81	38.492	
3,400.00	3,294.75	3,342.51	3,336.89	16.74	7.79	-175.86	-38.72	-139.05	630.45	614.12	16.34	38.591	
3,500.00	3,390.62	3,440.08	3,434.21	17.35	8.04	-175.82	-40.42	-145.81	652.34	635.48	16.86	38.683	
3,600.00	3,486.49	3,537.66	3,531.54	17.95	8.29	-175.79	-42.12	-152.56	674.24	656.84	17.39	38.768	
3,700.00	3,582.36	3,635.23	3,628.86	18.55	8.55	-175.75	-43.82	-159.31	696.13	678.21	17.92	38.847	
3,800.00	3,678.24	3,732.80	3,726.19	19.15	8.80	-175.72	-45.53	-166.06	718.02	699.57	18.45	38.922	
3,900.00	3,774.11	3,830.38	3,823.51	19.75	9.05	-175.69	-47.23	-172.81	739.91	720.93	18.98	38.991	
4,000.00	3,869.98	3,927.95	3,920.84	20.35	9.31	-175.66	-48.93	-179.56	761.80	742.30	19.50	39.057	
4,100.00	3,965.85	4,025.53	4,018.16	20.96	9.56	-175.63	-50.63	-186.32	783.69	763.66	20.03	39.118	
4,200.00	4,061.73	4,123.10	4,115.48	21.56	9.82	-175.61	-52.34	-193.07	805.59	785.02	20.56	39.176	
4,300.00	4,157.60	4,220.67	4,212.81	22.16	10.07	-175.58	-54.04	-199.82	827.48	806.39	21.09	39.231	
4,400.00	4,253.47	4,318.25	4,310.13	22.76	10.32	-175.56	-55.74	-206.57	849.37	827.75	21.62	39.282	
4,500.00	4,349.34	4,415.82	4,407.46	23.36	10.58	-175.54	-57.44	-213.32	871.26	849.11	22.15	39.331	
4,600.00	4,445.22	4,513.39	4,504.78	23.97	10.83	-175.52	-59.14	-220.07	893.16	870.47	22.68	39.377	
4,700.00	4,541.09	4,610.97	4,602.11	24.57	11.09	-175.50	-60.85	-226.82	915.05	891.84	23.21	39.421	
4,800.00	4,636.96	4,708.54	4,699.43	25.17	11.34	-175.48	-62.55	-233.58	936.94	913.20	23.74	39.463	
4,900.00	4,732.83	4,806.11	4,796.76	25.77	11.60	-175.46	-64.25	-240.33	958.84	934.56	24.27	39.502	
5,000.00	4,828.71	4,903.69	4,894.08	26.38	11.85	-175.44	-65.95	-247.08	980.73	955.92	24.80	39.540	

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 6-13
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 6-13	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00ft	Output errors are at	2.00 sigma
Reference Wellbore	P_Riverbend 6-13	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
5,100.00	4,924.58	5,001.26	4,991.41	26.98	12.11	-175.43	-67.66	-253.83	1,002.62	977.29	25.33	39.576	
5,200.00	5,020.45	5,098.84	5,088.73	27.58	12.36	-175.41	-69.36	-260.58	1,024.51	998.65	25.86	39.610	
5,300.00	5,116.32	5,196.41	5,186.06	28.18	12.62	-175.40	-71.06	-267.33	1,046.41	1,020.01	26.40	39.643	
5,400.00	5,212.20	5,293.98	5,283.38	28.79	12.88	-175.38	-72.76	-274.08	1,068.30	1,041.37	26.93	39.674	
5,492.05	5,300.45	5,383.80	5,372.97	29.34	13.11	-175.37	-74.33	-280.30	1,088.45	1,061.04	27.42	39.702	
5,500.00	5,308.07	5,391.56	5,380.71	29.38	13.13	-175.37	-74.46	-280.84	1,090.18	1,062.72	27.46	39.695	
5,600.00	5,404.50	5,489.55	5,478.45	29.81	13.39	-175.38	-76.17	-287.62	1,110.11	1,082.08	28.03	39.609	
5,700.00	5,501.78	5,588.17	5,576.82	30.20	13.65	-175.37	-77.89	-294.44	1,126.61	1,098.06	28.55	39.463	
5,800.00	5,599.82	5,687.30	5,675.70	30.53	13.91	-175.34	-79.62	-301.30	1,139.67	1,110.64	29.03	39.260	
5,900.00	5,698.48	5,786.83	5,774.97	30.82	14.17	-175.30	-81.36	-308.19	1,149.27	1,119.81	29.46	39.005	
6,000.00	5,797.66	5,886.62	5,874.51	31.06	14.43	-175.23	-83.10	-315.09	1,155.41	1,125.55	29.86	38.700	
6,100.00	5,897.21	5,975.97	5,963.64	31.26	14.65	-175.16	-84.63	-321.14	1,158.25	1,128.09	30.17	38.396	
6,200.00	5,997.04	6,048.59	6,036.17	31.41	14.79	-175.12	-85.49	-324.58	1,159.54	1,129.18	30.36	38.196	
6,300.00	6,097.00	6,121.21	6,108.77	31.51	14.92	-175.09	-85.91	-326.24	1,159.71	1,129.22	30.49	38.034	
6,318.00	6,115.00	6,134.28	6,121.84	31.52	14.94	97.26	-85.94	-326.35	1,159.62	1,129.11	30.51	38.006	
6,357.32	6,154.32	6,166.76	6,154.32	31.56	15.00	97.26	-85.95	-326.41	1,159.55	1,128.91	30.63	37.852	
6,400.00	6,197.00	6,209.44	6,197.00	31.59	15.07	97.26	-85.95	-326.41	1,159.55	1,128.77	30.78	37.670	
6,500.00	6,297.00	6,309.44	6,297.00	31.69	15.26	97.26	-85.95	-326.41	1,159.55	1,128.42	31.13	37.247	
6,600.00	6,397.00	6,409.44	6,397.00	31.78	15.44	97.26	-85.95	-326.41	1,159.55	1,128.06	31.48	36.830	
6,700.00	6,497.00	6,509.44	6,497.00	31.88	15.62	97.26	-85.95	-326.41	1,159.55	1,127.71	31.84	36.420	
6,800.00	6,597.00	6,609.44	6,597.00	31.97	15.81	97.26	-85.95	-326.41	1,159.55	1,127.35	32.19	36.017	
6,900.00	6,697.00	6,709.44	6,697.00	32.07	15.99	97.26	-85.95	-326.41	1,159.55	1,126.99	32.55	35.620	
7,000.00	6,797.00	6,809.44	6,797.00	32.17	16.18	97.26	-85.95	-326.41	1,159.55	1,126.63	32.91	35.229	
7,100.00	6,897.00	6,909.44	6,897.00	32.27	16.36	97.26	-85.95	-326.41	1,159.55	1,126.27	33.28	34.844	
7,200.00	6,997.00	7,009.44	6,997.00	32.37	16.55	97.26	-85.95	-326.41	1,159.55	1,125.91	33.64	34.466	
7,300.00	7,097.00	7,109.44	7,097.00	32.47	16.74	97.26	-85.95	-326.41	1,159.55	1,125.54	34.01	34.094	
7,400.00	7,197.00	7,209.44	7,197.00	32.58	16.93	97.26	-85.95	-326.41	1,159.55	1,125.17	34.38	33.728	
7,500.00	7,297.00	7,309.44	7,297.00	32.68	17.12	97.26	-85.95	-326.41	1,159.55	1,124.80	34.75	33.368	
7,600.00	7,397.00	7,409.44	7,397.00	32.79	17.32	97.26	-85.95	-326.41	1,159.55	1,124.43	35.12	33.014	
7,700.00	7,497.00	7,509.44	7,497.00	32.90	17.51	97.26	-85.95	-326.41	1,159.55	1,124.05	35.50	32.666	
7,800.00	7,597.00	7,609.44	7,597.00	33.01	17.70	97.26	-85.95	-326.41	1,159.55	1,123.68	35.87	32.324	
7,900.00	7,697.00	7,709.44	7,697.00	33.12	17.90	97.26	-85.95	-326.41	1,159.55	1,123.30	36.25	31.987	
8,000.00	7,797.00	7,809.44	7,797.00	33.23	18.09	97.26	-85.95	-326.41	1,159.55	1,122.92	36.63	31.656	
8,100.00	7,897.00	7,909.44	7,897.00	33.34	18.29	97.26	-85.95	-326.41	1,159.55	1,122.54	37.01	31.330	
8,200.00	7,997.00	8,009.44	7,997.00	33.45	18.48	97.26	-85.95	-326.41	1,159.55	1,122.16	37.39	31.010	
8,235.00	8,032.00	8,044.44	8,032.00	33.49	18.55	97.26	-85.95	-326.41	1,159.55	1,122.02	37.53	30.899	

Company:	US ROCKIES REGION PLANNING	Local Co-ordinate Reference:	Well P_Riverbend 6-13
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 6-13	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00ft	Output errors are at	2.00 sigma
Reference Wellbore	P_Riverbend 6-13	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						
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning
0.00	0.00	0.00	0.00	0.00	0.00	89.48	0.73	80.06	80.07				
100.00	100.00	100.00	100.00	0.10	0.10	89.48	0.73	80.06	80.07	79.87	0.19	419.078	
200.00	200.00	200.00	200.00	0.32	0.32	89.48	0.73	80.06	80.07	79.42	0.64	124.988	
300.00	300.00	300.00	300.00	0.55	0.55	89.48	0.73	80.06	80.07	78.98	1.09	73.447 CC, ES	
400.00	399.98	399.98	399.98	0.76	0.77	177.19	0.73	80.06	81.81	80.28	1.53	53.588	
500.00	499.84	499.84	499.84	0.98	0.99	177.35	0.73	80.06	87.04	85.08	1.96	44.466	
600.00	599.45	599.45	599.45	1.22	1.22	177.59	0.73	80.06	95.74	93.35	2.39	40.013	
700.00	698.70	698.70	698.70	1.50	1.44	177.85	0.73	80.06	107.92	105.09	2.83	38.123	
800.00	797.47	797.47	797.47	1.83	1.66	178.11	0.73	80.06	123.55	120.28	3.27	37.776 SF	
900.00	895.62	895.62	895.62	2.20	1.88	178.35	0.73	80.06	142.62	138.91	3.71	38.421	
1,000.00	993.06	993.06	993.06	2.64	2.10	178.57	0.73	80.06	165.11	160.95	4.16	39.734	
1,100.00	1,089.64	1,084.04	1,084.02	3.13	2.30	178.71	0.81	81.29	192.29	187.72	4.58	42.014	
1,125.95	1,114.55	1,107.11	1,107.09	3.27	2.35	178.73	0.86	82.06	200.38	195.70	4.68	42.773	
1,200.00	1,185.55	1,172.20	1,172.09	3.68	2.48	178.76	1.07	85.22	224.86	219.84	5.01	44.842	
1,300.00	1,281.42	1,258.41	1,258.05	4.25	2.67	178.76	1.50	91.68	260.38	254.92	5.46	47.675	
1,400.00	1,377.29	1,342.61	1,341.79	4.82	2.86	178.70	2.09	100.48	298.66	292.75	5.91	50.535	
1,500.00	1,473.17	1,424.74	1,423.18	5.40	3.07	178.63	2.81	111.42	339.59	333.23	6.36	53.410	
1,600.00	1,569.04	1,500.00	1,497.47	5.99	3.27	178.54	3.62	123.49	383.11	376.32	6.80	56.371	
1,700.00	1,664.91	1,582.56	1,578.55	6.58	3.53	178.44	4.65	138.96	429.03	421.77	7.25	59.153	
1,800.00	1,760.78	1,658.20	1,652.42	7.17	3.80	178.33	5.72	155.18	477.33	469.63	7.70	62.001	
1,900.00	1,856.66	1,731.63	1,723.70	7.76	4.08	178.23	6.89	172.77	527.89	519.74	8.14	64.827	
2,000.00	1,952.53	1,800.00	1,789.64	8.36	4.37	178.13	8.09	190.79	580.61	572.03	8.58	67.676	
2,100.00	2,048.40	1,871.91	1,858.51	8.95	4.71	178.03	9.47	211.44	635.38	626.35	9.03	70.388	
2,200.00	2,144.27	1,938.80	1,922.09	9.55	5.06	177.94	10.84	232.18	692.12	682.65	9.47	73.116	
2,300.00	2,240.15	2,000.00	1,979.82	10.15	5.40	177.85	12.19	252.45	750.74	740.85	9.89	75.875	
2,400.00	2,336.02	2,066.21	2,041.76	10.74	5.81	177.76	13.74	275.76	811.13	800.79	10.34	78.463	
2,500.00	2,431.89	2,126.81	2,097.98	11.34	6.21	177.68	15.24	298.34	873.23	862.46	10.77	81.079	
2,600.00	2,527.76	2,185.41	2,151.87	11.94	6.62	177.61	16.77	321.30	936.94	925.74	11.20	83.658	
2,700.00	2,623.64	2,248.28	2,209.19	12.54	7.09	177.53	18.48	347.06	1,002.11	990.47	11.64	86.084	
2,800.00	2,719.51	2,323.81	2,277.93	13.14	7.67	177.44	20.56	378.30	1,067.63	1,055.52	12.11	88.128	
2,900.00	2,815.38	2,399.35	2,346.68	13.74	8.26	177.36	22.64	409.53	1,133.16	1,120.57	12.59	90.000	
3,000.00	2,911.26	2,474.88	2,415.42	14.34	8.87	177.29	24.72	440.77	1,198.68	1,185.61	13.07	91.706	
3,100.00	3,007.13	2,550.42	2,484.16	14.94	9.48	177.23	26.79	472.01	1,264.21	1,250.65	13.55	93.276	
3,200.00	3,103.00	2,625.95	2,552.90	15.54	10.10	177.18	28.87	503.24	1,329.73	1,315.69	14.04	94.723	
3,300.00	3,198.87	2,701.48	2,621.64	16.14	10.72	177.13	30.95	534.48	1,395.26	1,380.73	14.52	96.061	
3,400.00	3,294.75	2,777.02	2,690.39	16.74	11.34	177.08	33.03	565.72	1,460.79	1,445.77	15.01	97.295	
3,500.00	3,390.62	2,852.55	2,759.13	17.35	11.97	177.04	35.10	596.95	1,526.31	1,510.81	15.50	98.440	
3,600.00	3,486.49	2,928.09	2,827.87	17.95	12.61	177.00	37.18	628.19	1,591.84	1,575.84	16.00	99.507	
3,700.00	3,582.36	3,003.62	2,896.61	18.55	13.24	176.97	39.26	659.42	1,657.37	1,640.88	16.49	100.502	
3,800.00	3,678.24	3,079.16	2,965.35	19.15	13.88	176.94	41.33	690.66	1,722.90	1,705.91	16.99	101.428	
3,900.00	3,774.11	3,154.69	3,034.10	19.75	14.52	176.90	43.41	721.90	1,788.43	1,770.94	17.48	102.295	
4,000.00	3,869.98	3,230.23	3,102.84	20.35	15.16	176.88	45.49	753.13	1,853.96	1,835.97	17.98	103.108	
4,100.00	3,965.85	3,305.76	3,171.58	20.96	15.81	176.85	47.57	784.37	1,919.48	1,901.01	18.48	103.872	
4,200.00	4,061.73	3,381.30	3,240.32	21.56	16.45	176.83	49.64	815.61	1,985.01	1,966.04	18.98	104.590	
4,300.00	4,157.60	3,456.83	3,309.06	22.16	17.10	176.80	51.72	846.84	2,050.54	2,031.06	19.48	105.266	
4,400.00	4,253.47	3,532.37	3,377.81	22.76	17.74	176.78	53.80	878.08	2,116.07	2,096.09	19.98	105.905	
4,500.00	4,349.34	3,784.72	3,611.15	23.36	19.42	176.74	60.16	973.75	2,179.34	2,158.43	20.90	104.258	
4,600.00	4,445.22	4,149.44	3,961.18	23.97	21.20	176.75	66.90	1,075.11	2,233.40	2,211.36	22.04	101.317	
4,700.00	4,541.09	4,573.56	4,380.48	24.57	22.40	176.84	70.96	1,136.11	2,275.43	2,252.24	23.19	98.142	
4,800.00	4,636.96	4,830.21	4,636.96	25.17	22.72	176.93	71.43	1,143.26	2,305.30	2,281.39	23.91	96.422	
4,900.00	4,732.83	4,926.08	4,732.83	25.77	22.82	176.97	71.43	1,143.26	2,333.70	2,309.33	24.37	95.764	
5,000.00	4,828.71	5,021.96	4,828.71	26.38	22.91	177.01	71.43	1,143.26	2,362.10	2,337.26	24.83	95.124	

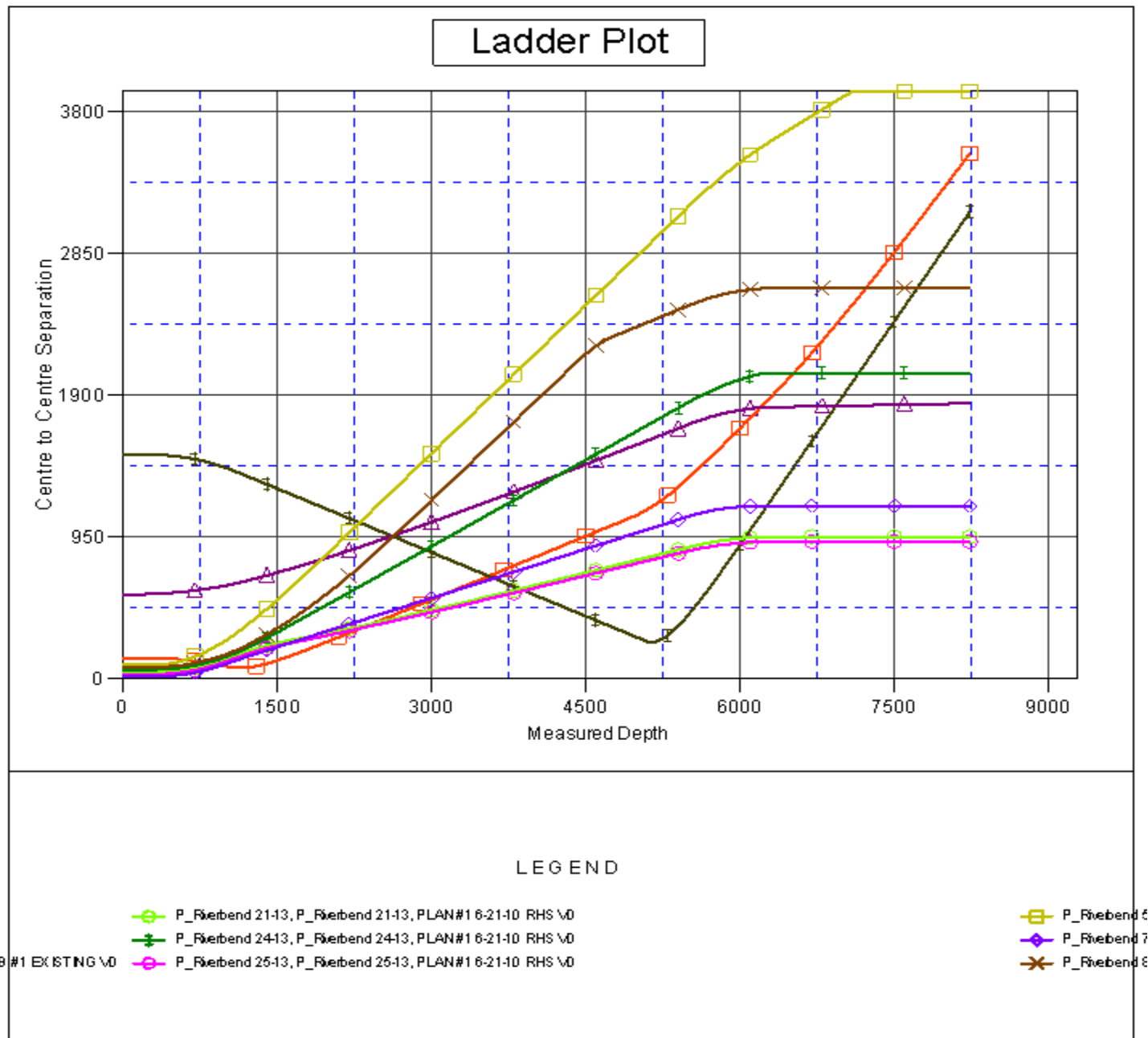
CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Company:	US ROCKIES REGION PLANNING	Local Co-ordinate Reference:	Well P_Riverbend 6-13
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 6-13	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00ft	Output errors are at	2.00 sigma
Reference Wellbore	P_Riverbend 6-13	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	4,924.58	5,117.83	4,924.58	26.98	23.00	177.04	71.43	1,143.26	2,390.49	2,365.20	25.30	94.502	
5,200.00	5,020.45	5,213.70	5,020.45	27.58	23.10	177.08	71.43	1,143.26	2,418.89	2,393.13	25.76	93.897	
5,300.00	5,116.32	5,309.57	5,116.32	28.18	23.20	177.11	71.43	1,143.26	2,447.29	2,421.06	26.23	93.308	
5,400.00	5,212.20	5,405.45	5,212.20	28.79	23.30	177.15	71.43	1,143.26	2,475.69	2,449.00	26.70	92.735	
5,492.05	5,300.45	5,493.70	5,300.45	29.34	23.39	177.18	71.43	1,143.26	2,501.84	2,474.71	27.13	92.222	
5,500.00	5,308.07	5,501.32	5,308.07	29.38	23.40	177.18	71.43	1,143.26	2,504.08	2,476.90	27.18	92.118	
5,600.00	5,404.50	5,597.75	5,404.50	29.81	23.50	177.24	71.43	1,143.26	2,530.54	2,502.71	27.83	90.923	
5,700.00	5,501.78	5,695.03	5,501.78	30.20	23.61	177.28	71.43	1,143.26	2,553.62	2,525.18	28.44	89.796	
5,800.00	5,599.82	5,793.07	5,599.82	30.53	23.72	177.32	71.43	1,143.26	2,573.30	2,544.30	29.00	88.732	
5,900.00	5,698.48	5,891.73	5,698.48	30.82	23.83	177.36	71.43	1,143.26	2,589.54	2,560.02	29.52	87.727	
6,000.00	5,797.66	5,990.91	5,797.66	31.06	23.94	177.38	71.43	1,143.26	2,602.34	2,572.35	29.99	86.776	
6,100.00	5,897.21	6,090.46	5,897.21	31.26	24.06	177.40	71.43	1,143.26	2,611.67	2,581.26	30.41	85.875	
6,200.00	5,997.04	6,190.29	5,997.04	31.41	24.17	177.41	71.43	1,143.26	2,617.52	2,586.74	30.79	85.021	
6,300.00	6,097.00	6,290.25	6,097.00	31.51	24.29	177.41	71.43	1,143.26	2,619.90	2,588.78	31.11	84.210	
6,318.00	6,115.00	6,308.25	6,115.00	31.52	24.31	89.76	71.43	1,143.26	2,619.95	2,588.79	31.17	84.066	
6,400.00	6,197.00	6,390.25	6,197.00	31.59	24.41	89.76	71.43	1,143.26	2,619.95	2,588.50	31.45	83.311	
6,500.00	6,297.00	6,490.25	6,297.00	31.69	24.53	89.76	71.43	1,143.26	2,619.95	2,588.16	31.80	82.398	
6,600.00	6,397.00	6,590.25	6,397.00	31.78	24.66	89.76	71.43	1,143.26	2,619.95	2,587.80	32.15	81.499	
6,700.00	6,497.00	6,690.25	6,497.00	31.88	24.78	89.76	71.43	1,143.26	2,619.95	2,587.45	32.50	80.613	
6,800.00	6,597.00	6,790.25	6,597.00	31.97	24.91	89.76	71.43	1,143.26	2,619.95	2,587.10	32.86	79.741	
6,900.00	6,697.00	6,890.25	6,697.00	32.07	25.03	89.76	71.43	1,143.26	2,619.95	2,586.74	33.21	78.882	
7,000.00	6,797.00	6,990.25	6,797.00	32.17	25.16	89.76	71.43	1,143.26	2,619.95	2,586.38	33.57	78.037	
7,100.00	6,897.00	7,090.25	6,897.00	32.27	25.29	89.76	71.43	1,143.26	2,619.95	2,586.02	33.94	77.204	
7,200.00	6,997.00	7,190.25	6,997.00	32.37	25.42	89.76	71.43	1,143.26	2,619.95	2,585.65	34.30	76.385	
7,300.00	7,097.00	7,290.25	7,097.00	32.47	25.55	89.76	71.43	1,143.26	2,619.95	2,585.29	34.67	75.579	
7,400.00	7,197.00	7,390.25	7,197.00	32.58	25.69	89.76	71.43	1,143.26	2,619.95	2,584.92	35.03	74.785	
7,500.00	7,297.00	7,490.25	7,297.00	32.68	25.82	89.76	71.43	1,143.26	2,619.95	2,584.55	35.40	74.004	
7,600.00	7,397.00	7,590.25	7,397.00	32.79	25.96	89.76	71.43	1,143.26	2,619.95	2,584.18	35.77	73.236	
7,700.00	7,497.00	7,690.25	7,497.00	32.90	26.10	89.76	71.43	1,143.26	2,619.95	2,583.80	36.15	72.480	
7,800.00	7,597.00	7,790.25	7,597.00	33.01	26.24	89.76	71.43	1,143.26	2,619.95	2,583.43	36.52	71.736	
7,900.00	7,697.00	7,890.25	7,697.00	33.12	26.38	89.76	71.43	1,143.26	2,619.95	2,583.05	36.90	71.003	
8,000.00	7,797.00	7,990.25	7,797.00	33.23	26.52	89.76	71.43	1,143.26	2,619.95	2,582.68	37.28	70.283	
8,100.00	7,897.00	8,090.25	7,897.00	33.34	26.66	89.76	71.43	1,143.26	2,619.95	2,582.30	37.66	69.575	
8,200.00	7,997.00	8,190.25	7,997.00	33.45	26.80	89.76	71.43	1,143.26	2,619.95	2,581.91	38.04	68.878	
8,235.00	8,032.00	8,225.25	8,032.00	33.49	26.85	89.76	71.43	1,143.26	2,619.95	2,581.78	38.17	68.636	

Company:	US ROCKIES REGION PLANNING	Local Co-ordinate Reference:	Well P_Riverbend 6-13
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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 6-13	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00ft	Output errors are at	2.00 sigma
Reference Wellbore	P_Riverbend 6-13	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 6-13
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 6-13
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 6-13	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00ft	Output errors are at	2.00 sigma
Reference Wellbore	P_Riverbend 6-13	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 6-13
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°

