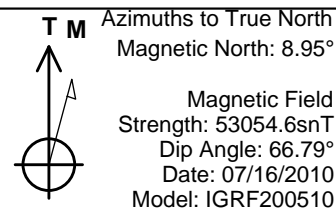


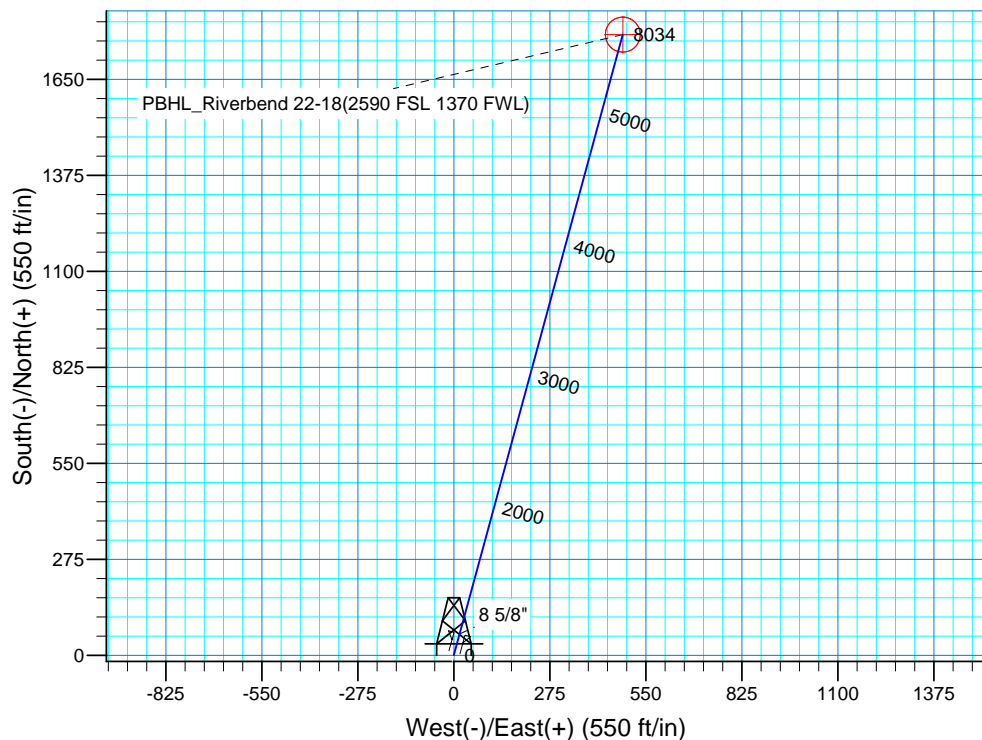
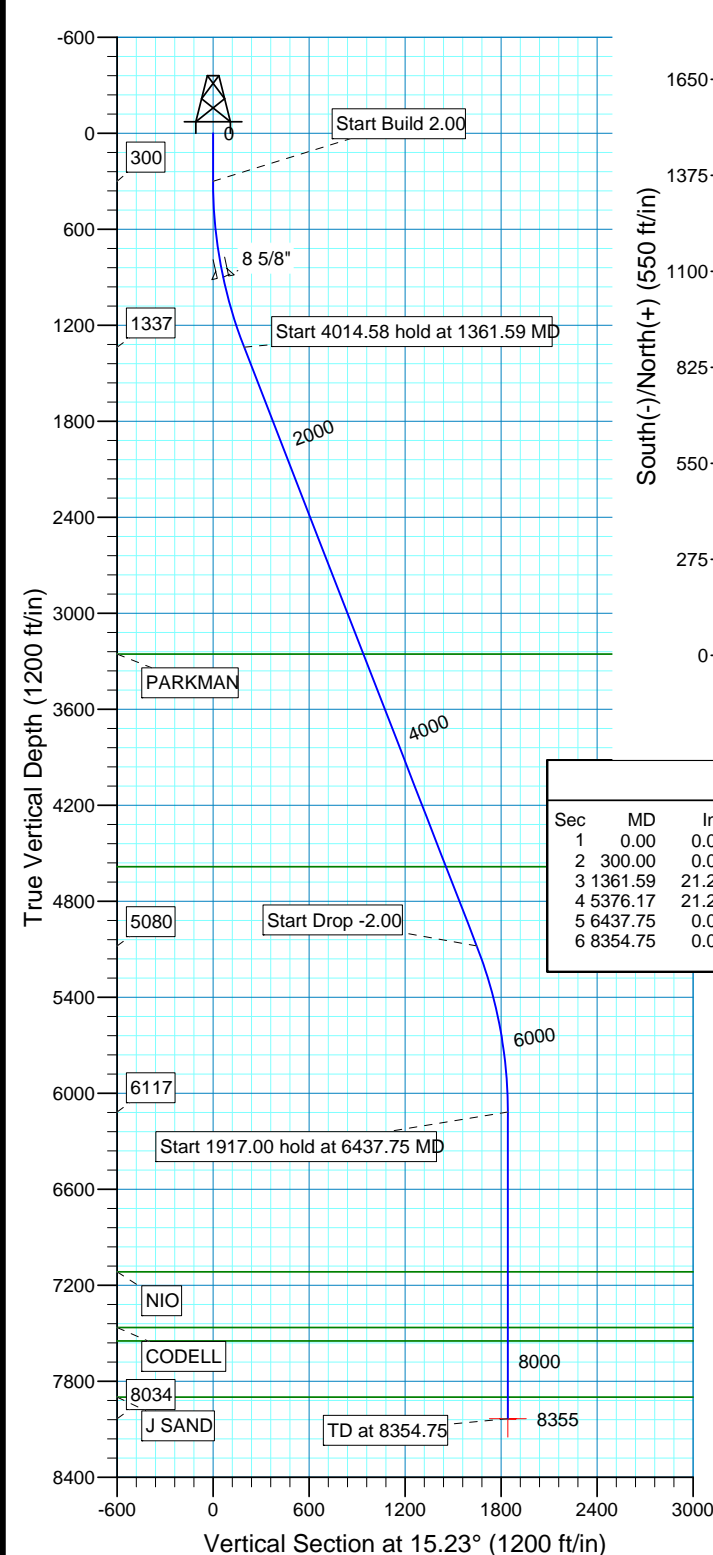
WELL DETAILS: P_Riverbend 22-18

+N/-S	+E/-W	GL 4919 & RKB 15' @ 4934.00ft (ASSUMED)	4919.00		
0.00	0.00	Northing	Easting	Latitude	Longitude
		1260351.10	3188540.12	40° 2' 45.913 N	104° 49' 35.580 W



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

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Shape
PBHL	8034.00	1778.04	484.02	1262132.77	3189010.63	40° 3' 3.485 N	104° 49' 29.356 W	Circle (Radius: 50.00)



SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	DLeg	TFace	VSec	Target
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2	300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.00	0.00	
3	1361.59	21.23	15.23	1337.46	187.62	51.08	2.00	15.23	194.45	
4	5376.17	21.23	15.23	5079.54	1590.42	432.95	0.00	0.00	1648.29	
5	6437.75	0.00	0.00	6117.00	1778.04	484.02	2.00	180.00	1842.75	
6	8354.75	0.00	0.00	8034.00	1778.04	484.02	0.00	0.00	1842.75	PBHL_Riverbend 22-18(2590 FSL 1370)

FORMATION TOP DETAILS

TVDPATH	MDPATH	FORMATION
3255.00	3418.76	PARKMAN
4585.00	4845.61	SUSSEX
7117.00	7437.75	NIO
7464.00	7784.75	CODELL
7549.00	7869.75	GREENHORN
7899.00	8219.75	J SAND

PROJECT DETAILS: COLORADO NORTHERN ZONE - 83

Geodetic System: US State Plane 1983
Datum: North American Datum 1983
Ellipsoid: GRS 1980
Zone: Colorado Northern Zone
Location: SECTION 18 T1N R66W
System Datum: Mean Sea Level
Local North: No north reference data is available

US ROCKIES REGION PLANNING

COLORADO NORTHERN ZONE - 83

WELD_RIVERBEND 13-8 pad

P_Riverbend 22-18

P_Riverbend 22-18

Plan: Plan #1 7-16-10 RHS

Standard Planning Report

16 July, 2010

Database:	EDM 2003.16 Single User Db	Local Co-ordinate Reference:	Well P_Riverbend 22-18
Company:	US ROCKIES REGION PLANNING	TVD Reference:	GL 4919 & RKB 15' @ 4934.00ft (ASSUMED)
Project:	COLORADO NORTHERN ZONE - 83	MD Reference:	GL 4919 & RKB 15' @ 4934.00ft (ASSUMED)
Site:	WELD_RIVERBEND 13-8 pad	North Reference:	True
Well:	P_Riverbend 22-18	Survey Calculation Method:	Minimum Curvature
Wellbore:	P_Riverbend 22-18		
Design:	Plan #1 7-16-10 RHS		

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

Site		WELD_RIVERBEND 13-8 pad, SECTION 18 T1N R66W			
Site Position:		Northing:	1,260,381.34 ft	Latitude:	40° 2' 46.212 N
From:	Lat/Long	Easting:	3,188,539.61 ft	Longitude:	104° 49' 35.584 W
Position Uncertainty:	0.00 ft	Slot Radius:	in	Grid Convergence:	0.44 °

Well	P_Riverbend 22-18, 816 FSL 880 FWL					
Well Position	+N-S	0.00 ft	Northing:	1,260,351.10 ft	Latitude:	40° 2' 45.913 N
	+E-W	0.00 ft	Easting:	3,188,540.12 ft	Longitude:	104° 49' 35.580 W
Position Uncertainty		0.00 ft	Wellhead Elevation:	ft	Ground Level:	4,919.00 ft

Wellbore	P_Riverbend 22-18				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF200510	07/16/10	8.95	66.79	53,055

Design	Plan #1 7-16-10 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	15.23	

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	
1,361.59	21.23	15.23	1,337.46	187.62	51.08	2.00	2.00	0.00	15.23	
5,376.17	21.23	15.23	5,079.54	1,590.42	432.95	0.00	0.00	0.00	0.00	
6,437.75	0.00	0.00	6,117.00	1,778.04	484.02	2.00	-2.00	0.00	180.00	
8,354.75	0.00	0.00	8,034.00	1,778.04	484.02	0.00	0.00	0.00	0.00	PBHL_Riverbend 2

Database:	EDM 2003.16 Single User Db	Local Co-ordinate Reference:	Well P_Riverbend 22-18
Company:	US ROCKIES REGION PLANNING	TVD Reference:	GL 4919 & RKB 15' @ 4934.00ft (ASSUMED)
Project:	COLORADO NORTHERN ZONE - 83	MD Reference:	GL 4919 & RKB 15' @ 4934.00ft (ASSUMED)
Site:	WELD_RIVERBEND 13-8 pad	North Reference:	True
Well:	P_Riverbend 22-18	Survey Calculation Method:	Minimum Curvature
Wellbore:	P_Riverbend 22-18		
Design:	Plan #1 7-16-10 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)
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
100.00	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00
200.00	0.00	0.00	200.00	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
Start Build 2.00									
400.00	2.00	15.23	399.98	1.68	0.46	1.75	2.00	2.00	0.00
500.00	4.00	15.23	499.84	6.73	1.83	6.98	2.00	2.00	0.00
600.00	6.00	15.23	599.45	15.14	4.12	15.69	2.00	2.00	0.00
700.00	8.00	15.23	698.70	26.90	7.32	27.88	2.00	2.00	0.00
800.00	10.00	15.23	797.47	41.99	11.43	43.52	2.00	2.00	0.00
900.00	12.00	15.23	895.62	60.40	16.44	62.60	2.00	2.00	0.00
904.48	12.09	15.23	900.00	61.31	16.69	63.54	2.00	2.00	0.00
8 5/8"									
1,000.00	14.00	15.23	993.06	82.11	22.35	85.10	2.00	2.00	0.00
1,100.00	16.00	15.23	1,089.64	107.08	29.15	110.98	2.00	2.00	0.00
1,200.00	18.00	15.23	1,185.27	135.29	36.83	140.21	2.00	2.00	0.00
1,300.00	20.00	15.23	1,279.82	166.70	45.38	172.77	2.00	2.00	0.00
1,361.59	21.23	15.23	1,337.46	187.62	51.08	194.45	2.00	2.00	0.00
Start 4014.58 hold at 1361.59 MD									
1,400.00	21.23	15.23	1,373.26	201.05	54.73	208.36	0.00	0.00	0.00
1,500.00	21.23	15.23	1,466.48	235.99	64.24	244.58	0.00	0.00	0.00
1,600.00	21.23	15.23	1,559.69	270.93	73.75	280.79	0.00	0.00	0.00
1,700.00	21.23	15.23	1,652.90	305.87	83.27	317.01	0.00	0.00	0.00
1,800.00	21.23	15.23	1,746.11	340.82	92.78	353.22	0.00	0.00	0.00
1,900.00	21.23	15.23	1,839.32	375.76	102.29	389.43	0.00	0.00	0.00
2,000.00	21.23	15.23	1,932.54	410.70	111.80	425.65	0.00	0.00	0.00
2,100.00	21.23	15.23	2,025.75	445.64	121.31	461.86	0.00	0.00	0.00
2,200.00	21.23	15.23	2,118.96	480.59	130.83	498.08	0.00	0.00	0.00
2,300.00	21.23	15.23	2,212.17	515.53	140.34	534.29	0.00	0.00	0.00
2,400.00	21.23	15.23	2,305.39	550.47	149.85	570.50	0.00	0.00	0.00
2,500.00	21.23	15.23	2,398.60	585.41	159.36	606.72	0.00	0.00	0.00
2,600.00	21.23	15.23	2,491.81	620.36	168.88	642.93	0.00	0.00	0.00
2,700.00	21.23	15.23	2,585.02	655.30	178.39	679.15	0.00	0.00	0.00
2,800.00	21.23	15.23	2,678.24	690.24	187.90	715.36	0.00	0.00	0.00
2,900.00	21.23	15.23	2,771.45	725.18	197.41	751.57	0.00	0.00	0.00
3,000.00	21.23	15.23	2,864.66	760.13	206.92	787.79	0.00	0.00	0.00
3,100.00	21.23	15.23	2,957.87	795.07	216.44	824.00	0.00	0.00	0.00
3,200.00	21.23	15.23	3,051.09	830.01	225.95	860.22	0.00	0.00	0.00
3,300.00	21.23	15.23	3,144.30	864.95	235.46	896.43	0.00	0.00	0.00
3,400.00	21.23	15.23	3,237.51	899.90	244.97	932.64	0.00	0.00	0.00
3,418.76	21.23	15.23	3,255.00	906.45	246.76	939.44	0.00	0.00	0.00
PARKMAN									
3,500.00	21.23	15.23	3,330.72	934.84	254.48	968.86	0.00	0.00	0.00
3,600.00	21.23	15.23	3,423.94	969.78	264.00	1,005.07	0.00	0.00	0.00
3,700.00	21.23	15.23	3,517.15	1,004.72	273.51	1,041.29	0.00	0.00	0.00
3,800.00	21.23	15.23	3,610.36	1,039.67	283.02	1,077.50	0.00	0.00	0.00
3,900.00	21.23	15.23	3,703.57	1,074.61	292.53	1,113.71	0.00	0.00	0.00
4,000.00	21.23	15.23	3,796.78	1,109.55	302.05	1,149.93	0.00	0.00	0.00
4,100.00	21.23	15.23	3,890.00	1,144.49	311.56	1,186.14	0.00	0.00	0.00
4,200.00	21.23	15.23	3,983.21	1,179.44	321.07	1,222.36	0.00	0.00	0.00
4,300.00	21.23	15.23	4,076.42	1,214.38	330.58	1,258.57	0.00	0.00	0.00
4,400.00	21.23	15.23	4,169.63	1,249.32	340.09	1,294.78	0.00	0.00	0.00
4,500.00	21.23	15.23	4,262.85	1,284.26	349.61	1,331.00	0.00	0.00	0.00

Database:	EDM 2003.16 Single User Db	Local Co-ordinate Reference:	Well P_Riverbend 22-18
Company:	US ROCKIES REGION PLANNING	TVD Reference:	GL 4919 & RKB 15' @ 4934.00ft (ASSUMED)
Project:	COLORADO NORTHERN ZONE - 83	MD Reference:	GL 4919 & RKB 15' @ 4934.00ft (ASSUMED)
Site:	WELD_RIVERBEND 13-8 pad	North Reference:	True
Well:	P_Riverbend 22-18	Survey Calculation Method:	Minimum Curvature
Wellbore:	P_Riverbend 22-18		
Design:	Plan #1 7-16-10 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)
4,600.00	21.23	15.23	4,356.06	1,319.21	359.12	1,367.21	0.00	0.00	0.00
4,700.00	21.23	15.23	4,449.27	1,354.15	368.63	1,403.43	0.00	0.00	0.00
4,800.00	21.23	15.23	4,542.48	1,389.09	378.14	1,439.64	0.00	0.00	0.00
4,845.61	21.23	15.23	4,585.00	1,405.03	382.48	1,456.16	0.00	0.00	0.00
SUSSEX									
4,900.00	21.23	15.23	4,635.70	1,424.03	387.65	1,475.85	0.00	0.00	0.00
5,000.00	21.23	15.23	4,728.91	1,458.98	397.17	1,512.07	0.00	0.00	0.00
5,100.00	21.23	15.23	4,822.12	1,493.92	406.68	1,548.28	0.00	0.00	0.00
5,200.00	21.23	15.23	4,915.33	1,528.86	416.19	1,584.50	0.00	0.00	0.00
5,300.00	21.23	15.23	5,008.55	1,563.80	425.70	1,620.71	0.00	0.00	0.00
5,376.17	21.23	15.23	5,079.54	1,590.42	432.95	1,648.29	0.00	0.00	0.00
Start Drop -2.00									
5,400.00	20.76	15.23	5,101.79	1,598.66	435.19	1,656.83	2.00	-2.00	0.00
5,500.00	18.76	15.23	5,195.90	1,631.27	444.07	1,690.63	2.00	-2.00	0.00
5,600.00	16.76	15.23	5,291.13	1,660.69	452.08	1,721.12	2.00	-2.00	0.00
5,700.00	14.76	15.23	5,387.37	1,686.89	459.21	1,748.28	2.00	-2.00	0.00
5,800.00	12.76	15.23	5,484.50	1,709.83	465.46	1,772.05	2.00	-2.00	0.00
5,900.00	10.76	15.23	5,582.40	1,729.49	470.81	1,792.42	2.00	-2.00	0.00
6,000.00	8.76	15.23	5,680.95	1,745.83	475.26	1,809.37	2.00	-2.00	0.00
6,100.00	6.76	15.23	5,780.03	1,758.85	478.80	1,822.86	2.00	-2.00	0.00
6,200.00	4.76	15.23	5,879.52	1,768.53	481.43	1,832.89	2.00	-2.00	0.00
6,300.00	2.76	15.23	5,979.30	1,774.85	483.15	1,839.43	2.00	-2.00	0.00
6,400.00	0.76	15.23	6,079.25	1,777.80	483.96	1,842.50	2.00	-2.00	0.00
6,437.75	0.00	0.00	6,117.00	1,778.04	484.02	1,842.75	2.00	-2.00	-40.34
Start 1917.00 hold at 6437.75 MD									
6,500.00	0.00	0.00	6,179.25	1,778.04	484.02	1,842.75	0.00	0.00	0.00
6,600.00	0.00	0.00	6,279.25	1,778.04	484.02	1,842.75	0.00	0.00	0.00
6,700.00	0.00	0.00	6,379.25	1,778.04	484.02	1,842.75	0.00	0.00	0.00
6,800.00	0.00	0.00	6,479.25	1,778.04	484.02	1,842.75	0.00	0.00	0.00
6,900.00	0.00	0.00	6,579.25	1,778.04	484.02	1,842.75	0.00	0.00	0.00
7,000.00	0.00	0.00	6,679.25	1,778.04	484.02	1,842.75	0.00	0.00	0.00
7,100.00	0.00	0.00	6,779.25	1,778.04	484.02	1,842.75	0.00	0.00	0.00
7,200.00	0.00	0.00	6,879.25	1,778.04	484.02	1,842.75	0.00	0.00	0.00
7,300.00	0.00	0.00	6,979.25	1,778.04	484.02	1,842.75	0.00	0.00	0.00
7,400.00	0.00	0.00	7,079.25	1,778.04	484.02	1,842.75	0.00	0.00	0.00
7,437.75	0.00	0.00	7,117.00	1,778.04	484.02	1,842.75	0.00	0.00	0.00
NIO									
7,500.00	0.00	0.00	7,179.25	1,778.04	484.02	1,842.75	0.00	0.00	0.00
7,600.00	0.00	0.00	7,279.25	1,778.04	484.02	1,842.75	0.00	0.00	0.00
7,700.00	0.00	0.00	7,379.25	1,778.04	484.02	1,842.75	0.00	0.00	0.00
7,784.75	0.00	0.00	7,464.00	1,778.04	484.02	1,842.75	0.00	0.00	0.00
CODELL									
7,800.00	0.00	0.00	7,479.25	1,778.04	484.02	1,842.75	0.00	0.00	0.00
7,869.75	0.00	0.00	7,549.00	1,778.04	484.02	1,842.75	0.00	0.00	0.00
GREENHORN									
7,900.00	0.00	0.00	7,579.25	1,778.04	484.02	1,842.75	0.00	0.00	0.00
8,000.00	0.00	0.00	7,679.25	1,778.04	484.02	1,842.75	0.00	0.00	0.00
8,100.00	0.00	0.00	7,779.25	1,778.04	484.02	1,842.75	0.00	0.00	0.00
8,200.00	0.00	0.00	7,879.25	1,778.04	484.02	1,842.75	0.00	0.00	0.00
8,219.75	0.00	0.00	7,899.00	1,778.04	484.02	1,842.75	0.00	0.00	0.00
J SAND									
8,300.00	0.00	0.00	7,979.25	1,778.04	484.02	1,842.75	0.00	0.00	0.00
8,354.75	0.00	0.00	8,034.00	1,778.04	484.02	1,842.75	0.00	0.00	0.00

Database:	EDM 2003.16 Single User Db	Local Co-ordinate Reference:	Well P_Riverbend 22-18
Company:	US ROCKIES REGION PLANNING	TVD Reference:	GL 4919 & RKB 15' @ 4934.00ft (ASSUMED)
Project:	COLORADO NORTHERN ZONE - 83	MD Reference:	GL 4919 & RKB 15' @ 4934.00ft (ASSUMED)
Site:	WELD_RIVERBEND 13-8 pad	North Reference:	True
Well:	P_Riverbend 22-18	Survey Calculation Method:	Minimum Curvature
Wellbore:	P_Riverbend 22-18		
Design:	Plan #1 7-16-10 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)
PBHL_Riverbend 22-18(2590 FSL 1370 FWL)									

Targets

Target Name

- hit/miss target	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (ft)	Easting (ft)	Latitude	Longitude
- Shape									
PBHL_Riverbend 22-1	0.00	0.00	8,034.00	1,778.04	484.02	1,262,132.77	3,189,010.63	40° 3' 3.485 N	104° 49' 29.356 W
- plan hits target center									
- Circle (radius 50.00)									

Casing Points

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

Formations

Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)
7,869.75	7,549.00	GREENHORN			
7,437.75	7,117.00	NIO			
3,418.76	3,255.00	PARKMAN			
8,219.75	7,899.00	J SAND			
7,784.75	7,464.00	CODELL			
4,845.61	4,585.00	SUSSEX			

Plan Annotations

Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment
		+N/-S (ft)	+E/-W (ft)	
300.00	300.00	0.00	0.00	Start Build 2.00
1,361.59	1,337.46	187.62	51.08	Start 4014.58 hold at 1361.59 MD
5,376.17	5,079.54	1,590.42	432.95	Start Drop -2.00
6,437.75	6,117.00	1,778.04	484.02	Start 1917.00 hold at 6437.75 MD
8,354.75	8,034.00	1,778.04	484.02	TD at 8354.75