

US ROCKIES REGION PLANNING

COLORADO NORTHERN ZONE - 83

WELD_RIVERBEND 4-13 PAD

Riverbend 4-13

Riverbend 4-13

Plan: Riverbend 4-13 (wp01)

Standard Planning Report

11 July, 2011



Project: COLORADO NORTHERN ZONE - 83
 Site: WELD_RIVERBEND 4-13 PAD
 Well: Riverbend 4-13
 Wellbore: Riverbend 4-13
 Section:
 SHL:
 Design: Riverbend 4-13 (wp01)
 Latitude: 40.056044
 Longitude: -104.847381
 GL: 4952.00
 KB: 15' RKB + 4952' GL @ 4967.00ft

FORMATION TOP DETAILS		
TVDPATH	MDPATH	FORMATION
4052.00	4090.80	PK Depth
4623.00	4661.80	SX Depth
7155.00	7193.80	NIO Depth
7502.00	7540.80	CD Depth
7587.00	7625.80	GH Depth
7937.00	7975.80	J Depth



Azimuths to True North
 Magnetic North: 8.87°

Magnetic Field
 Strength: 52932.7snT
 Dip Angle: 66.76°
 Date: 7/11/2011
 Model: IGRF2010

WELL DETAILS: Riverbend 4-13

+N/-S	+E/-W	Northing	Ground Level: Easting	4952.00 Latitude	Longitude	Slot
0.00	0.00	1263934.49	3182681.66	40.056044	-104.847381	

CASING DETAILS

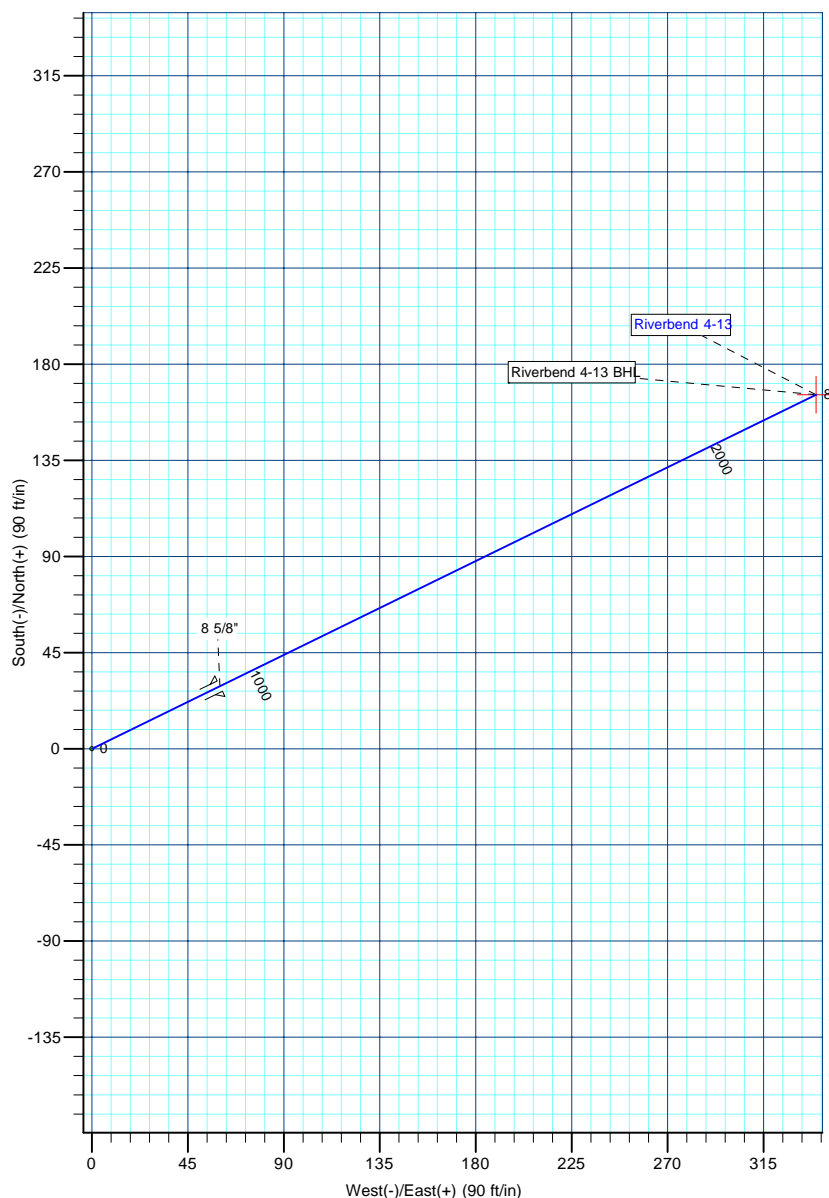
TVD	MD	Name	Size
915.00	919.82	8 5/8"	8-5/8

DESIGN TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Shape Point
Riverbend 4-13 BHL	8072.00	165.76	339.54	1264102.74	3183019.97	40.056499	-104.846168	

SECTION DETAILS

MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	Vsect
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
997.62	13.95	63.98	990.74	37.08	75.95	2.00	63.98	84.52
1813.53	13.95	63.98	1782.58	123.38	252.74	0.00	0.00	281.25
2610.80	0.00	0.00	2572.00	165.76	339.54	1.75	180.00	377.84
8110.80	0.00	0.00	8072.00	165.76	339.54	0.00	0.00	377.84



Database:	edm5000p	Local Co-ordinate Reference:	Well Riverbend 4-13
Company:	US ROCKIES REGION PLANNING	TVD Reference:	15' RKB + 4952' GL @ 4967.00ft
Project:	COLORADO NORTHERN ZONE - 83	MD Reference:	15' RKB + 4952' GL @ 4967.00ft
Site:	WELD_RIVERBEND 4-13 PAD	North Reference:	True
Well:	Riverbend 4-13	Survey Calculation Method:	Minimum Curvature
Wellbore:	Riverbend 4-13		
Design:	Riverbend 4-13 (wp01)		

Project	COLORADO NORTHERN ZONE - 83		
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 4-13 PAD		
Site Position:		Northing:	Latitude:
From:	Lat/Long	Easting:	Longitude:
Position Uncertainty:		Slot Radius:	Grid Convergence:

Well	Riverbend 4-13		
Well Position	+N/-S	Northing:	Latitude:
	+E/-W	Easting:	Longitude:
Position Uncertainty		Wellhead Elevation:	Ground Level:

Wellbore	Riverbend 4-13				
Magnetics	Model Name	Sample Date	Declination	Dip Angle	Field Strength
			()	()	(nT)
	IGRF2010	7/11/2011			

Design	Riverbend 4-13 (wp01)				
Audit Notes:					
Version:	Phase:	PLAN	Tie On Depth:		
Vertical Section:	Depth From (TVD)	+N/-S	+E/-W	Direction	
	()	()	()	()	

Plan Sections										
Measured	Inclination	Azimuth	Vertical	+N/-S	+E/-W	Dogleg	Build	Turn	TFO	Target
Depth			Depth			Rate	Rate	Rate		
()	()	()	()	()	()	()	()	()	()	
Riverbend 4-13 BHI										

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Site:	WELD_RIVERBEND 4-13 PAD	North Reference:	True
Well:	Riverbend 4-13	Survey Calculation Method:	Minimum Curvature
Wellbore:	Riverbend 4-13		
Design:	Riverbend 4-13 (wp01)		

Planned Survey

Measured Depth	Inclination	Azimuth	Vertical Depth	+N/-S	+E/-W	Vertical Section	Dogleg Rate	Build Rate	Turn Rate
0	0	0	0	0	0	0	0	0	0

Start Build 2.00

8 5/8"

Start 3366.38 hold at 1296.30 MD

PK Depth

Database:	edm5000p	Local Co-ordinate Reference:	Well Riverbend 4-13
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Site:	WELD_RIVERBEND 4-13 PAD	North Reference:	True
Well:	Riverbend 4-13	Survey Calculation Method:	Minimum Curvature
Wellbore:	Riverbend 4-13		
Design:	Riverbend 4-13 (wp01)		

Planned Survey

Measured Depth	Inclination	Azimuth	Vertical Depth	+N/-S	+E/-W	Vertical Section	Dogleg Rate	Build Rate	Turn Rate
0	0	0	0	0	0	0	0	0	0

SX Depth

Start Drop -1.75

Start 2500.00 hold at 5801.31 MD

NIO Depth

CD Depth

GH Depth

J Depth

Riverbend 8-14 BHL

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Site:	WELD_RIVERBEND 4-13 PAD	North Reference:	True
Well:	Riverbend 4-13	Survey Calculation Method:	Minimum Curvature
Wellbore:	Riverbend 4-13		
Design:	Riverbend 4-13 (wp01)		

Planned Survey										
Measured Depth	Inclination	Azimuth	Vertical Depth	+N/-S	+E/-W	Vertical Section	Dogleg Rate	Build Rate	Turn Rate	
()	()	()	()	()	()	()	()	()	()	()
Riverbend 4-13 BHL										

Casing Points					
Measured Depth	Vertical Depth	Name	Casing Diameter	Hole Diameter	
()	()		()	()	
8 5/8"					

Formations						
Measured Depth	Vertical Depth	Name	Lithology	Dip	Dip Direction	
()	()			()	()	
PK Depth SX Depth NIO Depth CD Depth GH Depth J Depth						

Plan Annotations					
Measured Depth	Vertical Depth	Local Coordinates		Comment	
()	()	+N/-S	+E/-W		
		()	()	Start Build 2.00 Start 3366.38 hold at 1296.30 MD Start Drop -1.75 Start 2500.00 hold at 5801.31 MD TD at 8301.31	