



US ROCKIES REGION PLANNING

COLORADO NORTHERN ZONE - 83

WELD_JR 3 PAD

P_JR 18-21

P_JR 18-21

Plan: PLAN #1 5-14-10 RHS

Standard Planning Report

14 May, 2010





Project: COLORADO NORTHERN ZONE - 83
 Site: WELD_JR 3 PAD
 Well: P_JR 18-21
 Wellbore: P_JR 18-21
 Section: SECTION 21 T4N R65W
 SHL: 1918 FNL 1152 FWL
 Design: PLAN #1 5-14-10 RHS
 Latitude: 40° 17' 59.791 N
 Longitude: 104° 40' 24.596 W
 GL: 4349.00
 KB: WELL @ 4364.00ft (Original Well Elev)



Weatherford



Azimuths to True North
 Magnetic North: 8.90°

Magnetic Field
 Strength: 53219.3snT
 Dip Angle: 67.04°
 Date: 5/14/2010
 Model: BGGM2009

FORMATION TOP DETAILS

TVDPath	MDPath	Formation
3853.00	3876.72	PARKMAN
4447.00	4475.47	SUSSEX
6946.00	6984.55	NIO
7239.00	7277.55	CODELL
7318.00	7356.55	GREENHORN
7663.00	7701.55	JSAND

CASING DETAILS

TVD	MD	Name	Size
550.00	550.00	8 5/8"	8.62

SECTION DETAILS

MD	Inc	Azi	TVD	+N/-S	+E/-W	DLeg	TFace	VSec	Annotation
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
650.00	0.00	0.00	650.00	0.00	0.00	0.00	0.00	0.00	Start Build 2.00
1011.32	7.23	16.58	1010.36	21.81	6.49	2.00	16.58	22.75	Start 4611.91 hold at 1011.32 MD
5623.23	7.23	16.58	5585.64	577.82	172.01	0.00	0.00	602.88	Start Drop -2.00
5984.55	0.00	0.00	5946.00	599.63	178.51	2.00	180.00	625.64	Start 1867.00 hold at 5984.55 MD
7851.55	0.00	0.00	7813.00	599.63	178.51	0.00	0.00	625.64	TD at 7851.55

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

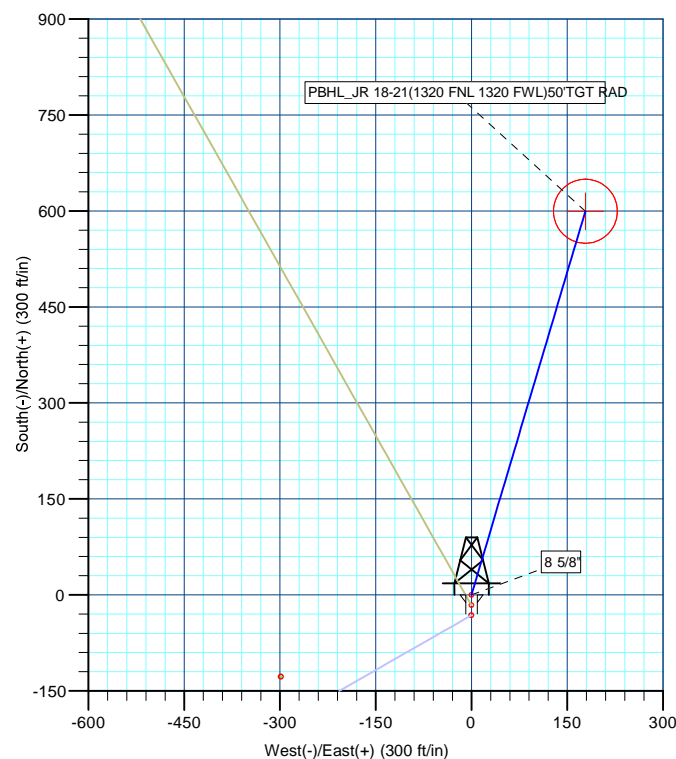
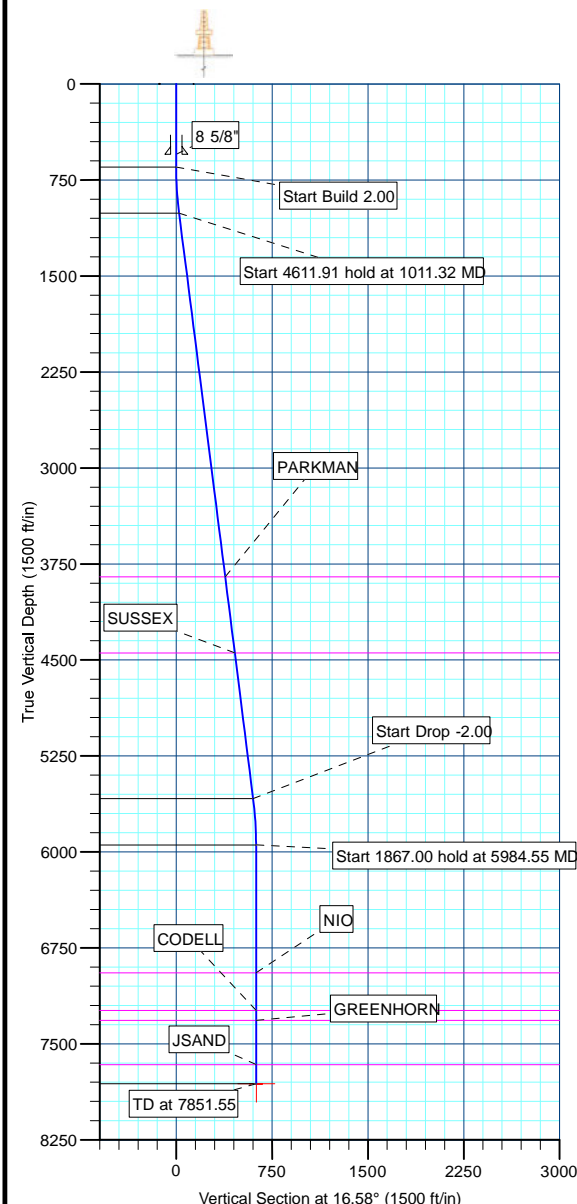
Name	TVD	+N/-S	+E/-W	Latitude	Longitude	Shape
PBHL	7813.00	599.63	178.51	40° 18' 5.717 N	104° 40' 22.292 W	Circle (Radius: 50.00)

WELL DETAILS: P_JR 18-21

+N/-S	+E/-W	Northing	Ground Level: Easting	4349.00 Latitude	Longitude	Slot
0.00	0.00	1353184.27	3230525.49	40° 17' 59.791 N	104° 40' 24.596 W	

LEGEND

- HSR-GULLICKSON #5-21 EXISTING, HSR-GULLICKSON #5-21 EXISTING, HSR-GULLICKSON #5-21 EXISTING V0
- P_JR 30-21, P_JR 30-21, PLAN #1 5-14-10 RHS V0
- P_JR 32-21, P_JR 32-21, PLAN #1 5-14-10 RHS V0
- PLAN #1 5-14-10 RHS



Plan: PLAN #1 5-14-10 RHS (P_JR 18-21/P_JR 18-21)

Created By: Robert H. Scott Date: 9:52, May 14 2010

Database:	EDM 2003.21 Single User Db	Local Co-ordinate Reference:	Well P_JR 18-21
Company:	US ROCKIES REGION PLANNING	TVD Reference:	WELL @ 4364.00ft (Original Well Elev)
Project:	COLORADO NORTHERN ZONE - 83	MD Reference:	WELL @ 4364.00ft (Original Well Elev)
Site:	WELD_JR 3 PAD	North Reference:	True
Well:	P_JR 18-21	Survey Calculation Method:	Minimum Curvature
Wellbore:	P_JR 18-21		
Design:	PLAN #1 5-14-10 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_JR 3 PAD, SECTION 21 T4N R65W				
Site Position:		Northing:	1,353,184.27 ft	Latitude:	40° 17' 59.791 N
From:	Lat/Long	Easting:	3,230,525.49ft	Longitude:	104° 40' 24.596 W
Position Uncertainty:	0.00 ft	Slot Radius:	in	Grid Convergence:	0.53 °

Well	P_JR 18-21					
Well Position	+N/-S	0.00 ft	Northing:	1,353,184.27 ft	Latitude:	40° 17' 59.791 N
	+E/-W	0.00 ft	Easting:	3,230,525.49 ft	Longitude:	104° 40' 24.596 W
Position Uncertainty	0.00 ft	Wellhead Elevation:	ft	Ground Level:	4,349.00 ft	

Wellbore	P_JR 18-21				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	BGGM2009	5/14/2010	8.90	67.04	53,219

Design	PLAN #1 5-14-10 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	16.58

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	
650.00	0.00	0.00	650.00	0.00	0.00	0.00	0.00	0.00	0.00	
1,011.32	7.23	16.58	1,010.36	21.81	6.49	2.00	2.00	0.00	16.58	
5,623.23	7.23	16.58	5,585.64	577.82	172.01	0.00	0.00	0.00	0.00	
5,984.55	0.00	0.00	5,946.00	599.63	178.51	2.00	-2.00	0.00	180.00	
7,851.55	0.00	0.00	7,813.00	599.63	178.51	0.00	0.00	0.00	0.00	PBHL_JR 18-21(13)

Database:	EDM 2003.21 Single User Db	Local Co-ordinate Reference:	Well P_JR 18-21
Company:	US ROCKIES REGION PLANNING	TVD Reference:	WELL @ 4364.00ft (Original Well Elev)
Project:	COLORADO NORTHERN ZONE - 83	MD Reference:	WELL @ 4364.00ft (Original Well Elev)
Site:	WELD_JR 3 PAD	North Reference:	True
Well:	P_JR 18-21	Survey Calculation Method:	Minimum Curvature
Wellbore:	P_JR 18-21		
Design:	PLAN #1 5-14-10 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									
650.00	0.00	0.00	650.00	0.00	0.00	0.00	0.00	0.00	0.00
700.00	1.00	16.58	700.00	0.42	0.12	0.44	2.00	2.00	0.00
800.00	3.00	16.58	799.93	3.76	1.12	3.93	2.00	2.00	0.00
900.00	5.00	16.58	899.68	10.45	3.11	10.90	2.00	2.00	0.00
1,000.00	7.00	16.58	999.13	20.47	6.09	21.35	2.00	2.00	0.00
Start 4611.91 hold at 1011.32 MD									
1,011.32	7.23	16.58	1,010.36	21.81	6.49	22.75	2.00	2.00	0.00
1,100.00	7.23	16.58	1,098.34	32.50	9.68	33.91	0.00	0.00	0.00
1,200.00	7.23	16.58	1,197.54	44.56	13.26	46.49	0.00	0.00	0.00
1,300.00	7.23	16.58	1,296.75	56.61	16.85	59.07	0.00	0.00	0.00
1,400.00	7.23	16.58	1,395.96	68.67	20.44	71.65	0.00	0.00	0.00
1,500.00	7.23	16.58	1,495.16	80.72	24.03	84.23	0.00	0.00	0.00
1,600.00	7.23	16.58	1,594.37	92.78	27.62	96.80	0.00	0.00	0.00
1,700.00	7.23	16.58	1,693.57	104.84	31.21	109.38	0.00	0.00	0.00
1,800.00	7.23	16.58	1,792.78	116.89	34.80	121.96	0.00	0.00	0.00
1,900.00	7.23	16.58	1,891.98	128.95	38.39	134.54	0.00	0.00	0.00
2,000.00	7.23	16.58	1,991.19	141.01	41.98	147.12	0.00	0.00	0.00
2,100.00	7.23	16.58	2,090.40	153.06	45.57	159.70	0.00	0.00	0.00
2,200.00	7.23	16.58	2,189.60	165.12	49.15	172.28	0.00	0.00	0.00
2,300.00	7.23	16.58	2,288.81	177.17	52.74	184.86	0.00	0.00	0.00
2,400.00	7.23	16.58	2,388.01	189.23	56.33	197.44	0.00	0.00	0.00
2,500.00	7.23	16.58	2,487.22	201.29	59.92	210.01	0.00	0.00	0.00
2,600.00	7.23	16.58	2,586.42	213.34	63.51	222.59	0.00	0.00	0.00
2,700.00	7.23	16.58	2,685.63	225.40	67.10	235.17	0.00	0.00	0.00
2,800.00	7.23	16.58	2,784.84	237.45	70.69	247.75	0.00	0.00	0.00
2,900.00	7.23	16.58	2,884.04	249.51	74.28	260.33	0.00	0.00	0.00
3,000.00	7.23	16.58	2,983.25	261.57	77.87	272.91	0.00	0.00	0.00
3,100.00	7.23	16.58	3,082.45	273.62	81.45	285.49	0.00	0.00	0.00
3,200.00	7.23	16.58	3,181.66	285.68	85.04	298.07	0.00	0.00	0.00
3,300.00	7.23	16.58	3,280.86	297.73	88.63	310.65	0.00	0.00	0.00
3,400.00	7.23	16.58	3,380.07	309.79	92.22	323.22	0.00	0.00	0.00
3,500.00	7.23	16.58	3,479.28	321.85	95.81	335.80	0.00	0.00	0.00
3,600.00	7.23	16.58	3,578.48	333.90	99.40	348.38	0.00	0.00	0.00
3,700.00	7.23	16.58	3,677.69	345.96	102.99	360.96	0.00	0.00	0.00
3,800.00	7.23	16.58	3,776.89	358.01	106.58	373.54	0.00	0.00	0.00
PARKMAN									
3,876.72	7.23	16.58	3,853.00	367.26	109.33	383.19	0.00	0.00	0.00
3,900.00	7.23	16.58	3,876.10	370.07	110.17	386.12	0.00	0.00	0.00
4,000.00	7.23	16.58	3,975.30	382.13	113.76	398.70	0.00	0.00	0.00
4,100.00	7.23	16.58	4,074.51	394.18	117.34	411.28	0.00	0.00	0.00
4,200.00	7.23	16.58	4,173.72	406.24	120.93	423.86	0.00	0.00	0.00
4,300.00	7.23	16.58	4,272.92	418.29	124.52	436.43	0.00	0.00	0.00
4,400.00	7.23	16.58	4,372.13	430.35	128.11	449.01	0.00	0.00	0.00
SUSSEX									
4,475.47	7.23	16.58	4,447.00	439.45	130.82	458.51	0.00	0.00	0.00
4,500.00	7.23	16.58	4,471.33	442.41	131.70	461.59	0.00	0.00	0.00
4,600.00	7.23	16.58	4,570.54	454.46	135.29	474.17	0.00	0.00	0.00
4,700.00	7.23	16.58	4,669.74	466.52	138.88	486.75	0.00	0.00	0.00
4,800.00	7.23	16.58	4,768.95	478.57	142.47	499.33	0.00	0.00	0.00
4,900.00	7.23	16.58	4,868.16	490.63	146.06	511.91	0.00	0.00	0.00
5,000.00	7.23	16.58	4,967.36	502.69	149.65	524.49	0.00	0.00	0.00
5,100.00	7.23	16.58	5,066.57	514.74	153.23	537.07	0.00	0.00	0.00

Database:	EDM 2003.21 Single User Db	Local Co-ordinate Reference:	Well P_JR 18-21
Company:	US ROCKIES REGION PLANNING	TVD Reference:	WELL @ 4364.00ft (Original Well Elev)
Project:	COLORADO NORTHERN ZONE - 83	MD Reference:	WELL @ 4364.00ft (Original Well Elev)
Site:	WELD_JR 3 PAD	North Reference:	True
Well:	P_JR 18-21	Survey Calculation Method:	Minimum Curvature
Wellbore:	P_JR 18-21		
Design:	PLAN #1 5-14-10 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)
5,200.00	7.23	16.58	5,165.77	526.80	156.82	549.64	0.00	0.00	0.00
5,300.00	7.23	16.58	5,264.98	538.85	160.41	562.22	0.00	0.00	0.00
5,400.00	7.23	16.58	5,364.18	550.91	164.00	574.80	0.00	0.00	0.00
5,500.00	7.23	16.58	5,463.39	562.97	167.59	587.38	0.00	0.00	0.00
5,600.00	7.23	16.58	5,562.60	575.02	171.18	599.96	0.00	0.00	0.00
Start Drop -2.00									
5,623.23	7.23	16.58	5,585.64	577.82	172.01	602.88	0.00	0.00	0.00
5,700.00	5.69	16.58	5,661.92	586.10	174.48	611.52	2.00	-2.00	0.00
5,800.00	3.69	16.58	5,761.58	593.94	176.81	619.70	2.00	-2.00	0.00
5,900.00	1.69	16.58	5,861.47	598.44	178.15	624.39	2.00	-2.00	0.00
Start 1867.00 hold at 5984.55 MD									
5,984.55	0.00	0.00	5,946.00	599.63	178.51	625.64	2.00	-2.00	-19.61
6,000.00	0.00	0.00	5,961.45	599.63	178.51	625.64	0.00	0.00	0.00
6,100.00	0.00	0.00	6,061.45	599.63	178.51	625.64	0.00	0.00	0.00
6,200.00	0.00	0.00	6,161.45	599.63	178.51	625.64	0.00	0.00	0.00
6,300.00	0.00	0.00	6,261.45	599.63	178.51	625.64	0.00	0.00	0.00
6,400.00	0.00	0.00	6,361.45	599.63	178.51	625.64	0.00	0.00	0.00
6,500.00	0.00	0.00	6,461.45	599.63	178.51	625.64	0.00	0.00	0.00
6,600.00	0.00	0.00	6,561.45	599.63	178.51	625.64	0.00	0.00	0.00
6,700.00	0.00	0.00	6,661.45	599.63	178.51	625.64	0.00	0.00	0.00
6,800.00	0.00	0.00	6,761.45	599.63	178.51	625.64	0.00	0.00	0.00
6,900.00	0.00	0.00	6,861.45	599.63	178.51	625.64	0.00	0.00	0.00
NIO									
6,984.55	0.00	0.00	6,946.00	599.63	178.51	625.64	0.00	0.00	0.00
7,000.00	0.00	0.00	6,961.45	599.63	178.51	625.64	0.00	0.00	0.00
7,100.00	0.00	0.00	7,061.45	599.63	178.51	625.64	0.00	0.00	0.00
7,200.00	0.00	0.00	7,161.45	599.63	178.51	625.64	0.00	0.00	0.00
CODELL									
7,277.55	0.00	0.00	7,239.00	599.63	178.51	625.64	0.00	0.00	0.00
7,300.00	0.00	0.00	7,261.45	599.63	178.51	625.64	0.00	0.00	0.00
GREENHORN									
7,356.55	0.00	0.00	7,318.00	599.63	178.51	625.64	0.00	0.00	0.00
7,400.00	0.00	0.00	7,361.45	599.63	178.51	625.64	0.00	0.00	0.00
7,500.00	0.00	0.00	7,461.45	599.63	178.51	625.64	0.00	0.00	0.00
7,600.00	0.00	0.00	7,561.45	599.63	178.51	625.64	0.00	0.00	0.00
7,700.00	0.00	0.00	7,661.45	599.63	178.51	625.64	0.00	0.00	0.00
JSAND									
7,701.55	0.00	0.00	7,663.00	599.63	178.51	625.64	0.00	0.00	0.00
7,800.00	0.00	0.00	7,761.45	599.63	178.51	625.64	0.00	0.00	0.00
PBHL_JR 18-21(1320 FNL 1320 FWL)50'TGT RAD									
7,851.55	0.00	0.00	7,813.00	599.63	178.51	625.64	0.00	0.00	0.00

Design Targets

Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (ft)	Easting (ft)	Latitude	Longitude
- hit/miss target									
- Shape									
PBHL_JR 18-21(1320	0.00	0.00	7,813.00	599.63	178.51	1,353,785.54	3,230,698.40	40° 18' 5.717 N	104° 40' 22.292 W
- plan hits target center									
- Circle (radius 50.00)									

Database:	EDM 2003.21 Single User Db	Local Co-ordinate Reference:	Well P_JR 18-21
Company:	US ROCKIES REGION PLANNING	TVD Reference:	WELL @ 4364.00ft (Original Well Elev)
Project:	COLORADO NORTHERN ZONE - 83	MD Reference:	WELL @ 4364.00ft (Original Well Elev)
Site:	WELD_JR 3 PAD	North Reference:	True
Well:	P_JR 18-21	Survey Calculation Method:	Minimum Curvature
Wellbore:	P_JR 18-21		
Design:	PLAN #1 5-14-10 RHS		

Casing Points

Measured Depth (ft)	Vertical Depth (ft)	Name	Casing Diameter (in)	Hole Diameter (in)
550.00	550.00	8 5/8"	8.62	11.00

Formations

Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)
3,876.72	3,853.00	PARKMAN			
4,475.47	4,447.00	SUSSEX			
6,984.55	6,946.00	NIO			
7,277.55	7,239.00	CODELL			
7,356.55	7,318.00	GREENHORN			
7,701.55	7,663.00	JSAND			

Plan Annotations

Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment
		+N/-S (ft)	+E/-W (ft)	
650.00	650.00	0.00	0.00	Start Build 2.00
1,011.32	1,010.36	21.81	6.49	Start 4611.91 hold at 1011.32 MD
5,623.23	5,585.64	577.82	172.01	Start Drop -2.00
5,984.55	5,946.00	599.63	178.51	Start 1867.00 hold at 5984.55 MD
7,851.55	7,813.00	599.63	178.51	TD at 7851.55