



SECTION DETAILS									
Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	DLeg	TFace	VSec
1	0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.0
2	1000.0	0.00	0.00	1000.0	0.0	0.0	0.00	0.00	0.0
3	2200.0	24.00	100.12	2165.2	-43.5	243.8	2.00	100.12	247.7
4	5167.8	24.00	100.12	4876.4	-255.6	1432.1	0.00	0.00	1454.8
5	6767.8	0.00	0.00	6430.0	-313.6	1757.2	1.50	180.00	1785.0
6	7834.7	0.00	0.00	7497.0	-313.6	1757.2	0.00	0.00	1785.0

Azimuths to True North  
 Magnetic North: 9.10°

Magnetic Field  
 Strength: 53269.8snT  
 Dip Angle: 66.99°  
 Date: 6/30/2009  
 Model: IGRF200510

# **ROCKIES - PLANNING**

**COLORADO NORTHERN ZONE - 83**

**WELD\_BELLA 4-8 PAD**

**P\_BELLA 21-8**

**P\_BELLA 21-8**

**Plan: Plan #1 06-30-09 ZJRA6**

## **Standard Planning Report - Geographic**

**30 June, 2009**

# APC

## Planning Report - Geographic

<b>Database:</b>	apc_edmp	<b>Local Co-ordinate Reference:</b>	Well P_BELLA 21-8
<b>Company:</b>	ROCKIES - PLANNING	<b>TVD Reference:</b>	WELL @ 4820.0ft (Original Well Elev)
<b>Project:</b>	COLORADO NORTHERN ZONE - 83	<b>MD Reference:</b>	WELL @ 4820.0ft (Original Well Elev)
<b>Site:</b>	WELD_BELLA 4-8 PAD	<b>North Reference:</b>	True
<b>Well:</b>	P_BELLA 21-8	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	P_BELLA 21-8		
<b>Design:</b>	Plan #1 06-30-09 ZJRA6		

<b>Project</b>	COLORADO NORTHERN ZONE - 83		
<b>Map System:</b>	US State Plane 1983	<b>System Datum:</b>	Mean Sea Level
<b>Geo Datum:</b>	North American Datum 1983		
<b>Map Zone:</b>	Colorado Northern Zone		

<b>Site</b>	WELD_BELLA 4-8 PAD				
<b>Site Position:</b>		<b>Northing:</b>	1,332,565.14 ft	<b>Latitude:</b>	40.244220
<b>From:</b>	Lat/Long	<b>Easting:</b>	3,193,206.35 ft	<b>Longitude:</b>	-104.807870
<b>Position Uncertainty:</b>	0.0 ft	<b>Slot Radius:</b>	"	<b>Grid Convergence:</b>	0.45 °

<b>Well</b>	P_BELLA 21-8					
<b>Well Position</b>	<b>+N/-S</b>	0.0 ft	<b>Northing:</b>	1,332,550.57 ft	<b>Latitude:</b>	40.244180
	<b>+E/-W</b>	0.0 ft	<b>Easting:</b>	3,193,206.47 ft	<b>Longitude:</b>	-104.807870
<b>Position Uncertainty</b>		0.0 ft	<b>Wellhead Elevation:</b>	ft	<b>Ground Level:</b>	4,820.0 ft

<b>Wellbore</b>	P_BELLA 21-8				
<b>Magnetics</b>	<b>Model Name</b>	<b>Sample Date</b>	<b>Declination (°)</b>	<b>Dip Angle (°)</b>	<b>Field Strength (nT)</b>
	IGRF200510	6/30/2009	9.10	66.99	53,270

<b>Design</b>	Plan #1 06-30-09 ZJRA6			
<b>Audit Notes:</b>				
<b>Version:</b>	<b>Phase:</b>	PLAN	<b>Tie On Depth:</b>	0.0
<b>Vertical Section:</b>	<b>Depth From (TVD) (ft)</b>	<b>+N/-S (ft)</b>	<b>+E/-W (ft)</b>	<b>Direction (°)</b>
	7,497.0	0.0	0.0	100.12

<b>Plan Sections</b>										
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
0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.00	0.00	
1,000.0	0.00	0.00	1,000.0	0.0	0.0	0.00	0.00	0.00	0.00	
2,200.0	24.00	100.12	2,165.2	-43.5	243.8	2.00	2.00	0.00	100.12	
5,167.8	24.00	100.12	4,876.4	-255.6	1,432.1	0.00	0.00	0.00	0.00	
6,767.8	0.00	0.00	6,430.0	-313.6	1,757.2	1.50	-1.50	0.00	180.00	
7,834.7	0.00	0.00	7,497.0	-313.6	1,757.2	0.00	0.00	0.00	0.00	PBHL_BELLA 21-8

# APC

## Planning Report - Geographic

<b>Database:</b> apc_edmp	<b>Local Co-ordinate Reference:</b> Well P_BELLA 21-8
<b>Company:</b> ROCKIES - PLANNING	<b>TVD Reference:</b> WELL @ 4820.0ft (Original Well Elev)
<b>Project:</b> COLORADO NORTHERN ZONE - 83	<b>MD Reference:</b> WELL @ 4820.0ft (Original Well Elev)
<b>Site:</b> WELD_BELLA 4-8 PAD	<b>North Reference:</b> True
<b>Well:</b> P_BELLA 21-8	<b>Survey Calculation Method:</b> Minimum Curvature
<b>Wellbore:</b> P_BELLA 21-8	
<b>Design:</b> Plan #1 06-30-09 ZJRA6	

Planned Survey										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Map Northing (ft)	Map Easting (ft)	Latitude	Longitude	
0.0	0.00	0.00	0.0	0.0	0.0	1,332,550.57	3,193,206.47	40.244180	-104.807870	
650.0	0.00	0.00	650.0	0.0	0.0	1,332,550.57	3,193,206.47	40.244180	-104.807870	
<b>Surface Casing</b>										
1,000.0	0.00	0.00	1,000.0	0.0	0.0	1,332,550.57	3,193,206.47	40.244180	-104.807870	
2,200.0	24.00	100.12	2,165.2	-43.5	243.8	1,332,508.95	3,193,450.62	40.244061	-104.806997	
4,015.8	24.00	100.12	3,824.0	-173.3	970.9	1,332,384.86	3,194,178.66	40.243704	-104.804392	
<b>Parkman</b>										
4,637.5	24.00	100.12	4,392.0	-217.7	1,219.8	1,332,342.37	3,194,427.95	40.243582	-104.803500	
<b>Sussex</b>										
5,150.9	24.00	100.12	4,861.0	-254.4	1,425.4	1,332,307.29	3,194,633.80	40.243481	-104.802764	
<b>Shannon</b>										
5,167.8	24.00	100.12	4,876.4	-255.6	1,432.1	1,332,306.13	3,194,640.55	40.243478	-104.802740	
6,767.8	0.00	0.00	6,430.0	-313.6	1,757.2	1,332,250.65	3,194,966.09	40.243319	-104.801575	
7,389.7	0.00	0.00	7,052.0	-313.6	1,757.2	1,332,250.65	3,194,966.09	40.243319	-104.801575	
<b>Niobrara "A"</b>										
7,674.7	0.00	0.00	7,337.0	-313.6	1,757.2	1,332,250.65	3,194,966.09	40.243319	-104.801575	
<b>Codell</b>										
7,834.7	0.00	0.00	7,497.0	-313.6	1,757.2	1,332,250.65	3,194,966.09	40.243319	-104.801575	

Targets										
Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (ft)	Easting (ft)	Latitude	Longitude	
PBHL_BELLA 21-8 - hit/miss target - Shape - Point	0.00	0.00	7,497.0	-313.6	1,757.2	1,332,250.65	3,194,966.09	40.243319	-104.801575	

Casing Points						
Measured Depth (ft)	Vertical Depth (ft)	Name	Casing Diameter (")	Hole Diameter (")		
650.0	650.0	Surface Casing	8-5/8	12-1/4		

Formations						
Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)	
4,015.8	3,824.0	Parkman		0.00		
7,389.7	7,052.0	Niobrara "A"		0.00		
5,150.9	4,861.0	Shannon		0.00		
4,637.5	4,392.0	Sussex		0.00		
7,674.7	7,337.0	Codell		0.00		