



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	1675.0	13.50	137.78	1668.8	-58.6	53.2	2.00	137.78	79.2
4	4520.7	13.50	137.78	4435.8	-550.6	499.6	0.00	0.00	743.5
5	5420.7	0.00	0.00	5327.5	-628.7	570.5	1.50	180.00	849.0
6	7573.2	0.00	0.00	7480.0	-628.7	570.5	0.00	0.00	849.0



Azimuths to True North
Magnetic North: 9.04°

Magnetic Field
Strength: 53288.0snT
Dip Angle: 67.02°
Date: 7/9/2009
Model: IGRF200510

ROCKIES - PLANNING

COLORADO NORTHERN ZONE - 83

WELD_RURAL 15-31 PAD

P_RURAL 37-31

P_RURAL 37-31

Plan: Plan #1 07-09-09 ZJRA6

Standard Planning Report - Geographic

09 July, 2009

APC

Planning Report - Geographic

Database:	apc_edmp	Local Co-ordinate Reference:	Well P_RURAL 37-31
Company:	ROCKIES - PLANNING	TVD Reference:	WELL @ 4918.0ft (Original Well Elev)
Project:	COLORADO NORTHERN ZONE - 83	MD Reference:	WELL @ 4918.0ft (Original Well Elev)
Site:	WELD_RURAL 15-31 PAD	North Reference:	True
Well:	P_RURAL 37-31	Survey Calculation Method:	Minimum Curvature
Wellbore:	P_RURAL 37-31		
Design:	Plan #1 07-09-09 ZJRA6		

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_RURAL 15-31 PAD											
Site Position:						Northing:			1,339,888.14ft			Latitude:			40.263650		
From:			Lat/Long			Easting:			3,222,349.22ft			Longitude:			-104.703240		
Position Uncertainty:			0.0 ft			Slot Radius:			"			Grid Convergence:			0.51 °		

Well	P_RURAL 37-31					
Well Position	+N/-S	0.0 ft	Northing:	1,339,855.35 ft	Latitude:	40.263560
	+E/-W	0.0 ft	Easting:	3,222,349.52 ft	Longitude:	-104.703240
Position Uncertainty		0.0 ft	Wellhead Elevation:	ft	Ground Level:	4,918.0 ft

Wellbore	P_RURAL 37-31				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF200510	7/9/2009	9.04	67.02	53,288

Design	Plan #1 07-09-09 ZJRA6			
Audit Notes:				
Version:	Phase:	PLAN	Tie On Depth:	0.0
Vertical Section:	Depth From (TVD) (ft)	+N/-S (ft)	+E/-W (ft)	Direction (°)
	7,480.0	0.0	0.0	137.78

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
0.0	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	
1,675.0	13.50	137.78	1,668.8	-58.6	53.2	2.00	2.00	0.00	137.78	
4,520.7	13.50	137.78	4,435.8	-550.6	499.6	0.00	0.00	0.00	0.00	
5,420.7	0.00	0.00	5,327.5	-628.7	570.5	1.50	-1.50	0.00	180.00	
7,573.2	0.00	0.00	7,480.0	-628.7	570.5	0.00	0.00	0.00	0.00	PBHL_RURAL 37-3

APC

Planning Report - Geographic

Database:	apc_edmp	Local Co-ordinate Reference:	Well P_RURAL 37-31
Company:	ROCKIES - PLANNING	TVD Reference:	WELL @ 4918.0ft (Original Well Elev)
Project:	COLORADO NORTHERN ZONE - 83	MD Reference:	WELL @ 4918.0ft (Original Well Elev)
Site:	WELD_RURAL 15-31 PAD	North Reference:	True
Well:	P_RURAL 37-31	Survey Calculation Method:	Minimum Curvature
Wellbore:	P_RURAL 37-31		
Design:	Plan #1 07-09-09 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	1,339,855.35	3,222,349.52	40.263560	-104.703240
600.0	0.00	0.00	600.0	0.0	0.0	1,339,855.35	3,222,349.52	40.263560	-104.703240
Surface Casing									
1,000.0	0.00	0.00	1,000.0	0.0	0.0	1,339,855.35	3,222,349.52	40.263560	-104.703240
1,675.0	13.50	137.78	1,668.8	-58.6	53.2	1,339,797.21	3,222,403.23	40.263399	-104.703049
3,969.6	13.50	137.78	3,900.0	-455.3	413.1	1,339,403.76	3,222,766.74	40.262310	-104.701760
Parkman									
4,432.4	13.50	137.78	4,350.0	-535.3	485.7	1,339,324.41	3,222,840.06	40.262090	-104.701499
Sussex									
4,520.7	13.50	137.78	4,435.8	-550.6	499.6	1,339,309.28	3,222,854.04	40.262049	-104.701450
5,420.7	0.00	0.00	5,327.5	-628.7	570.5	1,339,231.76	3,222,925.66	40.261834	-104.701196
7,121.2	0.00	0.00	7,028.0	-628.7	570.5	1,339,231.76	3,222,925.66	40.261834	-104.701196
Niobrara "A"									
7,412.2	0.00	0.00	7,319.0	-628.7	570.5	1,339,231.76	3,222,925.66	40.261834	-104.701196
Codell									
7,573.2	0.00	0.00	7,480.0	-628.7	570.5	1,339,231.76	3,222,925.66	40.261834	-104.701196

Targets									
Target Name									
- hit/miss target	Dip Angle	Dip Dir.	TVD	+N/-S	+E/-W	Northing	Easting		
- Shape	(°)	(°)	(ft)	(ft)	(ft)	(ft)	(ft)	Latitude	Longitude
PBHL_RURAL 37-31	0.00	0.00	7,480.0	-628.7	570.5	1,339,231.76	3,222,925.66	40.261834	-104.701196
- plan hits target center									
- Point									

Casing Points					
Measured Depth (ft)	Vertical Depth (ft)	Name	Casing Diameter (")	Hole Diameter (")	
600.0	600.0	Surface Casing	8-5/8	12-1/4	

Formations						
Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)	
4,432.4	4,350.0	Sussex		0.00		
3,969.6	3,900.0	Parkman		0.00		
7,121.2	7,028.0	Niobrara "A"		0.00		
7,412.2	7,319.0	Codell		0.00		