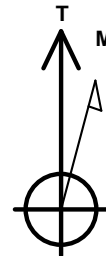


SECTION DETAILS

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	1500.0	0.00	0.00	1500.0	0.0	0.0	0.00	0.00	0.0
3	2506.6	20.13	317.60	2486.0	129.3	-118.0	2.00	317.60	175.0
4	5506.6	20.13	317.60	5302.7	891.8	-814.3	0.00	0.00	1207.6
5	6848.8	0.00	0.00	6617.4	1064.1	-971.7	1.50	180.00	1441.0
6	7736.3	0.00	0.00	7505.0	1064.1	-971.7	0.00	0.00	1441.0



Azimuths to True North
 Magnetic North: 9.13°

Magnetic Field
 Strength: 53270.3snT
 Dip Angle: 66.96°
 Date: 4/6/2009
 Model: IGRF200510

ROCKIES - PLANNING

COLORADO NORTHERN ZONE - 83

WELD_NORTON 18-29 PAD

P_NORTON 30-29

P_NORTON 30-29

Plan: Plan #2 07-13-09 ZJRA6

Standard Planning Report - Geographic

13 July, 2009

APC

Planning Report - Geographic

Database:	apc_edmp	Local Co-ordinate Reference:	Well P_NORTON 30-29
Company:	ROCKIES - PLANNING	TVD Reference:	WELL @ 4863.0ft
Project:	COLORADO NORTHERN ZONE - 83	MD Reference:	WELL @ 4863.0ft
Site:	WELD_NORTON 18-29 PAD	North Reference:	True
Well:	P_NORTON 30-29	Survey Calculation Method:	Minimum Curvature
Wellbore:	P_NORTON 30-29		
Design:	Plan #2 07-13-09 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_NORTON 18-29 PAD				
Site Position:		Northing:	1,316,425.80ft	Latitude:	40.199910
From:	Lat/Long	Easting:	3,193,539.04ft	Longitude:	-104.807130
Position Uncertainty:	0.0 ft	Slot Radius:	"	Grid Convergence:	0.45 °

Well	P_NORTON 30-29					
Well Position	+N/-S	0.0 ft	Northing:	1,316,426.03 ft	Latitude:	40.199910
	+E/-W	0.0 ft	Easting:	3,193,569.81 ft	Longitude:	-104.807020
Position Uncertainty		0.0 ft	Wellhead Elevation:	ft	Ground Level:	4,863.0 ft

Wellbore	P_NORTON 30-29				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF200510	4/6/2009	9.13	66.96	53,270

Design	Plan #2 07-13-09 ZJRA6			
Audit Notes:				
Version:	Phase:	PLAN	Tie On Depth:	0.0
Vertical Section:	Depth From (TVD) (ft)	+N/-S (ft)	+E/-W (ft)	Direction (°)
	7,505.0	0.0	0.0	317.60

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	
1,500.0	0.00	0.00	1,500.0	0.0	0.0	0.00	0.00	0.00	0.00	
2,506.6	20.13	317.60	2,486.0	129.3	-118.0	2.00	2.00	0.00	317.60	
5,506.6	20.13	317.60	5,302.7	891.8	-814.3	0.00	0.00	0.00	0.00	
6,848.8	0.00	0.00	6,617.4	1,064.1	-971.7	1.50	-1.50	0.00	180.00	
7,736.3	0.00	0.00	7,505.0	1,064.1	-971.7	0.00	0.00	0.00	0.00	PBHL_NORTON 30

APC

Planning Report - Geographic

Database: apc_edmp	Local Co-ordinate Reference: Well P_NORTON 30-29
Company: ROCKIES - PLANNING	TVD Reference: WELL @ 4863.0ft
Project: COLORADO NORTHERN ZONE - 83	MD Reference: WELL @ 4863.0ft
Site: WELD_NORTON 18-29 PAD	North Reference: True
Well: P_NORTON 30-29	Survey Calculation Method: Minimum Curvature
Wellbore: P_NORTON 30-29	
Design: Plan #2 07-13-09 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	1,316,426.03	3,193,569.81	40.199910	-104.807020
950.0	0.00	0.00	950.0	0.0	0.0	1,316,426.03	3,193,569.81	40.199910	-104.807020
Surface Casing									
1,500.0	0.00	0.00	1,500.0	0.0	0.0	1,316,426.03	3,193,569.81	40.199910	-104.807020
2,506.6	20.13	317.60	2,486.0	129.3	-118.0	1,316,554.37	3,193,450.78	40.200265	-104.807442
4,577.1	20.13	317.60	4,430.0	655.5	-598.6	1,317,076.85	3,192,966.15	40.201709	-104.809163
Sussex									
5,506.6	20.13	317.60	5,302.7	891.8	-814.3	1,317,311.41	3,192,748.57	40.202358	-104.809935
6,848.8	0.00	0.00	6,617.4	1,064.1	-971.7	1,317,482.52	3,192,589.86	40.202831	-104.810499
7,298.3	0.00	0.00	7,067.0	1,064.1	-971.7	1,317,482.52	3,192,589.86	40.202831	-104.810499
Niobrara "A"									
7,576.3	0.00	0.00	7,345.0	1,064.1	-971.7	1,317,482.52	3,192,589.86	40.202831	-104.810499
Codell									
7,736.3	0.00	0.00	7,505.0	1,064.1	-971.7	1,317,482.52	3,192,589.86	40.202831	-104.810499

Targets									
Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (ft)	Easting (ft)	Latitude	Longitude
PBHL_NORTON 30-2 - hit/miss target - Shape - Point	0.00	0.00	7,505.0	1,064.1	-971.7	1,317,482.52	3,192,589.86	40.202831	-104.810499

Casing Points					
Measured Depth (ft)	Vertical Depth (ft)	Name	Casing Diameter (")	Hole Diameter (")	
950.0	950.0	Surface Casing	8-5/8	12-1/4	

Formations					
Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)
4,577.1	4,430.0	Sussex		0.00	
7,576.3	7,345.0	Codell		0.00	
7,298.3	7,067.0	Niobrara "A"		0.00	