



ChevronTexaco

Rio Blanco Co., Colorado

Union Pacific

UP 151X16

151X16

Plan: Plan #1

Standard Planning Report

06 November, 2008





Crescent Directional Drilling Planning Report



Database: EDM 2003.16 Single User Db
Company: ChevronTexaco
Project: Rio Blanco Co., Colorado
Site: Union Pacific
Well: UP 151X16
Wellbore: 151X16
Design: Plan #1

Local Co-ordinate Reference: Well UP 151X16
TVD Reference: WELL @ 5385.0ft (KB Elevation)
MD Reference: WELL @ 5385.0ft (KB Elevation)
North Reference: True
Survey Calculation Method: Minimum Curvature

Project Rio Blanco Co., Colorado

Map System: US State Plane 1983
Geo Datum: North American Datum 1983
Map Zone: Colorado Northern Zone
System Datum: Mean Sea Level

Site Union Pacific

Site Position:
From: Lat/Long
Position Uncertainty: 0.0 ft
Northing: 1,312,142.36 ft
Easting: 2,061,627.27 ft
Slot Radius: "
Latitude: 40° 8' 29.249 N
Longitude: 108° 51' 26.129 W
Grid Convergence: -2.17 °

Well UP 151X16

Well Position +N/-S 0.0 ft
+E/-W 0.0 ft
Position Uncertainty 0.0 ft
Northing: 1,312,132.19 ft
Easting: 2,061,654.86 ft
Wellhead Elevation: ft
Latitude: 40° 8' 29.159 N
Longitude: 108° 51' 25.769 W
Ground Level: 5,363.0 ft

Wellbore 151X16

Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF200510	2008/11/06	11.14	66.19	52,777

Design Plan #1

Audit Notes:

Version: Phase: PROTOTYPE Tie On Depth: 0.0

Vertical Section:	Depth From (TVD) (ft)	+N/-S (ft)	+E/-W (ft)	Direction (°)
	0.0	0.0	0.0	109.63

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	
2,200.0	0.00	0.00	2,200.0	0.0	0.0	0.00	0.00	0.00	0.00	
3,878.9	25.18	109.63	3,825.4	-121.9	342.0	1.50	1.50	0.00	109.63	
6,917.3	25.18	109.63	6,575.0	-556.2	1,559.8	0.00	0.00	0.00	0.00	BHL 151X16



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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)
0.0	0.00	0.00	0.0	0.0	0.0	0.0	0.00	0.00	0.00
500.0	0.00	0.00	500.0	0.0	0.0	0.0	0.00	0.00	0.00
1,000.0	0.00	0.00	1,000.0	0.0	0.0	0.0	0.00	0.00	0.00
1,500.0	0.00	0.00	1,500.0	0.0	0.0	0.0	0.00	0.00	0.00
2,000.0	0.00	0.00	2,000.0	0.0	0.0	0.0	0.00	0.00	0.00
9 5/8"									
2,200.0	0.00	0.00	2,200.0	0.0	0.0	0.0	0.00	0.00	0.00
KOP 1.5									
2,500.0	4.50	109.63	2,499.7	-4.0	11.1	11.8	1.50	1.50	0.00
3,000.0	12.00	109.63	2,994.2	-28.0	78.6	83.5	1.50	1.50	0.00
3,500.0	19.50	109.63	3,475.0	-73.6	206.4	219.1	1.50	1.50	0.00
3,878.9	25.18	109.63	3,825.4	-121.9	342.0	363.1	1.50	1.50	0.00
Hold at 3878' MD									
3,972.4	25.18	109.63	3,910.0	-135.3	379.5	402.9	0.00	0.00	0.00
Morrison									
4,000.0	25.18	109.63	3,935.0	-139.3	390.5	414.6	0.00	0.00	0.00
4,500.0	25.18	109.63	4,387.4	-210.7	590.9	627.4	0.00	0.00	0.00
5,000.0	25.18	109.63	4,839.9	-282.2	791.3	840.1	0.00	0.00	0.00
5,050.9	25.18	109.63	4,886.0	-289.5	811.7	861.8	0.00	0.00	0.00
Navajo									
5,500.0	25.18	109.63	5,292.4	-353.6	991.7	1,052.9	0.00	0.00	0.00
5,967.0	25.18	109.63	5,715.0	-420.4	1,178.9	1,251.6	0.00	0.00	0.00
Moenkopi									
6,000.0	25.18	109.63	5,744.9	-425.1	1,192.1	1,265.6	0.00	0.00	0.00
6,500.0	25.18	109.63	6,197.3	-496.6	1,392.5	1,478.4	0.00	0.00	0.00
6,773.7	25.18	109.63	6,445.0	-535.7	1,502.2	1,594.8	0.00	0.00	0.00
Weber - 7"									
6,917.3	25.18	109.63	6,575.0	-556.2	1,559.8	1,656.0	0.00	0.00	0.00
BHL 151X16									

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									
BHL 151X16	0.00	0.00	6,575.0	-556.2	1,559.8	1,311,517.36	2,063,192.46	40° 8' 23.662 N	108° 51' 5.684 W
- plan hits target									
- Circle (radius 100.0)									

Casing Points

Measured Depth (ft)	Vertical Depth (ft)	Name	Casing Diameter (")	Hole Diameter (")
2,000.0	2,000.0	9 5/8"	9-5/8	12-1/4
6,773.7	6,445.0	7"	7	8-3/4



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Formations

Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)
5,967.0	5,715.0	Moenkopi		0.00	
6,773.7	6,445.0	Weber		0.00	
5,050.9	4,886.0	Navajo		0.00	
3,972.4	3,910.0	Morrison		0.00	

Plan Annotations

Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment
		+N/-S (ft)	+E/-W (ft)	
2,200.0	2,200.0	0.0	0.0	KOP 1.5
3,878.9	3,825.4	-121.9	342.0	Hold at 3878' MD
6,917.3	6,575.0	-556.2	1,559.8	TD at 6917' MD