

US ROCKIES REGION PLANNING

COLORADO NORTHERN ZONE - 83

WELD_NICHOLS 3-8 Pad

NICHOLS 18-8

Nichols 18-8

Plan: Nichols 18-8 (wp01)

Standard Planning Report

03 January, 2011



Weatherford®

Project: COLORADO NORTHERN ZONE - 83
 Site: WELD_NICHOLS 3-8 Pad
 Well: NICHOLS 18-8
 Wellbore: Nichols 18-8
 Section:
 SHL:
 Design: Nichols 18-8 (wp01)
 Latitude: 40.158572
 Longitude: -104.690119
 GL: 4894.00
 KB: GL @ 4894.00ft

FORMATION TOP DETAILS		
TVDPath	MDPath	Formation
4094.00	4230.52	PK
4504.00	4640.52	SX
6964.00	7100.52	NIO
7244.00	7380.52	CD
7331.00	7467.52	GH
7694.00	7830.52	J



WELL DETAILS: NICHOLS 18-8

+N/-S	+E/-W	Northing	Ground Level: Easting	4894.00 Latitude	Longitude	Slot
0.00	0.00	1301644.68	3226360.35	40.158572	-104.690119	

DESIGN TARGET DETAILS

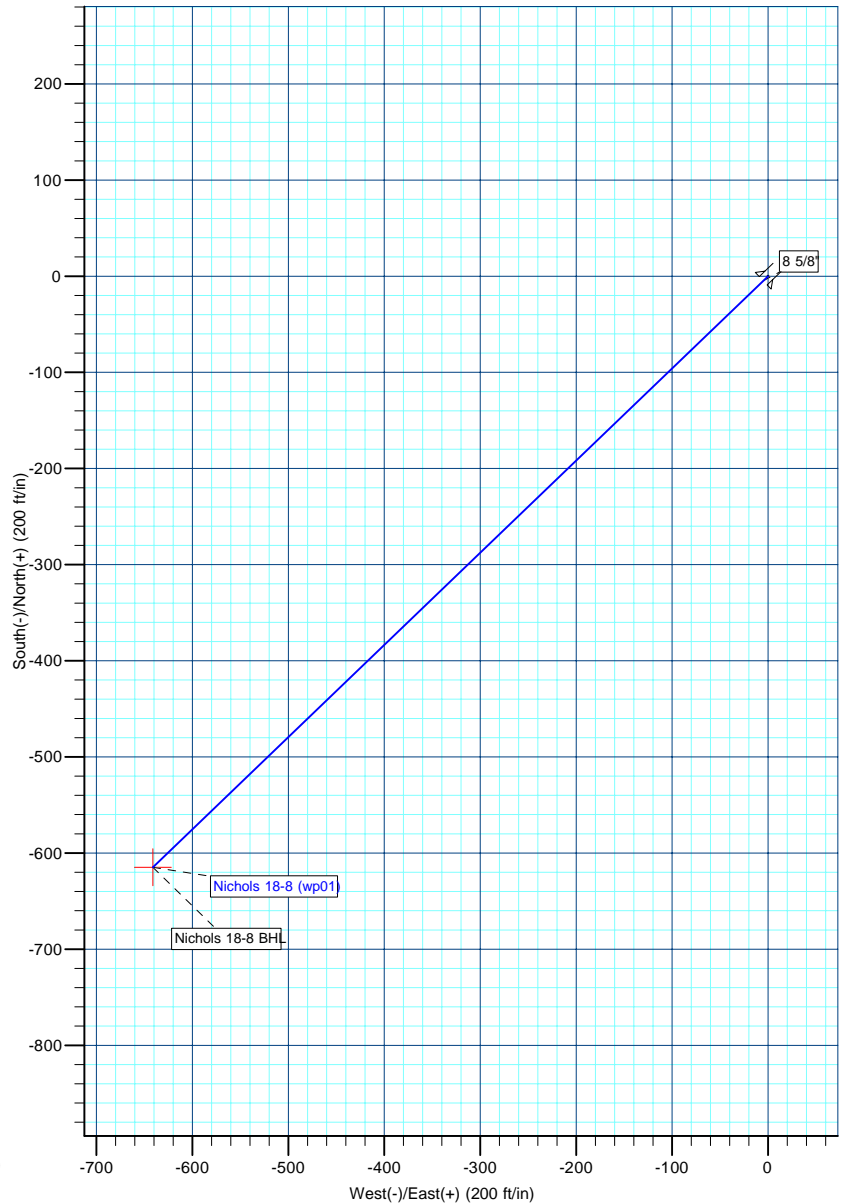
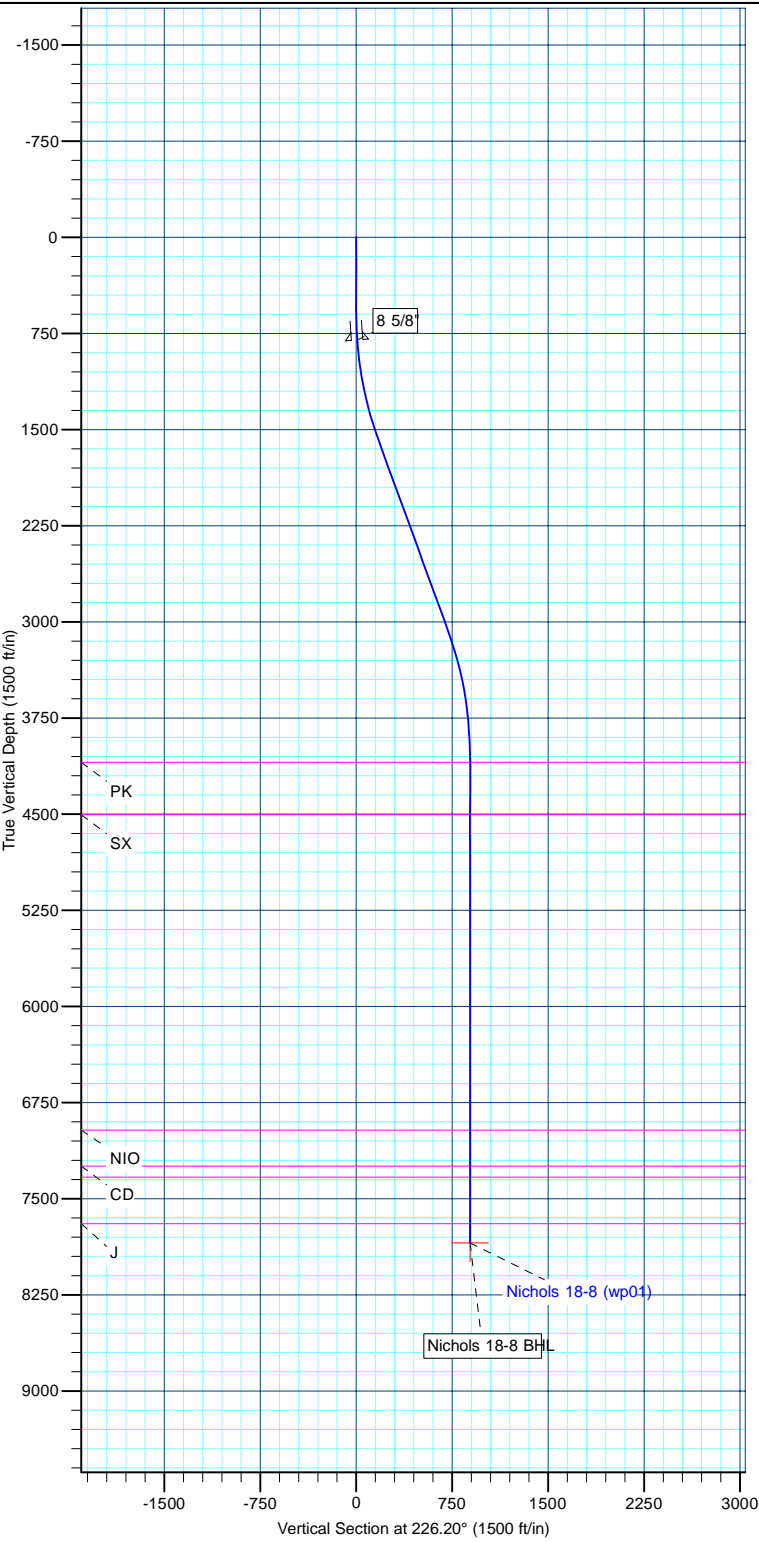
Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Shape
Nichols 18-8 BHL	7844.00	-614.89	-641.19	1301023.96	3225724.80	40.156884	-104.692413	Point

T/M

 Azimuths to True North
 Magnetic North: 0.00°
 Magnetic Field
 Strength: 0.0snT
 Dip Angle: 0.00°
 Date: 12/31/2010
 Model: USER DEFINED

SECTION DETAILS

MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSect	Target
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
600.00	0.00	0.00	600.00	0.00	0.00	0.00	0.00	0.00	
1604.40	20.09	226.20	1583.95	-120.63	-125.79	2.00	226.20	174.28	
3176.11	20.09	226.20	3060.05	-494.26	-515.41	0.00	0.00	714.10	
4180.52	0.00	0.00	4044.00	-614.89	-641.19	2.00	180.00	888.38	
7980.52	0.00	0.00	7844.00	-614.89	-641.19	0.00	0.00	888.38	Nichols 18-8 BHL



Database:	edm5000p	Local Co-ordinate Reference:	Well NICHOLS 18-8
Company:	US ROCKIES REGION PLANNING	TVD Reference:	GL @ 4894.00ft
Project:	COLORADO NORTHERN ZONE - 83	MD Reference:	GL @ 4894.00ft
Site:	WELD_NICHOLS 3-8 Pad	North Reference:	True
Well:	NICHOLS 18-8	Survey Calculation Method:	Minimum Curvature
Wellbore:	Nichols 18-8		
Design:	Nichols 18-8 (wp01)		

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_NICHOLS 3-8 Pad				
Site Position:		Northing:	1,301,644.68 ft	Latitude:	40.158572
From:	Lat/Long	Easting:	3,226,360.36 ft	Longitude:	-104.690119
Position Uncertainty:	0.00 ft	Slot Radius:	0 "	Grid Convergence:	0.52 °

Well	NICHOLS 18-8					
Well Position	+N/-S	-0.01 ft	Northing:	1,301,644.68 ft	Latitude:	40.158572
	+E/-W	0.00 ft	Easting:	3,226,360.36 ft	Longitude:	-104.690119
Position Uncertainty		0.00 ft	Wellhead Elevation:		Ground Level:	4,894.00 ft

Wellbore	Nichols 18-8				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	User Defined	12/31/2010	0.00	0.00	0

Design	Nichols 18-8 (wp01)			
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	226.20

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	
600.00	0.00	0.00	600.00	0.00	0.00	0.00	0.00	0.00	0.00	
1,604.40	20.09	226.20	1,583.95	-120.63	-125.79	2.00	2.00	0.00	226.20	
3,176.11	20.09	226.20	3,060.05	-494.26	-515.41	0.00	0.00	0.00	0.00	
4,180.52	0.00	0.00	4,044.00	-614.89	-641.19	2.00	-2.00	0.00	180.00	
7,980.52	0.00	0.00	7,844.00	-614.89	-641.19	0.00	0.00	0.00	0.00	Nichols 18-8 BHL

Database:	edm5000p	Local Co-ordinate Reference:	Well NICHOLS 18-8
Company:	US ROCKIES REGION PLANNING	TVD Reference:	GL @ 4894.00ft
Project:	COLORADO NORTHERN ZONE - 83	MD Reference:	GL @ 4894.00ft
Site:	WELD_NICHOLS 3-8 Pad	North Reference:	True
Well:	NICHOLS 18-8	Survey Calculation Method:	Minimum Curvature
Wellbore:	Nichols 18-8		
Design:	Nichols 18-8 (wp01)		

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)	
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
600.00	0.00	0.00	600.00	0.00	0.00	0.00	0.00	0.00	0.00	
800.16	4.00	226.20	800.00	-4.84	-5.04	6.99	2.00	2.00	0.00	
8-5/8"										
1,604.40	20.09	226.20	1,583.95	-120.63	-125.79	174.28	2.00	2.00	0.00	
3,176.11	20.09	226.20	3,060.05	-494.26	-515.41	714.10	0.00	0.00	0.00	
4,180.52	0.00	0.00	4,044.00	-614.89	-641.19	888.38	2.00	-2.00	0.00	
4,230.52	0.00	0.00	4,094.00	-614.89	-641.19	888.38	0.00	0.00	0.00	
PK										
4,640.52	0.00	0.00	4,504.00	-614.89	-641.19	888.38	0.00	0.00	0.00	
SX										
7,100.52	0.00	0.00	6,964.00	-614.89	-641.19	888.38	0.00	0.00	0.00	
NIO										
7,380.52	0.00	0.00	7,244.00	-614.89	-641.19	888.38	0.00	0.00	0.00	
CD										
7,467.52	0.00	0.00	7,331.00	-614.89	-641.19	888.38	0.00	0.00	0.00	
GH										
7,830.52	0.00	0.00	7,694.00	-614.89	-641.19	888.38	0.00	0.00	0.00	
J										
7,980.52	0.00	0.00	7,844.00	-614.89	-641.19	888.38	0.00	0.00	0.00	
Nichols 18-8 BHL										

Design Targets										
Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (ft)	Easting (ft)	Latitude	Longitude	
Nichols 18-8 BHL - hit/miss target - Shape - Point	0.00	0.00	7,844.00	-614.89	-641.19	1,301,023.96	3,225,724.81	40.156884	-104.692413	

Casing Points						
Measured Depth (ft)	Vertical Depth (ft)	Name	Casing Diameter (")	Hole Diameter (")		
800.16	800.00	8 5/8"	8-5/8	11		

Formations						
Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)	
4,230.52	4,094.00	PK				
4,640.52	4,504.00	SX				
7,100.52	6,964.00	NIO				
7,380.52	7,244.00	CD				
7,467.52	7,331.00	GH				
7,830.52	7,694.00	J				

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