

# **US ROCKIES REGION PLANNING**

**COLORADO NORTHERN ZONE - 83**

**WELD\_NICHOLS 28-8 pad**

**Nichols 24-8**

**Nichols 24-8**

**Plan: Nichols 24-8 (wp01)**

## **Standard Planning Report**

**04 January, 2011**



Project: COLORADO NORTHERN ZONE - 83  
Site: WELD\_NICHOLS 28-8 pad  
Well: Nichols 24-8  
Wellbore: Nichols 24-8  
Section:  
SHL:  
Design: Nichols 24-8 (wp01)  
Latitude: 40.159109  
Longitude: -104.687677  
GL: 4822.00  
KB: WELL @ 4822.00ft (Original Well Elev)

FORMATION TOP DETAILS		
TVDPath	MDPath	Formation
4023.00	4308.09	PK
4433.00	4758.22	SX
6893.00	7367.96	NIO
7173.00	7647.96	CD
7260.00	7734.96	GH
7623.00	8097.96	J

**Weatherford**



Azimuths to True North  
Magnetic North: 8.86°  
Magnetic Field  
Strength: 53060.3snT  
Dip Angle: 66.88°  
Date: 1/3/2011  
Model: IGRF2010

WELL DETAILS: Nichols 24-8

+N/-S	+E/-W	Northing	Ground Level: Easting	4822.00 Latitude	Longitude	Slot
0.00	0.00	1301846.52	3227041.08	40.159109	-104.687677	

CASING DETAILS

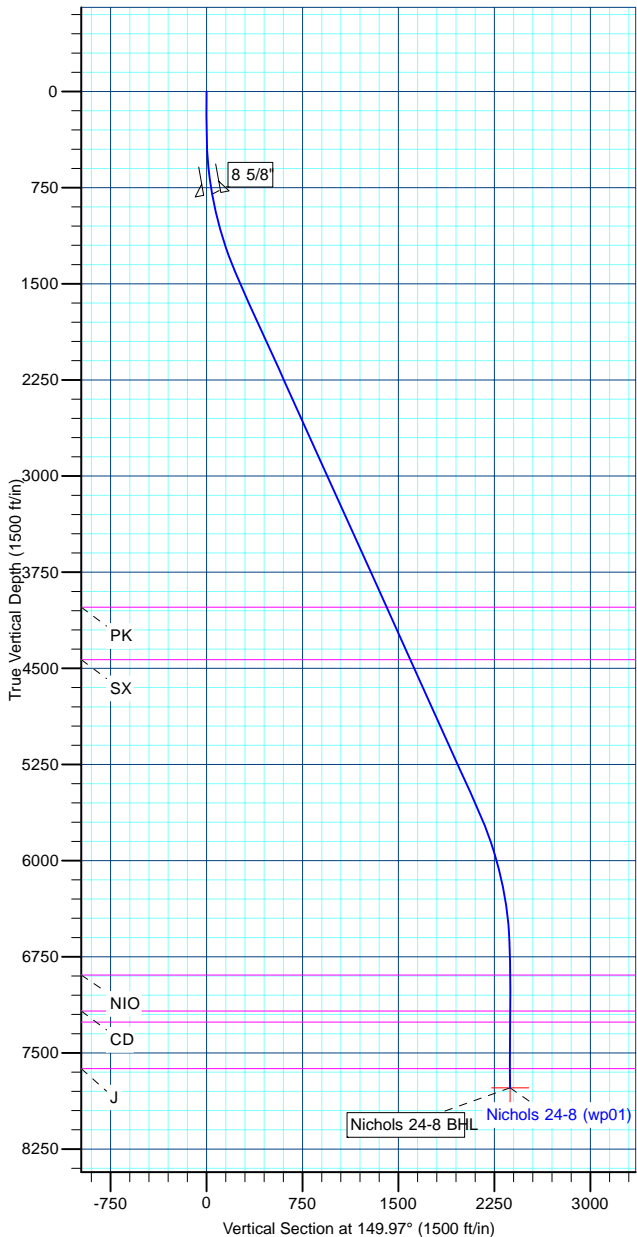
TVD	MD	Name	Size
800.00	802.57	8 5/8"	8-5/8

DESIGN TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Shape Point
Nichols 24-8 BHL	7773.00	-2053.77	1187.41	1299803.72	3228247.26	40.153471	-104.683429	

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	
300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.00	0.00	
1518.83	24.38	149.97	1482.39	-221.10	127.83	2.00	149.97	255.39	
6029.13	24.38	149.97	5590.61	-1832.67	1059.58	0.00	0.00	2116.94	
7247.96	0.00	0.00	6773.00	-2053.77	1187.41	2.00	180.00	2372.32	
8247.96	0.00	0.00	7773.00	-2053.77	1187.41	0.00	0.00	2372.32	Nichols 24-8 BHL



<b>Database:</b>	edm5000p	<b>Local Co-ordinate Reference:</b>	Well Nichols 24-8
<b>Company:</b>	US ROCKIES REGION PLANNING	<b>TVD Reference:</b>	WELL @ 4822.00ft (Original Well Elev)
<b>Project:</b>	COLORADO NORTHERN ZONE - 83	<b>MD Reference:</b>	WELL @ 4822.00ft (Original Well Elev)
<b>Site:</b>	WELD_NICHOLS 28-8 pad	<b>North Reference:</b>	True
<b>Well:</b>	Nichols 24-8	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Nichols 24-8		
<b>Design:</b>	Nichols 24-8 (wp01)		

<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		

Site						WELD_NICHOLS 28-8 pad											
Site Position:						Northing:			1,301,878.60 ft			Latitude:			40.159197		
From:			Lat/Long			Easting:			3,227,041.07 ft			Longitude:			-104.687676		
Position Uncertainty:			0.00 ft			Slot Radius:			0 "			Grid Convergence:			0.52		

Well	Nichols 24-8					
Well Position	+N-S	-32.07 ft	Northing:	1,301,846.52 ft	Latitude:	40.159109
	+E-W	-0.28 ft	Easting:	3,227,041.08 ft	Longitude:	-104.687677
Position Uncertainty		0.00 ft	Wellhead Elevation:		Ground Level:	4,822.00 ft

<b>Wellbore</b>	Nichols 24-8				
<b>Magnetics</b>	<b>Model Name</b>	<b>Sample Date</b>	<b>Declination (°)</b>	<b>Dip Angle (°)</b>	<b>Field Strength (nT)</b>
	IGRF2010	1/3/2011	8.86	66.88	53,060

<b>Design</b>	Nichols 24-8 (wp01)			
<b>Audit Notes:</b>				
<b>Version:</b>	<b>Phase:</b>	PLAN	<b>Tie On Depth:</b>	0.00
<b>Vertical Section:</b>	<b>Depth From (TVD) (ft)</b>	<b>+N/-S (ft)</b>	<b>+E/-W (ft)</b>	<b>Direction (°)</b>
	0.00	0.00	0.00	149.97

<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
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.00	0.00	0.00	
1,518.83	24.38	149.97	1,482.39	-221.10	127.83	2.00	2.00	0.00	149.97	
6,029.13	24.38	149.97	5,590.61	-1,832.67	1,059.59	0.00	0.00	0.00	0.00	
7,247.96	0.00	0.00	6,773.00	-2,053.77	1,187.41	2.00	-2.00	0.00	180.00	
8,247.96	0.00	0.00	7,773.00	-2,053.77	1,187.41	0.00	0.00	0.00	0.00	Nichols 24-8 BHL

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<b>Project:</b>	COLORADO NORTHERN ZONE - 83	<b>MD Reference:</b>	WELL @ 4822.00ft (Original Well Elev)
<b>Site:</b>	WELD_NICHOLS 28-8 pad	<b>North Reference:</b>	True
<b>Well:</b>	Nichols 24-8	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Nichols 24-8		
<b>Design:</b>	Nichols 24-8 (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
300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.00	0.00	0.00
802.57	10.05	149.97	800.00	-38.07	22.01	43.97	2.00	2.00	0.00
8 5/8"									
1,518.83	24.38	149.97	1,482.39	-221.10	127.83	255.39	2.00	2.00	0.00
4,308.09	24.38	149.97	4,023.00	-1,217.73	704.05	1,406.61	0.00	0.00	0.00
PK									
4,758.22	24.38	149.97	4,433.00	-1,378.57	797.04	1,592.39	0.00	0.00	0.00
SX									
6,029.13	24.38	149.97	5,590.61	-1,832.67	1,059.59	2,116.94	0.00	0.00	0.00
7,247.96	0.00	0.00	6,773.00	-2,053.77	1,187.41	2,372.32	2.00	-2.00	0.00
7,367.96	0.00	0.00	6,893.00	-2,053.77	1,187.41	2,372.32	0.00	0.00	0.00
NIO									
7,647.96	0.00	0.00	7,173.00	-2,053.77	1,187.41	2,372.32	0.00	0.00	0.00
CD									
7,734.96	0.00	0.00	7,260.00	-2,053.77	1,187.41	2,372.32	0.00	0.00	0.00
GH									
8,097.96	0.00	0.00	7,623.00	-2,053.77	1,187.41	2,372.32	0.00	0.00	0.00
J									
8,247.96	0.00	0.00	7,773.00	-2,053.77	1,187.41	2,372.32	0.00	0.00	0.00
Nichols 24-8 BHL									

Design 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									
Nichols 24-8 BHL	0.00	0.00	7,773.00	-2,053.77	1,187.41	1,299,803.71	3,228,247.26	40.153471	-104.683429
- plan hits target center									
- Point									

Casing Points					
Measured Depth (ft)	Vertical Depth (ft)	Name	Casing Diameter (")	Hole Diameter (")	
802.57	800.00	8 5/8"	8-5/8	11	

Formations					
Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)
4,308.09	4,023.00	PK			
4,758.22	4,433.00	SX			
7,367.96	6,893.00	NIO			
7,647.96	7,173.00	CD			
7,734.96	7,260.00	GH			
8,097.96	7,623.00	J			

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