

# **US ROCKIES REGION PLANNING**

**COLORADO NORTHERN ZONE - 83**

**WELD\_NICHOLS 28-8 pad**

**Nichols 17-8**

**Nichols 17-8**

**Plan: Nichols 17-8 (wp01)**

## **Standard Planning Report**

**04 January, 2011**



Project: COLORADO NORTHERN ZONE - 83  
Site: WELD\_NICHOLS 28-8 pad  
Well: Nichols 17-8  
Wellbore: Nichols 17-8  
Section:  
SHL:  
Design: Nichols 17-8 (wp01)  
Latitude: 40.159153  
Longitude: -104.687676  
GL: 4822.00  
KB: WELL @ 4822.00ft (Original Well Elev)

FORMATION TOP DETAILS		
TVDPath	MDPath	Formation
4022.00	4304.82	PK
4432.00	4739.70	SX
6892.00	7208.18	NIO
7172.00	7488.18	CD
7259.00	7575.18	GH
7622.00	7938.18	J

Weatherford®



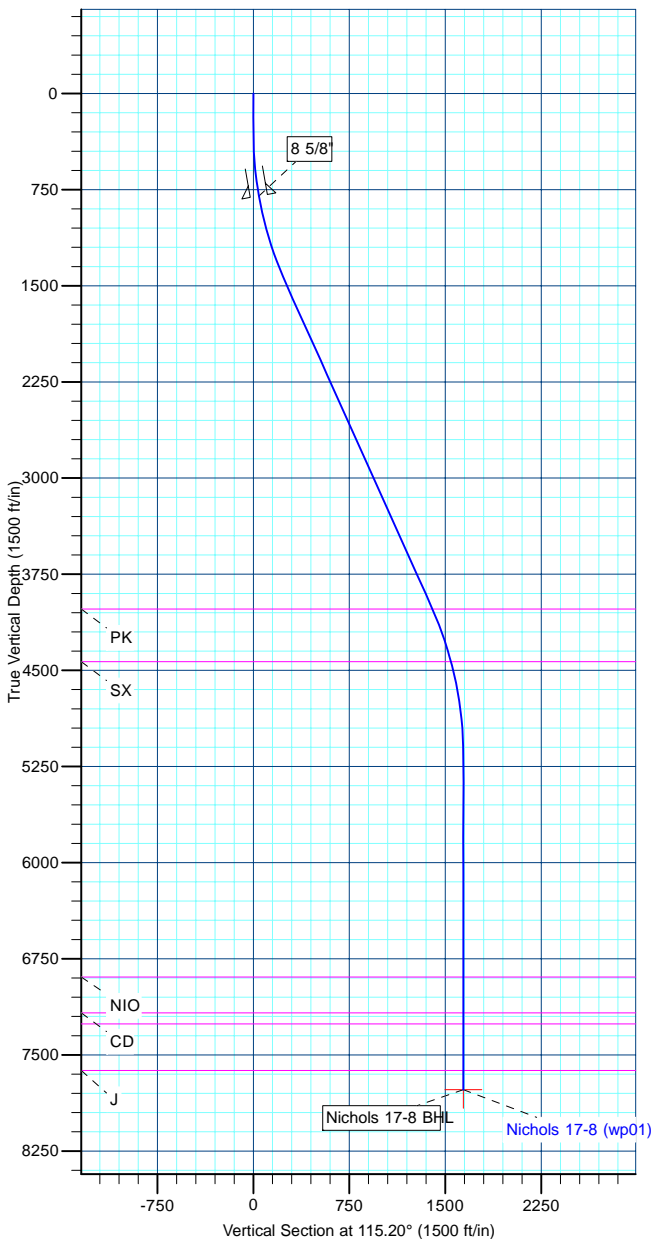
Azimuths to True North  
Magnetic North: 8.86°  
Magnetic Field  
Strength: 53060.4nT  
Dip Angle: 66.88°  
Date: 1/3/2011  
Model: IGRF2010

WELL DETAILS: Nichols 17-8					
+N/-S	+E/-W	Northing	Ground Level: Easting	4822.00 Latitude	Longitude
0.00	0.00	1301862.56	3227041.21	40.159153	-104.687676

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 17-8 BHL	7772.00	-699.00	1485.58	1301177.20	3228533.14	40.157234	-104.682361	

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	
1514.04	24.28	115.20	1478.03	-107.89	229.30	2.00	115.20	253.42	
4274.14	24.28	115.20	3993.97	-591.11	1256.28	0.00	0.00	1388.40	
5488.18	0.00	0.00	5172.00	-699.00	1485.58	2.00	180.00	1641.81	
8088.18	0.00	0.00	7772.00	-699.00	1485.58	0.00	0.00	1641.81	Nichols 17-8 BHL



<b>Database:</b>	edm5000p	<b>Local Co-ordinate Reference:</b>	Well Nichols 17-8
<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 17-8	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Nichols 17-8		
<b>Design:</b>	Nichols 17-8 (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 17-8					
Well Position	+N-S	-16.04 ft	Northing:	1,301,862.56 ft	Latitude:	40.159153
	+E-W	0.00 ft	Easting:	3,227,041.21 ft	Longitude:	-104.687676
Position Uncertainty		0.00 ft	Wellhead Elevation:		Ground Level:	4,822.00 ft

<b>Wellbore</b>	Nichols 17-8				
<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 17-8 (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	115.20

<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	
1,514.04	24.28	115.20	1,478.03	-107.89	229.30	2.00	2.00	0.00	115.20	
4,274.14	24.28	115.20	3,993.97	-591.11	1,256.28	0.00	0.00	0.00	0.00	
5,488.18	0.00	0.00	5,172.00	-699.00	1,485.58	2.00	-2.00	0.00	180.00	
8,088.18	0.00	0.00	7,772.00	-699.00	1,485.58	0.00	0.00	0.00	0.00	Nichols 17-8 BHL

<b>Database:</b>	edm5000p	<b>Local Co-ordinate Reference:</b>	Well Nichols 17-8
<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 17-8	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Nichols 17-8		
<b>Design:</b>	Nichols 17-8 (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	115.20	800.00	-18.72	39.79	43.97	2.00	2.00	0.00
8 5/8"									
1,514.04	24.28	115.20	1,478.03	-107.89	229.30	253.42	2.00	2.00	0.00
4,274.14	24.28	115.20	3,993.97	-591.11	1,256.28	1,388.40	0.00	0.00	0.00
4,304.82	23.67	115.20	4,022.00	-596.41	1,267.56	1,400.86	2.00	-2.00	0.00
PK									
4,739.70	14.97	115.20	4,432.00	-657.61	1,397.61	1,544.59	2.00	-2.00	0.00
SX									
5,488.18	0.00	0.00	5,172.00	-699.00	1,485.58	1,641.81	2.00	-2.00	0.00
7,208.18	0.00	0.00	6,892.00	-699.00	1,485.58	1,641.81	0.00	0.00	0.00
NIO									
7,488.18	0.00	0.00	7,172.00	-699.00	1,485.58	1,641.81	0.00	0.00	0.00
CD									
7,575.18	0.00	0.00	7,259.00	-699.00	1,485.58	1,641.81	0.00	0.00	0.00
GH									
7,938.18	0.00	0.00	7,622.00	-699.00	1,485.58	1,641.81	0.00	0.00	0.00
J									
8,088.18	0.00	0.00	7,772.00	-699.00	1,485.58	1,641.81	0.00	0.00	0.00
Nichols 17-8 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 17-8 BHL	0.00	0.00	7,772.00	-699.00	1,485.58	1,301,177.20	3,228,533.14	40.157234	-104.682361
- 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 (°)
4,304.82	4,022.00	PK		0.00	
4,739.70	4,432.00	SX			
7,208.18	6,892.00	NIO			
7,488.18	7,172.00	CD			
7,575.18	7,259.00	GH			
7,938.18	7,622.00	J			

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