

US ROCKIES REGION PLANNING

COLORADO NORTHERN ZONE - 83

WELD_NICHOLS 28-8 pad

Nichols 2-8

Nichols 2-8

Plan: Nichols 2-8 (wp01)

Standard Planning Report

04 January, 2011



Weatherford®

Project: COLORADO NORTHERN ZONE - 83
 Site: WELD_NICHOLS 28-8 pad
 Well: Nichols 2-8
 Wellbore: Nichols 2-8
 Section:
 SHL:
 Design: Nichols 2-8 (wp01)
 Latitude: 40.159197
 Longitude: -104.687676
 GL: 4822.00
 KB: WELL @ 4822.00ft (Original Well Elev)

FORMATION TOP DETAILS		
TVDPath	MDPath	Formation
4022.00	4152.72	PK
4432.00	4563.33	SX
6892.00	7023.33	NIO
7172.00	7303.33	CD
7259.00	7390.33	GH



Azimuths to True North
 Magnetic North: 8.86°

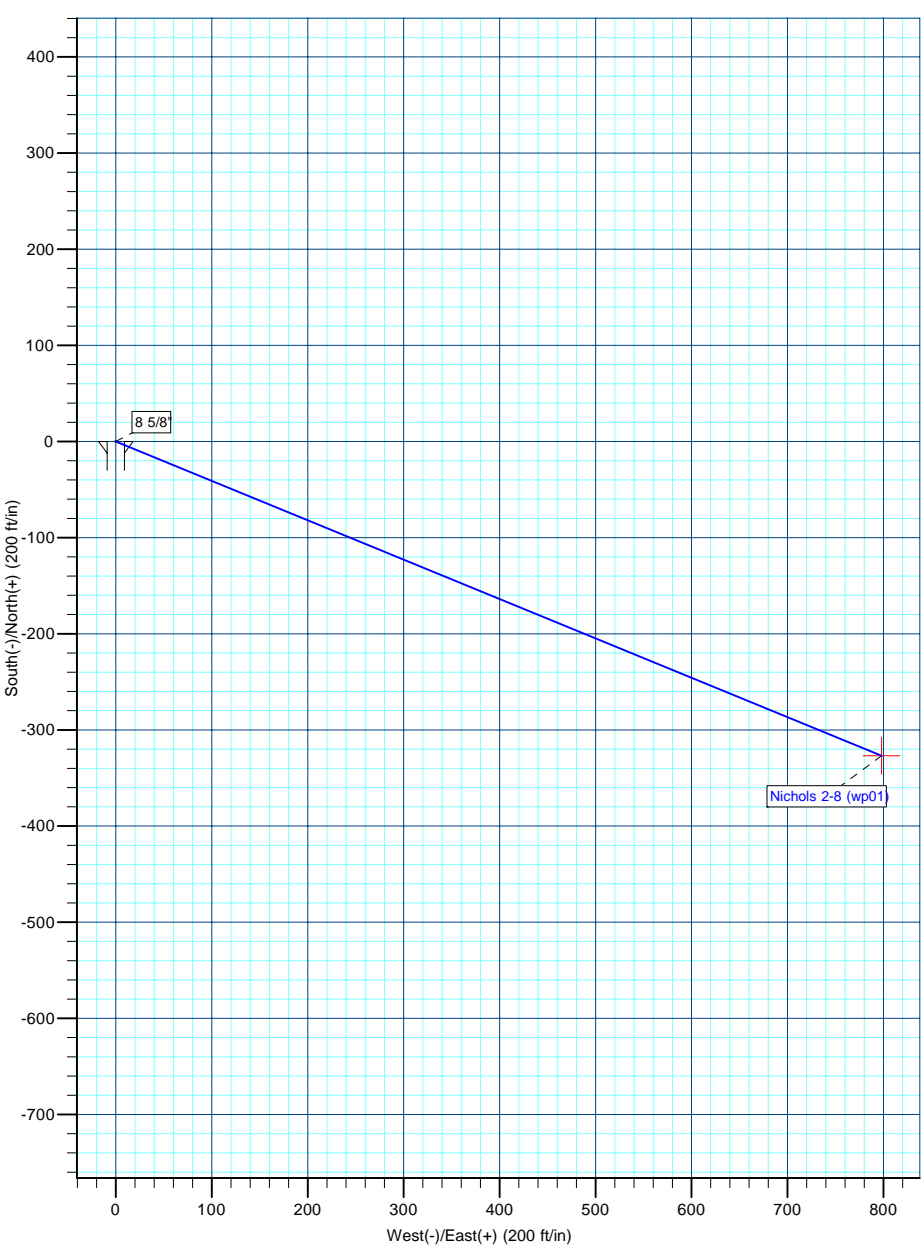
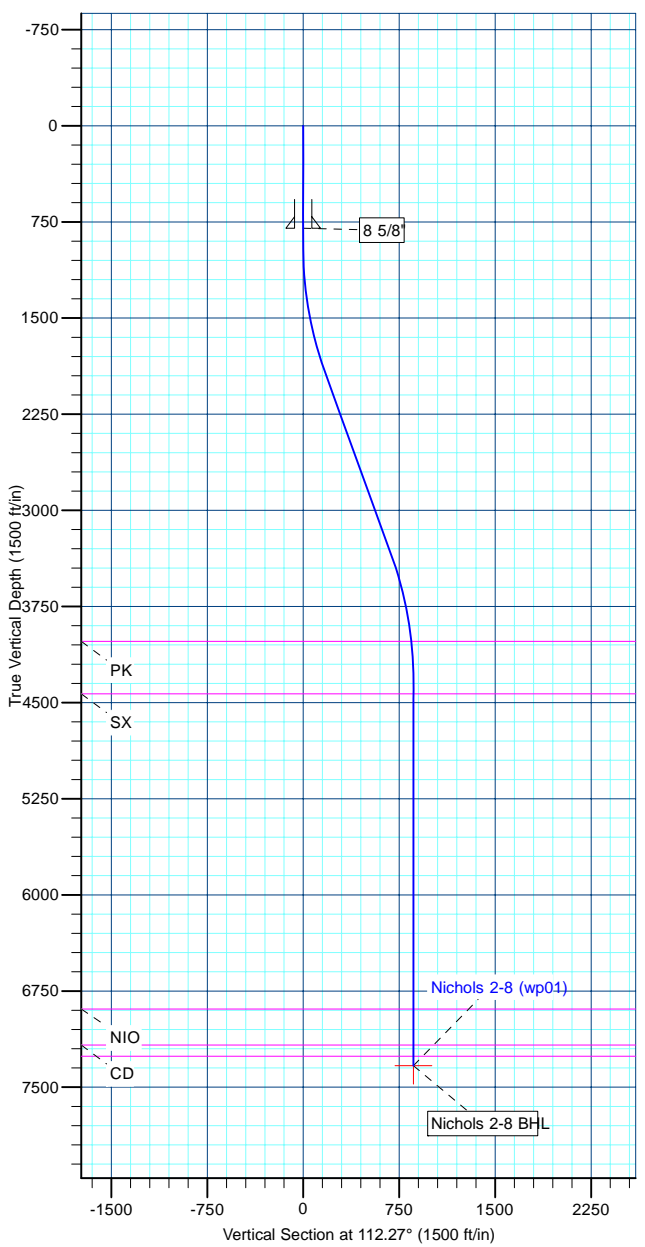
Magnetic Field
 Strength: 53060.4snT
 Dip Angle: 66.88°
 Date: 1/3/2011
 Model: IGRF2010

WELL DETAILS: Nichols 2-8						
+N/-S	+E/-W	Northing	Ground Level: Easting	4822.00 Latitude	Longitude	Slot
0.00	0.00	1301878.59	3227041.06	40.159197	-104.687676	

CASING DETAILS			
TVD	MD	Name	Size
800.00	800.00	8 5/8"	8-5/8

DESIGN TARGET DETAILS									
Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Shape	Point
Nichols 2-8 BHL	7332.00	-326.74	797.98	1301559.17	3227842.01	40.158300	-104.684821		

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	0.00	
950.00	0.00	0.00	950.00	0.00	0.00	0.00	0.00	0.00	0.00	
1948.31	19.97	112.27	1928.23	-65.25	159.35	2.00	112.27	172.19		
3465.02	19.97	112.27	3353.77	-261.50	638.63	0.00	0.00	690.09		
4463.33	0.00	0.00	4332.00	-326.74	797.98	2.00	180.00	862.29		
7463.33	0.00	0.00	7332.00	-326.74	797.98	0.00	0.00	862.29		Nichols 2-8 BHL



Database:	edm5000p	Local Co-ordinate Reference:	Well Nichols 2-8
Company:	US ROCKIES REGION PLANNING	TVD Reference:	WELL @ 4822.00ft (Original Well Elev)
Project:	COLORADO NORTHERN ZONE - 83	MD Reference:	WELL @ 4822.00ft (Original Well Elev)
Site:	WELD_NICHOLS 28-8 pad	North Reference:	True
Well:	Nichols 2-8	Survey Calculation Method:	Minimum Curvature
Wellbore:	Nichols 2-8		
Design:	Nichols 2-8 (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 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 2-8					
Well Position	+N/-S	0.00 ft	Northing:	1,301,878.59 ft	Latitude:	40.159197
	+E/-W	0.00 ft	Easting:	3,227,041.07 ft	Longitude:	-104.687676
Position Uncertainty		0.00 ft	Wellhead Elevation:		Ground Level:	4,822.00 ft

Wellbore	Nichols 2-8				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	1/3/2011	8.86	66.88	53,060

Design	Nichols 2-8 (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	112.27

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	
950.00	0.00	0.00	950.00	0.00	0.00	0.00	0.00	0.00	0.00	
1,948.31	19.97	112.27	1,928.23	-65.25	159.35	2.00	2.00	0.00	112.27	
3,465.02	19.97	112.27	3,353.77	-261.50	638.63	0.00	0.00	0.00	0.00	
4,463.33	0.00	0.00	4,332.00	-326.74	797.98	2.00	-2.00	0.00	180.00	
7,463.33	0.00	0.00	7,332.00	-326.74	797.98	0.00	0.00	0.00	0.00	Nichols 2-8 BHL

Database:	edm5000p	Local Co-ordinate Reference:	Well Nichols 2-8
Company:	US ROCKIES REGION PLANNING	TVD Reference:	WELL @ 4822.00ft (Original Well Elev)
Project:	COLORADO NORTHERN ZONE - 83	MD Reference:	WELL @ 4822.00ft (Original Well Elev)
Site:	WELD_NICHOLS 28-8 pad	North Reference:	True
Well:	Nichols 2-8	Survey Calculation Method:	Minimum Curvature
Wellbore:	Nichols 2-8		
Design:	Nichols 2-8 (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	
800.00	0.00	0.00	800.00	0.00	0.00	0.00	0.00	0.00	0.00	
8 5/8"										
950.00	0.00	0.00	950.00	0.00	0.00	0.00	0.00	0.00	0.00	
1,948.31	19.97	112.27	1,928.23	-65.25	159.35	172.19	2.00	2.00	0.00	
3,465.02	19.97	112.27	3,353.77	-261.50	638.63	690.09	0.00	0.00	0.00	
4,152.72	6.21	112.27	4,022.00	-320.37	782.41	845.46	2.00	-2.00	0.00	
PK										
4,463.33	0.00	0.00	4,332.00	-326.74	797.98	862.29	2.00	-2.00	0.00	
4,563.33	0.00	0.00	4,432.00	-326.74	797.98	862.29	0.00	0.00	0.00	
SX										
7,023.33	0.00	0.00	6,892.00	-326.74	797.98	862.29	0.00	0.00	0.00	
NIO										
7,303.33	0.00	0.00	7,172.00	-326.74	797.98	862.29	0.00	0.00	0.00	
CD										
7,390.33	0.00	0.00	7,259.00	-326.74	797.98	862.29	0.00	0.00	0.00	
GH										
7,463.33	0.00	0.00	7,332.00	-326.74	797.98	862.29	0.00	0.00	0.00	
Nichols 2-8 BHL										

Design Targets										
Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (ft)	Easting (ft)	Latitude	Longitude	
Nichols 2-8 BHL	0.00	0.00	7,332.00	-326.74	797.98	1,301,559.17	3,227,842.01	40.158300	-104.684821	
- hit/miss target										
- Shape										
- Point										

Casing Points						
Measured Depth (ft)	Vertical Depth (ft)	Name	Casing Diameter (")	Hole Diameter (")		
800.00	800.00	9 5/8"	8-5/8	11		

Formations						
Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)	
4,152.72	4,022.00	PK				
4,563.33	4,432.00	SX				
7,023.33	6,892.00	NIO				
7,303.33	7,172.00	CD				
7,390.33	7,259.00	GH				