

US ROCKIES REGION PLANNING

COLORADO NORTHERN ZONE - 83

WELD_Palyo 18-11 pad

Palyo 22-11

Palyo 22-11

Plan: Palyo 22-11 BHL

Standard Planning Report

04 January, 2011



Project: COLORADO NORTHERN ZONE - 83
Site: WELD_Palyo 18-11 pad
Well: Palyo 22-11
Wellbore: Palyo 22-11
Section:
SHL:
Design: Palyo 22-11 BHL
Latitude: 40.157570
Longitude: -104.635624
GL: 4854.00
KB: WELL @ 4854.00ft (Original Well Elev)

FORMATION TOP DETAILS

TVDPath	MDPath	Formation
4054.00	4236.99	PK
4409.00	4612.83	SX
6814.00	7056.42	NIO
7099.00	7341.42	CD
7180.00	7422.42	GH
7554.00	7796.42	J



Weatherford®

WELL DETAILS: Palyo 22-11

+N/-S	+E/-W	Northing	Ground Level: Easting	4854.00 Latitude	Longitude	Slot
0.00	0.00	1301423.45	3241594.71	40.157570	-104.635624	

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
Palyo 22-11 BHL	7704.00	-1541.96	-40.81	1299881.16	3241568.93	40.153337	-104.635770	Point

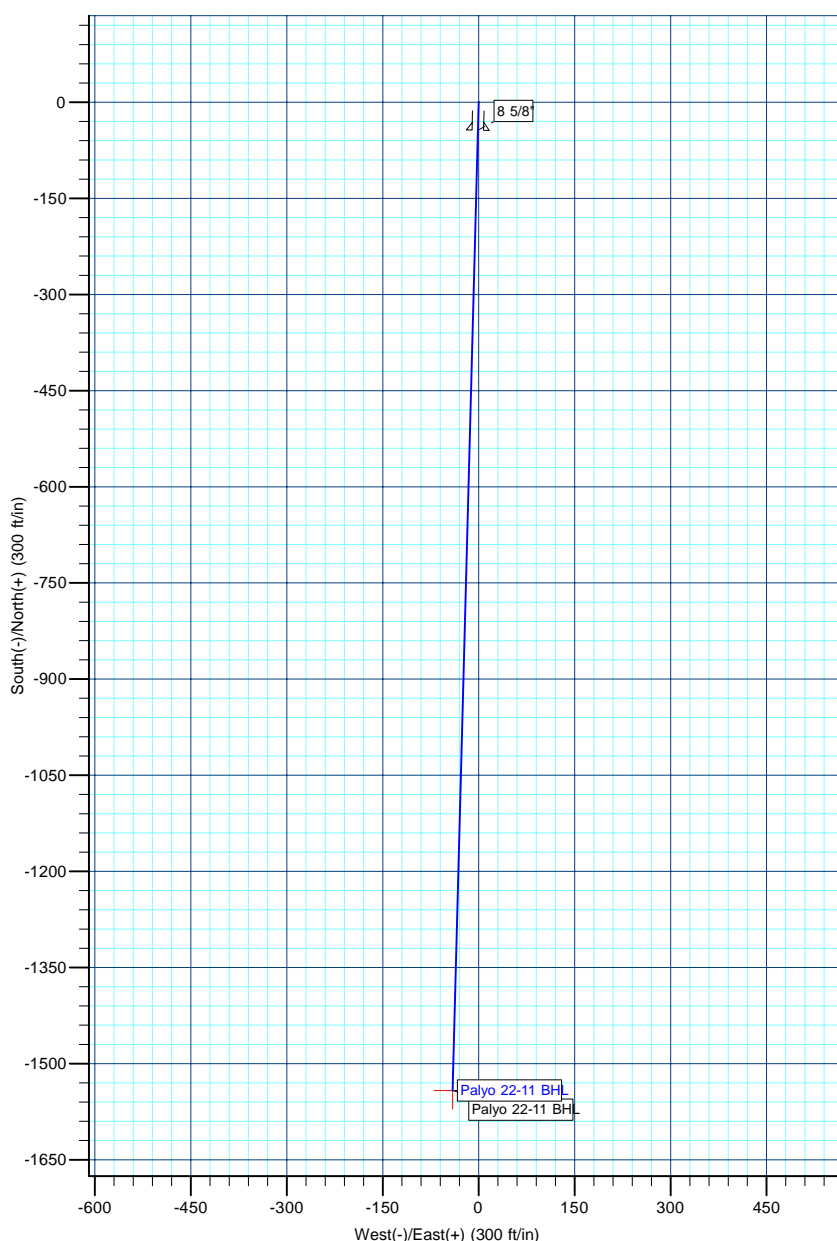
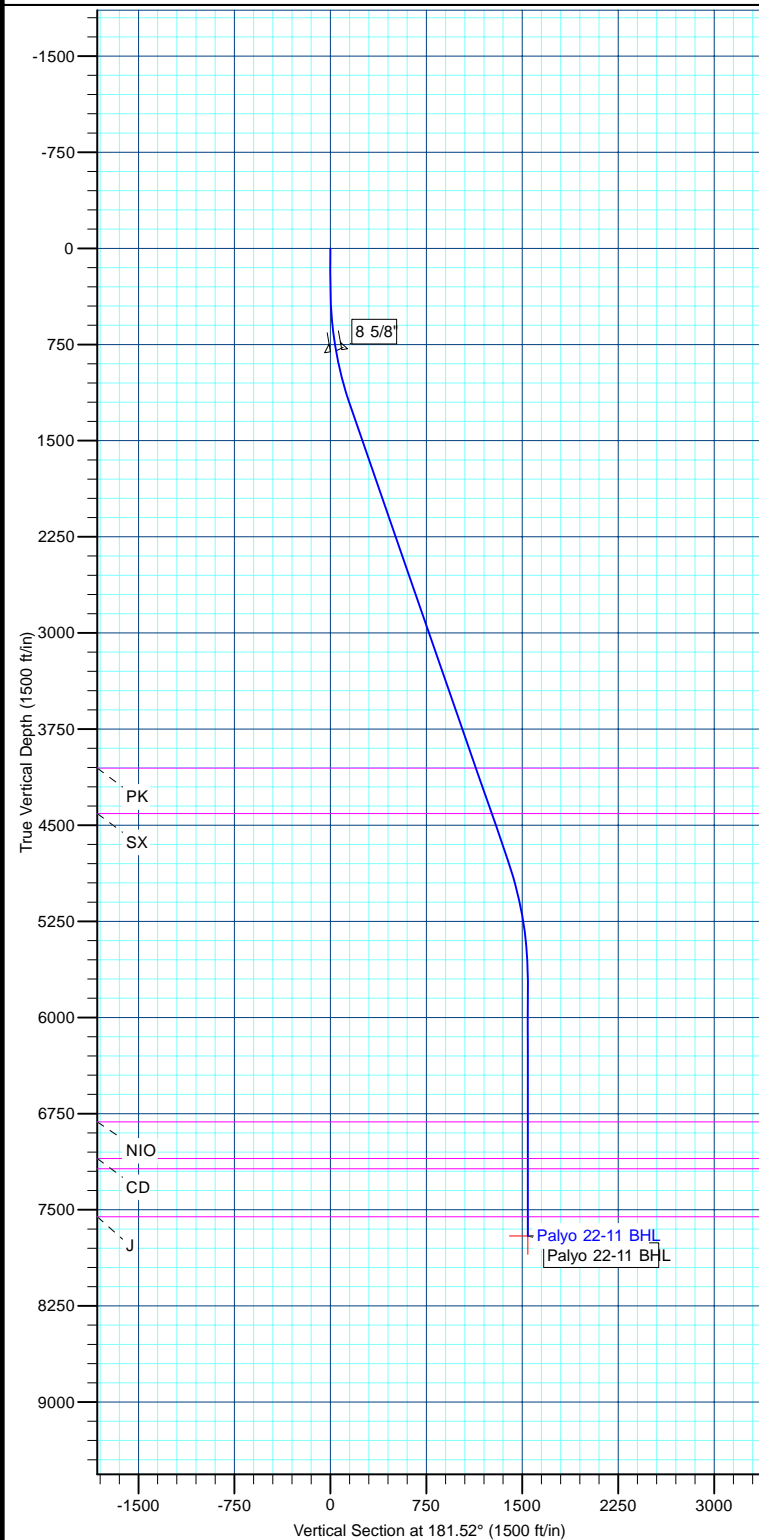


Azimuths to True North
Magnetic North: 8.83°

Magnetic Field
Strength: 53064.9snT
Dip Angle: 66.89°
Date: 1/3/2011
Model: IGRF2010

SECTION DETAILS

MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSec	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	
1258.62	19.17	181.52	1240.83	-158.84	-4.20	2.00	181.52	158.90	
4987.80	19.17	181.52	4763.17	-1383.12	-36.61	0.00	0.00	383.61	
5946.42	0.00	0.00	5704.00	-1541.96	-40.81	2.00	180.00	1542.50	
7946.42	0.00	0.00	7704.00	-1541.96	-40.81	0.00	0.00	1542.50	Palyo 22-11 BHL



Database:	edm5000p	Local Co-ordinate Reference:	Well Palyo 22-11
Company:	US ROCKIES REGION PLANNING	TVD Reference:	WELL @ 4854.00ft (Original Well Elev)
Project:	COLORADO NORTHERN ZONE - 83	MD Reference:	WELL @ 4854.00ft (Original Well Elev)
Site:	WELD_Palyo 18-11 pad	North Reference:	True
Well:	Palyo 22-11	Survey Calculation Method:	Minimum Curvature
Wellbore:	Palyo 22-11		
Design:	Palyo 22-11 BHL		

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_Palyo 18-11 pad			
Site Position:		Northing:	1,301,423.64 ft	Latitude: 40.157570
From:	Lat/Long	Easting:	3,241,610.64 ft	Longitude: -104.635567
Position Uncertainty:	0.00 ft	Slot Radius:	0 "	Grid Convergence: 0.56 °

Well	Palyo 22-11			
Well Position	+N/-S	-0.04 ft	Northing:	1,301,423.44 ft
	+E/-W	-15.93 ft	Easting:	3,241,594.71 ft
Position Uncertainty		0.00 ft	Wellhead Elevation:	Ground Level: 4,854.00 ft

Wellbore	Palyo 22-11				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	1/3/2011	8.83	66.89	53,065

Design	Palyo 22-11 BHL			
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	181.52

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	
300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.00	0.00	0.00	
1,258.62	19.17	181.52	1,240.83	-158.84	-4.20	2.00	2.00	0.00	181.52	
4,987.80	19.17	181.52	4,763.17	-1,383.12	-36.61	0.00	0.00	0.00	0.00	
5,946.42	0.00	0.00	5,704.00	-1,541.96	-40.81	2.00	-2.00	0.00	180.00	
7,946.42	0.00	0.00	7,704.00	-1,541.96	-40.81	0.00	0.00	0.00	0.00	Palyo 22-11 BHL

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Company:	US ROCKIES REGION PLANNING	TVD Reference:	WELL @ 4854.00ft (Original Well Elev)
Project:	COLORADO NORTHERN ZONE - 83	MD Reference:	WELL @ 4854.00ft (Original Well Elev)
Site:	WELD_Palyo 18-11 pad	North Reference:	True
Well:	Palyo 22-11	Survey Calculation Method:	Minimum Curvature
Wellbore:	Palyo 22-11		
Design:	Palyo 22-11 BHL		

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	181.52	800.00	-43.96	-1.16	43.97	2.00	2.00	0.00	
8 5/8"										
1,258.62	19.17	181.52	1,240.83	-158.84	-4.20	158.90	2.00	2.00	0.00	
4,236.99	19.17	181.52	4,054.00	-1,136.63	-30.08	1,137.03	0.00	0.00	0.00	
PK										
4,612.83	19.17	181.52	4,409.00	-1,260.02	-33.35	1,260.46	0.00	0.00	0.00	
SX										
4,987.80	19.17	181.52	4,763.17	-1,383.12	-36.61	1,383.61	0.00	0.00	0.00	
5,946.42	0.00	0.00	5,704.00	-1,541.96	-40.81	1,542.50	2.00	-2.00	0.00	
7,056.42	0.00	0.00	6,814.00	-1,541.96	-40.81	1,542.50	0.00	0.00	0.00	
NIO										
7,341.42	0.00	0.00	7,099.00	-1,541.96	-40.81	1,542.50	0.00	0.00	0.00	
CD										
7,422.42	0.00	0.00	7,180.00	-1,541.96	-40.81	1,542.50	0.00	0.00	0.00	
GH										
7,796.42	0.00	0.00	7,554.00	-1,541.96	-40.81	1,542.50	0.00	0.00	0.00	
J										
7,946.42	0.00	0.00	7,704.00	-1,541.96	-40.81	1,542.50	0.00	0.00	0.00	
Palyo 22-11 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										
Palyo 22-11 BHL	0.00	0.00	7,704.00	-1,541.96	-40.81	1,299,881.16	3,241,568.93	40.153337	-104.635770	
- 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 (°)	
4,236.99	4,054.00	PK				
4,612.83	4,409.00	SX				
7,056.42	6,814.00	NIO				
7,341.42	7,099.00	CD				
7,422.42	7,180.00	GH				
7,796.42	7,554.00	J				

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