

# **US ROCKIES REGION PLANNING**

**COLORADO NORTHERN ZONE - 83**

**WELD\_BERGER PAD**

**Berger 6-2**

**Berger 6-2**

**Plan: Berger 6-2 (wp01)**

## **Standard Planning Report**

**06 October, 2011**

Project: COLORADO NORTHERN ZONE - 83  
Site: WELD\_BERGER PAD  
Well: Berger 6-2  
Wellbore: Berger 6-2  
Section:  
SHL:  
Design: Berger 6-2 (wp01)  
Latitude: 40.083789  
Longitude: -104.863249  
GL: 4959.01  
KB: rkb + gl @ 4974.00ft

## FORMATION TOP DETAILS

TVDPath	MDPath	PK Depth	Formation
4062.00	4213.73	SX Depth	
4522.00	4673.74	NIO Depth	
7242.00	7393.74	CD Depth	
7552.00	7703.74	GH Depth	
7640.00	7791.74	J Depth	
7992.00	8143.74	DK Depth	
8172.00	8323.74		

## WELL DETAILS: Berger 6-2

+N/-S	+E/-W	Northing	Ground Level: Easting	4959.01 Latitude	Longitude	Slot
0.00	0.00	1274008.79	3178167.38	40.083789	-104.863249	

## CASING DETAILS

No casing data is available



Azimuths to True North  
Magnetic North: 8.85°

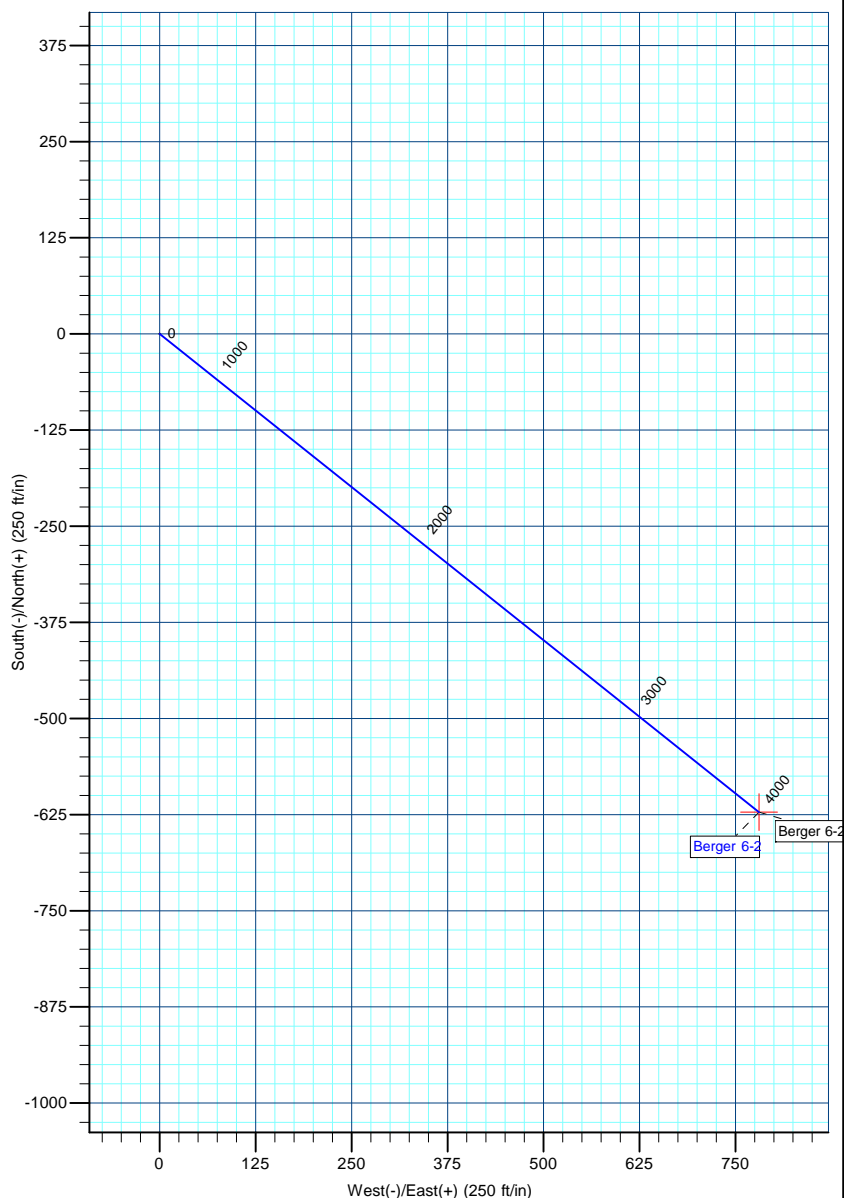
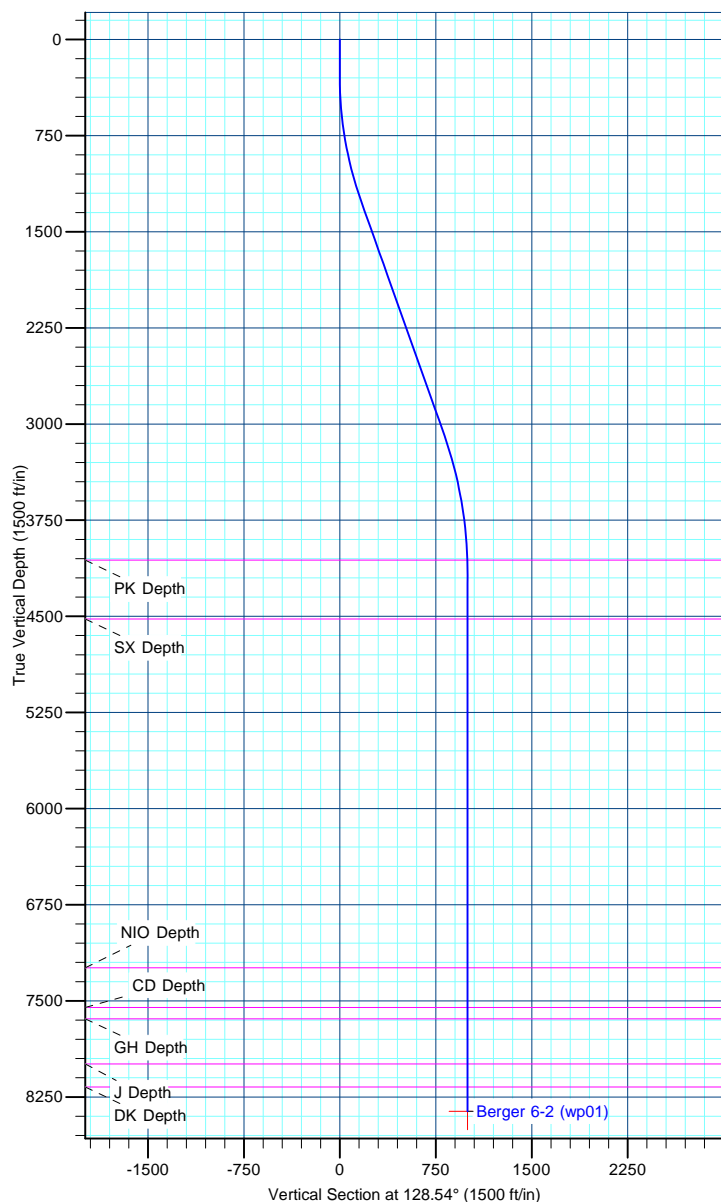
Magnetic Field  
Strength: 52920.5nT  
Dip Angle: 66.77°  
Date: 10/6/2011  
Model: IGRF2010

## DESIGN TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Shape Point
Berger 6-2 BHL	8362.00	-621.80	780.69	1273392.61	3178952.51	40.082082	-104.860459	

## SECTION DETAILS

MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSect
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
1280.61	19.61	128.54	1261.58	-103.54	130.00	2.00	128.54	166.20
3193.04	19.61	128.54	3063.06	-503.46	632.11	0.00	0.00	808.11
4313.74	0.00	0.00	4162.00	-621.80	780.69	1.75	180.00	998.05
8513.74	0.00	0.00	8362.00	-621.80	780.69	0.00	0.00	998.05



# Anadarko Petroleum Corp

## Planning Report

<b>Database:</b>	edmp	<b>Local Co-ordinate Reference:</b>	Well Berger 6-2
<b>Company:</b>	US ROCKIES REGION PLANNING	<b>TVD Reference:</b>	rkb + gl @ 4974.00ft
<b>Project:</b>	COLORADO NORTHERN ZONE - 83	<b>MD Reference:</b>	rkb + gl @ 4974.00ft
<b>Site:</b>	WELD_BERGER PAD	<b>North Reference:</b>	True
<b>Well:</b>	Berger 6-2	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Berger 6-2		
<b>Design:</b>	Berger 6-2 (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_BERGER PAD			
Site Position:		Northing:	1,274,067.38 usft	Latitude:	40.083952
From:	Lat/Long	Easting:	3,178,056.15 usft	Longitude:	-104.863645
Position Uncertainty:	0.00 ft	Slot Radius:	13-3/16 "	Grid Convergence:	0.41 °

Well	Berger 6-2					
Well Position	+N/-S	-59.39 ft	Northing:	1,274,008.78 usft	Latitude:	40.083789
	+E/-W	110.80 ft	Easting:	3,178,167.38 usft	Longitude:	-104.863249
Position Uncertainty		0.00 ft	Wellhead Elevation:		Ground Level:	4,959.01 ft

<b>Wellbore</b>	Berger 6-2				
<b>Magnetics</b>	<b>Model Name</b>	<b>Sample Date</b>	<b>Declination (°)</b>	<b>Dip Angle (°)</b>	<b>Field Strength (nT)</b>
	IGRF2010	10/6/2011	8.85	66.77	52,920

<b>Design</b>	Berger 6-2 (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	128.54	

<b>Plan Sections</b>										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	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	
1,280.61	19.61	128.54	1,261.58	-103.54	130.00	2.00	2.00	0.00	128.54	
3,193.04	19.61	128.54	3,063.06	-503.46	632.11	0.00	0.00	0.00	0.00	
4,313.74	0.00	0.00	4,162.00	-621.80	780.69	1.75	-1.75	0.00	180.00	
8,513.74	0.00	0.00	8,362.00	-621.80	780.69	0.00	0.00	0.00	0.00	Berger 6-2 BHL

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<b>Company:</b>	US ROCKIES REGION PLANNING	<b>TVD Reference:</b>	rkb + gl @ 4974.00ft
<b>Project:</b>	COLORADO NORTHERN ZONE - 83	<b>MD Reference:</b>	rkb + gl @ 4974.00ft
<b>Site:</b>	WELD_BERGER PAD	<b>North Reference:</b>	True
<b>Well:</b>	Berger 6-2	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Berger 6-2		
<b>Design:</b>	Berger 6-2 (wp01)		

Planned Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
100.00	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00
200.00	0.00	0.00	200.00	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
400.00	2.00	128.54	399.98	-1.09	1.37	1.75	2.00	2.00	0.00
500.00	4.00	128.54	499.84	-4.35	5.46	6.98	2.00	2.00	0.00
600.00	6.00	128.54	599.45	-9.78	12.28	15.69	2.00	2.00	0.00
700.00	8.00	128.54	698.70	-17.37	21.81	27.88	2.00	2.00	0.00
800.00	10.00	128.54	797.47	-27.11	34.04	43.52	2.00	2.00	0.00
900.00	12.00	128.54	895.62	-39.00	48.97	62.60	2.00	2.00	0.00
1,000.00	14.00	128.54	993.06	-53.02	66.56	85.10	2.00	2.00	0.00
1,100.00	16.00	128.54	1,089.64	-69.14	86.81	110.98	2.00	2.00	0.00
1,200.00	18.00	128.54	1,185.27	-87.35	109.68	140.21	2.00	2.00	0.00
1,280.61	19.61	128.54	1,261.58	-103.54	130.00	166.20	2.00	2.00	0.00
1,300.00	19.61	128.54	1,279.84	-107.60	135.09	172.71	0.00	0.00	0.00
1,400.00	19.61	128.54	1,374.04	-128.51	161.35	206.27	0.00	0.00	0.00
1,500.00	19.61	128.54	1,468.23	-149.42	187.60	239.84	0.00	0.00	0.00
1,600.00	19.61	128.54	1,562.43	-170.33	213.86	273.40	0.00	0.00	0.00
1,700.00	19.61	128.54	1,656.63	-191.24	240.11	306.97	0.00	0.00	0.00
1,800.00	19.61	128.54	1,750.83	-212.16	266.37	340.53	0.00	0.00	0.00
1,900.00	19.61	128.54	1,845.03	-233.07	292.62	374.10	0.00	0.00	0.00
2,000.00	19.61	128.54	1,939.23	-253.98	318.88	407.66	0.00	0.00	0.00
2,100.00	19.61	128.54	2,033.43	-274.89	345.13	441.23	0.00	0.00	0.00
2,200.00	19.61	128.54	2,127.62	-295.80	371.39	474.79	0.00	0.00	0.00
2,300.00	19.61	128.54	2,221.82	-316.71	397.64	508.36	0.00	0.00	0.00
2,400.00	19.61	128.54	2,316.02	-337.62	423.90	541.92	0.00	0.00	0.00
2,500.00	19.61	128.54	2,410.22	-358.54	450.16	575.49	0.00	0.00	0.00
2,600.00	19.61	128.54	2,504.42	-379.45	476.41	609.05	0.00	0.00	0.00
2,700.00	19.61	128.54	2,598.62	-400.36	502.67	642.62	0.00	0.00	0.00
2,800.00	19.61	128.54	2,692.82	-421.27	528.92	676.19	0.00	0.00	0.00
2,900.00	19.61	128.54	2,787.02	-442.18	555.18	709.75	0.00	0.00	0.00
3,000.00	19.61	128.54	2,881.21	-463.09	581.43	743.32	0.00	0.00	0.00
3,100.00	19.61	128.54	2,975.41	-484.01	607.69	776.88	0.00	0.00	0.00
3,193.04	19.61	128.54	3,063.06	-503.46	632.11	808.11	0.00	0.00	0.00
3,200.00	19.49	128.54	3,069.61	-504.91	633.94	810.44	1.75	-1.75	0.00
3,300.00	17.74	128.54	3,164.38	-524.80	658.90	842.36	1.75	-1.75	0.00
3,400.00	15.99	128.54	3,260.07	-542.87	681.60	871.37	1.75	-1.75	0.00
3,500.00	14.24	128.54	3,356.61	-559.12	701.99	897.45	1.75	-1.75	0.00
3,600.00	12.49	128.54	3,453.90	-573.52	720.08	920.56	1.75	-1.75	0.00
3,700.00	10.74	128.54	3,551.85	-586.06	735.82	940.70	1.75	-1.75	0.00
3,800.00	8.99	128.54	3,650.36	-596.74	749.23	957.83	1.75	-1.75	0.00
3,900.00	7.24	128.54	3,749.36	-605.53	760.27	971.94	1.75	-1.75	0.00
4,000.00	5.49	128.54	3,848.74	-612.44	768.94	983.03	1.75	-1.75	0.00
4,100.00	3.74	128.54	3,948.41	-617.45	775.23	991.08	1.75	-1.75	0.00
4,200.00	1.99	128.54	4,048.28	-620.57	779.14	996.08	1.75	-1.75	0.00
4,213.73	1.75	128.54	4,062.00	-620.85	779.49	996.52	1.75	-1.75	0.00
PK Depth									
4,300.00	0.24	128.54	4,148.26	-621.78	780.67	998.02	1.75	-1.75	0.00
4,313.74	0.00	0.00	4,162.00	-621.80	780.69	998.05	1.75	-1.75	0.00
4,400.00	0.00	0.00	4,248.26	-621.80	780.69	998.05	0.00	0.00	0.00
4,500.00	0.00	0.00	4,348.26	-621.80	780.69	998.05	0.00	0.00	0.00
4,600.00	0.00	0.00	4,448.26	-621.80	780.69	998.05	0.00	0.00	0.00
4,673.74	0.00	0.00	4,522.00	-621.80	780.69	998.05	0.00	0.00	0.00
SX Depth									

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<b>Company:</b>	US ROCKIES REGION PLANNING	<b>TVD Reference:</b>	rkb + gl @ 4974.00ft
<b>Project:</b>	COLORADO NORTHERN ZONE - 83	<b>MD Reference:</b>	rkb + gl @ 4974.00ft
<b>Site:</b>	WELD_BERGER PAD	<b>North Reference:</b>	True
<b>Well:</b>	Berger 6-2	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Berger 6-2		
<b>Design:</b>	Berger 6-2 (wp01)		

Planned Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
4,700.00	0.00	0.00	4,548.26	-621.80	780.69	998.05	0.00	0.00	0.00
4,800.00	0.00	0.00	4,648.26	-621.80	780.69	998.05	0.00	0.00	0.00
4,900.00	0.00	0.00	4,748.26	-621.80	780.69	998.05	0.00	0.00	0.00
5,000.00	0.00	0.00	4,848.26	-621.80	780.69	998.05	0.00	0.00	0.00
5,100.00	0.00	0.00	4,948.26	-621.80	780.69	998.05	0.00	0.00	0.00
5,200.00	0.00	0.00	5,048.26	-621.80	780.69	998.05	0.00	0.00	0.00
5,300.00	0.00	0.00	5,148.26	-621.80	780.69	998.05	0.00	0.00	0.00
5,400.00	0.00	0.00	5,248.26	-621.80	780.69	998.05	0.00	0.00	0.00
5,500.00	0.00	0.00	5,348.26	-621.80	780.69	998.05	0.00	0.00	0.00
5,600.00	0.00	0.00	5,448.26	-621.80	780.69	998.05	0.00	0.00	0.00
5,700.00	0.00	0.00	5,548.26	-621.80	780.69	998.05	0.00	0.00	0.00
5,800.00	0.00	0.00	5,648.26	-621.80	780.69	998.05	0.00	0.00	0.00
5,900.00	0.00	0.00	5,748.26	-621.80	780.69	998.05	0.00	0.00	0.00
6,000.00	0.00	0.00	5,848.26	-621.80	780.69	998.05	0.00	0.00	0.00
6,100.00	0.00	0.00	5,948.26	-621.80	780.69	998.05	0.00	0.00	0.00
6,200.00	0.00	0.00	6,048.26	-621.80	780.69	998.05	0.00	0.00	0.00
6,300.00	0.00	0.00	6,148.26	-621.80	780.69	998.05	0.00	0.00	0.00
6,400.00	0.00	0.00	6,248.26	-621.80	780.69	998.05	0.00	0.00	0.00
6,500.00	0.00	0.00	6,348.26	-621.80	780.69	998.05	0.00	0.00	0.00
6,600.00	0.00	0.00	6,448.26	-621.80	780.69	998.05	0.00	0.00	0.00
6,700.00	0.00	0.00	6,548.26	-621.80	780.69	998.05	0.00	0.00	0.00
6,800.00	0.00	0.00	6,648.26	-621.80	780.69	998.05	0.00	0.00	0.00
6,900.00	0.00	0.00	6,748.26	-621.80	780.69	998.05	0.00	0.00	0.00
7,000.00	0.00	0.00	6,848.26	-621.80	780.69	998.05	0.00	0.00	0.00
7,100.00	0.00	0.00	6,948.26	-621.80	780.69	998.05	0.00	0.00	0.00
7,200.00	0.00	0.00	7,048.26	-621.80	780.69	998.05	0.00	0.00	0.00
7,300.00	0.00	0.00	7,148.26	-621.80	780.69	998.05	0.00	0.00	0.00
7,393.74	0.00	0.00	7,242.00	-621.80	780.69	998.05	0.00	0.00	0.00
NIO Depth									
7,400.00	0.00	0.00	7,248.26	-621.80	780.69	998.05	0.00	0.00	0.00
7,500.00	0.00	0.00	7,348.26	-621.80	780.69	998.05	0.00	0.00	0.00
7,600.00	0.00	0.00	7,448.26	-621.80	780.69	998.05	0.00	0.00	0.00
7,700.00	0.00	0.00	7,548.26	-621.80	780.69	998.05	0.00	0.00	0.00
7,703.74	0.00	0.00	7,552.00	-621.80	780.69	998.05	0.00	0.00	0.00
CD Depth									
7,791.74	0.00	0.00	7,640.00	-621.80	780.69	998.05	0.00	0.00	0.00
GH Depth									
7,800.00	0.00	0.00	7,648.26	-621.80	780.69	998.05	0.00	0.00	0.00
7,900.00	0.00	0.00	7,748.26	-621.80	780.69	998.05	0.00	0.00	0.00
8,000.00	0.00	0.00	7,848.26	-621.80	780.69	998.05	0.00	0.00	0.00
8,100.00	0.00	0.00	7,948.26	-621.80	780.69	998.05	0.00	0.00	0.00
8,143.74	0.00	0.00	7,992.00	-621.80	780.69	998.05	0.00	0.00	0.00
J Depth									
8,200.00	0.00	0.00	8,048.26	-621.80	780.69	998.05	0.00	0.00	0.00
8,300.00	0.00	0.00	8,148.26	-621.80	780.69	998.05	0.00	0.00	0.00
8,323.74	0.00	0.00	8,172.00	-621.80	780.69	998.05	0.00	0.00	0.00
DK Depth									
8,400.00	0.00	0.00	8,248.26	-621.80	780.69	998.05	0.00	0.00	0.00
8,500.00	0.00	0.00	8,348.26	-621.80	780.69	998.05	0.00	0.00	0.00
8,513.74	0.00	0.00	8,362.00	-621.80	780.69	998.05	0.00	0.00	0.00
Berger 6-2 BHL									

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<b>Company:</b>	US ROCKIES REGION PLANNING	<b>TVD Reference:</b>	rkb + gl @ 4974.00ft
<b>Project:</b>	COLORADO NORTHERN ZONE - 83	<b>MD Reference:</b>	rkb + gl @ 4974.00ft
<b>Site:</b>	WELD_BERGER PAD	<b>North Reference:</b>	True
<b>Well:</b>	Berger 6-2	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Berger 6-2		
<b>Design:</b>	Berger 6-2 (wp01)		

Design Targets									
Target Name	Dip Angle	Dip Dir.	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
- hit/miss target	(°)	(°)	(ft)	(ft)	(ft)	(usft)	(usft)		
- Shape									
Berger 6-2 BHL	0.00	0.00	8,362.00	-621.80	780.69	1,273,392.61	3,178,952.51	40.082082	-104.860459
- plan hits target center									
- Point									

Formations						
Measured Depth	Vertical Depth	Name	Lithology	Dip	Dip Direction	
(ft)	(ft)			(°)	(°)	
4,213.73	4,062.00	PK Depth				
4,673.74	4,522.00	SX Depth				
7,393.74	7,242.00	NIO Depth				
7,703.74	7,552.00	CD Depth				
7,791.74	7,640.00	GH Depth				
8,143.74	7,992.00	J Depth				
8,323.74	8,172.00	DK Depth				