

US ROCKIES REGION PLANNING

COLORADO NORTHERN ZONE - 83

WELD_BERGER PAD

Berger 3-2

Berger 3-2

Plan: Berger 3-2 (wp01)

Standard Planning Report

06 October, 2011

Project: COLORADO NORTHERN ZONE - 83
Site: WELD_BERGER PAD
Well: Berger 3-2
Wellbore: Berger 3-2
Section:
SHL:
Design: Berger 3-2 (wp01)
Latitude: 40.083880
Longitude: -104.863699
GL: 4959.01
KB: 15' rkb + 4959' GL @ 4974.00ft

FORMATION TOP DETAILS			
TVDPath	MDPath	PK Depth	Formation
4061.00	4236.68		
4521.00	4697.10	SX Depth	
7241.00	7417.10	NIO Depth	
7551.00	7727.10	CD Depth	
7639.00	7815.10	GH Depth	
7991.00	8167.10	J Depth	
8171.00	8347.10	DK Depth	

CASING DETAILS
No casing data is available

T

M

A

Azimuths to True North

Magnetic North: 8.85°

Magnetic Field

Strength: 52920.5snT

Dip Angle: 66.77°

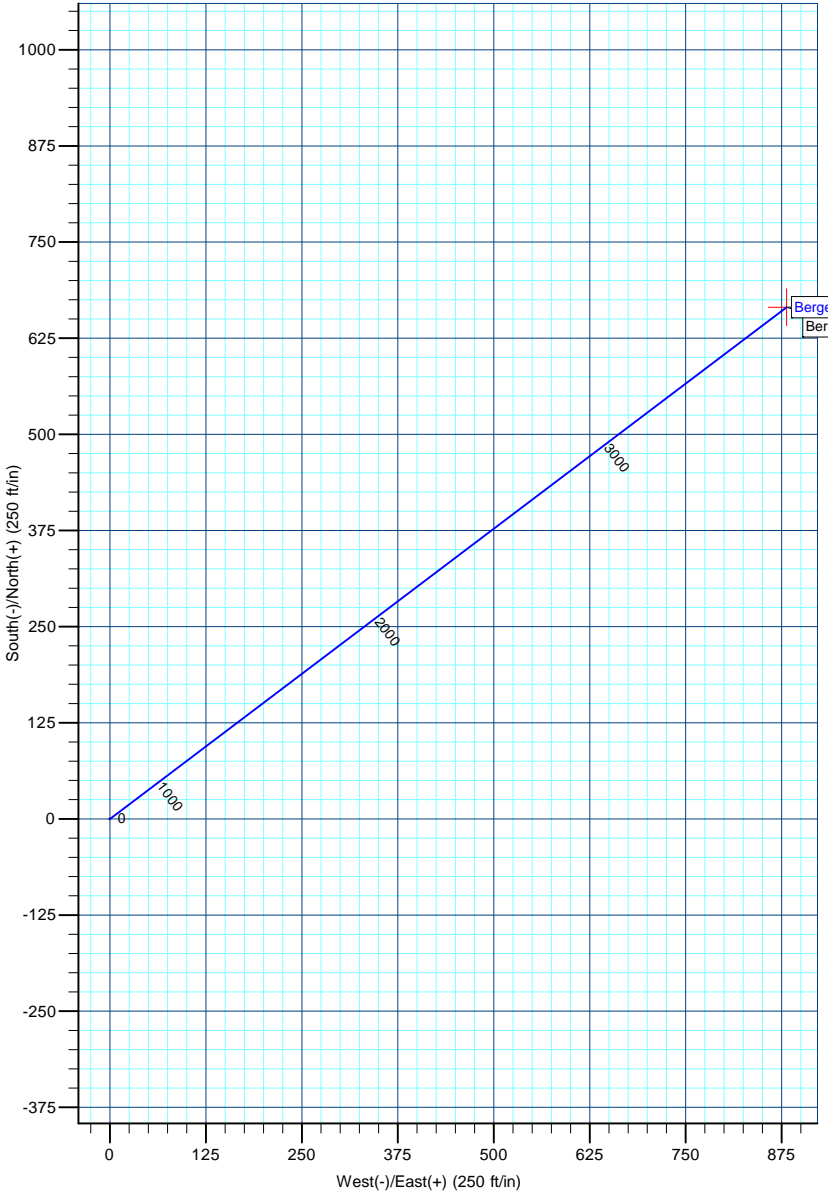
Date: 10/6/2011

Model: IGRF2010

WELL DETAILS: Berger 3-2							
+N/-S	+E/-W	Northing	Ground Level: Easting	4959.01 Latitude	40.083880	Longitude	Slot
0.00	0.00	1274041.03	3178041.23			-104.863699	

DESIGN TARGET DETAILS								
Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Shape Point
Berger 3-2 BHL	8361.00	665.20	881.38	1274712.54	3178917.81	40.085706	-104.860549	

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
1326.22	20.52	52.96	1304.41	109.55	145.15	2.00	52.96	181.85
3364.28	20.52	52.96	3213.10	540.00	715.49	0.00	0.00	896.40
4537.10	0.00	0.00	4361.00	665.20	881.38	1.75	180.00	1104.23
8537.10	0.00	0.00	8361.00	665.20	881.38	0.00	0.00	1104.23



Anadarko Petroleum Corp

Planning Report

Database:	edmp	Local Co-ordinate Reference:	Well Berger 3-2
Company:	US ROCKIES REGION PLANNING	TVD Reference:	15' rkb + 4959' GL @ 4974.00ft
Project:	COLORADO NORTHERN ZONE - 83	MD Reference:	15' rkb + 4959' GL @ 4974.00ft
Site:	WELD_BERGER PAD	North Reference:	True
Well:	Berger 3-2	Survey Calculation Method:	Minimum Curvature
Wellbore:	Berger 3-2		
Design:	Berger 3-2 (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_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 3-2			
Well Position	+N/-S	-26.24 ft	Northing:	1,274,041.03 usft
	+E/-W	-15.11 ft	Easting:	3,178,041.23 usft
Position Uncertainty		0.00 ft	Wellhead Elevation:	Latitude: 40.083880
				Longitude: -104.863699
				Ground Level: 4,959.01 ft

Wellbore	Berger 3-2				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	10/6/2011	8.85	66.77	52,920

Design	Berger 3-2 (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	52.96

Plan Sections										
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	
1,326.22	20.52	52.96	1,304.41	109.55	145.15	2.00	2.00	0.00	52.96	
3,364.28	20.52	52.96	3,213.10	540.00	715.49	0.00	0.00	0.00	0.00	
4,537.10	0.00	0.00	4,361.00	665.20	881.38	1.75	-1.75	0.00	180.00	
8,537.10	0.00	0.00	8,361.00	665.20	881.38	0.00	0.00	0.00	0.00	Berger 3-2 BHL

Anadarko Petroleum Corp

Planning Report

Database:	edmp	Local Co-ordinate Reference:	Well Berger 3-2
Company:	US ROCKIES REGION PLANNING	TVD Reference:	15' rkb + 4959' GL @ 4974.00ft
Project:	COLORADO NORTHERN ZONE - 83	MD Reference:	15' rkb + 4959' GL @ 4974.00ft
Site:	WELD_BERGER PAD	North Reference:	True
Well:	Berger 3-2	Survey Calculation Method:	Minimum Curvature
Wellbore:	Berger 3-2		
Design:	Berger 3-2 (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	52.96	399.98	1.05	1.39	1.75	2.00	2.00	0.00
500.00	4.00	52.96	499.84	4.20	5.57	6.98	2.00	2.00	0.00
600.00	6.00	52.96	599.45	9.45	12.53	15.69	2.00	2.00	0.00
700.00	8.00	52.96	698.70	16.80	22.25	27.88	2.00	2.00	0.00
800.00	10.00	52.96	797.47	26.22	34.74	43.52	2.00	2.00	0.00
900.00	12.00	52.96	895.62	37.71	49.97	62.60	2.00	2.00	0.00
1,000.00	14.00	52.96	993.06	51.26	67.92	85.10	2.00	2.00	0.00
1,100.00	16.00	52.96	1,089.64	66.85	88.58	110.98	2.00	2.00	0.00
1,200.00	18.00	52.96	1,185.27	84.47	111.92	140.21	2.00	2.00	0.00
1,300.00	20.00	52.96	1,279.82	104.08	137.90	172.77	2.00	2.00	0.00
1,326.22	20.52	52.96	1,304.41	109.55	145.15	181.85	2.00	2.00	0.00
1,400.00	20.52	52.96	1,373.51	125.13	165.80	207.72	0.00	0.00	0.00
1,500.00	20.52	52.96	1,467.16	146.25	193.78	242.78	0.00	0.00	0.00
1,600.00	20.52	52.96	1,560.81	167.37	221.76	277.84	0.00	0.00	0.00
1,700.00	20.52	52.96	1,654.47	188.49	249.75	312.90	0.00	0.00	0.00
1,800.00	20.52	52.96	1,748.12	209.61	277.73	347.96	0.00	0.00	0.00
1,900.00	20.52	52.96	1,841.77	230.73	305.72	383.02	0.00	0.00	0.00
2,000.00	20.52	52.96	1,935.42	251.86	333.70	418.08	0.00	0.00	0.00
2,100.00	20.52	52.96	2,029.08	272.98	361.69	453.14	0.00	0.00	0.00
2,200.00	20.52	52.96	2,122.73	294.10	389.67	488.20	0.00	0.00	0.00
2,300.00	20.52	52.96	2,216.38	315.22	417.66	523.26	0.00	0.00	0.00
2,400.00	20.52	52.96	2,310.03	336.34	445.64	558.32	0.00	0.00	0.00
2,500.00	20.52	52.96	2,403.69	357.46	473.63	593.38	0.00	0.00	0.00
2,600.00	20.52	52.96	2,497.34	378.58	501.61	628.44	0.00	0.00	0.00
2,700.00	20.52	52.96	2,590.99	399.70	529.60	663.50	0.00	0.00	0.00
2,800.00	20.52	52.96	2,684.64	420.82	557.58	698.56	0.00	0.00	0.00
2,900.00	20.52	52.96	2,778.29	441.94	585.57	733.62	0.00	0.00	0.00
3,000.00	20.52	52.96	2,871.95	463.06	613.55	768.68	0.00	0.00	0.00
3,100.00	20.52	52.96	2,965.60	484.19	641.54	803.74	0.00	0.00	0.00
3,200.00	20.52	52.96	3,059.25	505.31	669.52	838.80	0.00	0.00	0.00
3,300.00	20.52	52.96	3,152.90	526.43	697.51	873.86	0.00	0.00	0.00
3,364.28	20.52	52.96	3,213.10	540.00	715.49	896.40	0.00	0.00	0.00
3,400.00	19.90	52.96	3,246.62	547.44	725.34	908.74	1.75	-1.75	0.00
3,500.00	18.15	52.96	3,341.16	567.07	751.36	941.34	1.75	-1.75	0.00
3,600.00	16.40	52.96	3,436.64	584.96	775.06	971.03	1.75	-1.75	0.00
3,700.00	14.65	52.96	3,532.99	601.08	796.42	997.79	1.75	-1.75	0.00
3,800.00	12.90	52.96	3,630.11	615.43	815.43	1,021.60	1.75	-1.75	0.00
3,900.00	11.15	52.96	3,727.92	627.98	832.06	1,042.44	1.75	-1.75	0.00
4,000.00	9.40	52.96	3,826.31	638.72	846.29	1,060.27	1.75	-1.75	0.00
4,100.00	7.65	52.96	3,925.20	647.65	858.12	1,075.09	1.75	-1.75	0.00
4,200.00	5.90	52.96	4,024.50	654.75	867.54	1,086.89	1.75	-1.75	0.00
4,236.68	5.26	52.96	4,061.00	656.90	870.38	1,090.45	1.75	-1.75	0.00
PK Depth									
4,300.00	4.15	52.96	4,124.11	660.03	874.53	1,095.64	1.75	-1.75	0.00
4,400.00	2.40	52.96	4,223.94	663.47	879.09	1,101.36	1.75	-1.75	0.00
4,500.00	0.65	52.96	4,323.90	665.07	881.21	1,104.02	1.75	-1.75	0.00
4,537.10	0.00	0.00	4,361.00	665.20	881.38	1,104.23	1.75	-1.75	0.00
4,600.00	0.00	0.00	4,423.90	665.20	881.38	1,104.23	0.00	0.00	0.00
4,697.10	0.00	0.00	4,521.00	665.20	881.38	1,104.23	0.00	0.00	0.00
SX Depth									

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Site:	WELD_BERGER PAD	North Reference:	True
Well:	Berger 3-2	Survey Calculation Method:	Minimum Curvature
Wellbore:	Berger 3-2		
Design:	Berger 3-2 (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	4,523.90	665.20	881.38	1,104.23	0.00	0.00	0.00
4,800.00	0.00	0.00	4,623.90	665.20	881.38	1,104.23	0.00	0.00	0.00
4,900.00	0.00	0.00	4,723.90	665.20	881.38	1,104.23	0.00	0.00	0.00
5,000.00	0.00	0.00	4,823.90	665.20	881.38	1,104.23	0.00	0.00	0.00
5,100.00	0.00	0.00	4,923.90	665.20	881.38	1,104.23	0.00	0.00	0.00
5,200.00	0.00	0.00	5,023.90	665.20	881.38	1,104.23	0.00	0.00	0.00
5,300.00	0.00	0.00	5,123.90	665.20	881.38	1,104.23	0.00	0.00	0.00
5,400.00	0.00	0.00	5,223.90	665.20	881.38	1,104.23	0.00	0.00	0.00
5,500.00	0.00	0.00	5,323.90	665.20	881.38	1,104.23	0.00	0.00	0.00
5,600.00	0.00	0.00	5,423.90	665.20	881.38	1,104.23	0.00	0.00	0.00
5,700.00	0.00	0.00	5,523.90	665.20	881.38	1,104.23	0.00	0.00	0.00
5,800.00	0.00	0.00	5,623.90	665.20	881.38	1,104.23	0.00	0.00	0.00
5,900.00	0.00	0.00	5,723.90	665.20	881.38	1,104.23	0.00	0.00	0.00
6,000.00	0.00	0.00	5,823.90	665.20	881.38	1,104.23	0.00	0.00	0.00
6,100.00	0.00	0.00	5,923.90	665.20	881.38	1,104.23	0.00	0.00	0.00
6,200.00	0.00	0.00	6,023.90	665.20	881.38	1,104.23	0.00	0.00	0.00
6,300.00	0.00	0.00	6,123.90	665.20	881.38	1,104.23	0.00	0.00	0.00
6,400.00	0.00	0.00	6,223.90	665.20	881.38	1,104.23	0.00	0.00	0.00
6,500.00	0.00	0.00	6,323.90	665.20	881.38	1,104.23	0.00	0.00	0.00
6,600.00	0.00	0.00	6,423.90	665.20	881.38	1,104.23	0.00	0.00	0.00
6,700.00	0.00	0.00	6,523.90	665.20	881.38	1,104.23	0.00	0.00	0.00
6,800.00	0.00	0.00	6,623.90	665.20	881.38	1,104.23	0.00	0.00	0.00
6,900.00	0.00	0.00	6,723.90	665.20	881.38	1,104.23	0.00	0.00	0.00
7,000.00	0.00	0.00	6,823.90	665.20	881.38	1,104.23	0.00	0.00	0.00
7,100.00	0.00	0.00	6,923.90	665.20	881.38	1,104.23	0.00	0.00	0.00
7,200.00	0.00	0.00	7,023.90	665.20	881.38	1,104.23	0.00	0.00	0.00
7,300.00	0.00	0.00	7,123.90	665.20	881.38	1,104.23	0.00	0.00	0.00
7,400.00	0.00	0.00	7,223.90	665.20	881.38	1,104.23	0.00	0.00	0.00
7,417.10	0.00	0.00	7,241.00	665.20	881.38	1,104.23	0.00	0.00	0.00
NIO Depth									
7,500.00	0.00	0.00	7,323.90	665.20	881.38	1,104.23	0.00	0.00	0.00
7,600.00	0.00	0.00	7,423.90	665.20	881.38	1,104.23	0.00	0.00	0.00
7,700.00	0.00	0.00	7,523.90	665.20	881.38	1,104.23	0.00	0.00	0.00
7,727.10	0.00	0.00	7,551.00	665.20	881.38	1,104.23	0.00	0.00	0.00
CD Depth									
7,800.00	0.00	0.00	7,623.90	665.20	881.38	1,104.23	0.00	0.00	0.00
7,815.10	0.00	0.00	7,639.00	665.20	881.38	1,104.23	0.00	0.00	0.00
GH Depth									
7,900.00	0.00	0.00	7,723.90	665.20	881.38	1,104.23	0.00	0.00	0.00
8,000.00	0.00	0.00	7,823.90	665.20	881.38	1,104.23	0.00	0.00	0.00
8,100.00	0.00	0.00	7,923.90	665.20	881.38	1,104.23	0.00	0.00	0.00
8,167.10	0.00	0.00	7,991.00	665.20	881.38	1,104.23	0.00	0.00	0.00
J Depth									
8,200.00	0.00	0.00	8,023.90	665.20	881.38	1,104.23	0.00	0.00	0.00
8,300.00	0.00	0.00	8,123.90	665.20	881.38	1,104.23	0.00	0.00	0.00
8,347.10	0.00	0.00	8,171.00	665.20	881.38	1,104.23	0.00	0.00	0.00
DK Depth									
8,400.00	0.00	0.00	8,223.90	665.20	881.38	1,104.23	0.00	0.00	0.00
8,500.00	0.00	0.00	8,323.90	665.20	881.38	1,104.23	0.00	0.00	0.00
8,537.10	0.00	0.00	8,361.00	665.20	881.38	1,104.23	0.00	0.00	0.00
Berger 3-2 BHL									

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Database:	edmp	Local Co-ordinate Reference:	Well Berger 3-2
Company:	US ROCKIES REGION PLANNING	TVD Reference:	15' rkb + 4959' GL @ 4974.00ft
Project:	COLORADO NORTHERN ZONE - 83	MD Reference:	15' rkb + 4959' GL @ 4974.00ft
Site:	WELD_BERGER PAD	North Reference:	True
Well:	Berger 3-2	Survey Calculation Method:	Minimum Curvature
Wellbore:	Berger 3-2		
Design:	Berger 3-2 (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 3-2 BHL	0.00	0.00	8,361.00	665.20	881.38	1,274,712.54	3,178,917.81	40.085706	-104.860549
- plan hits target center									
- Point									

Formations						
Measured Depth	Vertical Depth	Name	Lithology	Dip	Dip Direction	
(ft)	(ft)			(°)	(°)	
4,236.68	4,061.00	PK Depth				
4,697.10	4,521.00	SX Depth				
7,417.10	7,241.00	NIO Depth				
7,727.10	7,551.00	CD Depth				
7,815.10	7,639.00	GH Depth				
8,167.10	7,991.00	J Depth				
8,347.10	8,171.00	DK Depth				