

US ROCKIES REGION PLANNING

COLORADO NORTHERN ZONE - 83

WELD_LAMBRECHT 1-2 PAD

Lambrecht 17-2

Lambrecht 17-2

Plan: Lambrecht 17-2 (wp02)

Standard Planning Report

10 April, 2012

Project: COLORADO NORTHERN ZONE - 83
Site: WELD_LAMBRECHT 1-2 PAD
Well: Lambrecht 17-2
Wellbore: Lambrecht 17-2
Section:
SHL:
Design: Lambrecht 17-2 (wp02)
Latitude: 40.085783
Longitude: -104.850379
GL: 4939.00
KB: RKB + GL @ 4954.00ft

FORMATION TOP DETAILS			
	TVDPath	MDPath	Formation
	4039.00	4131.57	PK Depth
	4499.00	4591.57	SX Depth
	7219.00	7311.57	NIO Depth
	7529.00	7621.57	CD Depth
	7617.00	7709.57	GH Depth

WELL DETAILS: Lambrecht 17-2						
	+N/-S	+E/-W	Northing	Ground Level: Easting	4939.00 Latitude	Longitude
	0.00	0.00	1274761.26	3181763.11	40.085783	-104.850379
						Slot

CASING DETAILS			
TVD	MD	Name	Size
915.00	919.82	8-5/8"	8-5/8"

T

M

Azimuths to True North

Magnetic North: 8.84°

Magnetic Field

Strength: 52923.4nT

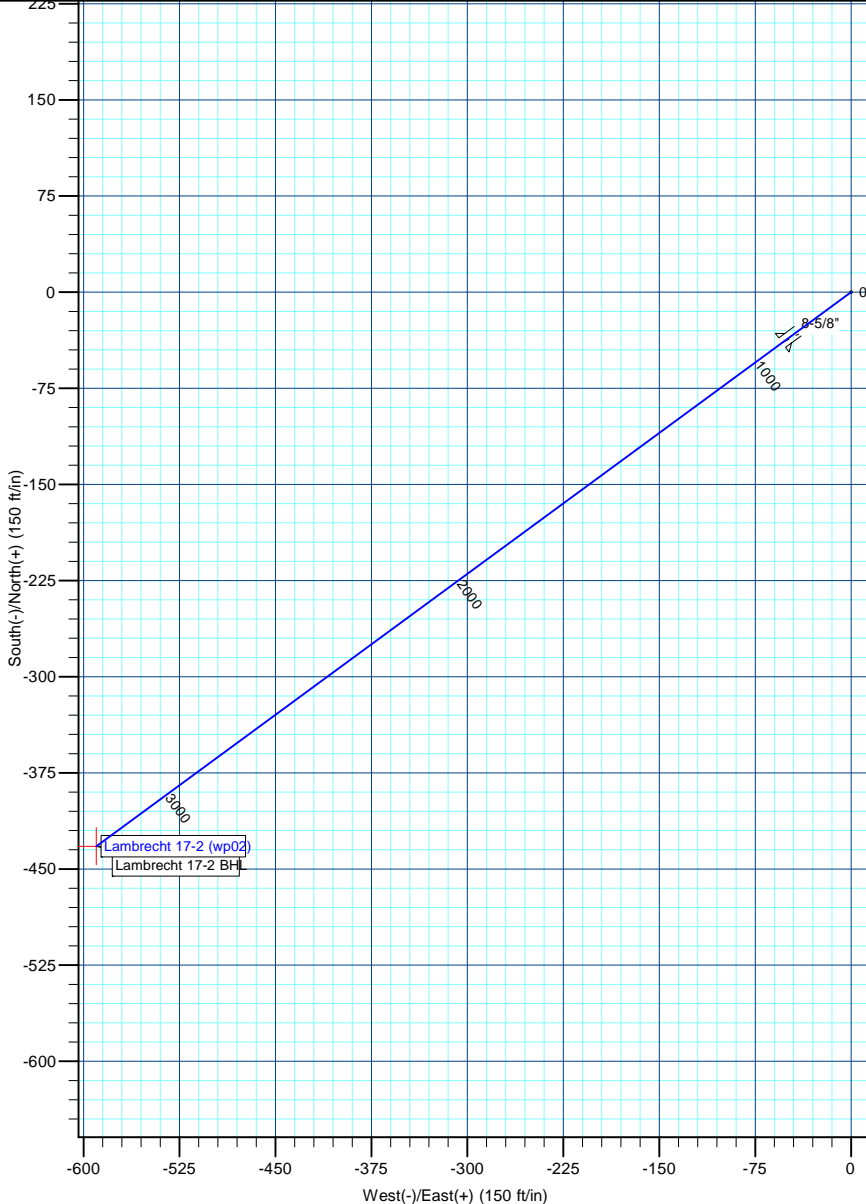
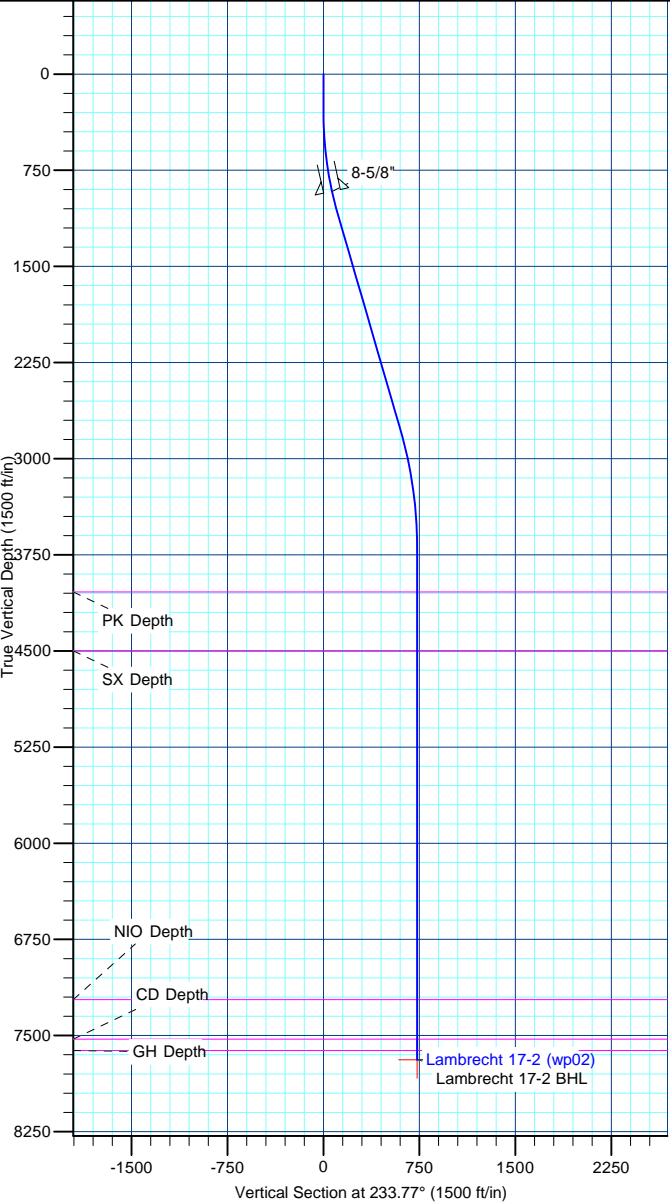
Dip Angle: 66.77°

Date: 10/5/2011

Model: IGRF2010

DESIGN TARGET DETAILS									
Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Shape	
Lambrecht 17-2 BHL	7689.00	-432.38	-590.11	1274324.57	3181176.18	40.084596	-104.852488	Point	

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
1111.26	16.23	233.77	1100.46	-67.44	-92.04	2.00	233.77	114.10
2854.42	16.23	233.77	2774.19	-355.31	-484.92	0.00	0.00	601.16
3781.57	0.00	0.00	3689.00	-432.38	-590.11	1.75	180.00	731.56
7781.57	0.00	0.00	7689.00	-432.38	-590.11	0.00	0.00	731.56



Anadarko Petroleum Corp

Planning Report

Database:	edmp	Local Co-ordinate Reference:	Well Lambrecht 17-2
Company:	US ROCKIES REGION PLANNING	TVD Reference:	RKB + GL @ 4954.00ft
Project:	COLORADO NORTHERN ZONE - 83	MD Reference:	RKB + GL @ 4954.00ft
Site:	WELD_LAMBRECHT 1-2 PAD	North Reference:	True
Well:	Lambrecht 17-2	Survey Calculation Method:	Minimum Curvature
Wellbore:	Lambrecht 17-2		
Design:	Lambrecht 17-2 (wp02)		

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_LAMBRECHT 1-2 PAD			
Site Position:		Northing:	1,274,749.10 usft	Latitude: 40.085753
From:	Lat/Long	Easting:	3,181,594.19 usft	Longitude: -104.850983
Position Uncertainty:	0.00 ft	Slot Radius:	0 "	Grid Convergence: 0.42 °

Well	Lambrecht 17-2			
Well Position	+N/-S	10.92 ft	Northing:	1,274,761.25 usft
	+E/-W	169.00 ft	Easting:	3,181,763.11 usft
Position Uncertainty		0.00 ft	Wellhead Elevation:	Latitude: 40.085783
				Longitude: -104.850379
				Ground Level: 4,939.00 ft

Wellbore	Lambrecht 17-2				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	10/5/2011	8.84	66.77	52,923

Design	Lambrecht 17-2 (wp02)			
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	233.77

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	
1,111.26	16.23	233.77	1,100.46	-67.44	-92.04	2.00	2.00	0.00	233.77	
2,854.42	16.23	233.77	2,774.19	-355.31	-484.92	0.00	0.00	0.00	0.00	
3,781.57	0.00	0.00	3,689.00	-432.38	-590.11	1.75	-1.75	0.00	180.00	
7,781.57	0.00	0.00	7,689.00	-432.38	-590.11	0.00	0.00	0.00	0.00	Lambrecht 17-2 BHL

Anadarko Petroleum Corp

Planning Report

Database:	edmp	Local Co-ordinate Reference:	Well Lambrecht 17-2
Company:	US ROCKIES REGION PLANNING	TVD Reference:	RKB + GL @ 4954.00ft
Project:	COLORADO NORTHERN ZONE - 83	MD Reference:	RKB + GL @ 4954.00ft
Site:	WELD_LAMBRECHT 1-2 PAD	North Reference:	True
Well:	Lambrecht 17-2	Survey Calculation Method:	Minimum Curvature
Wellbore:	Lambrecht 17-2		
Design:	Lambrecht 17-2 (wp02)		

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	233.77	399.98	-1.03	-1.41	1.75	2.00	2.00	0.00
500.00	4.00	233.77	499.84	-4.12	-5.63	6.98	2.00	2.00	0.00
600.00	6.00	233.77	599.45	-9.28	-12.66	15.69	2.00	2.00	0.00
700.00	8.00	233.77	698.70	-16.48	-22.49	27.88	2.00	2.00	0.00
800.00	10.00	233.77	797.47	-25.72	-35.11	43.52	2.00	2.00	0.00
900.00	12.00	233.77	895.62	-37.00	-50.50	62.60	2.00	2.00	0.00
919.82	12.40	233.77	915.00	-39.48	-53.88	66.79	2.00	2.00	0.00
8-5/8"									
1,000.00	14.00	233.77	993.06	-50.29	-68.64	85.10	2.00	2.00	0.00
1,100.00	16.00	233.77	1,089.64	-65.59	-89.52	110.98	2.00	2.00	0.00
1,111.26	16.23	233.77	1,100.46	-67.44	-92.04	114.10	2.00	2.00	0.00
1,200.00	16.23	233.77	1,185.67	-82.09	-112.04	138.90	0.00	0.00	0.00
1,300.00	16.23	233.77	1,281.68	-98.61	-134.58	166.84	0.00	0.00	0.00
1,400.00	16.23	233.77	1,377.70	-115.12	-157.12	194.78	0.00	0.00	0.00
1,500.00	16.23	233.77	1,473.72	-131.64	-179.66	222.72	0.00	0.00	0.00
1,600.00	16.23	233.77	1,569.73	-148.15	-202.20	250.66	0.00	0.00	0.00
1,700.00	16.23	233.77	1,665.75	-164.66	-224.73	278.60	0.00	0.00	0.00
1,800.00	16.23	233.77	1,761.77	-181.18	-247.27	306.54	0.00	0.00	0.00
1,900.00	16.23	233.77	1,857.79	-197.69	-269.81	334.49	0.00	0.00	0.00
2,000.00	16.23	233.77	1,953.80	-214.21	-292.35	362.43	0.00	0.00	0.00
2,100.00	16.23	233.77	2,049.82	-230.72	-314.89	390.37	0.00	0.00	0.00
2,200.00	16.23	233.77	2,145.84	-247.23	-337.43	418.31	0.00	0.00	0.00
2,300.00	16.23	233.77	2,241.85	-263.75	-359.97	446.25	0.00	0.00	0.00
2,400.00	16.23	233.77	2,337.87	-280.26	-382.50	474.19	0.00	0.00	0.00
2,500.00	16.23	233.77	2,433.89	-296.78	-405.04	502.13	0.00	0.00	0.00
2,600.00	16.23	233.77	2,529.91	-313.29	-427.58	530.07	0.00	0.00	0.00
2,700.00	16.23	233.77	2,625.92	-329.81	-450.12	558.01	0.00	0.00	0.00
2,800.00	16.23	233.77	2,721.94	-346.32	-472.66	585.96	0.00	0.00	0.00
2,854.42	16.23	233.77	2,774.19	-355.31	-484.92	601.16	0.00	0.00	0.00
2,900.00	15.43	233.77	2,818.04	-362.65	-494.95	613.59	1.75	-1.75	0.00
3,000.00	13.68	233.77	2,914.83	-377.50	-515.22	638.72	1.75	-1.75	0.00
3,100.00	11.93	233.77	3,012.34	-390.60	-533.09	660.88	1.75	-1.75	0.00
3,200.00	10.18	233.77	3,110.48	-401.93	-548.56	680.05	1.75	-1.75	0.00
3,300.00	8.43	233.77	3,209.17	-411.48	-561.60	696.21	1.75	-1.75	0.00
3,400.00	6.68	233.77	3,308.29	-419.25	-572.20	709.35	1.75	-1.75	0.00
3,500.00	4.93	233.77	3,407.78	-425.23	-580.35	719.46	1.75	-1.75	0.00
3,600.00	3.18	233.77	3,507.52	-429.40	-586.05	726.53	1.75	-1.75	0.00
3,700.00	1.43	233.77	3,607.44	-431.78	-589.29	730.55	1.75	-1.75	0.00
3,781.57	0.00	0.00	3,689.00	-432.38	-590.11	731.56	1.75	-1.75	0.00
3,800.00	0.00	0.00	3,707.43	-432.38	-590.11	731.56	0.00	0.00	0.00
3,900.00	0.00	0.00	3,807.43	-432.38	-590.11	731.56	0.00	0.00	0.00
4,000.00	0.00	0.00	3,907.43	-432.38	-590.11	731.56	0.00	0.00	0.00
4,100.00	0.00	0.00	4,007.43	-432.38	-590.11	731.56	0.00	0.00	0.00
4,131.57	0.00	0.00	4,039.00	-432.38	-590.11	731.56	0.00	0.00	0.00
PK Depth									
4,200.00	0.00	0.00	4,107.43	-432.38	-590.11	731.56	0.00	0.00	0.00
4,300.00	0.00	0.00	4,207.43	-432.38	-590.11	731.56	0.00	0.00	0.00
4,400.00	0.00	0.00	4,307.43	-432.38	-590.11	731.56	0.00	0.00	0.00
4,500.00	0.00	0.00	4,407.43	-432.38	-590.11	731.56	0.00	0.00	0.00
4,591.57	0.00	0.00	4,499.00	-432.38	-590.11	731.56	0.00	0.00	0.00

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Planning Report

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Company:	US ROCKIES REGION PLANNING	TVD Reference:	RKB + GL @ 4954.00ft
Project:	COLORADO NORTHERN ZONE - 83	MD Reference:	RKB + GL @ 4954.00ft
Site:	WELD_LAMBRECHT 1-2 PAD	North Reference:	True
Well:	Lambrecht 17-2	Survey Calculation Method:	Minimum Curvature
Wellbore:	Lambrecht 17-2		
Design:	Lambrecht 17-2 (wp02)		

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)
SX Depth									
4,600.00	0.00	0.00	4,507.43	-432.38	-590.11	731.56	0.00	0.00	0.00
4,700.00	0.00	0.00	4,607.43	-432.38	-590.11	731.56	0.00	0.00	0.00
4,800.00	0.00	0.00	4,707.43	-432.38	-590.11	731.56	0.00	0.00	0.00
4,900.00	0.00	0.00	4,807.43	-432.38	-590.11	731.56	0.00	0.00	0.00
5,000.00	0.00	0.00	4,907.43	-432.38	-590.11	731.56	0.00	0.00	0.00
5,100.00	0.00	0.00	5,007.43	-432.38	-590.11	731.56	0.00	0.00	0.00
5,200.00	0.00	0.00	5,107.43	-432.38	-590.11	731.56	0.00	0.00	0.00
5,300.00	0.00	0.00	5,207.43	-432.38	-590.11	731.56	0.00	0.00	0.00
5,400.00	0.00	0.00	5,307.43	-432.38	-590.11	731.56	0.00	0.00	0.00
5,500.00	0.00	0.00	5,407.43	-432.38	-590.11	731.56	0.00	0.00	0.00
5,600.00	0.00	0.00	5,507.43	-432.38	-590.11	731.56	0.00	0.00	0.00
5,700.00	0.00	0.00	5,607.43	-432.38	-590.11	731.56	0.00	0.00	0.00
5,800.00	0.00	0.00	5,707.43	-432.38	-590.11	731.56	0.00	0.00	0.00
5,900.00	0.00	0.00	5,807.43	-432.38	-590.11	731.56	0.00	0.00	0.00
6,000.00	0.00	0.00	5,907.43	-432.38	-590.11	731.56	0.00	0.00	0.00
6,100.00	0.00	0.00	6,007.43	-432.38	-590.11	731.56	0.00	0.00	0.00
6,200.00	0.00	0.00	6,107.43	-432.38	-590.11	731.56	0.00	0.00	0.00
6,300.00	0.00	0.00	6,207.43	-432.38	-590.11	731.56	0.00	0.00	0.00
6,400.00	0.00	0.00	6,307.43	-432.38	-590.11	731.56	0.00	0.00	0.00
6,500.00	0.00	0.00	6,407.43	-432.38	-590.11	731.56	0.00	0.00	0.00
6,600.00	0.00	0.00	6,507.43	-432.38	-590.11	731.56	0.00	0.00	0.00
6,700.00	0.00	0.00	6,607.43	-432.38	-590.11	731.56	0.00	0.00	0.00
6,800.00	0.00	0.00	6,707.43	-432.38	-590.11	731.56	0.00	0.00	0.00
6,900.00	0.00	0.00	6,807.43	-432.38	-590.11	731.56	0.00	0.00	0.00
7,000.00	0.00	0.00	6,907.43	-432.38	-590.11	731.56	0.00	0.00	0.00
7,100.00	0.00	0.00	7,007.43	-432.38	-590.11	731.56	0.00	0.00	0.00
7,200.00	0.00	0.00	7,107.43	-432.38	-590.11	731.56	0.00	0.00	0.00
7,300.00	0.00	0.00	7,207.43	-432.38	-590.11	731.56	0.00	0.00	0.00
7,311.57	0.00	0.00	7,219.00	-432.38	-590.11	731.56	0.00	0.00	0.00
NIO Depth									
7,400.00	0.00	0.00	7,307.43	-432.38	-590.11	731.56	0.00	0.00	0.00
7,500.00	0.00	0.00	7,407.43	-432.38	-590.11	731.56	0.00	0.00	0.00
7,600.00	0.00	0.00	7,507.43	-432.38	-590.11	731.56	0.00	0.00	0.00
7,621.57	0.00	0.00	7,529.00	-432.38	-590.11	731.56	0.00	0.00	0.00
CD Depth									
7,700.00	0.00	0.00	7,607.43	-432.38	-590.11	731.56	0.00	0.00	0.00
7,709.57	0.00	0.00	7,617.00	-432.38	-590.11	731.56	0.00	0.00	0.00
GH Depth									
7,781.57	0.00	0.00	7,689.00	-432.38	-590.11	731.56	0.00	0.00	0.00
Lambrecht 17-2 BHL									

Design Targets									
Target Name - hit/miss target - Shape	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (usft)	Easting (usft)	Latitude	Longitude
Lambrecht 17-2 BHL - plan hits target center - Point	0.00	0.00	7,689.00	-432.38	-590.11	1,274,324.57	3,181,176.18	40.084596	-104.852488

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Company:	US ROCKIES REGION PLANNING	TVD Reference:	RKB + GL @ 4954.00ft
Project:	COLORADO NORTHERN ZONE - 83	MD Reference:	RKB + GL @ 4954.00ft
Site:	WELD_LAMBRECHT 1-2 PAD	North Reference:	True
Well:	Lambrecht 17-2	Survey Calculation Method:	Minimum Curvature
Wellbore:	Lambrecht 17-2		
Design:	Lambrecht 17-2 (wp02)		

Casing Points					
Measured Depth (ft)	Vertical Depth (ft)	Name	Casing Diameter (")	Hole Diameter (")	
919.82	915.00	8-5/8"	8-5/8	11	

Formations						
Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)	
4,131.57	4,039.00	PK Depth				
4,591.57	4,499.00	SX Depth				
7,311.57	7,219.00	NIO Depth				
7,621.57	7,529.00	CD Depth				
7,709.57	7,617.00	GH Depth				