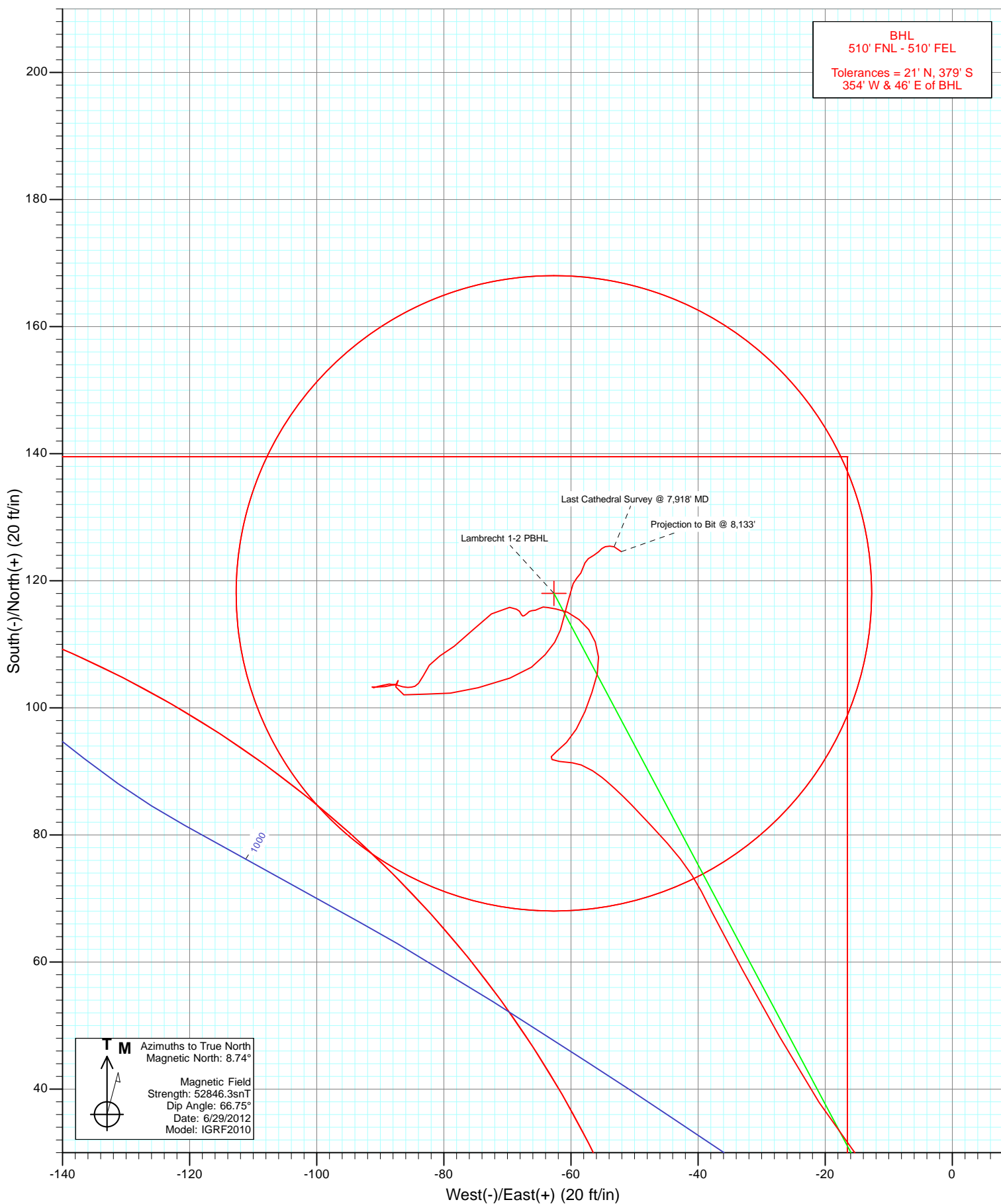


Azimuths to True North
Magnetic North: 8.74°

Magnetic Field
Strength: 52846.3snT
Dip Angle: 66.75°
Date: 6/29/2012
Model: IGRF2010

DD Lambrecht 1-2 125421: 177355; DN WELL @ 4954.0ft (Xtreme 11) GL @ 4939.0 North American Datum 1983 Well Lambrecht 1-2, True North							
Type	Target	Azimuth	Origin	Type	N/S	E/W	From TVD
Target	Lambrecht 1-2 PBHL	332.03	Slot		0.0	0.0	0.0
Lambrecht 1-2 LB		TVDP		+N/-S		+E/-W	
Lambrecht 1-2 PBHL		-8109.0		-60.5		-216.5	
		8109.0		118.0		-62.7	
					Latitude		Longitude
					40.085647		-104.851195
					40.086137		-104.850645



Cathedral Energy Services

Survey Report

Company:	Anadarko Petroleum Corporation	Local Co-ordinate Reference:	Well Lambrecht 1-2
Project:	DJ Wattenberg	TVD Reference:	WELL @ 4954.0ft (Xtreme 11)
Site:	S2-T1N-R67W (Lambrecht)	MD Reference:	WELL @ 4954.0ft (Xtreme 11)
Well:	Lambrecht 1-2	North Reference:	True
Wellbore:	DD	Survey Calculation Method:	Minimum Curvature
Design:	DD	Database:	USA EDM 5000 Multi Users DB

Project	DJ Wattenberg		
Map System:	US State Plane 1983	System Datum:	Mean Sea Level
Geo Datum:	North American Datum 1983		
Map Zone:	Colorado Northern Zone		

Site		S2-T1N-R67W (Lambrecht)			
Site Position:		Northing:	1,274,774.66 ft	Latitude:	40.085813
From:	Lat/Long	Easting:	3,181,757.64 ft	Longitude:	-104.850421
Position Uncertainty:	0.0 ft	Slot Radius:	13.200 in	Grid Convergence:	0.42 °

Well	Lambrecht 1-2					
Well Position	+N/-S	0.0 ft	Northing:	1,274,774.65 ft	Latitude:	40.085813
	+E/-W	0.0 ft	Easting:	3,181,757.64 ft	Longitude:	-104.850421
Position Uncertainty		0.0 ft	Wellhead Elevation:	ft	Ground Level:	4,939.0 ft

Wellbore	DD				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	6/29/2012	8.74	66.75	52,846

Design	DD				
Audit Notes:					
Version:	1.0	Phase:	ACTUAL	Tie On Depth:	0.0
Vertical Section:	Depth From (TVD)	+N/-S	+E/-W	Direction	
	(ft)	(ft)	(ft)	(°)	
	0.0	0.0	0.0	332.03	

Survey Program	Date	7/5/2012			
From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description	
109.0	8,133.0	Survey #1 (DD)	MWD	Geolink MWD	

Survey										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Formations / Comments	
0.0	0.00	0.00	0.0	0.0	0.0	0.0	0.00	0.00		
109.0	1.40	339.60	109.0	1.2	-0.5	1.3	1.28	1.28		
194.0	2.00	339.90	194.0	3.6	-1.3	3.8	0.71	0.71		
282.0	3.80	345.00	281.8	7.9	-2.6	8.2	2.06	2.05		
370.0	4.60	338.30	369.6	14.0	-4.7	14.5	1.06	0.91		
462.0	5.70	324.30	461.2	21.1	-8.7	22.7	1.81	1.20		
552.0	6.70	322.00	550.7	28.9	-14.5	32.3	1.14	1.11		
643.0	7.30	327.30	641.0	37.9	-20.9	43.3	0.97	0.66		
734.0	8.00	330.50	731.2	48.3	-27.2	55.4	0.90	0.77		
824.0	7.30	331.40	820.4	58.8	-33.0	67.4	0.79	-0.78		
910.0	6.50	333.10	905.8	67.9	-37.8	77.7	0.96	-0.93		
942.0	6.50	332.50	937.6	71.1	-39.5	81.3	0.21	0.00		
1,019.0	7.50	317.90	1,014.0	78.7	-44.9	90.6	2.64	1.30		

Cathedral Energy Services

Survey Report

Company:	Anadarko Petroleum Corporation	Local Co-ordinate Reference:	Well Lambrecht 1-2
Project:	DJ Wattenberg	TVD Reference:	WELL @ 4954.0ft (Xtreme 11)
Site:	S2-T1N-R67W (Lambrecht)	MD Reference:	WELL @ 4954.0ft (Xtreme 11)
Well:	Lambrecht 1-2	North Reference:	True
Wellbore:	DD	Survey Calculation Method:	Minimum Curvature
Design:	DD	Database:	USA EDM 5000 Multi Users DB

Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Formations / Comments
1,110.0	5.10	314.90	1,104.5	86.0	-51.7	100.2	2.66	-2.64	
1,201.0	3.00	301.90	1,195.2	90.1	-56.6	106.1	2.50	-2.31	
1,291.0	1.50	270.40	1,285.2	91.4	-59.8	108.7	2.10	-1.67	
1,382.0	1.10	283.20	1,376.1	91.6	-61.8	109.9	0.54	-0.44	
1,473.0	0.40	289.80	1,467.1	91.9	-63.0	110.7	0.77	-0.77	
1,564.0	0.50	25.10	1,558.1	92.3	-63.1	111.1	0.73	0.11	
1,655.0	1.10	54.90	1,649.1	93.2	-62.2	111.5	0.78	0.66	
1,745.0	1.50	42.90	1,739.1	94.6	-60.7	112.0	0.54	0.44	
1,836.0	1.80	31.50	1,830.1	96.7	-59.1	113.1	0.49	0.33	
1,927.0	2.10	21.50	1,921.0	99.4	-57.8	114.9	0.50	0.33	
2,017.0	2.00	18.20	2,010.9	102.4	-56.7	117.1	0.17	-0.11	
2,108.0	1.80	14.20	2,101.9	105.3	-55.8	119.2	0.26	-0.22	
2,199.0	1.60	353.30	2,192.9	108.0	-55.6	121.5	0.71	-0.22	
2,290.0	1.50	341.20	2,283.8	110.4	-56.2	123.8	0.38	-0.11	
2,381.0	1.30	322.80	2,374.8	112.3	-57.2	126.0	0.54	-0.22	
2,471.0	1.50	309.90	2,464.8	113.9	-58.7	128.1	0.41	0.22	
2,562.0	1.30	293.70	2,555.7	115.1	-60.6	130.0	0.49	-0.22	
2,653.0	1.10	274.90	2,646.7	115.6	-62.4	131.3	0.48	-0.22	
2,744.0	0.50	293.50	2,737.7	115.8	-63.6	132.1	0.71	-0.66	
2,835.0	0.50	258.50	2,828.7	115.9	-64.4	132.5	0.33	0.00	
2,925.0	0.40	237.30	2,918.7	115.6	-65.0	132.6	0.21	-0.11	
3,016.0	0.40	254.00	3,009.7	115.4	-65.6	132.7	0.13	0.00	
3,107.0	0.30	275.70	3,100.7	115.3	-66.1	132.9	0.18	-0.11	
3,197.0	0.30	229.60	3,190.7	115.2	-66.5	132.9	0.26	0.00	
3,288.0	0.40	227.10	3,281.7	114.8	-67.0	132.8	0.11	0.11	
3,379.0	0.20	246.80	3,372.7	114.5	-67.3	132.7	0.24	-0.22	
3,470.0	0.10	265.20	3,463.7	114.5	-67.6	132.8	0.12	-0.11	
3,561.0	0.30	325.60	3,554.7	114.6	-67.8	133.0	0.29	0.22	
3,652.0	0.50	334.30	3,645.7	115.2	-68.1	133.7	0.23	0.22	
3,742.0	1.80	281.40	3,735.7	115.8	-69.6	135.0	1.72	1.44	
3,833.0	2.50	228.20	3,826.6	114.8	-72.5	135.4	2.22	0.77	
3,924.0	2.70	230.00	3,917.5	112.1	-75.6	134.5	0.24	0.22	
4,014.0	1.90	226.40	4,007.5	109.7	-78.3	133.6	0.90	-0.89	
4,105.0	1.60	248.60	4,098.4	108.2	-80.6	133.4	0.81	-0.33	
4,196.0	1.40	205.30	4,189.4	106.7	-82.3	132.9	1.23	-0.22	
4,287.0	1.10	214.10	4,280.4	105.0	-83.2	131.8	0.39	-0.33	
4,378.0	0.60	211.10	4,371.4	103.9	-84.0	131.1	0.55	-0.55	
4,469.0	0.40	262.10	4,462.4	103.4	-84.5	131.0	0.51	-0.22	
4,559.0	0.30	244.60	4,552.3	103.3	-85.1	131.1	0.16	-0.11	
4,650.0	0.50	278.70	4,643.3	103.2	-85.7	131.4	0.33	0.22	
4,741.0	0.50	275.70	4,734.3	103.3	-86.5	131.8	0.03	0.00	
4,832.0	0.70	293.90	4,825.3	103.6	-87.4	132.5	0.30	0.22	
4,923.0	0.90	264.80	4,916.3	103.8	-88.6	133.2	0.49	0.22	
5,013.0	1.20	253.60	5,006.3	103.4	-90.2	133.6	0.40	0.33	
5,104.0	0.10	58.40	5,097.3	103.2	-91.0	133.8	1.43	-1.21	
5,195.0	0.40	278.70	5,188.3	103.3	-91.3	134.0	0.53	0.33	
5,286.0	0.70	98.70	5,279.3	103.3	-91.0	133.9	1.21	0.33	
5,377.0	1.60	82.00	5,370.3	103.3	-89.2	133.1	1.05	0.99	
5,467.0	0.70	66.40	5,460.3	103.7	-87.5	132.7	1.05	-1.00	
5,558.0	0.50	329.50	5,551.3	104.3	-87.2	133.0	1.00	-0.22	
5,649.0	1.70	187.20	5,642.3	103.3	-87.6	132.3	2.33	1.32	
5,740.0	1.80	86.80	5,733.2	102.0	-86.3	130.6	2.96	0.11	
5,830.0	2.80	88.90	5,823.2	102.2	-82.7	129.0	1.11	1.11	

Cathedral Energy Services

Survey Report

Company:	Anadarko Petroleum Corporation	Local Co-ordinate Reference:	Well Lambrecht 1-2
Project:	DJ Wattenberg	TVD Reference:	WELL @ 4954.0ft (Xtreme 11)
Site:	S2-T1N-R67W (Lambrecht)	MD Reference:	WELL @ 4954.0ft (Xtreme 11)
Well:	Lambrecht 1-2	North Reference:	True
Wellbore:	DD	Survey Calculation Method:	Minimum Curvature
Design:	DD	Database:	USA EDM 5000 Multi Users DB

Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Formations / Comments
5,921.0	1.90	85.30	5,914.1	102.3	-79.0	127.4	1.00	-0.99	
6,012.0	3.70	76.00	6,005.0	103.2	-74.6	126.1	2.03	1.98	
6,103.0	2.90	69.60	6,095.8	104.7	-69.6	125.1	0.97	-0.88	
6,193.0	2.00	53.40	6,185.7	106.4	-66.2	125.0	1.25	-1.00	
6,284.0	1.70	41.10	6,276.7	108.4	-64.0	125.8	0.55	-0.33	
6,375.0	1.40	32.60	6,367.7	110.3	-62.6	126.8	0.41	-0.33	
6,466.0	1.30	17.40	6,458.6	112.3	-61.7	128.1	0.41	-0.11	
6,556.0	1.20	13.10	6,548.6	114.1	-61.1	129.5	0.15	-0.11	
6,647.0	1.00	14.60	6,639.6	115.8	-60.7	130.8	0.22	-0.22	
6,738.0	0.90	16.40	6,730.6	117.3	-60.3	131.9	0.11	-0.11	
6,829.0	0.70	16.40	6,821.6	118.5	-60.0	132.8	0.22	-0.22	
6,920.0	0.70	17.40	6,912.6	119.6	-59.6	133.6	0.01	0.00	
7,010.0	0.70	50.90	7,002.6	120.4	-59.0	134.1	0.45	0.00	
7,101.0	0.60	23.30	7,093.5	121.2	-58.4	134.5	0.36	-0.11	
7,247.0	0.50	19.70	7,239.5	122.5	-57.9	135.4	0.07	-0.07	
7,283.0	0.50	24.30	7,275.5	122.8	-57.8	135.6	0.11	0.00	
7,374.0	0.60	50.10	7,366.5	123.5	-57.3	135.9	0.29	0.11	
7,464.0	0.70	64.50	7,456.5	124.0	-56.4	136.0	0.21	0.11	
7,555.0	0.50	43.60	7,547.5	124.6	-55.6	136.1	0.32	-0.22	
7,646.0	0.40	44.50	7,638.5	125.1	-55.1	136.3	0.11	-0.11	
7,737.0	0.40	78.60	7,729.5	125.4	-54.6	136.3	0.26	0.00	
7,828.0	0.50	85.60	7,820.5	125.5	-53.9	136.1	0.13	0.11	
7,918.0	0.40	115.40	7,910.5	125.4	-53.2	135.7	0.28	-0.11	Last Cathedral Survey @ 7,918' MD
8,133.0	0.34	133.61	8,125.5	124.6	-52.1	134.5	0.06	-0.03	Projection to Bit @ 8,133'

Targets

Target Name - hit/miss target - Shape	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (ft)	Easting (ft)	Latitude	Longitude
Lambrecht 1-2 PBHL - survey misses target center by 12.4ft at 8116.5ft MD (8109.0 TVD, 124.7 N, -52.1 E) - Circle (radius 50.0)	0.00	0.00	8,109.0	118.0	-62.7	1,274,892.22	3,181,694.10	40.086137	-104.850645
Lambrecht 1-2 LB - survey misses target center by 8112.1ft at 0.0ft MD (0.0 TVD, 0.0 N, 0.0 E) - Rectangle (sides W400.0 H400.0 D0.0)	0.00	0.00	-8,109.0	-60.5	-216.5	1,274,712.59	3,181,541.59	40.085647	-104.851195

Survey Annotations

Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates +N/-S (ft)	+E/-W (ft)	Comment
7,918.0	7,910.5	125.4	-53.2	Last Cathedral Survey @ 7,918' MD
8,133.0	8,125.5	124.6	-52.1	Projection to Bit @ 8,133'

Checked By: _____ Approved By: _____ Date: _____