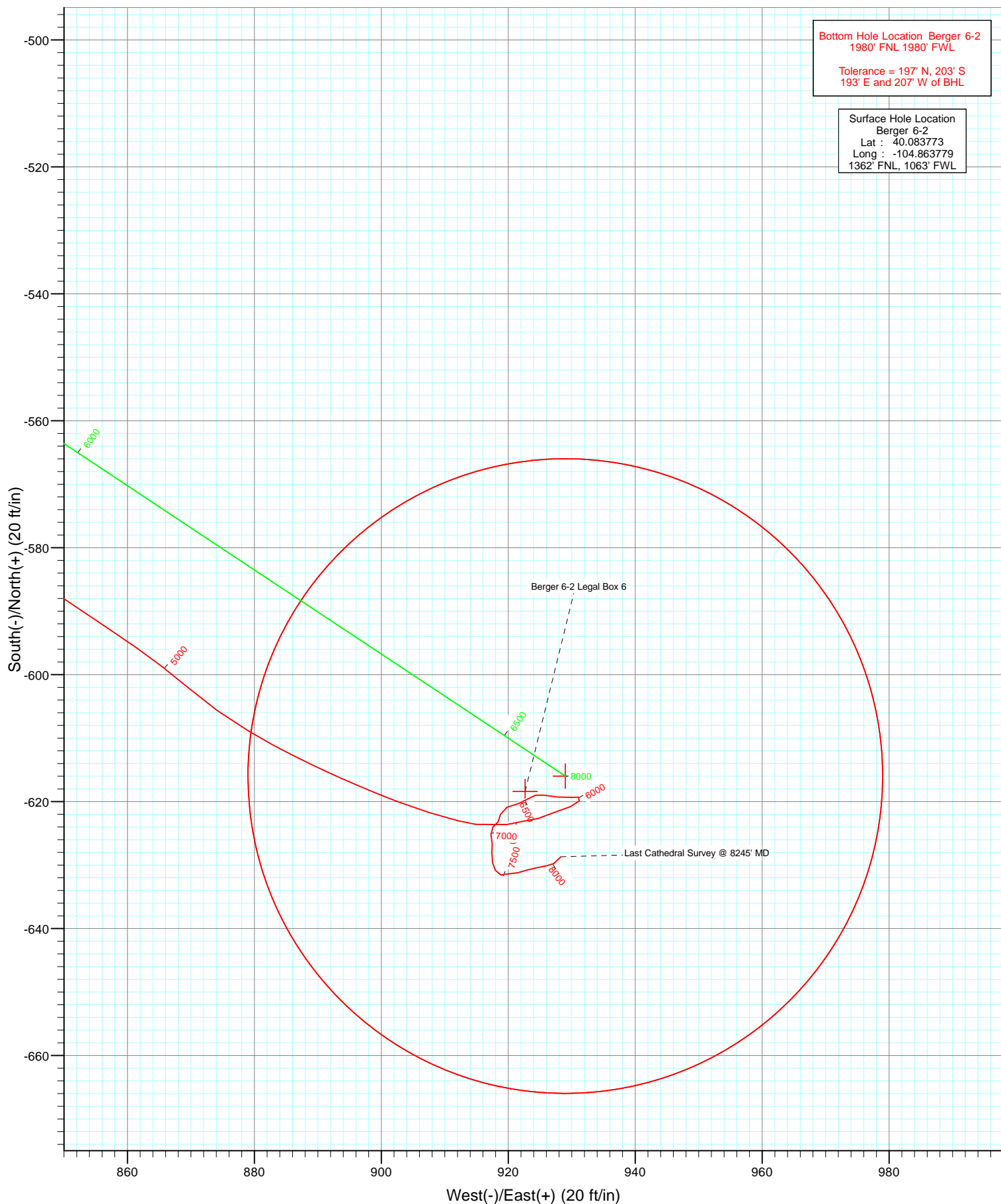


Type	Target	Azimuth	Origin	N/S	E/W	From TVD
User	No Target (Freehand)	123.33	Slot	0.0	0.0	0.0
Name	TVD	+N/-S	+E/-W	Latitude	Longitude	
Berger 6-2 Legal Box 6	-8147.0	-618.4	922.7	40.082075	-104.860482	
Berger 6-2 BHL	8147.0	-616.0	929.0	40.082082	-104.860459	



Cathedral Energy Services

Survey Report

Company:	Anadarko Petroleum Corporation	Local Co-ordinate Reference:	Well Berger 6-2
Project:	DJ Wattenberg	TVD Reference:	15' KB @ 4977.0ft (Original Well Elev)
Site:	S2 T1N R67W (Berger 8 Pad)	MD Reference:	15' KB @ 4977.0ft (Original Well Elev)
Well:	Berger 6-2	North Reference:	True
Wellbore:	DD	Survey Calculation Method:	Minimum Curvature
Design:	Final	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 (Berger 8 Pad)			
Site Position:		Northing:	1,274,043.57 ft	Latitude:	40.083880
From:	Lat/Long	Easting:	3,178,047.58 ft	Longitude:	-104.863699
Position Uncertainty:	0.0 ft	Slot Radius:	13.200 in	Grid Convergence:	0.41 °

Well	Berger 6-2					
Well Position	+N/-S	0.0 ft	Northing:	1,274,004.45 ft	Latitude:	40.083773
	+E/-W	0.0 ft	Easting:	3,178,025.48 ft	Longitude:	-104.863779
Position Uncertainty		0.0 ft	Wellhead Elevation:	ft	Ground Level:	4,962.0 ft

Wellbore	DD				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	5/21/2012	8.76	66.75	52,855

Design	Final				
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	123.33	

Survey Program	Date	6/8/2012			
From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description	
85.0	8,245.0	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	Berger 6-2 Legal Box 6
85.0	1.10	195.50	85.0	-0.8	-0.2	0.2	1.29	1.29	
173.0	1.20	169.20	173.0	-2.5	-0.3	1.2	0.60	0.11	
262.0	4.30	137.50	261.9	-5.9	2.2	5.0	3.75	3.48	
349.0	6.30	121.60	348.5	-10.8	8.4	13.0	2.83	2.30	
442.0	8.70	123.50	440.7	-17.3	18.6	25.1	2.59	2.58	
533.0	10.00	121.30	530.5	-25.2	31.1	39.9	1.48	1.43	
623.0	12.60	121.30	618.7	-34.4	46.2	57.5	2.89	2.89	
714.0	13.40	119.90	707.4	-44.8	63.8	78.0	0.94	0.88	
805.0	13.20	119.30	796.0	-55.2	82.0	98.8	0.27	-0.22	
887.0	13.00	121.10	875.8	-64.5	98.1	117.4	0.55	-0.24	
970.0	13.00	122.10	956.7	-74.3	114.0	136.1	0.27	0.00	
1,061.0	12.90	130.00	1,045.4	-86.3	130.4	156.4	1.95	-0.11	

Cathedral Energy Services

Survey Report

Company:	Anadarko Petroleum Corporation	Local Co-ordinate Reference:	Well Berger 6-2
Project:	DJ Wattenberg	TVD Reference:	15' KB @ 4977.0ft (Original Well Elev)
Site:	S2 T1N R67W (Berger 8 Pad)	MD Reference:	15' KB @ 4977.0ft (Original Well Elev)
Well:	Berger 6-2	North Reference:	True
Wellbore:	DD	Survey Calculation Method:	Minimum Curvature
Design:	Final	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
1,151.0	14.00	130.60	1,132.9	-99.8	146.4	177.2	1.23	1.22	
1,242.0	13.00	129.40	1,221.4	-113.5	162.7	198.3	1.14	-1.10	
1,333.0	14.70	127.00	1,309.8	-126.9	179.8	220.0	1.97	1.87	
1,424.0	14.20	126.50	1,397.9	-140.5	198.0	242.6	0.57	-0.55	
1,515.0	13.80	125.70	1,486.2	-153.5	215.8	264.6	0.49	-0.44	
1,605.0	14.00	125.20	1,573.5	-166.0	233.4	286.2	0.26	0.22	
1,696.0	13.00	124.90	1,662.0	-178.2	250.8	307.5	1.10	-1.10	
1,787.0	13.30	125.70	1,750.6	-190.2	267.7	328.1	0.39	0.33	
1,878.0	12.40	125.60	1,839.4	-202.0	284.1	348.4	0.99	-0.99	
1,968.0	13.40	122.60	1,927.1	-213.2	300.8	368.5	1.34	1.11	
2,059.0	12.40	125.10	2,015.8	-224.5	317.6	388.8	1.26	-1.10	
2,150.0	14.20	122.70	2,104.3	-236.2	335.0	409.7	2.07	1.98	
2,241.0	13.20	119.20	2,192.8	-247.3	353.5	431.2	1.43	-1.10	
2,331.0	13.10	125.70	2,280.4	-258.2	370.7	451.7	1.65	-0.11	
2,422.0	14.40	123.40	2,368.8	-270.5	388.6	473.3	1.55	1.43	
2,513.0	13.50	120.30	2,457.1	-282.1	407.2	495.2	1.29	-0.99	
2,604.0	11.80	118.30	2,545.9	-291.8	424.6	515.1	1.93	-1.87	
2,694.0	12.50	121.60	2,633.9	-301.3	441.0	534.0	1.10	0.78	
2,785.0	13.70	127.20	2,722.5	-313.0	457.9	554.6	1.92	1.32	
2,876.0	11.80	132.50	2,811.3	-325.8	473.4	574.5	2.45	-2.09	
2,967.0	14.20	129.40	2,899.9	-339.2	488.9	594.8	2.75	2.64	
3,057.0	13.00	132.40	2,987.4	-353.0	504.9	615.8	1.55	-1.33	
3,148.0	14.00	125.30	3,075.9	-366.3	521.4	636.9	2.13	1.10	
3,239.0	12.90	121.30	3,164.4	-377.9	539.1	658.0	1.58	-1.21	
3,330.0	13.60	116.30	3,253.0	-387.9	557.3	678.8	1.47	0.77	
3,421.0	11.40	120.60	3,341.8	-397.2	574.7	698.4	2.62	-2.42	
3,511.0	12.10	125.80	3,429.9	-407.3	590.0	716.7	1.41	0.78	
3,602.0	12.60	123.50	3,518.8	-418.3	606.0	736.2	0.77	0.55	
3,693.0	13.60	119.10	3,607.5	-429.0	623.6	756.8	1.55	1.10	
3,784.0	11.60	122.30	3,696.3	-439.1	640.7	776.6	2.33	-2.20	
3,874.0	12.50	115.20	3,784.3	-448.1	657.2	795.3	1.92	1.00	
3,965.0	13.30	115.00	3,873.0	-456.7	675.6	815.4	0.88	0.88	
4,056.0	12.70	119.90	3,961.7	-466.1	693.7	835.7	1.38	-0.66	
4,147.0	11.70	128.30	4,050.6	-476.8	709.6	854.9	2.24	-1.10	
4,237.0	11.30	129.50	4,138.8	-488.1	723.6	872.8	0.52	-0.44	
4,328.0	13.00	131.80	4,227.8	-500.6	738.1	891.8	1.94	1.87	
4,419.0	12.30	133.70	4,316.6	-514.1	752.8	911.4	0.89	-0.77	
4,510.0	10.20	138.70	4,405.8	-526.9	765.1	928.7	2.54	-2.31	
4,600.0	10.20	133.40	4,494.4	-538.3	776.1	944.3	1.04	0.00	
4,691.0	10.50	124.20	4,583.9	-548.5	788.8	960.5	1.84	0.33	
4,782.0	12.80	125.90	4,673.0	-559.1	803.9	978.8	2.56	2.53	
4,873.0	15.00	118.90	4,761.4	-570.7	822.3	1,000.7	3.04	2.42	
4,963.0	13.10	124.10	4,848.7	-582.0	841.0	1,022.5	2.53	-2.11	
5,054.0	11.00	123.40	4,937.7	-592.6	856.8	1,041.5	2.31	-2.31	
5,145.0	8.40	130.30	5,027.4	-601.7	869.1	1,056.8	3.12	-2.86	
5,235.0	7.50	120.80	5,116.5	-608.9	879.2	1,069.1	1.77	-1.00	
5,326.0	9.40	114.80	5,206.5	-615.1	891.0	1,082.4	2.30	2.09	
5,416.0	6.70	110.40	5,295.6	-620.0	902.6	1,094.8	3.07	-3.00	
5,507.0	5.80	104.30	5,386.1	-623.0	912.0	1,104.3	1.23	-0.99	
5,598.0	4.10	80.80	5,476.7	-623.6	919.7	1,111.1	2.87	-1.87	
5,689.0	2.40	76.20	5,567.6	-622.6	924.8	1,114.8	1.89	-1.87	
5,779.0	1.80	60.30	5,657.5	-621.5	927.8	1,116.7	0.92	-0.67	
5,870.0	0.90	91.00	5,748.5	-620.8	929.8	1,118.0	1.24	-0.99	

Cathedral Energy Services

Survey Report

Company:	Anadarko Petroleum Corporation	Local Co-ordinate Reference:	Well Berger 6-2
Project:	DJ Wattenberg	TVD Reference:	15' KB @ 4977.0ft (Original Well Elev)
Site:	S2 T1N R67W (Berger 8 Pad)	MD Reference:	15' KB @ 4977.0ft (Original Well Elev)
Well:	Berger 6-2	North Reference:	True
Wellbore:	DD	Survey Calculation Method:	Minimum Curvature
Design:	Final	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
6,052.0	0.60	359.00	5,930.5	-619.9	931.2	1,118.6	0.60	-0.16	
6,143.0	0.20	305.00	6,021.5	-619.3	931.1	1,118.2	0.56	-0.44	
6,233.0	1.10	261.60	6,111.5	-619.3	930.1	1,117.4	1.07	1.00	
6,324.0	1.80	277.50	6,202.5	-619.3	927.8	1,115.5	0.88	0.77	
6,415.0	1.00	278.80	6,293.4	-619.0	925.6	1,113.4	0.88	-0.88	
6,505.0	0.70	253.90	6,383.4	-619.0	924.3	1,112.4	0.52	-0.33	
6,596.0	1.00	239.10	6,474.4	-619.6	923.1	1,111.7	0.41	0.33	
6,687.0	1.00	248.40	6,565.4	-620.3	921.6	1,110.9	0.18	0.00	
6,777.0	1.50	252.80	6,655.4	-620.9	919.8	1,109.7	0.57	0.56	
6,868.0	1.00	173.40	6,746.4	-622.0	918.7	1,109.4	1.80	-0.55	
6,959.0	0.70	230.90	6,837.3	-623.2	918.4	1,109.8	0.94	-0.33	
7,050.0	0.80	218.80	6,928.3	-624.0	917.6	1,109.5	0.21	0.11	
7,140.0	0.90	173.70	7,018.3	-625.2	917.3	1,109.9	0.73	0.11	
7,231.0	0.90	169.70	7,109.3	-626.6	917.5	1,110.9	0.07	0.00	
7,321.0	1.00	192.00	7,199.3	-628.1	917.4	1,111.6	0.42	0.11	
7,412.0	1.00	161.30	7,290.3	-629.6	917.5	1,112.6	0.58	0.00	
7,503.0	0.60	155.80	7,381.3	-630.8	918.0	1,113.6	0.45	-0.44	
7,593.0	0.90	115.70	7,471.3	-631.5	918.8	1,114.7	0.65	0.33	
7,775.0	1.10	56.00	7,653.3	-631.2	921.5	1,116.8	0.56	0.11	
7,866.0	0.90	95.10	7,744.2	-630.8	923.0	1,117.7	0.76	-0.22	
7,957.0	1.10	63.40	7,835.2	-630.4	924.5	1,118.8	0.64	0.22	
8,047.0	1.00	94.30	7,925.2	-630.1	926.0	1,119.9	0.63	-0.11	
8,138.0	0.70	42.20	8,016.2	-629.8	927.2	1,120.7	0.87	-0.33	
8,229.0	0.90	47.30	8,107.2	-628.9	928.1	1,121.0	0.23	0.22	
8,245.0	1.00	47.30	8,123.2	-628.7	928.3	1,121.0	0.62	0.62	Last Cathedral Survey @ 8245' MD - Berger 6-2

Targets									
Target Name	- hit/miss target	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (ft)	Easting (ft)	
- Shape									Latitude Longitude
Berger 6-2 BHL		0.00	0.41	8,147.0	-616.0	929.0	1,273,395.16	3,178,958.87	40.082082 -104.860459
- actual wellpath misses target center by 27.0ft at 8245.0ft MD (8123.2 TVD, -628.7 N, 928.3 E)									
- Circle (radius 50.0)									
Berger 6-2 Legal Box 6		0.00	0.00	-8,147.0	-618.4	922.7	1,273,392.69	3,178,952.55	40.082075 -104.860482
- actual wellpath misses target center by 8222.4ft at 0.0ft MD (0.0 TVD, 0.0 N, 0.0 E)									
- Rectangle (sides W400.0 H400.0 D0.0)									

Design Annotations					
Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates			
		+N/-S (ft)	+E/-W (ft)	Comment	
8,245.0	8,123.2	-628.7	928.3	Last Cathedral Survey @ 8245' MD	

Checked By: _____ Approved By: _____ Date: _____