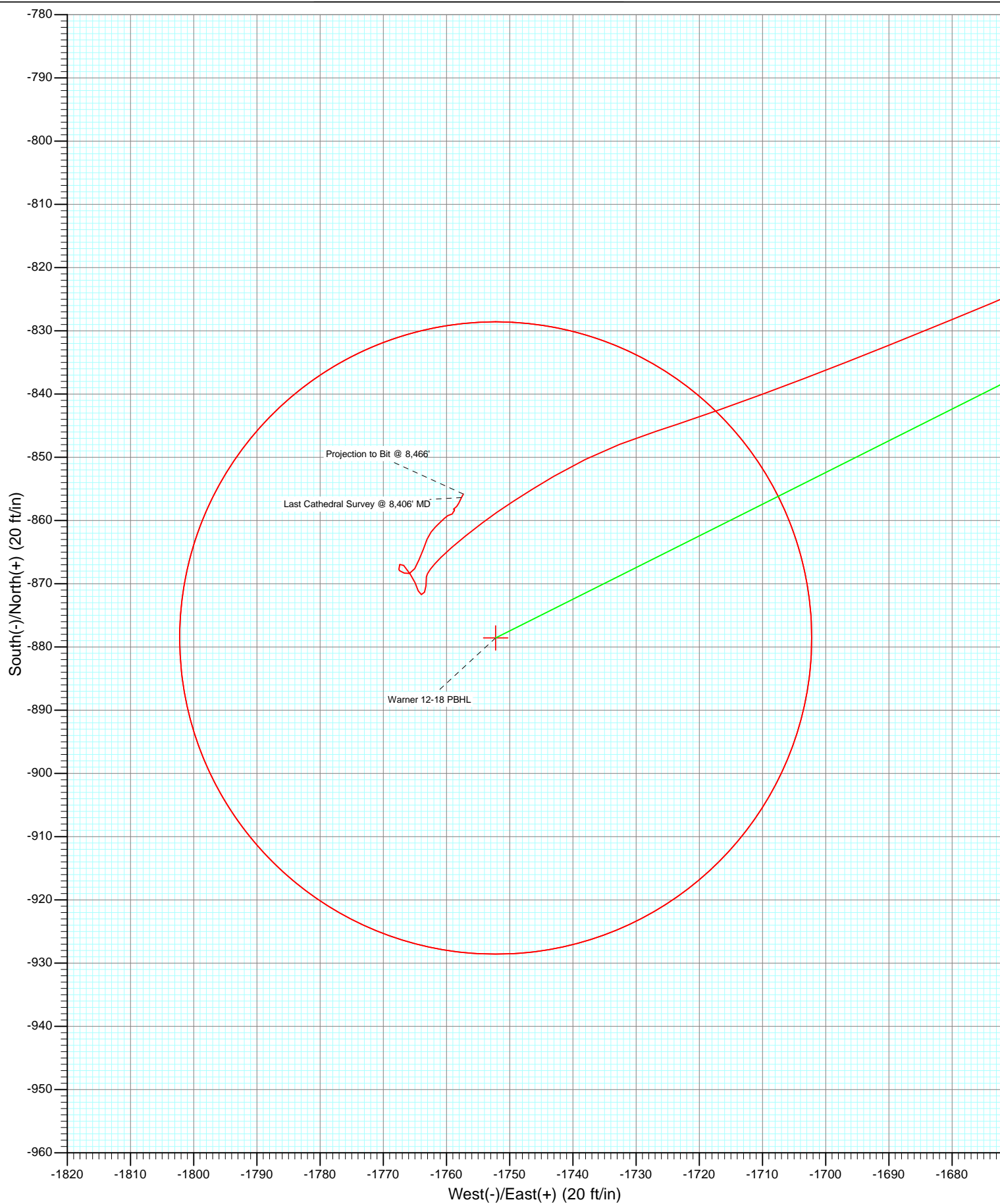


DD Warner 12-18 115519/121655; LR WELL @ 4999.0ft (Xtreme 14) North American Datum 1983 Well Warner 12-18, True North		Azimuth 243.37		Origin Type Slot	N/S 0.0	E/W 0.0	From TVD 0.0
Type Target	Target Warner 12-18 PBHL	TV	DD				
Name	Warner 12-18 400'x400' Legal Box	-7969.0	+N/-S	+E/-W	Latitude	Longitude	
	Warner 12-18 PBHL	7969.0	-906.6	-1718.8	40.136691	-104.713682	
			-878.6	-1752.2	40.136768	-104.713801	



# Cathedral Energy Services

## Survey Report

<b>Company:</b>	Anadarko Petroleum Corporation	<b>Local Co-ordinate Reference:</b>	Well Warner 12-18
<b>Project:</b>	DJ Wattenberg	<b>TVD Reference:</b>	WELL @ 4999.0ft (Xtreme 14)
<b>Site:</b>	SENW Sec18-T2N-R65W (Warner 25-18)	<b>MD Reference:</b>	WELL @ 4999.0ft (Xtreme 14)
<b>Well:</b>	Warner 12-18	<b>North Reference:</b>	True
<b>Wellbore:</b>	DD	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	DD	<b>Database:</b>	USA EDM 5000 Multi Users DB

<b>Project</b>	DJ Wattenberg		
<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		SENW Sec18-T2N-R65W (Warner 25-18)			
Site Position:		Northing:	1,294,539.44 ft	Latitude:	40.139180
From:	Lat/Long	Easting:	3,221,562.60 ft	Longitude:	-104.707534
Position Uncertainty:	0.0 ft	Slot Radius:	13.200 in	Grid Convergence:	0.51 °

Well	Warner 12-18					
Well Position	+N/-S	0.0 ft	Northing:	1,294,539.45 ft	Latitude:	40.139180
	+E/-W	0.0 ft	Easting:	3,221,562.60 ft	Longitude:	-104.707534
Position Uncertainty		0.0 ft	Wellhead Elevation:	ft	Ground Level:	4,984.0 ft

<b>Wellbore</b>	DD				
<b>Magnetics</b>	<b>Model Name</b>	<b>Sample Date</b>	<b>Declination (°)</b>	<b>Dip Angle (°)</b>	<b>Field Strength (nT)</b>
	IGRF2010	11/2/2011	8.76	66.84	52,959

<b>Design</b>	DD				
<b>Audit Notes:</b>					
<b>Version:</b>	1.0	<b>Phase:</b>	ACTUAL	<b>Tie On Depth:</b>	0.0
<b>Vertical Section:</b>	<b>Depth From (TVD)</b>	<b>+N/-S</b>	<b>+E/-W</b>	<b>Direction</b>	
	(ft)	(ft)	(ft)	(°)	
	0.0	0.0	0.0	243.37	

<b>Survey Program</b>	<b>Date</b>	11/20/2011			
<b>From (ft)</b>	<b>To (ft)</b>	<b>Survey (Wellbore)</b>	<b>Tool Name</b>	<b>Description</b>	
119.0	8,466.0	Survey #1 (DD)	MWD	Geolink MWD	

<b>Survey</b>										
<b>Measured Depth (ft)</b>	<b>Inclination (°)</b>	<b>Azimuth (°)</b>	<b>Vertical Depth (ft)</b>	<b>+N/-S (ft)</b>	<b>+E/-W (ft)</b>	<b>Vertical Section (ft)</b>	<b>Dogleg Rate (°/100ft)</b>	<b>Build Rate (°/100ft)</b>	<b>Formations / Comments</b>	
0.0	0.00	0.00	0.0	0.0	0.0	0.0	0.00	0.00		
119.0	0.40	329.40	119.0	0.4	-0.2	0.0	0.34	0.34		
213.0	1.70	276.70	213.0	0.8	-1.8	1.2	1.59	1.38		
306.0	2.70	262.30	305.9	0.7	-5.3	4.4	1.22	1.08		
414.0	4.10	252.80	413.7	-0.8	-11.5	10.7	1.39	1.30		
502.0	5.70	252.70	501.4	-3.0	-18.7	18.1	1.82	1.82		
590.0	8.00	247.10	588.8	-6.7	-28.5	28.5	2.72	2.61		
680.0	9.70	235.60	677.7	-13.4	-40.5	42.3	2.72	1.89		
770.0	11.40	232.80	766.2	-23.1	-53.9	58.5	1.97	1.89		
858.0	13.80	229.20	852.0	-35.2	-68.8	77.2	2.87	2.73		
881.0	13.40	229.60	874.4	-38.7	-72.9	82.5	1.79	-1.74		
947.0	13.20	228.90	938.6	-48.7	-84.4	97.2	0.39	-0.30		
1,036.0	14.70	228.70	1,025.0	-62.8	-100.5	118.0	1.69	1.69		

# Cathedral Energy Services

## Survey Report

<b>Company:</b>	Anadarko Petroleum Corporation	<b>Local Co-ordinate Reference:</b>	Well Warner 12-18
<b>Project:</b>	DJ Wattenberg	<b>TVD Reference:</b>	WELL @ 4999.0ft (Xtreme 14)
<b>Site:</b>	SENW Sec18-T2N-R65W (Warner 25-18)	<b>MD Reference:</b>	WELL @ 4999.0ft (Xtreme 14)
<b>Well:</b>	Warner 12-18	<b>North Reference:</b>	True
<b>Wellbore:</b>	DD	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	DD	<b>Database:</b>	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
1,124.0	17.10	231.30	1,109.6	-78.3	-119.0	141.4	2.84	2.73	
1,213.0	19.40	233.00	1,194.2	-95.3	-141.0	168.8	2.65	2.58	
1,303.0	21.90	233.30	1,278.4	-114.4	-166.4	200.0	2.78	2.78	
1,393.0	23.10	237.00	1,361.5	-134.0	-194.7	234.1	2.06	1.33	
1,480.0	24.70	241.40	1,441.1	-152.0	-225.0	269.2	2.75	1.84	
1,570.0	27.30	242.00	1,521.9	-170.7	-259.7	308.7	2.90	2.89	
1,660.0	29.40	244.70	1,601.1	-189.8	-297.9	351.4	2.73	2.33	
1,749.0	31.60	246.10	1,677.8	-208.6	-339.0	396.5	2.60	2.47	
1,838.0	33.90	245.30	1,752.7	-228.4	-382.8	444.6	2.63	2.58	
1,927.0	34.20	244.00	1,826.4	-249.8	-427.9	494.4	0.88	0.34	
2,016.0	34.40	244.60	1,899.9	-271.5	-473.1	544.6	0.44	0.22	
2,105.0	34.10	245.40	1,973.5	-292.7	-518.5	594.7	0.61	-0.34	
2,193.0	34.30	244.60	2,046.3	-313.6	-563.3	644.1	0.56	0.23	
2,279.0	33.70	244.90	2,117.6	-334.1	-606.8	692.2	0.72	-0.70	
2,369.0	33.10	246.20	2,192.7	-354.6	-651.9	741.7	1.04	-0.67	
2,457.0	33.10	245.70	2,266.4	-374.2	-695.8	789.7	0.31	0.00	
2,547.0	33.00	245.60	2,341.9	-394.4	-740.5	838.7	0.13	-0.11	
2,635.0	33.00	244.70	2,415.7	-414.6	-784.0	886.6	0.56	0.00	
2,723.0	34.50	246.90	2,488.9	-434.6	-828.6	935.5	2.20	1.70	
2,811.0	35.10	246.40	2,561.1	-454.5	-874.7	985.6	0.75	0.68	
2,900.0	33.40	246.60	2,634.7	-474.5	-920.6	1,035.6	1.91	-1.91	
2,989.0	33.00	245.30	2,709.2	-494.3	-965.1	1,084.3	0.92	-0.45	
3,077.0	33.20	241.80	2,782.9	-515.7	-1,008.1	1,132.3	2.18	0.23	
3,163.0	32.40	243.70	2,855.2	-537.1	-1,049.5	1,178.9	1.52	-0.93	
3,251.0	33.00	244.30	2,929.2	-557.9	-1,092.2	1,226.5	0.77	0.68	
3,341.0	32.50	245.50	3,004.9	-578.6	-1,136.3	1,275.1	0.91	-0.56	
3,440.0	33.00	243.60	3,088.2	-601.6	-1,184.7	1,328.7	1.15	0.51	
3,518.0	31.40	243.30	3,154.2	-620.2	-1,221.9	1,370.2	2.06	-2.05	
3,606.0	31.00	243.70	3,229.5	-640.5	-1,262.7	1,415.8	0.51	-0.45	
3,694.0	30.40	243.70	3,305.1	-660.4	-1,302.9	1,460.7	0.68	-0.68	
3,782.0	29.10	246.30	3,381.5	-678.9	-1,342.5	1,504.4	2.08	-1.48	
3,869.0	26.80	244.70	3,458.4	-695.8	-1,379.6	1,545.1	2.78	-2.64	
3,955.0	25.60	244.00	3,535.5	-712.2	-1,413.8	1,583.1	1.44	-1.40	
4,044.0	26.40	245.70	3,615.5	-728.8	-1,449.2	1,622.1	1.23	0.90	
4,131.0	26.60	246.20	3,693.4	-744.6	-1,484.6	1,660.9	0.34	0.23	
4,219.0	23.90	246.30	3,773.0	-759.7	-1,519.0	1,698.3	3.07	-3.07	
4,308.0	21.60	248.00	3,855.0	-773.1	-1,550.7	1,732.7	2.69	-2.58	
4,398.0	20.90	247.40	3,938.9	-785.5	-1,580.8	1,765.2	0.81	-0.78	
4,487.0	19.40	247.00	4,022.5	-797.3	-1,609.1	1,795.8	1.69	-1.69	
4,575.0	18.70	245.90	4,105.7	-808.8	-1,635.4	1,824.5	0.89	-0.80	
4,665.0	18.10	246.30	4,191.1	-820.3	-1,661.4	1,852.9	0.68	-0.67	
4,753.0	16.70	248.10	4,275.0	-830.5	-1,685.7	1,879.1	1.70	-1.59	
4,842.0	14.20	249.30	4,360.8	-839.2	-1,707.7	1,902.7	2.83	-2.81	
4,930.0	12.30	252.10	4,446.5	-845.9	-1,726.8	1,922.7	2.28	-2.16	
5,020.0	10.60	239.60	4,534.7	-853.0	-1,743.0	1,940.5	3.33	-1.89	
5,109.0	6.90	232.80	4,622.6	-860.4	-1,754.3	1,953.9	4.31	-4.16	
5,199.0	4.00	225.40	4,712.2	-865.9	-1,760.9	1,962.2	3.31	-3.22	
5,288.0	1.10	184.50	4,801.1	-868.9	-1,763.2	1,965.6	3.65	-3.26	
5,378.0	0.70	180.60	4,891.1	-870.3	-1,763.2	1,966.3	0.45	-0.44	
5,466.0	0.70	204.40	4,979.1	-871.3	-1,763.5	1,966.9	0.33	0.00	
5,554.0	0.40	290.40	5,067.1	-871.7	-1,764.0	1,967.6	0.89	-0.34	
5,642.0	0.70	337.00	5,155.1	-871.1	-1,764.5	1,967.7	0.59	0.34	
5,731.0	1.00	340.30	5,244.1	-869.9	-1,764.9	1,967.6	0.34	0.34	

# Cathedral Energy Services

## Survey Report

<b>Company:</b>	Anadarko Petroleum Corporation	<b>Local Co-ordinate Reference:</b>	Well Warner 12-18
<b>Project:</b>	DJ Wattenberg	<b>TVD Reference:</b>	WELL @ 4999.0ft (Xtreme 14)
<b>Site:</b>	SENW Sec18-T2N-R65W (Warner 25-18)	<b>MD Reference:</b>	WELL @ 4999.0ft (Xtreme 14)
<b>Well:</b>	Warner 12-18	<b>North Reference:</b>	True
<b>Wellbore:</b>	DD	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	DD	<b>Database:</b>	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
5,818.0	1.10	323.10	5,331.1	-868.5	-1,765.7	1,967.7	0.38	0.11	
5,906.0	1.20	323.20	5,419.1	-867.1	-1,766.8	1,968.0	0.11	0.11	
5,996.0	0.80	185.20	5,509.0	-867.0	-1,767.4	1,968.5	2.08	-0.44	
6,084.0	0.20	204.30	5,597.0	-867.7	-1,767.5	1,968.9	0.70	-0.68	
6,172.0	0.20	118.00	5,685.0	-867.9	-1,767.4	1,969.0	0.31	0.00	
6,261.0	0.20	124.80	5,774.0	-868.1	-1,767.2	1,968.8	0.03	0.00	
6,351.0	0.50	110.40	5,864.0	-868.3	-1,766.7	1,968.5	0.34	0.33	
6,439.0	0.60	80.70	5,952.0	-868.4	-1,765.9	1,967.8	0.34	0.11	
6,528.0	1.00	28.80	6,041.0	-867.6	-1,765.0	1,966.7	0.88	0.45	
6,618.0	1.00	23.10	6,131.0	-866.2	-1,764.3	1,965.4	0.11	0.00	
6,707.0	1.30	21.50	6,220.0	-864.5	-1,763.7	1,964.1	0.34	0.34	
6,795.0	0.90	19.50	6,308.0	-863.0	-1,763.1	1,962.8	0.46	-0.45	
6,884.0	0.80	40.00	6,397.0	-861.8	-1,762.4	1,961.8	0.36	-0.11	
6,972.0	0.60	41.60	6,485.0	-861.0	-1,761.7	1,960.8	0.23	-0.23	
7,061.0	0.70	48.60	6,574.0	-860.3	-1,761.0	1,959.8	0.14	0.11	
7,149.0	0.50	44.60	6,662.0	-859.7	-1,760.3	1,958.9	0.23	-0.23	
7,239.0	0.40	59.10	6,752.0	-859.2	-1,759.8	1,958.2	0.17	-0.11	
7,326.0	0.30	82.80	6,838.9	-859.0	-1,759.3	1,957.7	0.20	-0.11	
7,414.0	0.10	21.90	6,926.9	-858.9	-1,759.0	1,957.5	0.30	-0.23	
7,503.0	0.00	98.80	7,015.9	-858.9	-1,759.0	1,957.4	0.11	-0.11	
7,681.0	0.10	17.50	7,193.9	-858.7	-1,759.0	1,957.3	0.06	0.06	
7,769.0	0.30	42.30	7,281.9	-858.5	-1,758.8	1,957.0	0.24	0.23	
7,859.0	0.10	278.80	7,371.9	-858.3	-1,758.7	1,956.9	0.41	-0.22	
7,948.0	0.10	304.10	7,460.9	-858.2	-1,758.9	1,957.0	0.05	0.00	
8,038.0	0.10	61.40	7,550.9	-858.2	-1,758.9	1,956.9	0.19	0.00	
8,126.0	0.20	48.90	7,638.9	-858.0	-1,758.7	1,956.7	0.12	0.11	
8,214.0	0.30	48.90	7,726.9	-857.8	-1,758.4	1,956.3	0.11	0.11	
8,301.0	0.50	24.50	7,813.9	-857.3	-1,758.0	1,955.8	0.30	0.23	
8,406.0	0.60	27.30	7,918.9	-856.4	-1,757.6	1,955.0	0.10	0.10	Last Cathedral Survey @ 8,406' MD
8,466.0	0.60	27.30	7,978.9	-855.8	-1,757.3	1,954.5	0.00	0.00	Projection to Bit @ 8,466'

# Cathedral Energy Services

## Survey Report

<b>Company:</b>	Anadarko Petroleum Corporation	<b>Local Co-ordinate Reference:</b>	Well Warner 12-18
<b>Project:</b>	DJ Wattenberg	<b>TVD Reference:</b>	WELL @ 4999.0ft (Xtreme 14)
<b>Site:</b>	SENW Sec18-T2N-R65W (Warner 25-18)	<b>MD Reference:</b>	WELL @ 4999.0ft (Xtreme 14)
<b>Well:</b>	Warner 12-18	<b>North Reference:</b>	True
<b>Wellbore:</b>	DD	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	DD	<b>Database:</b>	USA EDM 5000 Multi Users DB

Targets									
Target Name	Dip Angle	Dip Dir.	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
- hit/miss target	(°)	(°)	(ft)	(ft)	(ft)	(ft)	(ft)		
- Shape									
Warner 12-18 400'x400'	0.00	0.00	-7,969.0	-906.6	-1,718.8	1,293,617.48	3,219,851.93	40.136691	-104.713682
- actual wellpath misses target center by 8202.5ft at 0.0ft MD (0.0 TVD, 0.0 N, 0.0 E)									
- Rectangle (sides W400.0 H400.0 D0.0)									
Warner 12-18 PBHL	0.00	0.00	7,969.0	-878.6	-1,752.2	1,293,645.25	3,219,818.31	40.136768	-104.713801
- actual wellpath misses target center by 23.3ft at 8455.9ft MD (7968.8 TVD, -855.9 N, -1757.4 E)									
- Circle (radius 50.0)									

Design Annotations					
Measured Depth	Vertical Depth	Local Coordinates			
(ft)	(ft)	+N/-S	+E/-W		
		(ft)	(ft)	Comment	
8,406.0	7,918.9	-856.4	-1,757.6	Last Cathedral Survey @ 8,406' MD	
8,466.0	7,978.9	-855.8	-1,757.3	Projection to Bit @ 8,466'	

Checked By: \_\_\_\_\_ Approved By: \_\_\_\_\_ Date: \_\_\_\_\_