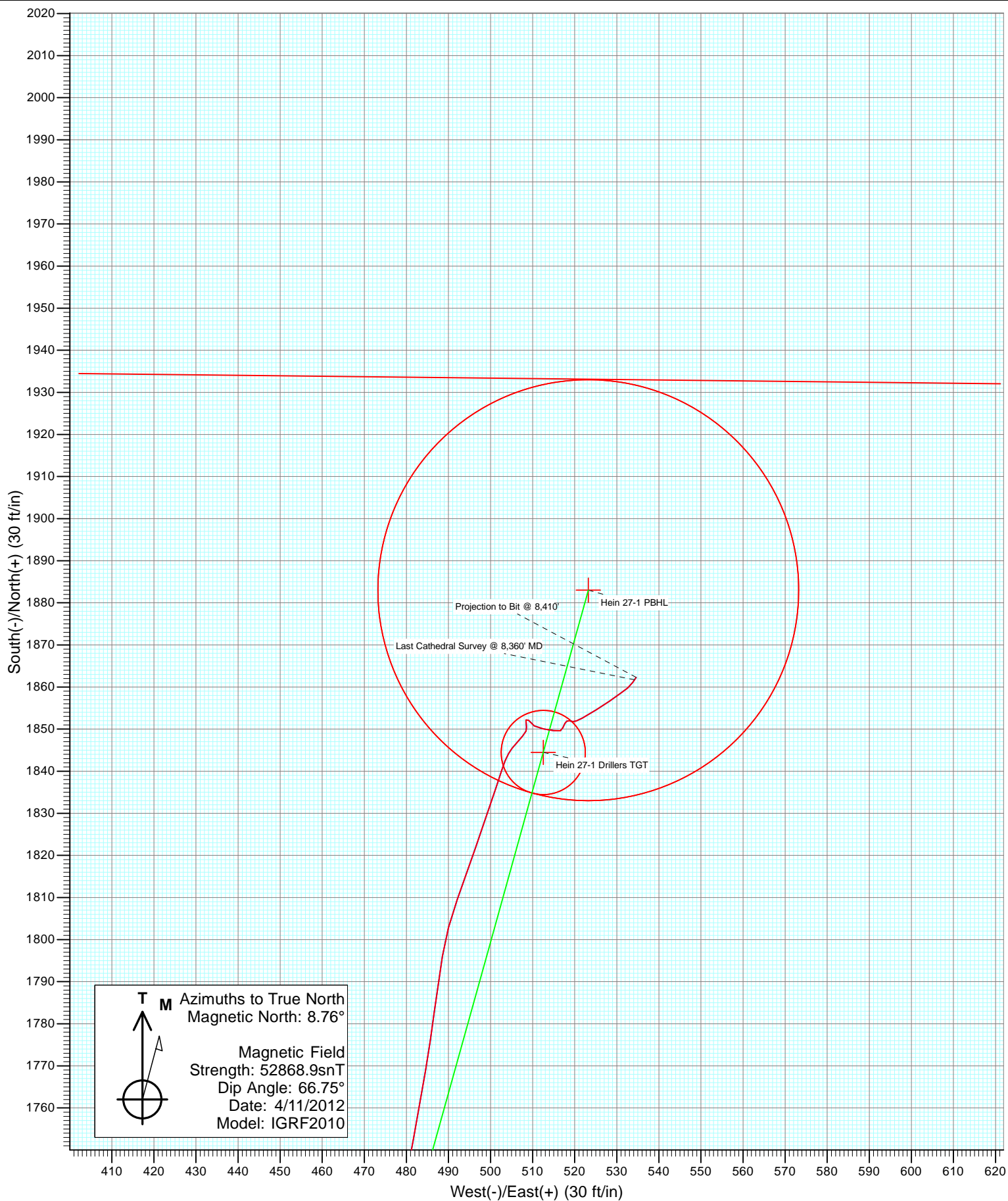


Azimuths to True North  
Magnetic North: 8.76°

Magnetic Field  
Strength: 52868.9snT  
Dip Angle: 66.75°  
Date: 4/11/2012  
Model: IGRF2010

| DD<br>Hein 27-1<br>125259; 155355; DN<br>KB=15' @ 4908.0ft (Xtreme 11)<br>North American Datum 1983<br>Well Hein 27-1, True North |                          |                  |                     |            |            |                 |  |
|-----------------------------------------------------------------------------------------------------------------------------------|--------------------------|------------------|---------------------|------------|------------|-----------------|--|
| Type<br>Target                                                                                                                    | Target<br>Hein 27-1 PBHL | Azimuth<br>15.53 | Origin Type<br>Slot | N/S<br>0.0 | E/W<br>0.0 | From TVD<br>0.0 |  |
| Name                                                                                                                              | TVD                      | +N/-S            | +E/-W               | Latitude   |            | Longitude       |  |
| Hein 27-1 Drillers TGT                                                                                                            | 6666.0                   | 1844.4           | 512.5               | 40.087168  |            | -104.834793     |  |
| Hein 27-1 PBHL                                                                                                                    | 8066.0                   | 1883.0           | 523.2               | 40.087274  |            | -104.834755     |  |



# Cathedral Energy Services

## Survey Report

|                  |                                |                                     |                               |
|------------------|--------------------------------|-------------------------------------|-------------------------------|
| <b>Company:</b>  | Anadarko Petroleum Corporation | <b>Local Co-ordinate Reference:</b> | Well Hein 27-1                |
| <b>Project:</b>  | DJ Wattenberg                  | <b>TVD Reference:</b>               | KB=15' @ 4908.0ft (Xtreme 11) |
| <b>Site:</b>     | SWNE Sec1-T1N-R67W (Hein 2-1)  | <b>MD Reference:</b>                | KB=15' @ 4908.0ft (Xtreme 11) |
| <b>Well:</b>     | Hein 27-1                      | <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                  |          | SWNE Sec1-T1N-R67W (Hein 2-1) |                 |                   |             |
|-----------------------|----------|-------------------------------|-----------------|-------------------|-------------|
| Site Position:        |          | Northing:                     | 1,273,436.50 ft | Latitude:         | 40.082061   |
| From:                 | Lat/Long | Easting:                      | 3,185,627.90 ft | Longitude:        | -104.836625 |
| Position Uncertainty: | 0.0 ft   | Slot Radius:                  | 13.200 in       | Grid Convergence: | 0.43 °      |

|                      |           |        |                     |                 |               |             |
|----------------------|-----------|--------|---------------------|-----------------|---------------|-------------|
| Well                 | Hein 27-1 |        |                     |                 |               |             |
| Well Position        | +N/-S     | 0.0 ft | Northing:           | 1,273,452.49 ft | Latitude:     | 40.082105   |
|                      | +E/-W     | 0.0 ft | Easting:            | 3,185,627.78 ft | Longitude:    | -104.836625 |
| Position Uncertainty |           | 0.0 ft | Wellhead Elevation: | ft              | Ground Level: | 4,893.0 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          | 4/11/2012          | 8.76                   | 66.75                | 52,869                     |

|                          |                         |                   |                   |                      |     |
|--------------------------|-------------------------|-------------------|-------------------|----------------------|-----|
| <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 (ft)</b> | <b>+E/-W (ft)</b> | <b>Direction (°)</b> |     |
|                          | 0.0                     | 0.0               | 0.0               | 15.53                |     |

|                       |                |                          |                  |                    |  |
|-----------------------|----------------|--------------------------|------------------|--------------------|--|
| <b>Survey Program</b> | <b>Date</b>    | 4/19/2012                |                  |                    |  |
| <b>From (ft)</b>      | <b>To (ft)</b> | <b>Survey (Wellbore)</b> | <b>Tool Name</b> | <b>Description</b> |  |
| 91.0                  | 8,410.0        | 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                        |                              |  |
| 91.0                       | 0.70                   | 29.40              | 91.0                       | 0.5               | 0.3               | 0.5                          | 0.77                         | 0.77                        |                              |  |
| 180.0                      | 1.80                   | 20.30              | 180.0                      | 2.3               | 1.0               | 2.5                          | 1.25                         | 1.24                        |                              |  |
| 239.0                      | 2.00                   | 20.40              | 238.9                      | 4.1               | 1.7               | 4.4                          | 0.34                         | 0.34                        |                              |  |
| 326.0                      | 2.90                   | 17.90              | 325.9                      | 7.6               | 2.9               | 8.1                          | 1.04                         | 1.03                        |                              |  |
| 386.0                      | 3.30                   | 18.50              | 385.8                      | 10.7              | 3.9               | 11.4                         | 0.67                         | 0.67                        |                              |  |
| 477.0                      | 4.70                   | 17.60              | 476.6                      | 16.7              | 5.9               | 17.7                         | 1.54                         | 1.54                        |                              |  |
| 567.0                      | 6.10                   | 13.20              | 566.1                      | 24.9              | 8.1               | 26.2                         | 1.62                         | 1.56                        |                              |  |
| 658.0                      | 8.20                   | 11.90              | 656.4                      | 36.0              | 10.5              | 37.5                         | 2.31                         | 2.31                        |                              |  |
| 749.0                      | 9.60                   | 16.10              | 746.3                      | 49.6              | 14.0              | 51.5                         | 1.70                         | 1.54                        |                              |  |
| 840.0                      | 11.00                  | 16.00              | 835.9                      | 65.2              | 18.5              | 67.8                         | 1.54                         | 1.54                        |                              |  |
| 880.0                      | 11.60                  | 15.40              | 875.1                      | 72.8              | 20.6              | 75.6                         | 1.53                         | 1.50                        |                              |  |
| 964.0                      | 12.00                  | 16.80              | 957.3                      | 89.3              | 25.4              | 92.8                         | 0.59                         | 0.48                        |                              |  |

# Cathedral Energy Services

## Survey Report

|                  |                                |                                     |                               |
|------------------|--------------------------------|-------------------------------------|-------------------------------|
| <b>Company:</b>  | Anadarko Petroleum Corporation | <b>Local Co-ordinate Reference:</b> | Well Hein 27-1                |
| <b>Project:</b>  | DJ Wattenberg                  | <b>TVD Reference:</b>               | KB=15' @ 4908.0ft (Xtreme 11) |
| <b>Site:</b>     | SWNE Sec1-T1N-R67W (Hein 2-1)  | <b>MD Reference:</b>                | KB=15' @ 4908.0ft (Xtreme 11) |
| <b>Well:</b>     | Hein 27-1                      | <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 |
| 1,056.0             | 13.80           | 12.20       | 1,047.0             | 109.2      | 30.4       | 113.3                 | 2.25                  | 1.96                 |                       |
| 1,146.0             | 15.30           | 14.30       | 1,134.1             | 131.2      | 35.6       | 135.9                 | 1.77                  | 1.67                 |                       |
| 1,237.0             | 17.90           | 15.60       | 1,221.3             | 156.3      | 42.4       | 161.9                 | 2.89                  | 2.86                 |                       |
| 1,328.0             | 20.00           | 15.80       | 1,307.4             | 184.7      | 50.4       | 191.5                 | 2.31                  | 2.31                 |                       |
| 1,419.0             | 23.30           | 14.60       | 1,391.9             | 217.1      | 59.1       | 225.0                 | 3.66                  | 3.63                 |                       |
| 1,509.0             | 23.60           | 15.60       | 1,474.5             | 251.7      | 68.5       | 260.9                 | 0.55                  | 0.33                 |                       |
| 1,600.0             | 23.00           | 17.40       | 1,558.1             | 286.2      | 78.7       | 296.8                 | 1.02                  | -0.66                |                       |
| 1,691.0             | 22.20           | 16.50       | 1,642.1             | 319.7      | 88.9       | 331.8                 | 0.96                  | -0.88                |                       |
| 1,782.0             | 21.70           | 16.20       | 1,726.5             | 352.3      | 98.5       | 365.8                 | 0.56                  | -0.55                |                       |
| 1,873.0             | 21.00           | 14.60       | 1,811.3             | 384.2      | 107.3      | 398.9                 | 1.00                  | -0.77                |                       |
| 1,964.0             | 21.00           | 13.80       | 1,896.2             | 415.9      | 115.3      | 431.5                 | 0.32                  | 0.00                 |                       |
| 2,055.0             | 21.90           | 13.70       | 1,980.9             | 448.2      | 123.2      | 464.8                 | 0.99                  | 0.99                 |                       |
| 2,145.0             | 22.20           | 16.50       | 2,064.3             | 480.8      | 132.0      | 498.6                 | 1.21                  | 0.33                 |                       |
| 2,236.0             | 22.70           | 16.10       | 2,148.4             | 514.1      | 141.7      | 533.3                 | 0.57                  | 0.55                 |                       |
| 2,327.0             | 22.80           | 16.80       | 2,232.4             | 547.9      | 151.7      | 568.5                 | 0.32                  | 0.11                 |                       |
| 2,418.0             | 23.40           | 14.70       | 2,316.1             | 582.3      | 161.4      | 604.2                 | 1.12                  | 0.66                 |                       |
| 2,508.0             | 24.40           | 14.20       | 2,398.3             | 617.6      | 170.5      | 640.7                 | 1.13                  | 1.11                 |                       |
| 2,599.0             | 22.40           | 12.40       | 2,481.9             | 652.7      | 178.8      | 676.8                 | 2.33                  | -2.20                |                       |
| 2,690.0             | 22.00           | 9.90        | 2,566.1             | 686.4      | 185.5      | 711.0                 | 1.13                  | -0.44                |                       |
| 2,781.0             | 22.10           | 10.40       | 2,650.5             | 720.1      | 191.5      | 745.1                 | 0.23                  | 0.11                 |                       |
| 2,872.0             | 22.20           | 12.70       | 2,734.7             | 753.7      | 198.4      | 779.3                 | 0.96                  | 0.11                 |                       |
| 2,963.0             | 21.80           | 16.40       | 2,819.1             | 786.7      | 206.9      | 813.3                 | 1.59                  | -0.44                |                       |
| 3,053.0             | 22.20           | 16.80       | 2,902.6             | 819.0      | 216.5      | 847.1                 | 0.47                  | 0.44                 |                       |
| 3,144.0             | 22.00           | 19.40       | 2,986.9             | 851.5      | 227.2      | 881.2                 | 1.10                  | -0.22                |                       |
| 3,235.0             | 21.70           | 18.10       | 3,071.3             | 883.6      | 238.1      | 915.1                 | 0.63                  | -0.33                |                       |
| 3,325.0             | 20.80           | 16.40       | 3,155.2             | 914.7      | 247.7      | 947.7                 | 1.21                  | -1.00                |                       |
| 3,416.0             | 20.60           | 15.50       | 3,240.3             | 945.7      | 256.6      | 979.8                 | 0.41                  | -0.22                |                       |
| 3,507.0             | 20.40           | 15.50       | 3,325.6             | 976.4      | 265.1      | 1,011.7               | 0.22                  | -0.22                |                       |
| 3,597.0             | 21.40           | 12.70       | 3,409.7             | 1,007.5    | 272.9      | 1,043.8               | 1.57                  | 1.11                 |                       |
| 3,688.0             | 22.40           | 13.20       | 3,494.1             | 1,040.6    | 280.5      | 1,077.7               | 1.12                  | 1.10                 |                       |
| 3,779.0             | 23.70           | 14.60       | 3,577.8             | 1,075.2    | 289.1      | 1,113.3               | 1.55                  | 1.43                 |                       |
| 3,869.0             | 25.00           | 19.10       | 3,659.8             | 1,110.6    | 299.9      | 1,150.4               | 2.52                  | 1.44                 |                       |
| 3,960.0             | 25.40           | 18.20       | 3,742.2             | 1,147.3    | 312.3      | 1,189.1               | 0.61                  | 0.44                 |                       |
| 4,051.0             | 24.60           | 15.60       | 3,824.6             | 1,184.1    | 323.4      | 1,227.5               | 1.49                  | -0.88                |                       |
| 4,142.0             | 23.80           | 15.00       | 3,907.6             | 1,220.1    | 333.3      | 1,264.8               | 0.92                  | -0.88                |                       |
| 4,232.0             | 24.30           | 13.70       | 3,989.8             | 1,255.6    | 342.4      | 1,301.5               | 0.81                  | 0.56                 |                       |
| 4,323.0             | 24.70           | 16.10       | 4,072.6             | 1,292.1    | 352.1      | 1,339.2               | 1.18                  | 0.44                 |                       |
| 4,414.0             | 25.00           | 17.70       | 4,155.2             | 1,328.7    | 363.2      | 1,377.4               | 0.81                  | 0.33                 |                       |
| 4,504.0             | 22.90           | 16.10       | 4,237.5             | 1,363.6    | 373.8      | 1,413.9               | 2.44                  | -2.33                |                       |
| 4,595.0             | 20.50           | 15.50       | 4,322.0             | 1,396.0    | 383.0      | 1,447.6               | 2.65                  | -2.64                |                       |
| 4,686.0             | 17.70           | 13.30       | 4,408.0             | 1,424.8    | 390.5      | 1,477.3               | 3.18                  | -3.08                |                       |
| 4,777.0             | 17.00           | 13.90       | 4,494.9             | 1,451.2    | 396.8      | 1,504.5               | 0.79                  | -0.77                |                       |
| 4,867.0             | 16.20           | 15.90       | 4,581.1             | 1,476.1    | 403.4      | 1,530.2               | 1.09                  | -0.89                |                       |
| 4,958.0             | 16.60           | 23.30       | 4,668.4             | 1,500.2    | 412.1      | 1,555.8               | 2.34                  | 0.44                 |                       |
| 5,049.0             | 18.10           | 21.70       | 4,755.3             | 1,525.3    | 422.4      | 1,582.7               | 1.73                  | 1.65                 |                       |
| 5,140.0             | 17.90           | 18.80       | 4,841.8             | 1,551.6    | 432.2      | 1,610.7               | 1.01                  | -0.22                |                       |
| 5,230.0             | 18.30           | 13.10       | 4,927.4             | 1,578.5    | 439.8      | 1,638.6               | 2.02                  | 0.44                 |                       |
| 5,321.0             | 18.60           | 12.70       | 5,013.7             | 1,606.6    | 446.2      | 1,667.4               | 0.36                  | 0.33                 |                       |
| 5,409.0             | 17.90           | 14.60       | 5,097.3             | 1,633.4    | 452.7      | 1,694.9               | 1.04                  | -0.80                |                       |
| 5,500.0             | 16.80           | 16.00       | 5,184.1             | 1,659.5    | 459.9      | 1,722.1               | 1.29                  | -1.21                |                       |
| 5,591.0             | 16.80           | 13.60       | 5,271.2             | 1,685.0    | 466.6      | 1,748.4               | 0.76                  | 0.00                 |                       |
| 5,682.0             | 16.40           | 13.50       | 5,358.4             | 1,710.2    | 472.7      | 1,774.4               | 0.44                  | -0.44                |                       |
| 5,773.0             | 13.80           | 11.70       | 5,446.3             | 1,733.4    | 477.9      | 1,798.0               | 2.90                  | -2.86                |                       |

# Cathedral Energy Services

## Survey Report

|                  |                                |                                     |                               |
|------------------|--------------------------------|-------------------------------------|-------------------------------|
| <b>Company:</b>  | Anadarko Petroleum Corporation | <b>Local Co-ordinate Reference:</b> | Well Hein 27-1                |
| <b>Project:</b>  | DJ Wattenberg                  | <b>TVD Reference:</b>               | KB=15' @ 4908.0ft (Xtreme 11) |
| <b>Site:</b>     | SWNE Sec1-T1N-R67W (Hein 2-1)  | <b>MD Reference:</b>                | KB=15' @ 4908.0ft (Xtreme 11) |
| <b>Well:</b>     | Hein 27-1                      | <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             |
|---------------------|-----------------|-------------|---------------------|------------|------------|-----------------------|-----------------------|----------------------|-----------------------------------|
| 5,863.0             | 11.30           | 10.30       | 5,534.1             | 1,752.5    | 481.7      | 1,817.5               | 2.80                  | -2.78                |                                   |
| 5,954.0             | 9.60            | 9.60        | 5,623.6             | 1,768.8    | 484.5      | 1,833.9               | 1.87                  | -1.87                |                                   |
| 6,045.0             | 8.20            | 7.10        | 5,713.5             | 1,782.7    | 486.6      | 1,847.9               | 1.60                  | -1.54                |                                   |
| 6,136.0             | 8.80            | 9.60        | 5,803.5             | 1,796.0    | 488.5      | 1,861.3               | 0.77                  | 0.66                 |                                   |
| 6,226.0             | 9.00            | 19.70       | 5,892.5             | 1,809.4    | 492.1      | 1,875.1               | 1.75                  | 0.22                 |                                   |
| 6,317.0             | 7.40            | 18.90       | 5,982.5             | 1,821.7    | 496.4      | 1,888.1               | 1.76                  | -1.76                |                                   |
| 6,408.0             | 6.10            | 19.00       | 6,072.9             | 1,831.8    | 499.8      | 1,898.8               | 1.43                  | -1.43                |                                   |
| 6,499.0             | 5.00            | 17.70       | 6,163.5             | 1,840.2    | 502.6      | 1,907.5               | 1.22                  | -1.21                |                                   |
| 6,589.0             | 2.60            | 39.70       | 6,253.3             | 1,845.5    | 505.1      | 1,913.3               | 3.07                  | -2.67                |                                   |
| 6,680.0             | 2.20            | 42.30       | 6,344.2             | 1,848.3    | 507.6      | 1,916.8               | 0.46                  | -0.44                |                                   |
| 6,771.0             | 1.10            | 342.90      | 6,435.1             | 1,850.5    | 508.5      | 1,919.1               | 2.08                  | -1.21                |                                   |
| 6,862.0             | 1.10            | 8.80        | 6,526.1             | 1,852.2    | 508.4      | 1,920.7               | 0.54                  | 0.00                 |                                   |
| 6,953.0             | 1.30            | 153.10      | 6,617.1             | 1,852.1    | 509.0      | 1,920.8               | 2.51                  | 0.22                 |                                   |
| 7,043.0             | 1.30            | 115.20      | 6,707.1             | 1,850.8    | 510.4      | 1,919.8               | 0.94                  | 0.00                 |                                   |
| 7,134.0             | 1.50            | 102.20      | 6,798.1             | 1,850.1    | 512.5      | 1,919.7               | 0.41                  | 0.22                 |                                   |
| 7,225.0             | 1.70            | 97.80       | 6,889.0             | 1,849.6    | 515.0      | 1,920.0               | 0.26                  | 0.22                 |                                   |
| 7,316.0             | 0.40            | 59.10       | 6,980.0             | 1,849.6    | 516.6      | 1,920.4               | 1.55                  | -1.43                |                                   |
| 7,407.0             | 0.80            | 27.60       | 7,071.0             | 1,850.3    | 517.2      | 1,921.3               | 0.55                  | 0.44                 |                                   |
| 7,497.0             | 0.60            | 22.30       | 7,161.0             | 1,851.3    | 517.6      | 1,922.3               | 0.23                  | -0.22                |                                   |
| 7,588.0             | 0.40            | 67.00       | 7,252.0             | 1,851.9    | 518.1      | 1,923.0               | 0.46                  | -0.22                |                                   |
| 7,679.0             | 0.40            | 101.80      | 7,343.0             | 1,852.0    | 518.7      | 1,923.2               | 0.26                  | 0.00                 |                                   |
| 7,769.0             | 0.70            | 102.70      | 7,433.0             | 1,851.8    | 519.6      | 1,923.3               | 0.33                  | 0.33                 |                                   |
| 7,860.0             | 2.40            | 60.40       | 7,524.0             | 1,852.6    | 521.8      | 1,924.7               | 2.13                  | 1.87                 |                                   |
| 7,951.0             | 2.50            | 58.30       | 7,614.9             | 1,854.6    | 525.1      | 1,927.5               | 0.15                  | 0.11                 |                                   |
| 8,042.0             | 2.20            | 55.80       | 7,705.8             | 1,856.6    | 528.2      | 1,930.2               | 0.35                  | -0.33                |                                   |
| 8,133.0             | 1.70            | 52.90       | 7,796.8             | 1,858.4    | 530.8      | 1,932.7               | 0.56                  | -0.55                |                                   |
| 8,223.0             | 1.20            | 54.10       | 7,886.7             | 1,859.8    | 532.6      | 1,934.5               | 0.56                  | -0.56                |                                   |
| 8,314.0             | 1.10            | 29.90       | 7,977.7             | 1,861.1    | 533.8      | 1,936.0               | 0.54                  | -0.11                |                                   |
| 8,360.0             | 0.80            | 35.30       | 8,023.7             | 1,861.7    | 534.2      | 1,936.8               | 0.68                  | -0.65                | Last Cathedral Survey @ 8,360' MD |
| 8,410.0             | 0.80            | 35.30       | 8,073.7             | 1,862.3    | 534.6      | 1,937.4               | 0.00                  | 0.00                 | Projection to Bit @ 8,410'        |

# Cathedral Energy Services

## Survey Report

|                  |                                |                                     |                               |
|------------------|--------------------------------|-------------------------------------|-------------------------------|
| <b>Company:</b>  | Anadarko Petroleum Corporation | <b>Local Co-ordinate Reference:</b> | Well Hein 27-1                |
| <b>Project:</b>  | DJ Wattenberg                  | <b>TVD Reference:</b>               | KB=15' @ 4908.0ft (Xtreme 11) |
| <b>Site:</b>     | SWNE Sec1-T1N-R67W (Hein 2-1)  | <b>MD Reference:</b>                | KB=15' @ 4908.0ft (Xtreme 11) |
| <b>Well:</b>     | Hein 27-1                      | <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                                                                                |           |          |         |         |       |              |              |           |             |
| Hein 27-1 PBHL                                                                         | 0.00      | 0.00     | 8,066.0 | 1,883.0 | 523.2 | 1,275,339.35 | 3,186,136.90 | 40.087274 | -104.834755 |
| - survey misses target center by 23.7ft at 8402.5ft MD (8066.1 TVD, 1862.2 N, 534.5 E) |           |          |         |         |       |              |              |           |             |
| - Circle (radius 50.0)                                                                 |           |          |         |         |       |              |              |           |             |
| Hein 27-1 Drillers TGT                                                                 | 0.00      | 0.00     | 6,666.0 | 1,844.4 | 512.5 | 1,275,300.72 | 3,186,126.47 | 40.087168 | -104.834793 |
| - survey misses target center by 7.4ft at 7002.0ft MD (6666.1 TVD, 1851.3 N, 509.6 E)  |           |          |         |         |       |              |              |           |             |
| - Circle (radius 10.0)                                                                 |           |          |         |         |       |              |              |           |             |

| Survey Annotations |                |                   |       |                                   |  |
|--------------------|----------------|-------------------|-------|-----------------------------------|--|
| Measured Depth     | Vertical Depth | Local Coordinates |       |                                   |  |
| (ft)               | (ft)           | +N/-S             | +E/-W |                                   |  |
| (ft)               | (ft)           | (ft)              | (ft)  | Comment                           |  |
| 8,360.0            | 8,023.7        | 1,861.7           | 534.2 | Last Cathedral Survey @ 8,360' MD |  |
| 8,410.0            | 8,073.7        | 1,862.3           | 534.6 | Projection to Bit @ 8,410'        |  |

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