





# Cathedral Energy Services

## Survey Report

|                  |                            |                                     |                                |
|------------------|----------------------------|-------------------------------------|--------------------------------|
| <b>Company:</b>  | EnCana Oil & Gas (USA) Inc | <b>Local Co-ordinate Reference:</b> | Well lone 2C-2H                |
| <b>Project:</b>  | DJ Wattenberg              | <b>TVD Reference:</b>               | KB=13' @ 5059.0ft (Ensign 124) |
| <b>Site:</b>     | S2-T2N-R66W (lone.)        | <b>MD Reference:</b>                | KB=13' @ 5059.0ft (Ensign 124) |
| <b>Well:</b>     | lone 2C-2H                 | <b>North Reference:</b>             | True                           |
| <b>Wellbore:</b> | HZ                         | <b>Survey Calculation Method:</b>   | Minimum Curvature              |
| <b>Design:</b>   | HZ                         | <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                  |          | S2-T2N-R66W (lone.) |                 |                   |             |
|-----------------------|----------|---------------------|-----------------|-------------------|-------------|
| Site Position:        |          | Northing:           | 1,306,798.50 ft | Latitude:         | 40.173110   |
| From:                 | Lat/Long | Easting:            | 3,209,901.52 ft | Longitude:        | -104.748870 |
| Position Uncertainty: | 0.0 ft   | Slot Radius:        | 13.200 in       | Grid Convergence: | 0.49 °      |

|                      |            |        |                     |                 |               |             |
|----------------------|------------|--------|---------------------|-----------------|---------------|-------------|
| Well                 | lone 2C-2H |        |                     |                 |               |             |
| Well Position        | +N/-S      | 0.0 ft | Northing:           | 1,306,798.64 ft | Latitude:     | 40.173110   |
|                      | +E/-W      | 0.0 ft | Easting:            | 3,209,921.08 ft | Longitude:    | -104.748800 |
| Position Uncertainty |            | 0.0 ft | Wellhead Elevation: | ft              | Ground Level: | 5,046.0 ft  |

|                  |                   |                    |                        |                      |                            |
|------------------|-------------------|--------------------|------------------------|----------------------|----------------------------|
| <b>Wellbore</b>  | HZ                |                    |                        |                      |                            |
| <b>Magnetics</b> | <b>Model Name</b> | <b>Sample Date</b> | <b>Declination (°)</b> | <b>Dip Angle (°)</b> | <b>Field Strength (nT)</b> |
|                  | IGRF2010          | 3/20/2013          | 8.60                   | 66.81                | 52,826                     |

|                          |                         |                   |                   |                      |     |
|--------------------------|-------------------------|-------------------|-------------------|----------------------|-----|
| <b>Design</b>            | HZ                      |                   |                   |                      |     |
| <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               | 180.00               |     |

|                       |                |                          |                  |                    |  |
|-----------------------|----------------|--------------------------|------------------|--------------------|--|
| <b>Survey Program</b> | <b>Date</b>    | 4/7/2013                 |                  |                    |  |
| <b>From (ft)</b>      | <b>To (ft)</b> | <b>Survey (Wellbore)</b> | <b>Tool Name</b> | <b>Description</b> |  |
| 171.0                 | 11,559.0       | Survey #1 (HZ)           | 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                        |                              |  |
| 171.0                      | 0.10                   | 285.20             | 171.0                      | 0.0               | -0.1              | 0.0                          | 0.06                         | 0.06                        |                              |  |
| 233.0                      | 1.10                   | 341.10             | 233.0                      | 0.6               | -0.4              | -0.6                         | 1.69                         | 1.61                        |                              |  |
| 295.0                      | 1.20                   | 338.50             | 295.0                      | 1.8               | -0.8              | -1.8                         | 0.18                         | 0.16                        |                              |  |
| 357.0                      | 1.20                   | 357.70             | 357.0                      | 3.0               | -1.1              | -3.0                         | 0.65                         | 0.00                        |                              |  |
| 419.0                      | 1.50                   | 341.80             | 419.0                      | 4.5               | -1.4              | -4.5                         | 0.77                         | 0.48                        |                              |  |
| 481.0                      | 1.80                   | 341.10             | 480.9                      | 6.1               | -1.9              | -6.1                         | 0.48                         | 0.48                        |                              |  |
| 543.0                      | 2.80                   | 336.30             | 542.9                      | 8.5               | -2.9              | -8.5                         | 1.64                         | 1.61                        |                              |  |
| 636.0                      | 3.40                   | 340.80             | 635.7                      | 13.1              | -4.7              | -13.1                        | 0.70                         | 0.65                        |                              |  |
| 729.0                      | 4.20                   | 332.10             | 728.5                      | 18.8              | -7.2              | -18.8                        | 1.06                         | 0.86                        |                              |  |
| 822.0                      | 5.20                   | 334.10             | 821.2                      | 25.6              | -10.6             | -25.6                        | 1.09                         | 1.08                        |                              |  |
| 915.0                      | 6.00                   | 335.80             | 913.8                      | 33.8              | -14.4             | -33.8                        | 0.88                         | 0.86                        |                              |  |
| 976.0                      | 6.10                   | 332.10             | 974.4                      | 39.6              | -17.3             | -39.6                        | 0.66                         | 0.16                        |                              |  |

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| <b>Company:</b>  | EnCana Oil & Gas (USA) Inc | <b>Local Co-ordinate Reference:</b> | Well lone 2C-2H                |
| <b>Project:</b>  | DJ Wattenberg              | <b>TVD Reference:</b>               | KB=13' @ 5059.0ft (Ensign 124) |
| <b>Site:</b>     | S2-T2N-R66W (lone.)        | <b>MD Reference:</b>                | KB=13' @ 5059.0ft (Ensign 124) |
| <b>Well:</b>     | lone 2C-2H                 | <b>North Reference:</b>             | True                           |
| <b>Wellbore:</b> | HZ                         | <b>Survey Calculation Method:</b>   | Minimum Curvature              |
| <b>Design:</b>   | HZ                         | <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 |
| 1,111.0             | 6.00            | 329.80      | 1,108.7             | 52.0       | -24.2      | -52.0                 | 0.19                  | -0.07                |                       |
| 1,204.0             | 5.50            | 325.60      | 1,201.2             | 59.9       | -29.1      | -59.9                 | 0.70                  | -0.54                |                       |
| 1,297.0             | 5.00            | 329.30      | 1,293.8             | 67.0       | -33.7      | -67.0                 | 0.65                  | -0.54                |                       |
| 1,390.0             | 8.30            | 304.40      | 1,386.2             | 74.3       | -41.3      | -74.3                 | 4.63                  | 3.55                 |                       |
| 1,483.0             | 8.20            | 301.90      | 1,478.2             | 81.6       | -52.5      | -81.6                 | 0.40                  | -0.11                |                       |
| 1,576.0             | 8.00            | 300.50      | 1,570.3             | 88.4       | -63.7      | -88.4                 | 0.30                  | -0.22                |                       |
| 1,669.0             | 6.60            | 284.30      | 1,662.6             | 93.0       | -74.5      | -93.0                 | 2.66                  | -1.51                |                       |
| 1,762.0             | 6.80            | 314.50      | 1,755.0             | 98.2       | -83.6      | -98.2                 | 3.75                  | 0.22                 |                       |
| 1,855.0             | 6.40            | 312.50      | 1,847.3             | 105.5      | -91.3      | -105.5                | 0.50                  | -0.43                |                       |
| 1,948.0             | 6.70            | 330.20      | 1,939.8             | 113.8      | -97.8      | -113.8                | 2.19                  | 0.32                 |                       |
| 2,043.0             | 6.40            | 325.80      | 2,034.1             | 122.9      | -103.6     | -122.9                | 0.62                  | -0.32                |                       |
| 2,138.0             | 5.80            | 324.70      | 2,128.6             | 131.2      | -109.3     | -131.2                | 0.64                  | -0.63                |                       |
| 2,233.0             | 5.50            | 323.30      | 2,223.1             | 138.8      | -114.8     | -138.8                | 0.35                  | -0.32                |                       |
| 2,327.0             | 5.10            | 319.50      | 2,316.7             | 145.6      | -120.2     | -145.6                | 0.57                  | -0.43                |                       |
| 2,423.0             | 7.10            | 321.10      | 2,412.2             | 153.5      | -126.7     | -153.5                | 2.09                  | 2.08                 |                       |
| 2,518.0             | 6.00            | 314.60      | 2,506.6             | 161.5      | -133.9     | -161.5                | 1.39                  | -1.16                |                       |
| 2,613.0             | 6.70            | 321.20      | 2,601.0             | 169.3      | -141.0     | -169.3                | 1.06                  | 0.74                 |                       |
| 2,708.0             | 5.40            | 318.90      | 2,695.4             | 177.0      | -147.4     | -177.0                | 1.39                  | -1.37                |                       |
| 2,802.0             | 6.70            | 316.70      | 2,788.9             | 184.3      | -154.0     | -184.3                | 1.40                  | 1.38                 |                       |
| 2,897.0             | 5.80            | 312.60      | 2,883.4             | 191.6      | -161.4     | -191.6                | 1.06                  | -0.95                |                       |
| 2,992.0             | 7.90            | 307.10      | 2,977.7             | 198.8      | -170.1     | -198.8                | 2.31                  | 2.21                 |                       |
| 3,087.0             | 7.40            | 304.70      | 3,071.8             | 206.2      | -180.3     | -206.2                | 0.62                  | -0.53                |                       |
| 3,182.0             | 6.90            | 303.40      | 3,166.1             | 212.8      | -190.1     | -212.8                | 0.55                  | -0.53                |                       |
| 3,277.0             | 6.10            | 309.40      | 3,260.5             | 219.2      | -198.8     | -219.2                | 1.10                  | -0.84                |                       |
| 3,373.0             | 5.00            | 302.40      | 3,356.0             | 224.7      | -206.3     | -224.7                | 1.34                  | -1.15                |                       |
| 3,468.0             | 5.20            | 320.20      | 3,450.7             | 230.2      | -212.5     | -230.2                | 1.67                  | 0.21                 |                       |
| 3,562.0             | 3.90            | 317.00      | 3,544.4             | 235.8      | -217.4     | -235.8                | 1.41                  | -1.38                |                       |
| 3,658.0             | 3.30            | 334.10      | 3,640.2             | 240.7      | -220.9     | -240.7                | 1.27                  | -0.62                |                       |
| 3,753.0             | 2.50            | 317.80      | 3,735.1             | 244.7      | -223.5     | -244.7                | 1.20                  | -0.84                |                       |
| 3,848.0             | 3.50            | 314.50      | 3,829.9             | 248.2      | -226.9     | -248.2                | 1.07                  | 1.05                 |                       |
| 3,943.0             | 3.30            | 323.30      | 3,924.8             | 252.5      | -230.6     | -252.5                | 0.59                  | -0.21                |                       |
| 4,038.0             | 2.60            | 343.40      | 4,019.6             | 256.7      | -232.9     | -256.7                | 1.30                  | -0.74                |                       |
| 4,133.0             | 3.10            | 358.10      | 4,114.5             | 261.4      | -233.6     | -261.4                | 0.93                  | 0.53                 |                       |
| 4,228.0             | 2.90            | 23.60       | 4,209.4             | 266.1      | -232.7     | -266.1                | 1.41                  | -0.21                |                       |
| 4,323.0             | 3.00            | 20.10       | 4,304.3             | 270.7      | -230.9     | -270.7                | 0.22                  | 0.11                 |                       |
| 4,418.0             | 2.20            | 53.50       | 4,399.2             | 274.1      | -228.6     | -274.1                | 1.77                  | -0.84                |                       |
| 4,513.0             | 1.00            | 119.30      | 4,494.1             | 274.8      | -226.4     | -274.8                | 2.11                  | -1.26                |                       |
| 4,609.0             | 0.40            | 120.70      | 4,590.1             | 274.2      | -225.3     | -274.2                | 0.63                  | -0.62                |                       |
| 4,704.0             | 0.40            | 307.30      | 4,685.1             | 274.2      | -225.3     | -274.2                | 0.84                  | 0.00                 |                       |
| 4,798.0             | 1.00            | 277.80      | 4,779.1             | 274.5      | -226.4     | -274.5                | 0.72                  | 0.64                 |                       |
| 4,894.0             | 1.30            | 270.40      | 4,875.1             | 274.6      | -228.3     | -274.6                | 0.35                  | 0.31                 |                       |
| 4,989.0             | 0.50            | 196.30      | 4,970.1             | 274.3      | -229.5     | -274.3                | 1.32                  | -0.84                |                       |
| 5,084.0             | 0.70            | 122.90      | 5,065.1             | 273.5      | -229.1     | -273.5                | 0.77                  | 0.21                 |                       |
| 5,178.0             | 0.70            | 119.20      | 5,159.1             | 273.0      | -228.2     | -273.0                | 0.05                  | 0.00                 |                       |
| 5,273.0             | 0.80            | 130.00      | 5,254.1             | 272.2      | -227.1     | -272.2                | 0.18                  | 0.11                 |                       |
| 5,368.0             | 0.90            | 140.20      | 5,349.1             | 271.2      | -226.2     | -271.2                | 0.19                  | 0.11                 |                       |
| 5,463.0             | 1.10            | 166.70      | 5,444.0             | 269.8      | -225.5     | -269.8                | 0.52                  | 0.21                 |                       |
| 5,558.0             | 0.60            | 10.50       | 5,539.0             | 269.4      | -225.2     | -269.4                | 1.75                  | -0.53                |                       |
| 5,653.0             | 0.70            | 4.80        | 5,634.0             | 270.5      | -225.0     | -270.5                | 0.13                  | 0.11                 |                       |
| 5,748.0             | 0.60            | 31.40       | 5,729.0             | 271.5      | -224.7     | -271.5                | 0.33                  | -0.11                |                       |
| 5,843.0             | 0.50            | 36.70       | 5,824.0             | 272.2      | -224.2     | -272.2                | 0.12                  | -0.11                |                       |
| 5,938.0             | 0.70            | 328.60      | 5,919.0             | 273.0      | -224.3     | -273.0                | 0.73                  | 0.21                 |                       |
| 6,033.0             | 0.40            | 222.50      | 6,014.0             | 273.3      | -224.8     | -273.3                | 0.94                  | -0.32                |                       |

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| <b>Project:</b>  | DJ Wattenberg              | <b>TVD Reference:</b>               | KB=13' @ 5059.0ft (Ensign 124) |
| <b>Site:</b>     | S2-T2N-R66W (lone.)        | <b>MD Reference:</b>                | KB=13' @ 5059.0ft (Ensign 124) |
| <b>Well:</b>     | lone 2C-2H                 | <b>North Reference:</b>             | True                           |
| <b>Wellbore:</b> | HZ                         | <b>Survey Calculation Method:</b>   | Minimum Curvature              |
| <b>Design:</b>   | HZ                         | <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 |
| 6,128.0             | 0.70            | 258.50      | 6,109.0             | 272.9      | -225.6     | -272.9                | 0.47                  | 0.32                 |                       |
| 6,223.0             | 1.00            | 254.00      | 6,204.0             | 272.6      | -227.0     | -272.6                | 0.32                  | 0.32                 |                       |
| 6,318.0             | 1.00            | 236.10      | 6,299.0             | 271.9      | -228.4     | -271.9                | 0.33                  | 0.00                 |                       |
| 6,413.0             | 0.30            | 186.40      | 6,394.0             | 271.2      | -229.2     | -271.2                | 0.88                  | -0.74                |                       |
| 6,508.0             | 0.30            | 149.30      | 6,489.0             | 270.7      | -229.1     | -270.7                | 0.20                  | 0.00                 |                       |
| 6,540.0             | 0.40            | 158.80      | 6,521.0             | 270.5      | -229.0     | -270.5                | 0.36                  | 0.31                 |                       |
| 6,571.0             | 1.50            | 163.70      | 6,552.0             | 270.1      | -228.8     | -270.1                | 3.55                  | 3.55                 |                       |
| 6,603.0             | 2.00            | 169.00      | 6,584.0             | 269.1      | -228.6     | -269.1                | 1.64                  | 1.56                 |                       |
| 6,635.0             | 3.40            | 173.80      | 6,615.9             | 267.6      | -228.4     | -267.6                | 4.43                  | 4.37                 |                       |
| 6,667.0             | 6.10            | 171.00      | 6,647.8             | 265.0      | -228.0     | -265.0                | 8.47                  | 8.44                 |                       |
| 6,698.0             | 8.60            | 175.30      | 6,678.6             | 261.1      | -227.6     | -261.1                | 8.25                  | 8.06                 |                       |
| 6,730.0             | 11.10           | 174.30      | 6,710.1             | 255.6      | -227.1     | -255.6                | 7.83                  | 7.81                 |                       |
| 6,762.0             | 14.20           | 171.60      | 6,741.3             | 248.7      | -226.2     | -248.7                | 9.86                  | 9.69                 |                       |
| 6,793.0             | 18.10           | 171.10      | 6,771.1             | 240.1      | -224.9     | -240.1                | 12.59                 | 12.58                |                       |
| 6,825.0             | 21.70           | 167.40      | 6,801.2             | 229.4      | -222.8     | -229.4                | 11.91                 | 11.25                |                       |
| 6,857.0             | 24.70           | 164.20      | 6,830.6             | 217.2      | -219.7     | -217.2                | 10.17                 | 9.37                 |                       |
| 6,889.0             | 26.50           | 166.00      | 6,859.4             | 203.9      | -216.2     | -203.9                | 6.13                  | 5.62                 |                       |
| 6,920.0             | 29.10           | 167.50      | 6,886.8             | 189.8      | -212.9     | -189.8                | 8.68                  | 8.39                 |                       |
| 6,952.0             | 31.10           | 169.10      | 6,914.5             | 174.1      | -209.6     | -174.1                | 6.73                  | 6.25                 |                       |
| 6,984.0             | 33.70           | 170.70      | 6,941.5             | 157.2      | -206.6     | -157.2                | 8.55                  | 8.12                 |                       |
| 7,015.0             | 35.50           | 170.10      | 6,967.1             | 139.9      | -203.7     | -139.9                | 5.91                  | 5.81                 |                       |
| 7,047.0             | 39.00           | 170.50      | 6,992.5             | 120.8      | -200.4     | -120.8                | 10.96                 | 10.94                |                       |
| 7,079.0             | 43.20           | 171.00      | 7,016.6             | 100.0      | -197.0     | -100.0                | 13.17                 | 13.12                |                       |
| 7,110.0             | 46.00           | 172.50      | 7,038.7             | 78.5       | -193.9     | -78.5                 | 9.65                  | 9.03                 |                       |
| 7,142.0             | 47.00           | 173.00      | 7,060.7             | 55.4       | -191.0     | -55.4                 | 3.32                  | 3.12                 |                       |
| 7,174.0             | 48.20           | 172.90      | 7,082.3             | 32.0       | -188.1     | -32.0                 | 3.76                  | 3.75                 |                       |
| 7,205.0             | 50.50           | 172.60      | 7,102.5             | 8.7        | -185.1     | -8.7                  | 7.46                  | 7.42                 |                       |
| 7,237.0             | 54.70           | 173.00      | 7,121.9             | -16.6      | -181.9     | 16.6                  | 13.16                 | 13.12                |                       |
| 7,269.0             | 58.00           | 174.40      | 7,139.7             | -43.0      | -179.0     | 43.0                  | 10.94                 | 10.31                |                       |
| 7,301.0             | 60.10           | 176.10      | 7,156.1             | -70.4      | -176.8     | 70.4                  | 7.99                  | 6.56                 |                       |
| 7,332.0             | 62.10           | 176.70      | 7,171.1             | -97.5      | -175.1     | 97.5                  | 6.67                  | 6.45                 |                       |
| 7,364.0             | 64.40           | 176.60      | 7,185.5             | -126.0     | -173.4     | 126.0                 | 7.19                  | 7.19                 |                       |
| 7,396.0             | 66.60           | 176.60      | 7,198.8             | -155.1     | -171.7     | 155.1                 | 6.87                  | 6.87                 |                       |
| 7,427.0             | 68.20           | 177.00      | 7,210.7             | -183.6     | -170.1     | 183.6                 | 5.30                  | 5.16                 |                       |
| 7,459.0             | 68.30           | 176.90      | 7,222.6             | -213.3     | -168.5     | 213.3                 | 0.43                  | 0.31                 |                       |
| 7,491.0             | 70.70           | 176.10      | 7,233.8             | -243.2     | -166.7     | 243.2                 | 7.86                  | 7.50                 |                       |
| 7,522.0             | 74.20           | 174.90      | 7,243.1             | -272.7     | -164.3     | 272.7                 | 11.88                 | 11.29                |                       |
| 7,554.0             | 76.40           | 174.40      | 7,251.2             | -303.5     | -161.4     | 303.5                 | 7.04                  | 6.87                 |                       |
| 7,586.0             | 77.10           | 174.40      | 7,258.6             | -334.5     | -158.4     | 334.5                 | 2.19                  | 2.19                 |                       |
| 7,617.0             | 78.80           | 174.60      | 7,265.0             | -364.7     | -155.5     | 364.7                 | 5.52                  | 5.48                 |                       |
| 7,649.0             | 81.50           | 175.10      | 7,270.5             | -396.1     | -152.7     | 396.1                 | 8.58                  | 8.44                 |                       |
| 7,688.0             | 84.00           | 174.00      | 7,275.4             | -434.6     | -149.0     | 434.6                 | 6.99                  | 6.41                 |                       |
| 7,768.0             | 86.80           | 176.00      | 7,281.8             | -514.0     | -142.1     | 514.0                 | 4.30                  | 3.50                 |                       |
| 7,863.0             | 92.00           | 176.80      | 7,282.8             | -608.8     | -136.1     | 608.8                 | 5.54                  | 5.47                 |                       |
| 7,958.0             | 90.40           | 176.60      | 7,280.8             | -703.6     | -130.6     | 703.6                 | 1.70                  | -1.68                |                       |
| 8,053.0             | 89.80           | 176.70      | 7,280.7             | -798.4     | -125.1     | 798.4                 | 0.64                  | -0.63                |                       |
| 8,148.0             | 89.40           | 176.30      | 7,281.3             | -893.3     | -119.3     | 893.3                 | 0.60                  | -0.42                |                       |
| 8,243.0             | 89.00           | 176.60      | 7,282.7             | -988.1     | -113.4     | 988.1                 | 0.53                  | -0.42                |                       |
| 8,339.0             | 90.20           | 178.90      | 7,283.3             | -1,084.0   | -109.6     | 1,084.0               | 2.70                  | 1.25                 |                       |
| 8,433.0             | 91.50           | 179.30      | 7,281.9             | -1,178.0   | -108.1     | 1,178.0               | 1.45                  | 1.38                 |                       |
| 8,528.0             | 91.60           | 181.70      | 7,279.4             | -1,272.9   | -109.0     | 1,272.9               | 2.53                  | 0.11                 |                       |
| 8,623.0             | 91.90           | 182.40      | 7,276.5             | -1,367.8   | -112.4     | 1,367.8               | 0.80                  | 0.32                 |                       |
| 8,719.0             | 91.40           | 183.70      | 7,273.7             | -1,463.6   | -117.5     | 1,463.6               | 1.45                  | -0.52                |                       |

# Cathedral Energy Services

## Survey Report

|                  |                            |                                     |                                |
|------------------|----------------------------|-------------------------------------|--------------------------------|
| <b>Company:</b>  | EnCana Oil & Gas (USA) Inc | <b>Local Co-ordinate Reference:</b> | Well lone 2C-2H                |
| <b>Project:</b>  | DJ Wattenberg              | <b>TVD Reference:</b>               | KB=13' @ 5059.0ft (Ensign 124) |
| <b>Site:</b>     | S2-T2N-R66W (lone.)        | <b>MD Reference:</b>                | KB=13' @ 5059.0ft (Ensign 124) |
| <b>Well:</b>     | lone 2C-2H                 | <b>North Reference:</b>             | True                           |
| <b>Wellbore:</b> | HZ                         | <b>Survey Calculation Method:</b>   | Minimum Curvature              |
| <b>Design:</b>   | HZ                         | <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   |
| 8,813.0             | 91.10           | 182.40      | 7,271.7             | -1,557.5   | -122.5     | 1,557.5               | 1.42                  | -0.32                |   |
| 8,908.0             | 89.80           | 182.40      | 7,270.9             | -1,652.4   | -126.5     | 1,652.4               | 1.37                  | -1.37                |   |
| 9,003.0             | 88.70           | 182.70      | 7,272.2             | -1,747.3   | -130.7     | 1,747.3               | 1.20                  | -1.16                |   |
| 9,098.0             | 87.70           | 183.30      | 7,275.1             | -1,842.1   | -135.6     | 1,842.1               | 1.23                  | -1.05                |   |
| 9,193.0             | 88.30           | 182.50      | 7,278.5             | -1,936.9   | -140.5     | 1,936.9               | 1.05                  | 0.63                 |   |
| 9,288.0             | 88.20           | 183.40      | 7,281.4             | -2,031.7   | -145.3     | 2,031.7               | 0.95                  | -0.11                |   |
| 9,383.0             | 85.80           | 183.00      | 7,286.3             | -2,126.5   | -150.6     | 2,126.5               | 2.56                  | -2.53                |   |
| 9,478.0             | 86.60           | 184.50      | 7,292.6             | -2,221.0   | -156.8     | 2,221.0               | 1.79                  | 0.84                 |   |
| 9,573.0             | 88.40           | 183.50      | 7,296.8             | -2,315.7   | -163.5     | 2,315.7               | 2.17                  | 1.89                 |   |
| 9,668.0             | 89.50           | 184.60      | 7,298.5             | -2,410.5   | -170.2     | 2,410.5               | 1.64                  | 1.16                 |   |
| 9,763.0             | 89.30           | 183.80      | 7,299.5             | -2,505.2   | -177.1     | 2,505.2               | 0.87                  | -0.21                |   |
| 9,858.0             | 89.40           | 183.20      | 7,300.6             | -2,600.0   | -182.9     | 2,600.0               | 0.64                  | 0.11                 |   |
| 9,953.0             | 88.90           | 183.50      | 7,302.0             | -2,694.8   | -188.5     | 2,694.8               | 0.61                  | -0.53                |   |
| 10,048.0            | 88.10           | 180.80      | 7,304.5             | -2,789.7   | -192.0     | 2,789.7               | 2.96                  | -0.84                |   |
| 10,143.0            | 88.00           | 181.90      | 7,307.7             | -2,884.7   | -194.3     | 2,884.7               | 1.16                  | -0.11                |   |
| 10,238.0            | 88.10           | 182.30      | 7,310.9             | -2,979.5   | -197.7     | 2,979.5               | 0.43                  | 0.11                 |   |
| 10,334.0            | 88.40           | 181.00      | 7,313.9             | -3,075.5   | -200.5     | 3,075.5               | 1.39                  | 0.31                 |   |
| 10,429.0            | 89.50           | 181.90      | 7,315.6             | -3,170.4   | -202.9     | 3,170.4               | 1.50                  | 1.16                 |   |
| 10,524.0            | 91.10           | 180.90      | 7,315.1             | -3,265.4   | -205.2     | 3,265.4               | 1.99                  | 1.68                 |   |
| 10,619.0            | 92.70           | 180.90      | 7,312.0             | -3,360.3   | -206.7     | 3,360.3               | 1.68                  | 1.68                 |   |
| 10,714.0            | 91.30           | 181.90      | 7,308.7             | -3,455.2   | -209.0     | 3,455.2               | 1.81                  | -1.47                |   |
| 10,809.0            | 89.30           | 182.70      | 7,308.2             | -3,550.1   | -212.9     | 3,550.1               | 2.27                  | -2.11                |   |
| 10,904.0            | 88.50           | 183.50      | 7,310.0             | -3,645.0   | -218.0     | 3,645.0               | 1.19                  | -0.84                |   |
| 10,999.0            | 88.70           | 183.50      | 7,312.3             | -3,739.8   | -223.8     | 3,739.8               | 0.21                  | 0.21                 |   |
| 11,094.0            | 89.50           | 181.90      | 7,313.8             | -3,834.6   | -228.3     | 3,834.6               | 1.88                  | 0.84                 |   |
| 11,189.0            | 90.20           | 180.70      | 7,314.0             | -3,929.6   | -230.4     | 3,929.6               | 1.46                  | 0.74                 |   |
| 11,284.0            | 90.30           | 180.50      | 7,313.6             | -4,024.6   | -231.4     | 4,024.6               | 0.24                  | 0.11                 |   |
| 11,379.0            | 91.10           | 180.90      | 7,312.5             | -4,119.6   | -232.6     | 4,119.6               | 0.94                  | 0.84                 |   |
| 11,474.0            | 92.10           | 180.00      | 7,309.8             | -4,214.6   | -233.3     | 4,214.6               | 1.42                  | 1.05                 |   |
| 11,506.0            | 92.20           | 180.20      | 7,308.6             | -4,246.5   | -233.4     | 4,246.5               | 0.70                  | 0.31                 | Last Cathedral Survey @ 11,506' MD<br>Projection to Bit @ 11,559' |
| 11,559.0            | 92.40           | 180.80      | 7,306.5             | -4,299.5   | -233.8     | 4,299.5               | 1.19                  | 0.38                 |   |

# Cathedral Energy Services

## Survey Report

|                  |                            |                                     |                                |
|------------------|----------------------------|-------------------------------------|--------------------------------|
| <b>Company:</b>  | EnCana Oil & Gas (USA) Inc | <b>Local Co-ordinate Reference:</b> | Well lone 2C-2H                |
| <b>Project:</b>  | DJ Wattenberg              | <b>TVD Reference:</b>               | KB=13' @ 5059.0ft (Ensign 124) |
| <b>Site:</b>     | S2-T2N-R66W (lone.)        | <b>MD Reference:</b>                | KB=13' @ 5059.0ft (Ensign 124) |
| <b>Well:</b>     | lone 2C-2H                 | <b>North Reference:</b>             | True                           |
| <b>Wellbore:</b> | HZ                         | <b>Survey Calculation Method:</b>   | Minimum Curvature              |
| <b>Design:</b>   | HZ                         | <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  |           |          |         |          |        |              |              |           |             |
| lone 2C-2H PBHL P3 (4i   | 0.00      | 0.00     | 7,278.0 | -4,315.2 | -234.6 | 1,302,481.60 | 3,209,723.08 | 40.161264 | -104.749639 |
| - actual wellpath misses target center by 32.5ft at 11559.0ft MD (7306.5 TVD, -4299.5 N, -233.8 E) |           |          |         |          |        |              |              |           |             |
| - Point  |           |          |         |          |        |              |              |           |             |
| lone 2C-2H PBHL (460'  | 0.00      | 0.00     | 7,278.0 | -4,313.1 | -271.1 | 1,302,483.42 | 3,209,686.52 | 40.161270 | -104.749770 |
| - actual wellpath misses target center by 48.8ft at 11559.0ft MD (7306.5 TVD, -4299.5 N, -233.8 E) |           |          |         |          |        |              |              |           |             |
| - Point  |           |          |         |          |        |              |              |           |             |
| lone 2C-2H 10400' MD 1   | 0.00      | 0.00     | 7,316.0 | -3,113.6 | -215.4 | 1,303,683.31 | 3,209,732.04 | 40.164563 | -104.749571 |
| - actual wellpath misses target center by 14.2ft at 10372.6ft MD (7314.8 TVD, -3114.0 N, -201.3 E) |           |          |         |          |        |              |              |           |             |
| - Point  |           |          |         |          |        |              |              |           |             |
| lone 2C-2H 8900' MD T(   | 0.00      | 0.00     | 7,277.0 | -1,617.4 | -147.6 | 1,305,180.04 | 3,209,787.19 | 40.168670 | -104.749328 |
| - actual wellpath misses target center by 23.4ft at 8873.9ft MD (7270.9 TVD, -1618.3 N, -125.0 E)  |           |          |         |          |        |              |              |           |             |
| - Point  |           |          |         |          |        |              |              |           |             |
| lone 2C-2H PBHL P4 (4i   | 0.00      | 0.00     | 7,293.0 | -4,315.2 | -234.6 | 1,302,481.60 | 3,209,723.08 | 40.161264 | -104.749639 |
| - actual wellpath misses target center by 20.7ft at 11559.0ft MD (7306.5 TVD, -4299.5 N, -233.8 E) |           |          |         |          |        |              |              |           |             |
| - Point  |           |          |         |          |        |              |              |           |             |
| Plan @ 7277.0 (lone 2C   | 0.00      | 0.00     | 7,277.0 | -986.8   | -123.2 | 1,305,810.81 | 3,209,806.20 | 40.170401 | -104.749241 |
| - actual wellpath misses target center by 11.3ft at 8241.1ft MD (7282.6 TVD, -986.1 N, -113.5 E)   |           |          |         |          |        |              |              |           |             |
| - Point  |           |          |         |          |        |              |              |           |             |
| lone 2C-2H PBHL P5 (4i   | 0.00      | 0.00     | 7,316.0 | -4,315.2 | -234.6 | 1,302,481.60 | 3,209,723.08 | 40.161264 | -104.749639 |
| - actual wellpath misses target center by 18.4ft at 11559.0ft MD (7306.5 TVD, -4299.5 N, -233.8 E) |           |          |         |          |        |              |              |           |             |
| - Point  |           |          |         |          |        |              |              |           |             |

| Design Annotations |                |                   |            |                                    |
|--------------------|----------------|-------------------|------------|------------------------------------|
| Measured Depth     | Vertical Depth | Local Coordinates |            | Comment                            |
| (ft)               | (ft)           | +N/-S (ft)        | +E/-W (ft) |                                    |
| 11,506.0           | 7,308.6        | -4,246.5          | -233.4     | Last Cathedral Survey @ 11,506' MD |
| 11,559.0           | 7,306.5        | -4,299.5          | -233.8     | Projection to Bit @ 11,559'        |

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