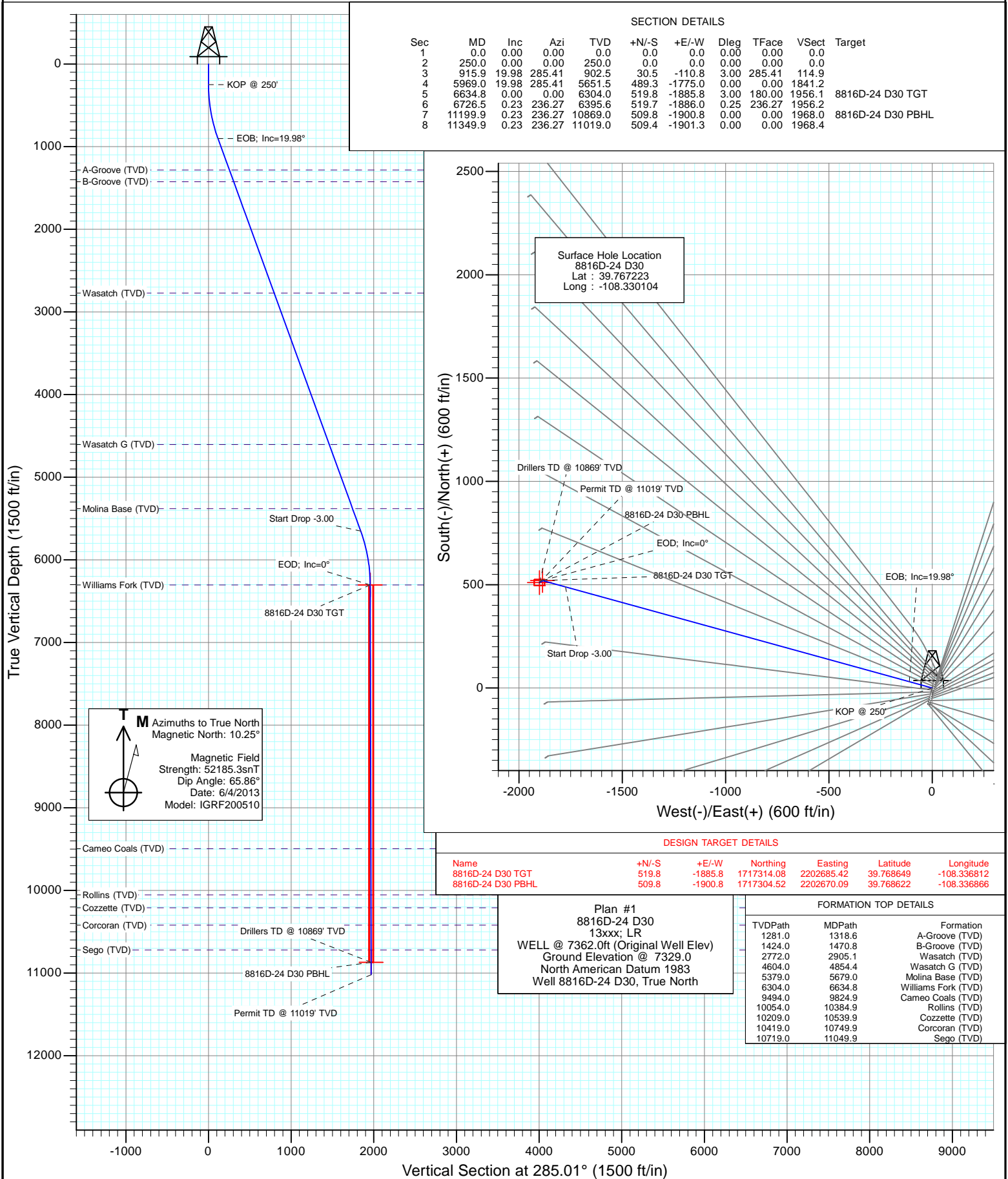




Project: Eureka Unit  
Site: S19-T3S-R97W (D30 397 Pad)  
Well: 8816D-24 D30  
Wellbore: DD  
Design: Plan #1



# Cathedral Energy Services

## Planning Report

|                  |                             |                                     |                                      |
|------------------|-----------------------------|-------------------------------------|--------------------------------------|
| <b>Database:</b> | USA EDM 5000 Multi Users DB | <b>Local Co-ordinate Reference:</b> | Well 8816D-24 D30                    |
| <b>Company:</b>  | EnCana Oil & Gas (USA) Inc  | <b>TVD Reference:</b>               | WELL @ 7362.0ft (Original Well Elev) |
| <b>Project:</b>  | Eureka Unit                 | <b>MD Reference:</b>                | WELL @ 7362.0ft (Original Well Elev) |
| <b>Site:</b>     | S19-T3S-R97W (D30 397 Pad)  | <b>North Reference:</b>             | True                                 |
| <b>Well:</b>     | 8816D-24 D30                | <b>Survey Calculation Method:</b>   | Minimum Curvature                    |
| <b>Wellbore:</b> | DD                          |                                     |                                      |
| <b>Design:</b>   | Plan #1                     |                                     |                                      |

|                    |                           |                      |                |
|--------------------|---------------------------|----------------------|----------------|
| <b>Project</b>     | Eureka Unit               |                      |                |
| <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 Central Zone     |                      |                |

|                       |          |                            |                 |                   |             |
|-----------------------|----------|----------------------------|-----------------|-------------------|-------------|
| Site                  |          | S19-T3S-R97W (D30 397 Pad) |                 |                   |             |
| Site Position:        |          | Northing:                  | 1,716,819.83 ft | Latitude:         | 39.767450   |
| From:                 | Lat/Long | Easting:                   | 2,204,516.45 ft | Longitude:        | -108.330247 |
| Position Uncertainty: | 0.0 ft   | Slot Radius:               | 13.200 in       | Grid Convergence: | -1.79 °     |

|                      |              |        |                     |                 |               |             |
|----------------------|--------------|--------|---------------------|-----------------|---------------|-------------|
| Well                 | 8816D-24 D30 |        |                     |                 |               |             |
| Well Position        | +N/-S        | 0.0 ft | Northing:           | 1,716,735.80 ft | Latitude:     | 39.767223   |
|                      | +E/-W        | 0.0 ft | Easting:            | 2,204,554.11 ft | Longitude:    | -108.330104 |
| Position Uncertainty |              | 0.0 ft | Wellhead Elevation: | ft              | Ground Level: | 7,329.0 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> |
|                  | IGRF200510        | 6/4/2013           | 10.25                  | 65.86                | 52,185                     |

|                          |                              |                   |                   |                      |     |
|--------------------------|------------------------------|-------------------|-------------------|----------------------|-----|
| <b>Design</b>            | Plan #1                      |                   |                   |                      |     |
| <b>Audit Notes:</b>      |                              |                   |                   |                      |     |
| <b>Version:</b>          | <b>Phase:</b>                | PLAN              |                   | <b>Tie On Depth:</b> | 0.0 |
| <b>Vertical Section:</b> | <b>Depth From (TVD) (ft)</b> | <b>+N/-S (ft)</b> | <b>+E/-W (ft)</b> | <b>Direction (°)</b> |     |
|                          | 0.0                          | 0.0               | 0.0               | 285.01               |     |

| <b>Plan Sections</b> |                 |             |                     |            |            |                       |                      |                     |         |                   |
|----------------------|-----------------|-------------|---------------------|------------|------------|-----------------------|----------------------|---------------------|---------|-------------------|
| Measured Depth (ft)  | Inclination (°) | Azimuth (°) | Vertical Depth (ft) | +N/-S (ft) | +E/-W (ft) | Dogleg Rate (°/100ft) | Build Rate (°/100ft) | Turn Rate (°/100ft) | TFO (°) | Target            |
| 0.0                  | 0.00            | 0.00        | 0.0                 | 0.0        | 0.0        | 0.00                  | 0.00                 | 0.00                | 0.00    |                   |
| 250.0                | 0.00            | 0.00        | 250.0               | 0.0        | 0.0        | 0.00                  | 0.00                 | 0.00                | 0.00    |                   |
| 915.9                | 19.98           | 285.41      | 902.5               | 30.5       | -110.8     | 3.00                  | 3.00                 | 0.00                | 285.41  |                   |
| 5,969.0              | 19.98           | 285.41      | 5,651.5             | 489.3      | -1,775.0   | 0.00                  | 0.00                 | 0.00                | 0.00    |                   |
| 6,634.8              | 0.00            | 0.00        | 6,304.0             | 519.8      | -1,885.8   | 3.00                  | -3.00                | 0.00                | 180.00  | 8816D-24 D30 TGT  |
| 6,726.5              | 0.23            | 236.27      | 6,395.6             | 519.7      | -1,886.0   | 0.25                  | 0.25                 | -135.06             | 236.27  |                   |
| 11,199.9             | 0.23            | 236.27      | 10,869.0            | 509.8      | -1,900.8   | 0.00                  | 0.00                 | 0.00                | 0.00    | 8816D-24 D30 PBHL |
| 11,349.9             | 0.23            | 236.27      | 11,019.0            | 509.4      | -1,901.3   | 0.00                  | 0.00                 | 0.00                | 0.00    |                   |

# Cathedral Energy Services

## Planning Report

|                  |                             |                                     |                                      |
|------------------|-----------------------------|-------------------------------------|--------------------------------------|
| <b>Database:</b> | USA EDM 5000 Multi Users DB | <b>Local Co-ordinate Reference:</b> | Well 8816D-24 D30                    |
| <b>Company:</b>  | EnCana Oil & Gas (USA) Inc  | <b>TVD Reference:</b>               | WELL @ 7362.0ft (Original Well Elev) |
| <b>Project:</b>  | Eureka Unit                 | <b>MD Reference:</b>                | WELL @ 7362.0ft (Original Well Elev) |
| <b>Site:</b>     | S19-T3S-R97W (D30 397 Pad)  | <b>North Reference:</b>             | True                                 |
| <b>Well:</b>     | 8816D-24 D30                | <b>Survey Calculation Method:</b>   | Minimum Curvature                    |
| <b>Wellbore:</b> | DD                          |                                     |                                      |
| <b>Design:</b>   | Plan #1                     |                                     |                                      |

### Planned Survey

| Measured Depth (ft) | Inclination (°) | Azimuth (°) | Vertical Depth (ft) | +N/-S (ft) | +E/-W (ft) | Vertical Section (ft) | Dogleg Rate (°/100ft) | Build Rate (°/100ft) | Comments / Formations |
|---------------------|-----------------|-------------|---------------------|------------|------------|-----------------------|-----------------------|----------------------|-----------------------|
| 0.0                 | 0.00            | 0.00        | 0.0                 | 0.0        | 0.0        | 0.0                   | 0.00                  | 0.00                 |                       |
| 100.0               | 0.00            | 0.00        | 100.0               | 0.0        | 0.0        | 0.0                   | 0.00                  | 0.00                 |                       |
| 200.0               | 0.00            | 0.00        | 200.0               | 0.0        | 0.0        | 0.0                   | 0.00                  | 0.00                 |                       |
| 250.0               | 0.00            | 0.00        | 250.0               | 0.0        | 0.0        | 0.0                   | 0.00                  | 0.00                 | KOP @ 250'            |
| 300.0               | 1.50            | 285.41      | 300.0               | 0.2        | -0.6       | 0.7                   | 3.00                  | 3.00                 |                       |
| 400.0               | 4.50            | 285.41      | 399.8               | 1.6        | -5.7       | 5.9                   | 3.00                  | 3.00                 |                       |
| 500.0               | 7.50            | 285.41      | 499.3               | 4.3        | -15.8      | 16.3                  | 3.00                  | 3.00                 |                       |
| 600.0               | 10.50           | 285.41      | 598.0               | 8.5        | -30.8      | 32.0                  | 3.00                  | 3.00                 |                       |
| 700.0               | 13.50           | 285.41      | 695.8               | 14.0       | -50.9      | 52.8                  | 3.00                  | 3.00                 |                       |
| 800.0               | 16.50           | 285.41      | 792.4               | 20.9       | -75.8      | 78.6                  | 3.00                  | 3.00                 |                       |
| 900.0               | 19.50           | 285.41      | 887.5               | 29.1       | -105.6     | 109.5                 | 3.00                  | 3.00                 |                       |
| 915.9               | 19.98           | 285.41      | 902.5               | 30.5       | -110.8     | 114.9                 | 3.00                  | 3.00                 | EOB; Inc=19.98°       |
| 1,000.0             | 19.98           | 285.41      | 981.5               | 38.2       | -138.5     | 143.6                 | 0.00                  | 0.00                 |                       |
| 1,100.0             | 19.98           | 285.41      | 1,075.5             | 47.2       | -171.4     | 177.8                 | 0.00                  | 0.00                 |                       |
| 1,200.0             | 19.98           | 285.41      | 1,169.5             | 56.3       | -204.4     | 212.0                 | 0.00                  | 0.00                 |                       |
| 1,300.0             | 19.98           | 285.41      | 1,263.5             | 65.4       | -237.3     | 246.1                 | 0.00                  | 0.00                 |                       |
| 1,318.6             | 19.98           | 285.41      | 1,281.0             | 67.1       | -243.4     | 252.5                 | 0.00                  | 0.00                 | A-Groove (TVD)        |
| 1,400.0             | 19.98           | 285.41      | 1,357.5             | 74.5       | -270.2     | 280.3                 | 0.00                  | 0.00                 |                       |
| 1,470.8             | 19.98           | 285.41      | 1,424.0             | 80.9       | -293.5     | 304.5                 | 0.00                  | 0.00                 | B-Groove (TVD)        |
| 1,500.0             | 19.98           | 285.41      | 1,451.4             | 83.6       | -303.2     | 314.5                 | 0.00                  | 0.00                 |                       |
| 1,600.0             | 19.98           | 285.41      | 1,545.4             | 92.6       | -336.1     | 348.6                 | 0.00                  | 0.00                 |                       |
| 1,700.0             | 19.98           | 285.41      | 1,639.4             | 101.7      | -369.0     | 382.8                 | 0.00                  | 0.00                 |                       |
| 1,800.0             | 19.98           | 285.41      | 1,733.4             | 110.8      | -402.0     | 416.9                 | 0.00                  | 0.00                 |                       |
| 1,900.0             | 19.98           | 285.41      | 1,827.4             | 119.9      | -434.9     | 451.1                 | 0.00                  | 0.00                 |                       |
| 2,000.0             | 19.98           | 285.41      | 1,921.4             | 129.0      | -467.8     | 485.3                 | 0.00                  | 0.00                 |                       |
| 2,100.0             | 19.98           | 285.41      | 2,015.3             | 138.0      | -500.8     | 519.4                 | 0.00                  | 0.00                 |                       |
| 2,200.0             | 19.98           | 285.41      | 2,109.3             | 147.1      | -533.7     | 553.6                 | 0.00                  | 0.00                 |                       |
| 2,300.0             | 19.98           | 285.41      | 2,203.3             | 156.2      | -566.6     | 587.8                 | 0.00                  | 0.00                 |                       |
| 2,400.0             | 19.98           | 285.41      | 2,297.3             | 165.3      | -599.6     | 621.9                 | 0.00                  | 0.00                 |                       |
| 2,500.0             | 19.98           | 285.41      | 2,391.3             | 174.3      | -632.5     | 656.1                 | 0.00                  | 0.00                 |                       |
| 2,600.0             | 19.98           | 285.41      | 2,485.3             | 183.4      | -665.4     | 690.2                 | 0.00                  | 0.00                 |                       |
| 2,700.0             | 19.98           | 285.41      | 2,579.2             | 192.5      | -698.4     | 724.4                 | 0.00                  | 0.00                 |                       |
| 2,800.0             | 19.98           | 285.41      | 2,673.2             | 201.6      | -731.3     | 758.6                 | 0.00                  | 0.00                 |                       |
| 2,900.0             | 19.98           | 285.41      | 2,767.2             | 210.7      | -764.3     | 792.7                 | 0.00                  | 0.00                 |                       |
| 2,905.1             | 19.98           | 285.41      | 2,772.0             | 211.1      | -765.9     | 794.5                 | 0.00                  | 0.00                 | Wasatch (TVD)         |
| 3,000.0             | 19.98           | 285.41      | 2,861.2             | 219.7      | -797.2     | 826.9                 | 0.00                  | 0.00                 |                       |
| 3,100.0             | 19.98           | 285.41      | 2,955.2             | 228.8      | -830.1     | 861.1                 | 0.00                  | 0.00                 |                       |
| 3,200.0             | 19.98           | 285.41      | 3,049.2             | 237.9      | -863.1     | 895.2                 | 0.00                  | 0.00                 |                       |
| 3,300.0             | 19.98           | 285.41      | 3,143.1             | 247.0      | -896.0     | 929.4                 | 0.00                  | 0.00                 |                       |
| 3,400.0             | 19.98           | 285.41      | 3,237.1             | 256.0      | -928.9     | 963.5                 | 0.00                  | 0.00                 |                       |
| 3,500.0             | 19.98           | 285.41      | 3,331.1             | 265.1      | -961.9     | 997.7                 | 0.00                  | 0.00                 |                       |
| 3,600.0             | 19.98           | 285.41      | 3,425.1             | 274.2      | -994.8     | 1,031.9               | 0.00                  | 0.00                 |                       |
| 3,700.0             | 19.98           | 285.41      | 3,519.1             | 283.3      | -1,027.7   | 1,066.0               | 0.00                  | 0.00                 |                       |
| 3,800.0             | 19.98           | 285.41      | 3,613.1             | 292.4      | -1,060.7   | 1,100.2               | 0.00                  | 0.00                 |                       |
| 3,900.0             | 19.98           | 285.41      | 3,707.0             | 301.4      | -1,093.6   | 1,134.4               | 0.00                  | 0.00                 |                       |
| 4,000.0             | 19.98           | 285.41      | 3,801.0             | 310.5      | -1,126.5   | 1,168.5               | 0.00                  | 0.00                 |                       |
| 4,100.0             | 19.98           | 285.41      | 3,895.0             | 319.6      | -1,159.5   | 1,202.7               | 0.00                  | 0.00                 |                       |
| 4,200.0             | 19.98           | 285.41      | 3,989.0             | 328.7      | -1,192.4   | 1,236.8               | 0.00                  | 0.00                 |                       |
| 4,300.0             | 19.98           | 285.41      | 4,083.0             | 337.8      | -1,225.3   | 1,271.0               | 0.00                  | 0.00                 |                       |
| 4,400.0             | 19.98           | 285.41      | 4,177.0             | 346.8      | -1,258.3   | 1,305.2               | 0.00                  | 0.00                 |                       |
| 4,500.0             | 19.98           | 285.41      | 4,270.9             | 355.9      | -1,291.2   | 1,339.3               | 0.00                  | 0.00                 |                       |
| 4,600.0             | 19.98           | 285.41      | 4,364.9             | 365.0      | -1,324.1   | 1,373.5               | 0.00                  | 0.00                 |                       |

# Cathedral Energy Services

## Planning Report

|                  |                             |                                     |                                      |
|------------------|-----------------------------|-------------------------------------|--------------------------------------|
| <b>Database:</b> | USA EDM 5000 Multi Users DB | <b>Local Co-ordinate Reference:</b> | Well 8816D-24 D30                    |
| <b>Company:</b>  | EnCana Oil & Gas (USA) Inc  | <b>TVD Reference:</b>               | WELL @ 7362.0ft (Original Well Elev) |
| <b>Project:</b>  | Eureka Unit                 | <b>MD Reference:</b>                | WELL @ 7362.0ft (Original Well Elev) |
| <b>Site:</b>     | S19-T3S-R97W (D30 397 Pad)  | <b>North Reference:</b>             | True                                 |
| <b>Well:</b>     | 8816D-24 D30                | <b>Survey Calculation Method:</b>   | Minimum Curvature                    |
| <b>Wellbore:</b> | DD                          |                                     |                                      |
| <b>Design:</b>   | Plan #1                     |                                     |                                      |

| Planned Survey      |                 |             |                     |            |            |                       |                       |                      |  |
|---------------------|-----------------|-------------|---------------------|------------|------------|-----------------------|-----------------------|----------------------|--|
| Measured Depth (ft) | Inclination (°) | Azimuth (°) | Vertical Depth (ft) | +N/-S (ft) | +E/-W (ft) | Vertical Section (ft) | Dogleg Rate (°/100ft) | Build Rate (°/100ft) | Comments / Formations                        |
| 4,700.0             | 19.98           | 285.41      | 4,458.9             | 374.1      | -1,357.1   | 1,407.7               | 0.00                  | 0.00                 |  |
| 4,800.0             | 19.98           | 285.41      | 4,552.9             | 383.1      | -1,390.0   | 1,441.8               | 0.00                  | 0.00                 |  |
| 4,854.4             | 19.98           | 285.41      | 4,604.0             | 388.1      | -1,407.9   | 1,460.4               | 0.00                  | 0.00                 | Wasatch G (TVD)                              |
| 4,900.0             | 19.98           | 285.41      | 4,646.9             | 392.2      | -1,423.0   | 1,476.0               | 0.00                  | 0.00                 |  |
| 5,000.0             | 19.98           | 285.41      | 4,740.9             | 401.3      | -1,455.9   | 1,510.1               | 0.00                  | 0.00                 |  |
| 5,100.0             | 19.98           | 285.41      | 4,834.8             | 410.4      | -1,488.8   | 1,544.3               | 0.00                  | 0.00                 |  |
| 5,200.0             | 19.98           | 285.41      | 4,928.8             | 419.5      | -1,521.8   | 1,578.5               | 0.00                  | 0.00                 |  |
| 5,300.0             | 19.98           | 285.41      | 5,022.8             | 428.5      | -1,554.7   | 1,612.6               | 0.00                  | 0.00                 |  |
| 5,400.0             | 19.98           | 285.41      | 5,116.8             | 437.6      | -1,587.6   | 1,646.8               | 0.00                  | 0.00                 |  |
| 5,500.0             | 19.98           | 285.41      | 5,210.8             | 446.7      | -1,620.6   | 1,681.0               | 0.00                  | 0.00                 |  |
| 5,600.0             | 19.98           | 285.41      | 5,304.8             | 455.8      | -1,653.5   | 1,715.1               | 0.00                  | 0.00                 |  |
| 5,679.0             | 19.98           | 285.41      | 5,379.0             | 462.9      | -1,679.5   | 1,742.1               | 0.00                  | 0.00                 | Molina Base (TVD)                            |
| 5,700.0             | 19.98           | 285.41      | 5,398.7             | 464.8      | -1,686.4   | 1,749.3               | 0.00                  | 0.00                 |  |
| 5,800.0             | 19.98           | 285.41      | 5,492.7             | 473.9      | -1,719.4   | 1,783.4               | 0.00                  | 0.00                 |  |
| 5,900.0             | 19.98           | 285.41      | 5,586.7             | 483.0      | -1,752.3   | 1,817.6               | 0.00                  | 0.00                 |  |
| 5,969.0             | 19.98           | 285.41      | 5,651.5             | 489.3      | -1,775.0   | 1,841.2               | 0.00                  | 0.00                 | Start Drop -3.00                             |
| 6,000.0             | 19.05           | 285.41      | 5,680.8             | 492.0      | -1,785.0   | 1,851.5               | 3.00                  | -3.00                |  |
| 6,100.0             | 16.05           | 285.41      | 5,776.1             | 500.0      | -1,814.1   | 1,881.7               | 3.00                  | -3.00                |  |
| 6,200.0             | 13.05           | 285.41      | 5,872.9             | 506.7      | -1,838.3   | 1,906.8               | 3.00                  | -3.00                |  |
| 6,300.0             | 10.05           | 285.41      | 5,970.9             | 512.0      | -1,857.6   | 1,926.8               | 3.00                  | -3.00                |  |
| 6,400.0             | 7.05            | 285.41      | 6,069.7             | 516.0      | -1,871.9   | 1,941.7               | 3.00                  | -3.00                |  |
| 6,500.0             | 4.05            | 285.41      | 6,169.3             | 518.5      | -1,881.2   | 1,951.3               | 3.00                  | -3.00                |  |
| 6,600.0             | 1.05            | 285.41      | 6,269.2             | 519.7      | -1,885.5   | 1,955.8               | 3.00                  | -3.00                |  |
| 6,634.8             | 0.00            | 0.00        | 6,304.0             | 519.8      | -1,885.8   | 1,956.1               | 3.00                  | -3.00                | EOD; Inc=0° - Williams Fork (TVD) - 8816D-24 |
| 6,700.0             | 0.16            | 236.27      | 6,369.2             | 519.7      | -1,885.9   | 1,956.1               | 0.25                  | 0.25                 |  |
| 6,726.5             | 0.23            | 236.27      | 6,395.6             | 519.7      | -1,886.0   | 1,956.2               | 0.25                  | 0.25                 |  |
| 6,800.0             | 0.23            | 236.27      | 6,469.2             | 519.5      | -1,886.2   | 1,956.4               | 0.00                  | 0.00                 |  |
| 6,900.0             | 0.23            | 236.27      | 6,569.2             | 519.3      | -1,886.5   | 1,956.7               | 0.00                  | 0.00                 |  |
| 7,000.0             | 0.23            | 236.27      | 6,669.2             | 519.1      | -1,886.9   | 1,956.9               | 0.00                  | 0.00                 |  |
| 7,100.0             | 0.23            | 236.27      | 6,769.1             | 518.9      | -1,887.2   | 1,957.2               | 0.00                  | 0.00                 |  |
| 7,200.0             | 0.23            | 236.27      | 6,869.1             | 518.6      | -1,887.5   | 1,957.4               | 0.00                  | 0.00                 |  |
| 7,300.0             | 0.23            | 236.27      | 6,969.1             | 518.4      | -1,887.9   | 1,957.7               | 0.00                  | 0.00                 |  |
| 7,400.0             | 0.23            | 236.27      | 7,069.1             | 518.2      | -1,888.2   | 1,958.0               | 0.00                  | 0.00                 |  |
| 7,500.0             | 0.23            | 236.27      | 7,169.1             | 518.0      | -1,888.5   | 1,958.2               | 0.00                  | 0.00                 |  |
| 7,600.0             | 0.23            | 236.27      | 7,269.1             | 517.8      | -1,888.9   | 1,958.5               | 0.00                  | 0.00                 |  |
| 7,700.0             | 0.23            | 236.27      | 7,369.1             | 517.5      | -1,889.2   | 1,958.8               | 0.00                  | 0.00                 |  |
| 7,800.0             | 0.23            | 236.27      | 7,469.1             | 517.3      | -1,889.5   | 1,959.0               | 0.00                  | 0.00                 |  |
| 7,900.0             | 0.23            | 236.27      | 7,569.1             | 517.1      | -1,889.9   | 1,959.3               | 0.00                  | 0.00                 |  |
| 8,000.0             | 0.23            | 236.27      | 7,669.1             | 516.9      | -1,890.2   | 1,959.6               | 0.00                  | 0.00                 |  |
| 8,100.0             | 0.23            | 236.27      | 7,769.1             | 516.6      | -1,890.5   | 1,959.8               | 0.00                  | 0.00                 |  |
| 8,200.0             | 0.23            | 236.27      | 7,869.1             | 516.4      | -1,890.9   | 1,960.1               | 0.00                  | 0.00                 |  |
| 8,300.0             | 0.23            | 236.27      | 7,969.1             | 516.2      | -1,891.2   | 1,960.3               | 0.00                  | 0.00                 |  |
| 8,400.0             | 0.23            | 236.27      | 8,069.1             | 516.0      | -1,891.5   | 1,960.6               | 0.00                  | 0.00                 |  |
| 8,500.0             | 0.23            | 236.27      | 8,169.1             | 515.8      | -1,891.8   | 1,960.9               | 0.00                  | 0.00                 |  |
| 8,600.0             | 0.23            | 236.27      | 8,269.1             | 515.5      | -1,892.2   | 1,961.1               | 0.00                  | 0.00                 |  |
| 8,700.0             | 0.23            | 236.27      | 8,369.1             | 515.3      | -1,892.5   | 1,961.4               | 0.00                  | 0.00                 |  |
| 8,800.0             | 0.23            | 236.27      | 8,469.1             | 515.1      | -1,892.8   | 1,961.7               | 0.00                  | 0.00                 |  |
| 8,900.0             | 0.23            | 236.27      | 8,569.1             | 514.9      | -1,893.2   | 1,961.9               | 0.00                  | 0.00                 |  |
| 9,000.0             | 0.23            | 236.27      | 8,669.1             | 514.7      | -1,893.5   | 1,962.2               | 0.00                  | 0.00                 |  |
| 9,100.0             | 0.23            | 236.27      | 8,769.1             | 514.4      | -1,893.8   | 1,962.5               | 0.00                  | 0.00                 |  |
| 9,200.0             | 0.23            | 236.27      | 8,869.1             | 514.2      | -1,894.2   | 1,962.7               | 0.00                  | 0.00                 |  |
| 9,300.0             | 0.23            | 236.27      | 8,969.1             | 514.0      | -1,894.5   | 1,963.0               | 0.00                  | 0.00                 |  |

# Cathedral Energy Services

## Planning Report

|                  |                             |                                     |                                      |
|------------------|-----------------------------|-------------------------------------|--------------------------------------|
| <b>Database:</b> | USA EDM 5000 Multi Users DB | <b>Local Co-ordinate Reference:</b> | Well 8816D-24 D30                    |
| <b>Company:</b>  | EnCana Oil & Gas (USA) Inc  | <b>TVD Reference:</b>               | WELL @ 7362.0ft (Original Well Elev) |
| <b>Project:</b>  | Eureka Unit                 | <b>MD Reference:</b>                | WELL @ 7362.0ft (Original Well Elev) |
| <b>Site:</b>     | S19-T3S-R97W (D30 397 Pad)  | <b>North Reference:</b>             | True                                 |
| <b>Well:</b>     | 8816D-24 D30                | <b>Survey Calculation Method:</b>   | Minimum Curvature                    |
| <b>Wellbore:</b> | DD                          |                                     |                                      |
| <b>Design:</b>   | Plan #1                     |                                     |                                      |

### Planned Survey

| Measured Depth (ft) | Inclination (°) | Azimuth (°) | Vertical Depth (ft) | +N/-S (ft) | +E/-W (ft) | Vertical Section (ft) | Dogleg Rate (°/100ft) | Build Rate (°/100ft) | Comments / Formations                       |
|---------------------|-----------------|-------------|---------------------|------------|------------|-----------------------|-----------------------|----------------------|---|
| 9,400.0             | 0.23            | 236.27      | 9,069.1             | 513.8      | -1,894.8   | 1,963.2               | 0.00                  | 0.00                 |   |
| 9,500.0             | 0.23            | 236.27      | 9,169.1             | 513.5      | -1,895.2   | 1,963.5               | 0.00                  | 0.00                 |   |
| 9,600.0             | 0.23            | 236.27      | 9,269.1             | 513.3      | -1,895.5   | 1,963.8               | 0.00                  | 0.00                 |   |
| 9,700.0             | 0.23            | 236.27      | 9,369.1             | 513.1      | -1,895.8   | 1,964.0               | 0.00                  | 0.00                 |   |
| 9,800.0             | 0.23            | 236.27      | 9,469.1             | 512.9      | -1,896.2   | 1,964.3               | 0.00                  | 0.00                 |   |
| 9,824.9             | 0.23            | 236.27      | 9,494.0             | 512.8      | -1,896.3   | 1,964.4               | 0.00                  | 0.00                 | Cameo Coals (TVD)                           |
| 9,900.0             | 0.23            | 236.27      | 9,569.1             | 512.7      | -1,896.5   | 1,964.6               | 0.00                  | 0.00                 |   |
| 10,000.0            | 0.23            | 236.27      | 9,669.1             | 512.4      | -1,896.8   | 1,964.8               | 0.00                  | 0.00                 |   |
| 10,100.0            | 0.23            | 236.27      | 9,769.1             | 512.2      | -1,897.2   | 1,965.1               | 0.00                  | 0.00                 |   |
| 10,200.0            | 0.23            | 236.27      | 9,869.1             | 512.0      | -1,897.5   | 1,965.4               | 0.00                  | 0.00                 |   |
| 10,300.0            | 0.23            | 236.27      | 9,969.1             | 511.8      | -1,897.8   | 1,965.6               | 0.00                  | 0.00                 |   |
| 10,384.9            | 0.23            | 236.27      | 10,054.0            | 511.6      | -1,898.1   | 1,965.8               | 0.00                  | 0.00                 | Rollins (TVD)                               |
| 10,400.0            | 0.23            | 236.27      | 10,069.1            | 511.5      | -1,898.2   | 1,965.9               | 0.00                  | 0.00                 |   |
| 10,500.0            | 0.23            | 236.27      | 10,169.1            | 511.3      | -1,898.5   | 1,966.1               | 0.00                  | 0.00                 |   |
| 10,539.9            | 0.23            | 236.27      | 10,209.0            | 511.2      | -1,898.6   | 1,966.3               | 0.00                  | 0.00                 | Cozzette (TVD)                              |
| 10,600.0            | 0.23            | 236.27      | 10,269.1            | 511.1      | -1,898.8   | 1,966.4               | 0.00                  | 0.00                 |   |
| 10,700.0            | 0.23            | 236.27      | 10,369.1            | 510.9      | -1,899.2   | 1,966.7               | 0.00                  | 0.00                 |   |
| 10,749.9            | 0.23            | 236.27      | 10,419.0            | 510.8      | -1,899.3   | 1,966.8               | 0.00                  | 0.00                 | Corcoran (TVD)                              |
| 10,800.0            | 0.23            | 236.27      | 10,469.1            | 510.7      | -1,899.5   | 1,966.9               | 0.00                  | 0.00                 |   |
| 10,900.0            | 0.23            | 236.27      | 10,569.1            | 510.4      | -1,899.8   | 1,967.2               | 0.00                  | 0.00                 |   |
| 11,000.0            | 0.23            | 236.27      | 10,669.1            | 510.2      | -1,900.2   | 1,967.5               | 0.00                  | 0.00                 |   |
| 11,049.9            | 0.23            | 236.27      | 10,719.0            | 510.1      | -1,900.3   | 1,967.6               | 0.00                  | 0.00                 | Sego (TVD)                                  |
| 11,100.0            | 0.23            | 236.27      | 10,769.1            | 510.0      | -1,900.5   | 1,967.7               | 0.00                  | 0.00                 |   |
| 11,199.9            | 0.23            | 236.27      | 10,869.0            | 509.8      | -1,900.8   | 1,968.0               | 0.00                  | 0.00                 | Drillers TD @ 10869' TVD - 8816D-24 D30 PBH |
| 11,200.0            | 0.23            | 236.27      | 10,869.1            | 509.8      | -1,900.8   | 1,968.0               | 0.00                  | 0.00                 |   |
| 11,300.0            | 0.23            | 236.27      | 10,969.1            | 509.5      | -1,901.2   | 1,968.3               | 0.00                  | 0.00                 |   |
| 11,349.9            | 0.23            | 236.27      | 11,019.0            | 509.4      | -1,901.3   | 1,968.4               | 0.00                  | 0.00                 | Permit TD @ 11019' TVD                      |

### Targets

| Target Name  | Dip Angle (°) | Dip Dir. (°) | TVD (ft) | +N/-S (ft) | +E/-W (ft) | Northing (ft) | Easting (ft) | Latitude  | Longitude   |
|--|---------------|--------------|----------|------------|------------|---------------|--------------|-----------|-------------|
| 8816D-24 D30 TGT<br>- hit/miss target<br>- Shape<br>- Point                            | 0.00          | 0.00         | 6,304.0  | 519.8      | -1,885.8   | 1,717,314.08  | 2,202,685.42 | 39.768649 | -108.336812 |
| 8816D-24 D30 PBHL<br>- plan hits target center<br>- Rectangle (sides W30.0 H50.0 D0.0) | 0.00          | 0.00         | 10,869.0 | 509.8      | -1,900.8   | 1,717,304.52  | 2,202,670.09 | 39.768622 | -108.336866 |

# Cathedral Energy Services

## Planning Report

|                  |                             |                                     |                                      |
|------------------|-----------------------------|-------------------------------------|--------------------------------------|
| <b>Database:</b> | USA EDM 5000 Multi Users DB | <b>Local Co-ordinate Reference:</b> | Well 8816D-24 D30                    |
| <b>Company:</b>  | EnCana Oil & Gas (USA) Inc  | <b>TVD Reference:</b>               | WELL @ 7362.0ft (Original Well Elev) |
| <b>Project:</b>  | Eureka Unit                 | <b>MD Reference:</b>                | WELL @ 7362.0ft (Original Well Elev) |
| <b>Site:</b>     | S19-T3S-R97W (D30 397 Pad)  | <b>North Reference:</b>             | True                                 |
| <b>Well:</b>     | 8816D-24 D30                | <b>Survey Calculation Method:</b>   | Minimum Curvature                    |
| <b>Wellbore:</b> | DD                          |                                     |                                      |
| <b>Design:</b>   | Plan #1                     |                                     |                                      |

### Formations

| Measured Depth (ft) | Vertical Depth (ft) | Name                | Lithology | Dip (°) | Dip Direction (°) |
|---------------------|---------------------|---------------------|-----------|---------|-------------------|
| 1,318.6             | 1,281.0             | A-Groove (TVD)      |           |         |                   |
| 1,470.8             | 1,424.0             | B-Groove (TVD)      |           |         |                   |
| 2,905.1             | 2,772.0             | Wasatch (TVD)       |           |         |                   |
| 4,854.4             | 4,604.0             | Wasatch G (TVD)     |           |         |                   |
| 5,679.0             | 5,379.0             | Molina Base (TVD)   |           |         |                   |
| 6,634.8             | 6,304.0             | Williams Fork (TVD) |           |         |                   |
| 9,824.9             | 9,494.0             | Cameo Coals (TVD)   |           |         |                   |
| 10,384.9            | 10,054.0            | Rollins (TVD)       |           |         |                   |
| 10,539.9            | 10,209.0            | Cozzette (TVD)      |           |         |                   |
| 10,749.9            | 10,419.0            | Corcoran (TVD)      |           |         |                   |
| 11,049.9            | 10,719.0            | Sego (TVD)          |           |         |                   |

### Plan Annotations

| Measured Depth (ft) | Vertical Depth (ft) | Local Coordinates |            | Comment                  |
|---------------------|---------------------|-------------------|------------|--------------------------|
|                     |                     | +N/-S (ft)        | +E/-W (ft) |                          |
| 250.0               | 250.0               | 0.0               | 0.0        | KOP @ 250'               |
| 915.9               | 902.5               | 30.5              | -110.8     | EOB; Inc=19.98°          |
| 5,969.0             | 5,651.5             | 489.3             | -1,775.0   | Start Drop -3.00         |
| 6,634.8             | 6,304.0             | 519.8             | -1,885.8   | EOD; Inc=0°              |
| 11,199.9            | 10,869.0            | 519.7             | -1,886.0   | Drillers TD @ 10869' TVD |
| 11,349.9            | 11,019.0            | 509.8             | -1,900.8   | Permit TD @ 11019' TVD   |