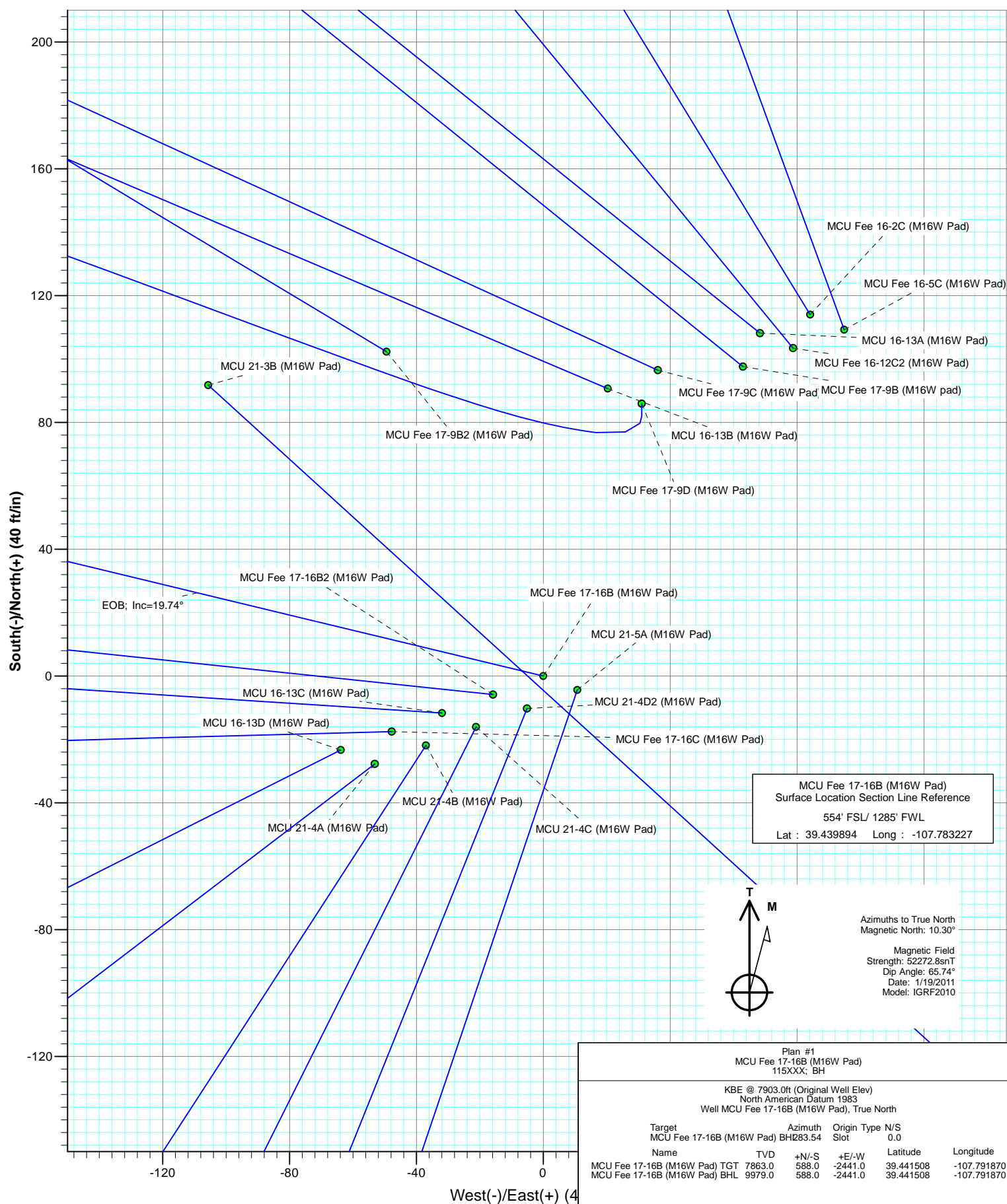
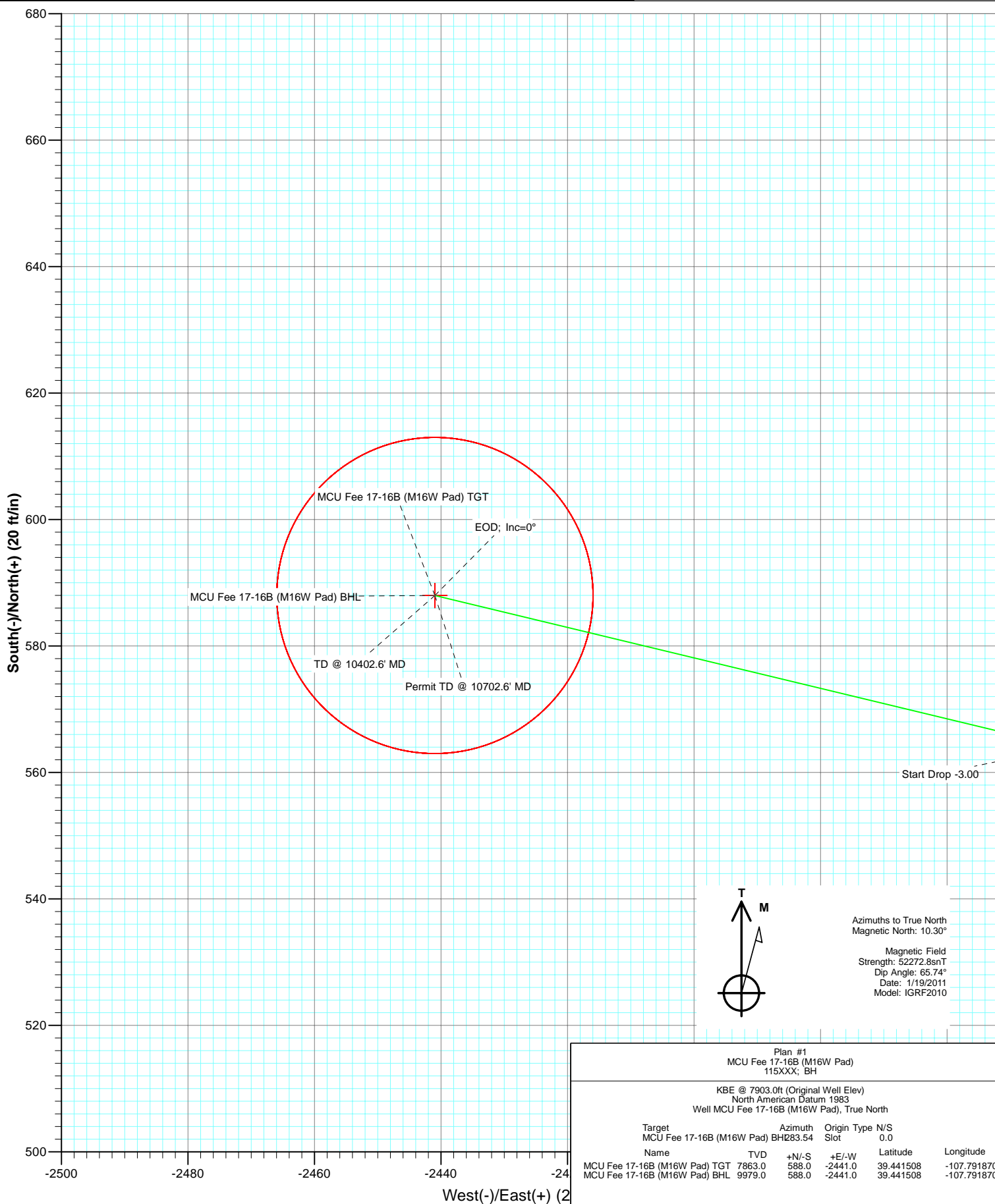


|  |                         |                         |                             |                                    |   |  |
|--|-------------------------|-------------------------|-----------------------------|------------------------------------|---|--|
| Plan #1<br>MCU Fee 17-16B (M16W Pad)<br>115XXX; BH   |                         |                         |                             |                                    |   |  |
| KBE @ 7903.0ft (Original Well Elev)<br>North American Datum 1983<br>Well MCU Fee 17-16B (M16W Pad), True North |                         |                         |                             |                                    |   |  |
| Target<br>MCU Fee 17-16B (M16W Pad) BHL  |                         | Azimuth<br>283.54       | Origin Type<br>S/N          | S<br>0.0                           |   |  |
| Name<br>MCU Fee 17-16B (M16W Pad) TGT<br>MCU Fee 17-16B (M16W Pad) BHL   | TVD<br>7863.0<br>9979.0 | +N/-S<br>588.0<br>588.0 | +E/-W<br>-2441.0<br>-2441.0 | Latitude<br>39.441508<br>39.441508 | Longitude<br>-107.791870<br>-107.791870 |  |





Project: Mamm Creek  
 Site: SWSW S16-T7S-R93W (M16W Pad)  
 Well: MCU Fee 17-16B (M16W Pad)  
 Wellbore: DD  
 Plan: Plan #1



# Cathedral Energy Services

## Planning Report

|                  |                              |                                     |                                     |
|------------------|------------------------------|-------------------------------------|-------------------------------------|
| <b>Database:</b> | EDM 5000.1 US Multi Users DB | <b>Local Co-ordinate Reference:</b> | Well MCU Fee 17-16B (M16W Pad)      |
| <b>Company:</b>  | EnCana Oil & Gas (USA) Inc   | <b>TVD Reference:</b>               | KBE @ 7903.0ft (Original Well Elev) |
| <b>Project:</b>  | Mamm Creek                   | <b>MD Reference:</b>                | KBE @ 7903.0ft (Original Well Elev) |
| <b>Site:</b>     | SWSW S16-T7S-R93W (M16W Pad) | <b>North Reference:</b>             | True                                |
| <b>Well:</b>     | MCU Fee 17-16B (M16W Pad)    | <b>Survey Calculation Method:</b>   | Minimum Curvature                   |
| <b>Wellbore:</b> | DD                           |                                     |                                     |
| <b>Design:</b>   | Plan #1                      |                                     |                                     |

|                    |                           |                      |                |
|--------------------|---------------------------|----------------------|----------------|
| <b>Project</b>     | Mamm Creek                |                      |                |
| <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                  |          | SWSW S16-T7S-R93W (M16W Pad) |                 |                   |             |
|-----------------------|----------|------------------------------|-----------------|-------------------|-------------|
| Site Position:        |          | Northing:                    | 1,593,196.17 ft | Latitude:         | 39.439834   |
| From:                 | Lat/Long | Easting:                     | 2,355,193.71 ft | Longitude:        | -107.783358 |
| Position Uncertainty: | 0.0 ft   | Slot Radius:                 | 13.200 in       | Grid Convergence: | -1.44 °     |

|                      |                           |        |                     |                 |               |             |
|----------------------|---------------------------|--------|---------------------|-----------------|---------------|-------------|
| Well                 | MCU Fee 17-16B (M16W Pad) |        |                     |                 |               |             |
| Well Position        | +N/-S                     | 0.0 ft | Northing:           | 1,593,217.08 ft | Latitude:     | 39.439894   |
|                      | +E/-W                     | 0.0 ft | Easting:            | 2,355,231.25 ft | Longitude:    | -107.783227 |
| Position Uncertainty |                           | 0.0 ft | Wellhead Elevation: | ft              | Ground Level: | 7,881.0 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          | 1/19/2011          | 10.30                  | 65.74                | 52,273                     |

|                          |                              |                   |                      |                      |
|--------------------------|------------------------------|-------------------|----------------------|----------------------|
| <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                  | 283.54               |

| <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    |                    |
| 200.0                | 0.00            | 0.00        | 200.0               | 0.0        | 0.0        | 0.00                  | 0.00                 | 0.00                | 0.00    |                    |
| 857.9                | 19.74           | 283.54      | 844.9               | 26.3       | -109.1     | 3.00                  | 3.00                 | 0.00                | 283.54  |                    |
| 7,628.7              | 19.74           | 283.54      | 7,218.1             | 561.7      | -2,331.9   | 0.00                  | 0.00                 | 0.00                | 0.00    |                    |
| 8,286.6              | 0.00            | 0.00        | 7,863.0             | 588.0      | -2,441.0   | 3.00                  | -3.00                | 0.00                | 180.00  | MCU Fee 17-16B (M1 |
| 10,402.6             | 0.00            | 0.00        | 9,979.0             | 588.0      | -2,441.0   | 0.00                  | 0.00                 | 0.00                | 0.00    | MCU Fee 17-16B (M1 |
| 10,702.6             | 0.00            | 0.00        | 10,279.0            | 588.0      | -2,441.0   | 0.00                  | 0.00                 | 0.00                | 0.00    |                    |

# Cathedral Energy Services

## Planning Report

|                  |                              |                                     |                                     |
|------------------|------------------------------|-------------------------------------|-------------------------------------|
| <b>Database:</b> | EDM 5000.1 US Multi Users DB | <b>Local Co-ordinate Reference:</b> | Well MCU Fee 17-16B (M16W Pad)      |
| <b>Company:</b>  | EnCana Oil & Gas (USA) Inc   | <b>TVD Reference:</b>               | KBE @ 7903.0ft (Original Well Elev) |
| <b>Project:</b>  | Mamm Creek                   | <b>MD Reference:</b>                | KBE @ 7903.0ft (Original Well Elev) |
| <b>Site:</b>     | SWSW S16-T7S-R93W (M16W Pad) | <b>North Reference:</b>             | True                                |
| <b>Well:</b>     | MCU Fee 17-16B (M16W Pad)    | <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                 | KOP @ 200' MD         |
| 300.0               | 3.00            | 283.54      | 300.0               | 0.6        | -2.5       | 2.6                   | 3.00                  | 3.00                 |                       |
| 400.0               | 6.00            | 283.54      | 399.6               | 2.5        | -10.2      | 10.5                  | 3.00                  | 3.00                 |                       |
| 500.0               | 9.00            | 283.54      | 498.8               | 5.5        | -22.9      | 23.5                  | 3.00                  | 3.00                 |                       |
| 600.0               | 12.00           | 283.54      | 597.1               | 9.8        | -40.6      | 41.7                  | 3.00                  | 3.00                 |                       |
| 700.0               | 15.00           | 283.54      | 694.3               | 15.2       | -63.3      | 65.1                  | 3.00                  | 3.00                 |                       |
| 800.0               | 18.00           | 283.54      | 790.2               | 21.9       | -90.9      | 93.5                  | 3.00                  | 3.00                 |                       |
| 857.9               | 19.74           | 283.54      | 844.9               | 26.3       | -109.1     | 112.2                 | 3.00                  | 3.00                 | EOB; Inc=19.74°       |
| 900.0               | 19.74           | 283.54      | 884.6               | 29.6       | -122.9     | 126.4                 | 0.00                  | 0.00                 |                       |
| 1,000.0             | 19.74           | 283.54      | 978.7               | 37.5       | -155.7     | 160.2                 | 0.00                  | 0.00                 |                       |
| 1,070.3             | 19.74           | 283.54      | 1,044.9             | 43.1       | -178.8     | 183.9                 | 0.00                  | 0.00                 | Surface Casing        |
| 1,100.0             | 19.74           | 283.54      | 1,072.8             | 45.4       | -188.6     | 194.0                 | 0.00                  | 0.00                 |                       |
| 1,200.0             | 19.74           | 283.54      | 1,167.0             | 53.3       | -221.4     | 227.7                 | 0.00                  | 0.00                 |                       |
| 1,300.0             | 19.74           | 283.54      | 1,261.1             | 61.2       | -254.2     | 261.5                 | 0.00                  | 0.00                 |                       |
| 1,400.0             | 19.74           | 283.54      | 1,355.2             | 69.1       | -287.0     | 295.3                 | 0.00                  | 0.00                 |                       |
| 1,500.0             | 19.74           | 283.54      | 1,449.3             | 77.1       | -319.9     | 329.0                 | 0.00                  | 0.00                 |                       |
| 1,600.0             | 19.74           | 283.54      | 1,543.5             | 85.0       | -352.7     | 362.8                 | 0.00                  | 0.00                 |                       |
| 1,700.0             | 19.74           | 283.54      | 1,637.6             | 92.9       | -385.5     | 396.6                 | 0.00                  | 0.00                 |                       |
| 1,800.0             | 19.74           | 283.54      | 1,731.7             | 100.8      | -418.4     | 430.3                 | 0.00                  | 0.00                 |                       |
| 1,900.0             | 19.74           | 283.54      | 1,825.9             | 108.7      | -451.2     | 464.1                 | 0.00                  | 0.00                 |                       |
| 2,000.0             | 19.74           | 283.54      | 1,920.0             | 116.6      | -484.0     | 497.9                 | 0.00                  | 0.00                 |                       |
| 2,100.0             | 19.74           | 283.54      | 2,014.1             | 124.5      | -516.9     | 531.6                 | 0.00                  | 0.00                 |                       |
| 2,200.0             | 19.74           | 283.54      | 2,108.2             | 132.4      | -549.7     | 565.4                 | 0.00                  | 0.00                 |                       |
| 2,300.0             | 19.74           | 283.54      | 2,202.4             | 140.3      | -582.5     | 599.2                 | 0.00                  | 0.00                 |                       |
| 2,400.0             | 19.74           | 283.54      | 2,296.5             | 148.2      | -615.3     | 632.9                 | 0.00                  | 0.00                 |                       |
| 2,500.0             | 19.74           | 283.54      | 2,390.6             | 156.1      | -648.2     | 666.7                 | 0.00                  | 0.00                 |                       |
| 2,600.0             | 19.74           | 283.54      | 2,484.7             | 164.0      | -681.0     | 700.5                 | 0.00                  | 0.00                 |                       |
| 2,700.0             | 19.74           | 283.54      | 2,578.9             | 172.0      | -713.8     | 734.2                 | 0.00                  | 0.00                 |                       |
| 2,800.0             | 19.74           | 283.54      | 2,673.0             | 179.9      | -746.7     | 768.0                 | 0.00                  | 0.00                 |                       |
| 2,900.0             | 19.74           | 283.54      | 2,767.1             | 187.8      | -779.5     | 801.8                 | 0.00                  | 0.00                 |                       |
| 3,000.0             | 19.74           | 283.54      | 2,861.2             | 195.7      | -812.3     | 835.5                 | 0.00                  | 0.00                 |                       |
| 3,100.0             | 19.74           | 283.54      | 2,955.4             | 203.6      | -845.1     | 869.3                 | 0.00                  | 0.00                 |                       |
| 3,200.0             | 19.74           | 283.54      | 3,049.5             | 211.5      | -878.0     | 903.1                 | 0.00                  | 0.00                 |                       |
| 3,300.0             | 19.74           | 283.54      | 3,143.6             | 219.4      | -910.8     | 936.9                 | 0.00                  | 0.00                 |                       |
| 3,400.0             | 19.74           | 283.54      | 3,237.7             | 227.3      | -943.6     | 970.6                 | 0.00                  | 0.00                 |                       |
| 3,500.0             | 19.74           | 283.54      | 3,331.9             | 235.2      | -976.5     | 1,004.4               | 0.00                  | 0.00                 |                       |
| 3,600.0             | 19.74           | 283.54      | 3,426.0             | 243.1      | -1,009.3   | 1,038.2               | 0.00                  | 0.00                 |                       |
| 3,700.0             | 19.74           | 283.54      | 3,520.1             | 251.0      | -1,042.1   | 1,071.9               | 0.00                  | 0.00                 |                       |
| 3,800.0             | 19.74           | 283.54      | 3,614.2             | 258.9      | -1,074.9   | 1,105.7               | 0.00                  | 0.00                 |                       |
| 3,900.0             | 19.74           | 283.54      | 3,708.4             | 266.9      | -1,107.8   | 1,139.5               | 0.00                  | 0.00                 |                       |
| 4,000.0             | 19.74           | 283.54      | 3,802.5             | 274.8      | -1,140.6   | 1,173.2               | 0.00                  | 0.00                 |                       |
| 4,036.7             | 19.74           | 283.54      | 3,837.0             | 277.7      | -1,152.6   | 1,185.6               | 0.00                  | 0.00                 | G Sand                |
| 4,100.0             | 19.74           | 283.54      | 3,896.6             | 282.7      | -1,173.4   | 1,207.0               | 0.00                  | 0.00                 |                       |
| 4,200.0             | 19.74           | 283.54      | 3,990.8             | 290.6      | -1,206.3   | 1,240.8               | 0.00                  | 0.00                 |                       |
| 4,300.0             | 19.74           | 283.54      | 4,084.9             | 298.5      | -1,239.1   | 1,274.5               | 0.00                  | 0.00                 |                       |
| 4,400.0             | 19.74           | 283.54      | 4,179.0             | 306.4      | -1,271.9   | 1,308.3               | 0.00                  | 0.00                 |                       |
| 4,500.0             | 19.74           | 283.54      | 4,273.1             | 314.3      | -1,304.8   | 1,342.1               | 0.00                  | 0.00                 |                       |
| 4,600.0             | 19.74           | 283.54      | 4,367.3             | 322.2      | -1,337.6   | 1,375.8               | 0.00                  | 0.00                 |                       |
| 4,700.0             | 19.74           | 283.54      | 4,461.4             | 330.1      | -1,370.4   | 1,409.6               | 0.00                  | 0.00                 |                       |
| 4,800.0             | 19.74           | 283.54      | 4,555.5             | 338.0      | -1,403.2   | 1,443.4               | 0.00                  | 0.00                 |                       |

# Cathedral Energy Services

## Planning Report

|                  |                              |                                     |                                     |
|------------------|------------------------------|-------------------------------------|-------------------------------------|
| <b>Database:</b> | EDM 5000.1 US Multi Users DB | <b>Local Co-ordinate Reference:</b> | Well MCU Fee 17-16B (M16W Pad)      |
| <b>Company:</b>  | EnCana Oil & Gas (USA) Inc   | <b>TVD Reference:</b>               | KBE @ 7903.0ft (Original Well Elev) |
| <b>Project:</b>  | Mamm Creek                   | <b>MD Reference:</b>                | KBE @ 7903.0ft (Original Well Elev) |
| <b>Site:</b>     | SWSW S16-T7S-R93W (M16W Pad) | <b>North Reference:</b>             | True                                |
| <b>Well:</b>     | MCU Fee 17-16B (M16W Pad)    | <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                        |
|---------------------|-----------------|-------------|---------------------|------------|------------|-----------------------|-----------------------|----------------------|--|
| 4,900.0             | 19.74           | 283.54      | 4,649.6             | 345.9      | -1,436.1   | 1,477.1               | 0.00                  | 0.00                 |  |
| 5,000.0             | 19.74           | 283.54      | 4,743.8             | 353.8      | -1,468.9   | 1,510.9               | 0.00                  | 0.00                 |  |
| 5,100.0             | 19.74           | 283.54      | 4,837.9             | 361.8      | -1,501.7   | 1,544.7               | 0.00                  | 0.00                 |  |
| 5,200.0             | 19.74           | 283.54      | 4,932.0             | 369.7      | -1,534.6   | 1,578.5               | 0.00                  | 0.00                 |  |
| 5,300.0             | 19.74           | 283.54      | 5,026.1             | 377.6      | -1,567.4   | 1,612.2               | 0.00                  | 0.00                 |  |
| 5,400.0             | 19.74           | 283.54      | 5,120.3             | 385.5      | -1,600.2   | 1,646.0               | 0.00                  | 0.00                 |  |
| 5,500.0             | 19.74           | 283.54      | 5,214.4             | 393.4      | -1,633.0   | 1,679.8               | 0.00                  | 0.00                 |  |
| 5,600.0             | 19.74           | 283.54      | 5,308.5             | 401.3      | -1,665.9   | 1,713.5               | 0.00                  | 0.00                 |  |
| 5,700.0             | 19.74           | 283.54      | 5,402.6             | 409.2      | -1,698.7   | 1,747.3               | 0.00                  | 0.00                 |  |
| 5,800.0             | 19.74           | 283.54      | 5,496.8             | 417.1      | -1,731.5   | 1,781.1               | 0.00                  | 0.00                 |  |
| 5,900.0             | 19.74           | 283.54      | 5,590.9             | 425.0      | -1,764.4   | 1,814.8               | 0.00                  | 0.00                 |  |
| 6,000.0             | 19.74           | 283.54      | 5,685.0             | 432.9      | -1,797.2   | 1,848.6               | 0.00                  | 0.00                 |  |
| 6,100.0             | 19.74           | 283.54      | 5,779.1             | 440.8      | -1,830.0   | 1,882.4               | 0.00                  | 0.00                 |  |
| 6,200.0             | 19.74           | 283.54      | 5,873.3             | 448.7      | -1,862.8   | 1,916.1               | 0.00                  | 0.00                 |  |
| 6,214.6             | 19.74           | 283.54      | 5,887.0             | 449.9      | -1,867.6   | 1,921.1               | 0.00                  | 0.00                 | Ohio Creek                                   |
| 6,300.0             | 19.74           | 283.54      | 5,967.4             | 456.6      | -1,895.7   | 1,949.9               | 0.00                  | 0.00                 |  |
| 6,400.0             | 19.74           | 283.54      | 6,061.5             | 464.6      | -1,928.5   | 1,983.7               | 0.00                  | 0.00                 |  |
| 6,500.0             | 19.74           | 283.54      | 6,155.6             | 472.5      | -1,961.3   | 2,017.4               | 0.00                  | 0.00                 |  |
| 6,600.0             | 19.74           | 283.54      | 6,249.8             | 480.4      | -1,994.2   | 2,051.2               | 0.00                  | 0.00                 |  |
| 6,683.1             | 19.74           | 283.54      | 6,328.0             | 486.9      | -2,021.4   | 2,079.3               | 0.00                  | 0.00                 | Mesa Verde                                   |
| 6,700.0             | 19.74           | 283.54      | 6,343.9             | 488.3      | -2,027.0   | 2,085.0               | 0.00                  | 0.00                 |  |
| 6,800.0             | 19.74           | 283.54      | 6,438.0             | 496.2      | -2,059.8   | 2,118.7               | 0.00                  | 0.00                 |  |
| 6,900.0             | 19.74           | 283.54      | 6,532.2             | 504.1      | -2,092.7   | 2,152.5               | 0.00                  | 0.00                 |  |
| 7,000.0             | 19.74           | 283.54      | 6,626.3             | 512.0      | -2,125.5   | 2,186.3               | 0.00                  | 0.00                 |  |
| 7,100.0             | 19.74           | 283.54      | 6,720.4             | 519.9      | -2,158.3   | 2,220.0               | 0.00                  | 0.00                 |  |
| 7,200.0             | 19.74           | 283.54      | 6,814.5             | 527.8      | -2,191.1   | 2,253.8               | 0.00                  | 0.00                 |  |
| 7,227.1             | 19.74           | 283.54      | 6,840.0             | 530.0      | -2,200.0   | 2,263.0               | 0.00                  | 0.00                 | Williams Fork                                |
| 7,300.0             | 19.74           | 283.54      | 6,908.7             | 535.7      | -2,224.0   | 2,287.6               | 0.00                  | 0.00                 |  |
| 7,400.0             | 19.74           | 283.54      | 7,002.8             | 543.6      | -2,256.8   | 2,321.4               | 0.00                  | 0.00                 |  |
| 7,500.0             | 19.74           | 283.54      | 7,096.9             | 551.5      | -2,289.6   | 2,355.1               | 0.00                  | 0.00                 |  |
| 7,600.0             | 19.74           | 283.54      | 7,191.0             | 559.5      | -2,322.5   | 2,388.9               | 0.00                  | 0.00                 |  |
| 7,628.7             | 19.74           | 283.54      | 7,218.1             | 561.7      | -2,331.9   | 2,398.6               | 0.00                  | 0.00                 | Start Drop -3.00                             |
| 7,700.0             | 17.60           | 283.54      | 7,285.6             | 567.1      | -2,354.1   | 2,421.4               | 3.00                  | -3.00                |  |
| 7,800.0             | 14.60           | 283.54      | 7,381.7             | 573.6      | -2,381.0   | 2,449.1               | 3.00                  | -3.00                |  |
| 7,900.0             | 11.60           | 283.54      | 7,479.0             | 578.9      | -2,403.0   | 2,471.8               | 3.00                  | -3.00                |  |
| 8,000.0             | 8.60            | 283.54      | 7,577.5             | 583.0      | -2,420.1   | 2,489.3               | 3.00                  | -3.00                |  |
| 8,100.0             | 5.60            | 283.54      | 7,676.7             | 585.9      | -2,432.1   | 2,501.7               | 3.00                  | -3.00                |  |
| 8,200.0             | 2.60            | 283.54      | 7,776.4             | 587.5      | -2,439.0   | 2,508.8               | 3.00                  | -3.00                |  |
| 8,286.6             | 0.00            | 0.00        | 7,863.0             | 588.0      | -2,441.0   | 2,510.8               | 3.00                  | -3.00                | EOD; Inc=0° - Top of Gas - MCU Fee 17-16B (I |
| 8,300.0             | 0.00            | 0.00        | 7,876.4             | 588.0      | -2,441.0   | 2,510.8               | 0.00                  | 0.00                 |  |
| 8,400.0             | 0.00            | 0.00        | 7,976.4             | 588.0      | -2,441.0   | 2,510.8               | 0.00                  | 0.00                 |  |
| 8,500.0             | 0.00            | 0.00        | 8,076.4             | 588.0      | -2,441.0   | 2,510.8               | 0.00                  | 0.00                 |  |
| 8,600.0             | 0.00            | 0.00        | 8,176.4             | 588.0      | -2,441.0   | 2,510.8               | 0.00                  | 0.00                 |  |
| 8,700.0             | 0.00            | 0.00        | 8,276.4             | 588.0      | -2,441.0   | 2,510.8               | 0.00                  | 0.00                 |  |
| 8,800.0             | 0.00            | 0.00        | 8,376.4             | 588.0      | -2,441.0   | 2,510.8               | 0.00                  | 0.00                 |  |
| 8,900.0             | 0.00            | 0.00        | 8,476.4             | 588.0      | -2,441.0   | 2,510.8               | 0.00                  | 0.00                 |  |
| 9,000.0             | 0.00            | 0.00        | 8,576.4             | 588.0      | -2,441.0   | 2,510.8               | 0.00                  | 0.00                 |  |
| 9,100.0             | 0.00            | 0.00        | 8,676.4             | 588.0      | -2,441.0   | 2,510.8               | 0.00                  | 0.00                 |  |
| 9,200.0             | 0.00            | 0.00        | 8,776.4             | 588.0      | -2,441.0   | 2,510.8               | 0.00                  | 0.00                 |  |
| 9,300.0             | 0.00            | 0.00        | 8,876.4             | 588.0      | -2,441.0   | 2,510.8               | 0.00                  | 0.00                 |  |
| 9,400.0             | 0.00            | 0.00        | 8,976.4             | 588.0      | -2,441.0   | 2,510.8               | 0.00                  | 0.00                 |  |
| 9,500.0             | 0.00            | 0.00        | 9,076.4             | 588.0      | -2,441.0   | 2,510.8               | 0.00                  | 0.00                 |  |

# Cathedral Energy Services

## Planning Report

|                  |                              |                                     |                                     |
|------------------|------------------------------|-------------------------------------|-------------------------------------|
| <b>Database:</b> | EDM 5000.1 US Multi Users DB | <b>Local Co-ordinate Reference:</b> | Well MCU Fee 17-16B (M16W Pad)      |
| <b>Company:</b>  | EnCana Oil & Gas (USA) Inc   | <b>TVD Reference:</b>               | KBE @ 7903.0ft (Original Well Elev) |
| <b>Project:</b>  | Mamm Creek                   | <b>MD Reference:</b>                | KBE @ 7903.0ft (Original Well Elev) |
| <b>Site:</b>     | SWSW S16-T7S-R93W (M16W Pad) | <b>North Reference:</b>             | True                                |
| <b>Well:</b>     | MCU Fee 17-16B (M16W Pad)    | <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                   |
| 9,502.6             | 0.00            | 0.00        | 9,079.0             | 588.0      | -2,441.0   | 2,510.8               | 0.00                  | 0.00                 | Coal Ridge                              |
| 9,600.0             | 0.00            | 0.00        | 9,176.4             | 588.0      | -2,441.0   | 2,510.8               | 0.00                  | 0.00                 |   |
| 9,700.0             | 0.00            | 0.00        | 9,276.4             | 588.0      | -2,441.0   | 2,510.8               | 0.00                  | 0.00                 |   |
| 9,800.0             | 0.00            | 0.00        | 9,376.4             | 588.0      | -2,441.0   | 2,510.8               | 0.00                  | 0.00                 |   |
| 9,900.0             | 0.00            | 0.00        | 9,476.4             | 588.0      | -2,441.0   | 2,510.8               | 0.00                  | 0.00                 |   |
| 10,000.0            | 0.00            | 0.00        | 9,576.4             | 588.0      | -2,441.0   | 2,510.8               | 0.00                  | 0.00                 |   |
| 10,100.0            | 0.00            | 0.00        | 9,676.4             | 588.0      | -2,441.0   | 2,510.8               | 0.00                  | 0.00                 |   |
| 10,166.6            | 0.00            | 0.00        | 9,743.0             | 588.0      | -2,441.0   | 2,510.8               | 0.00                  | 0.00                 | Base Cameo A Coal                       |
| 10,200.0            | 0.00            | 0.00        | 9,776.4             | 588.0      | -2,441.0   | 2,510.8               | 0.00                  | 0.00                 |   |
| 10,300.0            | 0.00            | 0.00        | 9,876.4             | 588.0      | -2,441.0   | 2,510.8               | 0.00                  | 0.00                 |   |
| 10,302.6            | 0.00            | 0.00        | 9,879.0             | 588.0      | -2,441.0   | 2,510.8               | 0.00                  | 0.00                 | Rollins                                 |
| 10,400.0            | 0.00            | 0.00        | 9,976.4             | 588.0      | -2,441.0   | 2,510.8               | 0.00                  | 0.00                 |   |
| 10,402.6            | 0.00            | 0.00        | 9,979.0             | 588.0      | -2,441.0   | 2,510.8               | 0.00                  | 0.00                 | TD @ 10402.6' MD - MCU Fee 17-16B (M16W |
| 10,500.0            | 0.00            | 0.00        | 10,076.4            | 588.0      | -2,441.0   | 2,510.8               | 0.00                  | 0.00                 |   |
| 10,600.0            | 0.00            | 0.00        | 10,176.4            | 588.0      | -2,441.0   | 2,510.8               | 0.00                  | 0.00                 |   |
| 10,700.0            | 0.00            | 0.00        | 10,276.4            | 588.0      | -2,441.0   | 2,510.8               | 0.00                  | 0.00                 |   |
| 10,702.6            | 0.00            | 0.00        | 10,279.0            | 588.0      | -2,441.0   | 2,510.8               | 0.00                  | 0.00                 | Permit TD @ 10702.6' MD                 |

| Targets   |               |              |          |            |            |               |              |           |             |
|---|---------------|--------------|----------|------------|------------|---------------|--------------|-----------|-------------|
| Target Name   | Dip Angle (°) | Dip Dir. (°) | TVD (ft) | +N/-S (ft) | +E/-W (ft) | Northing (ft) | Easting (ft) | Latitude  | Longitude   |
| - hit/miss target   |               |              |          |            |            |               |              |           |             |
| - Shape   |               |              |          |            |            |               |              |           |             |
| MCU Fee 17-16B (M16V<br>- plan hits target center<br>- Circle (radius 25.0) | 0.00          | 0.00         | 9,979.0  | 588.0      | -2,441.0   | 1,593,866.23  | 2,352,805.84 | 39.441508 | -107.791870 |
| MCU Fee 17-16B (M16V<br>- plan hits target center<br>- Circle (radius 25.0) | 0.00          | 0.00         | 7,863.0  | 588.0      | -2,441.0   | 1,593,866.23  | 2,352,805.84 | 39.441508 | -107.791870 |

| Casing Points       |                     |                |                      |                    |  |
|---------------------|---------------------|----------------|----------------------|--------------------|--|
| Measured Depth (ft) | Vertical Depth (ft) | Name           | Casing Diameter (in) | Hole Diameter (in) |  |
| 1,070.3             | 1,044.9             | Surface Casing | 0.000                | 0.000              |  |

# Cathedral Energy Services

## Planning Report

|                  |                              |                                     |                                     |
|------------------|------------------------------|-------------------------------------|-------------------------------------|
| <b>Database:</b> | EDM 5000.1 US Multi Users DB | <b>Local Co-ordinate Reference:</b> | Well MCU Fee 17-16B (M16W Pad)      |
| <b>Company:</b>  | EnCana Oil & Gas (USA) Inc   | <b>TVD Reference:</b>               | KBE @ 7903.0ft (Original Well Elev) |
| <b>Project:</b>  | Mamm Creek                   | <b>MD Reference:</b>                | KBE @ 7903.0ft (Original Well Elev) |
| <b>Site:</b>     | SWSW S16-T7S-R93W (M16W Pad) | <b>North Reference:</b>             | True                                |
| <b>Well:</b>     | MCU Fee 17-16B (M16W Pad)    | <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 (°) |  |
| 4,036.7             | 3,837.0             | G Sand            |           | 0.00    |                   |  |
| 6,214.6             | 5,887.0             | Ohio Creek        |           | 0.00    |                   |  |
| 6,683.1             | 6,328.0             | Mesa Verde        |           | 0.00    |                   |  |
| 7,227.1             | 6,840.0             | Williams Fork     |           | 0.00    |                   |  |
| 8,286.6             | 7,863.0             | Top of Gas        |           | 0.00    |                   |  |
| 9,502.6             | 9,079.0             | Coal Ridge        |           | 0.00    |                   |  |
| 10,166.6            | 9,743.0             | Base Cameo A Coal |           | 0.00    |                   |  |
| 10,302.6            | 9,879.0             | Rollins           |           | 0.00    |                   |  |

| Plan Annotations    |                     |                   |            |                         |  |
|---------------------|---------------------|-------------------|------------|-------------------------|--|
| Measured Depth (ft) | Vertical Depth (ft) | Local Coordinates |            |                         |  |
|                     |                     | +N/-S (ft)        | +E/-W (ft) | Comment                 |  |
| 200.0               | 200.0               | 0.0               | 0.0        | KOP @ 200' MD           |  |
| 857.9               | 844.9               | 26.3              | -109.1     | EOB; Inc=19.74°         |  |
| 7,628.7             | 7,218.1             | 561.7             | -2,331.9   | Start Drop -3.00        |  |
| 8,286.6             | 7,863.0             | 588.0             | -2,441.0   | EOD; Inc=0°             |  |
| 10,402.6            | 9,979.0             | 588.0             | -2,441.0   | TD @ 10402.6' MD        |  |
| 10,702.6            | 10,279.0            | 588.0             | -2,441.0   | Permit TD @ 10702.6' MD |  |



# **EnCana Oil & Gas (USA) Inc**

**Mamm Creek**

**SWSW S16-T7S-R93W (M16W Pad)**

**MCU Fee 17-16B (M16W Pad)**

**DD**

**Plan #1**

## **Anticollision Report**

**19 January, 2011**

# Cathedral Energy Services

## Anticollision Report

|                           |                              |                                     |                                     |
|---------------------------|------------------------------|-------------------------------------|-------------------------------------|
| <b>Company:</b>           | EnCana Oil & Gas (USA) Inc   | <b>Local Co-ordinate Reference:</b> | Well MCU Fee 17-16B (M16W Pad)      |
| <b>Project:</b>           | Mamm Creek                   | <b>TVD Reference:</b>               | KBE @ 7903.0ft (Original Well Elev) |
| <b>Reference Site:</b>    | SWSW S16-T7S-R93W (M16W Pad) | <b>MD Reference:</b>                | KBE @ 7903.0ft (Original Well Elev) |
| <b>Site Error:</b>        | 0.0ft                        | <b>North Reference:</b>             | True                                |
| <b>Reference Well:</b>    | MCU Fee 17-16B (M16W Pad)    | <b>Survey Calculation Method:</b>   | Minimum Curvature                   |
| <b>Well Error:</b>        | 0.0ft                        | <b>Output errors are at</b>         | 2.00 sigma                          |
| <b>Reference Wellbore</b> | DD                           | <b>Database:</b>                    | EDM 5000.1 US Multi Users DB        |
| <b>Reference Design:</b>  | Plan #1                      | <b>Offset TVD Reference:</b>        | Offset Datum                        |

| Reference                    | Plan #1   |                |                     |
|------------------------------|---|----------------|---------------------|
| Filter type:                 | GLOBAL FILTER APPLIED: All wellpaths within 200'+ 100/1000 of reference |                |                     |
| Interpolation Method:        | MD Interval 100.0ft   | Error Model:   | Systematic Ellipse  |
| Depth Range:                 | Unlimited   | Scan Method:   | Closest Approach 3D |
| Results Limited by:          | Maximum center-center distance of 500.0ft                               | Error Surface: | Elliptical Conic    |
| Warning Levels Evaluated at: | 2.00 Sigma  |                |                     |

|                            |                |                          |                  |                    |
|----------------------------|----------------|--------------------------|------------------|--------------------|
| <b>Survey Tool Program</b> | <b>Date</b>    | 1/19/2011                |                  |                    |
| <b>From (ft)</b>           | <b>To (ft)</b> | <b>Survey (Wellbore)</b> | <b>Tool Name</b> | <b>Description</b> |
| 0.0                        | 10,702.6       | Plan #1 (DD)             | MWD              | Geolink MWD        |

# Cathedral Energy Services

## Anticollision Report

|                           |                              |                                     |                                     |
|---------------------------|------------------------------|-------------------------------------|-------------------------------------|
| <b>Company:</b>           | EnCana Oil & Gas (USA) Inc   | <b>Local Co-ordinate Reference:</b> | Well MCU Fee 17-16B (M16W Pad)      |
| <b>Project:</b>           | Mamm Creek                   | <b>TVD Reference:</b>               | KBE @ 7903.0ft (Original Well Elev) |
| <b>Reference Site:</b>    | SWSW S16-T7S-R93W (M16W Pad) | <b>MD Reference:</b>                | KBE @ 7903.0ft (Original Well Elev) |
| <b>Site Error:</b>        | 0.0ft                        | <b>North Reference:</b>             | True                                |
| <b>Reference Well:</b>    | MCU Fee 17-16B (M16W Pad)    | <b>Survey Calculation Method:</b>   | Minimum Curvature                   |
| <b>Well Error:</b>        | 0.0ft                        | <b>Output errors are at</b>         | 2.00 sigma                          |
| <b>Reference Wellbore</b> | DD                           | <b>Database:</b>                    | EDM 5000.1 US Multi Users DB        |
| <b>Reference Design:</b>  | Plan #1                      | <b>Offset TVD Reference:</b>        | Offset Datum                        |

### Summary

| Site Name<br>Offset Well - Wellbore - Design | Reference<br>Measured<br>Depth<br>(ft) | Offset<br>Measured<br>Depth<br>(ft) | Distance                   |                             | Separation<br>Factor | Warning    |
|--|--|-------------------------------------|----------------------------|-----------------------------|----------------------|------------|
|  |  |                                     | Between<br>Centres<br>(ft) | Between<br>Ellipses<br>(ft) |                      |            |
| SWSW S16-T7S-R93W (M16W Pad)                 |  |                                     |                            |                             |                      |            |
| MCU 16-13A (M16W Pad) - DD - Plan #1         | 200.0                                  | 200.0                               | 128.0                      | 127.3                       | 205.943              | CC, ES     |
| MCU 16-13A (M16W Pad) - DD - Plan #1         | 1,300.0                                | 1,281.3                             | 259.3                      | 252.3                       | 36.703               | SF         |
| MCU 16-13B (M16W Pad) - DD - Plan #1         | 200.0                                  | 200.0                               | 92.9                       | 92.3                        | 149.590              | CC, ES     |
| MCU 16-13B (M16W Pad) - DD - Plan #1         | 900.0                                  | 892.2                               | 122.6                      | 118.1                       | 27.419               | SF         |
| MCU 16-13C (M16W Pad) - DD - Plan #1         | 670.4                                  | 666.4                               | 24.3                       | 21.4                        | 8.230                | CC, ES     |
| MCU 16-13C (M16W Pad) - DD - Plan #1         | 700.0                                  | 695.5                               | 24.8                       | 21.7                        | 7.861                | SF         |
| MCU 16-13D (M16W Pad) - DD - Plan #1         | 710.3                                  | 701.3                               | 63.1                       | 60.0                        | 20.432               | CC, ES     |
| MCU 16-13D (M16W Pad) - DD - Plan #1         | 900.0                                  | 884.8                               | 77.2                       | 72.7                        | 16.866               | SF         |
| MCU 21-3B (M16W Pad) - DD - Plan #1          | 718.8                                  | 721.0                               | 31.5                       | 27.8                        | 8.395                | CC, ES, SF |
| MCU 21-4A (M16W Pad) - DD - Plan #1          | 200.0                                  | 200.0                               | 59.9                       | 59.3                        | 96.371               | CC, ES     |
| MCU 21-4A (M16W Pad) - DD - Plan #1          | 800.0                                  | 787.7                               | 78.8                       | 75.0                        | 20.494               | SF         |
| MCU 21-4B (M16W Pad) - DD - Plan #1          | 200.0                                  | 200.0                               | 43.0                       | 42.3                        | 69.150               | CC, ES     |
| MCU 21-4B (M16W Pad) - DD - Plan #1          | 700.0                                  | 687.5                               | 80.4                       | 77.3                        | 26.252               | SF         |
| MCU 21-4C (M16W Pad) - DD - Plan #1          | 200.0                                  | 200.0                               | 26.6                       | 25.9                        | 42.749               | CC, ES     |
| MCU 21-4C (M16W Pad) - DD - Plan #1          | 400.0                                  | 396.7                               | 31.8                       | 30.4                        | 23.285               | SF         |
| MCU 21-4D2 (M16W Pad) - DD - Plan #1         | 200.0                                  | 200.0                               | 11.4                       | 10.8                        | 18.346               | CC, ES     |
| MCU 21-4D2 (M16W Pad) - DD - Plan #1         | 300.0                                  | 299.3                               | 13.7                       | 12.7                        | 13.995               | SF         |
| MCU 21-5A (M16W Pad) - DD - Plan #1          | 200.0                                  | 200.0                               | 11.6                       | 11.0                        | 18.650               | CC, ES     |
| MCU 21-5A (M16W Pad) - DD - Plan #1          | 300.0                                  | 299.8                               | 14.5                       | 13.5                        | 14.831               | SF         |
| MCU Fee 16-12C2 (M16W Pad) - DD - Plan #1    | 200.0                                  | 200.0                               | 130.0                      | 129.4                       | 209.284              | CC, ES     |
| MCU Fee 16-12C2 (M16W Pad) - DD - Plan #1    | 2,000.0                                | 1,958.0                             | 440.8                      | 428.4                       | 35.467               | SF         |
| MCU Fee 16-2C (M16W Pad) - DD - Plan #1      | 200.0                                  | 200.0                               | 141.7                      | 141.1                       | 228.066              | CC, ES     |
| MCU Fee 16-2C (M16W Pad) - DD - Plan #1      | 2,000.0                                | 1,947.5                             | 483.7                      | 469.5                       | 34.054               | SF         |
| MCU Fee 16-5C (M16W Pad) - DD - Plan #1      | 200.0                                  | 200.0                               | 144.7                      | 144.1                       | 232.923              | CC, ES     |
| MCU Fee 16-5C (M16W Pad) - DD - Plan #1      | 1,600.0                                | 1,525.0                             | 476.4                      | 464.0                       | 38.294               | SF         |
| MCU Fee 17-16B2 (M16W Pad) - DD - Plan #1    | 200.0                                  | 200.0                               | 16.9                       | 16.2                        | 27.128               | CC         |
| MCU Fee 17-16B2 (M16W Pad) - DD - Plan #1    | 300.0                                  | 299.2                               | 17.0                       | 16.0                        | 17.481               | ES         |
| MCU Fee 17-16B2 (M16W Pad) - DD - Plan #1    | 7,300.0                                | 7,288.3                             | 308.3                      | 220.6                       | 3.518                | SF         |
| MCU Fee 17-16C (M16W Pad) - DD - Plan #1     | 200.0                                  | 200.0                               | 50.8                       | 50.2                        | 81.809               | CC         |
| MCU Fee 17-16C (M16W Pad) - DD - Plan #1     | 300.0                                  | 297.5                               | 51.1                       | 50.1                        | 52.694               | ES         |
| MCU Fee 17-16C (M16W Pad) - DD - Plan #1     | 5,900.0                                | 5,863.4                             | 491.4                      | 423.1                       | 7.186                | SF         |
| MCU Fee 17-9B (M16W pad) - DD - Plan #1      | 200.0                                  | 200.0                               | 116.2                      | 115.5                       | 186.960              | CC, ES     |
| MCU Fee 17-9B (M16W pad) - DD - Plan #1      | 3,000.0                                | 2,977.1                             | 486.8                      | 454.7                       | 15.182               | SF         |
| MCU Fee 17-9B2 (M16W Pad) - DD - Plan #1     | 200.0                                  | 200.0                               | 113.7                      | 113.0                       | 182.926              | CC, ES     |
| MCU Fee 17-9B2 (M16W Pad) - DD - Plan #1     | 4,300.0                                | 4,243.4                             | 499.8                      | 452.4                       | 10.553               | SF         |
| MCU Fee 17-9C (M16W Pad) - DD - Plan #1      | 200.0                                  | 200.0                               | 103.1                      | 102.4                       | 165.864              | CC, ES     |
| MCU Fee 17-9C (M16W Pad) - DD - Plan #1      | 6,400.0                                | 6,383.9                             | 498.8                      | 422.3                       | 6.519                | SF         |
| MCU Fee 17-9D (M16W Pad) - DD - Plan #1      | 480.6                                  | 484.1                               | 86.4                       | 84.7                        | 49.790               | CC         |
| MCU Fee 17-9D (M16W Pad) - DD - Plan #1      | 500.0                                  | 503.5                               | 86.5                       | 84.7                        | 47.496               | ES         |
| MCU Fee 17-9D (M16W Pad) - DD - Plan #1      | 7,300.0                                | 7,298.6                             | 465.3                      | 406.2                       | 7.878                | SF         |

# Cathedral Energy Services

## Anticollision Report

|                           |                              |                                     |                                     |
|---------------------------|------------------------------|-------------------------------------|-------------------------------------|
| <b>Company:</b>           | EnCana Oil & Gas (USA) Inc   | <b>Local Co-ordinate Reference:</b> | Well MCU Fee 17-16B (M16W Pad)      |
| <b>Project:</b>           | Mamm Creek                   | <b>TVD Reference:</b>               | KBE @ 7903.0ft (Original Well Elev) |
| <b>Reference Site:</b>    | SWSW S16-T7S-R93W (M16W Pad) | <b>MD Reference:</b>                | KBE @ 7903.0ft (Original Well Elev) |
| <b>Site Error:</b>        | 0.0ft                        | <b>North Reference:</b>             | True                                |
| <b>Reference Well:</b>    | MCU Fee 17-16B (M16W Pad)    | <b>Survey Calculation Method:</b>   | Minimum Curvature                   |
| <b>Well Error:</b>        | 0.0ft                        | <b>Output errors are at</b>         | 2.00 sigma                          |
| <b>Reference Wellbore</b> | DD                           | <b>Database:</b>                    | EDM 5000.1 US Multi Users DB        |
| <b>Reference Design:</b>  | Plan #1                      | <b>Offset TVD Reference:</b>        | Offset Datum                        |

| Offset Design SWSW S16-T7S-R93W (M16W Pad) - MCU 16-13A (M16W Pad) - DD - Plan #1 |                     |                     |                     |                 |             |                       |                                   |            |                      |                       |                  |            | Offset Site Error: | 0.0 ft |
|---|---------------------|---------------------|---------------------|-----------------|-------------|-----------------------|-----------------------------------|------------|----------------------|-----------------------|------------------|------------|--------------------|--------|
| Survey Program: 0-MWD   |                     |                     |                     |                 |             |                       |                                   |            |                      |                       |                  |            | Offset Well Error: | 0.0 ft |
| Reference   |                     | Offset              |                     | Semi Major Axis |             |                       | Distance                          |            |                      |                       | Total            | Separation | Warning            |        |
| Measured Depth (ft)   | Vertical Depth (ft) | Measured Depth (ft) | Vertical Depth (ft) | Reference (ft)  | Offset (ft) | Highside Toolface (°) | Offset Wellbore Centre +N/-S (ft) | +E/-W (ft) | Between Centres (ft) | Between Ellipses (ft) | Uncertainty Axis | Factor     |                    |        |
| 0.0   | 0.0                 | 0.0                 | 0.0                 | 0.0             | 0.0         | 32.28                 | 108.2                             | 68.3       | 128.0                |                       |                  |            |                    |        |
| 100.0   | 100.0               | 100.0               | 100.0               | 0.1             | 0.1         | 32.28                 | 108.2                             | 68.3       | 128.0                | 127.7                 | 0.27             | 469.971    |                    |        |
| 200.0   | 200.0               | 200.0               | 200.0               | 0.3             | 0.3         | 32.28                 | 108.2                             | 68.3       | 128.0                | 127.3                 | 0.62             | 205.943    | CC, ES             |        |
| 300.0   | 300.0               | 299.2               | 299.2               | 0.5             | 0.5         | 108.66                | 109.8                             | 66.3       | 129.1                | 128.1                 | 0.98             | 131.063    |                    |        |
| 400.0   | 399.6               | 398.4               | 398.0               | 0.7             | 0.7         | 108.44                | 114.6                             | 60.3       | 132.5                | 131.1                 | 1.42             | 93.375     |                    |        |
| 500.0   | 498.8               | 497.9               | 496.8               | 1.0             | 1.0         | 108.41                | 122.2                             | 50.9       | 138.1                | 136.1                 | 1.95             | 70.942     |                    |        |
| 600.0   | 597.1               | 597.5               | 595.6               | 1.4             | 1.2         | 110.08                | 130.1                             | 41.1       | 145.4                | 142.9                 | 2.55             | 56.928     |                    |        |
| 700.0   | 694.3               | 696.6               | 693.9               | 1.8             | 1.5         | 113.30                | 138.0                             | 31.3       | 155.0                | 151.7                 | 3.23             | 47.958     |                    |        |
| 800.0   | 790.2               | 794.9               | 791.4               | 2.4             | 1.8         | 117.62                | 145.8                             | 21.6       | 167.3                | 163.4                 | 3.95             | 42.355     |                    |        |
| 900.0   | 884.6               | 892.4               | 888.1               | 3.0             | 2.0         | 122.61                | 153.5                             | 12.0       | 183.2                | 178.6                 | 4.66             | 39.337     |                    |        |
| 1,000.0   | 978.7               | 989.6               | 984.5               | 3.6             | 2.3         | 127.20                | 161.2                             | 2.4        | 200.9                | 195.6                 | 5.31             | 37.801     |                    |        |
| 1,100.0   | 1,072.8             | 1,086.8             | 1,081.0             | 4.2             | 2.6         | 131.03                | 169.0                             | -7.2       | 219.6                | 213.7                 | 5.93             | 37.036     |                    |        |
| 1,200.0   | 1,167.0             | 1,184.1             | 1,177.4             | 4.9             | 2.9         | 134.26                | 176.7                             | -16.8      | 239.1                | 232.6                 | 6.51             | 36.730     |                    |        |
| 1,300.0   | 1,261.1             | 1,281.3             | 1,273.9             | 5.5             | 3.1         | 137.01                | 184.4                             | -26.4      | 259.3                | 252.3                 | 7.07             | 36.703     | SF                 |        |
| 1,400.0   | 1,355.2             | 1,378.5             | 1,370.3             | 6.2             | 3.4         | 139.36                | 192.1                             | -36.0      | 280.0                | 272.4                 | 7.60             | 36.849     |                    |        |
| 1,500.0   | 1,449.3             | 1,475.8             | 1,466.8             | 6.8             | 3.7         | 141.38                | 199.8                             | -45.5      | 301.1                | 292.9                 | 8.11             | 37.102     |                    |        |
| 1,600.0   | 1,543.5             | 1,573.0             | 1,563.3             | 7.4             | 4.0         | 143.14                | 207.6                             | -55.1      | 322.4                | 313.8                 | 8.62             | 37.419     |                    |        |
| 1,700.0   | 1,637.6             | 1,670.2             | 1,659.7             | 8.1             | 4.2         | 144.69                | 215.3                             | -64.7      | 344.1                | 335.0                 | 9.11             | 37.774     |                    |        |
| 1,800.0   | 1,731.7             | 1,767.5             | 1,756.2             | 8.7             | 4.5         | 146.05                | 223.0                             | -74.3      | 365.9                | 356.3                 | 9.59             | 38.148     |                    |        |
| 1,900.0   | 1,825.9             | 1,864.7             | 1,852.6             | 9.4             | 4.8         | 147.26                | 230.7                             | -83.9      | 387.9                | 377.9                 | 10.07            | 38.531     |                    |        |
| 2,000.0   | 1,920.0             | 1,961.9             | 1,949.1             | 10.0            | 5.0         | 148.33                | 238.4                             | -93.5      | 410.1                | 399.6                 | 10.54            | 38.913     |                    |        |
| 2,100.0   | 2,014.1             | 2,059.2             | 2,045.5             | 10.6            | 5.3         | 149.30                | 246.2                             | -103.1     | 432.4                | 421.4                 | 11.01            | 39.291     |                    |        |
| 2,200.0   | 2,108.2             | 2,156.4             | 2,142.0             | 11.3            | 5.6         | 150.18                | 253.9                             | -112.7     | 454.8                | 443.3                 | 11.47            | 39.661     |                    |        |
| 2,300.0   | 2,202.4             | 2,253.6             | 2,238.4             | 11.9            | 5.9         | 150.97                | 261.6                             | -122.3     | 477.3                | 465.4                 | 11.93            | 40.020     |                    |        |
| 2,400.0   | 2,296.5             | 2,350.9             | 2,334.9             | 12.6            | 6.1         | 151.69                | 269.3                             | -131.9     | 499.9                | 487.5                 | 12.38            | 40.368     |                    |        |

# Cathedral Energy Services

## Anticollision Report

|                           |                              |                                     |                                     |
|---------------------------|------------------------------|-------------------------------------|-------------------------------------|
| <b>Company:</b>           | EnCana Oil & Gas (USA) Inc   | <b>Local Co-ordinate Reference:</b> | Well MCU Fee 17-16B (M16W Pad)      |
| <b>Project:</b>           | Mamm Creek                   | <b>TVD Reference:</b>               | KBE @ 7903.0ft (Original Well Elev) |
| <b>Reference Site:</b>    | SWSW S16-T7S-R93W (M16W Pad) | <b>MD Reference:</b>                | KBE @ 7903.0ft (Original Well Elev) |
| <b>Site Error:</b>        | 0.0ft                        | <b>North Reference:</b>             | True                                |
| <b>Reference Well:</b>    | MCU Fee 17-16B (M16W Pad)    | <b>Survey Calculation Method:</b>   | Minimum Curvature                   |
| <b>Well Error:</b>        | 0.0ft                        | <b>Output errors are at</b>         | 2.00 sigma                          |
| <b>Reference Wellbore</b> | DD                           | <b>Database:</b>                    | EDM 5000.1 US Multi Users DB        |
| <b>Reference Design:</b>  | Plan #1                      | <b>Offset TVD Reference:</b>        | Offset Datum                        |

| Offset Design SWSW S16-T7S-R93W (M16W Pad) - MCU 16-13B (M16W Pad) - DD - Plan #1 |                     |                     |                     |                 |             |                       |                                   |            |                      |                       |                        |                   | Offset Site Error: | 0.0 ft  |
|---|---------------------|---------------------|---------------------|-----------------|-------------|-----------------------|-----------------------------------|------------|----------------------|-----------------------|------------------------|-------------------|--------------------|---------|
| Survey Program: 0-MWD   |                     |                     |                     |                 |             |                       |                                   |            |                      |                       |                        |                   | Offset Well Error: | 0.0 ft  |
| Reference   |                     | Offset              |                     | Semi Major Axis |             |                       | Distance                          |            |                      |                       |                        |                   |                    | Warning |
| Measured Depth (ft)   | Vertical Depth (ft) | Measured Depth (ft) | Vertical Depth (ft) | Reference (ft)  | Offset (ft) | Highside Toolface (°) | Offset Wellbore Centre +N/-S (ft) | +E/-W (ft) | Between Centres (ft) | Between Ellipses (ft) | Total Uncertainty Axis | Separation Factor |                    |         |
| 0.0   | 0.0                 | 0.0                 | 0.0                 | 0.0             | 0.0         | 12.64                 | 90.7                              | 20.3       | 92.9                 |                       |                        |                   |                    |         |
| 100.0   | 100.0               | 100.0               | 100.0               | 0.1             | 0.1         | 12.64                 | 90.7                              | 20.3       | 92.9                 | 92.7                  | 0.27                   | 341.373           |                    |         |
| 200.0   | 200.0               | 200.0               | 200.0               | 0.3             | 0.3         | 12.64                 | 90.7                              | 20.3       | 92.9                 | 92.3                  | 0.62                   | 149.590 CC, ES    |                    |         |
| 300.0   | 300.0               | 299.1               | 299.1               | 0.5             | 0.5         | 89.12                 | 91.7                              | 18.0       | 93.4                 | 92.4                  | 0.99                   | 94.734            |                    |         |
| 400.0   | 399.6               | 398.3               | 398.0               | 0.7             | 0.7         | 89.21                 | 94.7                              | 10.9       | 94.6                 | 93.2                  | 1.42                   | 66.657            |                    |         |
| 500.0   | 498.8               | 498.3               | 497.4               | 1.0             | 0.9         | 91.19                 | 98.5                              | 1.8        | 96.3                 | 94.3                  | 1.93                   | 49.761            |                    |         |
| 600.0   | 597.1               | 597.9               | 596.5               | 1.4             | 1.2         | 96.09                 | 102.4                             | -7.2       | 98.4                 | 95.9                  | 2.53                   | 38.851            |                    |         |
| 700.0   | 694.3               | 696.9               | 695.1               | 1.8             | 1.4         | 103.51                | 106.2                             | -16.1      | 102.4                | 99.2                  | 3.20                   | 32.017            |                    |         |
| 800.0   | 790.2               | 795.0               | 792.8               | 2.4             | 1.6         | 112.62                | 110.0                             | -25.0      | 110.0                | 106.1                 | 3.88                   | 28.373            |                    |         |
| 900.0   | 884.6               | 892.2               | 889.4               | 3.0             | 1.9         | 122.21                | 113.7                             | -33.8      | 122.6                | 118.1                 | 4.47                   | 27.419 SF         |                    |         |
| 1,000.0   | 978.7               | 989.1               | 985.9               | 3.6             | 2.1         | 130.31                | 117.4                             | -42.6      | 138.7                | 133.8                 | 4.96                   | 27.984            |                    |         |
| 1,100.0   | 1,072.8             | 1,086.1             | 1,082.4             | 4.2             | 2.4         | 136.67                | 121.1                             | -51.3      | 157.0                | 151.6                 | 5.37                   | 29.232            |                    |         |
| 1,200.0   | 1,167.0             | 1,183.0             | 1,178.9             | 4.9             | 2.6         | 141.69                | 124.9                             | -60.1      | 176.8                | 171.1                 | 5.74                   | 30.793            |                    |         |
| 1,300.0   | 1,261.1             | 1,280.0             | 1,275.3             | 5.5             | 2.8         | 145.69                | 128.6                             | -68.9      | 197.7                | 191.6                 | 6.09                   | 32.469            |                    |         |
| 1,400.0   | 1,355.2             | 1,376.9             | 1,371.8             | 6.2             | 3.1         | 148.93                | 132.3                             | -77.7      | 219.3                | 212.9                 | 6.42                   | 34.156            |                    |         |
| 1,500.0   | 1,449.3             | 1,473.9             | 1,468.3             | 6.8             | 3.3         | 151.58                | 136.0                             | -86.4      | 241.5                | 234.8                 | 6.75                   | 35.797            |                    |         |
| 1,600.0   | 1,543.5             | 1,570.8             | 1,564.8             | 7.4             | 3.5         | 153.79                | 139.8                             | -95.2      | 264.1                | 257.1                 | 7.07                   | 37.363            |                    |         |
| 1,700.0   | 1,637.6             | 1,667.7             | 1,661.2             | 8.1             | 3.8         | 155.65                | 143.5                             | -104.0     | 287.0                | 279.7                 | 7.39                   | 38.842            |                    |         |
| 1,800.0   | 1,731.7             | 1,764.7             | 1,757.7             | 8.7             | 4.0         | 157.24                | 147.2                             | -112.7     | 310.2                | 302.5                 | 7.71                   | 40.230            |                    |         |
| 1,900.0   | 1,825.9             | 1,861.6             | 1,854.2             | 9.4             | 4.2         | 158.61                | 150.9                             | -121.5     | 333.6                | 325.5                 | 8.03                   | 41.527            |                    |         |
| 2,000.0   | 1,920.0             | 1,958.6             | 1,950.7             | 10.0            | 4.5         | 159.80                | 154.7                             | -130.3     | 357.1                | 348.7                 | 8.36                   | 42.737            |                    |         |
| 2,100.0   | 2,014.1             | 2,055.5             | 2,047.1             | 10.6            | 4.7         | 160.84                | 158.4                             | -139.1     | 380.7                | 372.1                 | 8.68                   | 43.865            |                    |         |
| 2,200.0   | 2,108.2             | 2,152.5             | 2,143.6             | 11.3            | 5.0         | 161.76                | 162.1                             | -147.8     | 404.5                | 395.5                 | 9.01                   | 44.916            |                    |         |
| 2,300.0   | 2,202.4             | 2,249.4             | 2,240.1             | 11.9            | 5.2         | 162.58                | 165.8                             | -156.6     | 428.3                | 419.0                 | 9.33                   | 45.896            |                    |         |
| 2,400.0   | 2,296.5             | 2,346.4             | 2,336.6             | 12.6            | 5.4         | 163.31                | 169.6                             | -165.4     | 452.2                | 442.6                 | 9.66                   | 46.811            |                    |         |
| 2,500.0   | 2,390.6             | 2,443.3             | 2,433.0             | 13.2            | 5.7         | 163.97                | 173.3                             | -174.2     | 476.2                | 466.2                 | 9.99                   | 47.666            |                    |         |

# Cathedral Energy Services

## Anticollision Report

|                           |                              |                                     |                                     |
|---------------------------|------------------------------|-------------------------------------|-------------------------------------|
| <b>Company:</b>           | EnCana Oil & Gas (USA) Inc   | <b>Local Co-ordinate Reference:</b> | Well MCU Fee 17-16B (M16W Pad)      |
| <b>Project:</b>           | Mamm Creek                   | <b>TVD Reference:</b>               | KBE @ 7903.0ft (Original Well Elev) |
| <b>Reference Site:</b>    | SWSW S16-T7S-R93W (M16W Pad) | <b>MD Reference:</b>                | KBE @ 7903.0ft (Original Well Elev) |
| <b>Site Error:</b>        | 0.0ft                        | <b>North Reference:</b>             | True                                |
| <b>Reference Well:</b>    | MCU Fee 17-16B (M16W Pad)    | <b>Survey Calculation Method:</b>   | Minimum Curvature                   |
| <b>Well Error:</b>        | 0.0ft                        | <b>Output errors are at</b>         | 2.00 sigma                          |
| <b>Reference Wellbore</b> | DD                           | <b>Database:</b>                    | EDM 5000.1 US Multi Users DB        |
| <b>Reference Design:</b>  | Plan #1                      | <b>Offset TVD Reference:</b>        | Offset Datum                        |

| Offset Design SWSW S16-T7S-R93W (M16W Pad) - MCU 16-13C (M16W Pad) - DD - Plan #1 |                     |                     |                     |                 |             |                       |                        |            |                      |                       |                        |                   | Offset Site Error: 0.0 ft |         |
|---|---------------------|---------------------|---------------------|-----------------|-------------|-----------------------|------------------------|------------|----------------------|-----------------------|------------------------|-------------------|---------------------------|---------|
| Survey Program: 0-MWD   |                     |                     |                     |                 |             |                       |                        |            |                      |                       |                        |                   | Offset Well Error: 0.0 ft |         |
| Reference   |                     | Offset              |                     | Semi Major Axis |             |                       | Distance               |            |                      |                       |                        |                   |                           | Warning |
| Measured Depth (ft)   | Vertical Depth (ft) | Measured Depth (ft) | Vertical Depth (ft) | Reference (ft)  | Offset (ft) | Highside Toolface (°) | Offset Wellbore Centre |            | Between Centres (ft) | Between Ellipses (ft) | Total Uncertainty Axis | Separation Factor |                           |         |
|   |                     |                     |                     |                 |             |                       | +N/-S (ft)             | +E/-W (ft) |                      |                       |                        |                   |                           |         |
| 0.0   | 0.0                 | 0.0                 | 0.0                 | 0.0             | 0.0         | -110.06               | -11.7                  | -31.9      | 34.0                 |                       |                        |                   |                           |         |
| 100.0   | 100.0               | 100.0               | 100.0               | 0.1             | 0.1         | -110.06               | -11.7                  | -31.9      | 34.0                 | 33.7                  | 0.27                   | 124.787           |                           |         |
| 200.0   | 200.0               | 200.0               | 200.0               | 0.3             | 0.3         | -110.06               | -11.7                  | -31.9      | 34.0                 | 33.4                  | 0.62                   | 54.682            |                           |         |
| 300.0   | 300.0               | 298.4               | 298.4               | 0.5             | 0.5         | -34.28                | -11.5                  | -34.4      | 34.2                 | 33.2                  | 0.97                   | 35.164            |                           |         |
| 400.0   | 399.6               | 397.4               | 397.1               | 0.7             | 0.7         | -36.60                | -11.0                  | -41.7      | 34.3                 | 33.0                  | 1.34                   | 25.597            |                           |         |
| 500.0   | 498.8               | 497.3               | 496.6               | 1.0             | 0.9         | -44.16                | -10.5                  | -49.8      | 31.4                 | 29.7                  | 1.77                   | 17.746            |                           |         |
| 600.0   | 597.1               | 596.7               | 595.8               | 1.4             | 1.1         | -62.16                | -10.0                  | -58.0      | 26.3                 | 24.0                  | 2.38                   | 11.080            |                           |         |
| 670.4   | 665.7               | 666.4               | 665.2               | 1.7             | 1.3         | -85.14                | -9.6                   | -63.7      | 24.3                 | 21.4                  | 2.96                   | 8.230 CC, ES      |                           |         |
| 700.0   | 694.3               | 695.5               | 694.2               | 1.8             | 1.3         | -96.83                | -9.4                   | -66.0      | 24.8                 | 21.7                  | 3.16                   | 7.861 SF          |                           |         |
| 800.0   | 790.2               | 793.4               | 791.7               | 2.4             | 1.6         | -131.35               | -8.9                   | -74.0      | 35.1                 | 31.7                  | 3.48                   | 10.089            |                           |         |
| 900.0   | 884.6               | 890.1               | 888.2               | 3.0             | 1.8         | -149.80               | -8.4                   | -82.0      | 56.0                 | 52.4                  | 3.59                   | 15.589            |                           |         |
| 1,000.0   | 978.7               | 986.7               | 984.4               | 3.6             | 2.0         | -158.30               | -7.9                   | -89.9      | 80.2                 | 76.4                  | 3.80                   | 21.116            |                           |         |
| 1,100.0   | 1,072.8             | 1,083.2             | 1,080.6             | 4.2             | 2.2         | -162.83               | -7.4                   | -97.8      | 105.3                | 101.3                 | 4.07                   | 25.882            |                           |         |
| 1,200.0   | 1,167.0             | 1,179.7             | 1,176.8             | 4.9             | 2.4         | -165.61               | -6.9                   | -105.7     | 130.8                | 126.5                 | 4.37                   | 29.934            |                           |         |
| 1,300.0   | 1,261.1             | 1,276.3             | 1,273.0             | 5.5             | 2.6         | -167.48               | -6.4                   | -113.6     | 156.5                | 151.8                 | 4.69                   | 33.393            |                           |         |
| 1,400.0   | 1,355.2             | 1,372.8             | 1,369.2             | 6.2             | 2.9         | -168.82               | -5.9                   | -121.4     | 182.3                | 177.3                 | 5.01                   | 36.371            |                           |         |
| 1,500.0   | 1,449.3             | 1,469.3             | 1,465.4             | 6.8             | 3.1         | -169.83               | -5.4                   | -129.3     | 208.2                | 202.9                 | 5.34                   | 38.958            |                           |         |
| 1,600.0   | 1,543.5             | 1,565.9             | 1,561.6             | 7.4             | 3.3         | -170.62               | -4.8                   | -137.2     | 234.1                | 228.5                 | 5.68                   | 41.225            |                           |         |
| 1,700.0   | 1,637.6             | 1,662.4             | 1,657.8             | 8.1             | 3.5         | -171.25               | -4.3                   | -145.1     | 260.1                | 254.1                 | 6.02                   | 43.226            |                           |         |
| 1,800.0   | 1,731.7             | 1,759.0             | 1,754.1             | 8.7             | 3.7         | -171.77               | -3.8                   | -153.0     | 286.1                | 279.7                 | 6.36                   | 45.005            |                           |         |
| 1,900.0   | 1,825.9             | 1,855.5             | 1,850.3             | 9.4             | 4.0         | -172.20               | -3.3                   | -160.9     | 312.1                | 305.4                 | 6.70                   | 46.597            |                           |         |
| 2,000.0   | 1,920.0             | 1,952.0             | 1,946.5             | 10.0            | 4.2         | -172.56               | -2.8                   | -168.8     | 338.1                | 331.0                 | 7.04                   | 48.029            |                           |         |
| 2,100.0   | 2,014.1             | 2,048.6             | 2,042.7             | 10.6            | 4.4         | -172.87               | -2.3                   | -176.7     | 364.1                | 356.7                 | 7.38                   | 49.325            |                           |         |
| 2,200.0   | 2,108.2             | 2,145.1             | 2,138.9             | 11.3            | 4.6         | -173.14               | -1.8                   | -184.6     | 390.1                | 382.4                 | 7.73                   | 50.502            |                           |         |
| 2,300.0   | 2,202.4             | 2,241.6             | 2,235.1             | 11.9            | 4.8         | -173.38               | -1.3                   | -192.5     | 416.2                | 408.1                 | 8.07                   | 51.577            |                           |         |
| 2,400.0   | 2,296.5             | 2,338.2             | 2,331.3             | 12.6            | 5.0         | -173.59               | -0.8                   | -200.4     | 442.2                | 433.8                 | 8.41                   | 52.562            |                           |         |
| 2,500.0   | 2,390.6             | 2,434.7             | 2,427.5             | 13.2            | 5.3         | -173.78               | -0.2                   | -208.3     | 468.3                | 459.5                 | 8.76                   | 53.468            |                           |         |
| 2,600.0   | 2,484.7             | 2,531.2             | 2,523.8             | 13.9            | 5.5         | -173.94               | 0.3                    | -216.2     | 494.3                | 485.2                 | 9.10                   | 54.304            |                           |         |

# Cathedral Energy Services

## Anticollision Report

|                           |                              |                                     |                                     |
|---------------------------|------------------------------|-------------------------------------|-------------------------------------|
| <b>Company:</b>           | EnCana Oil & Gas (USA) Inc   | <b>Local Co-ordinate Reference:</b> | Well MCU Fee 17-16B (M16W Pad)      |
| <b>Project:</b>           | Mamm Creek                   | <b>TVD Reference:</b>               | KBE @ 7903.0ft (Original Well Elev) |
| <b>Reference Site:</b>    | SWSW S16-T7S-R93W (M16W Pad) | <b>MD Reference:</b>                | KBE @ 7903.0ft (Original Well Elev) |
| <b>Site Error:</b>        | 0.0ft                        | <b>North Reference:</b>             | True                                |
| <b>Reference Well:</b>    | MCU Fee 17-16B (M16W Pad)    | <b>Survey Calculation Method:</b>   | Minimum Curvature                   |
| <b>Well Error:</b>        | 0.0ft                        | <b>Output errors are at</b>         | 2.00 sigma                          |
| <b>Reference Wellbore</b> | DD                           | <b>Database:</b>                    | EDM 5000.1 US Multi Users DB        |
| <b>Reference Design:</b>  | Plan #1                      | <b>Offset TVD Reference:</b>        | Offset Datum                        |

| Offset Design SWSW S16-T7S-R93W (M16W Pad) - MCU 16-13D (M16W Pad) - DD - Plan #1 |                        |                        |                        |                   |                |                             |   |               |                            |                             |                     |                      | Offset Site Error: | 0.0 ft |
|---|------------------------|------------------------|------------------------|-------------------|----------------|-----------------------------|---|---------------|----------------------------|-----------------------------|---------------------|----------------------|--------------------|--------|
| Survey Program: 0-MWD   |                        |                        |                        |                   |                |                             |   |               |                            |                             |                     |                      | Offset Well Error: | 0.0 ft |
| Reference   |                        | Offset                 |                        | Semi Major Axis   |                |                             | Distance                                |               |                            |                             | Total               |                      | Warning            |        |
| Measured Depth<br>(ft)  | Vertical Depth<br>(ft) | Measured Depth<br>(ft) | Vertical Depth<br>(ft) | Reference<br>(ft) | Offset<br>(ft) | Highside<br>Toolface<br>(°) | Offset Wellbore Centre<br>+N/-S<br>(ft) | +E/-W<br>(ft) | Between<br>Centres<br>(ft) | Between<br>Ellipses<br>(ft) | Uncertainty<br>Axis | Separation<br>Factor |                    |        |
| 0.0   | 0.0                    | 0.0                    | 0.0                    | 0.0               | 0.0            | -110.06                     | -23.3                                   | -63.8         | 68.0                       |                             |                     |                      |                    |        |
| 100.0   | 100.0                  | 100.0                  | 100.0                  | 0.1               | 0.1            | -110.06                     | -23.3                                   | -63.8         | 68.0                       | 67.7                        | 0.27                | 249.574              |                    |        |
| 200.0   | 200.0                  | 200.0                  | 200.0                  | 0.3               | 0.3            | -110.06                     | -23.3                                   | -63.8         | 68.0                       | 67.3                        | 0.62                | 109.364              |                    |        |
| 300.0   | 300.0                  | 296.6                  | 296.5                  | 0.5               | 0.5            | -35.01                      | -24.4                                   | -66.0         | 68.3                       | 67.3                        | 0.97                | 70.642               |                    |        |
| 400.0   | 399.6                  | 394.0                  | 393.7                  | 0.7               | 0.7            | -39.17                      | -27.6                                   | -72.4         | 69.4                       | 68.0                        | 1.33                | 52.162               |                    |        |
| 500.0   | 498.8                  | 493.6                  | 493.0                  | 1.0               | 0.9            | -46.24                      | -31.5                                   | -80.0         | 68.3                       | 66.6                        | 1.75                | 39.133               |                    |        |
| 600.0   | 597.1                  | 592.8                  | 591.7                  | 1.4               | 1.1            | -57.06                      | -35.3                                   | -87.6         | 65.3                       | 63.1                        | 2.28                | 28.702               |                    |        |
| 700.0   | 694.3                  | 691.2                  | 689.8                  | 1.8               | 1.4            | -72.67                      | -39.1                                   | -95.1         | 63.1                       | 60.1                        | 3.00                | 21.053               |                    |        |
| 710.3   | 704.3                  | 701.3                  | 699.8                  | 1.9               | 1.4            | -74.56                      | -39.4                                   | -95.9         | 63.1                       | 60.0                        | 3.09                | 20.432 CC, ES        |                    |        |
| 800.0   | 790.2                  | 788.5                  | 786.8                  | 2.4               | 1.6            | -92.24                      | -42.8                                   | -102.5        | 65.8                       | 62.0                        | 3.86                | 17.068               |                    |        |
| 900.0   | 884.6                  | 884.8                  | 882.7                  | 3.0               | 1.8            | -111.55                     | -46.5                                   | -109.9        | 77.2                       | 72.7                        | 4.58                | 16.866 SF            |                    |        |
| 1,000.0   | 978.7                  | 980.7                  | 978.3                  | 3.6               | 2.0            | -125.51                     | -50.2                                   | -117.2        | 95.8                       | 90.7                        | 5.07                | 18.881               |                    |        |
| 1,100.0   | 1,072.8                | 1,076.7                | 1,073.9                | 4.2               | 2.2            | -134.74                     | -53.9                                   | -124.6        | 118.1                      | 112.7                       | 5.47                | 21.611               |                    |        |
| 1,200.0   | 1,167.0                | 1,172.7                | 1,169.6                | 4.9               | 2.4            | -140.99                     | -57.6                                   | -131.9        | 142.5                      | 136.7                       | 5.83                | 24.438               |                    |        |
| 1,300.0   | 1,261.1                | 1,268.7                | 1,265.2                | 5.5               | 2.7            | -145.40                     | -61.3                                   | -139.2        | 168.1                      | 161.9                       | 6.20                | 27.129               |                    |        |
| 1,400.0   | 1,355.2                | 1,364.7                | 1,360.8                | 6.2               | 2.9            | -148.65                     | -65.0                                   | -146.6        | 194.3                      | 187.7                       | 6.56                | 29.610               |                    |        |
| 1,500.0   | 1,449.3                | 1,460.7                | 1,456.5                | 6.8               | 3.1            | -151.13                     | -68.6                                   | -153.9        | 221.0                      | 214.0                       | 6.93                | 31.866               |                    |        |
| 1,600.0   | 1,543.5                | 1,556.7                | 1,552.1                | 7.4               | 3.3            | -153.07                     | -72.3                                   | -161.2        | 248.0                      | 240.6                       | 7.31                | 33.909               |                    |        |
| 1,700.0   | 1,637.6                | 1,652.6                | 1,647.7                | 8.1               | 3.5            | -154.64                     | -76.0                                   | -168.6        | 275.1                      | 267.5                       | 7.69                | 35.758               |                    |        |
| 1,800.0   | 1,731.7                | 1,748.6                | 1,743.4                | 8.7               | 3.8            | -155.92                     | -79.7                                   | -175.9        | 302.5                      | 294.4                       | 8.08                | 37.432               |                    |        |
| 1,900.0   | 1,825.9                | 1,844.6                | 1,839.0                | 9.4               | 4.0            | -156.99                     | -83.4                                   | -183.2        | 330.0                      | 321.5                       | 8.47                | 38.954               |                    |        |
| 2,000.0   | 1,920.0                | 1,940.6                | 1,934.6                | 10.0              | 4.2            | -157.90                     | -87.1                                   | -190.6        | 357.5                      | 348.7                       | 8.86                | 40.339               |                    |        |
| 2,100.0   | 2,014.1                | 2,036.6                | 2,030.3                | 10.6              | 4.4            | -158.67                     | -90.8                                   | -197.9        | 385.2                      | 375.9                       | 9.26                | 41.605               |                    |        |
| 2,200.0   | 2,108.2                | 2,132.6                | 2,125.9                | 11.3              | 4.6            | -159.35                     | -94.5                                   | -205.2        | 412.8                      | 403.2                       | 9.65                | 42.765               |                    |        |
| 2,300.0   | 2,202.4                | 2,228.6                | 2,221.5                | 11.9              | 4.9            | -159.93                     | -98.2                                   | -212.6        | 440.6                      | 430.5                       | 10.05               | 43.832               |                    |        |
| 2,400.0   | 2,296.5                | 2,324.5                | 2,317.2                | 12.6              | 5.1            | -160.45                     | -101.9                                  | -219.9        | 468.4                      | 457.9                       | 10.45               | 44.815               |                    |        |
| 2,500.0   | 2,390.6                | 2,420.5                | 2,412.8                | 13.2              | 5.3            | -160.91                     | -105.6                                  | -227.2        | 496.2                      | 485.3                       | 10.85               | 45.724               |                    |        |

# Cathedral Energy Services

## Anticollision Report

|                           |                              |                                     |                                     |
|---------------------------|------------------------------|-------------------------------------|-------------------------------------|
| <b>Company:</b>           | EnCana Oil & Gas (USA) Inc   | <b>Local Co-ordinate Reference:</b> | Well MCU Fee 17-16B (M16W Pad)      |
| <b>Project:</b>           | Mamm Creek                   | <b>TVD Reference:</b>               | KBE @ 7903.0ft (Original Well Elev) |
| <b>Reference Site:</b>    | SWSW S16-T7S-R93W (M16W Pad) | <b>MD Reference:</b>                | KBE @ 7903.0ft (Original Well Elev) |
| <b>Site Error:</b>        | 0.0ft                        | <b>North Reference:</b>             | True                                |
| <b>Reference Well:</b>    | MCU Fee 17-16B (M16W Pad)    | <b>Survey Calculation Method:</b>   | Minimum Curvature                   |
| <b>Well Error:</b>        | 0.0ft                        | <b>Output errors are at</b>         | 2.00 sigma                          |
| <b>Reference Wellbore</b> | DD                           | <b>Database:</b>                    | EDM 5000.1 US Multi Users DB        |
| <b>Reference Design:</b>  | Plan #1                      | <b>Offset TVD Reference:</b>        | Offset Datum                        |

| Offset Design SWSW S16-T7S-R93W (M16W Pad) - MCU 21-3B (M16W Pad) - DD - Plan #1 |                     |                     |                     |                 |             |                       |                                   |            |                      |                       |                        |                   | Offset Site Error: | 0.0 ft |
|--|---------------------|---------------------|---------------------|-----------------|-------------|-----------------------|-----------------------------------|------------|----------------------|-----------------------|------------------------|-------------------|--------------------|--------|
| Survey Program: 0-MWD  |                     |                     |                     |                 |             |                       |                                   |            |                      |                       |                        |                   | Offset Well Error: | 0.0 ft |
| Reference  |                     | Offset              |                     | Semi Major Axis |             |                       | Distance                          |            |                      |                       |                        |                   | Warning            |        |
| Measured Depth (ft)  | Vertical Depth (ft) | Measured Depth (ft) | Vertical Depth (ft) | Reference (ft)  | Offset (ft) | Highside Toolface (°) | Offset Wellbore Centre +N/-S (ft) | +E/-W (ft) | Between Centres (ft) | Between Ellipses (ft) | Total Uncertainty Axis | Separation Factor |                    |        |
| 0.0  | 0.0                 | 0.0                 | 0.0                 | 0.0             | 0.0         | -49.01                | 91.8                              | -105.6     | 139.9                |                       |                        |                   |                    |        |
| 100.0  | 100.0               | 100.0               | 100.0               | 0.1             | 0.1         | -49.01                | 91.8                              | -105.6     | 139.9                | 139.7                 | 0.27                   | 513.956           |                    |        |
| 200.0  | 200.0               | 200.0               | 200.0               | 0.3             | 0.3         | -49.01                | 91.8                              | -105.6     | 139.9                | 139.3                 | 0.62                   | 225.217           |                    |        |
| 300.0  | 300.0               | 307.6               | 307.5               | 0.5             | 0.5         | 28.04                 | 89.7                              | -103.4     | 134.8                | 133.8                 | 0.99                   | 136.793           |                    |        |
| 400.0  | 399.6               | 413.4               | 413.0               | 0.7             | 0.8         | 30.11                 | 83.8                              | -96.8      | 119.6                | 118.2                 | 1.35                   | 88.277            |                    |        |
| 500.0  | 498.8               | 515.8               | 514.3               | 1.0             | 1.1         | 34.90                 | 74.2                              | -86.4      | 94.9                 | 93.1                  | 1.75                   | 54.289            |                    |        |
| 600.0  | 597.1               | 613.2               | 610.0               | 1.4             | 1.4         | 47.25                 | 61.8                              | -72.7      | 62.5                 | 60.2                  | 2.28                   | 27.418            |                    |        |
| 700.0  | 694.3               | 704.6               | 698.7               | 1.8             | 1.8         | 90.23                 | 47.2                              | -56.7      | 32.9                 | 29.4                  | 3.53                   | 9.320             |                    |        |
| 718.8  | 712.5               | 721.0               | 714.6               | 1.9             | 1.9         | 104.52                | 44.3                              | -53.5      | 31.5                 | 27.8                  | 3.76                   | 8.395 CC, ES, SF  |                    |        |
| 800.0  | 790.2               | 790.8               | 782.0               | 2.4             | 2.2         | 152.50                | 32.2                              | -40.2      | 52.3                 | 48.7                  | 3.56                   | 14.686            |                    |        |
| 900.0  | 884.6               | 874.6               | 863.0               | 3.0             | 2.6         | 172.37                | 17.6                              | -24.3      | 101.7                | 98.2                  | 3.42                   | 29.764            |                    |        |
| 1,000.0  | 978.7               | 957.9               | 943.5               | 3.6             | 3.0         | 179.51                | 3.2                               | -8.4       | 155.3                | 151.7                 | 3.62                   | 42.885            |                    |        |
| 1,100.0  | 1,072.8             | 1,041.2             | 1,024.0             | 4.2             | 3.4         | -176.99               | -11.3                             | 7.5        | 209.8                | 205.9                 | 3.92                   | 53.465            |                    |        |
| 1,200.0  | 1,167.0             | 1,124.6             | 1,104.5             | 4.9             | 3.8         | -174.93               | -25.7                             | 23.3       | 264.6                | 260.4                 | 4.26                   | 62.091            |                    |        |
| 1,300.0  | 1,261.1             | 1,207.9             | 1,185.1             | 5.5             | 4.2         | -173.57               | -40.2                             | 39.2       | 319.6                | 315.0                 | 4.62                   | 69.238            |                    |        |
| 1,400.0  | 1,355.2             | 1,291.2             | 1,265.6             | 6.2             | 4.6         | -172.60               | -54.7                             | 55.1       | 374.7                | 369.7                 | 4.98                   | 75.247            |                    |        |
| 1,500.0  | 1,449.3             | 1,374.5             | 1,346.1             | 6.8             | 5.0         | -171.89               | -69.1                             | 70.9       | 429.8                | 424.5                 | 5.35                   | 80.366            |                    |        |
| 1,600.0  | 1,543.5             | 1,457.9             | 1,426.6             | 7.4             | 5.5         | -171.34               | -83.6                             | 86.8       | 485.0                | 479.3                 | 5.72                   | 84.778            |                    |        |



# Cathedral Energy Services

## Anticollision Report

|                           |                              |                                     |                                     |
|---------------------------|------------------------------|-------------------------------------|-------------------------------------|
| <b>Company:</b>           | EnCana Oil & Gas (USA) Inc   | <b>Local Co-ordinate Reference:</b> | Well MCU Fee 17-16B (M16W Pad)      |
| <b>Project:</b>           | Mamm Creek                   | <b>TVD Reference:</b>               | KBE @ 7903.0ft (Original Well Elev) |
| <b>Reference Site:</b>    | SWSW S16-T7S-R93W (M16W Pad) | <b>MD Reference:</b>                | KBE @ 7903.0ft (Original Well Elev) |
| <b>Site Error:</b>        | 0.0ft                        | <b>North Reference:</b>             | True                                |
| <b>Reference Well:</b>    | MCU Fee 17-16B (M16W Pad)    | <b>Survey Calculation Method:</b>   | Minimum Curvature                   |
| <b>Well Error:</b>        | 0.0ft                        | <b>Output errors are at</b>         | 2.00 sigma                          |
| <b>Reference Wellbore</b> | DD                           | <b>Database:</b>                    | EDM 5000.1 US Multi Users DB        |
| <b>Reference Design:</b>  | Plan #1                      | <b>Offset TVD Reference:</b>        | Offset Datum                        |

| Offset Design SWSW S16-T7S-R93W (M16W Pad) - MCU 21-4A (M16W Pad) - DD - Plan #1 |                     |                     |                     |                 |             |                       |                                   |            |                      |                       |                        |                   | Offset Site Error: | 0.0 ft |
|--|---------------------|---------------------|---------------------|-----------------|-------------|-----------------------|-----------------------------------|------------|----------------------|-----------------------|------------------------|-------------------|--------------------|--------|
| Survey Program: 0-MWD  |                     |                     |                     |                 |             |                       |                                   |            |                      |                       |                        |                   | Offset Well Error: | 0.0 ft |
| Reference  |                     | Offset              |                     | Semi Major Axis |             |                       | Distance                          |            |                      |                       |                        | Separation Factor | Warning            |        |
| Measured Depth (ft)  | Vertical Depth (ft) | Measured Depth (ft) | Vertical Depth (ft) | Reference (ft)  | Offset (ft) | Highside Toolface (°) | Offset Wellbore Centre +N/-S (ft) | +E/-W (ft) | Between Centres (ft) | Between Ellipses (ft) | Total Uncertainty Axis |                   |                    |        |
| 0.0  | 0.0                 | 0.0                 | 0.0                 | 0.0             | 0.0         | -117.54               | -27.7                             | -53.1      | 59.9                 |                       |                        |                   |                    |        |
| 100.0  | 100.0               | 100.0               | 100.0               | 0.1             | 0.1         | -117.54               | -27.7                             | -53.1      | 59.9                 | 59.6                  | 0.27                   | 219.923           |                    |        |
| 200.0  | 200.0               | 200.0               | 200.0               | 0.3             | 0.3         | -117.54               | -27.7                             | -53.1      | 59.9                 | 59.3                  | 0.62                   | 96.371 CC, ES     |                    |        |
| 300.0  | 300.0               | 297.0               | 296.9               | 0.5             | 0.5         | -43.05                | -29.2                             | -55.1      | 60.4                 | 59.5                  | 0.97                   | 62.380            |                    |        |
| 400.0  | 399.6               | 393.9               | 393.6               | 0.7             | 0.7         | -48.69                | -33.6                             | -60.9      | 62.5                 | 61.2                  | 1.34                   | 46.696            |                    |        |
| 500.0  | 498.8               | 493.4               | 492.6               | 1.0             | 0.9         | -57.68                | -39.5                             | -68.6      | 64.4                 | 62.7                  | 1.78                   | 36.228            |                    |        |
| 600.0  | 597.1               | 592.3               | 591.1               | 1.4             | 1.2         | -70.02                | -45.3                             | -76.2      | 65.9                 | 63.5                  | 2.34                   | 28.113            |                    |        |
| 700.0  | 694.3               | 690.5               | 688.8               | 1.8             | 1.4         | -85.33                | -51.1                             | -83.8      | 69.6                 | 66.6                  | 3.06                   | 22.750            |                    |        |
| 800.0  | 790.2               | 787.7               | 785.5               | 2.4             | 1.6         | -101.62               | -56.8                             | -91.2      | 78.8                 | 75.0                  | 3.85                   | 20.494 SF         |                    |        |
| 900.0  | 884.6               | 883.7               | 881.0               | 3.0             | 1.9         | -116.23               | -62.4                             | -98.6      | 95.3                 | 90.7                  | 4.53                   | 21.014            |                    |        |
| 1,000.0  | 978.7               | 979.4               | 976.3               | 3.6             | 2.1         | -126.75               | -68.1                             | -106.0     | 116.7                | 111.6                 | 5.08                   | 22.956            |                    |        |
| 1,100.0  | 1,072.8             | 1,075.2             | 1,071.6             | 4.2             | 2.3         | -133.94               | -73.7                             | -113.4     | 140.9                | 135.3                 | 5.57                   | 25.285            |                    |        |
| 1,200.0  | 1,167.0             | 1,170.9             | 1,166.9             | 4.9             | 2.5         | -139.01               | -79.3                             | -120.8     | 166.5                | 160.5                 | 6.03                   | 27.615            |                    |        |
| 1,300.0  | 1,261.1             | 1,266.7             | 1,262.2             | 5.5             | 2.8         | -142.73               | -85.0                             | -128.1     | 193.1                | 186.6                 | 6.48                   | 29.806            |                    |        |
| 1,400.0  | 1,355.2             | 1,362.4             | 1,357.5             | 6.2             | 3.0         | -145.55               | -90.6                             | -135.5     | 220.2                | 213.3                 | 6.92                   | 31.816            |                    |        |
| 1,500.0  | 1,449.3             | 1,458.2             | 1,452.8             | 6.8             | 3.2         | -147.75               | -96.2                             | -142.9     | 247.7                | 240.3                 | 7.36                   | 33.642            |                    |        |
| 1,600.0  | 1,543.5             | 1,553.9             | 1,548.1             | 7.4             | 3.5         | -149.51               | -101.9                            | -150.3     | 275.5                | 267.7                 | 7.81                   | 35.294            |                    |        |
| 1,700.0  | 1,637.6             | 1,649.6             | 1,643.4             | 8.1             | 3.7         | -150.95               | -107.5                            | -157.7     | 303.5                | 295.2                 | 8.25                   | 36.789            |                    |        |
| 1,800.0  | 1,731.7             | 1,745.4             | 1,738.7             | 8.7             | 3.9         | -152.15               | -113.1                            | -165.0     | 331.6                | 322.9                 | 8.69                   | 38.145            |                    |        |
| 1,900.0  | 1,825.9             | 1,841.1             | 1,834.0             | 9.4             | 4.2         | -153.16               | -118.8                            | -172.4     | 359.9                | 350.7                 | 9.14                   | 39.378            |                    |        |
| 2,000.0  | 1,920.0             | 1,936.9             | 1,929.3             | 10.0            | 4.4         | -154.03               | -124.4                            | -179.8     | 388.2                | 378.6                 | 9.59                   | 40.501            |                    |        |
| 2,100.0  | 2,014.1             | 2,032.6             | 2,024.6             | 10.6            | 4.6         | -154.77               | -130.0                            | -187.2     | 416.6                | 406.6                 | 10.03                  | 41.528            |                    |        |
| 2,200.0  | 2,108.2             | 2,128.4             | 2,119.9             | 11.3            | 4.9         | -155.43               | -135.6                            | -194.5     | 445.1                | 434.6                 | 10.48                  | 42.470            |                    |        |
| 2,300.0  | 2,202.4             | 2,224.1             | 2,215.2             | 11.9            | 5.1         | -156.00               | -141.3                            | -201.9     | 473.6                | 462.7                 | 10.93                  | 43.336            |                    |        |

# Cathedral Energy Services

## Anticollision Report

|                           |                              |                                     |                                     |
|---------------------------|------------------------------|-------------------------------------|-------------------------------------|
| <b>Company:</b>           | EnCana Oil & Gas (USA) Inc   | <b>Local Co-ordinate Reference:</b> | Well MCU Fee 17-16B (M16W Pad)      |
| <b>Project:</b>           | Mamm Creek                   | <b>TVD Reference:</b>               | KBE @ 7903.0ft (Original Well Elev) |
| <b>Reference Site:</b>    | SWSW S16-T7S-R93W (M16W Pad) | <b>MD Reference:</b>                | KBE @ 7903.0ft (Original Well Elev) |
| <b>Site Error:</b>        | 0.0ft                        | <b>North Reference:</b>             | True                                |
| <b>Reference Well:</b>    | MCU Fee 17-16B (M16W Pad)    | <b>Survey Calculation Method:</b>   | Minimum Curvature                   |
| <b>Well Error:</b>        | 0.0ft                        | <b>Output errors are at</b>         | 2.00 sigma                          |
| <b>Reference Wellbore</b> | DD                           | <b>Database:</b>                    | EDM 5000.1 US Multi Users DB        |
| <b>Reference Design:</b>  | Plan #1                      | <b>Offset TVD Reference:</b>        | Offset Datum                        |

| Offset Design SWSW S16-T7S-R93W (M16W Pad) - MCU 21-4B (M16W Pad) - DD - Plan #1 |                     |                     |                     |                 |             |                       |                                   |            |                      |                       |                        | Offset Site Error: 0.0 ft |         |                           |  |
|--|---------------------|---------------------|---------------------|-----------------|-------------|-----------------------|-----------------------------------|------------|----------------------|-----------------------|------------------------|---------------------------|---------|---------------------------|--|
| Survey Program: 0-MWD  |                     |                     |                     |                 |             |                       |                                   |            |                      |                       |                        |                           |         | Offset Well Error: 0.0 ft |  |
| Reference  |                     | Offset              |                     | Semi Major Axis |             |                       | Distance                          |            |                      |                       |                        |                           |         |                           |  |
| Measured Depth (ft)  | Vertical Depth (ft) | Measured Depth (ft) | Vertical Depth (ft) | Reference (ft)  | Offset (ft) | Highside Toolface (°) | Offset Wellbore Centre +N/-S (ft) | +E/-W (ft) | Between Centres (ft) | Between Ellipses (ft) | Total Uncertainty Axis | Separation Factor         | Warning |                           |  |
| 0.0  | 0.0                 | 0.0                 | 0.0                 | 0.0             | 0.0         | -120.56               | -21.8                             | -37.0      | 43.0                 |                       |                        |                           |         |                           |  |
| 100.0  | 100.0               | 100.0               | 100.0               | 0.1             | 0.1         | -120.56               | -21.8                             | -37.0      | 43.0                 | 42.7                  | 0.27                   | 157.805                   |         |                           |  |
| 200.0  | 200.0               | 200.0               | 200.0               | 0.3             | 0.3         | -120.56               | -21.8                             | -37.0      | 43.0                 | 42.3                  | 0.62                   | 69.150                    | CC, ES  |                           |  |
| 300.0  | 300.0               | 297.9               | 297.9               | 0.5             | 0.5         | -47.92                | -24.0                             | -38.4      | 43.5                 | 42.5                  | 0.97                   | 44.708                    |         |                           |  |
| 400.0  | 399.6               | 395.4               | 395.0               | 0.7             | 0.7         | -58.55                | -30.2                             | -42.4      | 46.1                 | 44.8                  | 1.35                   | 34.081                    |         |                           |  |
| 500.0  | 498.8               | 492.1               | 490.9               | 1.0             | 1.0         | -72.80                | -40.5                             | -49.1      | 53.6                 | 51.8                  | 1.81                   | 29.636                    |         |                           |  |
| 600.0  | 597.1               | 590.2               | 588.0               | 1.4             | 1.3         | -87.25                | -52.6                             | -56.9      | 65.1                 | 62.7                  | 2.38                   | 27.344                    |         |                           |  |
| 700.0  | 694.3               | 687.5               | 684.3               | 1.8             | 1.5         | -100.34               | -64.5                             | -64.6      | 80.4                 | 77.3                  | 3.06                   | 26.252                    | SF      |                           |  |
| 800.0  | 790.2               | 783.7               | 779.5               | 2.4             | 1.8         | -111.45               | -76.3                             | -72.2      | 100.6                | 96.8                  | 3.80                   | 26.446                    |         |                           |  |
| 900.0  | 884.6               | 878.7               | 873.5               | 3.0             | 2.1         | -120.59               | -88.0                             | -79.8      | 125.8                | 121.2                 | 4.52                   | 27.807                    |         |                           |  |
| 1,000.0  | 978.7               | 973.5               | 967.2               | 3.6             | 2.4         | -127.17               | -99.6                             | -87.3      | 153.7                | 148.5                 | 5.20                   | 29.589                    |         |                           |  |
| 1,100.0  | 1,072.8             | 1,068.2             | 1,060.9             | 4.2             | 2.7         | -131.73               | -111.3                            | -94.8      | 183.0                | 177.1                 | 5.84                   | 31.339                    |         |                           |  |
| 1,200.0  | 1,167.0             | 1,163.0             | 1,154.6             | 4.9             | 3.0         | -135.03               | -122.9                            | -102.3     | 213.0                | 206.6                 | 6.47                   | 32.942                    |         |                           |  |
| 1,300.0  | 1,261.1             | 1,257.7             | 1,248.4             | 5.5             | 3.3         | -137.52               | -134.6                            | -109.9     | 243.6                | 236.5                 | 7.09                   | 34.376                    |         |                           |  |
| 1,400.0  | 1,355.2             | 1,352.5             | 1,342.1             | 6.2             | 3.6         | -139.46               | -146.2                            | -117.4     | 274.5                | 266.8                 | 7.70                   | 35.648                    |         |                           |  |
| 1,500.0  | 1,449.3             | 1,447.2             | 1,435.8             | 6.8             | 3.9         | -141.00               | -157.8                            | -124.9     | 305.5                | 297.2                 | 8.31                   | 36.776                    |         |                           |  |
| 1,600.0  | 1,543.5             | 1,542.0             | 1,529.6             | 7.4             | 4.2         | -142.26               | -169.5                            | -132.4     | 336.8                | 327.9                 | 8.92                   | 37.779                    |         |                           |  |
| 1,700.0  | 1,637.6             | 1,636.7             | 1,623.3             | 8.1             | 4.4         | -143.31               | -181.1                            | -140.0     | 368.2                | 358.7                 | 9.52                   | 38.673                    |         |                           |  |
| 1,800.0  | 1,731.7             | 1,731.5             | 1,717.0             | 8.7             | 4.7         | -144.19               | -192.7                            | -147.5     | 399.7                | 389.5                 | 10.12                  | 39.475                    |         |                           |  |
| 1,900.0  | 1,825.9             | 1,826.2             | 1,810.8             | 9.4             | 5.0         | -144.95               | -204.4                            | -155.0     | 431.2                | 420.5                 | 10.73                  | 40.197                    |         |                           |  |
| 2,000.0  | 1,920.0             | 1,921.0             | 1,904.5             | 10.0            | 5.3         | -145.60               | -216.0                            | -162.5     | 462.8                | 451.5                 | 11.33                  | 40.849                    |         |                           |  |
| 2,100.0  | 2,014.1             | 2,015.7             | 1,998.2             | 10.6            | 5.6         | -146.17               | -227.6                            | -170.0     | 494.5                | 482.6                 | 11.93                  | 41.441                    |         |                           |  |

# Cathedral Energy Services

## Anticollision Report

|                           |                              |                                     |                                     |
|---------------------------|------------------------------|-------------------------------------|-------------------------------------|
| <b>Company:</b>           | EnCana Oil & Gas (USA) Inc   | <b>Local Co-ordinate Reference:</b> | Well MCU Fee 17-16B (M16W Pad)      |
| <b>Project:</b>           | Mamm Creek                   | <b>TVD Reference:</b>               | KBE @ 7903.0ft (Original Well Elev) |
| <b>Reference Site:</b>    | SWSW S16-T7S-R93W (M16W Pad) | <b>MD Reference:</b>                | KBE @ 7903.0ft (Original Well Elev) |
| <b>Site Error:</b>        | 0.0ft                        | <b>North Reference:</b>             | True                                |
| <b>Reference Well:</b>    | MCU Fee 17-16B (M16W Pad)    | <b>Survey Calculation Method:</b>   | Minimum Curvature                   |
| <b>Well Error:</b>        | 0.0ft                        | <b>Output errors are at</b>         | 2.00 sigma                          |
| <b>Reference Wellbore</b> | DD                           | <b>Database:</b>                    | EDM 5000.1 US Multi Users DB        |
| <b>Reference Design:</b>  | Plan #1                      | <b>Offset TVD Reference:</b>        | Offset Datum                        |

| Offset Design SWSW S16-T7S-R93W (M16W Pad) - MCU 21-4C (M16W Pad) - DD - Plan #1 |                |                |                |                 |        |                   |                        |            |                 |                  |                   |            | Offset Site Error: | 0.0 ft  |
|--|----------------|----------------|----------------|-----------------|--------|-------------------|------------------------|------------|-----------------|------------------|-------------------|------------|--------------------|---------|
| Survey Program: 0-MWD  |                |                |                |                 |        |                   |                        |            |                 |                  |                   |            | Offset Well Error: | 0.0 ft  |
| Reference  |                | Offset         |                | Semi Major Axis |        |                   | Distance               |            |                 |                  |                   |            |                    | Warning |
| Measured Depth   | Vertical Depth | Measured Depth | Vertical Depth | Reference       | Offset | Highside Toolface | Offset Wellbore Centre |            | Between Centres | Between Ellipses | Total Uncertainty | Separation |                    |         |
| (ft)   | (ft)           | (ft)           | (ft)           | (ft)            | (ft)   | (°)               | +N/-S (ft)             | +E/-W (ft) | (ft)            | (ft)             | Axis              | Factor     |                    |         |
| 0.0  | 0.0            | 0.0            | 0.0            | 0.0             | 0.0    | -127.11           | -16.0                  | -21.2      | 26.6            |                  |                   |            |                    |         |
| 100.0  | 100.0          | 100.0          | 100.0          | 0.1             | 0.1    | -127.11           | -16.0                  | -21.2      | 26.6            | 26.3             | 0.27              | 97.555     |                    |         |
| 200.0  | 200.0          | 200.0          | 200.0          | 0.3             | 0.3    | -127.11           | -16.0                  | -21.2      | 26.6            | 25.9             | 0.62              | 42.749     | CC, ES             |         |
| 300.0  | 300.0          | 298.7          | 298.6          | 0.5             | 0.5    | -57.19            | -18.3                  | -22.3      | 27.4            | 26.4             | 0.97              | 28.104     |                    |         |
| 400.0  | 399.6          | 396.7          | 396.4          | 0.7             | 0.7    | -73.61            | -25.1                  | -25.7      | 31.8            | 30.4             | 1.36              | 23.285     | SF                 |         |
| 500.0  | 498.8          | 493.6          | 492.4          | 1.0             | 1.0    | -90.82            | -36.2                  | -31.2      | 43.0            | 41.2             | 1.83              | 23.459     |                    |         |
| 600.0  | 597.1          | 589.7          | 587.1          | 1.4             | 1.3    | -103.08           | -51.1                  | -38.7      | 61.8            | 59.4             | 2.40              | 25.713     |                    |         |
| 700.0  | 694.3          | 686.3          | 682.0          | 1.8             | 1.6    | -112.24           | -66.9                  | -46.6      | 84.7            | 81.7             | 3.06              | 27.677     |                    |         |
| 800.0  | 790.2          | 781.7          | 775.8          | 2.4             | 2.0    | -119.49           | -82.5                  | -54.4      | 111.6           | 107.8            | 3.78              | 29.518     |                    |         |
| 900.0  | 884.6          | 875.9          | 868.4          | 3.0             | 2.3    | -125.51           | -98.0                  | -62.1      | 142.2           | 137.7            | 4.51              | 31.566     |                    |         |
| 1,000.0  | 978.7          | 969.8          | 960.8          | 3.6             | 2.6    | -129.93           | -113.3                 | -69.7      | 174.6           | 169.3            | 5.22              | 33.455     |                    |         |
| 1,100.0  | 1,072.8        | 1,063.7        | 1,053.1        | 4.2             | 3.0    | -132.97           | -128.7                 | -77.4      | 207.5           | 201.6            | 5.92              | 35.065     |                    |         |
| 1,200.0  | 1,167.0        | 1,157.6        | 1,145.4        | 4.9             | 3.3    | -135.18           | -144.1                 | -85.1      | 240.9           | 234.2            | 6.61              | 36.427     |                    |         |
| 1,300.0  | 1,261.1        | 1,251.6        | 1,237.8        | 5.5             | 3.7    | -136.86           | -159.4                 | -92.7      | 274.4           | 267.1            | 7.30              | 37.583     |                    |         |
| 1,400.0  | 1,355.2        | 1,345.5        | 1,330.1        | 6.2             | 4.0    | -138.17           | -174.8                 | -100.4     | 308.2           | 300.2            | 7.99              | 38.572     |                    |         |
| 1,500.0  | 1,449.3        | 1,439.4        | 1,422.5        | 6.8             | 4.3    | -139.22           | -190.2                 | -108.1     | 342.0           | 333.4            | 8.68              | 39.426     |                    |         |
| 1,600.0  | 1,543.5        | 1,533.3        | 1,514.8        | 7.4             | 4.7    | -140.08           | -205.5                 | -115.7     | 376.0           | 366.6            | 9.36              | 40.168     |                    |         |
| 1,700.0  | 1,637.6        | 1,627.3        | 1,607.2        | 8.1             | 5.0    | -140.80           | -220.9                 | -123.4     | 410.0           | 399.9            | 10.04             | 40.819     |                    |         |
| 1,800.0  | 1,731.7        | 1,721.2        | 1,699.5        | 8.7             | 5.4    | -141.41           | -236.2                 | -131.1     | 444.0           | 433.3            | 10.73             | 41.395     |                    |         |
| 1,900.0  | 1,825.9        | 1,815.1        | 1,791.8        | 9.4             | 5.7    | -141.94           | -251.6                 | -138.7     | 478.1           | 466.7            | 11.41             | 41.906     |                    |         |

# Cathedral Energy Services

## Anticollision Report

|                           |                              |                                     |                                     |
|---------------------------|------------------------------|-------------------------------------|-------------------------------------|
| <b>Company:</b>           | EnCana Oil & Gas (USA) Inc   | <b>Local Co-ordinate Reference:</b> | Well MCU Fee 17-16B (M16W Pad)      |
| <b>Project:</b>           | Mamm Creek                   | <b>TVD Reference:</b>               | KBE @ 7903.0ft (Original Well Elev) |
| <b>Reference Site:</b>    | SWSW S16-T7S-R93W (M16W Pad) | <b>MD Reference:</b>                | KBE @ 7903.0ft (Original Well Elev) |
| <b>Site Error:</b>        | 0.0ft                        | <b>North Reference:</b>             | True                                |
| <b>Reference Well:</b>    | MCU Fee 17-16B (M16W Pad)    | <b>Survey Calculation Method:</b>   | Minimum Curvature                   |
| <b>Well Error:</b>        | 0.0ft                        | <b>Output errors are at</b>         | 2.00 sigma                          |
| <b>Reference Wellbore</b> | DD                           | <b>Database:</b>                    | EDM 5000.1 US Multi Users DB        |
| <b>Reference Design:</b>  | Plan #1                      | <b>Offset TVD Reference:</b>        | Offset Datum                        |

| Offset Design SWSW S16-T7S-R93W (M16W Pad) - MCU 21-4D2 (M16W Pad) - DD - Plan #1 |                |                |                |                 |        |                   |                        |            |                 |                  |                        | Offset Site Error: | 0.0 ft  |
|---|----------------|----------------|----------------|-----------------|--------|-------------------|------------------------|------------|-----------------|------------------|------------------------|--------------------|---------|
| Survey Program:   |                | 0-MWD          |                |                 |        |                   |                        |            |                 |                  |                        | Offset Well Error: | 0.0 ft  |
| Reference   |                | Offset         |                | Semi Major Axis |        |                   | Distance               |            |                 |                  |                        |                    | Warning |
| Measured Depth  | Vertical Depth | Measured Depth | Vertical Depth | Reference       | Offset | Highside Toolface | Offset Wellbore Centre |            | Between Centres | Between Ellipses | Total Uncertainty Axis | Separation Factor  |         |
| (ft)  | (ft)           | (ft)           | (ft)           | (ft)            | (ft)   | (°)               | +N/-S (ft)             | +E/-W (ft) | (ft)            | (ft)             |                        |                    |         |
| 0.0   | 0.0            | 0.0            | 0.0            | 0.0             | 0.0    | -153.52           | -10.2                  | -5.1       | 11.4            |                  |                        |                    |         |
| 100.0   | 100.0          | 100.0          | 100.0          | 0.1             | 0.1    | -153.52           | -10.2                  | -5.1       | 11.4            | 11.1             | 0.27                   | 41.867             |         |
| 200.0   | 200.0          | 200.0          | 200.0          | 0.3             | 0.3    | -153.52           | -10.2                  | -5.1       | 11.4            | 10.8             | 0.62                   | 18.346 CC, ES      |         |
| 300.0   | 300.0          | 299.3          | 299.2          | 0.5             | 0.5    | -88.56            | -12.6                  | -6.0       | 13.7            | 12.7             | 0.98                   | 13.995 SF          |         |
| 400.0   | 399.6          | 397.9          | 397.5          | 0.7             | 0.7    | -106.21           | -19.7                  | -8.9       | 22.3            | 20.9             | 1.38                   | 16.208             |         |
| 500.0   | 498.8          | 495.2          | 494.0          | 1.0             | 1.0    | -116.42           | -31.3                  | -13.6      | 38.3            | 36.4             | 1.85                   | 20.752             |         |
| 600.0   | 597.1          | 590.4          | 587.7          | 1.4             | 1.3    | -121.37           | -47.1                  | -19.9      | 61.3            | 58.9             | 2.41                   | 25.467             |         |
| 700.0   | 694.3          | 684.9          | 679.9          | 1.8             | 1.7    | -124.17           | -66.4                  | -27.6      | 90.3            | 87.2             | 3.05                   | 29.603             |         |
| 800.0   | 790.2          | 779.2          | 771.8          | 2.4             | 2.1    | -127.09           | -86.1                  | -35.5      | 122.7           | 119.0            | 3.76                   | 32.651             |         |
| 900.0   | 884.6          | 872.3          | 862.5          | 3.0             | 2.5    | -130.17           | -105.5                 | -43.3      | 158.4           | 153.9            | 4.50                   | 35.195             |         |
| 1,000.0   | 978.7          | 965.1          | 952.9          | 3.6             | 2.9    | -132.64           | -124.9                 | -51.1      | 194.9           | 189.7            | 5.25                   | 37.144             |         |
| 1,100.0   | 1,072.8        | 1,057.9        | 1,043.3        | 4.2             | 3.3    | -134.34           | -144.3                 | -58.8      | 231.7           | 225.7            | 6.00                   | 38.640             |         |
| 1,200.0   | 1,167.0        | 1,150.7        | 1,133.8        | 4.9             | 3.7    | -135.57           | -163.7                 | -66.6      | 268.6           | 261.9            | 6.75                   | 39.820             |         |
| 1,300.0   | 1,261.1        | 1,243.5        | 1,224.2        | 5.5             | 4.1    | -136.51           | -183.0                 | -74.4      | 305.6           | 298.1            | 7.49                   | 40.773             |         |
| 1,400.0   | 1,355.2        | 1,336.4        | 1,314.6        | 6.2             | 4.4    | -137.24           | -202.4                 | -82.1      | 342.6           | 334.4            | 8.24                   | 41.558             |         |
| 1,500.0   | 1,449.3        | 1,429.2        | 1,405.1        | 6.8             | 4.8    | -137.83           | -221.8                 | -89.9      | 379.7           | 370.7            | 8.99                   | 42.214             |         |
| 1,600.0   | 1,543.5        | 1,522.0        | 1,495.5        | 7.4             | 5.2    | -138.32           | -241.2                 | -97.7      | 416.8           | 407.0            | 9.74                   | 42.771             |         |
| 1,700.0   | 1,637.6        | 1,614.8        | 1,585.9        | 8.1             | 5.6    | -138.73           | -260.6                 | -105.5     | 453.9           | 443.4            | 10.49                  | 43.250             |         |
| 1,800.0   | 1,731.7        | 1,707.6        | 1,676.4        | 8.7             | 6.0    | -139.07           | -279.9                 | -113.2     | 491.0           | 479.8            | 11.25                  | 43.666             |         |

# Cathedral Energy Services

## Anticollision Report

|                           |                              |                                     |                                     |
|---------------------------|------------------------------|-------------------------------------|-------------------------------------|
| <b>Company:</b>           | EnCana Oil & Gas (USA) Inc   | <b>Local Co-ordinate Reference:</b> | Well MCU Fee 17-16B (M16W Pad)      |
| <b>Project:</b>           | Mamm Creek                   | <b>TVD Reference:</b>               | KBE @ 7903.0ft (Original Well Elev) |
| <b>Reference Site:</b>    | SWSW S16-T7S-R93W (M16W Pad) | <b>MD Reference:</b>                | KBE @ 7903.0ft (Original Well Elev) |
| <b>Site Error:</b>        | 0.0ft                        | <b>North Reference:</b>             | True                                |
| <b>Reference Well:</b>    | MCU Fee 17-16B (M16W Pad)    | <b>Survey Calculation Method:</b>   | Minimum Curvature                   |
| <b>Well Error:</b>        | 0.0ft                        | <b>Output errors are at</b>         | 2.00 sigma                          |
| <b>Reference Wellbore</b> | DD                           | <b>Database:</b>                    | EDM 5000.1 US Multi Users DB        |
| <b>Reference Design:</b>  | Plan #1                      | <b>Offset TVD Reference:</b>        | Offset Datum                        |

| Offset Design SWSW S16-T7S-R93W (M16W Pad) - MCU 21-5A (M16W Pad) - DD - Plan #1 |                     |                     |                     |                 |             |                       |                                   |            |                      |                       |                        |                   | Offset Site Error: 0.0 ft |         |
|--|---------------------|---------------------|---------------------|-----------------|-------------|-----------------------|-----------------------------------|------------|----------------------|-----------------------|------------------------|-------------------|---------------------------|---------|
| Survey Program: 0-MWD  |                     |                     |                     |                 |             |                       |                                   |            |                      |                       |                        |                   | Offset Well Error: 0.0 ft |         |
| Reference  |                     | Offset              |                     | Semi Major Axis |             |                       | Distance                          |            |                      |                       |                        |                   |                           | Warning |
| Measured Depth (ft)  | Vertical Depth (ft) | Measured Depth (ft) | Vertical Depth (ft) | Reference (ft)  | Offset (ft) | Highside Toolface (°) | Offset Wellbore Centre +N/-S (ft) | +E/-W (ft) | Between Centres (ft) | Between Ellipses (ft) | Total Uncertainty Axis | Separation Factor |                           |         |
| 0.0  | 0.0                 | 0.0                 | 0.0                 | 0.0             | 0.0         | 112.16                | -4.4                              | 10.7       | 11.6                 |                       |                        |                   |                           |         |
| 100.0  | 100.0               | 100.0               | 100.0               | 0.1             | 0.1         | 112.16                | -4.4                              | 10.7       | 11.6                 | 11.3                  | 0.27                   | 42.561            |                           |         |
| 200.0  | 200.0               | 200.0               | 200.0               | 0.3             | 0.3         | 112.16                | -4.4                              | 10.7       | 11.6                 | 11.0                  | 0.62                   | 18.650 CC, ES     |                           |         |
| 300.0  | 300.0               | 299.8               | 299.8               | 0.5             | 0.5         | -162.58               | -6.8                              | 9.9        | 14.5                 | 13.5                  | 0.98                   | 14.831 SF         |                           |         |
| 400.0  | 399.6               | 398.9               | 398.6               | 0.7             | 0.7         | -149.90               | -14.2                             | 7.4        | 24.2                 | 22.9                  | 1.37                   | 17.656            |                           |         |
| 500.0  | 498.8               | 496.6               | 495.4               | 1.0             | 1.0         | -142.43               | -26.2                             | 3.4        | 41.3                 | 39.4                  | 1.83                   | 22.503            |                           |         |
| 600.0  | 597.1               | 592.1               | 589.3               | 1.4             | 1.3         | -138.41               | -42.4                             | -2.0       | 65.3                 | 62.9                  | 2.38                   | 27.437            |                           |         |
| 700.0  | 694.3               | 684.9               | 679.7               | 1.8             | 1.7         | -136.00               | -62.4                             | -8.8       | 96.0                 | 93.0                  | 3.02                   | 31.793            |                           |         |
| 800.0  | 790.2               | 776.9               | 768.4               | 2.4             | 2.2         | -134.62               | -85.5                             | -16.6      | 132.4                | 128.7                 | 3.73                   | 35.510            |                           |         |
| 900.0  | 884.6               | 868.6               | 856.7               | 3.0             | 2.6         | -134.90               | -108.9                            | -24.4      | 172.2                | 167.8                 | 4.49                   | 38.378            |                           |         |
| 1,000.0  | 978.7               | 960.0               | 944.8               | 3.6             | 3.1         | -135.59               | -132.2                            | -32.3      | 212.6                | 207.4                 | 5.27                   | 40.367            |                           |         |
| 1,100.0  | 1,072.8             | 1,051.5             | 1,032.9             | 4.2             | 3.5         | -136.06               | -155.6                            | -40.1      | 253.0                | 247.0                 | 6.05                   | 41.794            |                           |         |
| 1,200.0  | 1,167.0             | 1,142.9             | 1,121.0             | 4.9             | 4.0         | -136.40               | -178.9                            | -47.9      | 293.5                | 286.6                 | 6.85                   | 42.864            |                           |         |
| 1,300.0  | 1,261.1             | 1,234.4             | 1,209.0             | 5.5             | 4.4         | -136.65               | -202.2                            | -55.8      | 333.9                | 326.2                 | 7.64                   | 43.694            |                           |         |
| 1,400.0  | 1,355.2             | 1,325.8             | 1,297.1             | 6.2             | 4.9         | -136.85               | -225.5                            | -63.6      | 374.3                | 365.9                 | 8.44                   | 44.355            |                           |         |
| 1,500.0  | 1,449.3             | 1,417.3             | 1,385.2             | 6.8             | 5.3         | -137.02               | -248.8                            | -71.5      | 414.7                | 405.5                 | 9.24                   | 44.894            |                           |         |
| 1,600.0  | 1,543.5             | 1,508.8             | 1,473.3             | 7.4             | 5.8         | -137.15               | -272.1                            | -79.3      | 455.2                | 445.1                 | 10.04                  | 45.341            |                           |         |
| 1,700.0  | 1,637.6             | 1,600.2             | 1,561.4             | 8.1             | 6.2         | -137.26               | -295.4                            | -87.1      | 495.6                | 484.8                 | 10.84                  | 45.718            |                           |         |

# Cathedral Energy Services

## Anticollision Report

|                           |                              |                                     |                                     |
|---------------------------|------------------------------|-------------------------------------|-------------------------------------|
| <b>Company:</b>           | EnCana Oil & Gas (USA) Inc   | <b>Local Co-ordinate Reference:</b> | Well MCU Fee 17-16B (M16W Pad)      |
| <b>Project:</b>           | Mamm Creek                   | <b>TVD Reference:</b>               | KBE @ 7903.0ft (Original Well Elev) |
| <b>Reference Site:</b>    | SWSW S16-T7S-R93W (M16W Pad) | <b>MD Reference:</b>                | KBE @ 7903.0ft (Original Well Elev) |
| <b>Site Error:</b>        | 0.0ft                        | <b>North Reference:</b>             | True                                |
| <b>Reference Well:</b>    | MCU Fee 17-16B (M16W Pad)    | <b>Survey Calculation Method:</b>   | Minimum Curvature                   |
| <b>Well Error:</b>        | 0.0ft                        | <b>Output errors are at</b>         | 2.00 sigma                          |
| <b>Reference Wellbore</b> | DD                           | <b>Database:</b>                    | EDM 5000.1 US Multi Users DB        |
| <b>Reference Design:</b>  | Plan #1                      | <b>Offset TVD Reference:</b>        | Offset Datum                        |

| Offset Design SWSW S16-T7S-R93W (M16W Pad) - MCU Fee 16-12C2 (M16W Pad) - DD - Plan #1 |                     |                     |                     |                 |             |                       |                                   |            |                      |                       |                        |                   | Offset Site Error: | 0.0 ft |
|--|---------------------|---------------------|---------------------|-----------------|-------------|-----------------------|-----------------------------------|------------|----------------------|-----------------------|------------------------|-------------------|--------------------|--------|
| Survey Program: 0-MWD  |                     |                     |                     |                 |             |                       |                                   |            |                      |                       |                        |                   | Offset Well Error: | 0.0 ft |
| Reference  |                     | Offset              |                     | Semi Major Axis |             |                       | Distance                          |            |                      |                       |                        | Separation Factor | Warning            |        |
| Measured Depth (ft)  | Vertical Depth (ft) | Measured Depth (ft) | Vertical Depth (ft) | Reference (ft)  | Offset (ft) | Highside Toolface (°) | Offset Wellbore Centre +N/-S (ft) | +E/-W (ft) | Between Centres (ft) | Between Ellipses (ft) | Total Uncertainty Axis |                   |                    |        |
| 0.0  | 0.0                 | 0.0                 | 0.0                 | 0.0             | 0.0         | 37.30                 | 103.4                             | 78.8       | 130.0                |                       |                        |                   |                    |        |
| 100.0  | 100.0               | 100.0               | 100.0               | 0.1             | 0.1         | 37.30                 | 103.4                             | 78.8       | 130.0                | 129.8                 | 0.27                   | 477.596           |                    |        |
| 200.0  | 200.0               | 200.0               | 200.0               | 0.3             | 0.3         | 37.30                 | 103.4                             | 78.8       | 130.0                | 129.4                 | 0.62                   | 209.284 CC, ES    |                    |        |
| 300.0  | 300.0               | 298.4               | 298.4               | 0.5             | 0.5         | 113.66                | 105.4                             | 77.2       | 131.7                | 130.7                 | 0.98                   | 134.010           |                    |        |
| 400.0  | 399.6               | 396.7               | 396.4               | 0.7             | 0.7         | 113.39                | 111.3                             | 72.4       | 136.6                | 135.2                 | 1.41                   | 96.910            |                    |        |
| 500.0  | 498.8               | 494.7               | 493.5               | 1.0             | 1.0         | 112.97                | 121.0                             | 64.4       | 144.8                | 142.9                 | 1.95                   | 74.185            |                    |        |
| 600.0  | 597.1               | 593.8               | 591.4               | 1.4             | 1.3         | 113.14                | 133.2                             | 54.3       | 155.8                | 153.2                 | 2.59                   | 60.223            |                    |        |
| 700.0  | 694.3               | 692.8               | 689.1               | 1.8             | 1.6         | 114.80                | 145.5                             | 44.2       | 169.0                | 165.7                 | 3.30                   | 51.168            |                    |        |
| 800.0  | 790.2               | 791.0               | 786.0               | 2.4             | 1.9         | 117.56                | 157.6                             | 34.2       | 184.7                | 180.6                 | 4.08                   | 45.269            |                    |        |
| 900.0  | 884.6               | 888.5               | 882.2               | 3.0             | 2.2         | 121.12                | 169.7                             | 24.3       | 203.2                | 198.4                 | 4.87                   | 41.734            |                    |        |
| 1,000.0  | 978.7               | 985.7               | 978.2               | 3.6             | 2.6         | 124.49                | 181.8                             | 14.4       | 223.1                | 217.4                 | 5.64                   | 39.581            |                    |        |
| 1,100.0  | 1,072.8             | 1,082.9             | 1,074.1             | 4.2             | 2.9         | 127.32                | 193.8                             | 4.5        | 243.5                | 237.1                 | 6.38                   | 38.182            |                    |        |
| 1,200.0  | 1,167.0             | 1,180.1             | 1,170.1             | 4.9             | 3.2         | 129.70                | 205.8                             | -5.4       | 264.4                | 257.3                 | 7.10                   | 37.251            |                    |        |
| 1,300.0  | 1,261.1             | 1,277.4             | 1,266.1             | 5.5             | 3.5         | 131.74                | 217.9                             | -15.3      | 285.8                | 278.0                 | 7.80                   | 36.622            |                    |        |
| 1,400.0  | 1,355.2             | 1,374.6             | 1,362.1             | 6.2             | 3.8         | 133.50                | 229.9                             | -25.2      | 307.4                | 298.9                 | 8.49                   | 36.195            |                    |        |
| 1,500.0  | 1,449.3             | 1,471.8             | 1,458.0             | 6.8             | 4.1         | 135.02                | 242.0                             | -35.1      | 329.2                | 320.0                 | 9.17                   | 35.907            |                    |        |
| 1,600.0  | 1,543.5             | 1,569.1             | 1,554.0             | 7.4             | 4.5         | 136.36                | 254.0                             | -45.0      | 351.3                | 341.4                 | 9.84                   | 35.714            |                    |        |
| 1,700.0  | 1,637.6             | 1,666.3             | 1,650.0             | 8.1             | 4.8         | 137.54                | 266.1                             | -54.9      | 373.5                | 363.0                 | 10.49                  | 35.591            |                    |        |
| 1,800.0  | 1,731.7             | 1,763.5             | 1,745.9             | 8.7             | 5.1         | 138.58                | 278.1                             | -64.8      | 395.8                | 384.7                 | 11.14                  | 35.517            |                    |        |
| 1,900.0  | 1,825.9             | 1,860.8             | 1,841.9             | 9.4             | 5.4         | 139.52                | 290.1                             | -74.7      | 418.3                | 406.5                 | 11.79                  | 35.478            |                    |        |
| 2,000.0  | 1,920.0             | 1,958.0             | 1,937.9             | 10.0            | 5.8         | 140.36                | 302.2                             | -84.6      | 440.8                | 428.4                 | 12.43                  | 35.467 SF         |                    |        |
| 2,100.0  | 2,014.1             | 2,055.2             | 2,033.9             | 10.6            | 6.1         | 141.11                | 314.2                             | -94.5      | 463.5                | 450.4                 | 13.06                  | 35.474            |                    |        |
| 2,200.0  | 2,108.2             | 2,152.4             | 2,129.8             | 11.3            | 6.4         | 141.80                | 326.3                             | -104.4     | 486.2                | 472.5                 | 13.70                  | 35.496            |                    |        |

# Cathedral Energy Services

## Anticollision Report

|                           |                              |                                     |                                     |
|---------------------------|------------------------------|-------------------------------------|-------------------------------------|
| <b>Company:</b>           | EnCana Oil & Gas (USA) Inc   | <b>Local Co-ordinate Reference:</b> | Well MCU Fee 17-16B (M16W Pad)      |
| <b>Project:</b>           | Mamm Creek                   | <b>TVD Reference:</b>               | KBE @ 7903.0ft (Original Well Elev) |
| <b>Reference Site:</b>    | SWSW S16-T7S-R93W (M16W Pad) | <b>MD Reference:</b>                | KBE @ 7903.0ft (Original Well Elev) |
| <b>Site Error:</b>        | 0.0ft                        | <b>North Reference:</b>             | True                                |
| <b>Reference Well:</b>    | MCU Fee 17-16B (M16W Pad)    | <b>Survey Calculation Method:</b>   | Minimum Curvature                   |
| <b>Well Error:</b>        | 0.0ft                        | <b>Output errors are at</b>         | 2.00 sigma                          |
| <b>Reference Wellbore</b> | DD                           | <b>Database:</b>                    | EDM 5000.1 US Multi Users DB        |
| <b>Reference Design:</b>  | Plan #1                      | <b>Offset TVD Reference:</b>        | Offset Datum                        |

| Offset Design SWSW S16-T7S-R93W (M16W Pad) - MCU Fee 16-2C (M16W Pad) - DD - Plan #1 |                     |                     |                     |                 |             |                       |                                   |            |                      |                       |                        |                   | Offset Site Error: | 0.0 ft |
|--|---------------------|---------------------|---------------------|-----------------|-------------|-----------------------|-----------------------------------|------------|----------------------|-----------------------|------------------------|-------------------|--------------------|--------|
| Survey Program: 0-MWD  |                     |                     |                     |                 |             |                       |                                   |            |                      |                       |                        |                   | Offset Well Error: | 0.0 ft |
| Reference  |                     | Offset              |                     | Semi Major Axis |             |                       | Distance                          |            |                      |                       |                        | Separation Factor | Warning            |        |
| Measured Depth (ft)  | Vertical Depth (ft) | Measured Depth (ft) | Vertical Depth (ft) | Reference (ft)  | Offset (ft) | Highside Toolface (°) | Offset Wellbore Centre +N/-S (ft) | +E/-W (ft) | Between Centres (ft) | Between Ellipses (ft) | Total Uncertainty Axis |                   |                    |        |
| 0.0  | 0.0                 | 0.0                 | 0.0                 | 0.0             | 0.0         | 36.44                 | 114.0                             | 84.2       | 141.7                |                       |                        |                   |                    |        |
| 100.0  | 100.0               | 100.0               | 100.0               | 0.1             | 0.1         | 36.44                 | 114.0                             | 84.2       | 141.7                | 141.4                 | 0.27                   | 520.458           |                    |        |
| 200.0  | 200.0               | 200.0               | 200.0               | 0.3             | 0.3         | 36.44                 | 114.0                             | 84.2       | 141.7                | 141.1                 | 0.62                   | 228.066 CC, ES    |                    |        |
| 300.0  | 300.0               | 297.2               | 297.2               | 0.5             | 0.5         | 112.86                | 116.1                             | 82.9       | 143.7                | 142.7                 | 0.98                   | 146.647           |                    |        |
| 400.0  | 399.6               | 394.3               | 393.9               | 0.7             | 0.7         | 112.76                | 122.4                             | 79.0       | 149.6                | 148.2                 | 1.40                   | 106.845           |                    |        |
| 500.0  | 498.8               | 490.9               | 489.7               | 1.0             | 1.0         | 112.59                | 132.9                             | 72.6       | 159.4                | 157.5                 | 1.93                   | 82.816            |                    |        |
| 600.0  | 597.1               | 586.9               | 584.2               | 1.4             | 1.3         | 112.36                | 147.3                             | 63.8       | 173.1                | 170.6                 | 2.57                   | 67.245            |                    |        |
| 700.0  | 694.3               | 685.4               | 680.8               | 1.8             | 1.7         | 112.83                | 164.2                             | 53.5       | 189.7                | 186.4                 | 3.33                   | 56.952            |                    |        |
| 800.0  | 790.2               | 783.4               | 776.7               | 2.4             | 2.0         | 114.42                | 180.9                             | 43.3       | 208.5                | 204.3                 | 4.17                   | 50.003            |                    |        |
| 900.0  | 884.6               | 880.5               | 871.9               | 3.0             | 2.4         | 116.93                | 197.5                             | 33.1       | 229.6                | 224.5                 | 5.05                   | 45.486            |                    |        |
| 1,000.0  | 978.7               | 977.5               | 967.0               | 3.6             | 2.8         | 119.47                | 214.1                             | 23.0       | 251.5                | 245.6                 | 5.92                   | 42.490            |                    |        |
| 1,100.0  | 1,072.8             | 1,074.5             | 1,062.0             | 4.2             | 3.2         | 121.60                | 230.7                             | 12.9       | 273.9                | 267.1                 | 6.78                   | 40.380            |                    |        |
| 1,200.0  | 1,167.0             | 1,171.5             | 1,157.0             | 4.9             | 3.5         | 123.41                | 247.2                             | 2.7        | 296.5                | 288.9                 | 7.64                   | 38.838            |                    |        |
| 1,300.0  | 1,261.1             | 1,268.5             | 1,252.1             | 5.5             | 3.9         | 124.97                | 263.8                             | -7.4       | 319.4                | 311.0                 | 8.48                   | 37.675            |                    |        |
| 1,400.0  | 1,355.2             | 1,365.5             | 1,347.1             | 6.2             | 4.3         | 126.31                | 280.4                             | -17.5      | 342.5                | 333.2                 | 9.31                   | 36.776            |                    |        |
| 1,500.0  | 1,449.3             | 1,462.5             | 1,442.1             | 6.8             | 4.7         | 127.49                | 297.0                             | -27.6      | 365.8                | 355.7                 | 10.14                  | 36.067            |                    |        |
| 1,600.0  | 1,543.5             | 1,559.5             | 1,537.2             | 7.4             | 5.0         | 128.53                | 313.6                             | -37.8      | 389.2                | 378.2                 | 10.96                  | 35.497            |                    |        |
| 1,700.0  | 1,637.6             | 1,656.5             | 1,632.2             | 8.1             | 5.4         | 129.45                | 330.1                             | -47.9      | 412.7                | 400.9                 | 11.78                  | 35.032            |                    |        |
| 1,800.0  | 1,731.7             | 1,753.5             | 1,727.2             | 8.7             | 5.8         | 130.27                | 346.7                             | -58.0      | 436.3                | 423.7                 | 12.59                  | 34.647            |                    |        |
| 1,900.0  | 1,825.9             | 1,850.5             | 1,822.3             | 9.4             | 6.2         | 131.00                | 363.3                             | -68.2      | 459.9                | 446.5                 | 13.40                  | 34.326            |                    |        |
| 2,000.0  | 1,920.0             | 1,947.5             | 1,917.3             | 10.0            | 6.6         | 131.67                | 379.9                             | -78.3      | 483.7                | 469.5                 | 14.20                  | 34.054 SF         |                    |        |

# Cathedral Energy Services

## Anticollision Report

|                           |                              |                                     |                                     |
|---------------------------|------------------------------|-------------------------------------|-------------------------------------|
| <b>Company:</b>           | EnCana Oil & Gas (USA) Inc   | <b>Local Co-ordinate Reference:</b> | Well MCU Fee 17-16B (M16W Pad)      |
| <b>Project:</b>           | Mamm Creek                   | <b>TVD Reference:</b>               | KBE @ 7903.0ft (Original Well Elev) |
| <b>Reference Site:</b>    | SWSW S16-T7S-R93W (M16W Pad) | <b>MD Reference:</b>                | KBE @ 7903.0ft (Original Well Elev) |
| <b>Site Error:</b>        | 0.0ft                        | <b>North Reference:</b>             | True                                |
| <b>Reference Well:</b>    | MCU Fee 17-16B (M16W Pad)    | <b>Survey Calculation Method:</b>   | Minimum Curvature                   |
| <b>Well Error:</b>        | 0.0ft                        | <b>Output errors are at</b>         | 2.00 sigma                          |
| <b>Reference Wellbore</b> | DD                           | <b>Database:</b>                    | EDM 5000.1 US Multi Users DB        |
| <b>Reference Design:</b>  | Plan #1                      | <b>Offset TVD Reference:</b>        | Offset Datum                        |

| Offset Design SWSW S16-T7S-R93W (M16W Pad) - MCU Fee 16-5C (M16W Pad) - DD - Plan #1 |                        |                        |                        |                   |                |                          |   |               |                         |                          |                           |                      | Offset Site Error: | 0.0 ft  |
|--|------------------------|------------------------|------------------------|-------------------|----------------|--------------------------|---|---------------|-------------------------|--------------------------|---------------------------|----------------------|--------------------|---------|
| Survey Program: 0-MWD  |                        |                        |                        |                   |                |                          |   |               |                         |                          |                           |                      | Offset Well Error: | 0.0 ft  |
| Reference  |                        | Offset                 |                        | Semi Major Axis   |                |                          | Distance                                |               |                         |                          |                           |                      |                    | Warning |
| Measured Depth<br>(ft)   | Vertical Depth<br>(ft) | Measured Depth<br>(ft) | Vertical Depth<br>(ft) | Reference<br>(ft) | Offset<br>(ft) | Highside Toolface<br>(°) | Offset Wellbore Centre<br>+N/-S<br>(ft) | +E/-W<br>(ft) | Between Centres<br>(ft) | Between Ellipses<br>(ft) | Total Uncertainty<br>Axis | Separation<br>Factor |                    |         |
| 0.0  | 0.0                    | 0.0                    | 0.0                    | 0.0               | 0.0            | 40.97                    | 109.3                                   | 94.9          | 144.7                   |                          |                           |                      |                    |         |
| 100.0  | 100.0                  | 100.0                  | 100.0                  | 0.1               | 0.1            | 40.97                    | 109.3                                   | 94.9          | 144.7                   | 144.5                    | 0.27                      | 531.543              |                    |         |
| 200.0  | 200.0                  | 200.0                  | 200.0                  | 0.3               | 0.3            | 40.97                    | 109.3                                   | 94.9          | 144.7                   | 144.1                    | 0.62                      | 232.923 CC, ES       |                    |         |
| 300.0  | 300.0                  | 296.4                  | 296.4                  | 0.5               | 0.5            | 117.41                   | 111.6                                   | 94.1          | 147.2                   | 146.2                    | 0.98                      | 150.628              |                    |         |
| 400.0  | 399.6                  | 392.5                  | 392.1                  | 0.7               | 0.7            | 117.34                   | 118.4                                   | 91.6          | 154.4                   | 153.0                    | 1.39                      | 111.249              |                    |         |
| 500.0  | 498.8                  | 487.9                  | 486.8                  | 1.0               | 1.0            | 117.22                   | 129.6                                   | 87.5          | 166.5                   | 164.6                    | 1.89                      | 87.944               |                    |         |
| 600.0  | 597.1                  | 582.3                  | 579.8                  | 1.4               | 1.3            | 117.04                   | 145.1                                   | 81.8          | 183.3                   | 180.8                    | 2.52                      | 72.829               |                    |         |
| 700.0  | 694.3                  | 675.5                  | 670.6                  | 1.8               | 1.7            | 116.80                   | 164.6                                   | 74.7          | 204.7                   | 201.4                    | 3.27                      | 62.594               |                    |         |
| 800.0  | 790.2                  | 767.2                  | 758.9                  | 2.4               | 2.2            | 116.47                   | 187.8                                   | 66.2          | 230.6                   | 226.5                    | 4.16                      | 55.473               |                    |         |
| 900.0  | 884.6                  | 859.2                  | 846.3                  | 3.0               | 2.7            | 116.41                   | 214.8                                   | 56.4          | 260.6                   | 255.5                    | 5.14                      | 50.744               |                    |         |
| 1,000.0  | 978.7                  | 954.3                  | 936.3                  | 3.6               | 3.2            | 116.74                   | 243.6                                   | 45.9          | 291.4                   | 285.3                    | 6.16                      | 47.308               |                    |         |
| 1,100.0  | 1,072.8                | 1,049.4                | 1,026.4                | 4.2               | 3.8            | 117.00                   | 272.4                                   | 35.4          | 322.3                   | 315.1                    | 7.20                      | 44.785               |                    |         |
| 1,200.0  | 1,167.0                | 1,144.6                | 1,116.4                | 4.9               | 4.3            | 117.22                   | 301.2                                   | 24.9          | 353.1                   | 344.8                    | 8.24                      | 42.860               |                    |         |
| 1,300.0  | 1,261.1                | 1,239.7                | 1,206.5                | 5.5               | 4.9            | 117.40                   | 330.0                                   | 14.4          | 383.9                   | 374.6                    | 9.28                      | 41.348               |                    |         |
| 1,400.0  | 1,355.2                | 1,334.8                | 1,296.5                | 6.2               | 5.4            | 117.56                   | 358.8                                   | 3.9           | 414.7                   | 404.4                    | 10.33                     | 40.131               |                    |         |
| 1,500.0  | 1,449.3                | 1,429.9                | 1,386.5                | 6.8               | 6.0            | 117.69                   | 387.7                                   | -6.6          | 445.6                   | 434.2                    | 11.39                     | 39.130               |                    |         |
| 1,600.0  | 1,543.5                | 1,525.0                | 1,476.6                | 7.4               | 6.6            | 117.81                   | 416.5                                   | -17.1         | 476.4                   | 464.0                    | 12.44                     | 38.294 SF            |                    |         |



# Cathedral Energy Services

## Anticollision Report

|                           |                              |                                     |                                     |
|---------------------------|------------------------------|-------------------------------------|-------------------------------------|
| <b>Company:</b>           | EnCana Oil & Gas (USA) Inc   | <b>Local Co-ordinate Reference:</b> | Well MCU Fee 17-16B (M16W Pad)      |
| <b>Project:</b>           | Mamm Creek                   | <b>TVD Reference:</b>               | KBE @ 7903.0ft (Original Well Elev) |
| <b>Reference Site:</b>    | SWSW S16-T7S-R93W (M16W Pad) | <b>MD Reference:</b>                | KBE @ 7903.0ft (Original Well Elev) |
| <b>Site Error:</b>        | 0.0ft                        | <b>North Reference:</b>             | True                                |
| <b>Reference Well:</b>    | MCU Fee 17-16B (M16W Pad)    | <b>Survey Calculation Method:</b>   | Minimum Curvature                   |
| <b>Well Error:</b>        | 0.0ft                        | <b>Output errors are at</b>         | 2.00 sigma                          |
| <b>Reference Wellbore</b> | DD                           | <b>Database:</b>                    | EDM 5000.1 US Multi Users DB        |
| <b>Reference Design:</b>  | Plan #1                      | <b>Offset TVD Reference:</b>        | Offset Datum                        |

| Offset Design SWSW S16-T7S-R93W (M16W Pad) - MCU Fee 17-16B2 (M16W Pad) - DD - Plan #1 |                           |                           |                           |                   |                |                             |   |               |                            |                             |                              |                      | Offset Site Error: | 0.0 ft |
|--|---------------------------|---------------------------|---------------------------|-------------------|----------------|-----------------------------|---|---------------|----------------------------|-----------------------------|------------------------------|----------------------|--------------------|--------|
| Survey Program: 0-MWD  |                           |                           |                           |                   |                |                             |   |               |                            |                             |                              |                      | Offset Well Error: | 0.0 ft |
| Reference  |                           | Offset                    |                           | Semi Major Axis   |                |                             | Distance                                |               |                            |                             | Total<br>Uncertainty<br>Axis | Separation<br>Factor | Warning            |        |
| Measured<br>Depth<br>(ft)  | Vertical<br>Depth<br>(ft) | Measured<br>Depth<br>(ft) | Vertical<br>Depth<br>(ft) | Reference<br>(ft) | Offset<br>(ft) | Highside<br>Toolface<br>(°) | Offset Wellbore Centre<br>+N/-S<br>(ft) | +E/-W<br>(ft) | Between<br>Centres<br>(ft) | Between<br>Ellipses<br>(ft) |                              |                      |                    |        |
| 0.0  | 0.0                       | 0.0                       | 0.0                       | 0.0               | 0.0            | -110.23                     | -5.8                                    | -15.8         | 16.9                       |                             |                              |                      |                    |        |
| 100.0  | 100.0                     | 100.0                     | 100.0                     | 0.1               | 0.1            | -110.23                     | -5.8                                    | -15.8         | 16.9                       | 16.6                        | 0.27                         | 61.906               |                    |        |
| 200.0  | 200.0                     | 200.0                     | 200.0                     | 0.3               | 0.3            | -110.23                     | -5.8                                    | -15.8         | 16.9                       | 16.2                        | 0.62                         | 27.128 CC            |                    |        |
| 300.0  | 300.0                     | 299.2                     | 299.2                     | 0.5               | 0.5            | -34.80                      | -5.6                                    | -18.4         | 17.0                       | 16.0                        | 0.97                         | 17.481 ES            |                    |        |
| 400.0  | 399.6                     | 398.4                     | 398.1                     | 0.7               | 0.7            | -37.76                      | -4.8                                    | -26.1         | 17.5                       | 16.2                        | 1.35                         | 12.969               |                    |        |
| 500.0  | 498.8                     | 497.6                     | 496.4                     | 1.0               | 1.0            | -42.29                      | -3.4                                    | -38.8         | 18.4                       | 16.6                        | 1.80                         | 10.268               |                    |        |
| 600.0  | 597.1                     | 596.8                     | 594.0                     | 1.4               | 1.4            | -47.87                      | -1.5                                    | -56.7         | 19.9                       | 17.5                        | 2.38                         | 8.377                |                    |        |
| 700.0  | 694.3                     | 696.0                     | 690.4                     | 1.8               | 1.8            | -53.83                      | 0.9                                     | -79.5         | 22.0                       | 18.9                        | 3.16                         | 6.970                |                    |        |
| 800.0  | 790.2                     | 795.1                     | 785.5                     | 2.4               | 2.3            | -59.63                      | 3.8                                     | -107.3        | 24.9                       | 20.7                        | 4.19                         | 5.941                |                    |        |
| 900.0  | 884.6                     | 894.6                     | 879.5                     | 3.0               | 3.0            | -64.93                      | 7.2                                     | -139.6        | 28.4                       | 23.0                        | 5.40                         | 5.260                |                    |        |
| 1,000.0  | 978.7                     | 994.5                     | 973.7                     | 3.6               | 3.6            | -69.24                      | 10.7                                    | -172.8        | 32.2                       | 25.6                        | 6.68                         | 4.825                |                    |        |
| 1,100.0  | 1,072.8                   | 1,094.4                   | 1,067.8                   | 4.2               | 4.2            | -72.62                      | 14.1                                    | -206.0        | 36.2                       | 28.2                        | 7.98                         | 4.535                |                    |        |
| 1,200.0  | 1,167.0                   | 1,194.3                   | 1,162.0                   | 4.9               | 4.8            | -75.33                      | 17.6                                    | -239.3        | 40.2                       | 31.0                        | 9.28                         | 4.334                |                    |        |
| 1,300.0  | 1,261.1                   | 1,294.2                   | 1,256.1                   | 5.5               | 5.5            | -77.54                      | 21.1                                    | -272.5        | 44.4                       | 33.8                        | 10.59                        | 4.189                |                    |        |
| 1,400.0  | 1,355.2                   | 1,394.1                   | 1,350.3                   | 6.2               | 6.1            | -79.37                      | 24.6                                    | -305.7        | 48.6                       | 36.7                        | 11.90                        | 4.080                |                    |        |
| 1,500.0  | 1,449.3                   | 1,494.0                   | 1,444.4                   | 6.8               | 6.7            | -80.91                      | 28.1                                    | -339.0        | 52.8                       | 39.6                        | 13.20                        | 3.997                |                    |        |
| 1,600.0  | 1,543.5                   | 1,593.9                   | 1,538.6                   | 7.4               | 7.4            | -82.22                      | 31.6                                    | -372.2        | 57.0                       | 42.5                        | 14.51                        | 3.931                |                    |        |
| 1,700.0  | 1,637.6                   | 1,693.8                   | 1,632.7                   | 8.1               | 8.0            | -83.35                      | 35.1                                    | -405.4        | 61.3                       | 45.5                        | 15.81                        | 3.879                |                    |        |
| 1,800.0  | 1,731.7                   | 1,793.7                   | 1,726.9                   | 8.7               | 8.6            | -84.33                      | 38.6                                    | -438.6        | 65.6                       | 48.5                        | 17.11                        | 3.836                |                    |        |
| 1,900.0  | 1,825.9                   | 1,893.6                   | 1,821.0                   | 9.4               | 9.3            | -85.19                      | 42.0                                    | -471.9        | 69.9                       | 51.5                        | 18.40                        | 3.800                |                    |        |
| 2,000.0  | 1,920.0                   | 1,993.5                   | 1,915.2                   | 10.0              | 9.9            | -85.95                      | 45.5                                    | -505.1        | 74.3                       | 54.6                        | 19.70                        | 3.771                |                    |        |
| 2,100.0  | 2,014.1                   | 2,093.4                   | 2,009.3                   | 10.6              | 10.5           | -86.62                      | 49.0                                    | -538.3        | 78.6                       | 57.6                        | 20.99                        | 3.745                |                    |        |
| 2,200.0  | 2,108.2                   | 2,193.3                   | 2,103.5                   | 11.3              | 11.2           | -87.23                      | 52.5                                    | -571.6        | 83.0                       | 60.7                        | 22.29                        | 3.723                |                    |        |
| 2,300.0  | 2,202.4                   | 2,293.2                   | 2,197.6                   | 11.9              | 11.8           | -87.77                      | 56.0                                    | -604.8        | 87.3                       | 63.8                        | 23.58                        | 3.705                |                    |        |
| 2,400.0  | 2,296.5                   | 2,393.1                   | 2,291.8                   | 12.6              | 12.4           | -88.26                      | 59.5                                    | -638.0        | 91.7                       | 66.8                        | 24.87                        | 3.688                |                    |        |
| 2,500.0  | 2,390.6                   | 2,493.0                   | 2,385.9                   | 13.2              | 13.1           | -88.71                      | 63.0                                    | -671.2        | 96.1                       | 69.9                        | 26.15                        | 3.674                |                    |        |
| 2,600.0  | 2,484.7                   | 2,592.9                   | 2,480.1                   | 13.9              | 13.7           | -89.12                      | 66.5                                    | -704.5        | 100.5                      | 73.0                        | 27.44                        | 3.661                |                    |        |
| 2,700.0  | 2,578.9                   | 2,692.8                   | 2,574.2                   | 14.5              | 14.4           | -89.49                      | 70.0                                    | -737.7        | 104.9                      | 76.1                        | 28.73                        | 3.650                |                    |        |
| 2,800.0  | 2,673.0                   | 2,792.7                   | 2,668.4                   | 15.1              | 15.0           | -89.84                      | 73.4                                    | -770.9        | 109.3                      | 79.2                        | 30.02                        | 3.640                |                    |        |
| 2,900.0  | 2,767.1                   | 2,892.6                   | 2,762.5                   | 15.8              | 15.6           | -90.16                      | 76.9                                    | -804.1        | 113.6                      | 82.3                        | 31.30                        | 3.631                |                    |        |
| 3,000.0  | 2,861.2                   | 2,992.5                   | 2,856.7                   | 16.4              | 16.3           | -90.45                      | 80.4                                    | -837.4        | 118.0                      | 85.5                        | 32.59                        | 3.623                |                    |        |
| 3,100.0  | 2,955.4                   | 3,092.4                   | 2,950.8                   | 17.1              | 16.9           | -90.72                      | 83.9                                    | -870.6        | 122.4                      | 88.6                        | 33.87                        | 3.615                |                    |        |
| 3,200.0  | 3,049.5                   | 3,192.3                   | 3,045.0                   | 17.7              | 17.5           | -90.98                      | 87.4                                    | -903.8        | 126.9                      | 91.7                        | 35.16                        | 3.608                |                    |        |
| 3,300.0  | 3,143.6                   | 3,292.2                   | 3,139.1                   | 18.4              | 18.2           | -91.21                      | 90.9                                    | -937.1        | 131.3                      | 94.8                        | 36.44                        | 3.602                |                    |        |
| 3,400.0  | 3,237.7                   | 3,392.1                   | 3,233.3                   | 19.0              | 18.8           | -91.44                      | 94.4                                    | -970.3        | 135.7                      | 97.9                        | 37.72                        | 3.596                |                    |        |
| 3,500.0  | 3,331.9                   | 3,492.0                   | 3,327.4                   | 19.6              | 19.5           | -91.64                      | 97.9                                    | -1,003.5      | 140.1                      | 101.1                       | 39.00                        | 3.591                |                    |        |
| 3,600.0  | 3,426.0                   | 3,591.9                   | 3,421.6                   | 20.3              | 20.1           | -91.84                      | 101.3                                   | -1,036.7      | 144.5                      | 104.2                       | 40.29                        | 3.586                |                    |        |
| 3,700.0  | 3,520.1                   | 3,691.8                   | 3,515.7                   | 20.9              | 20.7           | -92.02                      | 104.8                                   | -1,070.0      | 148.9                      | 107.3                       | 41.57                        | 3.582                |                    |        |
| 3,800.0  | 3,614.2                   | 3,791.7                   | 3,609.9                   | 21.6              | 21.4           | -92.19                      | 108.3                                   | -1,103.2      | 153.3                      | 110.5                       | 42.85                        | 3.578                |                    |        |
| 3,900.0  | 3,708.4                   | 3,891.6                   | 3,704.0                   | 22.2              | 22.0           | -92.36                      | 111.8                                   | -1,136.4      | 157.7                      | 113.6                       | 44.13                        | 3.574                |                    |        |
| 4,000.0  | 3,802.5                   | 3,991.5                   | 3,798.2                   | 22.9              | 22.7           | -92.51                      | 115.3                                   | -1,169.7      | 162.1                      | 116.7                       | 45.41                        | 3.570                |                    |        |
| 4,100.0  | 3,896.6                   | 4,091.4                   | 3,892.3                   | 23.5              | 23.3           | -92.66                      | 118.8                                   | -1,202.9      | 166.6                      | 119.9                       | 46.70                        | 3.567                |                    |        |
| 4,200.0  | 3,990.8                   | 4,191.3                   | 3,986.5                   | 24.2              | 23.9           | -92.80                      | 122.3                                   | -1,236.1      | 171.0                      | 123.0                       | 47.98                        | 3.564                |                    |        |
| 4,300.0  | 4,084.9                   | 4,291.2                   | 4,080.6                   | 24.8              | 24.6           | -92.93                      | 125.8                                   | -1,269.3      | 175.4                      | 126.1                       | 49.26                        | 3.561                |                    |        |
| 4,400.0  | 4,179.0                   | 4,391.1                   | 4,174.7                   | 25.4              | 25.2           | -93.05                      | 129.2                                   | -1,302.6      | 179.8                      | 129.3                       | 50.54                        | 3.558                |                    |        |
| 4,500.0  | 4,273.1                   | 4,491.0                   | 4,268.9                   | 26.1              | 25.8           | -93.17                      | 132.7                                   | -1,335.8      | 184.2                      | 132.4                       | 51.82                        | 3.556                |                    |        |
| 4,600.0  | 4,367.3                   | 4,590.9                   | 4,363.0                   | 26.7              | 26.5           | -93.29                      | 136.2                                   | -1,369.0      | 188.7                      | 135.6                       | 53.10                        | 3.553                |                    |        |
| 4,700.0  | 4,461.4                   | 4,690.8                   | 4,457.2                   | 27.4              | 27.1           | -93.39                      | 139.7                                   | -1,402.3      | 193.1                      | 138.7                       | 54.38                        | 3.551                |                    |        |
| 4,800.0  | 4,555.5                   | 4,790.7                   | 4,551.3                   | 28.0              | 27.8           | -93.50                      | 143.2                                   | -1,435.5      | 197.5                      | 141.9                       | 55.66                        | 3.549                |                    |        |
| 4,900.0  | 4,649.6                   | 4,890.6                   | 4,645.5                   | 28.7              | 28.4           | -93.60                      | 146.7                                   | -1,468.7      | 201.9                      | 145.0                       | 56.94                        | 3.547                |                    |        |
| 5,000.0  | 4,743.8                   | 4,990.5                   | 4,739.6                   | 29.3              | 29.0           | -93.69                      | 150.2                                   | -1,501.9      | 206.4                      | 148.2                       | 58.22                        | 3.545                |                    |        |
| 5,100.0  | 4,837.9                   | 5,090.4                   | 4,833.8                   | 30.0              | 29.7           | -93.78                      | 153.7                                   | -1,535.2      | 210.8                      | 151.3                       | 59.50                        | 3.543                |                    |        |

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

# Cathedral Energy Services

## Anticollision Report

|                           |                              |                                     |                                     |
|---------------------------|------------------------------|-------------------------------------|-------------------------------------|
| <b>Company:</b>           | EnCana Oil & Gas (USA) Inc   | <b>Local Co-ordinate Reference:</b> | Well MCU Fee 17-16B (M16W Pad)      |
| <b>Project:</b>           | Mamm Creek                   | <b>TVD Reference:</b>               | KBE @ 7903.0ft (Original Well Elev) |
| <b>Reference Site:</b>    | SWSW S16-T7S-R93W (M16W Pad) | <b>MD Reference:</b>                | KBE @ 7903.0ft (Original Well Elev) |
| <b>Site Error:</b>        | 0.0ft                        | <b>North Reference:</b>             | True                                |
| <b>Reference Well:</b>    | MCU Fee 17-16B (M16W Pad)    | <b>Survey Calculation Method:</b>   | Minimum Curvature                   |
| <b>Well Error:</b>        | 0.0ft                        | <b>Output errors are at</b>         | 2.00 sigma                          |
| <b>Reference Wellbore</b> | DD                           | <b>Database:</b>                    | EDM 5000.1 US Multi Users DB        |
| <b>Reference Design:</b>  | Plan #1                      | <b>Offset TVD Reference:</b>        | Offset Datum                        |

| Offset Design SWSW S16-T7S-R93W (M16W Pad) - MCU Fee 17-16B2 (M16W Pad) - DD - Plan #1 |                           |                           |                           |                   |                |                             |   |               |                            |                             |                              |                      | Offset Site Error: | 0.0 ft |
|--|---------------------------|---------------------------|---------------------------|-------------------|----------------|-----------------------------|---|---------------|----------------------------|-----------------------------|------------------------------|----------------------|--------------------|--------|
| Survey Program: O-MWD  |                           |                           |                           |                   |                |                             |   |               |                            |                             |                              |                      | Offset Well Error: | 0.0 ft |
| Reference  |                           | Offset                    |                           | Semi Major Axis   |                |                             | Distance                                |               |                            |                             | Total<br>Uncertainty<br>Axis | Separation<br>Factor | Warning            |        |
| Measured<br>Depth<br>(ft)  | Vertical<br>Depth<br>(ft) | Measured<br>Depth<br>(ft) | Vertical<br>Depth<br>(ft) | Reference<br>(ft) | Offset<br>(ft) | Highside<br>Toolface<br>(°) | Offset Wellbore Centre<br>+N/-S<br>(ft) | +E/-W<br>(ft) | Between<br>Centres<br>(ft) | Between<br>Ellipses<br>(ft) |                              |                      |                    |        |
| 5,200.0  | 4,932.0                   | 5,190.3                   | 4,927.9                   | 30.6              | 30.3           | -93.87                      | 157.2                                   | -1,568.4      | 215.2                      | 154.4                       | 60.78                        | 3.541                |                    |        |
| 5,300.0  | 5,026.1                   | 5,290.2                   | 5,022.1                   | 31.2              | 31.0           | -93.95                      | 160.6                                   | -1,601.6      | 219.6                      | 157.6                       | 62.06                        | 3.540                |                    |        |
| 5,400.0  | 5,120.3                   | 5,390.1                   | 5,116.2                   | 31.9              | 31.6           | -94.03                      | 164.1                                   | -1,634.8      | 224.1                      | 160.7                       | 63.33                        | 3.538                |                    |        |
| 5,500.0  | 5,214.4                   | 5,490.0                   | 5,210.4                   | 32.5              | 32.2           | -94.11                      | 167.6                                   | -1,668.1      | 228.5                      | 163.9                       | 64.61                        | 3.536                |                    |        |
| 5,600.0  | 5,308.5                   | 5,589.9                   | 5,304.5                   | 33.2              | 32.9           | -94.18                      | 171.1                                   | -1,701.3      | 232.9                      | 167.0                       | 65.89                        | 3.535                |                    |        |
| 5,700.0  | 5,402.6                   | 5,689.8                   | 5,398.7                   | 33.8              | 33.5           | -94.25                      | 174.6                                   | -1,734.5      | 237.4                      | 170.2                       | 67.17                        | 3.534                |                    |        |
| 5,800.0  | 5,496.8                   | 5,789.7                   | 5,492.8                   | 34.5              | 34.1           | -94.32                      | 178.1                                   | -1,767.8      | 241.8                      | 173.3                       | 68.45                        | 3.532                |                    |        |
| 5,900.0  | 5,590.9                   | 5,889.6                   | 5,587.0                   | 35.1              | 34.8           | -94.39                      | 181.6                                   | -1,801.0      | 246.2                      | 176.5                       | 69.73                        | 3.531                |                    |        |
| 6,000.0  | 5,685.0                   | 5,989.6                   | 5,681.1                   | 35.7              | 35.4           | -94.45                      | 185.1                                   | -1,834.2      | 250.6                      | 179.6                       | 71.01                        | 3.530                |                    |        |
| 6,100.0  | 5,779.1                   | 6,089.5                   | 5,775.3                   | 36.4              | 36.1           | -94.51                      | 188.5                                   | -1,867.4      | 255.1                      | 182.8                       | 72.29                        | 3.529                |                    |        |
| 6,200.0  | 5,873.3                   | 6,189.4                   | 5,869.4                   | 37.0              | 36.7           | -94.57                      | 192.0                                   | -1,900.7      | 259.5                      | 185.9                       | 73.56                        | 3.528                |                    |        |
| 6,300.0  | 5,967.4                   | 6,289.3                   | 5,963.6                   | 37.7              | 37.3           | -94.63                      | 195.5                                   | -1,933.9      | 263.9                      | 189.1                       | 74.84                        | 3.527                |                    |        |
| 6,400.0  | 6,061.5                   | 6,389.2                   | 6,057.7                   | 38.3              | 38.0           | -94.69                      | 199.0                                   | -1,967.1      | 268.4                      | 192.2                       | 76.12                        | 3.526                |                    |        |
| 6,500.0  | 6,155.6                   | 6,489.1                   | 6,151.9                   | 39.0              | 38.6           | -94.74                      | 202.5                                   | -2,000.4      | 272.8                      | 195.4                       | 77.40                        | 3.525                |                    |        |
| 6,600.0  | 6,249.8                   | 6,589.0                   | 6,246.0                   | 39.6              | 39.3           | -94.79                      | 206.0                                   | -2,033.6      | 277.2                      | 198.6                       | 78.68                        | 3.524                |                    |        |
| 6,700.0  | 6,343.9                   | 6,688.9                   | 6,340.2                   | 40.3              | 39.9           | -94.84                      | 209.5                                   | -2,066.8      | 281.7                      | 201.7                       | 79.96                        | 3.523                |                    |        |
| 6,800.0  | 6,438.0                   | 6,788.8                   | 6,434.3                   | 40.9              | 40.5           | -94.89                      | 213.0                                   | -2,100.0      | 286.1                      | 204.9                       | 81.24                        | 3.522                |                    |        |
| 6,900.0  | 6,532.2                   | 6,888.7                   | 6,528.5                   | 41.5              | 41.2           | -94.94                      | 216.4                                   | -2,133.3      | 290.5                      | 208.0                       | 82.51                        | 3.521                |                    |        |
| 7,000.0  | 6,626.3                   | 6,988.6                   | 6,622.6                   | 42.2              | 41.8           | -94.99                      | 219.9                                   | -2,166.5      | 295.0                      | 211.2                       | 83.79                        | 3.520                |                    |        |
| 7,100.0  | 6,720.4                   | 7,088.5                   | 6,716.8                   | 42.8              | 42.5           | -95.03                      | 223.4                                   | -2,199.7      | 299.4                      | 214.3                       | 85.07                        | 3.519                |                    |        |
| 7,200.0  | 6,814.5                   | 7,188.4                   | 6,810.9                   | 43.5              | 43.1           | -95.07                      | 226.9                                   | -2,233.0      | 303.8                      | 217.5                       | 86.35                        | 3.519                |                    |        |
| 7,300.0  | 6,908.7                   | 7,288.3                   | 6,905.1                   | 44.1              | 43.7           | -95.12                      | 230.4                                   | -2,266.2      | 308.3                      | 220.6                       | 87.63                        | 3.518 SF             |                    |        |
| 7,400.0  | 7,002.8                   | 7,388.5                   | 7,000.0                   | 44.8              | 44.3           | -95.15                      | 233.7                                   | -2,298.0      | 312.6                      | 223.8                       | 88.83                        | 3.519                |                    |        |
| 7,500.0  | 7,096.9                   | 7,488.5                   | 7,095.8                   | 45.4              | 44.8           | -96.40                      | 236.7                                   | -2,326.5      | 317.0                      | 227.0                       | 89.93                        | 3.524                |                    |        |
| 7,600.0  | 7,191.0                   | 7,588.0                   | 7,192.1                   | 46.1              | 45.3           | -97.94                      | 239.4                                   | -2,351.5      | 321.4                      | 230.5                       | 90.88                        | 3.537                |                    |        |
| 7,700.0  | 7,285.6                   | 7,687.0                   | 7,288.7                   | 46.7              | 45.7           | -99.89                      | 241.6                                   | -2,373.1      | 326.0                      | 234.4                       | 91.60                        | 3.559                |                    |        |
| 7,800.0  | 7,381.7                   | 7,785.8                   | 7,385.8                   | 47.1              | 46.0           | -101.57                     | 243.5                                   | -2,391.3      | 330.2                      | 238.1                       | 92.11                        | 3.585                |                    |        |
| 7,900.0  | 7,479.0                   | 7,884.5                   | 7,483.4                   | 47.5              | 46.3           | -102.90                     | 245.1                                   | -2,406.1      | 333.8                      | 241.3                       | 92.48                        | 3.609                |                    |        |
| 8,000.0  | 7,577.5                   | 7,983.1                   | 7,581.3                   | 47.8              | 46.5           | -103.90                     | 246.3                                   | -2,417.6      | 336.7                      | 244.0                       | 92.75                        | 3.630                |                    |        |
| 8,100.0  | 7,676.7                   | 8,081.6                   | 7,679.5                   | 48.0              | 46.6           | -104.59                     | 247.2                                   | -2,425.8      | 338.8                      | 245.9                       | 92.93                        | 3.646                |                    |        |
| 8,200.0  | 7,776.4                   | 8,180.1                   | 7,777.8                   | 48.2              | 46.7           | -104.97                     | 247.7                                   | -2,430.5      | 340.0                      | 247.0                       | 93.04                        | 3.654                |                    |        |
| 8,300.0  | 7,876.4                   | 8,278.7                   | 7,876.4                   | 48.2              | 46.8           | 178.48                      | 247.8                                   | -2,431.9      | 340.3                      | 247.2                       | 93.13                        | 3.654                |                    |        |
| 8,400.0  | 7,976.4                   | 8,378.7                   | 7,976.4                   | 48.3              | 46.8           | 178.48                      | 247.8                                   | -2,431.9      | 340.3                      | 247.1                       | 93.24                        | 3.650                |                    |        |
| 8,500.0  | 8,076.4                   | 8,478.7                   | 8,076.4                   | 48.3              | 46.9           | 178.48                      | 247.8                                   | -2,431.9      | 340.3                      | 247.0                       | 93.35                        | 3.646                |                    |        |
| 8,600.0  | 8,176.4                   | 8,578.7                   | 8,176.4                   | 48.4              | 47.0           | 178.48                      | 247.8                                   | -2,431.9      | 340.3                      | 246.9                       | 93.46                        | 3.641                |                    |        |
| 8,700.0  | 8,276.4                   | 8,678.7                   | 8,276.4                   | 48.4              | 47.0           | 178.48                      | 247.8                                   | -2,431.9      | 340.3                      | 246.7                       | 93.57                        | 3.637                |                    |        |
| 8,800.0  | 8,376.4                   | 8,778.7                   | 8,376.4                   | 48.5              | 47.1           | 178.48                      | 247.8                                   | -2,431.9      | 340.3                      | 246.6                       | 93.69                        | 3.633                |                    |        |
| 8,900.0  | 8,476.4                   | 8,878.7                   | 8,476.4                   | 48.5              | 47.1           | 178.48                      | 247.8                                   | -2,431.9      | 340.3                      | 246.5                       | 93.80                        | 3.628                |                    |        |
| 9,000.0  | 8,576.4                   | 8,978.7                   | 8,576.4                   | 48.6              | 47.2           | 178.48                      | 247.8                                   | -2,431.9      | 340.3                      | 246.4                       | 93.92                        | 3.624                |                    |        |
| 9,100.0  | 8,676.4                   | 9,078.7                   | 8,676.4                   | 48.6              | 47.2           | 178.48                      | 247.8                                   | -2,431.9      | 340.3                      | 246.3                       | 94.03                        | 3.619                |                    |        |
| 9,200.0  | 8,776.4                   | 9,178.7                   | 8,776.4                   | 48.7              | 47.3           | 178.48                      | 247.8                                   | -2,431.9      | 340.3                      | 246.2                       | 94.15                        | 3.615                |                    |        |
| 9,300.0  | 8,876.4                   | 9,278.7                   | 8,876.4                   | 48.8              | 47.4           | 178.48                      | 247.8                                   | -2,431.9      | 340.3                      | 246.0                       | 94.27                        | 3.610                |                    |        |
| 9,400.0  | 8,976.4                   | 9,378.7                   | 8,976.4                   | 48.8              | 47.4           | 178.48                      | 247.8                                   | -2,431.9      | 340.3                      | 245.9                       | 94.39                        | 3.605                |                    |        |
| 9,500.0  | 9,076.4                   | 9,478.7                   | 9,076.4                   | 48.9              | 47.5           | 178.48                      | 247.8                                   | -2,431.9      | 340.3                      | 245.8                       | 94.51                        | 3.601                |                    |        |
| 9,600.0  | 9,176.4                   | 9,578.7                   | 9,176.4                   | 48.9              | 47.5           | 178.48                      | 247.8                                   | -2,431.9      | 340.3                      | 245.7                       | 94.64                        | 3.596                |                    |        |
| 9,700.0  | 9,276.4                   | 9,678.7                   | 9,276.4                   | 49.0              | 47.6           | 178.48                      | 247.8                                   | -2,431.9      | 340.3                      | 245.6                       | 94.76                        | 3.591                |                    |        |
| 9,800.0  | 9,376.4                   | 9,778.7                   | 9,376.4                   | 49.1              | 47.7           | 178.48                      | 247.8                                   | -2,431.9      | 340.3                      | 245.4                       | 94.88                        | 3.587                |                    |        |
| 9,900.0  | 9,476.4                   | 9,878.7                   | 9,476.4                   | 49.1              | 47.7           | 178.48                      | 247.8                                   | -2,431.9      | 340.3                      | 245.3                       | 95.01                        | 3.582                |                    |        |
| 10,000.0   | 9,576.4                   | 9,978.7                   | 9,576.4                   | 49.2              | 47.8           | 178.48                      | 247.8                                   | -2,431.9      | 340.3                      | 245.2                       | 95.14                        | 3.577                |                    |        |
| 10,100.0   | 9,676.4                   | 10,078.7                  | 9,676.4                   | 49.2              | 47.9           | 178.48                      | 247.8                                   | -2,431.9      | 340.3                      | 245.1                       | 95.27                        | 3.572                |                    |        |
| 10,200.0   | 9,776.4                   | 10,178.7                  | 9,776.4                   | 49.3              | 47.9           | 178.48                      | 247.8                                   | -2,431.9      | 340.3                      | 244.9                       | 95.39                        | 3.567                |                    |        |
| 10,300.0   | 9,876.4                   | 10,278.7                  | 9,876.4                   | 49.4              | 48.0           | 178.48                      | 247.8                                   | -2,431.9      | 340.3                      | 244.8                       | 95.52                        | 3.563                |                    |        |

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

# Cathedral Energy Services

## Anticollision Report

|                           |                              |                                     |                                     |
|---------------------------|------------------------------|-------------------------------------|-------------------------------------|
| <b>Company:</b>           | EnCana Oil & Gas (USA) Inc   | <b>Local Co-ordinate Reference:</b> | Well MCU Fee 17-16B (M16W Pad)      |
| <b>Project:</b>           | Mamm Creek                   | <b>TVD Reference:</b>               | KBE @ 7903.0ft (Original Well Elev) |
| <b>Reference Site:</b>    | SWSW S16-T7S-R93W (M16W Pad) | <b>MD Reference:</b>                | KBE @ 7903.0ft (Original Well Elev) |
| <b>Site Error:</b>        | 0.0ft                        | <b>North Reference:</b>             | True                                |
| <b>Reference Well:</b>    | MCU Fee 17-16B (M16W Pad)    | <b>Survey Calculation Method:</b>   | Minimum Curvature                   |
| <b>Well Error:</b>        | 0.0ft                        | <b>Output errors are at</b>         | 2.00 sigma                          |
| <b>Reference Wellbore</b> | DD                           | <b>Database:</b>                    | EDM 5000.1 US Multi Users DB        |
| <b>Reference Design:</b>  | Plan #1                      | <b>Offset TVD Reference:</b>        | Offset Datum                        |

| Offset Design         |                |                |                |                 |        |                   |                        |            |                 |                  |                   | Offset Site Error: |         | 0.0 ft |  |
|-----------------------|----------------|----------------|----------------|-----------------|--------|-------------------|------------------------|------------|-----------------|------------------|-------------------|--------------------|---------|--------|--|
| Survey Program: 0-MWD |                |                |                |                 |        |                   |                        |            |                 |                  |                   | Offset Well Error: |         | 0.0 ft |  |
| Reference             |                | Offset         |                | Semi Major Axis |        |                   | Distance               |            |                 |                  |                   |                    |         |        |  |
| Measured Depth        | Vertical Depth | Measured Depth | Vertical Depth | Reference       | Offset | Highside Toolface | Offset Wellbore Centre |            | Between Centres | Between Ellipses | Total Uncertainty | Separation         | Warning |        |  |
| (ft)                  | (ft)           | (ft)           | (ft)           | (ft)            | (ft)   | (°)               | +N/-S (ft)             | +E/-W (ft) | (ft)            | (ft)             | Axis              | Factor             |         |        |  |
| 10,400.0              | 9,976.4        | 10,378.7       | 9,976.4        | 49.4            | 48.0   | 178.48            | 247.8                  | -2,431.9   | 340.3           | 244.7            | 95.66             | 3.558              |         |        |  |
| 10,500.0              | 10,076.4       | 10,478.7       | 10,076.4       | 49.5            | 48.1   | 178.48            | 247.8                  | -2,431.9   | 340.3           | 244.5            | 95.79             | 3.553              |         |        |  |
| 10,600.0              | 10,176.4       | 10,578.7       | 10,176.4       | 49.6            | 48.2   | 178.48            | 247.8                  | -2,431.9   | 340.3           | 244.4            | 95.92             | 3.548              |         |        |  |
| 10,700.0              | 10,276.4       | 10,678.7       | 10,276.4       | 49.6            | 48.2   | 178.48            | 247.8                  | -2,431.9   | 340.3           | 244.3            | 96.06             | 3.543              |         |        |  |
| 10,702.6              | 10,279.0       | 10,681.3       | 10,279.0       | 49.6            | 48.3   | 178.48            | 247.8                  | -2,431.9   | 340.3           | 244.3            | 96.06             | 3.543              |         |        |  |

# Cathedral Energy Services

## Anticollision Report

|                           |                              |                                     |                                     |
|---------------------------|------------------------------|-------------------------------------|-------------------------------------|
| <b>Company:</b>           | EnCana Oil & Gas (USA) Inc   | <b>Local Co-ordinate Reference:</b> | Well MCU Fee 17-16B (M16W Pad)      |
| <b>Project:</b>           | Mamm Creek                   | <b>TVD Reference:</b>               | KBE @ 7903.0ft (Original Well Elev) |
| <b>Reference Site:</b>    | SWSW S16-T7S-R93W (M16W Pad) | <b>MD Reference:</b>                | KBE @ 7903.0ft (Original Well Elev) |
| <b>Site Error:</b>        | 0.0ft                        | <b>North Reference:</b>             | True                                |
| <b>Reference Well:</b>    | MCU Fee 17-16B (M16W Pad)    | <b>Survey Calculation Method:</b>   | Minimum Curvature                   |
| <b>Well Error:</b>        | 0.0ft                        | <b>Output errors are at</b>         | 2.00 sigma                          |
| <b>Reference Wellbore</b> | DD                           | <b>Database:</b>                    | EDM 5000.1 US Multi Users DB        |
| <b>Reference Design:</b>  | Plan #1                      | <b>Offset TVD Reference:</b>        | Offset Datum                        |

| Offset Design SWSW S16-T7S-R93W (M16W Pad) - MCU Fee 17-16C (M16W Pad) - DD - Plan #1 |                     |                     |                     |                 |             |                       |                                   |            |                      |                       |                        |                   | Offset Site Error: 0.0 ft |         |
|---|---------------------|---------------------|---------------------|-----------------|-------------|-----------------------|-----------------------------------|------------|----------------------|-----------------------|------------------------|-------------------|---------------------------|---------|
| Survey Program: 0-MWD   |                     |                     |                     |                 |             |                       |                                   |            |                      |                       |                        |                   | Offset Well Error: 0.0 ft |         |
| Reference   |                     | Offset              |                     | Semi Major Axis |             |                       | Distance                          |            |                      |                       |                        |                   |                           | Warning |
| Measured Depth (ft)   | Vertical Depth (ft) | Measured Depth (ft) | Vertical Depth (ft) | Reference (ft)  | Offset (ft) | Highside Toolface (°) | Offset Wellbore Centre +N/-S (ft) | +E/-W (ft) | Between Centres (ft) | Between Ellipses (ft) | Total Uncertainty Axis | Separation Factor |                           |         |
| 0.0   | 0.0                 | 0.0                 | 0.0                 | 0.0             | 0.0         | -110.12               | -17.5                             | -47.7      | 50.8                 |                       |                        |                   |                           |         |
| 100.0   | 100.0               | 100.0               | 100.0               | 0.1             | 0.1         | -110.12               | -17.5                             | -47.7      | 50.8                 | 50.6                  | 0.27                   | 186.693           |                           |         |
| 200.0   | 200.0               | 200.0               | 200.0               | 0.3             | 0.3         | -110.12               | -17.5                             | -47.7      | 50.8                 | 50.2                  | 0.62                   | 81.809 CC         |                           |         |
| 300.0   | 300.0               | 297.5               | 297.5               | 0.5             | 0.5         | -34.36                | -17.6                             | -50.2      | 51.1                 | 50.1                  | 0.97                   | 52.694 ES         |                           |         |
| 400.0   | 399.6               | 395.1               | 394.7               | 0.7             | 0.7         | -36.39                | -17.8                             | -57.7      | 51.9                 | 50.5                  | 1.34                   | 38.809            |                           |         |
| 500.0   | 498.8               | 492.5               | 491.4               | 1.0             | 1.0         | -39.64                | -18.1                             | -70.1      | 53.3                 | 51.6                  | 1.75                   | 30.412            |                           |         |
| 600.0   | 597.1               | 589.9               | 587.2               | 1.4             | 1.3         | -43.86                | -18.6                             | -87.4      | 55.6                 | 53.3                  | 2.27                   | 24.504            |                           |         |
| 700.0   | 694.3               | 687.3               | 682.0               | 1.8             | 1.8         | -48.74                | -19.2                             | -109.5     | 59.0                 | 56.0                  | 2.95                   | 19.990            |                           |         |
| 800.0   | 790.2               | 784.5               | 775.4               | 2.4             | 2.3         | -53.92                | -19.9                             | -136.4     | 63.6                 | 59.7                  | 3.85                   | 16.504            |                           |         |
| 900.0   | 884.6               | 882.8               | 868.5               | 3.0             | 2.9         | -59.17                | -20.8                             | -167.9     | 69.4                 | 64.5                  | 4.96                   | 13.993            |                           |         |
| 1,000.0   | 978.7               | 982.4               | 962.7               | 3.6             | 3.5         | -63.88                | -21.6                             | -200.5     | 75.9                 | 69.7                  | 6.18                   | 12.282            |                           |         |
| 1,100.0   | 1,072.8             | 1,082.0             | 1,056.8             | 4.2             | 4.1         | -67.83                | -22.5                             | -233.1     | 82.8                 | 75.4                  | 7.45                   | 11.120            |                           |         |
| 1,200.0   | 1,167.0             | 1,181.6             | 1,150.9             | 4.9             | 4.7         | -71.16                | -23.4                             | -265.6     | 90.0                 | 81.3                  | 8.74                   | 10.305            |                           |         |
| 1,300.0   | 1,261.1             | 1,281.3             | 1,245.1             | 5.5             | 5.3         | -73.99                | -24.3                             | -298.2     | 97.5                 | 87.5                  | 10.04                  | 9.714             |                           |         |
| 1,400.0   | 1,355.2             | 1,380.9             | 1,339.2             | 6.2             | 5.9         | -76.42                | -25.2                             | -330.8     | 105.2                | 93.9                  | 11.35                  | 9.273             |                           |         |
| 1,500.0   | 1,449.3             | 1,480.5             | 1,433.3             | 6.8             | 6.5         | -78.51                | -26.1                             | -363.4     | 113.1                | 100.4                 | 12.65                  | 8.936             |                           |         |
| 1,600.0   | 1,543.5             | 1,580.1             | 1,527.5             | 7.4             | 7.2         | -80.32                | -27.0                             | -395.9     | 121.1                | 107.1                 | 13.96                  | 8.672             |                           |         |
| 1,700.0   | 1,637.6             | 1,679.7             | 1,621.6             | 8.1             | 7.8         | -81.91                | -27.9                             | -428.5     | 129.1                | 113.9                 | 15.26                  | 8.463             |                           |         |
| 1,800.0   | 1,731.7             | 1,779.3             | 1,715.7             | 8.7             | 8.4         | -83.31                | -28.7                             | -461.1     | 137.3                | 120.8                 | 16.56                  | 8.293             |                           |         |
| 1,900.0   | 1,825.9             | 1,878.9             | 1,809.9             | 9.4             | 9.0         | -84.56                | -29.6                             | -493.6     | 145.6                | 127.7                 | 17.85                  | 8.153             |                           |         |
| 2,000.0   | 1,920.0             | 1,978.5             | 1,904.0             | 10.0            | 9.6         | -85.67                | -30.5                             | -526.2     | 153.9                | 134.7                 | 19.15                  | 8.037             |                           |         |
| 2,100.0   | 2,014.1             | 2,078.2             | 1,998.1             | 10.6            | 10.3        | -86.66                | -31.4                             | -558.8     | 162.2                | 141.8                 | 20.43                  | 7.939             |                           |         |
| 2,200.0   | 2,108.2             | 2,177.8             | 2,092.3             | 11.3            | 10.9        | -87.56                | -32.3                             | -591.4     | 170.6                | 148.9                 | 21.72                  | 7.857             |                           |         |
| 2,300.0   | 2,202.4             | 2,277.4             | 2,186.4             | 11.9            | 11.5        | -88.38                | -33.2                             | -623.9     | 179.1                | 156.1                 | 23.00                  | 7.786             |                           |         |
| 2,400.0   | 2,296.5             | 2,377.0             | 2,280.5             | 12.6            | 12.1        | -89.12                | -34.1                             | -656.5     | 187.6                | 163.3                 | 24.28                  | 7.724             |                           |         |
| 2,500.0   | 2,390.6             | 2,476.6             | 2,374.7             | 13.2            | 12.8        | -89.79                | -35.0                             | -689.1     | 196.1                | 170.5                 | 25.56                  | 7.671             |                           |         |
| 2,600.0   | 2,484.7             | 2,576.2             | 2,468.8             | 13.9            | 13.4        | -90.41                | -35.8                             | -721.7     | 204.6                | 177.8                 | 26.84                  | 7.624             |                           |         |
| 2,700.0   | 2,578.9             | 2,675.8             | 2,562.9             | 14.5            | 14.0        | -90.98                | -36.7                             | -754.2     | 213.2                | 185.0                 | 28.11                  | 7.583             |                           |         |
| 2,800.0   | 2,673.0             | 2,775.4             | 2,657.0             | 15.1            | 14.6        | -91.51                | -37.6                             | -786.8     | 221.7                | 192.3                 | 29.38                  | 7.546             |                           |         |
| 2,900.0   | 2,767.1             | 2,875.0             | 2,751.2             | 15.8            | 15.2        | -92.00                | -38.5                             | -819.4     | 230.3                | 199.7                 | 30.65                  | 7.514             |                           |         |
| 3,000.0   | 2,861.2             | 2,974.7             | 2,845.3             | 16.4            | 15.9        | -92.45                | -39.4                             | -851.9     | 238.9                | 207.0                 | 31.92                  | 7.485             |                           |         |
| 3,100.0   | 2,955.4             | 3,074.3             | 2,939.4             | 17.1            | 16.5        | -92.87                | -40.3                             | -884.5     | 247.5                | 214.3                 | 33.19                  | 7.459             |                           |         |
| 3,200.0   | 3,049.5             | 3,173.9             | 3,033.6             | 17.7            | 17.1        | -93.26                | -41.2                             | -917.1     | 256.2                | 221.7                 | 34.45                  | 7.435             |                           |         |
| 3,300.0   | 3,143.6             | 3,273.5             | 3,127.7             | 18.4            | 17.7        | -93.63                | -42.1                             | -949.7     | 264.8                | 229.1                 | 35.72                  | 7.414             |                           |         |
| 3,400.0   | 3,237.7             | 3,373.1             | 3,221.8             | 19.0            | 18.4        | -93.97                | -42.9                             | -982.2     | 273.5                | 236.5                 | 36.98                  | 7.394             |                           |         |
| 3,500.0   | 3,331.9             | 3,472.7             | 3,316.0             | 19.6            | 19.0        | -94.30                | -43.8                             | -1,014.8   | 282.1                | 243.9                 | 38.25                  | 7.376             |                           |         |
| 3,600.0   | 3,426.0             | 3,572.3             | 3,410.1             | 20.3            | 19.6        | -94.60                | -44.7                             | -1,047.4   | 290.8                | 251.3                 | 39.51                  | 7.360             |                           |         |
| 3,700.0   | 3,520.1             | 3,671.9             | 3,504.2             | 20.9            | 20.2        | -94.89                | -45.6                             | -1,079.9   | 299.5                | 258.7                 | 40.77                  | 7.345             |                           |         |
| 3,800.0   | 3,614.2             | 3,771.6             | 3,598.4             | 21.6            | 20.8        | -95.15                | -46.5                             | -1,112.5   | 308.1                | 266.1                 | 42.03                  | 7.332             |                           |         |
| 3,900.0   | 3,708.4             | 3,871.2             | 3,692.5             | 22.2            | 21.5        | -95.41                | -47.4                             | -1,145.1   | 316.8                | 273.5                 | 43.29                  | 7.319             |                           |         |
| 4,000.0   | 3,802.5             | 3,970.8             | 3,786.6             | 22.9            | 22.1        | -95.65                | -48.3                             | -1,177.7   | 325.5                | 281.0                 | 44.55                  | 7.307             |                           |         |
| 4,100.0   | 3,896.6             | 4,070.4             | 3,880.8             | 23.5            | 22.7        | -95.88                | -49.2                             | -1,210.2   | 334.2                | 288.4                 | 45.81                  | 7.297             |                           |         |
| 4,200.0   | 3,990.8             | 4,170.0             | 3,974.9             | 24.2            | 23.3        | -96.10                | -50.0                             | -1,242.8   | 342.9                | 295.9                 | 47.06                  | 7.287             |                           |         |
| 4,300.0   | 4,084.9             | 4,269.6             | 4,069.0             | 24.8            | 24.0        | -96.30                | -50.9                             | -1,275.4   | 351.6                | 303.3                 | 48.32                  | 7.277             |                           |         |
| 4,400.0   | 4,179.0             | 4,369.2             | 4,163.2             | 25.4            | 24.6        | -96.50                | -51.8                             | -1,308.0   | 360.4                | 310.8                 | 49.58                  | 7.268             |                           |         |
| 4,500.0   | 4,273.1             | 4,468.8             | 4,257.3             | 26.1            | 25.2        | -96.69                | -52.7                             | -1,340.5   | 369.1                | 318.2                 | 50.84                  | 7.260             |                           |         |
| 4,600.0   | 4,367.3             | 4,568.5             | 4,351.4             | 26.7            | 25.8        | -96.87                | -53.6                             | -1,373.1   | 377.8                | 325.7                 | 52.09                  | 7.253             |                           |         |
| 4,700.0   | 4,461.4             | 4,668.1             | 4,445.6             | 27.4            | 26.4        | -97.04                | -54.5                             | -1,405.7   | 386.5                | 333.2                 | 53.35                  | 7.246             |                           |         |
| 4,800.0   | 4,555.5             | 4,767.7             | 4,539.7             | 28.0            | 27.1        | -97.20                | -55.4                             | -1,438.2   | 395.3                | 340.7                 | 54.60                  | 7.239             |                           |         |
| 4,900.0   | 4,649.6             | 4,867.3             | 4,633.8             | 28.7            | 27.7        | -97.35                | -56.3                             | -1,470.8   | 404.0                | 348.1                 | 55.86                  | 7.233             |                           |         |
| 5,000.0   | 4,743.8             | 4,966.9             | 4,727.9             | 29.3            | 28.3        | -97.50                | -57.1                             | -1,503.4   | 412.7                | 355.6                 | 57.11                  | 7.227             |                           |         |
| 5,100.0   | 4,837.9             | 5,066.5             | 4,822.1             | 30.0            | 28.9        | -97.65                | -58.0                             | -1,536.0   | 421.5                | 363.1                 | 58.37                  | 7.221             |                           |         |

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

# Cathedral Energy Services

## Anticollision Report

|                           |                              |                                     |                                     |
|---------------------------|------------------------------|-------------------------------------|-------------------------------------|
| <b>Company:</b>           | EnCana Oil & Gas (USA) Inc   | <b>Local Co-ordinate Reference:</b> | Well MCU Fee 17-16B (M16W Pad)      |
| <b>Project:</b>           | Mamm Creek                   | <b>TVD Reference:</b>               | KBE @ 7903.0ft (Original Well Elev) |
| <b>Reference Site:</b>    | SWSW S16-T7S-R93W (M16W Pad) | <b>MD Reference:</b>                | KBE @ 7903.0ft (Original Well Elev) |
| <b>Site Error:</b>        | 0.0ft                        | <b>North Reference:</b>             | True                                |
| <b>Reference Well:</b>    | MCU Fee 17-16B (M16W Pad)    | <b>Survey Calculation Method:</b>   | Minimum Curvature                   |
| <b>Well Error:</b>        | 0.0ft                        | <b>Output errors are at</b>         | 2.00 sigma                          |
| <b>Reference Wellbore</b> | DD                           | <b>Database:</b>                    | EDM 5000.1 US Multi Users DB        |
| <b>Reference Design:</b>  | Plan #1                      | <b>Offset TVD Reference:</b>        | Offset Datum                        |

| Offset Design         |                     |                     |                     |                 |             |                       |                                   |            |                      |                       |                        |                   | SWSW S16-T7S-R93W (M16W Pad) - MCU Fee 17-16C (M16W Pad) - DD - Plan #1 |         | Offset Site Error: |  | 0.0 ft |
|-----------------------|---------------------|---------------------|---------------------|-----------------|-------------|-----------------------|-----------------------------------|------------|----------------------|-----------------------|------------------------|-------------------|---|---------|--------------------|--|--------|
| Survey Program: 0-MWD |                     |                     |                     |                 |             |                       |                                   |            |                      |                       |                        |                   | Offset Well Error:  |         | 0.0 ft             |  |        |
| Reference             |                     | Offset              |                     | Semi Major Axis |             |                       | Distance                          |            |                      |                       |                        |                   |   | Warning |                    |  |        |
| Measured Depth (ft)   | Vertical Depth (ft) | Measured Depth (ft) | Vertical Depth (ft) | Reference (ft)  | Offset (ft) | Highside Toolface (°) | Offset Wellbore Centre +N/-S (ft) | +E/-W (ft) | Between Centres (ft) | Between Ellipses (ft) | Total Uncertainty Axis | Separation Factor |   |         |                    |  |        |
| 5,200.0               | 4,932.0             | 5,166.1             | 4,916.2             | 30.6            | 29.6        | -97.78                | -58.9                             | -1,568.5   | 430.2                | 370.6                 | 59.62                  | 7.216             |   |         |                    |  |        |
| 5,300.0               | 5,026.1             | 5,265.7             | 5,010.3             | 31.2            | 30.2        | -97.92                | -59.8                             | -1,601.1   | 439.0                | 378.1                 | 60.87                  | 7.211             |   |         |                    |  |        |
| 5,400.0               | 5,120.3             | 5,365.3             | 5,104.5             | 31.9            | 30.8        | -98.04                | -60.7                             | -1,633.7   | 447.7                | 385.6                 | 62.13                  | 7.206             |   |         |                    |  |        |
| 5,500.0               | 5,214.4             | 5,465.0             | 5,198.6             | 32.5            | 31.4        | -98.16                | -61.6                             | -1,666.3   | 456.4                | 393.1                 | 63.38                  | 7.202             |   |         |                    |  |        |
| 5,600.0               | 5,308.5             | 5,564.6             | 5,292.7             | 33.2            | 32.1        | -98.28                | -62.5                             | -1,698.8   | 465.2                | 400.6                 | 64.63                  | 7.197             |   |         |                    |  |        |
| 5,700.0               | 5,402.6             | 5,664.2             | 5,386.9             | 33.8            | 32.7        | -98.39                | -63.4                             | -1,731.4   | 473.9                | 408.1                 | 65.89                  | 7.193             |   |         |                    |  |        |
| 5,800.0               | 5,496.8             | 5,763.8             | 5,481.0             | 34.5            | 33.3        | -98.50                | -64.2                             | -1,764.0   | 482.7                | 415.6                 | 67.14                  | 7.190             |   |         |                    |  |        |
| 5,900.0               | 5,590.9             | 5,863.4             | 5,575.1             | 35.1            | 33.9        | -98.61                | -65.1                             | -1,796.5   | 491.4                | 423.1                 | 68.39                  | 7.186 SF          |   |         |                    |  |        |

# Cathedral Energy Services

## Anticollision Report

|                           |                              |                                     |                                     |
|---------------------------|------------------------------|-------------------------------------|-------------------------------------|
| <b>Company:</b>           | EnCana Oil & Gas (USA) Inc   | <b>Local Co-ordinate Reference:</b> | Well MCU Fee 17-16B (M16W Pad)      |
| <b>Project:</b>           | Mamm Creek                   | <b>TVD Reference:</b>               | KBE @ 7903.0ft (Original Well Elev) |
| <b>Reference Site:</b>    | SWSW S16-T7S-R93W (M16W Pad) | <b>MD Reference:</b>                | KBE @ 7903.0ft (Original Well Elev) |
| <b>Site Error:</b>        | 0.0ft                        | <b>North Reference:</b>             | True                                |
| <b>Reference Well:</b>    | MCU Fee 17-16B (M16W Pad)    | <b>Survey Calculation Method:</b>   | Minimum Curvature                   |
| <b>Well Error:</b>        | 0.0ft                        | <b>Output errors are at</b>         | 2.00 sigma                          |
| <b>Reference Wellbore</b> | DD                           | <b>Database:</b>                    | EDM 5000.1 US Multi Users DB        |
| <b>Reference Design:</b>  | Plan #1                      | <b>Offset TVD Reference:</b>        | Offset Datum                        |

| Offset Design SWSW S16-T7S-R93W (M16W Pad) - MCU Fee 17-9B (M16W pad) - DD - Plan #1 |                     |                     |                     |                 |             |                       |                                   |            |                      |                       |                        |                   | Offset Site Error: 0.0 ft |         |
|--|---------------------|---------------------|---------------------|-----------------|-------------|-----------------------|-----------------------------------|------------|----------------------|-----------------------|------------------------|-------------------|---------------------------|---------|
| Survey Program: 0-MWD  |                     |                     |                     |                 |             |                       |                                   |            |                      |                       |                        |                   | Offset Well Error: 0.0 ft |         |
| Reference  |                     | Offset              |                     | Semi Major Axis |             |                       | Distance                          |            |                      |                       |                        |                   |                           | Warning |
| Measured Depth (ft)  | Vertical Depth (ft) | Measured Depth (ft) | Vertical Depth (ft) | Reference (ft)  | Offset (ft) | Highside Toolface (°) | Offset Wellbore Centre +N/-S (ft) | +E/-W (ft) | Between Centres (ft) | Between Ellipses (ft) | Total Uncertainty Axis | Separation Factor |                           |         |
| 0.0  | 0.0                 | 0.0                 | 0.0                 | 0.0             | 0.0         | 32.83                 | 97.6                              | 63.0       | 116.2                |                       |                        |                   |                           |         |
| 100.0  | 100.0               | 100.0               | 100.0               | 0.1             | 0.1         | 32.83                 | 97.6                              | 63.0       | 116.2                | 115.9                 | 0.27                   | 426.652           |                           |         |
| 200.0  | 200.0               | 200.0               | 200.0               | 0.3             | 0.3         | 32.83                 | 97.6                              | 63.0       | 116.2                | 115.5                 | 0.62                   | 186.960           | CC, ES                    |         |
| 300.0  | 300.0               | 300.0               | 300.0               | 0.5             | 0.5         | 110.47                | 97.6                              | 63.0       | 117.1                | 116.1                 | 0.98                   | 119.721           |                           |         |
| 400.0  | 399.6               | 399.6               | 399.6               | 0.7             | 0.7         | 113.89                | 97.6                              | 63.0       | 120.0                | 118.7                 | 1.36                   | 87.969            |                           |         |
| 500.0  | 498.8               | 499.1               | 499.1               | 1.0             | 0.8         | 118.00                | 99.2                              | 61.0       | 125.8                | 123.9                 | 1.80                   | 69.817            |                           |         |
| 600.0  | 597.1               | 599.0               | 598.6               | 1.4             | 1.0         | 121.36                | 104.1                             | 54.9       | 134.3                | 131.9                 | 2.32                   | 57.963            |                           |         |
| 700.0  | 694.3               | 699.2               | 697.9               | 1.8             | 1.3         | 123.91                | 112.3                             | 44.8       | 145.3                | 142.4                 | 2.94                   | 49.460            |                           |         |
| 800.0  | 790.2               | 799.5               | 796.6               | 2.4             | 1.6         | 125.70                | 123.8                             | 30.6       | 158.7                | 155.0                 | 3.69                   | 43.000            |                           |         |
| 900.0  | 884.6               | 900.1               | 894.4               | 3.0             | 2.1         | 126.84                | 138.6                             | 12.4       | 174.0                | 169.4                 | 4.57                   | 38.056            |                           |         |
| 1,000.0  | 978.7               | 1,001.1             | 991.2               | 3.6             | 2.6         | 126.60                | 156.6                             | -10.0      | 188.7                | 183.1                 | 5.59                   | 33.748            |                           |         |
| 1,100.0  | 1,072.8             | 1,102.1             | 1,086.4             | 4.2             | 3.2         | 124.92                | 177.9                             | -36.2      | 202.3                | 195.5                 | 6.77                   | 29.871            |                           |         |
| 1,200.0  | 1,167.0             | 1,201.6             | 1,178.6             | 4.9             | 3.9         | 122.28                | 201.5                             | -65.4      | 215.4                | 207.4                 | 8.07                   | 26.691            |                           |         |
| 1,300.0  | 1,261.1             | 1,300.3             | 1,269.7             | 5.5             | 4.6         | 119.82                | 225.2                             | -94.7      | 228.9                | 219.5                 | 9.40                   | 24.360            |                           |         |
| 1,400.0  | 1,355.2             | 1,398.9             | 1,360.9             | 6.2             | 5.2         | 117.64                | 248.9                             | -124.0     | 242.7                | 232.0                 | 10.74                  | 22.608            |                           |         |
| 1,500.0  | 1,449.3             | 1,497.6             | 1,452.0             | 6.8             | 5.9         | 115.70                | 272.6                             | -153.3     | 256.9                | 244.8                 | 12.08                  | 21.256            |                           |         |
| 1,600.0  | 1,543.5             | 1,596.2             | 1,543.2             | 7.4             | 6.6         | 113.96                | 296.3                             | -182.6     | 271.3                | 257.8                 | 13.44                  | 20.192            |                           |         |
| 1,700.0  | 1,637.6             | 1,694.8             | 1,634.4             | 8.1             | 7.3         | 112.39                | 320.0                             | -211.9     | 285.9                | 271.1                 | 14.79                  | 19.336            |                           |         |
| 1,800.0  | 1,731.7             | 1,793.5             | 1,725.5             | 8.7             | 8.0         | 110.98                | 343.7                             | -241.2     | 300.7                | 284.6                 | 16.14                  | 18.638            |                           |         |
| 1,900.0  | 1,825.9             | 1,892.1             | 1,816.7             | 9.4             | 8.7         | 109.70                | 367.4                             | -270.5     | 315.7                | 298.2                 | 17.48                  | 18.059            |                           |         |
| 2,000.0  | 1,920.0             | 1,990.7             | 1,907.8             | 10.0            | 9.4         | 108.54                | 391.1                             | -299.8     | 330.8                | 312.0                 | 18.82                  | 17.574            |                           |         |
| 2,100.0  | 2,014.1             | 2,089.4             | 1,999.0             | 10.6            | 10.1        | 107.47                | 414.8                             | -329.1     | 346.1                | 325.9                 | 20.16                  | 17.162            |                           |         |
| 2,200.0  | 2,108.2             | 2,188.0             | 2,090.1             | 11.3            | 10.8        | 106.50                | 438.5                             | -358.4     | 361.4                | 339.9                 | 21.50                  | 16.810            |                           |         |
| 2,300.0  | 2,202.4             | 2,286.6             | 2,181.3             | 11.9            | 11.5        | 105.61                | 462.2                             | -387.7     | 376.8                | 354.0                 | 22.83                  | 16.505            |                           |         |
| 2,400.0  | 2,296.5             | 2,385.3             | 2,272.4             | 12.6            | 12.2        | 104.78                | 485.9                             | -417.0     | 392.4                | 368.2                 | 24.16                  | 16.240            |                           |         |
| 2,500.0  | 2,390.6             | 2,483.9             | 2,363.6             | 13.2            | 12.9        | 104.02                | 509.6                             | -446.3     | 408.0                | 382.5                 | 25.49                  | 16.008            |                           |         |
| 2,600.0  | 2,484.7             | 2,582.6             | 2,454.7             | 13.9            | 13.6        | 103.32                | 533.4                             | -475.6     | 423.6                | 396.8                 | 26.81                  | 15.803            |                           |         |
| 2,700.0  | 2,578.9             | 2,681.2             | 2,545.9             | 14.5            | 14.3        | 102.66                | 557.1                             | -504.9     | 439.4                | 411.2                 | 28.13                  | 15.621            |                           |         |
| 2,800.0  | 2,673.0             | 2,779.8             | 2,637.0             | 15.1            | 15.0        | 102.06                | 580.8                             | -534.2     | 455.1                | 425.7                 | 29.44                  | 15.459            |                           |         |
| 2,900.0  | 2,767.1             | 2,878.5             | 2,728.2             | 15.8            | 15.8        | 101.49                | 604.5                             | -563.5     | 470.9                | 440.2                 | 30.75                  | 15.313            |                           |         |
| 3,000.0  | 2,861.2             | 2,977.1             | 2,819.3             | 16.4            | 16.5        | 100.96                | 628.2                             | -592.8     | 486.8                | 454.7                 | 32.06                  | 15.182            | SF                        |         |

# Cathedral Energy Services

## Anticollision Report

|                           |                              |                                     |                                     |
|---------------------------|------------------------------|-------------------------------------|-------------------------------------|
| <b>Company:</b>           | EnCana Oil & Gas (USA) Inc   | <b>Local Co-ordinate Reference:</b> | Well MCU Fee 17-16B (M16W Pad)      |
| <b>Project:</b>           | Mamm Creek                   | <b>TVD Reference:</b>               | KBE @ 7903.0ft (Original Well Elev) |
| <b>Reference Site:</b>    | SWSW S16-T7S-R93W (M16W Pad) | <b>MD Reference:</b>                | KBE @ 7903.0ft (Original Well Elev) |
| <b>Site Error:</b>        | 0.0ft                        | <b>North Reference:</b>             | True                                |
| <b>Reference Well:</b>    | MCU Fee 17-16B (M16W Pad)    | <b>Survey Calculation Method:</b>   | Minimum Curvature                   |
| <b>Well Error:</b>        | 0.0ft                        | <b>Output errors are at</b>         | 2.00 sigma                          |
| <b>Reference Wellbore</b> | DD                           | <b>Database:</b>                    | EDM 5000.1 US Multi Users DB        |
| <b>Reference Design:</b>  | Plan #1                      | <b>Offset TVD Reference:</b>        | Offset Datum                        |

| Offset Design SWSW S16-T7S-R93W (M16W Pad) - MCU Fee 17-9B2 (M16W Pad) - DD - Plan #1 |                           |                           |                           |                   |                |                             |   |               |                              |                      |         |                | Offset Site Error: | 0.0 ft |
|---|---------------------------|---------------------------|---------------------------|-------------------|----------------|-----------------------------|---|---------------|------------------------------|----------------------|---------|----------------|--------------------|--------|
| Survey Program: 0-MWD   |                           |                           |                           |                   |                |                             |   |               |                              |                      |         |                | Offset Well Error: | 0.0 ft |
| Reference   |                           | Offset                    |                           | Semi Major Axis   |                | Highside<br>Toolface<br>(°) | Distance                                |               | Total<br>Uncertainty<br>Axis | Separation<br>Factor | Warning |                |                    |        |
| Measured<br>Depth<br>(ft)   | Vertical<br>Depth<br>(ft) | Measured<br>Depth<br>(ft) | Vertical<br>Depth<br>(ft) | Reference<br>(ft) | Offset<br>(ft) |                             | Offset Wellbore Centre<br>+N/-S<br>(ft) | +E/-W<br>(ft) |                              |                      |         |                |                    |        |
| 0.0   | 0.0                       | 0.0                       | 0.0                       | 0.0               | 0.0            | -25.78                      | 102.3                                   | -49.4         | 113.7                        |                      |         |                |                    |        |
| 100.0   | 100.0                     | 100.0                     | 100.0                     | 0.1               | 0.1            | -25.78                      | 102.3                                   | -49.4         | 113.7                        | 113.4                | 0.27    | 417.446        |                    |        |
| 200.0   | 200.0                     | 200.0                     | 200.0                     | 0.3               | 0.3            | -25.78                      | 102.3                                   | -49.4         | 113.7                        | 113.0                | 0.62    | 182.926 CC, ES |                    |        |
| 300.0   | 300.0                     | 295.3                     | 295.2                     | 0.5               | 0.5            | 50.99                       | 103.6                                   | -51.5         | 114.1                        | 113.1                | 0.97    | 117.659        |                    |        |
| 400.0   | 399.6                     | 390.5                     | 390.2                     | 0.7               | 0.7            | 51.88                       | 107.2                                   | -57.6         | 115.4                        | 114.0                | 1.35    | 85.256         |                    |        |
| 500.0   | 498.8                     | 485.7                     | 484.6                     | 1.0               | 1.0            | 53.33                       | 113.3                                   | -67.7         | 117.6                        | 115.8                | 1.81    | 65.105         |                    |        |
| 600.0   | 597.1                     | 580.8                     | 578.3                     | 1.4               | 1.3            | 55.25                       | 121.8                                   | -81.9         | 120.9                        | 118.5                | 2.37    | 51.082         |                    |        |
| 700.0   | 694.3                     | 675.8                     | 670.9                     | 1.8               | 1.7            | 57.56                       | 132.7                                   | -100.0        | 125.3                        | 122.2                | 3.07    | 40.806         |                    |        |
| 800.0   | 790.2                     | 770.8                     | 762.3                     | 2.4               | 2.2            | 60.14                       | 145.9                                   | -122.0        | 130.9                        | 126.9                | 3.95    | 33.137         |                    |        |
| 900.0   | 884.6                     | 865.6                     | 852.2                     | 3.0               | 2.8            | 62.80                       | 161.4                                   | -147.9        | 138.0                        | 133.0                | 5.00    | 27.610         |                    |        |
| 1,000.0   | 978.7                     | 963.0                     | 943.1                     | 3.6               | 3.4            | 64.47                       | 179.3                                   | -177.7        | 147.8                        | 141.7                | 6.11    | 24.213         |                    |        |
| 1,100.0   | 1,072.8                   | 1,062.4                   | 1,035.8                   | 4.2               | 4.1            | 65.85                       | 197.8                                   | -208.5        | 158.1                        | 150.8                | 7.26    | 21.784         |                    |        |
| 1,200.0   | 1,167.0                   | 1,161.8                   | 1,128.5                   | 4.9               | 4.8            | 67.05                       | 216.3                                   | -239.3        | 168.4                        | 160.0                | 8.43    | 19.969         |                    |        |
| 1,300.0   | 1,261.1                   | 1,261.2                   | 1,221.2                   | 5.5               | 5.4            | 68.12                       | 234.8                                   | -270.1        | 178.8                        | 169.1                | 9.63    | 18.568         |                    |        |
| 1,400.0   | 1,355.2                   | 1,360.6                   | 1,313.9                   | 6.2               | 6.1            | 69.06                       | 253.3                                   | -300.9        | 189.2                        | 178.4                | 10.84   | 17.459         |                    |        |
| 1,500.0   | 1,449.3                   | 1,460.0                   | 1,406.6                   | 6.8               | 6.8            | 69.91                       | 271.7                                   | -331.7        | 199.7                        | 187.6                | 12.06   | 16.561         |                    |        |
| 1,600.0   | 1,543.5                   | 1,559.4                   | 1,499.3                   | 7.4               | 7.4            | 70.68                       | 290.2                                   | -362.5        | 210.2                        | 196.9                | 13.29   | 15.821         |                    |        |
| 1,700.0   | 1,637.6                   | 1,658.8                   | 1,592.0                   | 8.1               | 8.1            | 71.37                       | 308.7                                   | -393.3        | 220.7                        | 206.2                | 14.52   | 15.202         |                    |        |
| 1,800.0   | 1,731.7                   | 1,758.2                   | 1,684.7                   | 8.7               | 8.8            | 72.00                       | 327.2                                   | -424.1        | 231.3                        | 215.6                | 15.76   | 14.676         |                    |        |
| 1,900.0   | 1,825.9                   | 1,857.6                   | 1,777.3                   | 9.4               | 9.5            | 72.57                       | 345.7                                   | -455.0        | 241.9                        | 224.9                | 17.01   | 14.225         |                    |        |
| 2,000.0   | 1,920.0                   | 1,957.0                   | 1,870.0                   | 10.0              | 10.1           | 73.09                       | 364.2                                   | -485.8        | 252.6                        | 234.3                | 18.26   | 13.834         |                    |        |
| 2,100.0   | 2,014.1                   | 2,056.4                   | 1,962.7                   | 10.6              | 10.8           | 73.58                       | 382.6                                   | -516.6        | 263.2                        | 243.7                | 19.51   | 13.491         |                    |        |
| 2,200.0   | 2,108.2                   | 2,155.9                   | 2,055.4                   | 11.3              | 11.5           | 74.02                       | 401.1                                   | -547.4        | 273.9                        | 253.1                | 20.76   | 13.190         |                    |        |
| 2,300.0   | 2,202.4                   | 2,255.3                   | 2,148.1                   | 11.9              | 12.2           | 74.43                       | 419.6                                   | -578.2        | 284.5                        | 262.5                | 22.02   | 12.921         |                    |        |
| 2,400.0   | 2,296.5                   | 2,354.7                   | 2,240.8                   | 12.6              | 12.9           | 74.82                       | 438.1                                   | -609.0        | 295.2                        | 272.0                | 23.28   | 12.682         |                    |        |
| 2,500.0   | 2,390.6                   | 2,454.1                   | 2,333.5                   | 13.2              | 13.5           | 75.17                       | 456.6                                   | -639.8        | 305.9                        | 281.4                | 24.54   | 12.467         |                    |        |
| 2,600.0   | 2,484.7                   | 2,553.5                   | 2,426.2                   | 13.9              | 14.2           | 75.50                       | 475.1                                   | -670.6        | 316.7                        | 290.9                | 25.80   | 12.272         |                    |        |
| 2,700.0   | 2,578.9                   | 2,652.9                   | 2,518.9                   | 14.5              | 14.9           | 75.81                       | 493.5                                   | -701.4        | 327.4                        | 300.3                | 27.07   | 12.096         |                    |        |
| 2,800.0   | 2,673.0                   | 2,752.3                   | 2,611.5                   | 15.1              | 15.6           | 76.10                       | 512.0                                   | -732.2        | 338.1                        | 309.8                | 28.33   | 11.935         |                    |        |
| 2,900.0   | 2,767.1                   | 2,851.7                   | 2,704.2                   | 15.8              | 16.2           | 76.37                       | 530.5                                   | -763.0        | 348.9                        | 319.3                | 29.59   | 11.788         |                    |        |
| 3,000.0   | 2,861.2                   | 2,951.1                   | 2,796.9                   | 16.4              | 16.9           | 76.63                       | 549.0                                   | -793.8        | 359.6                        | 328.7                | 30.86   | 11.653         |                    |        |
| 3,100.0   | 2,955.4                   | 3,050.5                   | 2,889.6                   | 17.1              | 17.6           | 76.87                       | 567.5                                   | -824.6        | 370.4                        | 338.2                | 32.13   | 11.528         |                    |        |
| 3,200.0   | 3,049.5                   | 3,149.9                   | 2,982.3                   | 17.7              | 18.3           | 77.10                       | 586.0                                   | -855.4        | 381.1                        | 347.7                | 33.39   | 11.413         |                    |        |
| 3,300.0   | 3,143.6                   | 3,249.3                   | 3,075.0                   | 18.4              | 19.0           | 77.31                       | 604.5                                   | -886.2        | 391.9                        | 357.2                | 34.66   | 11.306         |                    |        |
| 3,400.0   | 3,237.7                   | 3,348.8                   | 3,167.7                   | 19.0              | 19.6           | 77.52                       | 622.9                                   | -917.0        | 402.7                        | 366.7                | 35.93   | 11.207         |                    |        |
| 3,500.0   | 3,331.9                   | 3,448.2                   | 3,260.4                   | 19.6              | 20.3           | 77.71                       | 641.4                                   | -947.8        | 413.4                        | 376.2                | 37.20   | 11.114         |                    |        |
| 3,600.0   | 3,426.0                   | 3,547.6                   | 3,353.1                   | 20.3              | 21.0           | 77.89                       | 659.9                                   | -978.6        | 424.2                        | 385.8                | 38.47   | 11.028         |                    |        |
| 3,700.0   | 3,520.1                   | 3,647.0                   | 3,445.8                   | 20.9              | 21.7           | 78.07                       | 678.4                                   | -1,009.5      | 435.0                        | 395.3                | 39.74   | 10.947         |                    |        |
| 3,800.0   | 3,614.2                   | 3,746.4                   | 3,538.4                   | 21.6              | 22.3           | 78.23                       | 696.9                                   | -1,040.3      | 445.8                        | 404.8                | 41.01   | 10.871         |                    |        |
| 3,900.0   | 3,708.4                   | 3,845.8                   | 3,631.1                   | 22.2              | 23.0           | 78.39                       | 715.4                                   | -1,071.1      | 456.6                        | 414.3                | 42.28   | 10.800         |                    |        |
| 4,000.0   | 3,802.5                   | 3,945.2                   | 3,723.8                   | 22.9              | 23.7           | 78.54                       | 733.8                                   | -1,101.9      | 467.4                        | 423.8                | 43.55   | 10.733         |                    |        |
| 4,100.0   | 3,896.6                   | 4,044.6                   | 3,816.5                   | 23.5              | 24.4           | 78.68                       | 752.3                                   | -1,132.7      | 478.2                        | 433.4                | 44.82   | 10.670         |                    |        |
| 4,200.0   | 3,990.8                   | 4,144.0                   | 3,909.2                   | 24.2              | 25.1           | 78.82                       | 770.8                                   | -1,163.5      | 489.0                        | 442.9                | 46.09   | 10.610         |                    |        |
| 4,300.0   | 4,084.9                   | 4,243.4                   | 4,001.9                   | 24.8              | 25.7           | 78.95                       | 789.3                                   | -1,194.3      | 499.8                        | 452.4                | 47.36   | 10.553 SF      |                    |        |

# Cathedral Energy Services

## Anticollision Report

|                           |                              |                                     |                                     |
|---------------------------|------------------------------|-------------------------------------|-------------------------------------|
| <b>Company:</b>           | EnCana Oil & Gas (USA) Inc   | <b>Local Co-ordinate Reference:</b> | Well MCU Fee 17-16B (M16W Pad)      |
| <b>Project:</b>           | Mamm Creek                   | <b>TVD Reference:</b>               | KBE @ 7903.0ft (Original Well Elev) |
| <b>Reference Site:</b>    | SWSW S16-T7S-R93W (M16W Pad) | <b>MD Reference:</b>                | KBE @ 7903.0ft (Original Well Elev) |
| <b>Site Error:</b>        | 0.0ft                        | <b>North Reference:</b>             | True                                |
| <b>Reference Well:</b>    | MCU Fee 17-16B (M16W Pad)    | <b>Survey Calculation Method:</b>   | Minimum Curvature                   |
| <b>Well Error:</b>        | 0.0ft                        | <b>Output errors are at</b>         | 2.00 sigma                          |
| <b>Reference Wellbore</b> | DD                           | <b>Database:</b>                    | EDM 5000.1 US Multi Users DB        |
| <b>Reference Design:</b>  | Plan #1                      | <b>Offset TVD Reference:</b>        | Offset Datum                        |

| Offset Design SWSW S16-T7S-R93W (M16W Pad) - MCU Fee 17-9C (M16W Pad) - DD - Plan #1 |                     |                     |                     |                 |             |                       |                                   |            |                      |                       |                  |                | Offset Site Error: | 0.0 ft |
|--|---------------------|---------------------|---------------------|-----------------|-------------|-----------------------|-----------------------------------|------------|----------------------|-----------------------|------------------|----------------|--------------------|--------|
| Survey Program: 0-MWD  |                     |                     |                     |                 |             |                       |                                   |            |                      |                       |                  |                | Offset Well Error: | 0.0 ft |
| Reference  |                     | Offset              |                     | Semi Major Axis |             | Distance              |                                   | Total      |                      | Separation            |                  | Warning        |                    |        |
| Measured Depth (ft)  | Vertical Depth (ft) | Measured Depth (ft) | Vertical Depth (ft) | Reference (ft)  | Offset (ft) | Highside Toolface (°) | Offset Wellbore Centre +N/-S (ft) | +E/-W (ft) | Between Centres (ft) | Between Ellipses (ft) | Uncertainty Axis |                |                    |        |
| 0.0  | 0.0                 | 0.0                 | 0.0                 | 0.0             | 0.0         | 20.53                 | 96.5                              | 36.2       | 103.1                |                       |                  |                |                    |        |
| 100.0  | 100.0               | 100.0               | 100.0               | 0.1             | 0.1         | 20.53                 | 96.5                              | 36.2       | 103.1                | 102.8                 | 0.27             | 378.509        |                    |        |
| 200.0  | 200.0               | 200.0               | 200.0               | 0.3             | 0.3         | 20.53                 | 96.5                              | 36.2       | 103.1                | 102.4                 | 0.62             | 165.864 CC, ES |                    |        |
| 300.0  | 300.0               | 299.6               | 299.6               | 0.5             | 0.5         | 96.97                 | 97.6                              | 33.8       | 103.6                | 102.6                 | 0.99             | 104.966        |                    |        |
| 400.0  | 399.6               | 399.2               | 398.9               | 0.7             | 0.7         | 96.93                 | 100.8                             | 26.7       | 105.1                | 103.6                 | 1.43             | 73.657         |                    |        |
| 500.0  | 498.8               | 498.8               | 497.6               | 1.0             | 1.0         | 96.84                 | 106.2                             | 14.9       | 107.6                | 105.6                 | 1.99             | 53.995         |                    |        |
| 600.0  | 597.1               | 598.3               | 595.5               | 1.4             | 1.4         | 96.74                 | 113.7                             | -1.5       | 111.1                | 108.4                 | 2.72             | 40.878         |                    |        |
| 700.0  | 694.3               | 697.8               | 692.2               | 1.8             | 1.8         | 96.60                 | 123.3                             | -22.5      | 115.6                | 111.9                 | 3.62             | 31.929         |                    |        |
| 800.0  | 790.2               | 797.2               | 787.5               | 2.4             | 2.4         | 96.44                 | 135.0                             | -48.1      | 121.0                | 116.3                 | 4.71             | 25.705         |                    |        |
| 900.0  | 884.6               | 896.6               | 881.3               | 3.0             | 3.0         | 96.16                 | 148.8                             | -78.1      | 127.4                | 121.4                 | 5.94             | 21.430         |                    |        |
| 1,000.0  | 978.7               | 996.4               | 974.7               | 3.6             | 3.6         | 95.46                 | 163.4                             | -110.0     | 134.0                | 126.8                 | 7.21             | 18.590         |                    |        |
| 1,100.0  | 1,072.8             | 1,096.1             | 1,068.0             | 4.2             | 4.3         | 94.82                 | 178.0                             | -142.0     | 140.6                | 132.1                 | 8.48             | 16.576         |                    |        |
| 1,200.0  | 1,167.0             | 1,195.9             | 1,161.4             | 4.9             | 4.9         | 94.25                 | 192.6                             | -173.9     | 147.3                | 137.5                 | 9.76             | 15.080         |                    |        |
| 1,300.0  | 1,261.1             | 1,295.7             | 1,254.8             | 5.5             | 5.6         | 93.72                 | 207.2                             | -205.8     | 153.9                | 142.9                 | 11.05            | 13.928         |                    |        |
| 1,400.0  | 1,355.2             | 1,395.5             | 1,348.2             | 6.2             | 6.3         | 93.24                 | 221.8                             | -237.8     | 160.6                | 148.3                 | 12.34            | 13.014         |                    |        |
| 1,500.0  | 1,449.3             | 1,495.2             | 1,441.6             | 6.8             | 6.9         | 92.79                 | 236.4                             | -269.7     | 167.3                | 153.6                 | 13.63            | 12.273         |                    |        |
| 1,600.0  | 1,543.5             | 1,595.0             | 1,534.9             | 7.4             | 7.6         | 92.38                 | 251.1                             | -301.7     | 174.0                | 159.1                 | 14.92            | 11.660         |                    |        |
| 1,700.0  | 1,637.6             | 1,694.8             | 1,628.3             | 8.1             | 8.2         | 92.01                 | 265.7                             | -333.6     | 180.7                | 164.5                 | 16.21            | 11.145         |                    |        |
| 1,800.0  | 1,731.7             | 1,794.5             | 1,721.7             | 8.7             | 8.9         | 91.65                 | 280.3                             | -365.5     | 187.4                | 169.9                 | 17.50            | 10.706         |                    |        |
| 1,900.0  | 1,825.9             | 1,894.3             | 1,815.1             | 9.4             | 9.6         | 91.33                 | 294.9                             | -397.5     | 194.1                | 175.3                 | 18.79            | 10.328         |                    |        |
| 2,000.0  | 1,920.0             | 1,994.1             | 1,908.5             | 10.0            | 10.2        | 91.02                 | 309.5                             | -429.4     | 200.8                | 180.7                 | 20.08            | 9.999          |                    |        |
| 2,100.0  | 2,014.1             | 2,093.8             | 2,001.9             | 10.6            | 10.9        | 90.73                 | 324.1                             | -461.3     | 207.6                | 186.2                 | 21.37            | 9.710          |                    |        |
| 2,200.0  | 2,108.2             | 2,193.6             | 2,095.2             | 11.3            | 11.6        | 90.46                 | 338.7                             | -493.3     | 214.3                | 191.6                 | 22.66            | 9.455          |                    |        |
| 2,300.0  | 2,202.4             | 2,293.4             | 2,188.6             | 11.9            | 12.2        | 90.21                 | 353.3                             | -525.2     | 221.0                | 197.1                 | 23.95            | 9.227          |                    |        |
| 2,400.0  | 2,296.5             | 2,393.1             | 2,282.0             | 12.6            | 12.9        | 89.98                 | 368.0                             | -557.2     | 227.8                | 202.5                 | 25.24            | 9.023          |                    |        |
| 2,500.0  | 2,390.6             | 2,492.9             | 2,375.4             | 13.2            | 13.6        | 89.75                 | 382.6                             | -589.1     | 234.5                | 208.0                 | 26.53            | 8.839          |                    |        |
| 2,600.0  | 2,484.7             | 2,592.7             | 2,468.8             | 13.9            | 14.2        | 89.54                 | 397.2                             | -621.0     | 241.3                | 213.4                 | 27.82            | 8.673          |                    |        |
| 2,700.0  | 2,578.9             | 2,692.4             | 2,562.1             | 14.5            | 14.9        | 89.34                 | 411.8                             | -653.0     | 248.0                | 218.9                 | 29.11            | 8.521          |                    |        |
| 2,800.0  | 2,673.0             | 2,792.2             | 2,655.5             | 15.1            | 15.6        | 89.15                 | 426.4                             | -684.9     | 254.8                | 224.4                 | 30.39            | 8.382          |                    |        |
| 2,900.0  | 2,767.1             | 2,892.0             | 2,748.9             | 15.8            | 16.2        | 88.97                 | 441.0                             | -716.9     | 261.5                | 229.8                 | 31.68            | 8.255          |                    |        |
| 3,000.0  | 2,861.2             | 2,991.7             | 2,842.3             | 16.4            | 16.9        | 88.80                 | 455.6                             | -748.8     | 268.3                | 235.3                 | 32.96            | 8.138          |                    |        |
| 3,100.0  | 2,955.4             | 3,091.5             | 2,935.7             | 17.1            | 17.6        | 88.64                 | 470.2                             | -780.7     | 275.0                | 240.8                 | 34.25            | 8.030          |                    |        |
| 3,200.0  | 3,049.5             | 3,191.3             | 3,029.0             | 17.7            | 18.2        | 88.49                 | 484.9                             | -812.7     | 281.8                | 246.3                 | 35.54            | 7.930          |                    |        |
| 3,300.0  | 3,143.6             | 3,291.0             | 3,122.4             | 18.4            | 18.9        | 88.34                 | 499.5                             | -844.6     | 288.6                | 251.7                 | 36.82            | 7.837          |                    |        |
| 3,400.0  | 3,237.7             | 3,390.8             | 3,215.8             | 19.0            | 19.5        | 88.20                 | 514.1                             | -876.6     | 295.3                | 257.2                 | 38.10            | 7.751          |                    |        |
| 3,500.0  | 3,331.9             | 3,490.6             | 3,309.2             | 19.6            | 20.2        | 88.07                 | 528.7                             | -908.5     | 302.1                | 262.7                 | 39.39            | 7.670          |                    |        |
| 3,600.0  | 3,426.0             | 3,590.4             | 3,402.6             | 20.3            | 20.9        | 87.94                 | 543.3                             | -940.4     | 308.9                | 268.2                 | 40.67            | 7.594          |                    |        |
| 3,700.0  | 3,520.1             | 3,690.1             | 3,496.0             | 20.9            | 21.5        | 87.82                 | 557.9                             | -972.4     | 315.6                | 273.7                 | 41.96            | 7.523          |                    |        |
| 3,800.0  | 3,614.2             | 3,789.9             | 3,589.3             | 21.6            | 22.2        | 87.70                 | 572.5                             | -1,004.3   | 322.4                | 279.2                 | 43.24            | 7.457          |                    |        |
| 3,900.0  | 3,708.4             | 3,889.7             | 3,682.7             | 22.2            | 22.9        | 87.59                 | 587.1                             | -1,036.2   | 329.2                | 284.7                 | 44.52            | 7.394          |                    |        |
| 4,000.0  | 3,802.5             | 3,989.4             | 3,776.1             | 22.9            | 23.5        | 87.48                 | 601.8                             | -1,068.2   | 336.0                | 290.2                 | 45.80            | 7.335          |                    |        |
| 4,100.0  | 3,896.6             | 4,089.2             | 3,869.5             | 23.5            | 24.2        | 87.38                 | 616.4                             | -1,100.1   | 342.7                | 295.7                 | 47.09            | 7.279          |                    |        |
| 4,200.0  | 3,990.8             | 4,189.0             | 3,962.9             | 24.2            | 24.9        | 87.28                 | 631.0                             | -1,132.1   | 349.5                | 301.1                 | 48.37            | 7.226          |                    |        |
| 4,300.0  | 4,084.9             | 4,288.7             | 4,056.2             | 24.8            | 25.5        | 87.18                 | 645.6                             | -1,164.0   | 356.3                | 306.6                 | 49.65            | 7.176          |                    |        |
| 4,400.0  | 4,179.0             | 4,388.5             | 4,149.6             | 25.4            | 26.2        | 87.09                 | 660.2                             | -1,195.9   | 363.1                | 312.1                 | 50.93            | 7.129          |                    |        |
| 4,500.0  | 4,273.1             | 4,488.3             | 4,243.0             | 26.1            | 26.9        | 87.00                 | 674.8                             | -1,227.9   | 369.9                | 317.6                 | 52.21            | 7.084          |                    |        |
| 4,600.0  | 4,367.3             | 4,588.0             | 4,336.4             | 26.7            | 27.5        | 86.92                 | 689.4                             | -1,259.8   | 376.6                | 323.1                 | 53.49            | 7.041          |                    |        |
| 4,700.0  | 4,461.4             | 4,687.8             | 4,429.8             | 27.4            | 28.2        | 86.83                 | 704.0                             | -1,291.8   | 383.4                | 328.6                 | 54.77            | 7.000          |                    |        |
| 4,800.0  | 4,555.5             | 4,787.6             | 4,523.1             | 28.0            | 28.9        | 86.75                 | 718.7                             | -1,323.7   | 390.2                | 334.1                 | 56.05            | 6.961          |                    |        |
| 4,900.0  | 4,649.6             | 4,887.3             | 4,616.5             | 28.7            | 29.5        | 86.68                 | 733.3                             | -1,355.6   | 397.0                | 339.6                 | 57.33            | 6.924          |                    |        |
| 5,000.0  | 4,743.8             | 4,987.1             | 4,709.9             | 29.3            | 30.2        | 86.60                 | 747.9                             | -1,387.6   | 403.8                | 345.2                 | 58.61            | 6.889          |                    |        |
| 5,100.0  | 4,837.9             | 5,086.9             | 4,803.3             | 30.0            | 30.9        | 86.53                 | 762.5                             | -1,419.5   | 410.6                | 350.7                 | 59.89            | 6.855          |                    |        |

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



# Cathedral Energy Services

## Anticollision Report

|                           |                              |                                     |                                     |
|---------------------------|------------------------------|-------------------------------------|-------------------------------------|
| <b>Company:</b>           | EnCana Oil & Gas (USA) Inc   | <b>Local Co-ordinate Reference:</b> | Well MCU Fee 17-16B (M16W Pad)      |
| <b>Project:</b>           | Mamm Creek                   | <b>TVD Reference:</b>               | KBE @ 7903.0ft (Original Well Elev) |
| <b>Reference Site:</b>    | SWSW S16-T7S-R93W (M16W Pad) | <b>MD Reference:</b>                | KBE @ 7903.0ft (Original Well Elev) |
| <b>Site Error:</b>        | 0.0ft                        | <b>North Reference:</b>             | True                                |
| <b>Reference Well:</b>    | MCU Fee 17-16B (M16W Pad)    | <b>Survey Calculation Method:</b>   | Minimum Curvature                   |
| <b>Well Error:</b>        | 0.0ft                        | <b>Output errors are at</b>         | 2.00 sigma                          |
| <b>Reference Wellbore</b> | DD                           | <b>Database:</b>                    | EDM 5000.1 US Multi Users DB        |
| <b>Reference Design:</b>  | Plan #1                      | <b>Offset TVD Reference:</b>        | Offset Datum                        |

| <b>Offset Design</b> SWSW S16-T7S-R93W (M16W Pad) - MCU Fee 17-9C (M16W Pad) - DD - Plan #1 |                     |                     |                     |                 |             |                       |                                   |            |                      |                       |                        |                   | Offset Site Error: | 0.0 ft |
|---|---------------------|---------------------|---------------------|-----------------|-------------|-----------------------|-----------------------------------|------------|----------------------|-----------------------|------------------------|-------------------|--------------------|--------|
| Survey Program: 0-MWD   |                     |                     |                     |                 |             |                       |                                   |            |                      |                       |                        |                   | Offset Well Error: | 0.0 ft |
| Reference   |                     | Offset              |                     | Semi Major Axis |             |                       | Distance                          |            |                      |                       |                        |                   | Warning            |        |
| Measured Depth (ft)   | Vertical Depth (ft) | Measured Depth (ft) | Vertical Depth (ft) | Reference (ft)  | Offset (ft) | Highside Toolface (°) | Offset Wellbore Centre +N/-S (ft) | +E/-W (ft) | Between Centres (ft) | Between Ellipses (ft) | Total Uncertainty Axis | Separation Factor |                    |        |
| 5,200.0   | 4,932.0             | 5,186.6             | 4,896.7             | 30.6            | 31.5        | 86.46                 | 777.1                             | -1,451.5   | 417.3                | 356.2                 | 61.17                  | 6.822             |                    |        |
| 5,300.0   | 5,026.1             | 5,286.4             | 4,990.1             | 31.2            | 32.2        | 86.39                 | 791.7                             | -1,483.4   | 424.1                | 361.7                 | 62.45                  | 6.791             |                    |        |
| 5,400.0   | 5,120.3             | 5,386.2             | 5,083.4             | 31.9            | 32.9        | 86.33                 | 806.3                             | -1,515.3   | 430.9                | 367.2                 | 63.73                  | 6.761             |                    |        |
| 5,500.0   | 5,214.4             | 5,486.0             | 5,176.8             | 32.5            | 33.5        | 86.26                 | 820.9                             | -1,547.3   | 437.7                | 372.7                 | 65.01                  | 6.733             |                    |        |
| 5,600.0   | 5,308.5             | 5,585.7             | 5,270.2             | 33.2            | 34.2        | 86.20                 | 835.6                             | -1,579.2   | 444.5                | 378.2                 | 66.29                  | 6.705             |                    |        |
| 5,700.0   | 5,402.6             | 5,685.5             | 5,363.6             | 33.8            | 34.9        | 86.14                 | 850.2                             | -1,611.2   | 451.3                | 383.7                 | 67.57                  | 6.679             |                    |        |
| 5,800.0   | 5,496.8             | 5,785.3             | 5,457.0             | 34.5            | 35.5        | 86.09                 | 864.8                             | -1,643.1   | 458.1                | 389.2                 | 68.85                  | 6.653             |                    |        |
| 5,900.0   | 5,590.9             | 5,885.0             | 5,550.3             | 35.1            | 36.2        | 86.03                 | 879.4                             | -1,675.0   | 464.9                | 394.7                 | 70.13                  | 6.629             |                    |        |
| 6,000.0   | 5,685.0             | 5,984.8             | 5,643.7             | 35.7            | 36.9        | 85.98                 | 894.0                             | -1,707.0   | 471.6                | 400.2                 | 71.41                  | 6.605             |                    |        |
| 6,100.0   | 5,779.1             | 6,084.6             | 5,737.1             | 36.4            | 37.5        | 85.92                 | 908.6                             | -1,738.9   | 478.4                | 405.7                 | 72.68                  | 6.582             |                    |        |
| 6,200.0   | 5,873.3             | 6,184.3             | 5,830.5             | 37.0            | 38.2        | 85.87                 | 923.2                             | -1,770.8   | 485.2                | 411.3                 | 73.96                  | 6.560             |                    |        |
| 6,300.0   | 5,967.4             | 6,284.1             | 5,923.9             | 37.7            | 38.9        | 85.82                 | 937.8                             | -1,802.8   | 492.0                | 416.8                 | 75.24                  | 6.539             |                    |        |
| 6,400.0   | 6,061.5             | 6,383.9             | 6,017.3             | 38.3            | 39.5        | 85.77                 | 952.5                             | -1,834.7   | 498.8                | 422.3                 | 76.52                  | 6.519 SF          |                    |        |

# Cathedral Energy Services

## Anticollision Report

|                           |                              |                                     |                                     |
|---------------------------|------------------------------|-------------------------------------|-------------------------------------|
| <b>Company:</b>           | EnCana Oil & Gas (USA) Inc   | <b>Local Co-ordinate Reference:</b> | Well MCU Fee 17-16B (M16W Pad)      |
| <b>Project:</b>           | Mamm Creek                   | <b>TVD Reference:</b>               | KBE @ 7903.0ft (Original Well Elev) |
| <b>Reference Site:</b>    | SWSW S16-T7S-R93W (M16W Pad) | <b>MD Reference:</b>                | KBE @ 7903.0ft (Original Well Elev) |
| <b>Site Error:</b>        | 0.0ft                        | <b>North Reference:</b>             | True                                |
| <b>Reference Well:</b>    | MCU Fee 17-16B (M16W Pad)    | <b>Survey Calculation Method:</b>   | Minimum Curvature                   |
| <b>Well Error:</b>        | 0.0ft                        | <b>Output errors are at</b>         | 2.00 sigma                          |
| <b>Reference Wellbore</b> | DD                           | <b>Database:</b>                    | EDM 5000.1 US Multi Users DB        |
| <b>Reference Design:</b>  | Plan #1                      | <b>Offset TVD Reference:</b>        | Offset Datum                        |

| Offset Design SWSW S16-T7S-R93W (M16W Pad) - MCU Fee 17-9D (M16W Pad) - DD - Plan #1 |                           |                           |                           |                   |                |                             |   |               |                            |                             |                              |                      | Offset Site Error: | 0.0 ft |
|--|---------------------------|---------------------------|---------------------------|-------------------|----------------|-----------------------------|---|---------------|----------------------------|-----------------------------|------------------------------|----------------------|--------------------|--------|
| Survey Program: 0-MWD  |                           |                           |                           |                   |                |                             |   |               |                            |                             |                              |                      | Offset Well Error: | 0.0 ft |
| Reference  |                           | Offset                    |                           | Semi Major Axis   |                |                             | Distance                                |               |                            |                             | Total<br>Uncertainty<br>Axis | Separation<br>Factor | Warning            |        |
| Measured<br>Depth<br>(ft)  | Vertical<br>Depth<br>(ft) | Measured<br>Depth<br>(ft) | Vertical<br>Depth<br>(ft) | Reference<br>(ft) | Offset<br>(ft) | Highside<br>Toolface<br>(°) | Offset Wellbore Centre<br>+N/-S<br>(ft) | +E/-W<br>(ft) | Between<br>Centres<br>(ft) | Between<br>Ellipses<br>(ft) |                              |                      |                    |        |
| 0.0  | 0.0                       | 0.0                       | 0.0                       | 0.0               | 0.0            | 19.87                       | 86.0                                    | 31.1          | 91.4                       |                             |                              |                      |                    |        |
| 100.0  | 100.0                     | 100.0                     | 100.0                     | 0.1               | 0.1            | 19.87                       | 86.0                                    | 31.1          | 91.4                       | 91.1                        | 0.27                         | 335.698              |                    |        |
| 200.0  | 200.0                     | 200.0                     | 200.0                     | 0.3               | 0.3            | 19.87                       | 86.0                                    | 31.1          | 91.4                       | 90.8                        | 0.62                         | 147.104              |                    |        |
| 300.0  | 300.0                     | 303.0                     | 303.0                     | 0.5               | 0.5            | 98.47                       | 84.1                                    | 31.1          | 90.1                       | 89.1                        | 0.98                         | 91.470               |                    |        |
| 400.0  | 399.6                     | 403.8                     | 403.6                     | 0.7               | 0.7            | 104.39                      | 79.6                                    | 30.4          | 87.2                       | 85.9                        | 1.38                         | 63.244               |                    |        |
| 480.6  | 479.6                     | 484.1                     | 483.8                     | 0.9               | 0.8            | 109.59                      | 77.3                                    | 26.9          | 86.4                       | 84.7                        | 1.74                         | 49.790 CC            |                    |        |
| 500.0  | 498.8                     | 503.5                     | 503.2                     | 1.0               | 0.9            | 110.83                      | 77.0                                    | 25.7          | 86.5                       | 84.7                        | 1.82                         | 47.496 ES            |                    |        |
| 600.0  | 597.1                     | 603.7                     | 603.0                     | 1.4               | 1.1            | 116.96                      | 76.9                                    | 16.3          | 88.2                       | 85.8                        | 2.33                         | 37.853               |                    |        |
| 700.0  | 694.3                     | 704.4                     | 702.7                     | 1.8               | 1.4            | 122.38                      | 79.3                                    | 2.3           | 92.1                       | 89.1                        | 2.91                         | 31.585               |                    |        |
| 800.0  | 790.2                     | 805.6                     | 802.0                     | 2.4               | 1.7            | 126.87                      | 84.3                                    | -16.4         | 97.9                       | 94.3                        | 3.58                         | 27.350               |                    |        |
| 900.0  | 884.6                     | 907.4                     | 900.7                     | 3.0               | 2.1            | 130.22                      | 92.0                                    | -39.8         | 105.2                      | 100.8                       | 4.33                         | 24.291               |                    |        |
| 1,000.0  | 978.7                     | 1,008.6                   | 997.6                     | 3.6               | 2.7            | 131.28                      | 101.9                                   | -67.2         | 111.1                      | 105.9                       | 5.18                         | 21.440               |                    |        |
| 1,100.0  | 1,072.8                   | 1,108.5                   | 1,093.0                   | 4.2               | 3.2            | 131.81                      | 112.2                                   | -95.0         | 116.7                      | 110.6                       | 6.06                         | 19.241               |                    |        |
| 1,200.0  | 1,167.0                   | 1,208.3                   | 1,188.3                   | 4.9               | 3.7            | 132.28                      | 122.5                                   | -122.9        | 122.2                      | 115.3                       | 6.95                         | 17.581               |                    |        |
| 1,300.0  | 1,261.1                   | 1,308.1                   | 1,283.6                   | 5.5               | 4.3            | 132.72                      | 132.7                                   | -150.7        | 127.8                      | 119.9                       | 7.84                         | 16.294               |                    |        |
| 1,400.0  | 1,355.2                   | 1,408.0                   | 1,379.0                   | 6.2               | 4.8            | 133.12                      | 143.0                                   | -178.6        | 133.4                      | 124.6                       | 8.73                         | 15.270               |                    |        |
| 1,500.0  | 1,449.3                   | 1,507.8                   | 1,474.3                   | 6.8               | 5.4            | 133.49                      | 153.2                                   | -206.4        | 138.9                      | 129.3                       | 9.62                         | 14.438               |                    |        |
| 1,600.0  | 1,543.5                   | 1,607.7                   | 1,569.6                   | 7.4               | 5.9            | 133.83                      | 163.5                                   | -234.2        | 144.5                      | 134.0                       | 10.51                        | 13.750               |                    |        |
| 1,700.0  | 1,637.6                   | 1,707.5                   | 1,664.9                   | 8.1               | 6.5            | 134.14                      | 173.8                                   | -262.1        | 150.1                      | 138.7                       | 11.39                        | 13.173               |                    |        |
| 1,800.0  | 1,731.7                   | 1,807.3                   | 1,760.3                   | 8.7               | 7.0            | 134.43                      | 184.0                                   | -289.9        | 155.7                      | 143.4                       | 12.28                        | 12.681               |                    |        |
| 1,900.0  | 1,825.9                   | 1,907.2                   | 1,855.6                   | 9.4               | 7.6            | 134.70                      | 194.3                                   | -317.8        | 161.3                      | 148.1                       | 13.16                        | 12.258               |                    |        |
| 2,000.0  | 1,920.0                   | 2,007.0                   | 1,950.9                   | 10.0              | 8.1            | 134.96                      | 204.5                                   | -345.6        | 166.9                      | 152.9                       | 14.04                        | 11.891               |                    |        |
| 2,100.0  | 2,014.1                   | 2,106.9                   | 2,046.3                   | 10.6              | 8.7            | 135.19                      | 214.8                                   | -373.4        | 172.5                      | 157.6                       | 14.91                        | 11.568               |                    |        |
| 2,200.0  | 2,108.2                   | 2,206.7                   | 2,141.6                   | 11.3              | 9.3            | 135.41                      | 225.1                                   | -401.3        | 178.1                      | 162.3                       | 15.78                        | 11.284               |                    |        |
| 2,300.0  | 2,202.4                   | 2,306.5                   | 2,236.9                   | 11.9              | 9.8            | 135.62                      | 235.3                                   | -429.1        | 183.7                      | 167.0                       | 16.65                        | 11.030               |                    |        |
| 2,400.0  | 2,296.5                   | 2,406.4                   | 2,332.3                   | 12.6              | 10.4           | 135.82                      | 245.6                                   | -457.0        | 189.3                      | 171.8                       | 17.52                        | 10.803               |                    |        |
| 2,500.0  | 2,390.6                   | 2,506.2                   | 2,427.6                   | 13.2              | 11.0           | 136.00                      | 255.8                                   | -484.8        | 194.9                      | 176.5                       | 18.39                        | 10.599               |                    |        |
| 2,600.0  | 2,484.7                   | 2,606.1                   | 2,522.9                   | 13.9              | 11.5           | 136.18                      | 266.1                                   | -512.6        | 200.5                      | 181.3                       | 19.26                        | 10.414               |                    |        |
| 2,700.0  | 2,578.9                   | 2,705.9                   | 2,618.2                   | 14.5              | 12.1           | 136.34                      | 276.4                                   | -540.5        | 206.2                      | 186.0                       | 20.12                        | 10.246               |                    |        |
| 2,800.0  | 2,673.0                   | 2,805.7                   | 2,713.6                   | 15.1              | 12.6           | 136.50                      | 286.6                                   | -568.3        | 211.8                      | 190.8                       | 20.98                        | 10.092               |                    |        |
| 2,900.0  | 2,767.1                   | 2,905.6                   | 2,808.9                   | 15.8              | 13.2           | 136.65                      | 296.9                                   | -596.2        | 217.4                      | 195.5                       | 21.84                        | 9.952                |                    |        |
| 3,000.0  | 2,861.2                   | 3,005.4                   | 2,904.2                   | 16.4              | 13.8           | 136.79                      | 307.1                                   | -624.0        | 223.0                      | 200.3                       | 22.70                        | 9.823                |                    |        |
| 3,100.0  | 2,955.4                   | 3,105.3                   | 2,999.6                   | 17.1              | 14.3           | 136.92                      | 317.4                                   | -651.8        | 228.6                      | 205.1                       | 23.56                        | 9.703                |                    |        |
| 3,200.0  | 3,049.5                   | 3,205.1                   | 3,094.9                   | 17.7              | 14.9           | 137.05                      | 327.7                                   | -679.7        | 234.3                      | 209.8                       | 24.42                        | 9.593                |                    |        |
| 3,300.0  | 3,143.6                   | 3,304.9                   | 3,190.2                   | 18.4              | 15.5           | 137.17                      | 337.9                                   | -707.5        | 239.9                      | 214.6                       | 25.28                        | 9.490                |                    |        |
| 3,400.0  | 3,237.7                   | 3,404.8                   | 3,285.6                   | 19.0              | 16.0           | 137.28                      | 348.2                                   | -735.4        | 245.5                      | 219.4                       | 26.13                        | 9.395                |                    |        |
| 3,500.0  | 3,331.9                   | 3,504.6                   | 3,380.9                   | 19.6              | 16.6           | 137.39                      | 358.4                                   | -763.2        | 251.1                      | 224.1                       | 26.98                        | 9.306                |                    |        |
| 3,600.0  | 3,426.0                   | 3,604.5                   | 3,476.2                   | 20.3              | 17.2           | 137.50                      | 368.7                                   | -791.0        | 256.7                      | 228.9                       | 27.84                        | 9.223                |                    |        |
| 3,700.0  | 3,520.1                   | 3,704.3                   | 3,571.5                   | 20.9              | 17.7           | 137.60                      | 379.0                                   | -818.9        | 262.4                      | 233.7                       | 28.69                        | 9.145                |                    |        |
| 3,800.0  | 3,614.2                   | 3,804.1                   | 3,666.9                   | 21.6              | 18.3           | 137.70                      | 389.2                                   | -846.7        | 268.0                      | 238.5                       | 29.54                        | 9.072                |                    |        |
| 3,900.0  | 3,708.4                   | 3,904.0                   | 3,762.2                   | 22.2              | 18.8           | 137.79                      | 399.5                                   | -874.6        | 273.6                      | 243.2                       | 30.39                        | 9.003                |                    |        |
| 4,000.0  | 3,802.5                   | 4,003.8                   | 3,857.5                   | 22.9              | 19.4           | 137.88                      | 409.7                                   | -902.4        | 279.3                      | 248.0                       | 31.24                        | 8.939                |                    |        |
| 4,100.0  | 3,896.6                   | 4,103.7                   | 3,952.9                   | 23.5              | 20.0           | 137.96                      | 420.0                                   | -930.2        | 284.9                      | 252.8                       | 32.09                        | 8.877                |                    |        |
| 4,200.0  | 3,990.8                   | 4,203.5                   | 4,048.2                   | 24.2              | 20.5           | 138.05                      | 430.3                                   | -958.1        | 290.5                      | 257.6                       | 32.94                        | 8.820                |                    |        |
| 4,300.0  | 4,084.9                   | 4,303.3                   | 4,143.5                   | 24.8              | 21.1           | 138.13                      | 440.5                                   | -985.9        | 296.2                      | 262.4                       | 33.79                        | 8.765                |                    |        |
| 4,400.0  | 4,179.0                   | 4,403.2                   | 4,238.9                   | 25.4              | 21.7           | 138.20                      | 450.8                                   | -1,013.8      | 301.8                      | 267.1                       | 34.64                        | 8.713                |                    |        |
| 4,500.0  | 4,273.1                   | 4,503.0                   | 4,334.2                   | 26.1              | 22.2           | 138.28                      | 461.0                                   | -1,041.6      | 307.4                      | 271.9                       | 35.48                        | 8.664                |                    |        |
| 4,600.0  | 4,367.3                   | 4,602.9                   | 4,429.5                   | 26.7              | 22.8           | 138.35                      | 471.3                                   | -1,069.4      | 313.1                      | 276.7                       | 36.33                        | 8.617                |                    |        |
| 4,700.0  | 4,461.4                   | 4,702.7                   | 4,524.8                   | 27.4              | 23.4           | 138.41                      | 481.6                                   | -1,097.3      | 318.7                      | 281.5                       | 37.18                        | 8.572                |                    |        |
| 4,800.0  | 4,555.5                   | 4,802.5                   | 4,620.2                   | 28.0              | 23.9           | 138.48                      | 491.8                                   | -1,125.1      | 324.3                      | 286.3                       | 38.02                        | 8.530                |                    |        |
| 4,900.0  | 4,649.6                   | 4,902.4                   | 4,715.5                   | 28.7              | 24.5           | 138.54                      | 502.1                                   | -1,153.0      | 330.0                      | 291.1                       | 38.87                        | 8.489                |                    |        |
| 5,000.0  | 4,743.8                   | 5,002.2                   | 4,810.8                   | 29.3              | 25.1           | 138.61                      | 512.3                                   | -1,180.8      | 335.6                      | 295.9                       | 39.71                        | 8.451                |                    |        |

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

# Cathedral Energy Services

## Anticollision Report

|                           |                              |                                     |                                     |
|---------------------------|------------------------------|-------------------------------------|-------------------------------------|
| <b>Company:</b>           | EnCana Oil & Gas (USA) Inc   | <b>Local Co-ordinate Reference:</b> | Well MCU Fee 17-16B (M16W Pad)      |
| <b>Project:</b>           | Mamm Creek                   | <b>TVD Reference:</b>               | KBE @ 7903.0ft (Original Well Elev) |
| <b>Reference Site:</b>    | SWSW S16-T7S-R93W (M16W Pad) | <b>MD Reference:</b>                | KBE @ 7903.0ft (Original Well Elev) |
| <b>Site Error:</b>        | 0.0ft                        | <b>North Reference:</b>             | True                                |
| <b>Reference Well:</b>    | MCU Fee 17-16B (M16W Pad)    | <b>Survey Calculation Method:</b>   | Minimum Curvature                   |
| <b>Well Error:</b>        | 0.0ft                        | <b>Output errors are at</b>         | 2.00 sigma                          |
| <b>Reference Wellbore</b> | DD                           | <b>Database:</b>                    | EDM 5000.1 US Multi Users DB        |
| <b>Reference Design:</b>  | Plan #1                      | <b>Offset TVD Reference:</b>        | Offset Datum                        |

| Offset Design SWSW S16-T7S-R93W (M16W Pad) - MCU Fee 17-9D (M16W Pad) - DD - Plan #1 |                        |                        |                        |                   |                |                             |   |               |                            |                             |                     |                      | Offset Site Error: | 0.0 ft |
|--|------------------------|------------------------|------------------------|-------------------|----------------|-----------------------------|---|---------------|----------------------------|-----------------------------|---------------------|----------------------|--------------------|--------|
| Survey Program: 0-MWD  |                        |                        |                        |                   |                |                             |   |               |                            |                             |                     |                      | Offset Well Error: | 0.0 ft |
| Reference  |                        | Offset                 |                        | Semi Major Axis   |                |                             | Distance                                |               |                            |                             | Total               |                      | Warning            |        |
| Measured Depth<br>(ft)   | Vertical Depth<br>(ft) | Measured Depth<br>(ft) | Vertical Depth<br>(ft) | Reference<br>(ft) | Offset<br>(ft) | Highside<br>Toolface<br>(°) | Offset Wellbore Centre<br>+N/-S<br>(ft) | +E/-W<br>(ft) | Between<br>Centres<br>(ft) | Between<br>Ellipses<br>(ft) | Uncertainty<br>Axis | Separation<br>Factor |                    |        |
| 5,100.0  | 4,837.9                | 5,102.1                | 4,906.2                | 30.0              | 25.6           | 138.66                      | 522.6                                   | -1,208.6      | 341.2                      | 300.7                       | 40.55               | 8.414                |                    |        |
| 5,200.0  | 4,932.0                | 5,201.9                | 5,001.5                | 30.6              | 26.2           | 138.72                      | 532.8                                   | -1,236.5      | 346.9                      | 305.5                       | 41.40               | 8.378                |                    |        |
| 5,300.0  | 5,026.1                | 5,301.8                | 5,096.8                | 31.2              | 26.7           | 138.78                      | 543.1                                   | -1,264.3      | 352.5                      | 310.2                       | 42.24               | 8.344                |                    |        |
| 5,400.0  | 5,120.3                | 5,401.6                | 5,192.2                | 31.9              | 27.3           | 138.83                      | 553.4                                   | -1,292.2      | 358.1                      | 315.0                       | 43.09               | 8.312                |                    |        |
| 5,500.0  | 5,214.4                | 5,501.4                | 5,287.5                | 32.5              | 27.9           | 138.88                      | 563.6                                   | -1,320.0      | 363.8                      | 319.8                       | 43.93               | 8.281                |                    |        |
| 5,600.0  | 5,308.5                | 5,601.3                | 5,382.8                | 33.2              | 28.4           | 138.93                      | 573.9                                   | -1,347.8      | 369.4                      | 324.6                       | 44.77               | 8.251                |                    |        |
| 5,700.0  | 5,402.6                | 5,701.1                | 5,478.1                | 33.8              | 29.0           | 138.98                      | 584.1                                   | -1,375.7      | 375.0                      | 329.4                       | 45.61               | 8.222                |                    |        |
| 5,800.0  | 5,496.8                | 5,801.0                | 5,573.5                | 34.5              | 29.6           | 139.03                      | 594.4                                   | -1,403.5      | 380.7                      | 334.2                       | 46.45               | 8.195                |                    |        |
| 5,900.0  | 5,590.9                | 5,900.8                | 5,668.8                | 35.1              | 30.1           | 139.08                      | 604.7                                   | -1,431.4      | 386.3                      | 339.0                       | 47.30               | 8.168                |                    |        |
| 6,000.0  | 5,685.0                | 6,000.6                | 5,764.1                | 35.7              | 30.7           | 139.12                      | 614.9                                   | -1,459.2      | 391.9                      | 343.8                       | 48.14               | 8.142                |                    |        |
| 6,100.0  | 5,779.1                | 6,100.5                | 5,859.5                | 36.4              | 31.3           | 139.17                      | 625.2                                   | -1,487.0      | 397.6                      | 348.6                       | 48.98               | 8.118                |                    |        |
| 6,200.0  | 5,873.3                | 6,200.3                | 5,954.8                | 37.0              | 31.8           | 139.21                      | 635.4                                   | -1,514.9      | 403.2                      | 353.4                       | 49.82               | 8.094                |                    |        |
| 6,300.0  | 5,967.4                | 6,300.2                | 6,050.1                | 37.7              | 32.4           | 139.25                      | 645.7                                   | -1,542.7      | 408.9                      | 358.2                       | 50.66               | 8.071                |                    |        |
| 6,400.0  | 6,061.5                | 6,400.0                | 6,145.5                | 38.3              | 33.0           | 139.29                      | 656.0                                   | -1,570.6      | 414.5                      | 363.0                       | 51.50               | 8.049                |                    |        |
| 6,500.0  | 6,155.6                | 6,499.8                | 6,240.8                | 39.0              | 33.5           | 139.33                      | 666.2                                   | -1,598.4      | 420.1                      | 367.8                       | 52.34               | 8.027                |                    |        |
| 6,600.0  | 6,249.8                | 6,599.7                | 6,336.1                | 39.6              | 34.1           | 139.37                      | 676.5                                   | -1,626.2      | 425.8                      | 372.6                       | 53.18               | 8.006                |                    |        |
| 6,700.0  | 6,343.9                | 6,699.5                | 6,431.4                | 40.3              | 34.7           | 139.40                      | 686.7                                   | -1,654.1      | 431.4                      | 377.4                       | 54.02               | 7.986                |                    |        |
| 6,800.0  | 6,438.0                | 6,799.4                | 6,526.8                | 40.9              | 35.2           | 139.44                      | 697.0                                   | -1,681.9      | 437.1                      | 382.2                       | 54.86               | 7.967                |                    |        |
| 6,900.0  | 6,532.2                | 6,899.2                | 6,622.1                | 41.5              | 35.8           | 139.48                      | 707.3                                   | -1,709.8      | 442.7                      | 387.0                       | 55.70               | 7.948                |                    |        |
| 7,000.0  | 6,626.3                | 6,999.0                | 6,717.4                | 42.2              | 36.3           | 139.51                      | 717.5                                   | -1,737.6      | 448.3                      | 391.8                       | 56.54               | 7.930                |                    |        |
| 7,100.0  | 6,720.4                | 7,098.9                | 6,812.8                | 42.8              | 36.9           | 139.54                      | 727.8                                   | -1,765.4      | 454.0                      | 396.6                       | 57.38               | 7.912                |                    |        |
| 7,200.0  | 6,814.5                | 7,198.7                | 6,908.1                | 43.5              | 37.5           | 139.58                      | 738.0                                   | -1,793.3      | 459.6                      | 401.4                       | 58.21               | 7.895                |                    |        |
| 7,300.0  | 6,908.7                | 7,298.6                | 7,003.4                | 44.1              | 38.0           | 139.61                      | 748.3                                   | -1,821.1      | 465.3                      | 406.2                       | 59.05               | 7.878 SF             |                    |        |
| 7,400.0  | 7,002.8                | 7,389.7                | 7,090.7                | 44.8              | 38.5           | 139.73                      | 757.3                                   | -1,845.6      | 471.7                      | 411.9                       | 59.74               | 7.895                |                    |        |
| 7,500.0  | 7,096.9                | 7,479.0                | 7,177.1                | 45.4              | 38.9           | 140.09                      | 765.2                                   | -1,867.1      | 480.3                      | 420.1                       | 60.17               | 7.982                |                    |        |
| 7,600.0  | 7,191.0                | 7,567.8                | 7,263.6                | 46.1              | 39.3           | 140.66                      | 772.2                                   | -1,885.9      | 491.0                      | 430.7                       | 60.34               | 8.137                |                    |        |

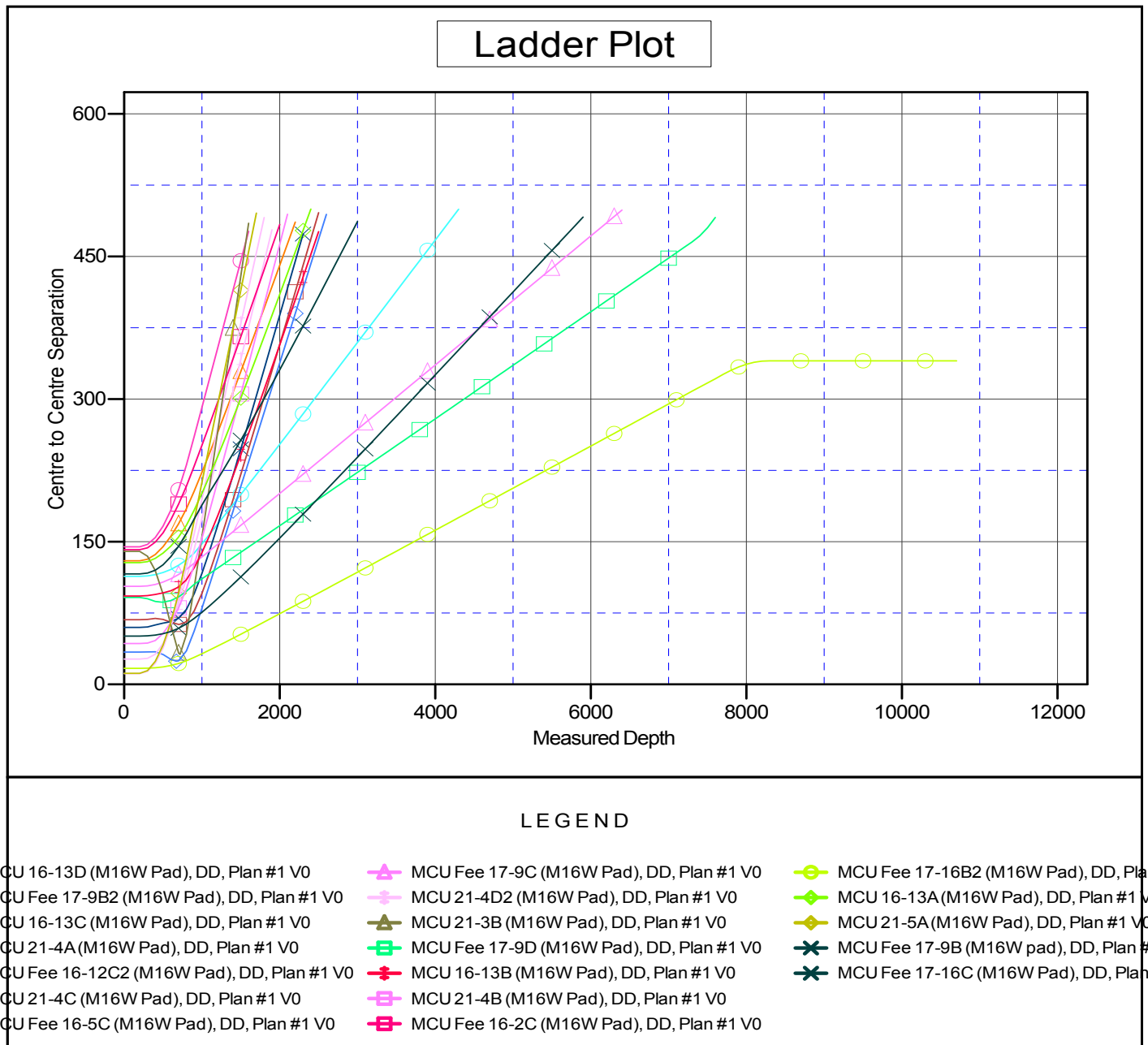
# Cathedral Energy Services

## Anticollision Report

|                           |                              |                                     |                                     |
|---------------------------|------------------------------|-------------------------------------|-------------------------------------|
| <b>Company:</b>           | EnCana Oil & Gas (USA) Inc   | <b>Local Co-ordinate Reference:</b> | Well MCU Fee 17-16B (M16W Pad)      |
| <b>Project:</b>           | Mamm Creek                   | <b>TVD Reference:</b>               | KBE @ 7903.0ft (Original Well Elev) |
| <b>Reference Site:</b>    | SWSW S16-T7S-R93W (M16W Pad) | <b>MD Reference:</b>                | KBE @ 7903.0ft (Original Well Elev) |
| <b>Site Error:</b>        | 0.0ft                        | <b>North Reference:</b>             | True                                |
| <b>Reference Well:</b>    | MCU Fee 17-16B (M16W Pad)    | <b>Survey Calculation Method:</b>   | Minimum Curvature                   |
| <b>Well Error:</b>        | 0.0ft                        | <b>Output errors are at</b>         | 2.00 sigma                          |
| <b>Reference Wellbore</b> | DD                           | <b>Database:</b>                    | EDM 5000.1 US Multi Users DB        |
| <b>Reference Design:</b>  | Plan #1                      | <b>Offset TVD Reference:</b>        | Offset Datum                        |

Reference Depths are relative to KBE @ 7903.0ft (Original Well Elev)  
 Offset Depths are relative to Offset Datum  
 Central Meridian is -105.500000 °

Coordinates are relative to: MCU Fee 17-16B (M16W Pad)  
 Coordinate System is US State Plane 1983, Colorado Central Zone  
 Grid Convergence at Surface is: -1.44°



CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation