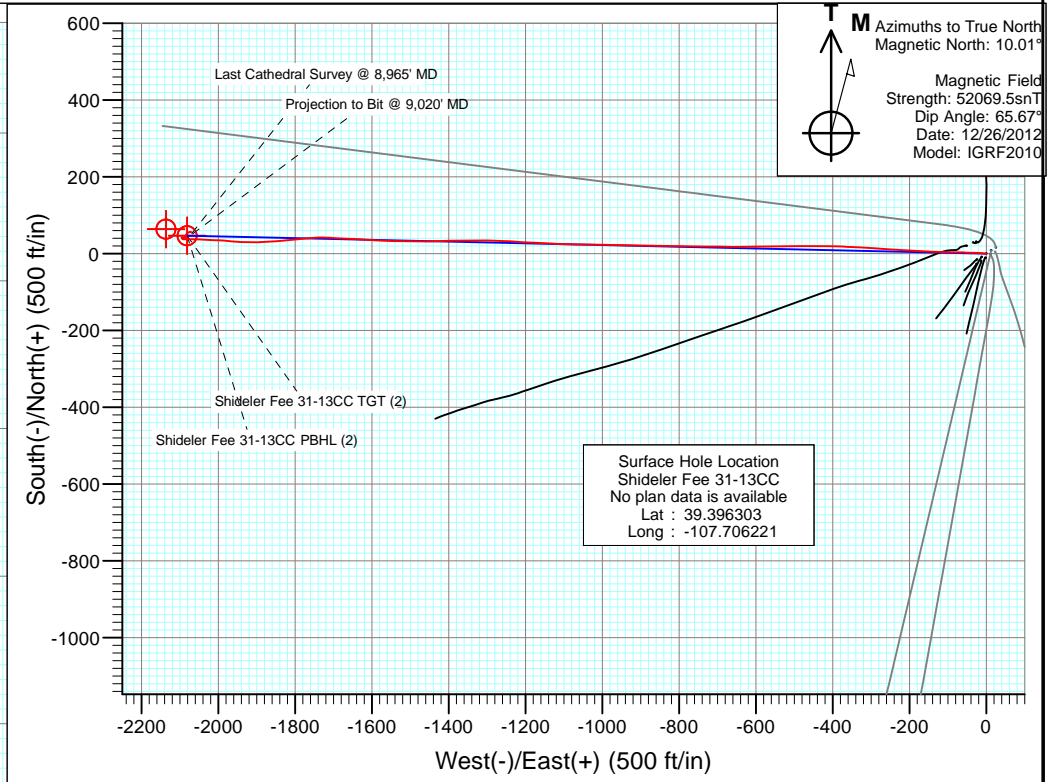
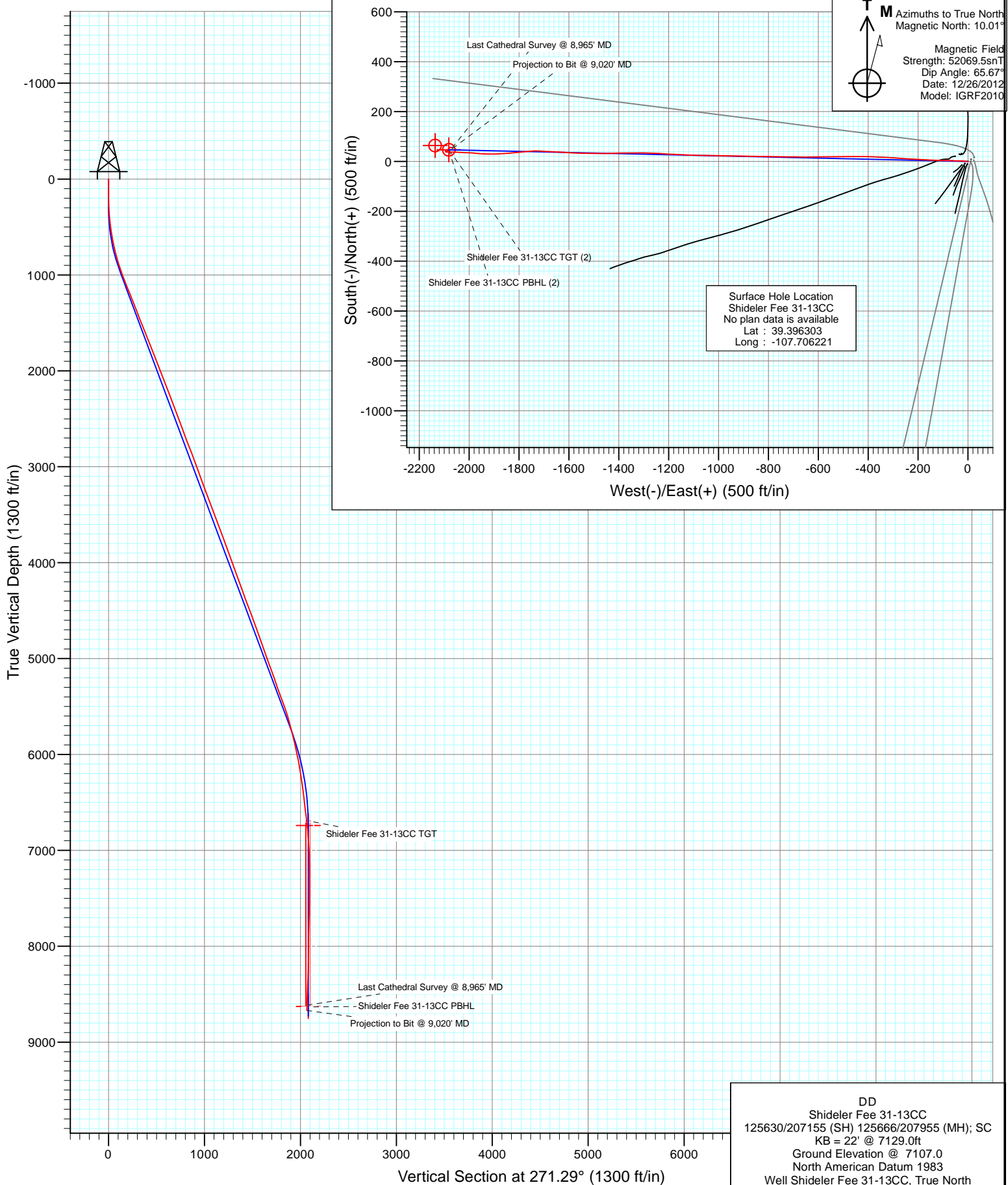
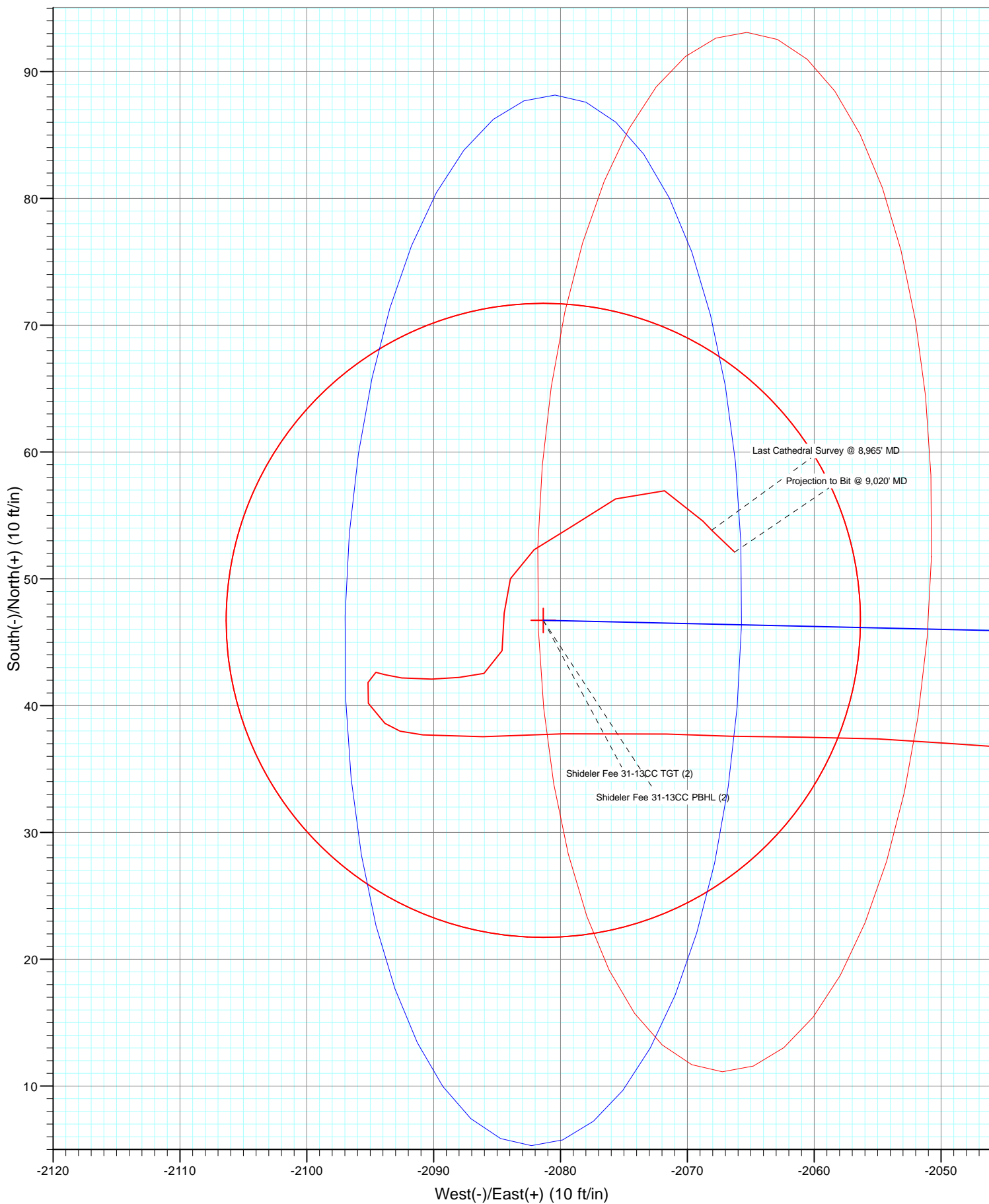




Project: Mamm Creek
 Site: O31E Pad
 Well: Shideler Fee 31-13CC
 Wellbore: OH
 Design: FINAL



DD
 Shideler Fee 31-13CC
 125630/207155 (SH) 125666/207955 (MH); SC
 KB = 22' @ 7129.0ft
 Ground Elevation @ 7107.0
 North American Datum 1983
 Well Shideler Fee 31-13CC, True North



Cathedral Energy Services

Survey Report

| | | | |
|------------------|----------------------------|-------------------------------------|-----------------------------|
| Company: | EnCana Oil & Gas (USA) Inc | Local Co-ordinate Reference: | Well Shideler Fee 31-13CC |
| Project: | Mamm Creek | TVD Reference: | KB = 22' @ 7129.0ft |
| Site: | O31E Pad | MD Reference: | KB = 22' @ 7129.0ft |
| Well: | Shideler Fee 31-13CC | North Reference: | True |
| Wellbore: | OH | Survey Calculation Method: | Minimum Curvature |
| Design: | DD | Database: | USA EDM 5000 Multi Users DB |

| | | | |
|--------------------|---------------------------|----------------------|----------------|
| Project | Mamm Creek | | |
| Map System: | US State Plane 1983 | System Datum: | Mean Sea Level |
| Geo Datum: | North American Datum 1983 | | |
| Map Zone: | Colorado Central Zone | | |

| Site | | O31E Pad | | | |
|-----------------------|----------|--------------|-----------------|-------------------|-------------|
| Site Position: | | Northing: | 1,577,012.73 ft | Latitude: | 39.396873 |
| From: | Lat/Long | Easting: | 2,376,675.10 ft | Longitude: | -107.705929 |
| Position Uncertainty: | 0.0 ft | Slot Radius: | 13.200 in | Grid Convergence: | -1.39 ° |

| | | | | | | |
|----------------------|----------------------|--------|---------------------|-----------------|---------------|-------------|
| Well | Shideler Fee 31-13CC | | | | | |
| Well Position | +N/-S | 0.0 ft | Northing: | 1,576,807.16 ft | Latitude: | 39.396303 |
| | +E/-W | 0.0 ft | Easting: | 2,376,587.56 ft | Longitude: | -107.706221 |
| Position Uncertainty | | 0.0 ft | Wellhead Elevation: | ft | Ground Level: | 7,107.0 ft |

| | | | | | |
|------------------|-------------------|--------------------|------------------------|----------------------|----------------------------|
| Wellbore | OH | | | | |
| Magnetics | Model Name | Sample Date | Declination (°) | Dip Angle (°) | Field Strength (nT) |
| | IGRF2010 | 12/26/2012 | 10.01 | 65.67 | 52,070 |

| | | | | | |
|--------------------------|-------------------------|---------------|--------------|----------------------|-----|
| Design | DD | | | | |
| Audit Notes: | | | | | |
| Version: | 1.0 | Phase: | ACTUAL | Tie On Depth: | 0.0 |
| Vertical Section: | Depth From (TVD) | +N/-S | +E/-W | Direction | |
| | (ft) | (ft) | (ft) | (°) | |
| | 0.0 | 0.0 | 0.0 | 271.29 | |

| | | | | | |
|-----------------------|----------------|--------------------------|------------------|--------------------|--|
| Survey Program | Date | 1/2/2013 | | | |
| From (ft) | To (ft) | Survey (Wellbore) | Tool Name | Description | |
| 111.0 | 1,080.0 | Survey #1 (OH) | MWD | Geolink MWD | |
| 1,242.0 | 9,020.0 | Survey #2 (OH) | MWD | Geolink MWD | |

| | | | | | | | | | | |
|----------------------------|------------------------|--------------------|----------------------------|-------------------|-------------------|------------------------------|------------------------------|-----------------------------|------------------------------|--|
| Survey | | | | | | | | | | |
| Measured Depth (ft) | Inclination (°) | Azimuth (°) | Vertical Depth (ft) | +N/-S (ft) | +E/-W (ft) | Vertical Section (ft) | Dogleg Rate (°/100ft) | Build Rate (°/100ft) | Formations / Comments | |
| 0.0 | 0.00 | 0.00 | 0.0 | 0.0 | 0.0 | 0.0 | 0.00 | 0.00 | | |
| 111.0 | 0.20 | 235.20 | 111.0 | -0.1 | -0.2 | 0.2 | 0.18 | 0.18 | | |
| 141.0 | 0.20 | 183.40 | 141.0 | -0.2 | -0.2 | 0.2 | 0.58 | 0.00 | | |
| 172.0 | 0.40 | 188.40 | 172.0 | -0.4 | -0.2 | 0.2 | 0.65 | 0.65 | | |
| 203.0 | 0.40 | 244.40 | 203.0 | -0.5 | -0.3 | 0.3 | 1.21 | 0.00 | | |
| 234.0 | 1.10 | 261.00 | 234.0 | -0.6 | -0.7 | 0.7 | 2.34 | 2.26 | | |
| 265.0 | 1.80 | 274.70 | 265.0 | -0.6 | -1.5 | 1.5 | 2.50 | 2.26 | | |
| 295.0 | 2.70 | 279.50 | 295.0 | -0.5 | -2.7 | 2.7 | 3.06 | 3.00 | | |
| 326.0 | 3.30 | 277.60 | 325.9 | -0.2 | -4.3 | 4.3 | 1.96 | 1.94 | | |
| 356.0 | 4.00 | 281.40 | 355.9 | 0.1 | -6.2 | 6.2 | 2.47 | 2.33 | | |
| 387.0 | 4.70 | 279.80 | 386.8 | 0.5 | -8.5 | 8.5 | 2.29 | 2.26 | | |
| 418.0 | 5.70 | 280.00 | 417.6 | 1.0 | -11.2 | 11.3 | 3.23 | 3.23 | | |

Cathedral Energy Services

Survey Report

| | | | |
|------------------|----------------------------|-------------------------------------|-----------------------------|
| Company: | EnCana Oil & Gas (USA) Inc | Local Co-ordinate Reference: | Well Shideler Fee 31-13CC |
| Project: | Mamm Creek | TVD Reference: | KB = 22' @ 7129.0ft |
| Site: | O31E Pad | MD Reference: | KB = 22' @ 7129.0ft |
| Well: | Shideler Fee 31-13CC | North Reference: | True |
| Wellbore: | OH | Survey Calculation Method: | Minimum Curvature |
| Design: | DD | Database: | USA EDM 5000 Multi Users DB |

Survey

| Measured Depth (ft) | Inclination (°) | Azimuth (°) | Vertical Depth (ft) | +N/-S (ft) | +E/-W (ft) | Vertical Section (ft) | Dogleg Rate (°/100ft) | Build Rate (°/100ft) | Formations / Comments |
|---------------------|-----------------|-------------|---------------------|------------|------------|-----------------------|-----------------------|----------------------|-----------------------|
| 449.0 | 6.60 | 274.80 | 448.5 | 1.4 | -14.5 | 14.6 | 3.41 | 2.90 | |
| 479.0 | 7.20 | 271.90 | 478.2 | 1.6 | -18.1 | 18.2 | 2.31 | 2.00 | |
| 571.0 | 9.30 | 271.80 | 569.3 | 2.1 | -31.3 | 31.4 | 2.28 | 2.28 | |
| 662.0 | 11.30 | 272.40 | 658.8 | 2.7 | -47.6 | 47.6 | 2.20 | 2.20 | |
| 753.0 | 13.50 | 271.30 | 747.7 | 3.3 | -67.1 | 67.2 | 2.43 | 2.42 | |
| 844.0 | 15.80 | 271.40 | 835.7 | 3.8 | -90.1 | 90.2 | 2.53 | 2.53 | |
| 937.0 | 17.80 | 270.80 | 924.8 | 4.3 | -117.0 | 117.1 | 2.16 | 2.15 | |
| 1,029.0 | 21.60 | 273.10 | 1,011.4 | 5.5 | -148.0 | 148.1 | 4.21 | 4.13 | |
| 1,080.0 | 22.10 | 273.80 | 1,058.7 | 6.6 | -166.9 | 167.0 | 1.11 | 0.98 | |
| 1,242.0 | 21.60 | 272.40 | 1,209.1 | 9.9 | -227.1 | 227.3 | 0.45 | -0.31 | |
| 1,333.0 | 21.90 | 273.80 | 1,293.6 | 11.7 | -260.8 | 261.0 | 0.66 | 0.33 | |
| 1,425.0 | 20.90 | 274.20 | 1,379.2 | 14.0 | -294.3 | 294.5 | 1.10 | -1.09 | |
| 1,517.0 | 21.60 | 272.70 | 1,465.0 | 16.0 | -327.6 | 327.8 | 0.96 | 0.76 | |
| 1,608.0 | 21.10 | 273.50 | 1,549.7 | 17.8 | -360.6 | 360.9 | 0.64 | -0.55 | |
| 1,700.0 | 21.90 | 270.20 | 1,635.3 | 18.9 | -394.3 | 394.6 | 1.58 | 0.87 | |
| 1,792.0 | 22.00 | 270.80 | 1,720.7 | 19.2 | -428.7 | 429.0 | 0.27 | 0.11 | |
| 1,883.0 | 21.30 | 271.80 | 1,805.2 | 19.9 | -462.3 | 462.6 | 0.87 | -0.77 | |
| 1,974.0 | 21.80 | 269.10 | 1,889.9 | 20.2 | -495.7 | 496.0 | 1.22 | 0.55 | |
| 2,066.0 | 21.30 | 268.30 | 1,975.5 | 19.4 | -529.5 | 529.8 | 0.63 | -0.54 | |
| 2,157.0 | 21.20 | 268.80 | 2,060.3 | 18.6 | -562.4 | 562.7 | 0.23 | -0.11 | |
| 2,249.0 | 21.10 | 269.60 | 2,146.1 | 18.1 | -595.6 | 595.9 | 0.33 | -0.11 | |
| 2,340.0 | 20.80 | 269.40 | 2,231.1 | 17.9 | -628.2 | 628.4 | 0.34 | -0.33 | |
| 2,432.0 | 20.90 | 270.30 | 2,317.0 | 17.8 | -660.9 | 661.1 | 0.36 | 0.11 | |
| 2,524.0 | 20.30 | 270.60 | 2,403.1 | 18.0 | -693.3 | 693.5 | 0.66 | -0.65 | |
| 2,615.0 | 20.80 | 270.90 | 2,488.4 | 18.4 | -725.2 | 725.5 | 0.56 | 0.55 | |
| 2,707.0 | 20.20 | 270.30 | 2,574.5 | 18.8 | -757.4 | 757.7 | 0.69 | -0.65 | |
| 2,798.0 | 20.30 | 271.90 | 2,659.9 | 19.4 | -788.9 | 789.2 | 0.62 | 0.11 | |
| 2,890.0 | 21.40 | 270.30 | 2,745.9 | 20.0 | -821.7 | 821.9 | 1.35 | 1.20 | |
| 2,981.0 | 21.20 | 270.50 | 2,830.7 | 20.2 | -854.7 | 855.0 | 0.23 | -0.22 | |
| 3,073.0 | 20.40 | 271.70 | 2,916.7 | 20.9 | -887.4 | 887.6 | 0.99 | -0.87 | |
| 3,165.0 | 19.60 | 272.20 | 3,003.1 | 21.9 | -918.8 | 919.1 | 0.89 | -0.87 | |
| 3,256.0 | 20.10 | 271.20 | 3,088.7 | 22.8 | -949.7 | 950.0 | 0.66 | 0.55 | |
| 3,347.0 | 21.30 | 269.40 | 3,173.8 | 23.0 | -981.9 | 982.1 | 1.49 | 1.32 | |
| 3,439.0 | 20.50 | 270.70 | 3,259.8 | 23.0 | -1,014.7 | 1,015.0 | 1.01 | -0.87 | |
| 3,531.0 | 19.80 | 271.80 | 3,346.1 | 23.7 | -1,046.4 | 1,046.6 | 0.87 | -0.76 | |
| 3,622.0 | 20.70 | 270.70 | 3,431.5 | 24.4 | -1,077.9 | 1,078.1 | 1.07 | 0.99 | |
| 3,714.0 | 20.30 | 272.50 | 3,517.7 | 25.3 | -1,110.1 | 1,110.4 | 0.81 | -0.43 | |
| 3,805.0 | 21.10 | 272.20 | 3,602.8 | 26.6 | -1,142.2 | 1,142.5 | 0.89 | 0.88 | |
| 3,897.0 | 20.50 | 273.10 | 3,688.8 | 28.1 | -1,174.8 | 1,175.2 | 0.74 | -0.65 | |
| 3,988.0 | 19.60 | 273.90 | 3,774.3 | 30.0 | -1,206.0 | 1,206.3 | 1.03 | -0.99 | |
| 4,080.0 | 20.80 | 273.80 | 3,860.7 | 32.1 | -1,237.7 | 1,238.1 | 1.30 | 1.30 | |
| 4,172.0 | 20.20 | 270.70 | 3,946.8 | 33.4 | -1,269.9 | 1,270.3 | 1.35 | -0.65 | |
| 4,263.0 | 20.00 | 272.30 | 4,032.3 | 34.2 | -1,301.1 | 1,301.6 | 0.64 | -0.22 | |
| 4,355.0 | 19.80 | 269.10 | 4,118.8 | 34.6 | -1,332.4 | 1,332.9 | 1.20 | -0.22 | |
| 4,446.0 | 19.20 | 270.00 | 4,204.6 | 34.4 | -1,362.8 | 1,363.2 | 0.74 | -0.66 | |
| 4,538.0 | 20.40 | 267.50 | 4,291.1 | 33.7 | -1,393.9 | 1,394.3 | 1.60 | 1.30 | |
| 4,630.0 | 19.60 | 267.90 | 4,377.6 | 32.4 | -1,425.4 | 1,425.7 | 0.88 | -0.87 | |
| 4,721.0 | 21.10 | 270.30 | 4,462.9 | 31.9 | -1,457.0 | 1,457.4 | 1.89 | 1.65 | |
| 4,813.0 | 20.70 | 270.20 | 4,548.9 | 32.1 | -1,489.8 | 1,490.2 | 0.44 | -0.43 | |
| 4,905.0 | 19.80 | 271.40 | 4,635.2 | 32.5 | -1,521.7 | 1,522.0 | 1.08 | -0.98 | |
| 4,996.0 | 20.90 | 271.80 | 4,720.5 | 33.4 | -1,553.3 | 1,553.7 | 1.22 | 1.21 | |
| 5,088.0 | 18.70 | 270.50 | 4,807.0 | 34.0 | -1,584.5 | 1,584.8 | 2.44 | -2.39 | |
| 5,179.0 | 18.90 | 276.20 | 4,893.2 | 35.8 | -1,613.7 | 1,614.1 | 2.03 | 0.22 | |

Cathedral Energy Services

Survey Report

| | | | |
|------------------|----------------------------|-------------------------------------|-----------------------------|
| Company: | EnCana Oil & Gas (USA) Inc | Local Co-ordinate Reference: | Well Shideler Fee 31-13CC |
| Project: | Mamm Creek | TVD Reference: | KB = 22' @ 7129.0ft |
| Site: | O31E Pad | MD Reference: | KB = 22' @ 7129.0ft |
| Well: | Shideler Fee 31-13CC | North Reference: | True |
| Wellbore: | OH | Survey Calculation Method: | Minimum Curvature |
| Design: | DD | Database: | USA EDM 5000 Multi Users DB |

| Survey | | | | | | | | | |
|---------------------|-----------------|-------------|---------------------|------------|------------|-----------------------|-----------------------|----------------------|--|
| Measured Depth (ft) | Inclination (°) | Azimuth (°) | Vertical Depth (ft) | +N/-S (ft) | +E/-W (ft) | Vertical Section (ft) | Dogleg Rate (°/100ft) | Build Rate (°/100ft) | Formations / Comments |
| 5,271.0 | 19.70 | 272.50 | 4,980.0 | 38.0 | -1,644.0 | 1,644.4 | 1.59 | 0.87 | |
| 5,362.0 | 20.70 | 272.20 | 5,065.4 | 39.3 | -1,675.4 | 1,675.9 | 1.10 | 1.10 | |
| 5,454.0 | 19.90 | 274.20 | 5,151.7 | 41.1 | -1,707.3 | 1,707.8 | 1.15 | -0.87 | |
| 5,546.0 | 18.60 | 269.10 | 5,238.6 | 42.0 | -1,737.6 | 1,738.1 | 2.31 | -1.41 | |
| 5,637.0 | 19.90 | 264.10 | 5,324.5 | 40.2 | -1,767.5 | 1,767.9 | 2.31 | 1.43 | |
| 5,729.0 | 20.90 | 264.30 | 5,410.7 | 37.0 | -1,799.4 | 1,799.8 | 1.09 | 1.09 | |
| 5,821.0 | 19.90 | 265.70 | 5,496.9 | 34.2 | -1,831.3 | 1,831.6 | 1.21 | -1.09 | |
| 5,912.0 | 17.10 | 265.20 | 5,583.2 | 31.9 | -1,860.1 | 1,860.4 | 3.08 | -3.08 | |
| 6,004.0 | 15.10 | 266.20 | 5,671.6 | 29.9 | -1,885.5 | 1,885.7 | 2.19 | -2.17 | |
| 6,096.0 | 14.80 | 271.80 | 5,760.5 | 29.5 | -1,909.2 | 1,909.4 | 1.60 | -0.33 | |
| 6,187.0 | 14.10 | 272.40 | 5,848.6 | 30.4 | -1,931.9 | 1,932.1 | 0.79 | -0.77 | |
| 6,279.0 | 11.60 | 273.40 | 5,938.3 | 31.4 | -1,952.4 | 1,952.6 | 2.73 | -2.72 | |
| 6,371.0 | 11.40 | 274.00 | 6,028.5 | 32.6 | -1,970.7 | 1,970.9 | 0.25 | -0.22 | |
| 6,462.0 | 9.50 | 277.20 | 6,118.0 | 34.1 | -1,987.1 | 1,987.4 | 2.18 | -2.09 | |
| 6,554.0 | 9.80 | 271.10 | 6,208.7 | 35.2 | -2,002.5 | 2,002.7 | 1.16 | 0.33 | |
| 6,646.0 | 7.90 | 271.00 | 6,299.6 | 35.5 | -2,016.6 | 2,016.9 | 2.07 | -2.07 | |
| 6,737.0 | 6.70 | 272.50 | 6,389.8 | 35.8 | -2,028.2 | 2,028.5 | 1.34 | -1.32 | |
| 6,828.0 | 6.70 | 272.70 | 6,480.2 | 36.3 | -2,038.8 | 2,039.1 | 0.03 | 0.00 | |
| 6,920.0 | 6.70 | 275.00 | 6,571.6 | 37.0 | -2,049.5 | 2,049.8 | 0.29 | 0.00 | |
| 7,011.0 | 7.60 | 270.20 | 6,661.9 | 37.5 | -2,060.8 | 2,061.1 | 1.19 | 0.99 | |
| 7,092.0 | 6.26 | 272.46 | 6,742.3 | 37.7 | -2,070.6 | 2,070.9 | 1.68 | -1.65 | Shideler Fee 31-13CC TGT (2) |
| 7,102.0 | 6.10 | 272.80 | 6,752.2 | 37.8 | -2,071.6 | 2,072.0 | 1.68 | -1.64 | |
| 7,194.0 | 4.10 | 265.90 | 6,843.8 | 37.8 | -2,079.8 | 2,080.1 | 2.27 | -2.17 | |
| 7,292.0 | 3.30 | 270.60 | 6,941.6 | 37.6 | -2,086.1 | 2,086.4 | 0.87 | -0.82 | |
| 7,384.0 | 2.60 | 273.20 | 7,033.5 | 37.7 | -2,090.8 | 2,091.2 | 0.77 | -0.76 | |
| 7,476.0 | 1.50 | 311.20 | 7,125.5 | 38.6 | -2,093.8 | 2,094.2 | 1.84 | -1.20 | |
| 7,568.0 | 1.10 | 332.30 | 7,217.4 | 40.2 | -2,095.1 | 2,095.5 | 0.67 | -0.43 | |
| 7,659.0 | 1.20 | 23.90 | 7,308.4 | 41.8 | -2,095.2 | 2,095.6 | 1.10 | 0.11 | |
| 7,751.0 | 0.30 | 108.30 | 7,400.4 | 42.6 | -2,094.6 | 2,095.0 | 1.31 | -0.98 | |
| 7,843.0 | 0.60 | 103.20 | 7,492.4 | 42.4 | -2,093.9 | 2,094.3 | 0.33 | 0.33 | |
| 7,935.0 | 1.10 | 100.00 | 7,584.4 | 42.2 | -2,092.5 | 2,092.9 | 0.55 | 0.54 | |
| 8,026.0 | 1.90 | 87.40 | 7,675.4 | 42.1 | -2,090.1 | 2,090.6 | 0.95 | 0.88 | |
| 8,118.0 | 0.80 | 85.00 | 7,767.3 | 42.2 | -2,088.0 | 2,088.4 | 1.20 | -1.20 | |
| 8,209.0 | 1.70 | 78.70 | 7,858.3 | 42.5 | -2,086.0 | 2,086.5 | 1.00 | 0.99 | |
| 8,301.0 | 1.90 | 3.00 | 7,950.3 | 44.3 | -2,084.6 | 2,085.1 | 2.41 | 0.22 | |
| 8,393.0 | 1.80 | 3.90 | 8,042.2 | 47.3 | -2,084.4 | 2,085.0 | 0.11 | -0.11 | |
| 8,484.0 | 1.70 | 16.70 | 8,133.2 | 50.0 | -2,083.9 | 2,084.5 | 0.44 | -0.11 | |
| 8,576.0 | 2.20 | 56.80 | 8,225.2 | 52.3 | -2,082.1 | 2,082.7 | 1.54 | 0.54 | |
| 8,668.0 | 2.00 | 59.80 | 8,317.1 | 54.1 | -2,079.2 | 2,079.9 | 0.25 | -0.22 | |
| 8,759.0 | 3.30 | 56.50 | 8,408.0 | 56.3 | -2,075.7 | 2,076.4 | 1.44 | 1.43 | |
| 8,851.0 | 2.30 | 116.60 | 8,499.9 | 56.9 | -2,071.8 | 2,072.6 | 3.19 | -1.09 | |
| 8,943.0 | 2.60 | 138.60 | 8,591.8 | 54.6 | -2,068.8 | 2,069.5 | 1.07 | 0.33 | |
| 8,965.0 | 2.60 | 133.70 | 8,613.8 | 53.8 | -2,068.1 | 2,068.8 | 1.01 | 0.00 | Last Cathedral Survey @ 8,965' MD - Shideler F |
| 9,020.0 | 2.60 | 133.70 | 8,668.7 | 52.1 | -2,066.3 | 2,066.9 | 0.00 | 0.00 | Projection to Bit @ 9,020' MD |

Cathedral Energy Services

Survey Report

| | | | |
|------------------|----------------------------|-------------------------------------|-----------------------------|
| Company: | EnCana Oil & Gas (USA) Inc | Local Co-ordinate Reference: | Well Shideler Fee 31-13CC |
| Project: | Mamm Creek | TVD Reference: | KB = 22' @ 7129.0ft |
| Site: | O31E Pad | MD Reference: | KB = 22' @ 7129.0ft |
| Well: | Shideler Fee 31-13CC | North Reference: | True |
| Wellbore: | OH | Survey Calculation Method: | Minimum Curvature |
| Design: | DD | Database: | USA EDM 5000 Multi Users DB |

| Targets | | | | | | | | | |
|---|-----------|----------|---------|-------|----------|--------------|--------------|-----------|-------------|
| Target Name | Dip Angle | Dip Dir. | TVD | +N/-S | +E/-W | Northing | Easting | Latitude | Longitude |
| - hit/miss target | (°) | (°) | (ft) | (ft) | (ft) | (ft) | (ft) | | |
| - Shape | | | | | | | | | |
| Shideler Fee 31-13CC F | 0.00 | 0.00 | 8,629.0 | 46.7 | -2,081.4 | 1,576,904.41 | 2,374,507.96 | 39.396431 | -107.713586 |
| - actual wellpath misses target center by 21.4ft at 8965.0ft MD (8613.8 TVD, 53.8 N, -2068.1 E) | | | | | | | | | |
| - Circle (radius 25.0) | | | | | | | | | |
| Shideler Fee 31-13CC F | 0.00 | 0.00 | 8,633.0 | 63.9 | -2,136.5 | 1,576,922.87 | 2,374,453.28 | 39.396478 | -107.713781 |
| - actual wellpath misses target center by 71.7ft at 8965.0ft MD (8613.8 TVD, 53.8 N, -2068.1 E) | | | | | | | | | |
| - Circle (radius 25.0) | | | | | | | | | |
| Shideler Fee 31-13CC T | 0.00 | 0.00 | 6,741.0 | 46.7 | -2,081.4 | 1,576,904.41 | 2,374,507.96 | 39.396431 | -107.713586 |
| - actual wellpath misses target center by 14.1ft at 7092.0ft MD (6742.3 TVD, 37.7 N, -2070.6 E) | | | | | | | | | |
| - Point | | | | | | | | | |
| Shideler Fee 31-13CC T | 0.00 | 0.00 | 6,703.0 | 63.9 | -2,136.5 | 1,576,922.87 | 2,374,453.28 | 39.396478 | -107.713781 |
| - actual wellpath misses target center by 74.7ft at 7061.0ft MD (6711.5 TVD, 37.6 N, -2067.0 E) | | | | | | | | | |
| - Point | | | | | | | | | |

| Design Annotations | | | | | |
|--------------------|----------------|-------------------|------------|-----------------------------------|--|
| Measured Depth | Vertical Depth | Local Coordinates | | | |
| (ft) | (ft) | +N/-S (ft) | +E/-W (ft) | Comment | |
| 8,965.0 | 8,613.8 | 53.8 | -2,068.1 | Last Cathedral Survey @ 8,965' MD | |
| 9,020.0 | 8,668.7 | 52.1 | -2,066.3 | Projection to Bit @ 9,020' MD | |

Checked By: _____ Approved By: _____ Date: _____