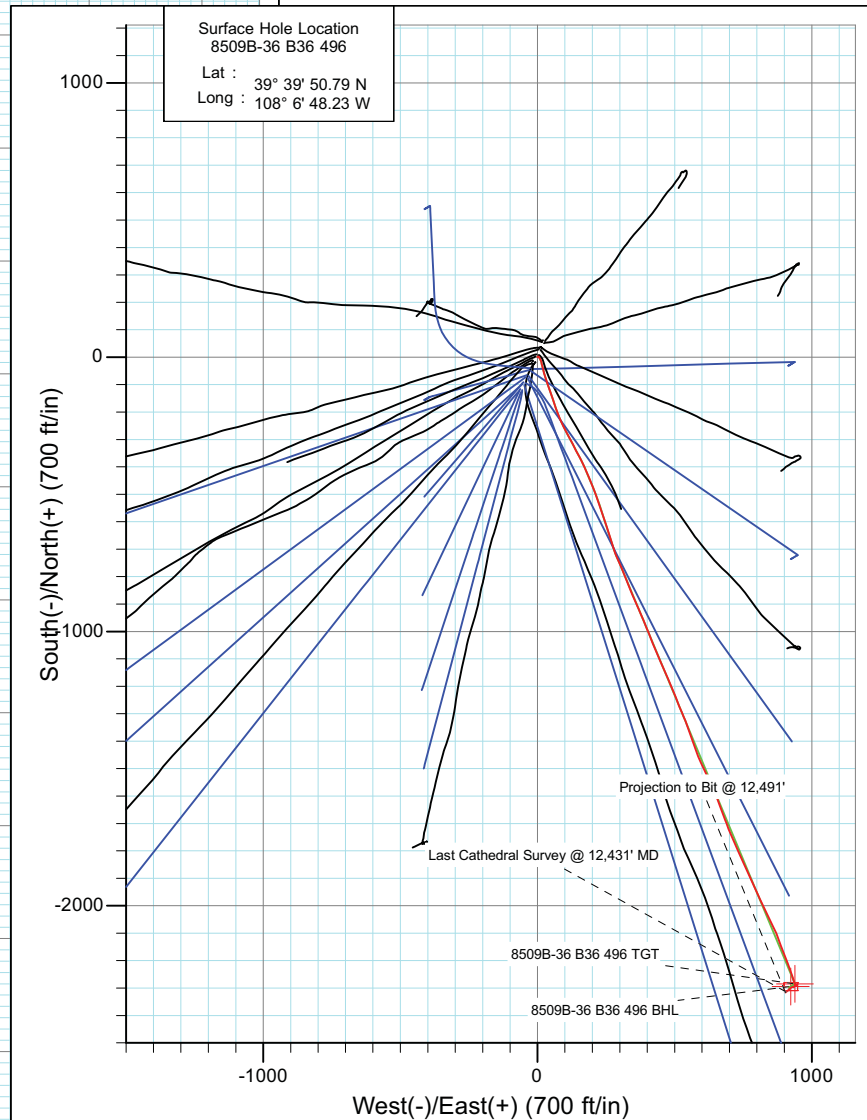
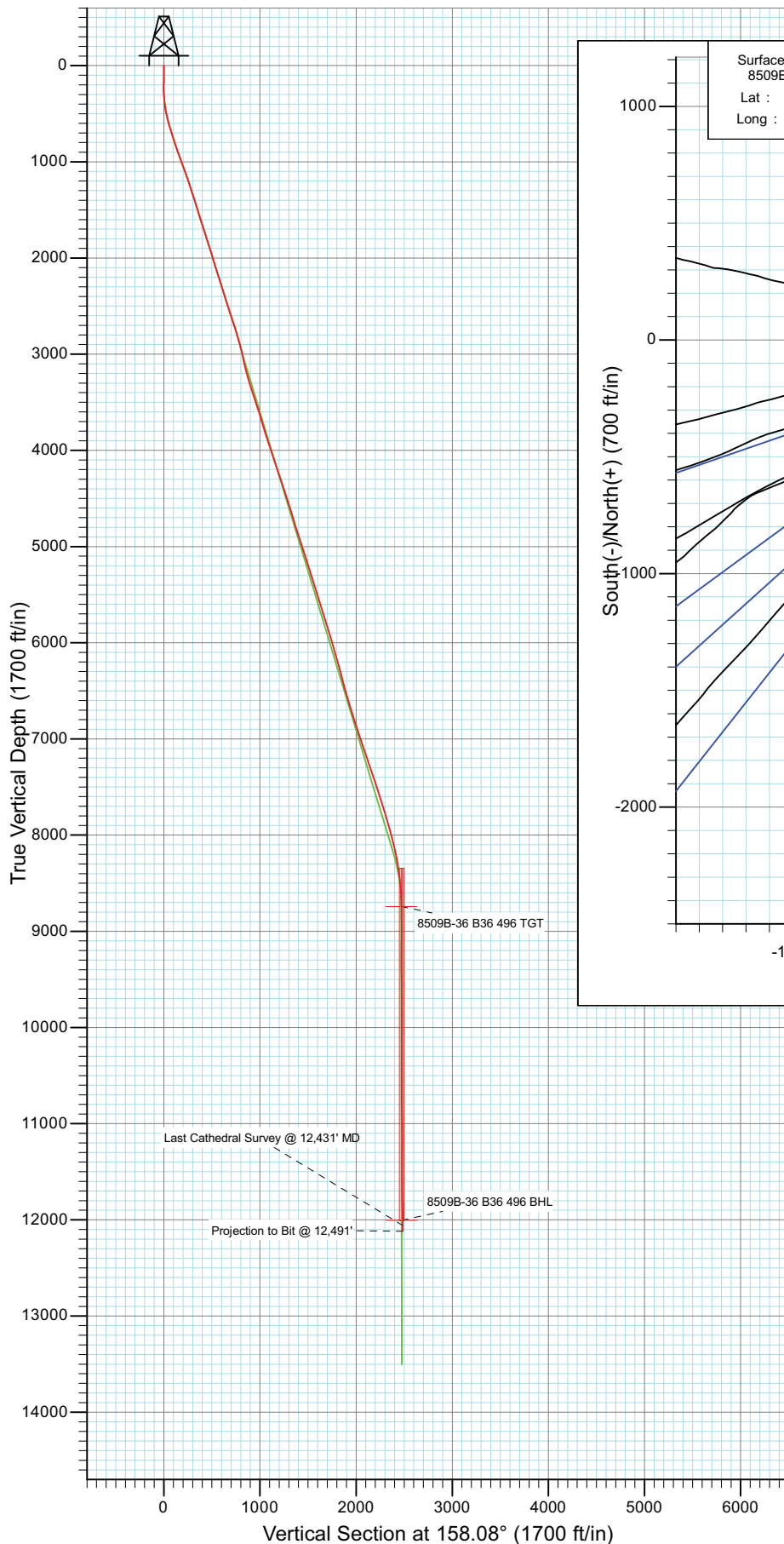




Project: Story Gulch
 Site: S36-T4S-R96W (B36 496)
 Well: 8509B-36 B36 496
 Wellbore: DD
 Design: FINAL



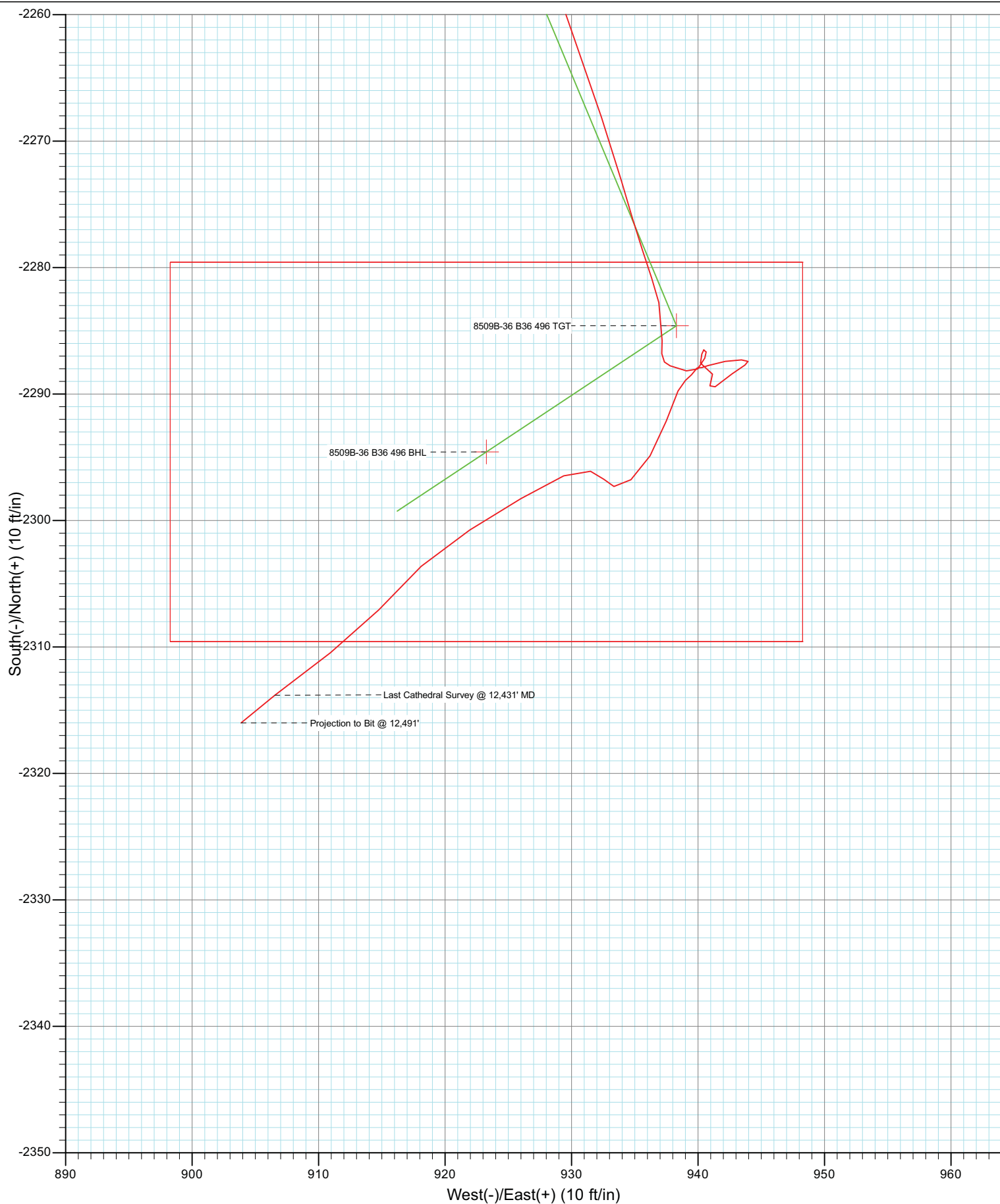
Azimuths to True North
 Magnetic North: 10.56°

Magnetic Field
 Strength: 52410.4nT
 Dip Angle: 65.88°
 Date: 6/6/2010
 Model: IGRF2010

| | | | | | |
|---|-------------------|---------------------|------------|------------|-----------------|
| DD 8509B-36 B36 496 105241; BH | | | | | |
| KBE @ 8374.0ft (Patterson #308) North American Datum 1983 Well 8509B-36 B36 496, True North | | | | | |
| Target 8509B-36 B36 496 BHL | Azimuth 158.08 | Origin Type Slot | N/S 0.0 | E/W 0.0 | From TVD 0.0 |



Project: Story Gulch
Site: S36-T4S-R96W (B36 496)
Well: 8509B-36 B36 496
Wellbore: DD
Design: FINAL



Cathedral Energy

Survey Report

| | | | |
|------------------|----------------------------|-------------------------------------|---------------------------------|
| Company: | EnCana Oil & Gas (USA) Inc | Local Co-ordinate Reference: | Well 8509B-36 B36 496 |
| Project: | Story Gulch | TVD Reference: | KBE @ 8374.0ft (Patterson #308) |
| Site: | S36-T4S-R96W (B36 496) | MD Reference: | KBE @ 8374.0ft (Patterson #308) |
| Well: | 8509B-36 B36 496 | North Reference: | True |
| Wellbore: | DD | Survey Calculation Method: | Minimum Curvature |
| Design: | DD | Database: | EDM 5000.1 US Multi Users DB |

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

| Site | | S36-T4S-R96W (B36 496) | | | |
|-----------------------|----------|------------------------|-----------------|-------------------|-----------------|
| Site Position: | | Northing: | 1,677,422.27 ft | Latitude: | 39° 39' 51.36 N |
| From: | Lat/Long | Easting: | 2,264,394.80 ft | Longitude: | 108° 6' 47.88 W |
| Position Uncertainty: | 0.0 ft | Slot Radius: | 13.200 in | Grid Convergence: | -1.65 ° |

| | | | | | | |
|----------------------|------------------|--------|---------------------|-----------------|---------------|-----------------|
| Well | 8509B-36 B36 496 | | | | | |
| Well Position | +N/-S | 0.0 ft | Northing: | 1,677,365.14 ft | Latitude: | 39° 39' 50.79 N |
| | +E/-W | 0.0 ft | Easting: | 2,264,365.96 ft | Longitude: | 108° 6' 48.23 W |
| Position Uncertainty | | 0.0 ft | Wellhead Elevation: | ft | Ground Level: | 8,352.0 ft |

| | | | | | |
|------------------|-------------------|--------------------|------------------------|----------------------|----------------------------|
| Wellbore | DD | | | | |
| Magnetics | Model Name | Sample Date | Declination (°) | Dip Angle (°) | Field Strength (nT) |
| | IGRF2010 | 6/6/2010 | 10.56 | 65.88 | 52,410 |

| | | | | | |
|--------------------------|-------------------------|-------------------|-------------------|----------------------|-----|
| Design | DD | | | | |
| Audit Notes: | | | | | |
| Version: | 1.0 | Phase: | ACTUAL | Tie On Depth: | 0.0 |
| Vertical Section: | Depth From (TVD) | +N/-S (ft) | +E/-W (ft) | Direction (°) | |
| | 0.0 | 0.0 | 0.0 | 158.08 | |

| | | | | | |
|-----------------------|----------------|--------------------------|------------------|--------------------|--|
| Survey Program | Date | 9/27/2010 | | | |
| From (ft) | To (ft) | Survey (Wellbore) | Tool Name | Description | |
| 171.0 | 12,491.0 | Survey #1 (DD) | 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 | | |
| 171.0 | 1.40 | 41.90 | 171.0 | 1.6 | 1.4 | -0.9 | 0.82 | 0.82 | | |
| 202.0 | 1.20 | 59.90 | 202.0 | 2.0 | 1.9 | -1.1 | 1.46 | -0.65 | | |
| 233.0 | 1.40 | 84.90 | 233.0 | 2.2 | 2.6 | -1.1 | 1.92 | 0.65 | | |
| 263.0 | 1.70 | 111.60 | 263.0 | 2.1 | 3.4 | -0.7 | 2.58 | 1.00 | | |
| 294.0 | 2.60 | 131.00 | 293.9 | 1.4 | 4.3 | 0.3 | 3.69 | 2.90 | | |
| 325.0 | 3.80 | 143.50 | 324.9 | 0.1 | 5.5 | 1.9 | 4.46 | 3.87 | | |
| 356.0 | 5.20 | 150.40 | 355.8 | -1.9 | 6.8 | 4.3 | 4.83 | 4.52 | | |
| 387.0 | 6.80 | 147.50 | 386.6 | -4.7 | 8.5 | 7.5 | 5.25 | 5.16 | | |
| 417.0 | 8.10 | 154.50 | 416.4 | -8.1 | 10.3 | 11.3 | 5.28 | 4.33 | | |
| 448.0 | 9.70 | 160.90 | 447.0 | -12.5 | 12.1 | 16.1 | 6.06 | 5.16 | | |
| 479.0 | 11.10 | 161.20 | 477.5 | -17.8 | 13.9 | 21.7 | 4.52 | 4.52 | | |
| 510.0 | 12.30 | 169.90 | 507.8 | -23.9 | 15.5 | 27.9 | 6.87 | 3.87 | | |

Cathedral Energy

Survey Report

| | | | |
|------------------|----------------------------|-------------------------------------|---------------------------------|
| Company: | EnCana Oil & Gas (USA) Inc | Local Co-ordinate Reference: | Well 8509B-36 B36 496 |
| Project: | Story Gulch | TVD Reference: | KBE @ 8374.0ft (Patterson #308) |
| Site: | S36-T4S-R96W (B36 496) | MD Reference: | KBE @ 8374.0ft (Patterson #308) |
| Well: | 8509B-36 B36 496 | North Reference: | True |
| Wellbore: | DD | Survey Calculation Method: | Minimum Curvature |
| Design: | DD | Database: | EDM 5000.1 US 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 |
| 540.0 | 13.30 | 166.10 | 537.1 | -30.4 | 16.9 | 34.5 | 4.36 | 3.33 | |
| 571.0 | 14.40 | 164.60 | 567.2 | -37.6 | 18.7 | 41.8 | 3.73 | 3.55 | |
| 602.0 | 15.50 | 168.00 | 597.1 | -45.3 | 20.6 | 49.7 | 4.54 | 3.55 | |
| 633.0 | 16.50 | 164.10 | 626.9 | -53.6 | 22.7 | 58.2 | 4.73 | 3.23 | |
| 664.0 | 16.70 | 164.70 | 656.7 | -62.1 | 25.1 | 67.0 | 0.85 | 0.65 | |
| 694.0 | 17.00 | 161.90 | 685.4 | -70.5 | 27.6 | 75.7 | 2.88 | 1.00 | |
| 790.0 | 18.30 | 160.10 | 776.8 | -98.0 | 37.1 | 104.7 | 1.47 | 1.35 | |
| 882.0 | 19.40 | 161.00 | 863.9 | -126.0 | 47.0 | 134.4 | 1.24 | 1.20 | |
| 973.0 | 19.70 | 162.60 | 949.7 | -154.9 | 56.5 | 164.8 | 0.67 | 0.33 | |
| 1,065.0 | 19.50 | 160.50 | 1,036.3 | -184.2 | 66.2 | 195.6 | 0.80 | -0.22 | |
| 1,156.0 | 20.50 | 158.80 | 1,121.8 | -213.4 | 77.1 | 226.7 | 1.27 | 1.10 | |
| 1,248.0 | 18.50 | 154.50 | 1,208.6 | -241.6 | 89.2 | 257.4 | 2.67 | -2.17 | |
| 1,340.0 | 18.10 | 152.20 | 1,295.9 | -267.4 | 102.1 | 286.2 | 0.90 | -0.43 | |
| 1,431.0 | 18.00 | 152.00 | 1,382.4 | -292.3 | 115.3 | 314.2 | 0.13 | -0.11 | |
| 1,523.0 | 17.40 | 152.90 | 1,470.1 | -317.1 | 128.2 | 342.1 | 0.72 | -0.65 | |
| 1,615.0 | 17.40 | 152.90 | 1,557.9 | -341.6 | 140.8 | 369.5 | 0.00 | 0.00 | |
| 1,706.0 | 17.40 | 150.80 | 1,644.7 | -365.6 | 153.6 | 396.5 | 0.69 | 0.00 | |
| 1,798.0 | 17.80 | 154.40 | 1,732.4 | -390.3 | 166.4 | 424.2 | 1.26 | 0.43 | |
| 1,890.0 | 18.30 | 158.00 | 1,819.9 | -416.4 | 177.9 | 452.7 | 1.33 | 0.54 | |
| 1,981.0 | 17.40 | 158.00 | 1,906.5 | -442.2 | 188.3 | 480.6 | 0.99 | -0.99 | |
| 2,073.0 | 16.40 | 155.80 | 1,994.5 | -466.8 | 198.8 | 507.3 | 1.29 | -1.09 | |
| 2,165.0 | 16.60 | 157.10 | 2,082.7 | -490.8 | 209.3 | 533.4 | 0.46 | 0.22 | |
| 2,256.0 | 18.00 | 161.70 | 2,169.6 | -516.1 | 218.7 | 560.4 | 2.15 | 1.54 | |
| 2,348.0 | 18.20 | 162.30 | 2,257.1 | -543.3 | 227.6 | 589.0 | 0.30 | 0.22 | |
| 2,440.0 | 17.30 | 161.60 | 2,344.7 | -570.0 | 236.2 | 616.9 | 1.01 | -0.98 | |
| 2,531.0 | 17.00 | 161.30 | 2,431.6 | -595.4 | 244.8 | 643.7 | 0.34 | -0.33 | |
| 2,623.0 | 17.80 | 162.60 | 2,519.4 | -621.5 | 253.3 | 671.2 | 0.97 | 0.87 | |
| 2,715.0 | 18.60 | 162.70 | 2,606.8 | -649.0 | 261.9 | 699.8 | 0.87 | 0.87 | |
| 2,806.0 | 18.20 | 162.90 | 2,693.2 | -676.4 | 270.4 | 728.4 | 0.45 | -0.44 | |
| 2,898.0 | 17.10 | 161.00 | 2,780.8 | -702.9 | 279.0 | 756.3 | 1.35 | -1.20 | |
| 3,015.0 | 15.30 | 155.50 | 2,893.2 | -733.3 | 291.0 | 788.9 | 2.02 | -1.54 | |
| 3,175.0 | 12.10 | 157.30 | 3,048.6 | -767.9 | 306.2 | 826.7 | 2.02 | -2.00 | |
| 3,267.0 | 12.80 | 157.90 | 3,138.5 | -786.3 | 313.8 | 846.6 | 0.77 | 0.76 | |
| 3,358.0 | 15.90 | 159.40 | 3,226.6 | -807.3 | 322.0 | 869.1 | 3.43 | 3.41 | |
| 3,450.0 | 17.50 | 158.20 | 3,314.7 | -831.9 | 331.5 | 895.6 | 1.78 | 1.74 | |
| 3,542.0 | 18.30 | 157.00 | 3,402.3 | -858.1 | 342.3 | 923.8 | 0.96 | 0.87 | |
| 3,633.0 | 17.30 | 154.70 | 3,488.9 | -883.5 | 353.7 | 951.6 | 1.34 | -1.10 | |
| 3,725.0 | 19.20 | 157.60 | 3,576.3 | -909.8 | 365.3 | 980.4 | 2.29 | 2.07 | |
| 3,817.0 | 16.50 | 155.50 | 3,663.9 | -935.7 | 376.5 | 1,008.6 | 3.02 | -2.93 | |
| 3,909.0 | 16.30 | 157.70 | 3,752.1 | -959.5 | 386.8 | 1,034.6 | 0.71 | -0.22 | |
| 4,000.0 | 18.20 | 158.50 | 3,839.0 | -984.6 | 396.8 | 1,061.5 | 2.10 | 2.09 | |
| 4,092.0 | 16.80 | 159.10 | 3,926.8 | -1,010.4 | 406.9 | 1,089.2 | 1.53 | -1.52 | |
| 4,184.0 | 18.10 | 158.50 | 4,014.5 | -1,036.1 | 416.8 | 1,116.8 | 1.43 | 1.41 | |
| 4,276.0 | 20.40 | 156.70 | 4,101.4 | -1,064.1 | 428.4 | 1,147.1 | 2.58 | 2.50 | |
| 4,367.0 | 18.80 | 155.10 | 4,187.1 | -1,092.0 | 440.9 | 1,177.6 | 1.85 | -1.76 | |
| 4,459.0 | 19.10 | 156.80 | 4,274.1 | -1,119.3 | 453.0 | 1,207.5 | 0.68 | 0.33 | |
| 4,551.0 | 17.20 | 156.10 | 4,361.5 | -1,145.5 | 464.5 | 1,236.1 | 2.08 | -2.07 | |
| 4,642.0 | 18.30 | 158.20 | 4,448.2 | -1,171.1 | 475.2 | 1,263.8 | 1.40 | 1.21 | |
| 4,734.0 | 16.70 | 156.60 | 4,535.9 | -1,196.6 | 485.9 | 1,291.5 | 1.82 | -1.74 | |
| 4,826.0 | 18.10 | 158.20 | 4,623.7 | -1,222.0 | 496.4 | 1,319.0 | 1.61 | 1.52 | |
| 4,918.0 | 16.20 | 157.30 | 4,711.6 | -1,247.2 | 506.7 | 1,346.1 | 2.09 | -2.07 | |
| 5,009.0 | 17.60 | 158.40 | 4,798.7 | -1,271.7 | 516.6 | 1,372.6 | 1.58 | 1.54 | |
| 5,101.0 | 18.90 | 158.00 | 4,886.1 | -1,298.4 | 527.3 | 1,401.4 | 1.42 | 1.41 | |

Cathedral Energy

Survey Report

| | | | |
|------------------|----------------------------|-------------------------------------|---------------------------------|
| Company: | EnCana Oil & Gas (USA) Inc | Local Co-ordinate Reference: | Well 8509B-36 B36 496 |
| Project: | Story Gulch | TVD Reference: | KBE @ 8374.0ft (Patterson #308) |
| Site: | S36-T4S-R96W (B36 496) | MD Reference: | KBE @ 8374.0ft (Patterson #308) |
| Well: | 8509B-36 B36 496 | North Reference: | True |
| Wellbore: | DD | Survey Calculation Method: | Minimum Curvature |
| Design: | DD | Database: | EDM 5000.1 US 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 |
| 5,193.0 | 17.70 | 156.90 | 4,973.4 | -1,325.1 | 538.4 | 1,430.3 | 1.36 | -1.30 | |
| 5,285.0 | 18.00 | 160.60 | 5,061.0 | -1,351.4 | 548.6 | 1,458.5 | 1.27 | 0.33 | |
| 5,376.0 | 16.90 | 160.50 | 5,147.8 | -1,377.1 | 557.7 | 1,485.7 | 1.21 | -1.21 | |
| 5,468.0 | 18.50 | 160.50 | 5,235.5 | -1,403.5 | 567.0 | 1,513.7 | 1.74 | 1.74 | |
| 5,559.0 | 16.90 | 161.00 | 5,322.1 | -1,429.6 | 576.2 | 1,541.3 | 1.77 | -1.76 | |
| 5,651.0 | 17.60 | 157.10 | 5,410.0 | -1,455.0 | 585.9 | 1,568.6 | 1.47 | 0.76 | |
| 5,742.0 | 17.80 | 155.50 | 5,496.7 | -1,480.4 | 597.1 | 1,596.2 | 0.58 | 0.22 | |
| 5,834.0 | 16.20 | 155.70 | 5,584.7 | -1,504.9 | 608.2 | 1,623.1 | 1.74 | -1.74 | |
| 5,926.0 | 17.30 | 154.30 | 5,672.8 | -1,528.9 | 619.4 | 1,649.6 | 1.27 | 1.20 | |
| 6,017.0 | 17.90 | 155.30 | 5,759.5 | -1,553.8 | 631.1 | 1,677.0 | 0.74 | 0.66 | |
| 6,109.0 | 16.20 | 155.40 | 5,847.5 | -1,578.3 | 642.3 | 1,704.0 | 1.85 | -1.85 | |
| 6,201.0 | 16.90 | 159.50 | 5,935.7 | -1,602.5 | 652.4 | 1,730.2 | 1.48 | 0.76 | |
| 6,292.0 | 17.70 | 159.40 | 6,022.5 | -1,627.8 | 661.9 | 1,757.2 | 0.88 | 0.88 | |
| 6,384.0 | 16.30 | 159.80 | 6,110.5 | -1,653.0 | 671.2 | 1,784.1 | 1.53 | -1.52 | |
| 6,475.0 | 15.70 | 159.10 | 6,198.0 | -1,676.5 | 680.0 | 1,809.2 | 0.69 | -0.66 | |
| 6,567.0 | 14.40 | 160.10 | 6,286.8 | -1,698.9 | 688.4 | 1,833.1 | 1.44 | -1.41 | |
| 6,659.0 | 14.30 | 159.10 | 6,376.0 | -1,720.3 | 696.3 | 1,855.9 | 0.29 | -0.11 | |
| 6,750.0 | 15.40 | 156.70 | 6,463.9 | -1,741.9 | 705.1 | 1,879.2 | 1.38 | 1.21 | |
| 6,842.0 | 16.50 | 155.50 | 6,552.4 | -1,765.0 | 715.4 | 1,904.4 | 1.25 | 1.20 | |
| 6,933.0 | 17.30 | 155.50 | 6,639.4 | -1,789.1 | 726.3 | 1,930.9 | 0.88 | 0.88 | |
| 7,025.0 | 17.90 | 155.80 | 6,727.1 | -1,814.4 | 737.8 | 1,958.7 | 0.66 | 0.65 | |
| 7,117.0 | 16.70 | 154.70 | 6,815.0 | -1,839.2 | 749.3 | 1,986.0 | 1.35 | -1.30 | |
| 7,208.0 | 17.40 | 156.90 | 6,902.0 | -1,863.6 | 760.2 | 2,012.6 | 1.05 | 0.77 | |
| 7,300.0 | 19.50 | 156.10 | 6,989.2 | -1,890.3 | 771.8 | 2,041.7 | 2.30 | 2.28 | |
| 7,391.0 | 18.40 | 156.20 | 7,075.3 | -1,917.3 | 783.7 | 2,071.3 | 1.21 | -1.21 | |
| 7,483.0 | 19.20 | 155.40 | 7,162.4 | -1,944.3 | 795.9 | 2,100.9 | 0.91 | 0.87 | |
| 7,574.0 | 18.50 | 154.10 | 7,248.5 | -1,970.9 | 808.4 | 2,130.3 | 0.90 | -0.77 | |
| 7,666.0 | 17.20 | 153.60 | 7,336.1 | -1,996.3 | 820.9 | 2,158.4 | 1.42 | -1.41 | |
| 7,758.0 | 18.90 | 154.10 | 7,423.6 | -2,021.8 | 833.4 | 2,186.8 | 1.86 | 1.85 | |
| 7,849.0 | 19.20 | 155.70 | 7,509.6 | -2,048.7 | 846.0 | 2,216.5 | 0.66 | 0.33 | |
| 7,941.0 | 18.10 | 154.00 | 7,596.7 | -2,075.4 | 858.5 | 2,245.8 | 1.33 | -1.20 | |
| 8,032.0 | 18.00 | 155.90 | 7,683.3 | -2,100.9 | 870.4 | 2,274.0 | 0.66 | -0.11 | |
| 8,124.0 | 17.30 | 161.30 | 7,770.9 | -2,126.8 | 880.6 | 2,301.8 | 1.93 | -0.76 | |
| 8,216.0 | 15.60 | 159.70 | 7,859.2 | -2,151.4 | 889.3 | 2,327.9 | 1.91 | -1.85 | |
| 8,307.0 | 14.80 | 159.20 | 7,947.0 | -2,173.7 | 897.7 | 2,351.7 | 0.89 | -0.88 | |
| 8,399.0 | 14.10 | 158.40 | 8,036.1 | -2,195.2 | 906.0 | 2,374.7 | 0.79 | -0.76 | |
| 8,490.0 | 13.30 | 158.50 | 8,124.5 | -2,215.2 | 913.9 | 2,396.2 | 0.88 | -0.88 | |
| 8,582.0 | 11.30 | 158.90 | 8,214.4 | -2,233.5 | 921.0 | 2,415.8 | 2.18 | -2.17 | |
| 8,674.0 | 9.70 | 164.70 | 8,304.8 | -2,249.3 | 926.3 | 2,432.5 | 2.08 | -1.74 | |
| 8,765.0 | 7.80 | 160.10 | 8,394.8 | -2,262.5 | 930.4 | 2,446.3 | 2.22 | -2.09 | |
| 8,857.0 | 6.10 | 163.80 | 8,486.1 | -2,273.1 | 933.9 | 2,457.4 | 1.91 | -1.85 | |
| 8,948.0 | 4.10 | 161.00 | 8,576.7 | -2,280.8 | 936.3 | 2,465.5 | 2.21 | -2.20 | |
| 9,040.0 | 2.30 | 187.50 | 8,668.6 | -2,285.8 | 937.2 | 2,470.4 | 2.48 | -1.96 | |
| 9,132.0 | 1.10 | 100.50 | 8,760.5 | -2,287.8 | 937.8 | 2,472.5 | 2.71 | -1.30 | |
| 9,219.0 | 0.70 | 117.60 | 8,847.5 | -2,288.2 | 939.1 | 2,473.3 | 0.55 | -0.46 | |
| 9,311.0 | 0.70 | 43.20 | 8,939.5 | -2,288.0 | 940.0 | 2,473.5 | 0.92 | 0.00 | |
| 9,403.0 | 0.60 | 21.60 | 9,031.5 | -2,287.2 | 940.5 | 2,472.9 | 0.29 | -0.11 | |
| 9,494.0 | 0.10 | 303.50 | 9,122.5 | -2,286.7 | 940.6 | 2,472.5 | 0.65 | -0.55 | |
| 9,586.0 | 0.20 | 309.70 | 9,214.5 | -2,286.5 | 940.5 | 2,472.3 | 0.11 | 0.11 | |
| 9,678.0 | 0.20 | 119.60 | 9,306.5 | -2,286.5 | 940.5 | 2,472.3 | 0.43 | 0.00 | |
| 9,769.0 | 0.50 | 228.80 | 9,397.5 | -2,286.8 | 940.3 | 2,472.5 | 0.66 | 0.33 | |
| 9,861.0 | 0.60 | 156.80 | 9,489.5 | -2,287.5 | 940.2 | 2,473.2 | 0.71 | 0.11 | |
| 9,952.0 | 0.40 | 95.90 | 9,580.5 | -2,288.0 | 940.7 | 2,473.8 | 0.59 | -0.22 | |

Cathedral Energy

Survey Report

| | | | |
|------------------|----------------------------|-------------------------------------|---------------------------------|
| Company: | EnCana Oil & Gas (USA) Inc | Local Co-ordinate Reference: | Well 8509B-36 B36 496 |
| Project: | Story Gulch | TVD Reference: | KBE @ 8374.0ft (Patterson #308) |
| Site: | S36-T4S-R96W (B36 496) | MD Reference: | KBE @ 8374.0ft (Patterson #308) |
| Well: | 8509B-36 B36 496 | North Reference: | True |
| Wellbore: | DD | Survey Calculation Method: | Minimum Curvature |
| Design: | DD | Database: | EDM 5000.1 US 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 |
| 10,044.0 | 0.50 | 161.70 | 9,672.5 | -2,288.4 | 941.1 | 2,474.3 | 0.54 | 0.11 | |
| 10,135.0 | 0.80 | 211.20 | 9,763.5 | -2,289.3 | 940.9 | 2,475.1 | 0.67 | 0.33 | |
| 10,227.0 | 1.10 | 57.70 | 9,855.5 | -2,289.4 | 941.4 | 2,475.3 | 2.01 | 0.33 | |
| 10,319.0 | 1.00 | 46.80 | 9,947.5 | -2,288.4 | 942.7 | 2,474.9 | 0.24 | -0.11 | |
| 10,410.0 | 0.60 | 70.40 | 10,038.5 | -2,287.7 | 943.7 | 2,474.6 | 0.56 | -0.44 | |
| 10,502.0 | 0.30 | 300.20 | 10,130.5 | -2,287.4 | 944.0 | 2,474.4 | 0.90 | -0.33 | |
| 10,593.0 | 0.40 | 270.10 | 10,221.5 | -2,287.3 | 943.4 | 2,474.1 | 0.23 | 0.11 | |
| 10,685.0 | 1.20 | 263.30 | 10,313.5 | -2,287.4 | 942.2 | 2,473.8 | 0.87 | 0.87 | |
| 10,776.0 | 0.60 | 242.70 | 10,404.5 | -2,287.7 | 940.8 | 2,473.6 | 0.74 | -0.66 | |
| 10,868.0 | 0.10 | 314.10 | 10,496.5 | -2,287.9 | 940.3 | 2,473.5 | 0.63 | -0.54 | |
| 10,960.0 | 0.40 | 254.00 | 10,588.5 | -2,287.9 | 939.9 | 2,473.4 | 0.39 | 0.33 | |
| 11,051.0 | 0.60 | 198.30 | 10,679.4 | -2,288.5 | 939.5 | 2,473.8 | 0.55 | 0.22 | |
| 11,143.0 | 0.40 | 271.70 | 10,771.4 | -2,288.9 | 939.0 | 2,474.0 | 0.67 | -0.22 | |
| 11,235.0 | 1.10 | 197.60 | 10,863.4 | -2,289.8 | 938.4 | 2,474.5 | 1.15 | 0.76 | |
| 11,326.0 | 2.10 | 203.40 | 10,954.4 | -2,292.1 | 937.5 | 2,476.4 | 1.11 | 1.10 | |
| 11,418.0 | 1.70 | 206.50 | 11,046.4 | -2,294.9 | 936.2 | 2,478.5 | 0.45 | -0.43 | |
| 11,510.0 | 1.40 | 234.00 | 11,138.3 | -2,296.8 | 934.7 | 2,479.7 | 0.86 | -0.33 | |
| 11,600.0 | 0.60 | 283.90 | 11,228.3 | -2,297.3 | 933.4 | 2,479.7 | 1.24 | -0.89 | |
| 11,692.0 | 0.70 | 323.00 | 11,320.3 | -2,296.7 | 932.5 | 2,478.8 | 0.48 | 0.11 | |
| 11,784.0 | 0.90 | 285.00 | 11,412.3 | -2,296.1 | 931.5 | 2,477.9 | 0.60 | 0.22 | |
| 11,876.0 | 1.90 | 248.90 | 11,504.3 | -2,296.5 | 929.4 | 2,477.4 | 1.40 | 1.09 | |
| 11,968.0 | 2.90 | 237.50 | 11,596.2 | -2,298.3 | 926.0 | 2,477.8 | 1.20 | 1.09 | |
| 12,059.0 | 3.10 | 239.40 | 11,687.1 | -2,300.8 | 921.9 | 2,478.6 | 0.25 | 0.22 | |
| 12,151.0 | 2.90 | 226.40 | 11,778.9 | -2,303.6 | 918.1 | 2,479.8 | 0.77 | -0.22 | |
| 12,243.0 | 3.10 | 222.20 | 11,870.8 | -2,307.1 | 914.8 | 2,481.8 | 0.32 | 0.22 | |
| 12,335.0 | 3.30 | 234.50 | 11,962.7 | -2,310.5 | 910.9 | 2,483.5 | 0.78 | 0.22 | |
| 12,431.0 | 3.30 | 230.60 | 12,058.5 | -2,313.8 | 906.5 | 2,485.0 | 0.23 | 0.00 | Last Cathedral Survey @ 12,431' MD Projection to Bit @ 12,491' |
| 12,491.0 | 3.30 | 230.60 | 12,118.4 | -2,316.0 | 903.9 | 2,486.0 | 0.00 | 0.00 | |

| Targets | | | | | | | | | |
|---|-------------------|---------------|--------------|----------|------------|------------|---------------|--------------|---------------------------------|
| Target Name | - hit/miss target | Dip Angle (°) | Dip Dir. (°) | TVD (ft) | +N/-S (ft) | +E/-W (ft) | Northing (ft) | Easting (ft) | Latitude Longitude |
| 8509B-36 B36 496 BHL | | 0.00 | 0.00 | 12,004.0 | -2,294.6 | 923.3 | 1,675,044.96 | 2,265,222.85 | 39° 39' 28.11 N 108° 6' 36.42 W |
| - survey misses target center by 22.4ft at 12375.1ft MD (12002.7 TVD, -2311.8 N, 909.1 E) | | | | | | | | | |
| - Rectangle (sides W30.0 H50.0 D0.0) | | | | | | | | | |
| 8509B-36 B36 496 TGT | | 0.00 | 0.00 | 8,743.0 | -2,284.6 | 938.3 | 1,675,054.50 | 2,265,238.15 | 39° 39' 28.21 N 108° 6' 36.23 W |
| - survey misses target center by 3.1ft at 9114.4ft MD (8742.9 TVD, -2287.6 N, 937.5 E) | | | | | | | | | |
| - Point | | | | | | | | | |

| Survey Annotations | | | | | |
|---------------------|---------------------|-------------------|------------|------------------------------------|--|
| Measured Depth (ft) | Vertical Depth (ft) | Local Coordinates | | | |
| | | +N/-S (ft) | +E/-W (ft) | Comment | |
| 12,431.0 | 12,058.5 | -2,313.8 | 906.5 | Last Cathedral Survey @ 12,431' MD | |
| 12,491.0 | 12,118.4 | -2,316.0 | 903.9 | Projection to Bit @ 12,491' | |

Checked By: _____ Approved By: _____ Date: _____