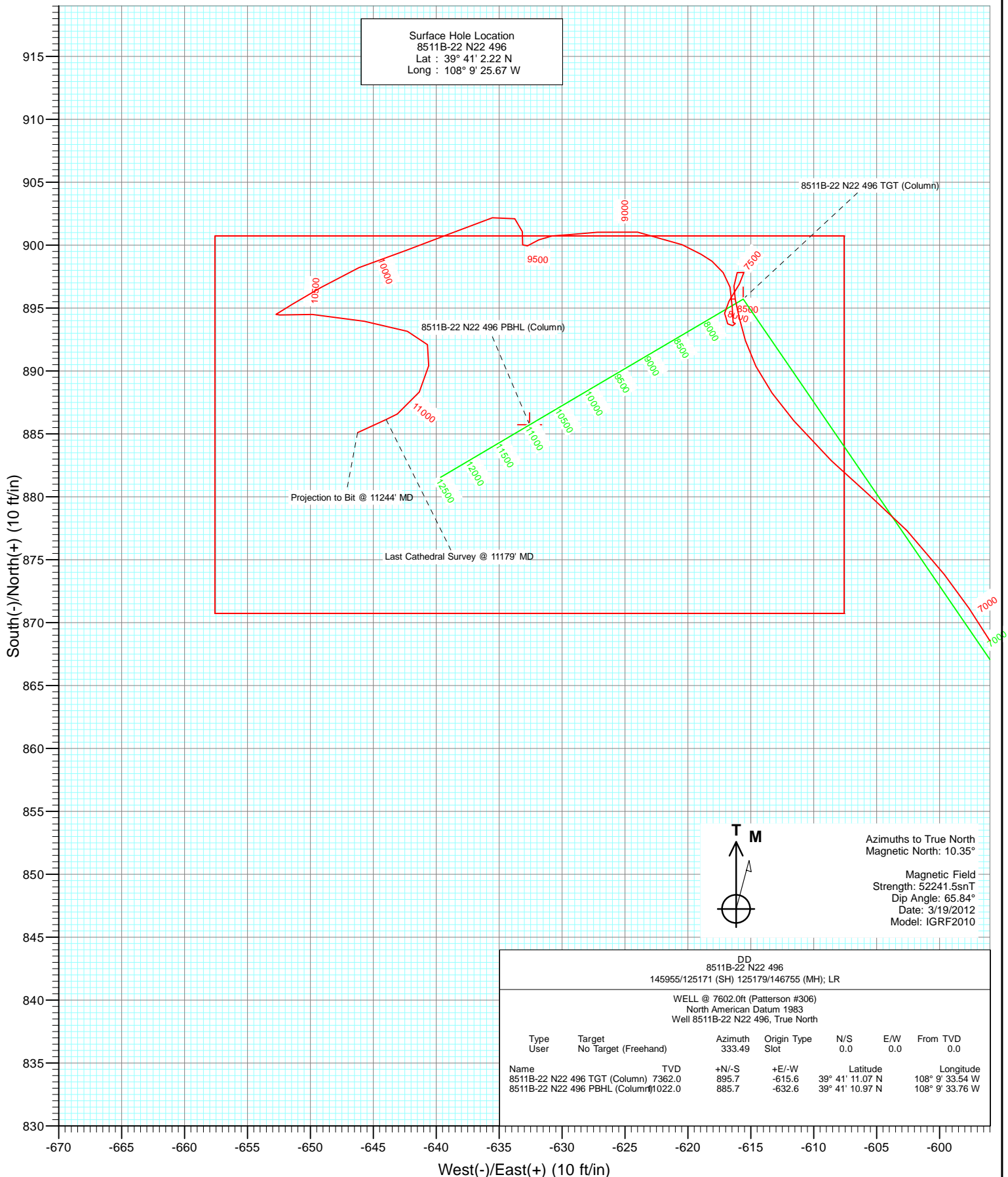


Azimuths to True North
Magnetic North: 10.35°

Magnetic Field
Strength: 52241.5nT
Dip Angle: 65.84°
Date: 3/19/2012
Model: IGRF2010

| DD 8511B-22 N22 496 145955/125171 (SH) 125179/146755 (MH); LR WELL @ 7602.0ft (Patterson #306) North American Datum 1983 Well 8511B-22 N22 496, True North | | | | | | | |
|---|----------------------|---------|--------|--------|-----------------|-----------------|----------|
| Type User | Target | Azimuth | Origin | Type | N/S | E/W | From TVD |
| | No Target (Freehand) | 333.49 | Slot | | 0.0 | 0.0 | 0.0 |
| Name | | TVD | +N/-S | +E/-W | Latitude | Longitude | |
| 8511B-22 N22 496 TGT (Column) | | 7362.0 | 895.7 | -615.6 | 39° 41' 11.07 N | 108° 9' 33.54 W | |
| 8511B-22 N22 496 PBHL (Column) | | 7362.0 | 885.7 | -632.6 | 39° 41' 10.97 N | 108° 9' 33.76 W | |



Survey Report

| | | | |
|------------------|---|-------------------------------------|----------------------------------|
| Company: | EnCana Oil & Gas (USA) Inc | Local Co-ordinate Reference: | Well 8511B-22 N22 496 |
| Project: | Story Gulch | TVD Reference: | WELL @ 7602.0ft (Patterson #306) |
| Site: | S22-T4S-R96W (N22 496) (Column Pattern) | MD Reference: | WELL @ 7602.0ft (Patterson #306) |
| Well: | 8511B-22 N22 496 | North Reference: | True |
| Wellbore: | DD | Survey Calculation Method: | Minimum Curvature |
| Design: | DD | Database: | USA EDM 5000 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 | | S22-T4S-R96W (N22 496) (Column Pattern) | | | |
|-----------------------|----------|---|-----------------|-------------------|-----------------|
| Site Position: | | Northing: | 1,685,048.56 ft | Latitude: | 39° 41' 3.24 N |
| From: | Lat/Long | Easting: | 2,252,316.79 ft | Longitude: | 108° 9' 25.11 W |
| Position Uncertainty: | 0.0 ft | Slot Radius: | 13.200 in | Grid Convergence: | -1.68 ° |

| | | | | | | |
|----------------------|------------------|--------|---------------------|-----------------|---------------|-----------------|
| Well | 8511B-22 N22 496 | | | | | |
| Well Position | +N/-S | 0.0 ft | Northing: | 1,684,946.72 ft | Latitude: | 39° 41' 2.22 N |
| | +E/-W | 0.0 ft | Easting: | 2,252,269.99 ft | Longitude: | 108° 9' 25.67 W |
| Position Uncertainty | | 0.0 ft | Wellhead Elevation: | ft | Ground Level: | 7,569.0 ft |

| | | | | | |
|------------------|-------------------|--------------------|------------------------|----------------------|----------------------------|
| Wellbore | DD | | | | |
| Magnetics | Model Name | Sample Date | Declination (°) | Dip Angle (°) | Field Strength (nT) |
| | IGRF2010 | 3/19/2012 | 10.35 | 65.84 | 52,242 |

| | | | | | |
|--------------------------|-------------------------|-------------------|-------------------|----------------------|-----|
| 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 | 333.49 | |

| | | | | | |
|-----------------------|----------------|--------------------------|------------------|--------------------|--|
| Survey Program | Date | 3/27/2012 | | | |
| From (ft) | To (ft) | Survey (Wellbore) | Tool Name | Description | |
| 148.0 | 11,244.0 | 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 | | |
| 148.0 | 1.20 | 81.30 | 148.0 | 0.2 | 1.5 | -0.5 | 0.81 | 0.81 | | |
| 178.0 | 0.60 | 121.60 | 178.0 | 0.2 | 2.0 | -0.7 | 2.79 | -2.00 | | |
| 209.0 | 0.80 | 100.30 | 209.0 | 0.1 | 2.3 | -1.0 | 1.05 | 0.65 | | |
| 239.0 | 0.20 | 22.70 | 239.0 | 0.1 | 2.6 | -1.1 | 2.61 | -2.00 | | |
| 300.0 | 0.50 | 316.90 | 300.0 | 0.4 | 2.4 | -0.7 | 0.75 | 0.49 | | |
| 330.0 | 0.50 | 294.80 | 330.0 | 0.5 | 2.2 | -0.5 | 0.64 | 0.00 | | |
| 360.0 | 0.80 | 355.60 | 360.0 | 0.8 | 2.1 | -0.2 | 2.36 | 1.00 | | |
| 423.0 | 2.20 | 322.10 | 423.0 | 2.2 | 1.3 | 1.4 | 2.53 | 2.22 | | |
| 515.0 | 3.70 | 326.00 | 514.8 | 6.0 | -1.5 | 6.1 | 1.64 | 1.63 | | |
| 609.0 | 6.60 | 322.80 | 608.4 | 12.9 | -6.4 | 14.4 | 3.10 | 3.09 | | |
| 700.0 | 9.00 | 328.30 | 698.6 | 23.1 | -13.3 | 26.6 | 2.76 | 2.64 | | |
| 791.0 | 9.60 | 321.80 | 788.4 | 35.1 | -21.8 | 41.1 | 1.33 | 0.66 | | |

Survey Report

| | | | |
|------------------|---|-------------------------------------|----------------------------------|
| Company: | EnCana Oil & Gas (USA) Inc | Local Co-ordinate Reference: | Well 8511B-22 N22 496 |
| Project: | Story Gulch | TVD Reference: | WELL @ 7602.0ft (Patterson #306) |
| Site: | S22-T4S-R96W (N22 496) (Column Pattern) | MD Reference: | WELL @ 7602.0ft (Patterson #306) |
| Well: | 8511B-22 N22 496 | North Reference: | True |
| Wellbore: | DD | 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 |
|---------------------|-----------------|-------------|---------------------|------------|------------|-----------------------|-----------------------|----------------------|-----------------------|
| 883.0 | 9.10 | 313.50 | 879.2 | 46.1 | -31.8 | 55.5 | 1.56 | -0.54 | |
| 975.0 | 9.20 | 321.30 | 970.0 | 56.9 | -41.6 | 69.5 | 1.35 | 0.11 | |
| 1,067.0 | 9.90 | 325.40 | 1,060.7 | 69.1 | -50.7 | 84.5 | 1.06 | 0.76 | |
| 1,158.0 | 10.00 | 330.60 | 1,150.4 | 82.5 | -59.1 | 100.2 | 0.99 | 0.11 | |
| 1,249.0 | 10.30 | 331.90 | 1,240.0 | 96.5 | -66.8 | 116.2 | 0.41 | 0.33 | |
| 1,341.0 | 10.60 | 330.00 | 1,330.4 | 111.1 | -74.9 | 132.8 | 0.50 | 0.33 | |
| 1,432.0 | 11.30 | 326.10 | 1,419.8 | 125.8 | -84.0 | 150.0 | 1.12 | 0.77 | |
| 1,524.0 | 12.30 | 323.80 | 1,509.8 | 141.1 | -94.8 | 168.6 | 1.20 | 1.09 | |
| 1,616.0 | 12.90 | 323.90 | 1,599.6 | 157.3 | -106.7 | 188.4 | 0.65 | 0.65 | |
| 1,706.0 | 11.90 | 322.20 | 1,687.5 | 172.8 | -118.3 | 207.4 | 1.18 | -1.11 | |
| 1,798.0 | 10.90 | 324.50 | 1,777.7 | 187.4 | -129.2 | 225.3 | 1.19 | -1.09 | |
| 1,889.0 | 10.10 | 324.00 | 1,867.2 | 200.8 | -138.8 | 241.7 | 0.88 | -0.88 | |
| 1,981.0 | 9.40 | 321.00 | 1,957.8 | 213.2 | -148.3 | 257.0 | 0.94 | -0.76 | |
| 2,073.0 | 9.60 | 323.90 | 2,048.6 | 225.2 | -157.6 | 271.9 | 0.56 | 0.22 | |
| 2,094.0 | 9.40 | 327.60 | 2,069.3 | 228.1 | -159.5 | 275.3 | 3.06 | -0.95 | |
| 2,175.0 | 8.30 | 323.50 | 2,149.3 | 238.4 | -166.5 | 287.7 | 1.56 | -1.36 | |
| 2,267.0 | 9.00 | 312.50 | 2,240.3 | 248.6 | -175.8 | 300.9 | 1.95 | 0.76 | |
| 2,358.0 | 9.20 | 315.00 | 2,330.1 | 258.5 | -186.2 | 314.5 | 0.49 | 0.22 | |
| 2,450.0 | 9.40 | 324.60 | 2,420.9 | 269.9 | -195.7 | 328.9 | 1.70 | 0.22 | |
| 2,542.0 | 9.80 | 337.00 | 2,511.7 | 283.2 | -203.1 | 344.1 | 2.28 | 0.43 | |
| 2,633.0 | 9.40 | 334.90 | 2,601.4 | 297.1 | -209.3 | 359.3 | 0.58 | -0.44 | |
| 2,724.0 | 8.80 | 334.20 | 2,691.2 | 310.1 | -215.5 | 373.6 | 0.67 | -0.66 | |
| 2,816.0 | 8.80 | 323.20 | 2,782.2 | 322.0 | -222.8 | 387.6 | 1.83 | 0.00 | |
| 2,907.0 | 10.60 | 319.20 | 2,871.9 | 333.9 | -232.4 | 402.6 | 2.11 | 1.98 | |
| 2,999.0 | 9.80 | 318.60 | 2,962.4 | 346.2 | -243.1 | 418.3 | 0.88 | -0.87 | |
| 3,090.0 | 9.00 | 327.50 | 3,052.2 | 358.0 | -252.1 | 432.9 | 1.82 | -0.88 | |
| 3,182.0 | 8.10 | 330.10 | 3,143.2 | 369.7 | -259.2 | 446.5 | 1.06 | -0.98 | |
| 3,273.0 | 7.80 | 323.10 | 3,233.3 | 380.2 | -266.1 | 459.0 | 1.11 | -0.33 | |
| 3,365.0 | 8.00 | 313.80 | 3,324.4 | 389.6 | -274.5 | 471.2 | 1.40 | 0.22 | |
| 3,457.0 | 9.80 | 325.50 | 3,415.3 | 400.5 | -283.5 | 485.0 | 2.77 | 1.96 | |
| 3,548.0 | 10.20 | 327.20 | 3,504.9 | 413.7 | -292.3 | 500.6 | 0.55 | 0.44 | |
| 3,640.0 | 9.10 | 327.50 | 3,595.6 | 426.7 | -300.6 | 516.0 | 1.20 | -1.20 | |
| 3,731.0 | 9.90 | 331.00 | 3,685.4 | 439.6 | -308.2 | 530.9 | 1.08 | 0.88 | |
| 3,823.0 | 9.80 | 331.20 | 3,776.0 | 453.3 | -315.8 | 546.7 | 0.11 | -0.11 | |
| 3,914.0 | 8.60 | 330.50 | 3,865.9 | 466.1 | -322.9 | 561.2 | 1.32 | -1.32 | |
| 4,006.0 | 8.40 | 332.70 | 3,956.8 | 478.0 | -329.4 | 574.8 | 0.41 | -0.22 | |
| 4,098.0 | 9.70 | 310.80 | 4,047.7 | 489.1 | -338.4 | 588.7 | 3.97 | 1.41 | |
| 4,189.0 | 10.20 | 317.40 | 4,137.4 | 500.0 | -349.6 | 603.5 | 1.37 | 0.55 | |
| 4,281.0 | 10.50 | 322.10 | 4,227.9 | 512.6 | -360.3 | 619.5 | 0.97 | 0.33 | |
| 4,373.0 | 9.30 | 329.80 | 4,318.5 | 525.6 | -369.2 | 635.2 | 1.94 | -1.30 | |
| 4,464.0 | 7.90 | 329.70 | 4,408.5 | 537.4 | -376.0 | 648.7 | 1.54 | -1.54 | |
| 4,556.0 | 7.40 | 330.10 | 4,499.7 | 548.0 | -382.2 | 661.0 | 0.55 | -0.54 | |
| 4,648.0 | 7.90 | 322.10 | 4,590.8 | 558.1 | -389.0 | 673.1 | 1.28 | 0.54 | |
| 4,740.0 | 8.80 | 320.60 | 4,681.9 | 568.6 | -397.3 | 686.1 | 1.01 | 0.98 | |
| 4,831.0 | 8.70 | 326.80 | 4,771.8 | 579.7 | -405.5 | 699.8 | 1.04 | -0.11 | |
| 4,923.0 | 9.50 | 327.70 | 4,862.6 | 591.9 | -413.4 | 714.2 | 0.88 | 0.87 | |
| 5,014.0 | 8.40 | 325.70 | 4,952.5 | 603.8 | -421.2 | 728.3 | 1.26 | -1.21 | |
| 5,106.0 | 7.70 | 324.80 | 5,043.6 | 614.4 | -428.5 | 741.0 | 0.77 | -0.76 | |
| 5,197.0 | 7.10 | 328.30 | 5,133.9 | 624.1 | -435.0 | 752.7 | 0.82 | -0.66 | |
| 5,289.0 | 8.20 | 326.40 | 5,225.1 | 634.4 | -441.6 | 764.8 | 1.23 | 1.20 | |
| 5,380.0 | 8.70 | 323.30 | 5,315.1 | 645.3 | -449.3 | 778.0 | 0.74 | 0.55 | |
| 5,472.0 | 9.30 | 327.90 | 5,405.9 | 657.2 | -457.4 | 792.3 | 1.02 | 0.65 | |
| 5,564.0 | 10.70 | 330.10 | 5,496.5 | 670.9 | -465.6 | 808.2 | 1.58 | 1.52 | |

Survey Report

| | | | |
|------------------|---|-------------------------------------|----------------------------------|
| Company: | EnCana Oil & Gas (USA) Inc | Local Co-ordinate Reference: | Well 8511B-22 N22 496 |
| Project: | Story Gulch | TVD Reference: | WELL @ 7602.0ft (Patterson #306) |
| Site: | S22-T4S-R96W (N22 496) (Column Pattern) | MD Reference: | WELL @ 7602.0ft (Patterson #306) |
| Well: | 8511B-22 N22 496 | North Reference: | True |
| Wellbore: | DD | 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 |
|---------------------|-----------------|-------------|---------------------|------------|------------|-----------------------|-----------------------|----------------------|-------------------------------|
| 5,655.0 | 10.40 | 326.00 | 5,586.0 | 685.1 | -474.4 | 824.8 | 0.89 | -0.33 | |
| 5,747.0 | 9.70 | 321.80 | 5,676.6 | 698.0 | -483.9 | 840.6 | 1.10 | -0.76 | |
| 5,838.0 | 10.40 | 324.20 | 5,766.2 | 710.7 | -493.4 | 856.2 | 0.90 | 0.77 | |
| 5,930.0 | 10.20 | 323.10 | 5,856.7 | 724.0 | -503.1 | 872.4 | 0.30 | -0.22 | |
| 6,022.0 | 9.20 | 317.80 | 5,947.4 | 735.9 | -513.0 | 887.5 | 1.46 | -1.09 | |
| 6,113.0 | 9.40 | 325.80 | 6,037.2 | 747.5 | -522.0 | 901.9 | 1.44 | 0.22 | |
| 6,204.0 | 9.80 | 327.90 | 6,126.9 | 760.2 | -530.3 | 917.0 | 0.58 | 0.44 | |
| 6,296.0 | 9.20 | 329.50 | 6,217.7 | 773.1 | -538.2 | 932.1 | 0.71 | -0.65 | |
| 6,387.0 | 9.00 | 328.20 | 6,307.5 | 785.5 | -545.7 | 946.4 | 0.32 | -0.22 | |
| 6,478.0 | 8.50 | 327.40 | 6,397.5 | 797.2 | -553.0 | 960.2 | 0.57 | -0.55 | |
| 6,570.0 | 8.10 | 326.10 | 6,488.5 | 808.3 | -560.3 | 973.4 | 0.48 | -0.43 | |
| 6,662.0 | 7.20 | 324.40 | 6,579.7 | 818.4 | -567.3 | 985.5 | 1.01 | -0.98 | |
| 6,753.0 | 8.30 | 325.40 | 6,669.8 | 828.4 | -574.3 | 997.7 | 1.22 | 1.21 | |
| 6,845.0 | 9.10 | 334.30 | 6,760.8 | 840.4 | -581.3 | 1,011.5 | 1.70 | 0.87 | |
| 6,937.0 | 8.30 | 333.10 | 6,851.7 | 852.9 | -587.4 | 1,025.4 | 0.89 | -0.87 | |
| 7,029.0 | 8.10 | 330.90 | 6,942.8 | 864.5 | -593.6 | 1,038.5 | 0.40 | -0.22 | |
| 7,120.0 | 6.00 | 322.10 | 7,033.1 | 873.8 | -599.6 | 1,049.6 | 2.59 | -2.31 | |
| 7,212.0 | 4.90 | 309.80 | 7,124.7 | 880.1 | -605.6 | 1,057.9 | 1.74 | -1.20 | |
| 7,304.0 | 5.60 | 318.80 | 7,216.3 | 886.0 | -611.6 | 1,065.9 | 1.17 | 0.76 | |
| 7,396.0 | 3.90 | 343.40 | 7,308.0 | 892.4 | -615.4 | 1,073.3 | 2.84 | -1.85 | |
| 7,450.1 | 2.57 | 349.47 | 7,362.0 | 895.4 | -616.2 | 1,076.3 | 2.54 | -2.46 | 8511B-22 N22 496 TGT (Column) |
| 7,487.0 | 1.70 | 359.00 | 7,398.9 | 896.7 | -616.3 | 1,077.6 | 2.54 | -2.36 | |
| 7,579.0 | 0.50 | 135.70 | 7,490.9 | 897.8 | -616.1 | 1,078.4 | 2.27 | -1.30 | |
| 7,670.0 | 0.50 | 39.30 | 7,581.9 | 897.8 | -615.5 | 1,078.2 | 0.82 | 0.00 | |
| 7,945.0 | 0.90 | 211.10 | 7,856.9 | 896.9 | -615.9 | 1,077.5 | 0.51 | 0.15 | |
| 8,036.0 | 1.10 | 211.60 | 7,947.8 | 895.6 | -616.7 | 1,076.7 | 0.22 | 0.22 | |
| 8,128.0 | 0.30 | 149.60 | 8,039.8 | 894.6 | -617.1 | 1,076.0 | 1.08 | -0.87 | |
| 8,220.0 | 0.80 | 170.20 | 8,131.8 | 893.8 | -616.8 | 1,075.1 | 0.58 | 0.54 | |
| 8,311.0 | 0.70 | 31.00 | 8,222.8 | 893.6 | -616.4 | 1,074.8 | 1.55 | -0.11 | |
| 8,403.0 | 0.40 | 193.10 | 8,314.8 | 893.8 | -616.2 | 1,074.9 | 1.18 | -0.33 | |
| 8,495.0 | 0.50 | 345.00 | 8,406.8 | 893.9 | -616.4 | 1,075.0 | 0.95 | 0.11 | |
| 8,586.0 | 1.10 | 1.90 | 8,497.8 | 895.1 | -616.5 | 1,076.2 | 0.70 | 0.66 | |
| 8,677.0 | 0.90 | 343.00 | 8,588.8 | 896.7 | -616.7 | 1,077.6 | 0.42 | -0.22 | |
| 8,769.0 | 0.70 | 324.70 | 8,680.8 | 897.8 | -617.2 | 1,078.9 | 0.35 | -0.22 | |
| 8,861.0 | 0.90 | 308.70 | 8,772.8 | 898.7 | -618.1 | 1,080.1 | 0.32 | 0.22 | |
| 8,953.0 | 2.50 | 295.40 | 8,864.7 | 900.0 | -620.5 | 1,082.4 | 1.78 | 1.74 | |
| 9,044.0 | 2.20 | 274.80 | 8,955.7 | 901.0 | -624.0 | 1,084.8 | 0.98 | -0.33 | |
| 9,136.0 | 1.80 | 263.90 | 9,047.6 | 901.0 | -627.2 | 1,086.2 | 0.60 | -0.43 | |
| 9,228.0 | 1.00 | 267.20 | 9,139.6 | 900.8 | -629.4 | 1,087.1 | 0.87 | -0.87 | |
| 9,319.0 | 0.70 | 263.40 | 9,230.6 | 900.7 | -630.8 | 1,087.6 | 0.34 | -0.33 | |
| 9,411.0 | 0.70 | 244.70 | 9,322.6 | 900.4 | -631.8 | 1,087.8 | 0.25 | 0.00 | |
| 9,502.0 | 0.60 | 239.40 | 9,413.6 | 899.9 | -632.8 | 1,087.8 | 0.13 | -0.11 | |
| 9,593.0 | 0.40 | 6.40 | 9,504.6 | 900.0 | -633.1 | 1,088.0 | 0.99 | -0.22 | |
| 9,685.0 | 0.90 | 355.10 | 9,596.6 | 901.1 | -633.2 | 1,088.9 | 0.56 | 0.54 | |
| 9,776.0 | 0.80 | 301.70 | 9,687.6 | 902.1 | -633.8 | 1,090.1 | 0.85 | -0.11 | |
| 9,867.0 | 1.60 | 257.90 | 9,778.5 | 902.2 | -635.5 | 1,091.0 | 1.28 | 0.88 | |
| 9,959.0 | 2.50 | 244.10 | 9,870.5 | 901.0 | -638.6 | 1,091.3 | 1.11 | 0.98 | |
| 10,051.0 | 2.60 | 254.10 | 9,962.4 | 899.6 | -642.4 | 1,091.7 | 0.49 | 0.11 | |
| 10,142.0 | 2.40 | 245.30 | 10,053.3 | 898.2 | -646.1 | 1,092.2 | 0.48 | -0.22 | |
| 10,233.0 | 1.90 | 238.80 | 10,144.2 | 896.6 | -649.1 | 1,092.1 | 0.61 | -0.55 | |
| 10,325.0 | 1.40 | 240.70 | 10,236.2 | 895.3 | -651.4 | 1,091.9 | 0.55 | -0.54 | |
| 10,417.0 | 0.50 | 231.90 | 10,328.2 | 894.5 | -652.7 | 1,091.8 | 0.99 | -0.98 | |
| 10,508.0 | 0.80 | 72.30 | 10,419.2 | 894.5 | -652.4 | 1,091.6 | 1.41 | 0.33 | |

Survey Report

| | | | |
|------------------|---|-------------------------------------|----------------------------------|
| Company: | EnCana Oil & Gas (USA) Inc | Local Co-ordinate Reference: | Well 8511B-22 N22 496 |
| Project: | Story Gulch | TVD Reference: | WELL @ 7602.0ft (Patterson #306) |
| Site: | S22-T4S-R96W (N22 496) (Column Pattern) | MD Reference: | WELL @ 7602.0ft (Patterson #306) |
| Well: | 8511B-22 N22 496 | North Reference: | True |
| Wellbore: | DD | 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 |
| 10,599.0 | 2.50 | 94.30 | 10,510.1 | 894.5 | -649.9 | 1,090.5 | 1.96 | 1.87 | |
| 10,691.0 | 2.70 | 100.40 | 10,602.0 | 894.0 | -645.7 | 1,088.2 | 0.37 | 0.22 | |
| 10,783.0 | 1.70 | 107.60 | 10,694.0 | 893.2 | -642.3 | 1,085.9 | 1.13 | -1.09 | |
| 10,874.0 | 0.90 | 154.90 | 10,784.9 | 892.1 | -640.7 | 1,084.3 | 1.40 | -0.88 | |
| 10,966.0 | 1.30 | 191.30 | 10,876.9 | 890.4 | -640.6 | 1,082.7 | 0.85 | 0.43 | |
| 11,058.0 | 1.50 | 207.10 | 10,968.9 | 888.3 | -641.3 | 1,081.2 | 0.47 | 0.22 | |
| 11,111.0 | 1.55 | 227.75 | 11,021.8 | 887.2 | -642.2 | 1,080.6 | 1.04 | 0.09 | 8511B-22 N22 496 PBHL (Column) |
| 11,150.0 | 1.70 | 241.00 | 11,060.9 | 886.6 | -643.1 | 1,080.4 | 1.04 | 0.39 | |
| 11,179.0 | 2.20 | 245.40 | 11,089.8 | 886.1 | -644.0 | 1,080.4 | 1.80 | 1.72 | Last Cathedral Survey @ 11179' MD |
| 11,244.0 | 2.20 | 245.40 | 11,154.8 | 885.1 | -646.2 | 1,080.5 | 0.00 | 0.00 | Projection to Bit @ 11244' 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 | | | | | | | | | |
| 8511B-22 N22 496 PBHL | 0.00 | 0.00 | 11,022.0 | 885.7 | -632.6 | 1,685,850.56 | 2,251,663.59 | 39° 41' 10.97 N | 108° 9' 33.76 W |
| - actual wellpath misses target center by 9.7ft at 11111.0ft MD (11021.8 TVD, 887.2 N, -642.2 E) | | | | | | | | | |
| - Rectangle (sides W30.0 H50.0 D0.0) | | | | | | | | | |
| 8511B-22 N22 496 TGT | 0.00 | 0.00 | 7,362.0 | 895.7 | -615.6 | 1,685,860.05 | 2,251,680.85 | 39° 41' 11.07 N | 108° 9' 33.54 W |
| - actual wellpath misses target center by 0.7ft at 7450.1ft MD (7362.0 TVD, 895.4 N, -616.2 E) | | | | | | | | | |
| - Point | | | | | | | | | |

| Design Annotations | | | | |
|---------------------|---------------------|-------------------|------------|-----------------------------------|
| Measured Depth (ft) | Vertical Depth (ft) | Local Coordinates | | Comment |
| | | +N/-S (ft) | +E/-W (ft) | |
| 11,179.0 | 11,089.8 | 886.1 | -644.0 | Last Cathedral Survey @ 11179' MD |
| 11,244.0 | 11,154.8 | 885.1 | -646.2 | Projection to Bit @ 11244' MD |

Checked By: _____ Approved By: _____ Date: _____