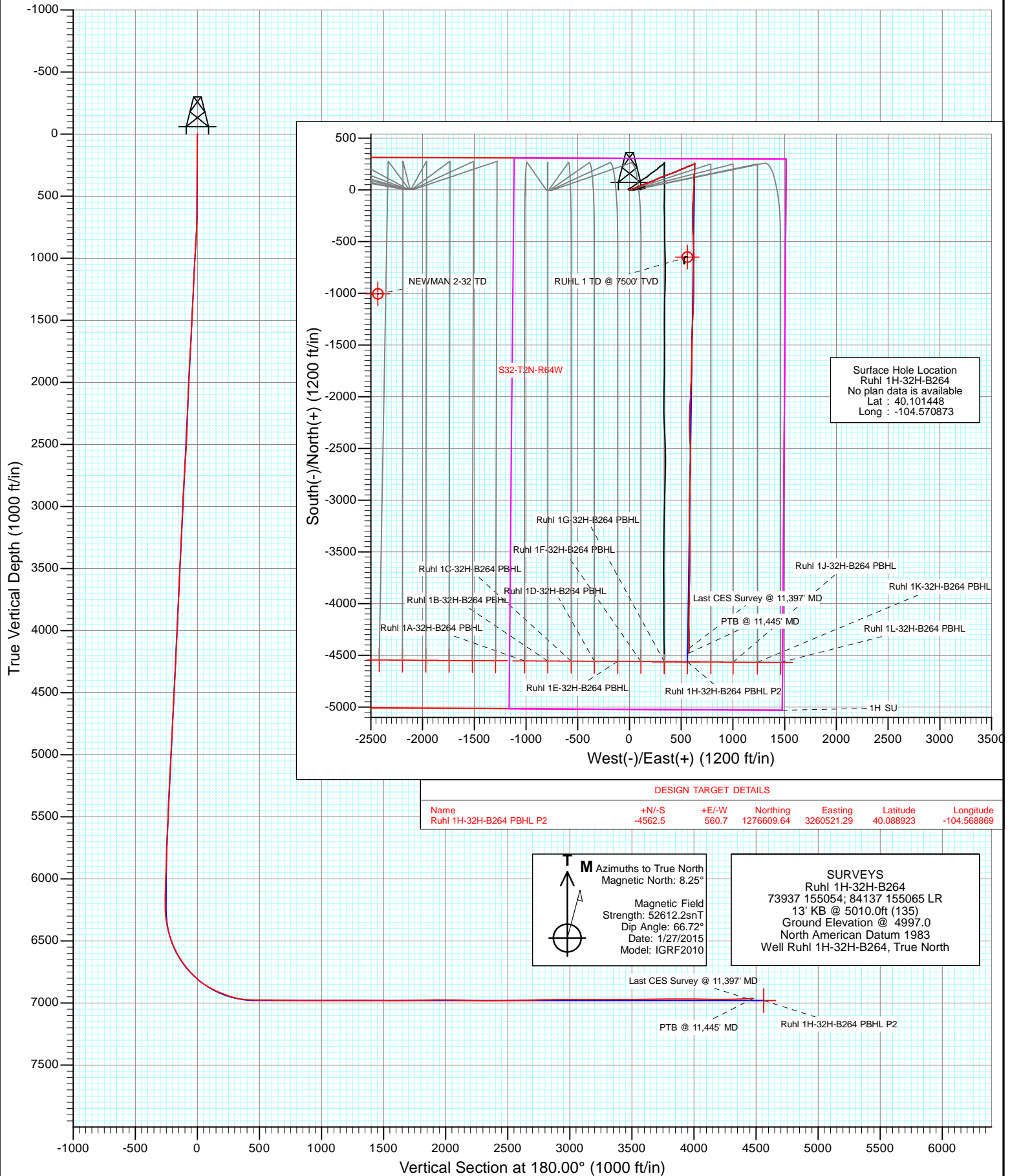




Project: DJ Wattenberg
 Site: S32-T2N-R64W (Newman/Ruhl)
 Well: Ruhl 1H-32H-B264
 Wellbore: Hz
 Design: SURVEYS



HP

Survey Report

| | | | |
|------------------|----------------------------|-------------------------------------|------------------------------|
| Company: | EnCana Oil & Gas (USA) Inc | Local Co-ordinate Reference: | Well Ruhl 1H-32H-B264 |
| Project: | DJ Wattenberg | TVD Reference: | 13' KB @ 5010.0ft (135) |
| Site: | S32-T2N-R64W (Newman/Ruhl) | MD Reference: | 13' KB @ 5010.0ft (135) |
| Well: | Ruhl 1H-32H-B264 | North Reference: | True |
| Wellbore: | Hz | Survey Calculation Method: | Minimum Curvature |
| Design: | SURVEYS | Database: | USA EDM R5000 Multi Users DB |

| | | | |
|--------------------|---------------------------|----------------------|----------------|
| Project | DJ Wattenberg | | |
| Map System: | US State Plane 1983 | System Datum: | Mean Sea Level |
| Geo Datum: | North American Datum 1983 | | |
| Map Zone: | Colorado Northern Zone | | |

| | | | | | |
|-----------------------|----------|----------------------------|-----------------|-------------------|-------------|
| Site | | S32-T2N-R64W (Newman/Ruhl) | | | |
| Site Position: | | Northing: | 1,281,150.65 ft | Latitude: | 40.101468 |
| From: | Lat/Long | Easting: | 3,257,734.55 ft | Longitude: | -104.578660 |
| Position Uncertainty: | 0.0 ft | Slot Radius: | 13.200 in | Grid Convergence: | 0.60 ° |

| | | | | | | |
|----------------------|------------------|--------|---------------------|-----------------|---------------|-------------|
| Well | Ruhl 1H-32H-B264 | | | | | |
| Well Position | +N/-S | 0.0 ft | Northing: | 1,281,166.06 ft | Latitude: | 40.101448 |
| | +E/-W | 0.0 ft | Easting: | 3,259,912.82 ft | Longitude: | -104.570873 |
| Position Uncertainty | | 0.0 ft | Wellhead Elevation: | 0.0 ft | Ground Level: | 4,997.0 ft |

| | | | | | |
|------------------|-------------------|--------------------|------------------------|----------------------|----------------------------|
| Wellbore | Hz | | | | |
| Magnetics | Model Name | Sample Date | Declination (°) | Dip Angle (°) | Field Strength (nT) |
| | IGRF2010 | 1/27/2015 | 8.25 | 66.72 | 52,612 |

| | | | | | |
|--------------------------|-------------------------|---------------|--------------|----------------------|-----|
| Design | SURVEYS | | | | |
| 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 | 180.00 | |

| | | | | | |
|-----------------------|----------------|--------------------------|------------------|--------------------|--|
| Survey Program | Date | 2/2/2015 | | | |
| From (ft) | To (ft) | Survey (Wellbore) | Tool Name | Description | |
| 235.0 | 11,445.0 | Survey #1 (Hz) | Geolink 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 | | |
| 235.0 | 0.40 | 44.60 | 235.0 | 0.6 | 0.6 | -0.6 | 0.17 | 0.17 | | |
| 327.0 | 0.50 | 18.20 | 327.0 | 1.2 | 0.9 | -1.2 | 0.25 | 0.11 | | |
| 419.0 | 1.80 | 86.50 | 419.0 | 1.7 | 2.5 | -1.7 | 1.83 | 1.41 | | |
| 510.0 | 1.60 | 75.20 | 509.9 | 2.1 | 5.1 | -2.1 | 0.43 | -0.22 | | |
| 602.0 | 3.00 | 83.50 | 601.9 | 2.7 | 8.8 | -2.7 | 1.56 | 1.52 | | |
| 694.0 | 5.50 | 76.70 | 693.6 | 4.0 | 15.5 | -4.0 | 2.77 | 2.72 | | |
| 785.0 | 8.60 | 74.40 | 783.9 | 6.8 | 26.3 | -6.8 | 3.42 | 3.41 | | |
| 877.0 | 8.90 | 67.50 | 874.8 | 11.4 | 39.5 | -11.4 | 1.19 | 0.33 | | |
| 969.0 | 8.40 | 62.70 | 965.8 | 17.2 | 52.0 | -17.2 | 0.95 | -0.54 | | |
| 1,061.0 | 7.90 | 67.80 | 1,056.9 | 22.6 | 63.8 | -22.6 | 0.95 | -0.54 | | |
| 1,104.0 | 7.10 | 68.50 | 1,099.5 | 24.7 | 69.0 | -24.7 | 1.87 | -1.86 | | |
| 1,204.0 | 6.80 | 66.90 | 1,198.8 | 29.3 | 80.2 | -29.3 | 0.36 | -0.30 | | |

HP

Survey Report

| | | | |
|------------------|----------------------------|-------------------------------------|------------------------------|
| Company: | EnCana Oil & Gas (USA) Inc | Local Co-ordinate Reference: | Well Ruhl 1H-32H-B264 |
| Project: | DJ Wattenberg | TVD Reference: | 13' KB @ 5010.0ft (135) |
| Site: | S32-T2N-R64W (Newman/Ruhl) | MD Reference: | 13' KB @ 5010.0ft (135) |
| Well: | Ruhl 1H-32H-B264 | North Reference: | True |
| Wellbore: | Hz | Survey Calculation Method: | Minimum Curvature |
| Design: | SURVEYS | Database: | USA EDM R5000 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 |
|---------------------|-----------------|-------------|---------------------|------------|------------|-----------------------|-----------------------|----------------------|-----------------------|
| 1,295.0 | 7.30 | 70.30 | 1,289.1 | 33.4 | 90.6 | -33.4 | 0.72 | 0.55 | |
| 1,387.0 | 7.40 | 70.70 | 1,380.3 | 37.3 | 101.7 | -37.3 | 0.12 | 0.11 | |
| 1,479.0 | 7.00 | 70.10 | 1,471.6 | 41.2 | 112.6 | -41.2 | 0.44 | -0.43 | |
| 1,571.0 | 8.40 | 72.40 | 1,562.8 | 45.1 | 124.3 | -45.1 | 1.56 | 1.52 | |
| 1,662.0 | 7.70 | 64.10 | 1,652.9 | 49.8 | 136.1 | -49.8 | 1.49 | -0.77 | |
| 1,754.0 | 7.80 | 62.30 | 1,744.0 | 55.4 | 147.2 | -55.4 | 0.29 | 0.11 | |
| 1,845.0 | 8.00 | 59.80 | 1,834.2 | 61.4 | 158.1 | -61.4 | 0.44 | 0.22 | |
| 1,937.0 | 6.90 | 65.60 | 1,925.4 | 66.9 | 168.7 | -66.9 | 1.45 | -1.20 | |
| 2,028.0 | 6.80 | 75.00 | 2,015.7 | 70.6 | 178.9 | -70.6 | 1.24 | -0.11 | |
| 2,120.0 | 6.80 | 72.10 | 2,107.1 | 73.7 | 189.3 | -73.7 | 0.37 | 0.00 | |
| 2,212.0 | 6.40 | 72.60 | 2,198.5 | 76.9 | 199.4 | -76.9 | 0.44 | -0.43 | |
| 2,303.0 | 7.80 | 75.60 | 2,288.8 | 79.9 | 210.2 | -79.9 | 1.59 | 1.54 | |
| 2,395.0 | 7.30 | 72.10 | 2,380.0 | 83.3 | 221.8 | -83.3 | 0.74 | -0.54 | |
| 2,490.0 | 7.00 | 72.80 | 2,474.2 | 86.9 | 233.1 | -86.9 | 0.33 | -0.32 | |
| 2,584.0 | 7.50 | 56.80 | 2,567.5 | 91.9 | 243.7 | -91.9 | 2.21 | 0.53 | |
| 2,679.0 | 7.30 | 53.20 | 2,661.7 | 98.9 | 253.7 | -98.9 | 0.53 | -0.21 | |
| 2,774.0 | 7.60 | 60.20 | 2,755.9 | 105.7 | 264.0 | -105.7 | 1.01 | 0.32 | |
| 2,868.0 | 7.30 | 69.90 | 2,849.1 | 110.8 | 275.0 | -110.8 | 1.37 | -0.32 | |
| 2,963.0 | 7.00 | 69.00 | 2,943.4 | 115.0 | 286.1 | -115.0 | 0.34 | -0.32 | |
| 3,057.0 | 8.00 | 70.10 | 3,036.6 | 119.2 | 297.6 | -119.2 | 1.07 | 1.06 | |
| 3,152.0 | 7.80 | 68.20 | 3,130.7 | 123.9 | 309.8 | -123.9 | 0.35 | -0.21 | |
| 3,246.0 | 7.30 | 68.10 | 3,223.9 | 128.5 | 321.2 | -128.5 | 0.53 | -0.53 | |
| 3,341.0 | 7.30 | 71.30 | 3,318.1 | 132.7 | 332.5 | -132.7 | 0.43 | 0.00 | |
| 3,435.0 | 7.40 | 69.30 | 3,411.3 | 136.7 | 343.9 | -136.7 | 0.29 | 0.11 | |
| 3,530.0 | 8.30 | 71.00 | 3,505.4 | 141.1 | 356.1 | -141.1 | 0.98 | 0.95 | |
| 3,625.0 | 6.70 | 68.50 | 3,599.6 | 145.4 | 367.7 | -145.4 | 1.72 | -1.68 | |
| 3,719.0 | 8.00 | 70.90 | 3,692.8 | 149.5 | 379.0 | -149.5 | 1.42 | 1.38 | |
| 3,814.0 | 6.90 | 66.30 | 3,787.0 | 154.0 | 390.5 | -154.0 | 1.32 | -1.16 | |
| 3,908.0 | 7.50 | 77.90 | 3,880.3 | 157.5 | 401.6 | -157.5 | 1.67 | 0.64 | |
| 4,003.0 | 6.60 | 69.60 | 3,974.6 | 160.7 | 412.8 | -160.7 | 1.43 | -0.95 | |
| 4,098.0 | 7.60 | 71.70 | 4,068.9 | 164.6 | 423.9 | -164.6 | 1.09 | 1.05 | |
| 4,193.0 | 7.70 | 69.90 | 4,163.0 | 168.8 | 435.8 | -168.8 | 0.27 | 0.11 | |
| 4,287.0 | 7.80 | 66.70 | 4,256.1 | 173.5 | 447.6 | -173.5 | 0.47 | 0.11 | |
| 4,382.0 | 7.50 | 65.40 | 4,350.3 | 178.6 | 459.2 | -178.6 | 0.36 | -0.32 | |
| 4,476.0 | 7.40 | 63.40 | 4,443.5 | 183.9 | 470.2 | -183.9 | 0.30 | -0.11 | |
| 4,571.0 | 7.20 | 61.20 | 4,537.7 | 189.5 | 480.9 | -189.5 | 0.36 | -0.21 | |
| 4,666.0 | 7.10 | 63.50 | 4,632.0 | 195.0 | 491.3 | -195.0 | 0.32 | -0.11 | |
| 4,760.0 | 7.30 | 72.10 | 4,725.3 | 199.4 | 502.2 | -199.4 | 1.17 | 0.21 | |
| 4,855.0 | 6.90 | 70.70 | 4,819.5 | 203.1 | 513.3 | -203.1 | 0.46 | -0.42 | |
| 4,949.0 | 6.60 | 65.30 | 4,912.9 | 207.2 | 523.6 | -207.2 | 0.75 | -0.32 | |
| 5,044.0 | 6.90 | 66.30 | 5,007.2 | 211.8 | 533.8 | -211.8 | 0.34 | 0.32 | |
| 5,138.0 | 6.10 | 63.10 | 5,100.6 | 216.3 | 543.4 | -216.3 | 0.93 | -0.85 | |
| 5,233.0 | 7.30 | 64.70 | 5,195.0 | 221.2 | 553.3 | -221.2 | 1.28 | 1.26 | |
| 5,328.0 | 6.90 | 61.20 | 5,289.2 | 226.5 | 563.8 | -226.5 | 0.62 | -0.42 | |
| 5,422.0 | 6.20 | 64.20 | 5,382.6 | 231.5 | 573.3 | -231.5 | 0.83 | -0.74 | |
| 5,517.0 | 6.40 | 78.10 | 5,477.1 | 234.8 | 583.1 | -234.8 | 1.62 | 0.21 | |
| 5,611.0 | 6.90 | 72.40 | 5,570.4 | 237.6 | 593.6 | -237.6 | 0.88 | 0.53 | |
| 5,706.0 | 5.70 | 64.60 | 5,664.9 | 241.3 | 603.3 | -241.3 | 1.55 | -1.26 | |
| 5,801.0 | 4.50 | 58.90 | 5,759.5 | 245.3 | 610.8 | -245.3 | 1.37 | -1.26 | |
| 5,895.0 | 4.50 | 68.50 | 5,853.2 | 248.5 | 617.4 | -248.5 | 0.80 | 0.00 | |
| 5,990.0 | 3.90 | 59.20 | 5,947.9 | 251.6 | 623.6 | -251.6 | 0.95 | -0.63 | |
| 6,085.0 | 3.60 | 52.10 | 6,042.7 | 255.0 | 628.7 | -255.0 | 0.58 | -0.32 | |
| 6,179.0 | 2.20 | 359.60 | 6,136.6 | 258.7 | 631.1 | -258.7 | 3.04 | -1.49 | |

HP

Survey Report

| | | | |
|------------------|----------------------------|-------------------------------------|------------------------------|
| Company: | EnCana Oil & Gas (USA) Inc | Local Co-ordinate Reference: | Well Ruhl 1H-32H-B264 |
| Project: | DJ Wattenberg | TVD Reference: | 13' KB @ 5010.0ft (135) |
| Site: | S32-T2N-R64W (Newman/Ruhl) | MD Reference: | 13' KB @ 5010.0ft (135) |
| Well: | Ruhl 1H-32H-B264 | North Reference: | True |
| Wellbore: | Hz | Survey Calculation Method: | Minimum Curvature |
| Design: | SURVEYS | Database: | USA EDM R5000 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 |
| 6,274.0 | 2.20 | 190.20 | 6,231.6 | 258.7 | 630.7 | -258.7 | 4.61 | 0.00 | |
| 6,319.0 | 2.90 | 188.00 | 6,276.6 | 256.7 | 630.4 | -256.7 | 1.57 | 1.56 | |
| 6,368.0 | 7.90 | 187.70 | 6,325.3 | 252.1 | 629.8 | -252.1 | 10.20 | 10.20 | |
| 6,415.0 | 11.30 | 184.40 | 6,371.7 | 244.4 | 629.0 | -244.4 | 7.33 | 7.23 | |
| 6,462.0 | 14.20 | 180.70 | 6,417.5 | 234.0 | 628.6 | -234.0 | 6.41 | 6.17 | |
| 6,509.0 | 17.10 | 177.50 | 6,462.7 | 221.3 | 628.8 | -221.3 | 6.44 | 6.17 | |
| 6,557.0 | 20.80 | 178.40 | 6,508.1 | 205.7 | 629.4 | -205.7 | 7.73 | 7.71 | |
| 6,604.0 | 25.10 | 183.00 | 6,551.4 | 187.4 | 629.1 | -187.4 | 9.91 | 9.15 | |
| 6,652.0 | 28.30 | 185.40 | 6,594.3 | 165.9 | 627.5 | -165.9 | 7.03 | 6.67 | |
| 6,699.0 | 31.10 | 184.60 | 6,635.1 | 142.7 | 625.4 | -142.7 | 6.02 | 5.96 | |
| 6,746.0 | 34.20 | 181.60 | 6,674.7 | 117.4 | 624.1 | -117.4 | 7.44 | 6.60 | |
| 6,793.0 | 38.30 | 178.10 | 6,712.6 | 89.7 | 624.2 | -89.7 | 9.77 | 8.72 | |
| 6,841.0 | 42.20 | 178.90 | 6,749.2 | 58.7 | 625.0 | -58.7 | 8.20 | 8.12 | |
| 6,888.0 | 46.00 | 183.20 | 6,783.0 | 26.0 | 624.4 | -26.0 | 10.29 | 8.09 | |
| 6,935.0 | 49.80 | 184.90 | 6,814.5 | -8.8 | 621.9 | 8.8 | 8.52 | 8.09 | |
| 6,982.0 | 55.00 | 185.40 | 6,843.1 | -45.9 | 618.5 | 45.9 | 11.10 | 11.06 | |
| 7,030.0 | 59.50 | 184.10 | 6,869.1 | -86.1 | 615.2 | 86.1 | 9.65 | 9.37 | |
| 7,077.0 | 63.20 | 182.50 | 6,891.6 | -127.3 | 612.8 | 127.3 | 8.42 | 7.87 | |
| 7,124.0 | 66.90 | 181.00 | 6,911.4 | -169.8 | 611.6 | 169.8 | 8.39 | 7.87 | |
| 7,171.0 | 69.50 | 180.50 | 6,928.9 | -213.5 | 611.0 | 213.5 | 5.62 | 5.53 | |
| 7,219.0 | 70.90 | 180.80 | 6,945.2 | -258.6 | 610.5 | 258.6 | 2.98 | 2.92 | |
| 7,266.0 | 74.50 | 179.80 | 6,959.1 | -303.5 | 610.2 | 303.5 | 7.92 | 7.66 | |
| 7,313.0 | 81.80 | 177.90 | 6,968.8 | -349.5 | 611.2 | 349.5 | 16.03 | 15.53 | |
| 7,360.0 | 86.00 | 177.40 | 6,973.8 | -396.1 | 613.1 | 396.1 | 9.00 | 8.94 | |
| 7,398.0 | 88.70 | 177.30 | 6,975.5 | -434.1 | 614.8 | 434.1 | 7.11 | 7.11 | |
| 7,440.0 | 89.80 | 176.90 | 6,976.1 | -476.0 | 617.0 | 476.0 | 2.79 | 2.62 | |
| 7,488.0 | 89.80 | 176.80 | 6,976.2 | -523.9 | 619.6 | 523.9 | 0.21 | 0.00 | |
| 7,544.0 | 89.00 | 178.50 | 6,976.8 | -579.9 | 621.9 | 579.9 | 3.35 | -1.43 | |
| 7,582.0 | 88.90 | 179.30 | 6,977.5 | -617.9 | 622.6 | 617.9 | 2.12 | -0.26 | |
| 7,622.0 | 89.40 | 181.20 | 6,978.1 | -657.8 | 622.5 | 657.8 | 4.91 | 1.25 | |
| 7,677.0 | 89.50 | 180.90 | 6,978.7 | -712.8 | 621.5 | 712.8 | 0.57 | 0.18 | |
| 7,771.0 | 89.50 | 180.30 | 6,979.5 | -806.8 | 620.5 | 806.8 | 0.64 | 0.00 | |
| 7,866.0 | 89.50 | 179.50 | 6,980.3 | -901.8 | 620.6 | 901.8 | 0.84 | 0.00 | |
| 7,961.0 | 90.80 | 181.30 | 6,980.1 | -996.8 | 620.0 | 996.8 | 2.34 | 1.37 | |
| 8,055.0 | 90.70 | 182.10 | 6,978.8 | -1,090.8 | 617.2 | 1,090.8 | 0.86 | -0.11 | |
| 8,150.0 | 89.40 | 182.60 | 6,978.7 | -1,185.7 | 613.3 | 1,185.7 | 1.47 | -1.37 | |
| 8,245.0 | 89.80 | 181.90 | 6,979.4 | -1,280.6 | 609.6 | 1,280.6 | 0.85 | 0.42 | |
| 8,339.0 | 90.30 | 181.50 | 6,979.3 | -1,374.6 | 606.8 | 1,374.6 | 0.68 | 0.53 | |
| 8,434.0 | 88.90 | 181.70 | 6,980.0 | -1,469.5 | 604.1 | 1,469.5 | 1.49 | -1.47 | |
| 8,528.0 | 89.50 | 180.70 | 6,981.3 | -1,563.5 | 602.1 | 1,563.5 | 1.24 | 0.64 | |
| 8,623.0 | 91.60 | 180.00 | 6,980.4 | -1,658.5 | 601.6 | 1,658.5 | 2.33 | 2.21 | |
| 8,717.0 | 91.30 | 181.50 | 6,978.0 | -1,752.4 | 600.3 | 1,752.4 | 1.63 | -0.32 | |
| 8,812.0 | 90.20 | 182.30 | 6,976.8 | -1,847.4 | 597.2 | 1,847.4 | 1.43 | -1.16 | |
| 8,907.0 | 90.40 | 182.90 | 6,976.3 | -1,942.3 | 592.9 | 1,942.3 | 0.67 | 0.21 | |
| 9,001.0 | 89.80 | 183.80 | 6,976.1 | -2,036.1 | 587.4 | 2,036.1 | 1.15 | -0.64 | |
| 9,096.0 | 88.40 | 181.50 | 6,977.6 | -2,131.0 | 583.0 | 2,131.0 | 2.83 | -1.47 | |
| 9,191.0 | 87.40 | 181.10 | 6,981.1 | -2,225.9 | 580.8 | 2,225.9 | 1.13 | -1.05 | |
| 9,285.0 | 89.10 | 178.30 | 6,983.9 | -2,319.8 | 581.3 | 2,319.8 | 3.48 | 1.81 | |
| 9,380.0 | 90.90 | 177.00 | 6,983.9 | -2,414.8 | 585.2 | 2,414.8 | 2.34 | 1.89 | |
| 9,474.0 | 92.00 | 179.10 | 6,981.6 | -2,508.7 | 588.4 | 2,508.7 | 2.52 | 1.17 | |
| 9,569.0 | 91.70 | 180.30 | 6,978.5 | -2,603.6 | 588.9 | 2,603.6 | 1.30 | -0.32 | |
| 9,663.0 | 90.80 | 181.50 | 6,976.4 | -2,697.6 | 587.4 | 2,697.6 | 1.60 | -0.96 | |
| 9,758.0 | 92.00 | 181.10 | 6,974.1 | -2,792.5 | 585.3 | 2,792.5 | 1.33 | 1.26 | |

HP

Survey Report

| | | | |
|------------------|----------------------------|-------------------------------------|------------------------------|
| Company: | EnCana Oil & Gas (USA) Inc | Local Co-ordinate Reference: | Well Ruhl 1H-32H-B264 |
| Project: | DJ Wattenberg | TVD Reference: | 13' KB @ 5010.0ft (135) |
| Site: | S32-T2N-R64W (Newman/Ruhl) | MD Reference: | 13' KB @ 5010.0ft (135) |
| Well: | Ruhl 1H-32H-B264 | North Reference: | True |
| Wellbore: | Hz | Survey Calculation Method: | Minimum Curvature |
| Design: | SURVEYS | Database: | USA EDM R5000 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 |
| 9,852.0 | 89.30 | 181.40 | 6,973.1 | -2,886.5 | 583.2 | 2,886.5 | 2.89 | -2.87 | |
| 9,947.0 | 90.10 | 180.90 | 6,973.6 | -2,981.5 | 581.3 | 2,981.5 | 0.99 | 0.84 | |
| 10,041.0 | 90.10 | 180.60 | 6,973.4 | -3,075.5 | 580.1 | 3,075.5 | 0.32 | 0.00 | |
| 10,136.0 | 89.90 | 179.70 | 6,973.4 | -3,170.5 | 579.9 | 3,170.5 | 0.97 | -0.21 | |
| 10,230.0 | 89.80 | 179.20 | 6,973.6 | -3,264.4 | 580.8 | 3,264.4 | 0.54 | -0.11 | |
| 10,325.0 | 89.80 | 179.00 | 6,974.0 | -3,359.4 | 582.3 | 3,359.4 | 0.21 | 0.00 | |
| 10,420.0 | 91.60 | 179.40 | 6,972.8 | -3,454.4 | 583.6 | 3,454.4 | 1.94 | 1.89 | |
| 10,514.0 | 90.80 | 181.10 | 6,970.8 | -3,548.4 | 583.2 | 3,548.4 | 2.00 | -0.85 | |
| 10,608.0 | 90.20 | 181.00 | 6,970.0 | -3,642.4 | 581.4 | 3,642.4 | 0.65 | -0.64 | |
| 10,703.0 | 90.30 | 180.20 | 6,969.6 | -3,737.4 | 580.4 | 3,737.4 | 0.85 | 0.11 | |
| 10,798.0 | 91.50 | 181.70 | 6,968.1 | -3,832.3 | 578.9 | 3,832.3 | 2.02 | 1.26 | |
| 10,892.0 | 89.40 | 181.20 | 6,967.4 | -3,926.3 | 576.5 | 3,926.3 | 2.30 | -2.23 | |
| 10,987.0 | 89.20 | 180.90 | 6,968.5 | -4,021.3 | 574.8 | 4,021.3 | 0.38 | -0.21 | |
| 11,081.0 | 88.80 | 180.60 | 6,970.2 | -4,115.3 | 573.5 | 4,115.3 | 0.53 | -0.43 | |
| 11,176.0 | 89.30 | 179.10 | 6,971.8 | -4,210.2 | 573.8 | 4,210.2 | 1.66 | 0.53 | |
| 11,270.0 | 92.10 | 178.80 | 6,970.6 | -4,304.2 | 575.5 | 4,304.2 | 3.00 | 2.98 | |
| 11,365.0 | 92.20 | 181.20 | 6,967.0 | -4,399.1 | 575.5 | 4,399.1 | 2.53 | 0.11 | |
| 11,397.0 | 92.40 | 181.20 | 6,965.8 | -4,431.1 | 574.8 | 4,431.1 | 0.62 | 0.62 | Last CES Survey @ 11,397' MD |
| 11,445.0 | 92.40 | 181.20 | 6,963.7 | -4,479.0 | 573.8 | 4,479.0 | 0.00 | 0.00 | PTB @ 11,445' 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 | | | | | | | | | |
| Ruhl 1H-32H-B264 PBH | 0.00 | 0.00 | 6,960.0 | -4,562.5 | 560.7 | 1,276,609.64 | 3,260,521.29 | 40.088923 | -104.568869 |
| - survey misses target center by 84.6ft at 11445.0ft MD (6963.7 TVD, -4479.0 N, 573.8 E) | | | | | | | | | |
| - Point | | | | | | | | | |
| Ruhl 1H-32H-B264 PBH | 0.00 | 0.00 | 6,980.0 | -4,562.5 | 560.7 | 1,276,609.64 | 3,260,521.29 | 40.088923 | -104.568869 |
| - survey misses target center by 86.1ft at 11445.0ft MD (6963.7 TVD, -4479.0 N, 573.8 E) | | | | | | | | | |
| - Point | | | | | | | | | |

| Survey Annotations | | | | | |
|---------------------|---------------------|-------------------|------------|------------------------------|--|
| Measured Depth (ft) | Vertical Depth (ft) | Local Coordinates | | | |
| | | +N/-S (ft) | +E/-W (ft) | Comment | |
| 11,397.0 | 6,965.8 | -4,431.1 | 574.8 | Last CES Survey @ 11,397' MD | |
| 11,445.0 | 6,963.7 | -4,479.0 | 573.8 | PTB @ 11,445' MD | |

| | | |
|-------------------|--------------------|-------------|
| Checked By: _____ | Approved By: _____ | Date: _____ |
|-------------------|--------------------|-------------|

EnCana Oil & Gas (USA) Inc

DJ Wattenberg

S32-T2N-R64W (Newman/Ruhl)

Ruhl 1H-32H-B264

Hz

Survey: Survey #1

Survey Report - Geographic

02 February, 2015

HP

Survey Report - Geographic

| | | | |
|------------------|----------------------------|-------------------------------------|------------------------------|
| Company: | EnCana Oil & Gas (USA) Inc | Local Co-ordinate Reference: | Well Ruhl 1H-32H-B264 |
| Project: | DJ Wattenberg | TVD Reference: | 13' KB @ 5010.0ft (135) |
| Site: | S32-T2N-R64W (Newman/Ruhl) | MD Reference: | 13' KB @ 5010.0ft (135) |
| Well: | Ruhl 1H-32H-B264 | North Reference: | True |
| Wellbore: | Hz | Survey Calculation Method: | Minimum Curvature |
| Design: | SURVEYS | Database: | USA EDM R5000 Multi Users DB |

| | | | |
|--------------------|---------------------------|----------------------|----------------|
| Project | DJ Wattenberg | | |
| Map System: | US State Plane 1983 | System Datum: | Mean Sea Level |
| Geo Datum: | North American Datum 1983 | | |
| Map Zone: | Colorado Northern Zone | | |

| | | | | | |
|-----------------------|----------|----------------------------|-----------------|-------------------|-------------|
| Site | | S32-T2N-R64W (Newman/Ruhl) | | | |
| Site Position: | | Northing: | 1,281,150.65 ft | Latitude: | 40.101468 |
| From: | Lat/Long | Easting: | 3,257,734.55 ft | Longitude: | -104.578660 |
| Position Uncertainty: | 0.0 ft | Slot Radius: | 13.200 in | Grid Convergence: | 0.60 ° |

| | | | | | | |
|----------------------|------------------|--------|---------------------|-----------------|---------------|-------------|
| Well | Ruhl 1H-32H-B264 | | | | | |
| Well Position | +N/-S | 0.0 ft | Northing: | 1,281,166.06 ft | Latitude: | 40.101448 |
| | +E/-W | 0.0 ft | Easting: | 3,259,912.82 ft | Longitude: | -104.570873 |
| Position Uncertainty | | 0.0 ft | Wellhead Elevation: | 0.0 ft | Ground Level: | 4,997.0 ft |

| | | | | | |
|------------------|-------------------|--------------------|------------------------|----------------------|----------------------------|
| Wellbore | Hz | | | | |
| Magnetics | Model Name | Sample Date | Declination (°) | Dip Angle (°) | Field Strength (nT) |
| | IGRF2010 | 1/27/2015 | 8.25 | 66.72 | 52,612 |

| | | | | | |
|--------------------------|------------------------------|-------------------|-------------------|----------------------|-----|
| Design | SURVEYS | | | | |
| Audit Notes: | | | | | |
| Version: | 1.0 | Phase: | ACTUAL | Tie On Depth: | 0.0 |
| Vertical Section: | Depth From (TVD) (ft) | +N/-S (ft) | +E/-W (ft) | Direction (°) | |
| | 0.0 | 0.0 | 0.0 | 180.00 | |

| | | | | | |
|-----------------------|----------------|--------------------------|------------------|--------------------|--|
| Survey Program | Date | 2/2/2015 | | | |
| From (ft) | To (ft) | Survey (Wellbore) | Tool Name | Description | |
| 235.0 | 11,445.0 | Survey #1 (Hz) | Geolink MWD | Geolink MWD | |

| | | | | | | | | | | |
|----------------------------|------------------------|--------------------|----------------------------|-------------------|-------------------|--------------------------|-------------------------|-----------------|------------------|--|
| Survey | | | | | | | | | | |
| Measured Depth (ft) | Inclination (°) | Azimuth (°) | Vertical Depth (ft) | +N/-S (ft) | +E/-W (ft) | Map Northing (ft) | Map Easting (ft) | Latitude | Longitude | |
| 0.0 | 0.00 | 0.00 | 0.0 | 0.0 | 0.0 | 1,281,166.06 | 3,259,912.82 | 40.101448 | -104.570873 | |
| 235.0 | 0.40 | 44.60 | 235.0 | 0.6 | 0.6 | 1,281,166.65 | 3,259,913.39 | 40.101450 | -104.570871 | |
| 327.0 | 0.50 | 18.20 | 327.0 | 1.2 | 0.9 | 1,281,167.27 | 3,259,913.74 | 40.101451 | -104.570870 | |
| 419.0 | 1.80 | 86.50 | 419.0 | 1.7 | 2.5 | 1,281,167.75 | 3,259,915.30 | 40.101453 | -104.570864 | |
| 510.0 | 1.60 | 75.20 | 509.9 | 2.1 | 5.1 | 1,281,168.19 | 3,259,917.95 | 40.101454 | -104.570855 | |
| 602.0 | 3.00 | 83.50 | 601.9 | 2.7 | 8.8 | 1,281,168.83 | 3,259,921.58 | 40.101455 | -104.570842 | |
| 694.0 | 5.50 | 76.70 | 693.6 | 4.0 | 15.5 | 1,281,170.19 | 3,259,928.25 | 40.101459 | -104.570818 | |
| 785.0 | 8.60 | 74.40 | 783.9 | 6.8 | 26.3 | 1,281,173.13 | 3,259,939.02 | 40.101467 | -104.570779 | |
| 877.0 | 8.90 | 67.50 | 874.8 | 11.4 | 39.5 | 1,281,177.84 | 3,259,952.17 | 40.101479 | -104.570732 | |
| 969.0 | 8.40 | 62.70 | 965.8 | 17.2 | 52.0 | 1,281,183.78 | 3,259,964.65 | 40.101495 | -104.570687 | |
| 1,061.0 | 7.90 | 67.80 | 1,056.9 | 22.6 | 63.8 | 1,281,189.38 | 3,259,976.42 | 40.101510 | -104.570645 | |
| 1,104.0 | 7.10 | 68.50 | 1,099.5 | 24.7 | 69.0 | 1,281,191.52 | 3,259,981.61 | 40.101516 | -104.570626 | |

HP

Survey Report - Geographic

| | | | |
|------------------|----------------------------|-------------------------------------|------------------------------|
| Company: | EnCana Oil & Gas (USA) Inc | Local Co-ordinate Reference: | Well Ruhl 1H-32H-B264 |
| Project: | DJ Wattenberg | TVD Reference: | 13' KB @ 5010.0ft (135) |
| Site: | S32-T2N-R64W (Newman/Ruhl) | MD Reference: | 13' KB @ 5010.0ft (135) |
| Well: | Ruhl 1H-32H-B264 | North Reference: | True |
| Wellbore: | Hz | Survey Calculation Method: | Minimum Curvature |
| Design: | SURVEYS | Database: | USA EDM R5000 Multi Users DB |

| Survey | | | | | | | | | |
|---------------------|-----------------|-------------|---------------------|------------|------------|-------------------|------------------|-----------|-------------|
| Measured Depth (ft) | Inclination (°) | Azimuth (°) | Vertical Depth (ft) | +N/-S (ft) | +E/-W (ft) | Map Northing (ft) | Map Easting (ft) | Latitude | Longitude |
| 1,204.0 | 6.80 | 66.90 | 1,198.8 | 29.3 | 80.2 | 1,281,196.23 | 3,259,992.75 | 40.101528 | -104.570586 |
| 1,295.0 | 7.30 | 70.30 | 1,289.1 | 33.4 | 90.6 | 1,281,200.40 | 3,260,003.11 | 40.101540 | -104.570549 |
| 1,387.0 | 7.40 | 70.70 | 1,380.3 | 37.3 | 101.7 | 1,281,204.44 | 3,260,014.16 | 40.101550 | -104.570510 |
| 1,479.0 | 7.00 | 70.10 | 1,471.6 | 41.2 | 112.6 | 1,281,208.42 | 3,260,024.98 | 40.101561 | -104.570471 |
| 1,571.0 | 8.40 | 72.40 | 1,562.8 | 45.1 | 124.3 | 1,281,212.48 | 3,260,036.62 | 40.101572 | -104.570429 |
| 1,662.0 | 7.70 | 64.10 | 1,652.9 | 49.8 | 136.1 | 1,281,217.28 | 3,260,048.39 | 40.101585 | -104.570387 |
| 1,754.0 | 7.80 | 62.30 | 1,744.0 | 55.4 | 147.2 | 1,281,222.99 | 3,260,059.40 | 40.101600 | -104.570347 |
| 1,845.0 | 8.00 | 59.80 | 1,834.2 | 61.4 | 158.1 | 1,281,229.16 | 3,260,070.28 | 40.101617 | -104.570308 |
| 1,937.0 | 6.90 | 65.60 | 1,925.4 | 66.9 | 168.7 | 1,281,234.77 | 3,260,080.79 | 40.101632 | -104.570270 |
| 2,028.0 | 6.80 | 75.00 | 2,015.7 | 70.6 | 178.9 | 1,281,238.53 | 3,260,090.93 | 40.101642 | -104.570234 |
| 2,120.0 | 6.80 | 72.10 | 2,107.1 | 73.7 | 189.3 | 1,281,241.73 | 3,260,101.34 | 40.101650 | -104.570197 |
| 2,212.0 | 6.40 | 72.60 | 2,198.5 | 76.9 | 199.4 | 1,281,245.04 | 3,260,111.38 | 40.101659 | -104.570161 |
| 2,303.0 | 7.80 | 75.60 | 2,288.8 | 79.9 | 210.2 | 1,281,248.20 | 3,260,122.17 | 40.101667 | -104.570122 |
| 2,395.0 | 7.30 | 72.10 | 2,380.0 | 83.3 | 221.8 | 1,281,251.68 | 3,260,133.74 | 40.101677 | -104.570080 |
| 2,490.0 | 7.00 | 72.80 | 2,474.2 | 86.9 | 233.1 | 1,281,255.36 | 3,260,144.98 | 40.101686 | -104.570040 |
| 2,584.0 | 7.50 | 56.80 | 2,567.5 | 91.9 | 243.7 | 1,281,260.52 | 3,260,155.53 | 40.101700 | -104.570002 |
| 2,679.0 | 7.30 | 53.20 | 2,661.7 | 98.9 | 253.7 | 1,281,267.64 | 3,260,165.48 | 40.101720 | -104.569966 |
| 2,774.0 | 7.60 | 60.20 | 2,755.9 | 105.7 | 264.0 | 1,281,274.48 | 3,260,175.69 | 40.101738 | -104.569930 |
| 2,868.0 | 7.30 | 69.90 | 2,849.1 | 110.8 | 275.0 | 1,281,279.74 | 3,260,186.64 | 40.101752 | -104.569890 |
| 2,963.0 | 7.00 | 69.00 | 2,943.4 | 115.0 | 286.1 | 1,281,284.01 | 3,260,197.67 | 40.101764 | -104.569851 |
| 3,057.0 | 8.00 | 70.10 | 3,036.6 | 119.2 | 297.6 | 1,281,288.41 | 3,260,209.12 | 40.101775 | -104.569810 |
| 3,152.0 | 7.80 | 68.20 | 3,130.7 | 123.9 | 309.8 | 1,281,293.18 | 3,260,221.27 | 40.101788 | -104.569766 |
| 3,246.0 | 7.30 | 68.10 | 3,223.9 | 128.5 | 321.2 | 1,281,297.89 | 3,260,232.69 | 40.101801 | -104.569725 |
| 3,341.0 | 7.30 | 71.30 | 3,318.1 | 132.7 | 332.5 | 1,281,302.20 | 3,260,243.96 | 40.101812 | -104.569684 |
| 3,435.0 | 7.40 | 69.30 | 3,411.3 | 136.7 | 343.9 | 1,281,306.37 | 3,260,255.24 | 40.101823 | -104.569644 |
| 3,530.0 | 8.30 | 71.00 | 3,505.4 | 141.1 | 356.1 | 1,281,310.89 | 3,260,267.40 | 40.101835 | -104.569600 |
| 3,625.0 | 6.70 | 68.50 | 3,599.6 | 145.4 | 367.7 | 1,281,315.28 | 3,260,278.99 | 40.101847 | -104.569559 |
| 3,719.0 | 8.00 | 70.90 | 3,692.8 | 149.5 | 379.0 | 1,281,319.55 | 3,260,290.23 | 40.101858 | -104.569518 |
| 3,814.0 | 6.90 | 66.30 | 3,787.0 | 154.0 | 390.5 | 1,281,324.12 | 3,260,301.66 | 40.101871 | -104.569477 |
| 3,908.0 | 7.50 | 77.90 | 3,880.3 | 157.5 | 401.6 | 1,281,327.80 | 3,260,312.79 | 40.101880 | -104.569437 |
| 4,003.0 | 6.60 | 69.60 | 3,974.6 | 160.7 | 412.8 | 1,281,331.12 | 3,260,323.93 | 40.101889 | -104.569398 |
| 4,098.0 | 7.60 | 71.70 | 4,068.9 | 164.6 | 423.9 | 1,281,335.11 | 3,260,334.97 | 40.101900 | -104.569358 |
| 4,193.0 | 7.70 | 69.90 | 4,163.0 | 168.8 | 435.8 | 1,281,339.39 | 3,260,346.87 | 40.101911 | -104.569315 |
| 4,287.0 | 7.80 | 66.70 | 4,256.1 | 173.5 | 447.6 | 1,281,344.20 | 3,260,358.59 | 40.101924 | -104.569273 |
| 4,382.0 | 7.50 | 65.40 | 4,350.3 | 178.6 | 459.2 | 1,281,349.45 | 3,260,370.10 | 40.101938 | -104.569232 |
| 4,476.0 | 7.40 | 63.40 | 4,443.5 | 183.9 | 470.2 | 1,281,354.83 | 3,260,381.03 | 40.101953 | -104.569193 |
| 4,571.0 | 7.20 | 61.20 | 4,537.7 | 189.5 | 480.9 | 1,281,360.55 | 3,260,391.66 | 40.101968 | -104.569154 |
| 4,666.0 | 7.10 | 63.50 | 4,632.0 | 195.0 | 491.3 | 1,281,366.15 | 3,260,402.07 | 40.101983 | -104.569117 |
| 4,760.0 | 7.30 | 72.10 | 4,725.3 | 199.4 | 502.2 | 1,281,370.69 | 3,260,412.91 | 40.101995 | -104.569078 |
| 4,855.0 | 6.90 | 70.70 | 4,819.5 | 203.1 | 513.3 | 1,281,374.55 | 3,260,424.00 | 40.102006 | -104.569038 |
| 4,949.0 | 6.60 | 65.30 | 4,912.9 | 207.2 | 523.6 | 1,281,378.78 | 3,260,434.19 | 40.102017 | -104.569002 |
| 5,044.0 | 6.90 | 66.30 | 5,007.2 | 211.8 | 533.8 | 1,281,383.46 | 3,260,444.33 | 40.102029 | -104.568965 |
| 5,138.0 | 6.10 | 63.10 | 5,100.6 | 216.3 | 543.4 | 1,281,388.09 | 3,260,453.90 | 40.102042 | -104.568931 |
| 5,233.0 | 7.30 | 64.70 | 5,195.0 | 221.2 | 553.3 | 1,281,393.06 | 3,260,463.81 | 40.102055 | -104.568895 |
| 5,328.0 | 6.90 | 61.20 | 5,289.2 | 226.5 | 563.8 | 1,281,398.50 | 3,260,474.21 | 40.102070 | -104.568858 |
| 5,422.0 | 6.20 | 64.20 | 5,382.6 | 231.5 | 573.3 | 1,281,403.52 | 3,260,483.68 | 40.102083 | -104.568824 |
| 5,517.0 | 6.40 | 78.10 | 5,477.1 | 234.8 | 583.1 | 1,281,406.95 | 3,260,493.44 | 40.102093 | -104.568789 |
| 5,611.0 | 6.90 | 72.40 | 5,570.4 | 237.6 | 593.6 | 1,281,409.85 | 3,260,503.92 | 40.102100 | -104.568751 |
| 5,706.0 | 5.70 | 64.60 | 5,664.9 | 241.3 | 603.3 | 1,281,413.70 | 3,260,513.58 | 40.102110 | -104.568716 |
| 5,801.0 | 4.50 | 58.90 | 5,759.5 | 245.3 | 610.8 | 1,281,417.73 | 3,260,521.00 | 40.102121 | -104.568690 |
| 5,895.0 | 4.50 | 68.50 | 5,853.2 | 248.5 | 617.4 | 1,281,421.05 | 3,260,527.55 | 40.102130 | -104.568666 |
| 5,990.0 | 3.90 | 59.20 | 5,947.9 | 251.6 | 623.6 | 1,281,424.14 | 3,260,533.76 | 40.102139 | -104.568644 |
| 6,085.0 | 3.60 | 52.10 | 6,042.7 | 255.0 | 628.7 | 1,281,427.68 | 3,260,538.85 | 40.102148 | -104.568626 |
| 6,179.0 | 2.20 | 359.60 | 6,136.6 | 258.7 | 631.1 | 1,281,431.32 | 3,260,541.13 | 40.102158 | -104.568617 |
| 6,274.0 | 2.20 | 190.20 | 6,231.6 | 258.7 | 630.7 | 1,281,431.34 | 3,260,540.79 | 40.102158 | -104.568619 |

HP

Survey Report - Geographic

| | | | |
|------------------|----------------------------|-------------------------------------|------------------------------|
| Company: | EnCana Oil & Gas (USA) Inc | Local Co-ordinate Reference: | Well Ruhl 1H-32H-B264 |
| Project: | DJ Wattenberg | TVD Reference: | 13' KB @ 5010.0ft (135) |
| Site: | S32-T2N-R64W (Newman/Ruhl) | MD Reference: | 13' KB @ 5010.0ft (135) |
| Well: | Ruhl 1H-32H-B264 | North Reference: | True |
| Wellbore: | Hz | Survey Calculation Method: | Minimum Curvature |
| Design: | SURVEYS | Database: | USA EDM R5000 Multi Users DB |

| Survey | | | | | | | | | |
|---------------------|-----------------|-------------|---------------------|------------|------------|-------------------|------------------|-----------|-------------|
| Measured Depth (ft) | Inclination (°) | Azimuth (°) | Vertical Depth (ft) | +N/-S (ft) | +E/-W (ft) | Map Northing (ft) | Map Easting (ft) | Latitude | Longitude |
| 6,319.0 | 2.90 | 188.00 | 6,276.6 | 256.7 | 630.4 | 1,281,429.36 | 3,260,540.50 | 40.102153 | -104.568620 |
| 6,368.0 | 7.90 | 187.70 | 6,325.3 | 252.1 | 629.8 | 1,281,424.79 | 3,260,539.93 | 40.102140 | -104.568622 |
| 6,415.0 | 11.30 | 184.40 | 6,371.7 | 244.4 | 629.0 | 1,281,416.99 | 3,260,539.22 | 40.102119 | -104.568625 |
| 6,462.0 | 14.20 | 180.70 | 6,417.5 | 234.0 | 628.6 | 1,281,406.63 | 3,260,538.91 | 40.102090 | -104.568626 |
| 6,509.0 | 17.10 | 177.50 | 6,462.7 | 221.3 | 628.8 | 1,281,393.96 | 3,260,539.27 | 40.102056 | -104.568625 |
| 6,557.0 | 20.80 | 178.40 | 6,508.1 | 205.7 | 629.4 | 1,281,378.39 | 3,260,539.98 | 40.102013 | -104.568623 |
| 6,604.0 | 25.10 | 183.00 | 6,551.4 | 187.4 | 629.1 | 1,281,360.08 | 3,260,539.88 | 40.101963 | -104.568624 |
| 6,652.0 | 28.30 | 185.40 | 6,594.3 | 165.9 | 627.5 | 1,281,338.57 | 3,260,538.51 | 40.101903 | -104.568630 |
| 6,699.0 | 31.10 | 184.60 | 6,635.1 | 142.7 | 625.4 | 1,281,315.35 | 3,260,536.73 | 40.101840 | -104.568637 |
| 6,746.0 | 34.20 | 181.60 | 6,674.7 | 117.4 | 624.1 | 1,281,290.03 | 3,260,535.65 | 40.101770 | -104.568642 |
| 6,793.0 | 38.30 | 178.10 | 6,712.6 | 89.7 | 624.2 | 1,281,262.25 | 3,260,536.05 | 40.101694 | -104.568642 |
| 6,841.0 | 42.20 | 178.90 | 6,749.2 | 58.7 | 625.0 | 1,281,231.27 | 3,260,537.18 | 40.101609 | -104.568639 |
| 6,888.0 | 46.00 | 183.20 | 6,783.0 | 26.0 | 624.4 | 1,281,198.58 | 3,260,536.88 | 40.101519 | -104.568641 |
| 6,935.0 | 49.80 | 184.90 | 6,814.5 | -8.8 | 621.9 | 1,281,163.78 | 3,260,534.77 | 40.101424 | -104.568650 |
| 6,982.0 | 55.00 | 185.40 | 6,843.1 | -45.9 | 618.5 | 1,281,126.67 | 3,260,531.81 | 40.101322 | -104.568662 |
| 7,030.0 | 59.50 | 184.10 | 6,869.1 | -86.1 | 615.2 | 1,281,086.42 | 3,260,528.90 | 40.101212 | -104.568674 |
| 7,077.0 | 63.20 | 182.50 | 6,891.6 | -127.3 | 612.8 | 1,281,045.23 | 3,260,526.97 | 40.101099 | -104.568682 |
| 7,124.0 | 66.90 | 181.00 | 6,911.4 | -169.8 | 611.6 | 1,281,002.63 | 3,260,526.12 | 40.100982 | -104.568687 |
| 7,171.0 | 69.50 | 180.50 | 6,928.9 | -213.5 | 611.0 | 1,280,959.00 | 3,260,526.01 | 40.100862 | -104.568689 |
| 7,219.0 | 70.90 | 180.80 | 6,945.2 | -258.6 | 610.5 | 1,280,913.84 | 3,260,525.97 | 40.100738 | -104.568691 |
| 7,266.0 | 74.50 | 179.80 | 6,959.1 | -303.5 | 610.2 | 1,280,868.97 | 3,260,526.21 | 40.100615 | -104.568692 |
| 7,313.0 | 81.80 | 177.90 | 6,968.8 | -349.5 | 611.2 | 1,280,823.03 | 3,260,527.63 | 40.100489 | -104.568688 |
| 7,360.0 | 86.00 | 177.40 | 6,973.8 | -396.1 | 613.1 | 1,280,776.37 | 3,260,530.03 | 40.100361 | -104.568682 |
| 7,398.0 | 88.70 | 177.30 | 6,975.5 | -434.1 | 614.8 | 1,280,738.47 | 3,260,532.18 | 40.100256 | -104.568675 |
| 7,440.0 | 89.80 | 176.90 | 6,976.1 | -476.0 | 617.0 | 1,280,696.56 | 3,260,534.75 | 40.100141 | -104.568668 |
| 7,488.0 | 89.80 | 176.80 | 6,976.2 | -523.9 | 619.6 | 1,280,648.66 | 3,260,537.89 | 40.100010 | -104.568658 |
| 7,544.0 | 89.00 | 178.50 | 6,976.8 | -579.9 | 621.9 | 1,280,592.74 | 3,260,540.77 | 40.099856 | -104.568650 |
| 7,582.0 | 88.90 | 179.30 | 6,977.5 | -617.9 | 622.6 | 1,280,554.76 | 3,260,541.90 | 40.099752 | -104.568648 |
| 7,622.0 | 89.40 | 181.20 | 6,978.1 | -657.8 | 622.5 | 1,280,514.77 | 3,260,542.14 | 40.099642 | -104.568648 |
| 7,677.0 | 89.50 | 180.90 | 6,978.7 | -712.8 | 621.5 | 1,280,459.77 | 3,260,541.71 | 40.099491 | -104.568652 |
| 7,771.0 | 89.50 | 180.30 | 6,979.5 | -806.8 | 620.5 | 1,280,365.78 | 3,260,541.71 | 40.099233 | -104.568655 |
| 7,866.0 | 89.50 | 179.50 | 6,980.3 | -901.8 | 620.6 | 1,280,270.79 | 3,260,542.87 | 40.098972 | -104.568655 |
| 7,961.0 | 90.80 | 181.30 | 6,980.1 | -996.8 | 620.0 | 1,280,175.80 | 3,260,543.20 | 40.098712 | -104.568657 |
| 8,055.0 | 90.70 | 182.10 | 6,978.8 | -1,090.8 | 617.2 | 1,280,081.82 | 3,260,541.40 | 40.098454 | -104.568667 |
| 8,150.0 | 89.40 | 182.60 | 6,978.7 | -1,185.7 | 613.3 | 1,279,986.87 | 3,260,538.50 | 40.098193 | -104.568681 |
| 8,245.0 | 89.80 | 181.90 | 6,979.4 | -1,280.6 | 609.6 | 1,279,891.91 | 3,260,535.76 | 40.097933 | -104.568694 |
| 8,339.0 | 90.30 | 181.50 | 6,979.3 | -1,374.6 | 606.8 | 1,279,797.93 | 3,260,533.96 | 40.097675 | -104.568704 |
| 8,434.0 | 88.90 | 181.70 | 6,980.0 | -1,469.5 | 604.1 | 1,279,702.95 | 3,260,532.30 | 40.097414 | -104.568714 |
| 8,528.0 | 89.50 | 180.70 | 6,981.3 | -1,563.5 | 602.1 | 1,279,608.96 | 3,260,531.32 | 40.097156 | -104.568721 |
| 8,623.0 | 91.60 | 180.00 | 6,980.4 | -1,658.5 | 601.6 | 1,279,513.98 | 3,260,531.73 | 40.096895 | -104.568723 |
| 8,717.0 | 91.30 | 181.50 | 6,978.0 | -1,752.4 | 600.3 | 1,279,420.01 | 3,260,531.49 | 40.096637 | -104.568727 |
| 8,812.0 | 90.20 | 182.30 | 6,976.8 | -1,847.4 | 597.2 | 1,279,325.04 | 3,260,529.33 | 40.096377 | -104.568739 |
| 8,907.0 | 90.40 | 182.90 | 6,976.3 | -1,942.3 | 592.9 | 1,279,230.10 | 3,260,526.02 | 40.096116 | -104.568754 |
| 9,001.0 | 89.80 | 183.80 | 6,976.1 | -2,036.1 | 587.4 | 1,279,136.21 | 3,260,521.51 | 40.095859 | -104.568774 |
| 9,096.0 | 88.40 | 181.50 | 6,977.6 | -2,131.0 | 583.0 | 1,279,041.29 | 3,260,518.11 | 40.095598 | -104.568789 |
| 9,191.0 | 87.40 | 181.10 | 6,981.1 | -2,225.9 | 580.8 | 1,278,946.37 | 3,260,516.95 | 40.095338 | -104.568797 |
| 9,285.0 | 89.10 | 178.30 | 6,983.9 | -2,319.8 | 581.3 | 1,278,852.44 | 3,260,518.43 | 40.095080 | -104.568795 |
| 9,380.0 | 90.90 | 177.00 | 6,983.9 | -2,414.8 | 585.2 | 1,278,757.57 | 3,260,523.32 | 40.094819 | -104.568781 |
| 9,474.0 | 92.00 | 179.10 | 6,981.6 | -2,508.7 | 588.4 | 1,278,663.70 | 3,260,527.50 | 40.094561 | -104.568770 |
| 9,569.0 | 91.70 | 180.30 | 6,978.5 | -2,603.6 | 588.9 | 1,278,568.76 | 3,260,528.99 | 40.094301 | -104.568768 |
| 9,663.0 | 90.80 | 181.50 | 6,976.4 | -2,697.6 | 587.4 | 1,278,474.79 | 3,260,528.50 | 40.094043 | -104.568773 |
| 9,758.0 | 92.00 | 181.10 | 6,974.1 | -2,792.5 | 585.3 | 1,278,379.82 | 3,260,527.34 | 40.093782 | -104.568781 |
| 9,852.0 | 89.30 | 181.40 | 6,973.1 | -2,886.5 | 583.2 | 1,278,285.84 | 3,260,526.28 | 40.093524 | -104.568789 |
| 9,947.0 | 90.10 | 180.90 | 6,973.6 | -2,981.5 | 581.3 | 1,278,190.85 | 3,260,525.36 | 40.093263 | -104.568795 |
| 10,041.0 | 90.10 | 180.60 | 6,973.4 | -3,075.5 | 580.1 | 1,278,096.85 | 3,260,525.12 | 40.093005 | -104.568800 |

HP

Survey Report - Geographic

| | | | |
|------------------|----------------------------|-------------------------------------|------------------------------|
| Company: | EnCana Oil & Gas (USA) Inc | Local Co-ordinate Reference: | Well Ruhl 1H-32H-B264 |
| Project: | DJ Wattenberg | TVD Reference: | 13' KB @ 5010.0ft (135) |
| Site: | S32-T2N-R64W (Newman/Ruhl) | MD Reference: | 13' KB @ 5010.0ft (135) |
| Well: | Ruhl 1H-32H-B264 | North Reference: | True |
| Wellbore: | Hz | Survey Calculation Method: | Minimum Curvature |
| Design: | SURVEYS | Database: | USA EDM R5000 Multi Users DB |

| Survey | | | | | | | | | |
|-------------------------------------|-----------------|-------------|---------------------|------------|------------|-------------------|------------------|-----------|-------------|
| Measured Depth (ft) | Inclination (°) | Azimuth (°) | Vertical Depth (ft) | +N/-S (ft) | +E/-W (ft) | Map Northing (ft) | Map Easting (ft) | Latitude | Longitude |
| 10,136.0 | 89.90 | 179.70 | 6,973.4 | -3,170.5 | 579.9 | 1,278,001.86 | 3,260,525.87 | 40.092745 | -104.568801 |
| 10,230.0 | 89.80 | 179.20 | 6,973.6 | -3,264.4 | 580.8 | 1,277,907.88 | 3,260,527.75 | 40.092487 | -104.568797 |
| 10,325.0 | 89.80 | 179.00 | 6,974.0 | -3,359.4 | 582.3 | 1,277,812.91 | 3,260,530.24 | 40.092226 | -104.568792 |
| 10,420.0 | 91.60 | 179.40 | 6,972.8 | -3,454.4 | 583.6 | 1,277,717.95 | 3,260,532.56 | 40.091965 | -104.568787 |
| 10,514.0 | 90.80 | 181.10 | 6,970.8 | -3,548.4 | 583.2 | 1,277,623.97 | 3,260,533.14 | 40.091707 | -104.568789 |
| 10,608.0 | 90.20 | 181.00 | 6,970.0 | -3,642.4 | 581.4 | 1,277,529.98 | 3,260,532.40 | 40.091449 | -104.568795 |
| 10,703.0 | 90.30 | 180.20 | 6,969.6 | -3,737.4 | 580.4 | 1,277,434.98 | 3,260,532.40 | 40.091188 | -104.568799 |
| 10,798.0 | 91.50 | 181.70 | 6,968.1 | -3,832.3 | 578.9 | 1,277,340.00 | 3,260,531.82 | 40.090928 | -104.568804 |
| 10,892.0 | 89.40 | 181.20 | 6,967.4 | -3,926.3 | 576.5 | 1,277,246.02 | 3,260,530.43 | 40.090670 | -104.568813 |
| 10,987.0 | 89.20 | 180.90 | 6,968.5 | -4,021.3 | 574.8 | 1,277,151.03 | 3,260,529.68 | 40.090409 | -104.568819 |
| 11,081.0 | 88.80 | 180.60 | 6,970.2 | -4,115.3 | 573.5 | 1,277,057.05 | 3,260,529.43 | 40.090151 | -104.568823 |
| 11,176.0 | 89.30 | 179.10 | 6,971.8 | -4,210.2 | 573.8 | 1,276,962.07 | 3,260,530.68 | 40.089890 | -104.568822 |
| 11,270.0 | 92.10 | 178.80 | 6,970.6 | -4,304.2 | 575.5 | 1,276,868.13 | 3,260,533.38 | 40.089632 | -104.568816 |
| 11,365.0 | 92.20 | 181.20 | 6,967.0 | -4,399.1 | 575.5 | 1,276,773.20 | 3,260,534.38 | 40.089372 | -104.568816 |
| 11,397.0 | 92.40 | 181.20 | 6,965.8 | -4,431.1 | 574.8 | 1,276,741.23 | 3,260,534.04 | 40.089284 | -104.568819 |
| Last CES Survey @ 11,397' MD | | | | | | | | | |
| 11,445.0 | 92.40 | 181.20 | 6,963.7 | -4,479.0 | 573.8 | 1,276,693.28 | 3,260,533.54 | 40.089152 | -104.568822 |
| PTB @ 11,445' MD | | | | | | | | | |

| Design 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 | | | | | | | | | |
| Ruhl 1H-32H-B264 PBH | 0.00 | 0.00 | 6,980.0 | -4,562.5 | 560.7 | 1,276,609.64 | 3,260,521.29 | 40.088923 | -104.568869 |
| - survey misses target center by 86.1ft at 11445.0ft MD (6963.7 TVD, -4479.0 N, 573.8 E) | | | | | | | | | |
| - Point | | | | | | | | | |

| Survey Annotations | | | | | |
|---------------------|---------------------|-------------------|------------|------------------------------|--|
| Measured Depth (ft) | Vertical Depth (ft) | Local Coordinates | | | |
| | | +N/-S (ft) | +E/-W (ft) | Comment | |
| 11,397.0 | 6,965.8 | -4,431.1 | 574.8 | Last CES Survey @ 11,397' MD | |
| 11,445.0 | 6,963.7 | -4,479.0 | 573.8 | PTB @ 11,445' MD | |

Checked By: _____ Approved By: _____ Date: _____